

8-Hr Ozone	Lansing-East Lansing, MI	448	3	Subpart 1
MI: Mason County				
8-Hr Ozone	Mason Co, MI	28	1	Subpart 1
MI: Muskegon				
8-Hr Ozone	Muskegon, MI	170	1	Marginal
MO-IL: St. Louis				
8-Hr Ozone	St Louis, MO-IL	2,505	9	Moderate
Lead	Jefferson County (part); Herculaneum, MO	2	1	
PM-2.5	St. Louis, MO-IL	2,487	9	Nonattainment
MT: Billings/Laurel				
SO2	Laurel Area (Yellowstone County), MT	6	1	Primary
MT: Butte				
PM-10	Butte, MT	35	1	Moderate
MT: Columbia Falls (Flathead County)				
PM-10	Columbia Falls, MT	4	1	Moderate
MT: East Helena				
Lead	East Helena Area (Lewis and Clark Co.), MT	2	1	
SO2	East Helena Area (Lewis and Clark Co.), MT	2	1	Primary, Second
MT: Kalispell (Flathead County)				
PM-10	Kalispell, MT	15	1	Moderate
MT: Lame Deer				
PM-10	Lame Deer, MT	1	1	Moderate
MT: Libby				
PM-10	Libby, MT	3	1	Moderate
PM-2.5	Libby, MT	3	1	Nonattainment
MT: Missoula				
Carbon Monoxide	Missoula, MT	52	1	Moderate <= 12.
PM-10	Missoula, MT	52	1	Moderate
MT: Polson (Lake County)				
PM-10	Polson, MT	4	1	Moderate
MT: Ronan (Lake County)				
PM-10	Ronan, MT	3	1	Moderate
MT: Thompson Falls				
PM-10	Sanders County (part);Thompson Falls and vicini	1	1	Moderate
MT: Whitefish (Flathead County)				
PM-10	Flathead County; Whitefish and vicinity, MT	5	1	Moderate
NC: Fayetteville				
8-Hr Ozone	Fayetteville, NC	303	1	Subpart 1 EAC
NC: Greensboro-Winston-Salem-High Point				
8-Hr Ozone	Greensboro-Winston Salem-High Point, NC	1,286	8	Marginal EAC
PM-2.5	Greensboro-Winston Salem-High Point, NC	568	2	Nonattainment
NC: Haywood and Swain Cos (Great Smoky Mtn NP)				
8-Hr Ozone	Haywood and Swain Cos (Great Smoky NP), NC	0	2	Subpart 1
NC: Hickory-Morganton-Lenoir				

	8-Hr Ozone	Hickory-Morganton-Lenoir, NC	310	4	Subpart 1 EAC
	PM-2.5	Hickory, NC	142	1	Nonattainment
NC:	Raleigh-Durham-Chapel Hill				
	8-Hr Ozone	Raleigh-Durham-Chapel Hill, NC	1,244	8	Subpart 1
NC:	Rocky Mount				
	8-Hr Ozone	Rocky Mount, NC	143	2	Subpart 1
NC-SC:	Charlotte-Gastonia-Rock Hill				
	8-Hr Ozone	Charlotte-Gastonia-Rock Hill, NC-SC	1,477	8	Moderate
NH:	Boston-Manchester-Portsmouth(SE)				
	8-Hr Ozone	Boston-Manchester-Portsmouth(SE), NH	697	4	Moderate
NM:	Anthony				
	PM-10	Anthony, NM	3	1	Moderate
NV:	Las Vegas				
	Carbon Monoxide	Las Vegas, NV	479	1	Serious
	8-Hr Ozone	Las Vegas, NV	1,349	1	Subpart 1
	PM-10	Clark Co, NV	1,376	1	Serious
NV:	Reno				
	Carbon Monoxide	Reno, NV	179	1	Moderate <= 12.
	PM-10	Washoe Co, NV	339	1	Serious
NY:	Albany-Schenectady-Troy				
	8-Hr Ozone	Albany-Schenectady-Troy, NY	924	7	Subpart 1
NY:	Buffalo-Niagara Falls				
	8-Hr Ozone	Buffalo-Niagara Falls, NY	1,170	2	Subpart 1
NY:	Essex County; Whiteface Mountain				
	8-Hr Ozone	Essex Co (Whiteface Mtn), NY	1	1	Subpart 1
NY:	Jamestown				
	8-Hr Ozone	Jamestown, NY	140	1	Subpart 1
NY:	Jefferson County				
	8-Hr Ozone	Jefferson Co, NY	112	1	Moderate
NY:	Poughkeepsie				
	8-Hr Ozone	Poughkeepsie, NY	717	3	Moderate
NY:	Rochester				
	8-Hr Ozone	Rochester, NY	1,098	6	Subpart 1
NY-NJ-CT:	New York-N. New Jersey-Long Island				
	8-Hr Ozone	New York-N. New Jersey-Long Island, NY-NJ-CT	19,634	24	Moderate
	PM-10	New York Co, NY	1,537	1	Moderate
	PM-2.5	New York-N. New Jersey-Long Island, NY-NJ-CT	19,803	22	Nonattainment
OH:	Canton-Massillon				
	8-Hr Ozone	Canton-Massillon, OH	378	1	Subpart 1
	PM-2.5	Canton-Massillon, OH	378	1	Nonattainment
OH:	Cleveland-Akron-Lorain				
	8-Hr Ozone	Cleveland-Akron-Lorain, OH	2,946	8	Moderate
	PM-2.5	Cleveland-Akron-Lorain, OH	2,775	7	Nonattainment
OH:	Columbus				

	8-Hr Ozone	Columbus, OH	1,542	6	Subpart 1
	PM-2.5	Columbus, OH	1,449	5	Nonattainment
<b>OH: Dayton-Springfield</b>					
	8-Hr Ozone	Dayton-Springfield, OH	951	4	Subpart 1
	PM-2.5	Dayton-Springfield, OH	852	3	Nonattainment
<b>OH: Lima</b>					
	8-Hr Ozone	Lima, OH	108	1	Subpart 1
<b>OH: Toledo</b>					
	8-Hr Ozone	Toledo, OH	576	2	Subpart 1
<b>OH-KY-IN: Cincinnati-Hamilton</b>					
	8-Hr Ozone	Cincinnati-Hamilton, OH-KY-IN	1,892	9	Subpart 1
	PM-2.5	Cincinnati-Hamilton, OH-KY-IN	1,851	8	Nonattainment
<b>OH-PA: Youngstown-Warren-Sharon</b>					
	8-Hr Ozone	Youngstown-Warren-Sharon, OH-PA	715	4	Subpart 1
<b>OH-WV: Steubenville-Weirton</b>					
	8-Hr Ozone	Steubenville-Weirton, OH-WV	132	3	Subpart 1
	PM-2.5	Steubenville-Weirton, OH-WV	132	3	Nonattainment
<b>OR: Eugene-Springfield</b>					
	PM-10	Eugene-Springfield, OR	179	1	Moderate
<b>OR: LaGrande</b>					
	PM-10	LaGrande, OR	12	1	Moderate
<b>OR: Lakeview</b>					
	PM-10	Lake Co, OR	3	1	Moderate
<b>OR: Medford</b>					
	PM-10	Medford-Ashland, OR	78	1	Moderate
<b>OR: Oakridge</b>					
	PM-10	Lane Co, OR	3	1	Moderate
<b>OR: Salem</b>					
	Carbon Monoxide	Salem, OR	135	2	Not Classified
<b>PA: Allentown-Bethlehem-Easton</b>					
	8-Hr Ozone	Allentown-Bethlehem-Easton, PA	638	3	Subpart 1
	SO2	Warren Co, NJ	102	1	Primary, Second
<b>PA: Altoona</b>					
	8-Hr Ozone	Altoona, PA	129	1	Subpart 1
<b>PA: Clearfield and Indiana Cos</b>					
	8-Hr Ozone	Clearfield and Indiana Cos, PA	173	2	Subpart 1
<b>PA: Erie</b>					
	8-Hr Ozone	Erie, PA	281	1	Subpart 1
<b>PA: Franklin County</b>					
	8-Hr Ozone	Franklin Co, PA	129	1	Subpart 1
<b>PA: Greene County</b>					
	8-Hr Ozone	Greene Co, PA	41	1	Subpart 1
<b>PA: Harrisburg-Lebanon-Carlisle</b>					
	8-Hr Ozone	Harrisburg-Lebanon-Carlisle, PA	629	4	Subpart 1

	PM-2.5	Harrisburg-Lebanon-Carlisle, PA	586	3	Nonattainment
PA:	Johnstown				
	8-Hr Ozone	Johnstown, PA	153	1	Subpart 1
	PM-2.5	Johnstown, PA	164	2	Nonattainment
PA:	Lancaster				
	8-Hr Ozone	Lancaster, PA	471	1	Marginal
	PM-2.5	Lancaster, PA	471	1	Nonattainment
PA:	Pittsburgh-Beaver Valley				
	8-Hr Ozone	Pittsburgh-Beaver Valley, PA	2,431	7	Subpart 1
	PM-2.5	Liberty-Clairton, PA	22	1	Nonattainment
	PM-2.5	Pittsburgh-Beaver Valley, PA	2,195	8	Nonattainment
	SO2	Armstrong Co, PA	5	1	Primary
PA:	Reading				
	8-Hr Ozone	Reading, PA	374	1	Subpart 1
	PM-2.5	Reading, PA	374	1	Nonattainment
PA:	Scranton-Wilkes-Barre				
	8-Hr Ozone	Scranton-Wilkes-Barre, PA	699	4	Subpart 1
PA:	State College				
	8-Hr Ozone	State College, PA	136	1	Subpart 1
PA:	Tioga County				
	8-Hr Ozone	Tioga Co, PA	41	1	Subpart 1
PA:	York				
	8-Hr Ozone	York, PA	473	2	Subpart 1
	PM-2.5	York, PA	382	1	Nonattainment
PA-NJ-MD-DE:	Philadelphia-Wilmin-Atlantic City				
	8-Hr Ozone	Philadelphia-Wilmin-Atlantic Ci, PA-NJ-MD-DE	7,333	18	Moderate
	PM-2.5	Philadelphia-Wilmington, PA-NJ-DE	5,537	9	Nonattainment
PR:	Guaynabo County				
	PM-10	Mun. of Guaynabo, PR	92	1	Moderate
RI:	Providence (all of RI)				
	8-Hr Ozone	Providence (All RI), RI	1,048	5	Moderate
SC:	Columbia				
	8-Hr Ozone	Columbia, SC	495	2	Subpart 1 EAC
SC:	Greenville-Spartanburg-Anderson				
	8-Hr Ozone	Greenville-Spartanburg-Anderson, SC	799	3	Subpart 1 EAC
TN:	Johnson City-Kingsport-Bristol				
	8-Hr Ozone	Johnson City-Kingsport-Bristol, TN	207	2	Subpart 1 EAC
TN:	Knoxville				
	8-Hr Ozone	Knoxville, TN	714	7	Subpart 1
	PM-2.5	Knoxville, TN	599	5	Nonattainment
TN:	Nashville				
	8-Hr Ozone	Nashville, TN	1,098	5	Subpart 1 EAC
TN-AR:	Memphis				
	8-Hr Ozone	Memphis, TN-AR	948	2	Marginal

<b>TN-GA: Chattanooga</b>					
8-Hr Ozone	Chattanooga, TN-GA	372	3	Subpart 1 EAC	
PM-2.5	Chattanooga, AL-TN-GA	424	4	Nonattainment	
<b>TN-KY: Clarksville-Hopkinsville</b>					
8-Hr Ozone	Clarksville-Hopkinsville, TN-KY (TN portion)	135	1	Subpart 1	
<b>TX: Beaumont-Port Arthur</b>					
8-Hr Ozone	Beaumont-Port Arthur, TX	385	3	Marginal	
<b>TX: Dallas-Fort Worth</b>					
8-Hr Ozone	Dallas-Fort Worth, TX	5,031	9	Moderate	
<b>TX: El Paso</b>					
Carbon Monoxide	El Paso, TX	62	1	Moderate <= 12.	
PM-10	El Paso Co, TX	564	1	Moderate	
<b>TX: Houston-Galveston-Brazoria</b>					
8-Hr Ozone	Houston-Galveston-Brazoria, TX	4,670	8	Moderate	
<b>TX: San Antonio</b>					
8-Hr Ozone	San Antonio, TX	1,560	3	Subpart 1 EAC	
<b>UT: Ogden</b>					
PM-10	Ogden, UT	77	1	Moderate	
<b>UT: Provo</b>					
PM-10	Utah Co, UT	369	1	Moderate	
<b>UT: Salt Lake City</b>					
PM-10	Salt Lake Co, UT	898	1	Moderate	
SO2	Salt Lake Co, UT	898	1	Primary, Second	
<b>UT: Tooele County</b>					
SO2	Tooele Co, UT	41	1	Primary, Second	
<b>VA: Frederick County</b>					
8-Hr Ozone	Frederick Co, VA	83	2	Subpart 1 EAC	
<b>VA: Norfolk-Virginia Beach-Newport News (Hampton Roads)</b>					
8-Hr Ozone	Norfolk-Virginia Beach-Newport News (HR), VA	1,542	13	Marginal	
<b>VA: Richmond-Petersburg</b>					
8-Hr Ozone	Richmond-Petersburg, VA	919	9	Marginal	
<b>VA: Roanoke</b>					
8-Hr Ozone	Roanoke, VA	236	4	Subpart 1 EAC	
<b>WI: Door County</b>					
8-Hr Ozone	Door Co, WI	28	1	Subpart 1	
<b>WI: Kewaunee County</b>					
8-Hr Ozone	Kewaunee Co, WI	20	1	Subpart 1	
<b>WI: Manitowoc County</b>					
8-Hr Ozone	Manitowoc Co, WI	83	1	Subpart 1	
<b>WI: Milwaukee-Racine</b>					
8-Hr Ozone	Milwaukee-Racine, WI	1,839	6	Moderate	
<b>WI: Sheboygan</b>					
8-Hr Ozone	Sheboygan, WI	113	1	Moderate	
<b>WV: Berkeley and Jefferson Counties</b>					

8-Hr Ozone	Berkeley and Jefferson Counties, WV	118	2	Subpart 1 EAC
<b>WV: Charleston</b>				
8-Hr Ozone	Charleston, WV	252	2	Subpart 1
PM-2.5	Charleston, WV	252	2	Nonattainment
<b>WV: Weirton</b>				
PM-10	Weirton, WV	15	2	Moderate
<b>WV-KY: Huntington-Ashland</b>				
8-Hr Ozone	Huntington-Ashland, WV-KY	189	3	Subpart 1
PM-2.5	Huntington-Ashland, WV-KY-OH	341	9	Nonattainment
SO2	Boyd County (part), KY	50	1	Primary
<b>WV-OH: Parkersburg-Marietta</b>				
8-Hr Ozone	Parkersburg-Marietta, WV-OH	151	2	Subpart 1
PM-2.5	Parkersburg-Marietta, WV-OH	153	3	Nonattainment
<b>WV-OH: Wheeling</b>				
8-Hr Ozone	Wheeling, WV-OH	153	3	Subpart 1
PM-2.5	Wheeling, WV-OH	153	3	Nonattainment
<b>WY: Sheridan</b>				
PM-10	Sheridan, WY	16	1	Moderate

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Last updated on Wednesday, March 15th, 2006  
URL: <http://www.epa.gov/oar/oaqps/greenbk/anc12.html>

## Executive Summary

The New Orleans Ozone Maintenance Area<sup>1</sup>, which includes the parishes of Jefferson, Orleans, St. Bernard and St. Charles, was designated under section 107 of the 1977 Clean Air Act as nonattainment for the National Ambient Air Quality Standard (NAAQS) for ozone on September 11, 1978.

Following the federal Clean Air Act Amendments (CAAA) of 1990, the New Orleans Ozone Maintenance Area was classified as a "transitional" ozone nonattainment area pursuant to sections 107(d) and 181(a) of the CAAA (56 FR 56694). Following the collection of the required ambient ozone air monitoring data needed for redesignation of the New Orleans Ozone Maintenance Area, an ozone maintenance plan was developed in accordance with section 175A of the CAAA. On October 15, 1994, a redesignation request and an ozone maintenance plan were submitted to the Environmental Protection Agency (EPA). The EPA redesignated the New Orleans Ozone Maintenance Area to attainment for the one-hour ozone standard and approved the ozone maintenance plan effective December 1, 1995. (60 FR 51354)

On April 15, 2004, EPA designated and classified areas for the 8-hour ozone NAAQS of 0.08 parts per million (ppm) (69 FR 23858, April 30, 2004). For most areas these designations became effective June 15, 2004. EPA designated the New Orleans Ozone Maintenance Area as attainment/unclassifiable for the 8-hour ozone standard effective June 15, 2004.

Section 110(a)(1) of the CAAA requires that each state adopt and submit to EPA a plan which provides for implementation, maintenance and enforcement of the primary pollutant standard following the promulgation of a NAAQS for any air pollutant. States must submit Section 110(a)(1)

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<sup>1</sup> The New Orleans CMSA at the time of the 1994 maintenance plan submission was comprised of six parishes: Jefferson, Orleans, St. Bernard, St. Charles, St. John the Baptist and St. Tammany. Maintenance and contingency plans were not included in the action for the parishes St. John the Baptist and St. Tammany. St. John the Baptist Parish was previously redesignated to attainment and St. Tammany Parish was never designated as nonattainment.

maintenance plans no later than three (3) years after the effective date of the area's 8-hour ozone NAAQS designation.

On May 20, 2005, EPA issued "*Maintenance Plan Guidance Document for Certain 8-hour Ozone Areas Under Section 110(a)(1) of the Clean Air Act*". The guidance specifies that states include the following components in the maintenance plan:

- Attainment inventory;
- Maintenance demonstration;
- Ambient air quality monitoring;
- Verification of continued attainment; and
- Contingency plan.

With the submittal of this ozone maintenance plan for the New Orleans Ozone Maintenance Area which is a revision to the Louisiana State Implementation Plan (SIP), the state is fulfilling the requirements of Section 110(a)(1) under the 8-hour ozone standard.

This plan is based on the 2002 emissions inventory which was collected before the devastation to the area by Hurricane Katrina in August 2005. The population of the area has decreased by approximately 50% and the area is in the process of rebuilding.

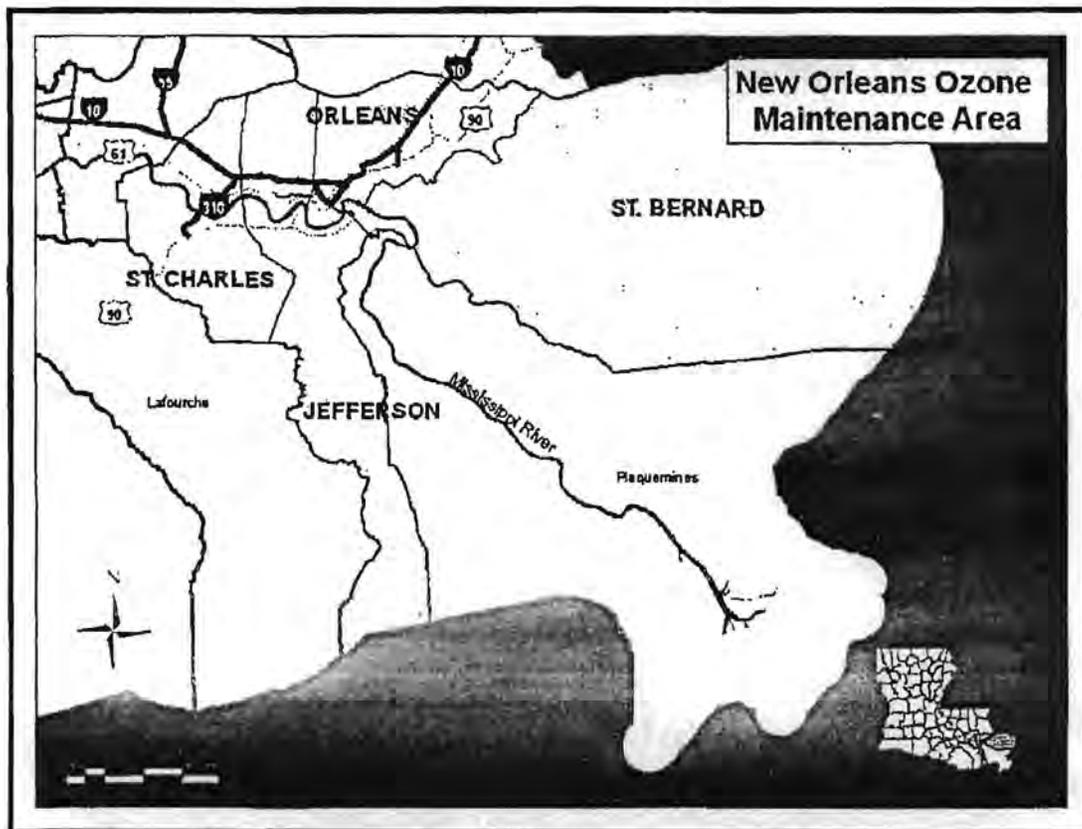
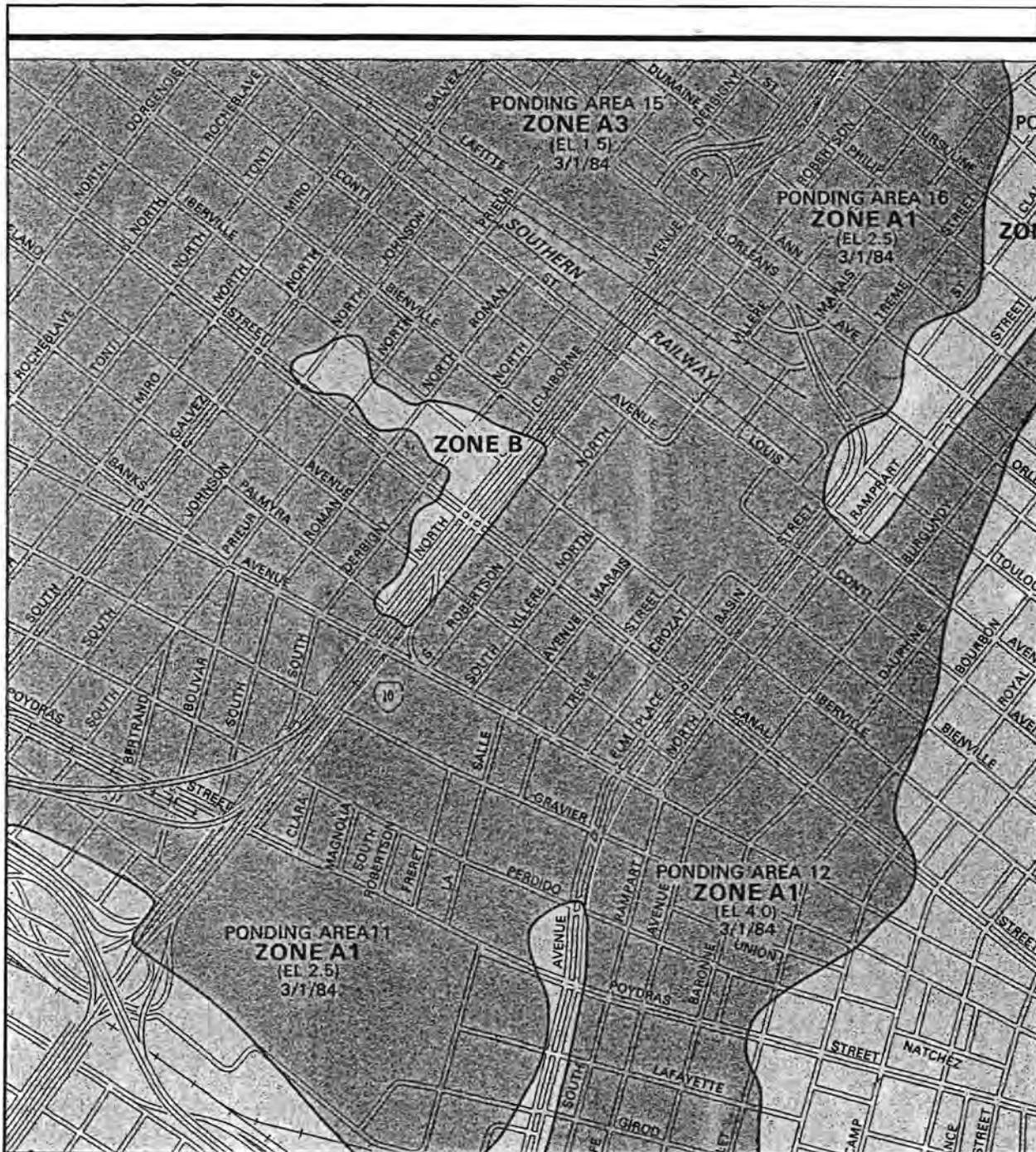


Figure 1: State Map Illustrating the New Orleans Ozone Maintenance Area

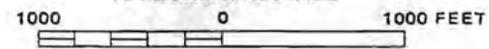
### 1.3 Public Notice

In accordance with La. R.S. 49:950 et seq., and to comply with 40 CFR 51.285 Public Notification, the Louisiana Department of Environmental Quality published a notice seeking comment on this SIP revision on April 20, 2007 in the *Louisiana Register*. A public hearing concerning this proposed SIP revision was held at 1:30pm on May 30, 2007 in the Galvez Building, Oliver Pollock Room C-111, at 602 N. Fifth Street in Baton Rouge, Louisiana. Interested parties are invited to submit written or oral comments on the proposal at that time. The comment period closed on June 6, 2007. A copy of the notices, hearing transcript, comments, comment summary and responses to the comments are included in Appendix C.

**APPENDIX C**  
**COASTAL BARRIERS/FLOODPLAIN MAP**



APPROXIMATE SCALE



NATIONAL FLOOD INSURANCE PROGRAM

**FIRM**  
FLOOD INSURANCE RATE MAP

CITY OF  
NEW ORLEANS AND  
ORLEANS PARISH,  
LOUISIANA

PANEL 160 OF 185  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER  
225203 0160 E

MAP REVISED:  
MARCH 1, 1984



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)



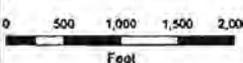
**HURRICANE KATRINA SURGE INUNDATION and ADVISORY BASE FLOOD ELEVATION MAP**  
 Orleans Parish, Louisiana  
 Map Number: LA-CC31



**LEGEND**

State Boundary	Vertical Control Point
Parish Boundary	Hurricane Katrina Related Data
Flood Advisory Related Data	<ul style="list-style-type: none"> <li>Preliminary Indoor High Water Mark</li> <li>Preliminary Outdoor High Water Mark</li> <li>Preliminary Debris High Water Mark</li> <li>Level of Katina Surge Inundation</li> </ul>
Advisory Base Flood Elevation (ABFE) Zone, including Flood Zone Type (AE, M, V, etc.) and elevation in feet	
3 ft Above HEAG Criterion Applies	

Date of Event: August 29, 2005  
 Date of Map: June 5, 2006



**Data Sources:**  
 Aerial Imagery  
 USDA National Agriculture Imagery Program, 2004  
 Flood Zones and Elevations  
 FEMA Flood Insurance Rate Map (Orleans Parish, 1994)  
 High Water Marks  
 FEMA (downloaded and surveyed Sept/Oct., 2006)  
 National Geospatial Intelligence  
 National Facilities Inventory  
 Storm Trunk  
 NOAA National Weather Service

**HOW TO READ THIS MAP**

In areas not delineated on this map, the Advisory Base Flood Elevation (ABFE) to be used for substituting at a particular property is the higher of these two options:

- (1) Current, effective Base Flood Elevation (BFE) shown on the community's Flood Insurance Rate Map (FIRM), or
- (2) 3 feet above Highest Existing Adjacent Grade (HEAG) at the building site. The HEAG is defined as the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

Using the best available data, FEMA has mapped the areas of the Parish where each of these two options should be applied:

- Green-shaded areas:** FEMA recommends that the first floor of the building (including basement) be elevated at or above the BFE shown on the community's FIRM. FEMA has provided the current BFEs on the map above in yellow and black text (for example, "EL 1.5 ft"). The zone or area where each BFE applies is outlined in yellow; these color boundaries are the same as those shown on the FIRM. If the FIRM does not have a BFE for a particular area, no elevation will be listed on the map above. In those cases, buildings should be elevated to 3 feet above HEAG.
- Outlines of green-shaded areas:** FEMA recommends that the first floor of the building (including basement) be elevated at or above the BFE shown on the community's FIRM. FEMA has provided the current BFEs on the map above in yellow and black text (for example, "EL 1.5 ft"). The zone or area where each BFE applies is outlined in yellow; these color boundaries are the same as those shown on the FIRM. If the FIRM does not have a BFE for a particular area, no elevation will be listed on the map above. In those cases, buildings should be elevated to 3 feet above HEAG.

Anywhere in the Parish, the Community Floodplain Administrator may determine a site-specific ABFE other than that on the information mapped above. Using detailed topographic data for the site, the Floodplain Administrator can determine what elevation corresponds to 3 feet above HEAG and compare it to the FIRM BFE. Again, FEMA's guidance is that buildings should be elevated to whichever of those two elevations is higher at the site.

For more information on how the ABFE guidance was determined for this Parish, please see: [http://www.fema.gov/pdf/flood/070605main/nyrb050605main\\_parish06\\_12-05.pdf](http://www.fema.gov/pdf/flood/070605main/nyrb050605main_parish06_12-05.pdf)

**Notes:**  
 1. Elevation is in feet relative to the North American Vertical Datum of 1988.  
 2. Measured in feet relative to the National Geospatial Vertical Datum of 1988 (NGVD83). To convert from NGVD83 to the North American Vertical Datum of 1988 in Orleans Parish, add 0.3 feet.  
 3. Elevation units substitute from Surveyed, surge-only High Water Marks. Local wave effects (wind height and wave run-up) are not included in these elevations.

**MAPS FOR ADVISORY PURPOSES ONLY - NOT FOR INSURANCE RATING PURPOSES**  
 For insurance rating purposes, refer to the currently effective Flood Insurance Rate Map (FIRM), available from your local government or the FEMA Map Service Center (1-888-286-8414; <http://www.fema.gov>)  
 For more information on this Advisory map, please see [http://www.fema.gov/pressroom/2006/nyrb050605main\\_parish06\\_12-05.pdf](http://www.fema.gov/pressroom/2006/nyrb050605main_parish06_12-05.pdf)

**APPENDIX D**

**FLOODPLAINS**

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**8-STEP DECISION MAKING PROCESS  
FEMA FLOODPLAIN MAP  
FEMA FLOOD RECOVERY GUIDANCE**

## Lafitte Housing Development Project

### Floodplain Decision-Making Process 24 CFR 55.20

#### **Step 1 Determine whether the proposed action is located in a 100-year floodplain.**

The project site and immediate target neighborhood are located in a 100-year floodplain identified in the Federal Emergency Management Agency's Flood Insurance Rate Map (FIRM), community panel number 225203-0160 E, dated March 1, 1984.

#### **Step 2 Notify the public.**

A public notice was published in the Times-Picayune, a local and regional newspaper, on October 10, 2006.

#### **Step 3 Identify and evaluate practicable alternatives to locating the proposed action in a floodplain.**

The proposed project plans to demolish 896 vacant units of two and three story garden apartments with 812 new housing units.

*Alternative 1:* Relocate all new construction onto a site not located in a 100-year floodplain.

*Response:* The entire project site and surrounding target neighborhood are located in a 100 year floodplain, as is 80 percent of the City of New Orleans. There are no sites sufficiently large enough or available in the 20 percent of the city not located in a floodplain.

*Alternative 2:* Provide rental assistance to potential occupants to locate in housing outside of a floodplain instead of returning to the Lafitte site.

*Response:* The City's housing stock was significantly reduced by Hurricane Katrina. Few affordable rental units are available for rental. Housing needs to be constructed or rehabilitated in order to enable residents to return to New Orleans. The redevelopment of the Lafitte site and immediate target neighborhood will replace housing destroyed by the storm.

*Alternative 3:* Build fewer buildings but increase the number of floors in each building.

*Response:* The Lafitte site abuts a designated historic district. Constructing buildings greater than three stories would have a detrimental impact on the architectural integrity of the adjacent historic district.

**Alternative 4:** Determine not to approve any action.

**Response:** Adopting a “no action option” will result in the continued abandonment of 77 uninhabitable buildings on the Lafitte site. The impact of such a decision will be twofold: (1) to deprive the housing project’s previous occupants with an opportunity to return to their former community, and (2) it will leave the neighborhood in a perpetual state of physical decline and discourage the recovery of the adjacent neighborhoods.

The City of New Orleans is protected from flooding caused by hurricanes with the reconstruction of a levee system surrounding the city that is rated to provide protection from a Category 3 hurricane. The levee system does not eliminate the City’s designated 100-year floodplains, but rather protects it from the impact of hurricane caused storm surges. Hazard mitigation will include the raising of new buildings three feet above the identified flood elevation.

**Step 4 Identify potential direct and indirect impacts associated with the occupancy of the floodplain.**

Approval of the proposed redevelopment project will have a small positive direct impact on the 100-year floodplain by increasing the floodwater storage capacity of the neighborhood. The project proposes to build fewer units (and fewer buildings) in the floodplain, thereby increasing the area available for holding flood water. Further, the mitigation measure of raising the elevation of new buildings will not create barriers to the drainage of flood water. Additionally, fewer residents will be brought back into the neighborhood as 84 fewer units will be built. The indirect impact of the proposed project will be to make the neighborhood more attractive thereby encouraging additional renovation of storm damaged properties.

**Step 5 Design or modify the proposed action to minimize the potential adverse impacts within the floodplain.**

All newly constructed buildings will be elevated in conformance with FEMA’s “Flood Recovery Guidance” dated April 12, 2006.

Prospective project residents will be notified by HANO that they will be residing in a flood hazard area in accordance with 24 CFR 55.21. HANO will also inform new residents that emergency information and area evacuation procedures during a storm/flood event will be provided to the community by radio and television from the City’s Emergency Broadcast System. Additionally, HANO will formulate its own evacuation plan.

Complete flood proofing of all buildings cannot be achieved as it is not practical to raise all newly constructed buildings to an elevation sufficient to remove them from the floodplain.

HANO will purchase and maintain flood insurance on all properties.

**Step 6 Reevaluate the proposed alternatives.**

The potential for flood hazards will exist for the foreseeable future. Despite this condition, the proposed redevelopment of the Lafitte Housing Development and surrounding target neighborhood will not aggravate the current hazards to other floodplains. The site was originally developed in 1941 with a higher density of buildings and units than what is currently proposed. The proposed project will have a smaller "footprint" on the areas as fewer buildings and units will be constructed, thereby increasing the floodwater storage capability of the area. Further, the project will not create a barrier to the drainage of flood water.

None of the alternatives evaluated in Step 3 are practical in light of the information gained in Steps 4 and 5 of this section. There are no sites available of sufficient size in the 20 percent of the City not located in a 100-year floodplain. Further, the City lacks sufficient affordable rental housing units for people seeking to use Section 8 rental assistance. New housing to replace that destroyed by Hurricane Katrina is needed to allow residents to return to their former neighborhood.

Increasing the number of stories in each new building in order to reduce the number of buildings constructed is not practical as the Lafitte site is in the Area of Potential Effect to the adjacent historic district. Taller buildings will not be in keeping with the existing building mass and density.

Building nothing will keep the site in a perpetual state of blight, creating a hazard to both the immediate site and surrounding neighborhood.

All practical mitigation measures, namely the raising of all newly constructed building's elevation, will be employed. Additionally, HANO will develop a means to inform residents of an impending emergency and a plan to evacuate residents in the event of a pending flood.

**Step 7 Publish of Final Notice**

A public notice was published on July 27, 2007 in the New Orleans Times-Picayune to give the public an opportunity to comment on the results of the flood analysis. The public was given seven days to comment on the proposal before it is approved.

**Step 8 Implement the proposed action.**

Having considered all practical alternatives and public comments HANO will proceed with the redevelopment of the Lafitte Housing Development.

## Bids & Proposals

NOTICE OF PROPOSED IMPROVEMENTS AND DEVELOPMENT IN A FLOODPLAIN The Housing Authority of New Orleans (HANO) will be seeking approval from the U.S. Department of Housing and Urban Development (HUD) for funding from the Capital Fund Program and the Replacement Housing Factor Fund for various development activities at the following locations: St. Bernard Housing Development, Bounded by: Senate Street to the north, Hamburg Street to the east, St. Bernard Avenue to the west, and Sere Street to the south. The site is located within the A1 flood zone identified on the Federal Insurance Rate Map, No. 225203-0095E. Plans for the site currently include a Project involving demolition of 1,436 units; construction of approximately 624 dwelling units, including some Section 8 Project Based units; and associated site utilities and common improvements. BW Cooper Housing Development, Bounded by: Earhart Boulevard to the north, South Prieur Street to the east, South Dorgenois Street to the west, and Martin Luther King Boulevard to the south. The site is located within the A4 flood zone identified on the Federal Insurance Rate Map, No. 225203-0160E. Plans for the site currently include a Project involving the demolition of 1,474 units in two phases; repair of 311 units; construction of approximately 610 dwelling units in phases, including some Section 8 Project Based units; and associated site utilities and common improvements in phases. Lafitte Housing Development Bounded by: Orleans Avenue to the north, North Claiborne Avenue to the east, North Rocheblave Street to the west, and Lafitte Avenue to the south. The site is located within the A3 flood zone identified on the Federal Insurance Rate Map, No. 225203-0160E. Plans for the site currently include a Project involving demolition of 896 units; construction of approximately 600 dwelling units, including some Section 8 Project Based units; and associated site utilities and common improvements. CJ Peete Housing Development Bounded by: South Claiborne Avenue to the north, Washington Avenue to the east, Louisiana Avenue and Toledano Avenue to the west, and LaSalle Street and Freret Street to the south. The site is located within the A1 flood zone identified on the Federal Insurance Rate Map, No. 225203-0160E. Plans for the site currently include a Project involving demolition of 723 units; construction of approximately 460 dwelling units in phases, including some Section 8 Project Based units; and associated site utilities and common improvements. All projects also include the disposition of property to development entities. In accordance with 24CFR Part 55.20 Subpart C the following information on the proposed projects is provided. Alternatives Considered: Alternative A - Locate the Project Developments within the Floodplain A1. Locate the projects at the current locations A2. Locate the projects in other City of New Orleans locations. Alternative B - Locate the Projects Outside the Floodplain Alternative C - No Action/Other Actions that Serve the Same Purpose Although the proposed project sites in Alternative A.1 are located within the 100 year floodplain, the Lower Mississippi River has not been a natural river system since the 1920s. The projects will not impact or alter that floodplain beyond what has already occurred as a result of construction of the protective levee system. The threat of flooding to life and property as a result of locating the projects in the floodplain is still a concern. However, it is HUD's belief that the City has adequate emergency systems in place to give residents enough warning time to evacuate the project if there is danger of a levee breach or major flooding; and, that the purchase of flood insurance by HANO reasonably mitigates potential damage to property that may result from flooding. All other possible Project locations identified in alternative B are also within the City of New Orleans/Orleans Parish land area and are within the 100 year floodplain. Therefore, there are no advantageous alternate locations within the land area of the City of New Orleans/Orleans Parish. Further, the funding parameters for the Project are tied to the present proposed project location. Neither is Alternative C a viable option because it will not help alleviate that identified need to revitalize the low-income housing market in New Orleans or revitalize the current developments. It is our determination that there is no practicable alternative to locating the Projects in the A4 flood zone because: 1) The need for redevelopment of the Housing Developments must be met; 2) The projects are economically feasible; and 3) No further impacts to the floodplain will occur as a result of the replacement of the previous residential buildings, nor from the construction of supporting infrastructure. Written comments regarding this issue should be received within 7 calendar days of publication of this notice in order to be considered by HANO in its decision process. Comments should be sent to: Roma Campanile, HUD/OPHI, 451 7th Street SW, Room 4130, Washington DC 20410; telephone (202) 402-4880.

*Published in Times-Picayune on 07/27*

**NOTICE OF PROPOSED IMPROVEMENTS AND  
DEVELOPMENT IN A FLOODPLAIN**

The Housing Authority of New Orleans (HANO) will be seeking approval from the U.S. Department of Housing and Urban Development (HUD) for funding from the Capital Fund Program and the Replacement Housing Factor Fund for various activities at the Lafitte Housing Development, bounded by: Orleans Avenue to the north, North Claiborne Avenue to the east, North Rocheblave Street to the west, and Lafitte Avenue to the south. The site is located within the A3 flood zone identified on the Federal Insurance Rate Map, No. 225203-0160E.

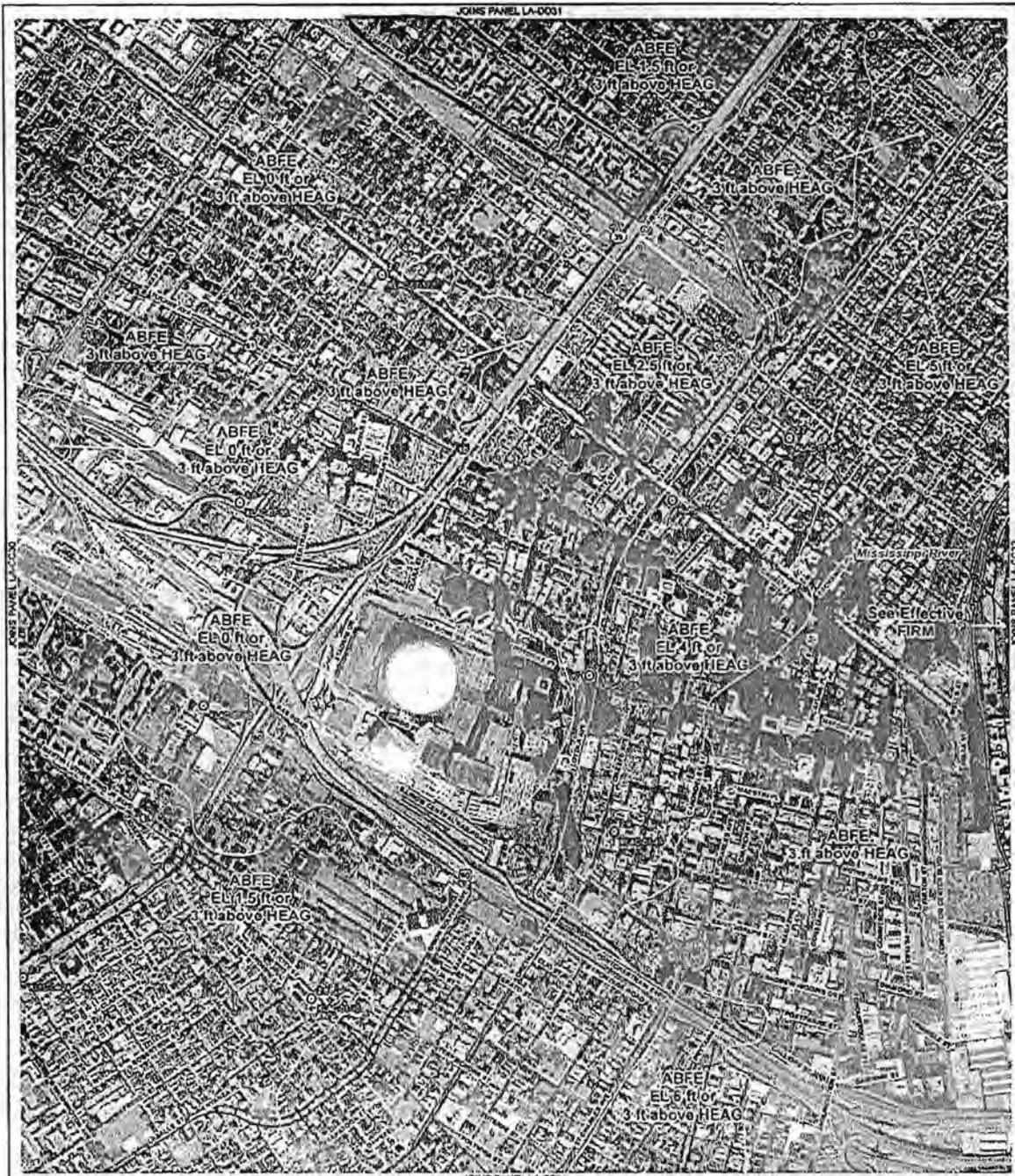
Plans for the site currently include a Project involving demolition of 896 units; construction of approximately 600 dwelling units, including some Section 8 Project Based units; and associated site utilities and common improvements. Plans for the site also include the disposition of property to development entities.

HANO has additional information on these plans, and is preparing a review to determine if there are any practicable alternatives to locating the Project in the flood plain, and to identify potential adverse impacts that may result from this Project, as well as mitigation measures that may be necessary to protect the flood plain.

Written comments regarding this issue should be received within 15 days of publication of this notice in order to be considered by HANO in its decision process. Comments should be sent to:

Julie Tweeter  
Environmental Review Officer  
Department of Housing and Neighborhood Development  
City of New Orleans  
1340 Poydras St. Suite 1000  
New Orleans, LA 70112  
Telephone: (504) 658-4364





**HURRICANE KATRINA SURGE INUNDATION and ADVISORY BASE FLOOD ELEVATION MAP**  
 Orleans Parish, Louisiana  
 Map Number: LA-CC31

**OVERVIEW MAP**

**LEGEND**

- State Boundary
- Parish Boundary
- Flood Advisory Related Data
- Advisory Base Flood Elevation (ABFE) Zone, including Flood Zone Type (AE, or VE) and elevation on foot
- 3 ft Above HEAG Criterion Applies
- Vertical Control Point
- Hurricane Katrina Related Data
- Preliminary Inland High Water Mark
- Preliminary Coastal High Water Mark
- Preliminary Delta High Water Mark
- Line of Katrina Surge Inundation

Date of Event: August 29, 2005  
 Date of Map: June 5, 2006

**HOW TO READ THIS MAP**

In some protected areas, the Advisory Base Flood Elevation (ABFE) is to be used for siting of a particular property is the higher of these two options:

- Current, effective Base Flood Elevation (BFE) shown on the community's Flood Insurance Rate Map (FIRM), or
- 3 feet above Highest Existing Adjacent Grade (HEAG) at the building site. The HEAG is defined as the highest natural elevation of the ground surface prior to construction used to the proposed walls of a structure.

Using the best available data, FEMA has mapped the areas of the Parish where each of these two options should be applied:

- In green-hatched areas, FEMA recommends that the first floor of the building (including basement) be elevated 3 feet above HEAG at the building site.
- Outside of green-hatched areas, FEMA recommends that the first floor of the building (including basement) be elevated at or above the BFE shown on the community's FIRM. FEMA has provided the current BFEs on the map above in yellow and black text (for example, "EL 1.5 ft"). The zone or area where each BFE applies is outlined in yellow. These zone boundaries are the same as those shown on the FIRM. If the FIRM does not have a BFE for a particular area, no elevation will be listed on the map above. In those cases, buildings should be elevated to 3 feet above HEAG.

Anytime in the Parish, the Community Floodplain Administrator may determine a site-specific ABFE rather than rely on the information depicted above. Using detailed topographic data for the site, the Floodplain Administrator can determine what elevation corresponds with 3 feet above HEAG and compare it to the FIRM BFE. Again, FEMA's guidance is that buildings should be elevated to whichever of these two elevations is higher at the site.

For more information on how the ABFE guidance was determined for this Parish, please see: [http://www.fema.gov/pdf/050605/050605cr/050605cr\\_050605cr\\_050605cr\\_050605cr\\_050605cr.pdf](http://www.fema.gov/pdf/050605/050605cr/050605cr_050605cr_050605cr_050605cr_050605cr.pdf)

**Data Sources:**

- Aerial Imagery
- FEMA National Agriculture Inventory Program, 2004
- Recent Census and Demographics
- FEMA Flood Insurance Rate Map (Orleans Parish, 1994)
- High Water Mark Data
- FEMA (unpublished and unreviewed Sept-Oct., 2005)
- National Coastal Assessment
- National Wetland Inventory
- Storm Traces
- FEMA National Weather Service

**NOTES:**

- Measured in feet relative to the North American Vertical Datum of 1988.
- Measured in feet relative to the National Oceanic Vertical Datum of 1988 (NOVD83). To convert from NOVD83 to the North American Vertical Datum of 1988 in Orleans Parish, subtract 0.2 feet.
- Elevation limits measured from surrogates, surge only High Water Marks. 1,000-foot scale (contour heights and surge marks) are not included in these elevations.

**MAPS FOR ADVISORY PURPOSES ONLY - NOT FOR INSURANCE RATING PURPOSES**

For insurance rating purposes, refer to the currently effective Flood Insurance Rate Map (FIRM), available from your local government or the FEMA Map Service Center (1-800-368-6111; [www.fema.gov](http://www.fema.gov))

For more information on these advisory maps, please see [http://www.fema.gov/pressrel/050605/050605cr/050605cr\\_050605cr\\_050605cr\\_050605cr\\_050605cr.pdf](http://www.fema.gov/pressrel/050605/050605cr/050605cr_050605cr_050605cr_050605cr_050605cr.pdf)



## ADVISORY Base Flood Elevations for Orleans Parish, Louisiana

Hurricanes Katrina and Rita were both strong Category 5 hurricanes for several days in the Caribbean and Gulf of Mexico before pushing waters toward the Louisiana coast. Katrina made landfall on August 29, 2005, near the Mississippi-Louisiana border, and Rita made landfall on September 23, 2005, at the Texas-Louisiana border. These hurricanes caused extensive damage in the parishes of Louisiana along the Gulf Coast and Lake Pontchartrain.

To minimize the flood impacts of future events, the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) is providing advisory information concerning coastal flood elevations and interior levee ponding elevations that can be used to guide recovery efforts. This guidance is necessary because Hurricanes Katrina and Rita, along with other recent storms, have created concerns about the accuracy of the flood risk information for Orleans Parish (including incorporated areas) and whether the risk may be understated.

Assessing flood hazards in Orleans Parish is challenging due to the existence of numerous flood control facilities. These facilities experienced damage of varying degrees throughout southeastern Louisiana as a result of Hurricanes Katrina and Rita, and the U.S. Army Corps of Engineers (USACE) is on an aggressive path to repair and improve the flood control system. The USACE is on schedule to have repairs to damaged areas completed by June 2006, to have all federal levees constructed to authorized heights by September 2007, and to have fully authorized levels of protection and improvements to the system completed by 2010.

Although USACE improvements to the flood control system will make Orleans Parish safer than it was before the storms, they will not eliminate the potential for flooding. **In fact, based on analyses recently completed by the USACE, the flood control system will not meet the standards**

**necessary for providing protection against the 1-percent-annual-chance (100-year) flood, which is also referred to as the base flood.** The National Flood Insurance Program (NFIP) uses the base flood as the standard for floodplain management.

FEMA and the USACE have worked together to develop flood hazard data and formulate recommendations to be considered by State and local governments as they begin to make recovery decisions. This information is both reliable and current, and is aimed at assisting in the recovery process as it moves forward. Owing to the differences in flood risk information for areas inside and outside of levees, this Flood Recovery Guidance has been organized below to treat these two physical settings separately.

### **Inside of Levee-Protected Areas**

For areas in the Parish located within existing levees, FEMA has determined that eventual levee certification is likely. In the levee areas of Sub-Basins "a" to "h" of the Parish (see Figure 1), FEMA recommends the following: new construction and substantially damaged homes and businesses within a designated FEMA floodplain should be elevated to either the Base Flood Elevation (BFE) shown on the current effective Flood Insurance Rate Map (FIRM) **or** at least 3 feet above the highest adjacent existing ground elevation at the building site, whichever is higher; and new construction and substantially damaged homes and businesses not located in a designated FEMA floodplain should be elevated at least 3 feet above the highest adjacent existing ground elevation at the building site.

For the Parish Advisory BFE (ABFE) inside levees, this Guidance is similar to NFIP rules for areas protected by levees being restored to provide 1-percent-annual-chance base flood protection. Should the requirements needed for application of these rules fail to materialize, flood elevations



Figure 1. ABFE guidance and levee sub-basin locations for Orleans Parish.

in this area would be based on a “without levee” scenario and could exceed elevations of 8 feet (west and south of Mississippi River) or 13 to 14 feet (east and north of Mississippi River) referenced to the National Geodetic Vertical Datum of 1929 (NGVD29).

In addition to the recent USACE storm surge modeling, FEMA has also developed these recommendations based on the height and integrity of the levee system expected to be in place by September 2007. Although FEMA is confident in the results from this current assessment, the agency will continue to monitor progress made with regard to levee improvements, findings from other ongoing studies, and enhancements to the agency’s understanding of the probability of flooding in this area. FEMA will adjust the recommended flood elevations as necessary as the agency prepares updated FIRMs for Orleans Parish and its incorporated areas.

#### Outside of Levee-Protected Areas

USACE, in close coordination with FEMA, has completed a preliminary analysis of the 1-percent-annual-chance flood elevations for all areas of the Parish outside of levees along the Gulf of Mexico shorelines east and south of Interstate 10 and Lake Pontchartrain. This analysis considered storm data from the past 155 years (including Hurricanes Katrina and Rita), new and existing long-term tidal gage records, and other existing engineering studies. The results of the USACE

storm data analysis indicate that the new 1-percent-annual-chance flood elevations in areas impacted by coastal storm surge are higher than those shown on the current, effective FIRMs for Orleans Parish.

As a result of the storm data analysis, FEMA has developed ABFEs that incorporate freeboard above the BFEs shown on the FIRMs. “Freeboard” is defined as follows (from 44 CFR 59.1):

*Freeboard means a factor of safety usually expressed in feet above a flood level for purposes of floodplain management. “Freeboard” tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed.*

FEMA recommends that for the Gulf of Mexico shoreline outside-levee areas in Orleans Parish (see Figure 1), a freeboard of 1 foot be applied. That is, structures should be elevated at least 1 foot above the current BFE shown on the effective FIRM for the building site.

#### Community Adoption

FEMA is encouraging local officials and citizens to adopt the elevation and freeboard recommendations for inside and outside of levee-protection made in this Guidance Document and to elevate structures accordingly. These added precautions will take into account increased flood risk due to subsidence, provide extra flood protection to the structure, reduce nuisance flooding, and may result in lower flood insurance premiums. Using elevation and freeboard are prudent measures for ensuring structures are rebuilt using the best available information to protect lives and property, and is also a sound floodplain management practice that communities are encouraged to adopt and enforce.

#### Updated Flood Risk Information for Orleans Parish

A FEMA coastal model study of hurricane storm surge flooding and levee flood protection is already underway at USACE, and FEMA intends to have an updated preliminary Flood Insurance Study (FIS) and updated FIRMs for coastal areas of Orleans Parish as soon as possible. The updated FIS

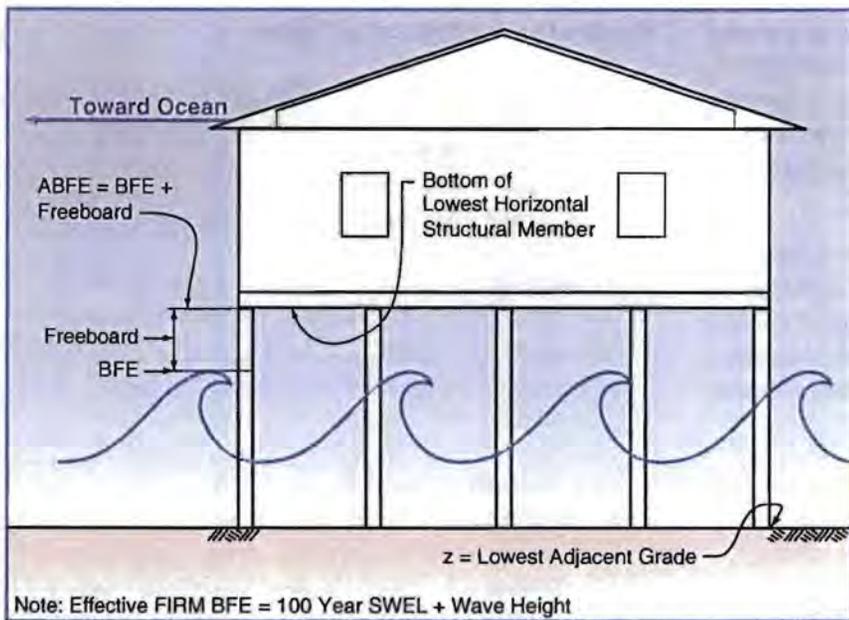


Figure 2. How to determine the ABFE based on the site's effective BFE and recommended freeboard.

Ultimately it will be local officials, working with property owners, who will make final decisions regarding construction type and elevations that will apply during the recovery and rebuilding process. The ABFEs will be a valuable tool until new model studies can be developed and incorporated into the FIS and FIRMs. Within the next one to two months, FEMA will also publish a set of maps that will show detailed event information for Hurricanes Katrina and Rita, including flood inundation boundaries and high-water elevations.

#### Datum Conversion Considerations

Conversion of orthometric height measurements (elevations) from the NGVD29 to North American Vertical Datum of 1988 (NAVD88) is of importance to surveyors and building

officials using this Guidance. Studies show some variability of the conversion factor between NGVD29 and NAVD88 over the geographic extent of Orleans Parish, and it would appear that a Parish average conversion factor of -0.20 foot would be appropriate for application. For site-specific determinations, a tool such as CORPSCON, developed by the USACE (<http://crunch.tec.army.mil/software/corpscon/corpscon.html>), can be used. The latest information on NAVD88 elevations in Louisiana can be found on the National Oceanic and Atmospheric Administration's (NOAAs) National Geodetic Survey (NGS) website at <http://www.ngs.noaa.gov/heightmod/LouisianaControl.shtml>. Future updates to the FIS and FIRM by FEMA will include a conversion of all flood data and BFEs within the Parish from NGVD29 to NAVD88.

and FIRMs may show an increase of the 1-percent annual-chance stillwater elevations (SWELs), Special Flood Hazard Areas (SFHAs), and BFEs over existing flood data (including the storm data analysis and engineering studies used for this Flood Recovery Guidance), and may result in the coastal high hazard area (V Zone) moving further landward.

Until the restudy is completed, FEMA is encouraging communities within Orleans Parish to use the Flood Recovery Guidance described herein. This Guidance method can be used during the recovery and reconstruction of the Louisiana coastal and levee-protected areas by determining the site-specific ABFEs as described below.

### Flood Recovery Guidance Method Inside of Levee-Protected Areas

#### 1. Method for Calculating ABFE Inside of Levee-Protected Areas:

ABFE = The greater of either the FIRM BFE or the highest existing adjacent grade (HEAG) at the building site + 3 feet

#### 2. Example:

Consider a site where:

Orleans Parish FIRM BFE = Zone AE (EL 5 feet)  
(relative to NGVD29)

Site HEAG = 4 feet (NGVD29)

Compare FIRM BFE to site HEAG + 3 feet:

BFE of 5 feet < 7 feet (site HEAG of 4 feet + 3 feet)

ABFE at this site is 7 feet (NGVD29). Therefore, the structure's first floor (including basement) is recommended to be elevated to 7 feet (NGVD29) or higher.

To apply the Flood Recovery Guidance provided above to determine an ABFE for inside of levee-protected areas, individuals must review the current, effective FIRM and detailed topographic data (ground elevations) for the building site. In the Parish levee Sub-Basins "a" to "h", the first floor of new construction is recommended to be elevated to the BFE shown on the FIRM or at least 3 feet above the highest adjacent existing ground elevation at the building site, whichever is higher. (A professional surveyor may need to be consulted to accurately determine the highest adjacent existing grade for the proposed site.)

### Outside of Levee-Protected Areas

#### 1. Method for Calculating ABFE Outside of Levee-Protected Areas:

ABFE = FIRM BFE + Freeboard

FIRM BFE = 100-year SWEL + wave height

Freeboard = 1 foot

#### 2. Example:

For Orleans Parish FIRM BFE = Zone VE (EL 12 feet)  
and

Freeboard = 1 foot; ABFE = 12 + 1 = 13 feet  
NGVD29

Compare ABFE to the lowest adjacent grade (LAG)  
elevation.

Building LAG (z) = 4 feet; the building is  
recommended to be elevated 9 feet above ground  
surface.

To apply the Flood Recovery Guidance provided above to determine an ABFE in areas outside of levees, the first step is to determine the SFHAs and BFEs from the effective FIRM that apply to the structure on the building site.

Once the BFE applicable to the building has been determined, the ABFE can be calculated (see Figure 2) using the appropriate freeboard amount specified above for the Parish. Specifically, the ABFE is the current BFE plus a freeboard of 1 foot. For structures located in Zone VE on the effective FIRMs, the bottom of the lowest horizontal structural member is recommended to be at the ABFE.

#### Other Pertinent ABFE Information

Although the information provided here is advisory, communities should consider its use for rebuilding in a safer manner. For additional information, community officials, residents, and other interested parties can access the FEMA website for these flood recovery advisories at <http://www.fema.gov/hazard/flood/recoverydata/index.shtm>.

In addition to determining site-specific ABFEs, community officials should consider additional protective measures to reduce future flood risks. These measures could include using additional freeboard and using the FEMA Coastal Construction Manual (CCM) (FEMA Publication 55). The CCM recommends the use of V Zone building standards in all areas subject to waves and velocity floodwaters caused by hurricane storm surges. For additional information on recommended practices, see the Coastal Construction Fact Sheet Series available at <http://www.fema.gov/fima/mat/fema499.shtm>.

**APPENDIX E**

**SECTION 106**  
**HISTORIC PRESERVATION**  
**REVIEW**

**HOUSING AUTHORITY OF  
NEW ORLEANS**

**SECTION 106 REVIEW AND  
DOCUMENTATION FOR  
LAFITTE HOUSING DEVELOPMENT  
2101 LAFITTE STREET  
NEW ORLEANS, LOUISIANA 70112**

**JANUARY 2007**

**PREPARED BY:**

**UNITED STATES RISK MANAGEMENT, L.L.C.  
365 CANAL STREET, SUITE 2760  
NEW ORLEANS, LOUISIANA 70130  
(504) 561-6563**

**PROJECT NUMBER 15060165**

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## 1.0 SUMMARY

This documentation is intended to satisfy the requirements under 36 CFR 800.6 (a)(3) and (4) review process. Section 106 of the National Historic Preservation Act of 1966 (NHPA) provides that the agency head shall afford the Advisory Council of Historic Preservation the opportunity to comment on the effects of their undertakings on historic properties. The Section 106 process also involves compliance with the regulations of the ACHP.

This Section 106 documentation will be included in the Environmental Assessment (EA) (24 CFR Part 58) being completed for this proposed undertaking. As part of the EA and the Section 106 Review, direct and indirect impacts, both temporary and long-term, are addressed in this document. As detailed in 36 CFR 800.5 (a)(2), adverse effects on historical properties include: (1) physical destruction; (2) alterations, including rehabilitation; (3) removal of the property from its historical location; (4) change of the character of the property's use or physical features; (5) introduction of visual, atmospheric or audible elements; (6) neglect of the property; and (7) transfer, lease or sale of the property.

## 2.0 INTRODUCTION

### 2.1 Project Description

Lafitte Housing Development is a conventional site public housing development owned by the Housing Authority of New Orleans (HANO) in New Orleans, Louisiana. The property is bounded by Orleans Avenue to the northeast, North Claiborne Avenue and elevated Interstate 10 (I-10) to the southeast, North Rocheblave Street to the northwest, and Lafitte Avenue to the southwest. A densely developed industrial and commercial area is located west of the housing development. The 27.2 acres site includes eight hundred ninety-six (896) public housing units, which are deteriorating and damaged by Hurricane Katrina. The site has been vacant since the hurricane hit New Orleans.

The Lafitte Housing Development was constructed in 1941 with eight hundred ninety-six (896) units in seventy-seven (77) buildings. The property encompasses approximately 28.1 acres. All units have been vacant since Hurricane Katrina. Lafitte Housing Development suffers from high density, overpopulated units, deteriorated buildings and infrastructure, obsolete building components, hazardous building materials, and building envelopes that are not energy efficient.

Construction activities on the property will include: remediation and demolition of all the existing structures, construction of new multi-family units, removal of existing infrastructure (i.e. water, gas and sewer lines), and the addition of new roadways, utilities and landscaping.

HANO has selected Providence/Enterprise to redevelop the Lafitte Housing Development site into a vibrant mixed income community to provide both affordable and market rate housing. Providence/Enterprise plans to redevelop the

property providing five hundred fifty-six (556) housing units on-site and, in later phases, an additional nine hundred forty-four (944) units in the neighborhood (scattered sites). These units are planned to include two hundred seventy-six (276) public housing units, six hundred twenty-four (624) affordable rental units, and six hundred (600) homeownership units. At this time, the location of the scattered sites in the neighborhood is undetermined.

The Louisiana Speaks Pattern Book will serve as a planning and design guide for the new community. The Louisiana Vernacular, Victorian, and Classical styles will be featured in a combination of double and multi-plex buildings. Reconnecting the property with the surrounding neighborhood by re-establishing the public street grid and blending with the community character is a priority.

### **2.1.1 Lafitte I**

The Lafitte I Housing Development will include the construction of five hundred fifty-six (556) housing units on the Lafitte Housing Development site and two hundred fifty-six (256) housing units in the neighborhood. The on-site units will include one hundred (100) public housing units designated for seniors, one hundred seventy-six (176) public housing units for families and one hundred (100) tax credit only units. This phase will also include the construction of forty (40) homeownership units on the site for low-income families and one hundred forty (140) homeownership units on the site for moderate income families.

This first phase of the redevelopment of Lafitte will also include one hundred ninety-two (192) units to be developed in the neighborhood and supported with Section 8 project-based assistance and sixty-four (64) homeownership units for moderate income families that will also be located off-site in the Lafitte/Treme neighborhood.

#### **2.1.1.1 Housing Units**

The Lafitte I Housing Development will include one hundred eleven (111) one bedroom rental units; two hundred fifty-two (252) two bedroom rental units, one hundred seventy-two (172) three bedroom rental units and thirty-three (33) four bedroom rental units. The one bedroom units will have an average of 750 square feet; the two bedroom units will average 1,000 square feet; three bedroom units will average 1,250 square feet; and four bedroom units will average 1,600 square feet. The units will have all Energy Star appliances including refrigerators, dishwashers, disposals, washers and dryers. The living areas will be carpeted, with vinyl tile in the kitchens and laundry rooms and ceramic tile in the bathrooms. Units with three or more bedrooms will have two full bathrooms. All bathtubs will have cultured marble tub surrounds. Mini-blinds will be provided on all

windows. The units will have energy efficient central heat and air conditioning, as well as Energy Star Qualified windows and doors. The buildings will more than 15-year maintenance-free hardi-plank exteriors; a 30-50 year roof warranty and storm windows.

To meet the needs of persons needing handicap accessible units, thirty (30) units (five percent) will be fully handicap accessible and meet the Uniform Federal Accessibility Standards.

### 2.1.12 Bedroom Distribution

The bedroom distribution for the on-site rental units by unit type is indicated below.

	On-Site			Off-Site	Total
	Public Housing/ Tax Credit - Seniors	Public Housing/ Tax Credit - Family	Tax Credit	Section 8 Project Based/Tax Credit	
1 Bedroom	80	25	6	0	111
2 Bedroom	20	129	33	70	252
3 Bedroom	0	22	50	100	172
4 Bedroom	0	0	11	22	33
Total	100	176	100	192	568

### 2.1.13 Community Space

The Lafitte I community will include appropriate community space, including a 10,000 square foot facility.

### 2.1.2 Lafitte II

The Lafitte II Housing Development will include the construction of six hundred eighty-eight (688) off-site housing units, including three hundred thirty-two (332) low-income housing tax credit units with Section 8 contracts and three hundred fifty-six (356) homeownership units.

#### 2.1.2.1 Housing Units

The Lafitte II Housing Development will include two hundred (200) two bedroom rental units one hundred thirty-two (132) three bedroom rental units. The one bedroom units will have an average of 868 square feet; the two bedroom units will average 1,000 square feet; three bedroom units will average 1,250 square feet. The units will be similar in quality and design to those of Phase I.

To meet the needs of persons needing handicap accessible units, eighteen (18) units (five percent) will be fully handicap accessible and meet the Uniform Federal Accessibility Standards.

## 2.2 Methodology

The purpose of a Section 106 Review is to require an agency to take into account the effect of an undertaking on any district, site, building or structure or object that is included in, or eligible for, inclusion in the National Register.

HANO has taken several steps to identify historic properties located on or near the Lafitte Housing Development. A summary of these steps is detailed below:

HANO consulted with the Louisiana State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation (ACHP) and the National Register of Historic Places (NRHP) to identify historic properties located in the defined Area of Potential Effect (APE).

HANO authorized United States Risk Management (USRM) to complete all research required for the completion of the Section 106 review. USRM identified all structures within the APE, which are listed or eligible for listing on the NRHP and evaluated the effect of the proposed undertaking on the property. A standing structure survey was completed for all potentially affected historical properties at the State of Louisiana Library.

In addition, an archaeological contractor will be authorized to complete a Phase I Cultural Resources Survey, as requested by SHPO.

Also, as required under the Section 106 review, HANO has held public meetings and communicated with consulting parties that are interested in participating in the Section 106 review process. HANO is currently coordinating participation with these parties and the local community to ensure that comments are thoroughly addressed.

## 3.0 DESCRIPTION OF UNDERTAKING

The U.S. Department of Housing and Urban Development (HUD) and the Housing Authority of New Orleans (HANO) have proposed to use federal funds for the demolition and redevelopment of the Lafitte Housing Development in New Orleans, Louisiana. The goal of the project is to convert a conventional public housing development into a new, mixed-income and mixed-use community.

### **3.1 Description of Property**

The Lafitte Housing Development, was constructed in 1941 with eight hundred ninety-six (896) units in seventy-seven (77) buildings. The property encompasses approximately 28.1 acres.

The interior streets (North Tonti, North Miro, North Johnson, North Roman, and North Derbigny Streets) are closed to automobile traffic and are designed for pedestrian use as outdoor, linear parks and common yard areas. The remaining streets outside and inside the complex are primarily two lanes with parking on both sides.

### **3.2 General Vicinity Characteristics**

The Lafitte Housing Development complex encompasses about sixteen (16) city blocks and is bound by Orleans Avenue to the northeast, North Claiborne Avenue and elevated I-10 to the southeast, North Rocheblave Street to the northwest, and Lafitte Avenue to the southwest.

The neighborhood surrounding Lafitte consists of residential developments including detached homes, both owner and renter occupied, with some duplexes and sporadic apartment buildings. Many older New Orleans homes, often built in the typical "shotgun" style with front porches and narrow, long lots, are in the neighborhood. A densely developed industrial and commercial area is located west of the housing development.

The neighborhood also includes various religious buildings, schools and a community center and pool. The General Laundry Building, a NRHP property, is located approximately two hundred (200) feet northwest of the property.

The Esplanade Ridge Historic District is located adjacent to the northeast of the Lafitte Housing Development.

### **3.3 Hurricane Katrina**

The subject property was impacted by floodwaters, wind damage and damage from human actions during Hurricane Katrina on August 29, 2005 and its aftermath. The Lafitte Housing Development consisted of eight hundred ninety-six (896) units prior to Hurricane Katrina.

#### **3.3.1 ECM Consultants, Inc. Evaluation of the Property**

The Lafitte Housing Development was damaged due to hurricane force winds and flood water caused by Hurricane Katrina. Flood water depth was approximately 3' to 5' at the site which caused flooding of the first floor units by approximately 6 inches to 12 inches. It also flooded the crawl spaces,

causing damage to plumbing and piping due to possible salt water intrusion, leading to corrosion and ultimately damage the piping.

It appeared that the hurricane flood waters may have contributed to subsidence of the existing ground throughout the site. It is estimated that approximately 4" to 6" of additional fill will be required to bring the existing ground back to the original level in order to maintain the required grade at the bottom steps and reduce the tripping hazard caused by these non-standard riser heights. This damage alone may weaken the footers and cause significant structural damage to the walls of any three story building, although there is currently no sign of structural damage.

Hurricane force winds also caused damage to the building's exteriors. A number of windows were broken, and need to be replaced. The brick veneer show signs of cracking and breaking in areas throughout the site. The exterior and unit entry doors were damaged throughout the site, and it is recommended that all these doors and frames be replaced.

The primary area of wind damage was the roof of each building. Although the clay tile roofs appeared to have minimal damage from the ground level, there are visible signs of damage such as cracked and/or broken tiles. A 2006 inspection from a qualified roofing contractor found significant damage due to tile being uplifted, causing nails and substrate to be damaged. The estimated repairs from this inspection were approximately \$5.9 million. The repairs of these roofs may present a problem due to non-availability of matching tiles. At present approximately one-third of the existing buildings have fiberglass shingles. Most of this shingle roofing has been damaged and will have to be replaced. It was observed that a number of locations had extensive water damage to the plaster ceilings at the third floor attic locations. This condition is prevalent throughout the site and would indicate there is possible damage to the substrate and trusses supporting the roof.

The copper roof flashing at walls and chimneys were, in most instances, found to be damaged or missing due to theft. All copper flashing must be straightened and reattached or replaced, as necessary, by a qualified roofer.

An area of concern regarding damage is the moisture barrier, which is an important part of the wall system of the exterior wall construction. The moisture barrier is located on the outside face of the interior wall or inside the wall's air space. With the numerous water blisters throughout the plaster walls, it is been determined that this barrier has failed in a number of locations. The only way to provide a new barrier is to remove the existing brick veneer of all the buildings, but this is cost prohibitive and further supports the need for total demolition of these buildings.

Flooding on first floor and extensive water intrusion through the roof and broken windows has partly caused moderate to extensive mold growth in most of the walls and ceilings. Extensive mold remediation will be required prior to beginning repairs and rehabilitations.

There is no central air conditioning system in the buildings and this has contributed to mold growth in these apartments. It appears that some tenants have incorporated "window-type" air conditioners in a number of the units. However, these window units violate the egress code that requires a means of escape from each of these spaces. This also does not pass HUD's UPCS for inspection. As a result of this, central air conditioning systems need to be provided in these buildings. Due to the construction type, the only feasible way to provide this system would be to rehabilitate the interiors of every building on site.

Due to this water intrusion and a period of unoccupied and unconditioned spaces throughout the complex, it was determined that all flooring of all units needs to be replaced. The water intrusion was also apparent in numerous locations on the plaster walls and ceilings. These areas need to be repaired and replaced. Also, after removal of this damaged plaster, investigations should be made to determine the point of the water intrusion. This may lead to additional repairs. It was determined that approximately thirty (30) percent of the plaster ceilings and walls need to be removed and replaced. After repair of work and ceiling plaster, the entire interior would have to be painted.

The kitchen appliances have been damaged due to flooding and the year-plus of inoperability and being open to the environmental conditions. The appliances would need to be replaced in their entirety.

Damage to the community center due to flood and wind includes roofing, flooring and interior drywalls, which have already been gutted to a height of approximately 4' from the floor. Landscaping has also been destroyed, as a result of the flooding.

### **3.3.2 USRM Evaluation of the Property**

The overall exterior of the buildings suffered significant and sporadic damage related to Hurricane Katrina and vandalism following Hurricane Katrina. USRM and PPM Consultants, Inc. did not perform structural evaluations of the buildings, but did note significant visible exterior damage such as areas of the buildings that were missing sections of gutters, other roof damage, and exterior damage to the masonry, as well as inspecting the interiors of several units and noting significant damage related to moisture intrusion.

### 3.3.3 Lead Hazard

Historical testing of the units of the Lafitte Housing Development for Lead Based Paint (LBP) was performed, and indicated the presence of elevated concentrations of lead on exterior surfaces to include doors and porch railings. The results were indicative of conditions specific to each unit tested. However, based upon the general results, these conditions appeared to be predominant in the development. The results indicated that interior lead was also identified in the following locations; living room, kitchen, bathroom and stairwells. As a result of the historical testing, an aggressive lead abatement program was undertaken in the development.

As part of this abatement program, surfaces that tested positive for lead were treated and encapsulated to cover and bind the lead. Clearance sampling was conducted following the abatement and indicated that abatement procedures were performed acceptable. However, based upon the degree of damage sustained to the development during Hurricane Katrina and the occupancy of the units over the past eight (8) years, encapsulant failure has most likely occurred throughout the development.

The development was inspected after the hurricane, and following a prolonged period of lack of climate control within the units, with damage identified in the development to include visible mold growth, and deterioration of walls and other building substrates as a result of the flooding. A number of windows and cast stone window seals were broken, and need to be replaced, with the brick veneer indicating signs of cracking and breaking in areas throughout the site. In addition, the exterior and unit entry doors were damaged throughout the site. All of these conditions allow for the increased penetration of rain into the units, causing further failure of painted surfaces that contain lead. Further, climate control in these units is absent, increasing the surface humidity and deterioration of lead encapsulants. These noted conditions confirm that substrate deterioration has occurred in the units, and failure of lead encapsulants is consistent at Lafitte, as it is at other developments.

The erosion of the soils and grass cover at the development, due to the flooding from Hurricane Katrina, significantly increases the exposure potential lead in soil by tracking the lead into the units. Soil lead concentrations are well documented, and have been shown to be elevated. Increased availability of direct contact with the soil during access and egress to the units, coupled with windblown dusts entering the units through the damaged areas of the building envelope, are anticipated to directly increase the likelihood of lead exposure.

### 3.3.4 Mold Inspection and Sampling

PPM Consultants, Inc. (PPM) was contracted by HUD to complete an evaluation of habitability, including an inspection for mold impact and other environmental hazards. An air sample was collected in each unit that was inspected. PPM inspected eight hundred ninety-four (894) housing units. Of the units inspected, eight hundred forty-two (842) units had some evidence of mold growth. Environmental issues and potential hazards were identified in one hundred sixty-five (165) of the units. One hundred forty-three (143) units were found to have collapsing ceilings and/or roof damage. Five hundred nineteen (519) units were observed to have some sort of water damage. (PPM 2006)

### 3.4 Funding

Funding for the first phase of the construction includes \$27 million in CDBG/HANO funds, a HANO loan of \$8.5 million, \$118.7 million in tax credit equity, \$2.1 million in deferred developer fees, a conventional mortgage of \$36 million, and \$4.1 million in other funds.

## 4.0 HISTORICAL PROPERTIES

### 4.1 NRHP Listed Historical Properties

A historical property is defined by 36 CFR Part 800.16 (l)(1), as any prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. The NRHP listing documentation for each listed property or district is included in **Appendix A**. The locations of the NRHP properties are illustrated on **Figure 1**.

#### 4.1.1 General Laundry Building

The General Laundry Building is located at 2512 St. Peter Street, approximately 200 feet northwest of the Lafitte Housing Development. The property was listed on the NRHP on December 27, 1974. The property was listed under Criterion C for the Art Deco architecture on an industrial building. The General Laundry Building, erected in 1939, is one of three intact Art Deco/Aztec Style buildings surviving in New Orleans. Only the façade of the building is listed on the NRHP, which includes an area one room deep (approximately 20 feet). The remainder of the building is currently developed as Southern Scrap Metal Company.

The General Laundry Building is included in the APE.

#### **4.1.2 Esplanade Ridge Historic District**

The Esplanade Ridge Historic District, listed on the NRHP on June 30, 1980, encompasses an area in the vicinity of Esplanade Avenue between Rampart Street and Bayou St. John. The Esplanade Ridge Historical District is significant on a state level for the Anglo-American architecture under Criterion C and for its social history under Criterion A. The Esplanade Ridge Historic District is generally residential with scattered neighborhood commercial strips and an intrusion rate of seven (7) percent. The district encompasses approximately four thousand one hundred forty-six (4,146) structures in seven (7) major house types that represents New Orleans architecture from 1830 to 1930.

There are limited effects on the Esplanade Ridge Historical District from the proposed demolition and redevelopment. The area of effect included in the APE is immediately adjacent to the proposed project area and the effect is clearly temporary in nature.

### **4.2 NRHP Eligible Historical Properties**

#### **4.1.2 Lafitte Housing Development**

According to correspondence from SHPO dated December 1, 2006, the buildings at the Lafitte Housing Development are historically significant and meet the criteria for listing in the NRHP. SHPO stated that the demolition of the Lafitte Housing Development “would constitute an adverse effect on a historic property.”

Based on similar properties (i.e., CJ Peete Housing Development), that is listed in the NRHP, we assume Lafitte Housing Development would be eligible under Criterion A. The property is eligible under Criterion A for its association with the establishment of the early federal low-income housing program as defined under the New Deal and President Franklin Roosevelt. It would be significant at the local level as it represents the implementation of federal programs to stimulate the local economy and resolve slum problems.

#### **4.1.3 Adjacent Properties Over 50 Years Old**

Structures over fifty (50) years old, which may be eligible for the NRHP, were observed adjacent to the Lafitte Housing Development. All of the structures to the northeast of the housing development are included in the Esplanade Ridge Historic District and are discussed above. A small number of possibly historic structures were observed northwest and southwest of the Lafitte Housing Development. These structures are included in the APE.

#### 4.3 Archeological Resources

In correspondence from Ms. Pam Breaux, the State Historic Preservation Officer, dated December 1, 2006, Ms. Breaux stated, "it is the opinion of this office that there is a potential for intact archaeological deposits to be encountered during the re-development of this property." As a result, HANO and HUD will authorize an archaeological contractor to conduct a Phase I Cultural Resources Survey.

#### 4.4 Native American/Indian Tribes

According to the SHPO, five Native American Tribes were identified for possible archaeological consultation on the proposed demolition and redevelopment of the Lafitte Housing Development. These tribes are generally identified as being located in the State, but have not been specifically identified with this site. Letters requesting comments as potential consulting parties have been forwarded to each of the five identified tribes provided by SHPO and are included in **Appendix C**.

### 5.0 DIRECT IMPACTS

An adverse effect, as defined by Section 800.5 (a)(1), is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.

#### 5.1 Demolition

The eight hundred ninety-six (896) units at the Lafitte Housing Development are proposed for demolition by HANO and HUD. Lafitte Housing Development suffers from high density, overpopulated units, deteriorated buildings and infrastructure, obsolete building components, hazardous building materials, and building envelopes that are not energy efficient. For those historical properties that would be adversely affected, Historic American Buildings Survey (HABS) documentation, as instructed by the SHPO and will be stipulated in the Memorandum of Agreement (MOA), will be collected. The HABS documentation will include gathering historic pictures/drawings of the properties, preparing written documentation (historic narratives, statements of significance, etc.), acquiring indexed sets of drawings, and taking HABS-quality photographs of all buildings. A draft packet of these materials will be sent to the National Park Service (NPS), ACHP and the SHPO for their review. After comments are received, the complete HABS documentation for Lafitte Housing Development will be submitted in final form as follows: one archival copy and one non-archival

copy will be provided to SHPO (for deposit with SHPO records and the Louisiana State Archives).

## 5.2 Redevelopment

The goal of the project is to convert a conventional public housing development into a new, mixed-income and mixed-use community that includes rentals and home ownership units in New Orleans, some of which may be developed as scattered units in the adjacent neighborhood. The final Master Plan must create a blueprint for a successful, stable, diverse, safe, attractive and sustainable mixed-income community. At this time, the location of the scattered sites in the neighborhood is undetermined.

HANO has selected Providence/Enterprise to redevelop the Lafitte Housing Development site into a vibrant mixed income community to provide both affordable and market rate housing. Providence/Enterprise plans to develop fifteen hundred (1,500) affordable and market rate units on the Lafitte Housing Development site and in the neighborhood. These units are planned to include two hundred seventy-six (276) public housing units, six hundred twenty-four (624) affordable rental units, and six hundred (600) homeownership units.

The New Orleans Neighborhoods Rebuilding Plans were unanimously accepted by the City Council of New Orleans on Friday October 27, 2006 (Motion M-06-460) and sent to the Louisiana Recovery Authority (LRA) for funding. The plans represent the hard work, needs, and desires of communities, affluent and poor, large and small across New Orleans. The plans, in preparation for several months, are the result of the commitment residents have to rebuilding their City and neighborhoods. The Lafitte Housing Development is included in the 6<sup>th</sup> Ward/Treme/Lafitte Neighborhood Rebuilding Plan, available at [www.nolanrp.com](http://www.nolanrp.com).

The redevelopment will occur at a lower density and in accordance with guidance located in the Louisiana Speaks Planning Initiative Book, an initiative of the Louisiana Recovery Authority. In addition, all proposed construction design will be have prior approval from the SHPO and ACHP. All design criteria agreed upon by HANO, HUD, SHPO and ACHP will be stipulated in the MOA.

## 5.3 Economic Impact

ECM Consultants, Inc. prepared three order of magnitude cost estimates to determine the most cost effective option to improve the development. The first cost estimate involves just improving the development to its condition before hurricane Katrina and repairing other non-Katrina related deficiencies (“immediate needs”). The second cost estimate involves demolishing the inside and roof of the buildings and improving the buildings so that they meet current building code and HUD

standards (“modernization”). The third cost estimate involves demolishing the entire development and constructing an entirely new development.

As to the first “immediate repairs” cost estimate, the cost is approximately \$29,516,444.00 million. However, this cost estimate does not include any cost to correct the observed code violations and other critical deficiencies indicated below:

- Electrical (wiring without grounding) - Receptacles throughout do not have a grounding lug; it is a two wire system. The receptacles in the bathrooms and kitchens are not GFCI type. The bedroom electrical circuit breakers are not AFCI, which is also code compliant. There are no outdoor weather-proof GFCI outlets. The location of the power panels is too close to the rear apartment exits, in violation of FIRE codes for clear access. Power panels (inside and outside) are heavily corroded and should not be energized, this represent a severe fire hazard.
- Porches without railings (porches are 30” from the ground and require railings per IBC (2003) - 1012.1 and NFPA 101-7.1.8).
- Building egress stairs (34 buildings-stairs are not of required width per IBC (2003) – 1009.1 – Exp #1 and NFPA 101 – Table 7.2.2.2.1).
- Windows meeting hurricane impact requirement per IBC (2003) – 1609.1.4 for the code requirement.
- The property does not meet the Uniform Federal Accessibility Standard (UFAS), which requires a minimum of five (5) percent of the units to be compliant with Section 504 of the Housing Act of 1973. Only demolition and new construction will ensure UFAS is complied with.
- All walls separating dwelling units shall be a fire-rated wall partition per IBC 708.1, #1 (2003). These fire-rated walls are to extend to the underside of the roof decks.
- Lead Based Paint (LBP) Assessment. An assessment to specifically identify building components containing lead-based paint would be required in conjunction with a major repair or rehabilitation effort. The exterior iron balcony and porch rails have previously been identified as containing LBP and were encapsulated in the 1990s. However, the effects of Hurricane Katrina further deteriorated the encapsulation, such that additional remediation is required. The assessment may identify additional buildings containing lead-based paint that would require remediation.

As to the second “modernization” cost estimate, this cost is about \$149,093,151.00 million. This will bring the buildings up to the current UFAS and UPCS requirements and make the housing acceptable to the general public as desirable housing. This will include complete demolishing of interiors including roofing and rebuilding fifty (50) buildings out of a total of seventy-nine (79) buildings.

As to the third cost estimate, the cost of demolition and new construction for the same square footage of livable space would be approximately \$121,140,271.50

million. The cost of modernization (\$149,093,151.00 million) is about 23% higher than the cost of total demolition and new construction (\$121,140,271.50 million). Therefore, it is prudent to demolish this 65 year old property and rebuild new housing similar to current developments undertaken by HANO on other sites.

Addressing the immediate needs of the Lafitte Development will require an expenditure of over \$29,516,444.00 million. However, after this expense, the buildings will still remain obsolete, potential environmental hazards will still be present, and the buildings would fail to meet the current required applicable codes and safety standards. Per HUD guidelines, these buildings would be considered "housing of last resort" within the community. Thus, this alternative is not recommended.

Rehabilitation cost is \$149,093,151.00 and new construction cost is \$121,140,271.50. Rehabilitation cost is about 23% more than the new construction cost. Therefore, demolition is the logical and most cost effective remedy to ensure the viability of the Lafitte Housing Development. This site and all other HANO sites will soon be operated on Asset Based Management principles. Repairs would not correct all deficiencies. Rehabilitation would leave substrate and structural problems yet to be identified and be prohibitively expensive. Demolition is the correct remedy to ensure that the future residents and management of this site will live in safe, decent and sanitary housing.

#### **5.4 Land Use Changes**

The Lafitte Housing Development is being redeveloped with four hundred-five (405) new residential units. No commercial developments are included in the master plan for this property. The redevelopment of the Lafitte Housing Development will not require the acquisition of any additional land for the first funded phase of development, but land will be acquired for subsequent development of scattered sites, which will be evaluated on a case-by-case basis for each property acquired. No impact to zoning or land use is expected from the proposed project.

Structures built on the property will be owned and operated by different entities, including sole home ownership. It is HANO's intent to enter into a long-term ground lease with the Owner Entity of the project. Although the land will be removed from complete public ownership, the long-term lease will guarantee HANO's involvement of the property into the future.

### **6.0 INDIRECT IMPACTS**

#### **6.1 Visual Impact**

Visual impacts are determined by the highly variable and often subjective responses of individuals to physical objects in their surroundings. The viewscape of the proposed undertaking is in an area dominated by structures that are fifty (50) years

or older. The surrounding community is predominantly one to two family residences. The current viewscape of the Lafitte Housing Development is incompatible and out of character with the nineteenth and twentieth century neighborhoods. Demolition of these structures would have a positive impact on the viewscape of the neighborhood characteristics.

During the redevelopment of the property, the structures will be rebuilt in a lower density and in accordance with guidance located in the Louisiana Speaks Planning Initiative Book, an initiative of the Louisiana Recovery Authority. In addition, all proposed construction design will have prior approval from the SHPO and ACHP. This review will ensure that the new construction maintains the visual integrity of the neighborhoods and a positive visual impact will be afforded.

## 6.2 Air Quality

Lafitte Housing Development is located in an attainment area for all National Ambient Air Quality Standards (NAAQS). The NAAQS were developed and implemented under The Clean Air Act, which was last amended in 1990, which required the United States Environmental Protection Agency (EPA) to set standards (40 CFR Part 50) for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. *Primary standards* set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. *Secondary standards* set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. The EPA also allows states to implement these standards and as such air quality regulations are enforced by the Louisiana Department of Environmental Quality (LDEQ). The following table outlines the NAAQS standards.