



# **RESPONSE:** DEQ'S EMERGENCY RESPONSE EFFORTS IN THE WAKE OF HURRICANES KATRINA & RITA

LOUISIANA DEPARTMENT OF **ENVIRONMENTAL QUALITY**

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

# **Incidents of National Significance**

**Whenever a major disaster of such size and scope (either natural or manmade) occurs and harms or threatens a community or the natural environment, the Secretary of Homeland Security can declare this to be an Incident of National Significance.**

# **Incidents of National Significance**

**Once the President makes the emergency declaration, the Stafford Act is activated; and special response provisions, including the Stafford Act Disaster Relief Fund, can then be used to respond to the disaster.**

# **Incidents of National Significance**

**The National Response Plan (NRP) is the comprehensive response plan for all hazards within the United States structured in a the way responders work together and to provide supporting mechanisms for disasters.**

**Most pollution incidents, especially responses to Stafford Act disasters and emergencies, fall under in the NRP's HAZMAT Emergency Support Function (ESF #10).**

# **Incidents of National Significance**

**The Louisiana Department of Environmental Quality has the following ESF-10 response responsibilities:**

- Primary for nuclear/radiation issues
- Primary for environmental mitigation
- Support for hazardous materials ER
- Support for oil spill response/mitigation

# **LDEQ Incident Priorities**

- Assess Situation
- Request Assistance
- Setup ESF-10 Command Post
- Address Environmental Issues
- Perform ESF-10 Functions
- Evaluate Progress

# SEARCH AND RESCUE

- EPA/LDEQ was initially deployed to conduct sampling and assessment activities.
- Acute life-saving needs called for staff and equipment to conduct search and rescue missions.













30 5:12PM





# **Initial Assessment**

**This catastrophic incident  
exceeded all capabilities  
of the state of Louisiana**

# EARLY RECONNAISSANCE, DAMAGE & ENVIRONMENTAL THREATS ASSESSMENT:



# Reconnaissance

- EPA toxics inventories were reviewed for potential hot spots.
- Prioritization of initial reconnaissance missions utilized current Emergency Planning & Community Right to Know Act (EPCRA) and Toxics Release Inventory (TRI) data.



- Prioritization of Coast Guard Reconnaissance based on oil storage capacities identified in Facility Response Plans (FRPs).





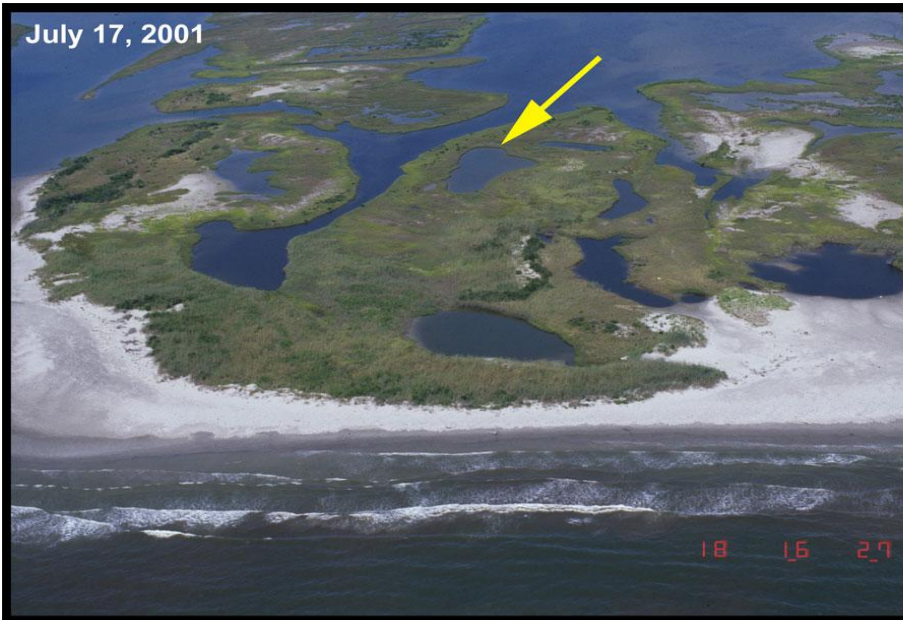
I-10 Twin Span - Slidell, LA







# Coastal Erosion - Chandeleur Islands

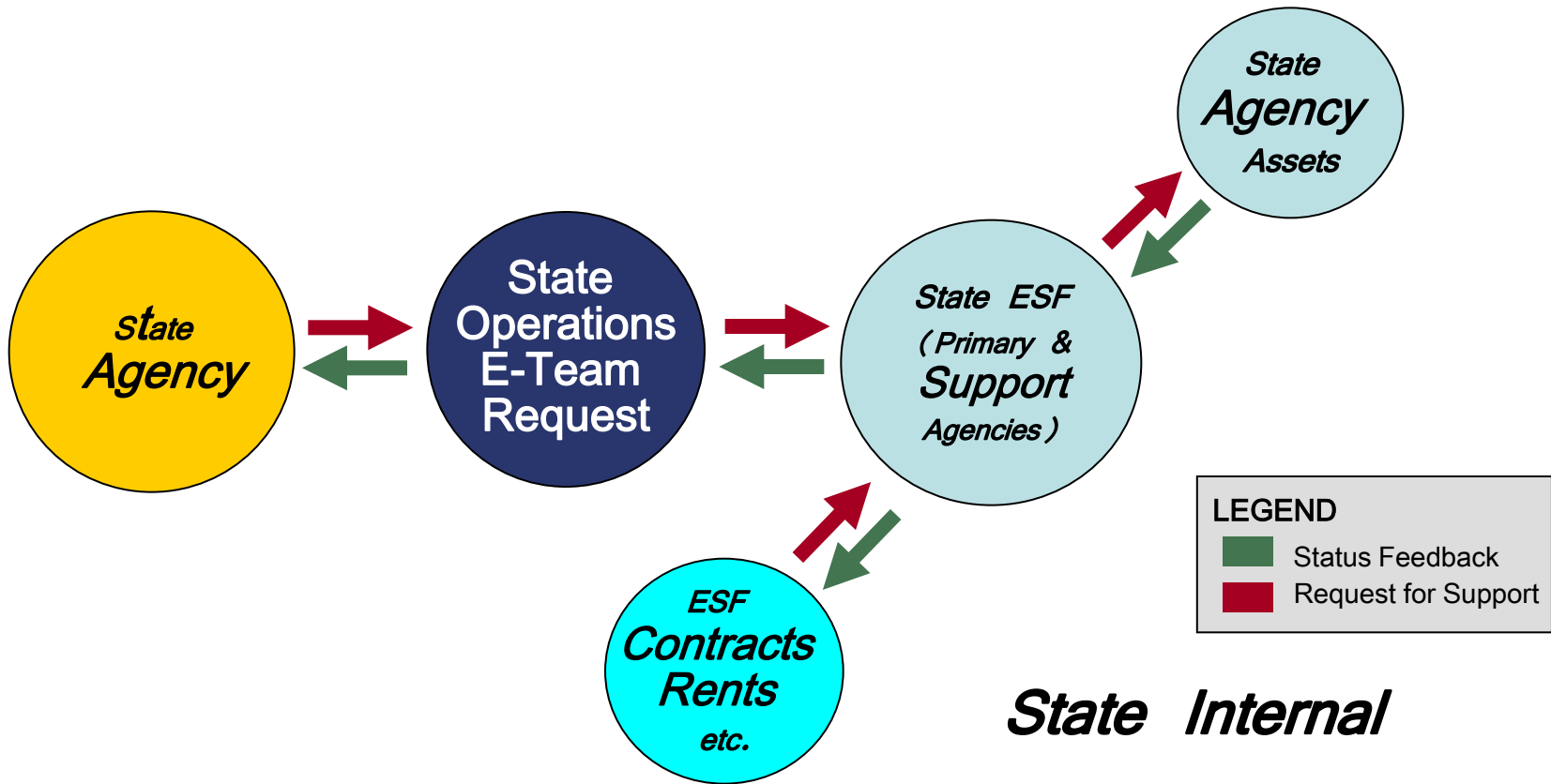


# **Request Assistance**

**- Requesting Federal assistance through FEMA requires completing an Action Request Form (ARF). FEMA selects the federal agency. The agency is given the mission assignment based upon the merits of the ARF.**

# *Concept Of Operations*

## Requests



# FEMA Action Request FORM 90-136 For Federal Assistance

U.S. Department of Homeland Security Federal Emergency Management Agency		See Reverse for Paperwork Disclosure Notice	OMB No. 1650-0047 Expires November 30, 2007
<b>ACTION REQUEST</b>			
I. REQUESTING ASSISTANCE (To be completed by Requestor)			
Requestor's Name (Please Print) <i>SKUR MASON</i>		2. Title <i>EPA-FOSC Region 6</i>	3. Phone No. <i>940-898-5251</i>
4. Requestor's Organization <i>EPA Region 6</i>		5. Fax No. <i>940-898-5231</i>	6. Email Address <i>MASON.SKUR@EPA.GOV</i>
II. Requested Assistance (Completed by Requestor)			
1. Description of Requested Assistance: <i>Conduct field operations for activity and disposal of oil and hazardous as requested by the state of LA. Provide capability to conduct removal and disposal of actual and potential oil discharges. Releases of hazardous materials, pollutants and contaminants to include</i>			
12. Quantity <i>Locations in LA</i>	3. Priority: <input type="checkbox"/> Lifesaving <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium	<input checked="" type="checkbox"/> Life sustaining <input type="checkbox"/> Normal	4. Date and Time Needed <i>8/29/05</i>
5. Delivery Site Location: <i>Personnel assigned to support this mission should coordinate their delivery site location with the EPA-FOSC at this in Baton Rouge, LA (898-10)</i>		6. Site Point of Contact (POC)	
9. State Approving Official Signature <i>[Signature]</i>		7. 24 Hour Phone No.	8. Fax No.
		10. Date <i>8/24/05</i>	
III. Supporting the Request - Review/Coordination (Operations Section Only)			
1. <input type="checkbox"/> OPS Review by: _____		2. <input type="checkbox"/> Donations	
<input type="checkbox"/> Log Review by: _____		<input type="checkbox"/> Other (explain): _____	
<input type="checkbox"/> Other Coordination by: _____		<input type="checkbox"/> Requisitions	
<input type="checkbox"/> Other Coordination by: _____		<input type="checkbox"/> Procurement	
<input type="checkbox"/> Other Coordination by: _____		<input type="checkbox"/> Interagency Agreement	
<input type="checkbox"/> Other Coordination by: _____		<input type="checkbox"/> Mission Assignment	
Immediate Action Required: <input type="checkbox"/> Yes <input type="checkbox"/> No		4. Date	5. Time Assigned
Type of Action Request: <input type="checkbox"/> ESF# <input type="checkbox"/> Other		7. Assigned to	
IV. STATEMENT OF WORK (Operations Section Only)			
1. OFA Action Officer:		2. 24 Hour Phone No.	3. Fax No.
		5. 24 Hour Phone No.	6. Fax No.
7. Justification / Statement of Work:			
8. Estimated Completion Date:		9. Cost Estimate: <i>\$ 2,600,000</i>	
V. Action Taken (Operations Section Only)			
<input type="checkbox"/> Accepted		<input type="checkbox"/> Rejected	
Disposition:		<input type="checkbox"/> Accountable Property Coordinated with APO	
TRACKING INFORMATION (FEMA USE ONLY)			
ECAPS/NEMIS Task ID:		Action Request No.	Program Code/Event #: <input type="checkbox"/> Originated as verbal
Received by (Name and Organization):		State:	Date/Time Submitted:

FEMA Form 90-136, NOV 04 (This particular form has been updated for compatibility with DART)

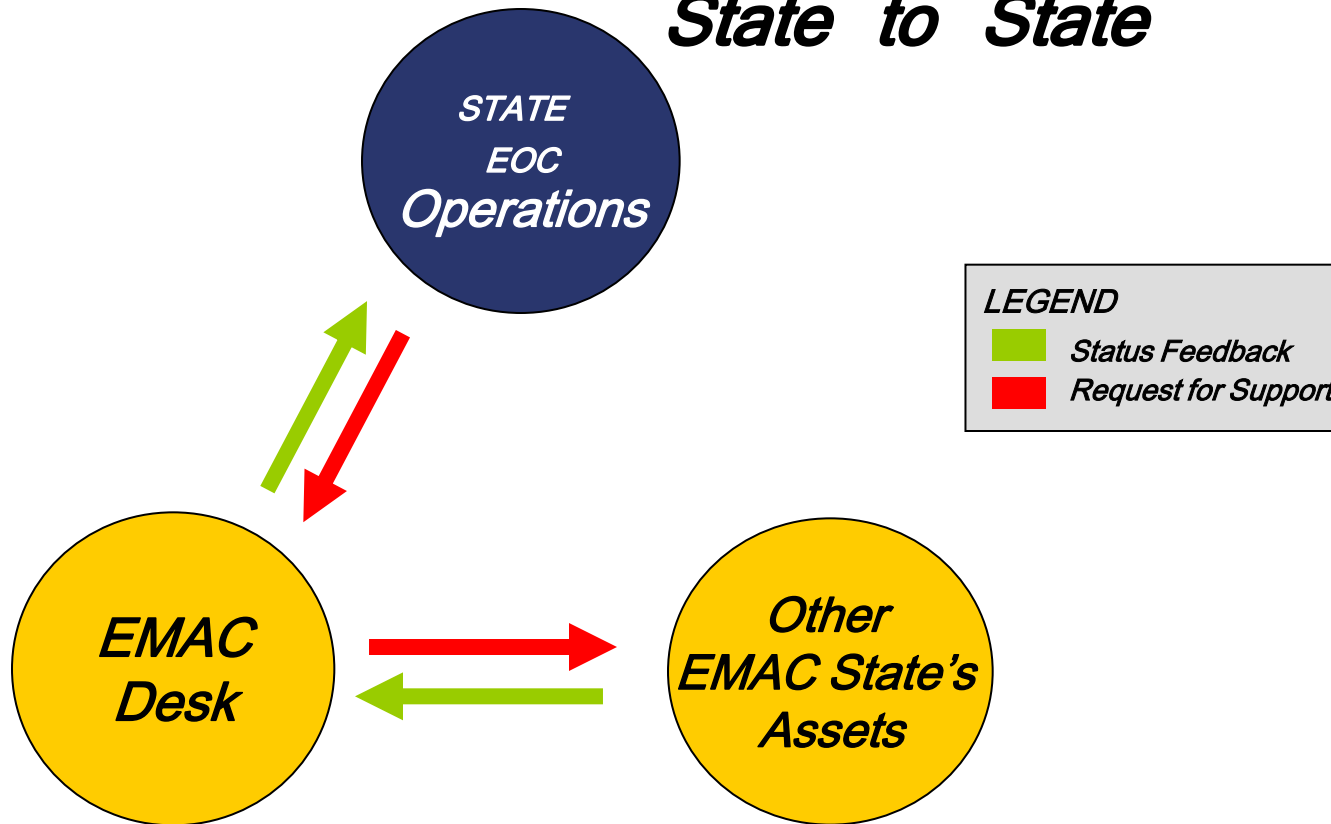


# **Request Assistance**

- Requesting assistance from another state requires the use of EMAC.**

# *Concept Of Operations Requests*

## *State to State*



PAGE THREE  
PART IV  
REC.A. STATE OF LOUISIANA and STATE OF ARKANSAS

The Louisiana Department of Environmental Quality requests the following personnel and resources:

6 - Compliance/Inspection Trained Environmental Scientists (or equivalent) and  
1 - Supervisor for a period of 30 days. These 7 - individuals should be capable of performing daily assignments for the environmental assessment of hurricane damaged areas of Louisiana.


This team must include vehicle transportation and personal protective equipment capable to fulfill this mission. The specialized equipment shall include all the necessary safety requirements as defined in 29CFR 1910.120 as pertaining to personal protective equipment for Level D hazards operation. This team will be utilized as supplemental manpower and will function under the direct supervision of the LDEQ Management and will work directly with comparable LDEQ Personnel.

The LDEQ commitment:

1. LDEQ will provide sleeping accommodations dormitory style at the LDEQ Headquarters in Baton Rouge.
2. LDEQ will provide a Meal Ready to Eat (MRE) or equivalent when field work dictates and meals are not readily available. Otherwise, meals will be the responsibility of the individual. LDEQ will reimburse ADEQ at the end of the contract period.
3. LDEQ will provide personal supplies and equipment as necessary for the daily work assignments.
2. LDEQ will provide fuel for vehicles for 30 days.

POC: LDEQ – SPOC – Jeffrey P. Meyers  
225-219-3620 or 225-219-3624  
602 N. Fifth Street  
Baton Rouge, LA 70802

Initials/Date

*JPM* 10-7-05 Cell  
936-  
Oct 15 - Nov 14

# Emergency Management Assistance (EMAC) Interstate Mutual Aid Request

Form REQ-A, 2005

Type or print all information except signatures.

Completed  
10-11-05

**Part I TO BE COMPLETED BY THE REQUESTING STATE**

Date:	10-9-05	Time:	1112 hrs	From the State of:	Louisiana
Contact Person:	Joe Galina, LA EMAC			Telephone:	225-885-7485
				Fax:	225-287-7745
To the State of:	Arkansas			Authorized Rep:	David Maxwell, FAX 501-730-9734
Incident Requiring Assistance: Hurricane-Katrina					

Type Assistance/Resources Needed (for more space, attach Part IV):  
8 compliance/inspection Trained Environmental Scientists (or equivalent) and (1) supervisor for a period of 30 days to perform daily assignments for the environmental assessment of hurricane damaged areas. The team must have vehicle transportation and PPE capable of fulfilling this mission.

POC - Jeff Meyers 225-215-3880 or call 225-938-8831

Date & Time Resources Needed:	10-15-05	Staging Area:	Dept. of Environmental Quality
Approximate Date/Time Resources To Be Released:	11-14-05		
Authorized Official's Name:	L. Colonel Doran	Authorized Official's Signature:	<i>[Signature]</i>
Title:	Dep. Director	Agency:	Louisiana OHSEP
		Mission No.:	0805-793

**Part II TO BE COMPLETED BY THE ASSISTING STATE**

Contact Person:	DANNA MCGINTY	Telephone:	501-730-9751	Fax:	501-730-9754
Type of Assistance Available: See Attached					

22 OCT 05 *[Signature]*

Date & Time Resources Available From:	10-16-05	To:	11-13-05	Staging Area Location:	LDER HQ BATON ROUGE
Approx. Total Cost of this Deployment for which Reimbursement will be Requested: \$ ATTACHED					
Trans. Costs from Home Base to Staging Area:		\$ ATTACHED		Trans. Costs to Return to Home Base: \$ ATTACHED	
Logistics Required from Requesting State (for more space, attach Part IV):					
Authorized Official's Name:	DAVID MAXWELL	Title:	DEPUTY DIRECTOR		
Authorized Official's Signature:	<i>[Signature]</i>	Agency:	ADEM		
Dated:	OCTOBER 10, 2005	Time:	1315 hrs	Mission No.:	0805-793

**Part III REQUESTING STATE'S APPROVAL**

Authorized Official's Name:	L. Colonel Doran	Title:	Dep. Director		
Signature:	<i>[Signature]</i>	Agency:	Louisiana OHSEP		
Dated:	10-10-05	Time:	hrs	Mission No.:	0805-793

Additional Information:

10-10-05 100% FEMA match expires 10-26-05. Jeff Meyers informed that he will incur 25% of costs after 10-26-05

15:35  
JMX

# **Setup the ESF-10 Command Post**

**Identify all partners for the initiation of  
Unified Command**

- 1. LDEQ**
- 2. LOSCO (Oil Spill Coordinator)**
- 3. USEPA (all regions)**
- 4. US Coast Guard (all strike teams)**

# Address Environmental Issues

- **Environmental Monitoring and Reconnaissance**

1. Air Quality

2. Floodwaters

3. Sediments

4. Debris

- **Oil Spills (US Coast Guard)**

# EPA Mobilized Specialized Air Monitoring Equipment



**ASPECT aerial monitoring system**

**Airborne Spectral Photometric  
Environmental Collection  
Technology**

**EPA's mobile air monitoring lab**

**Trace Atmospheric Gas Analyzer (TAGA)**



# ENVIRONMENTAL SAMPLING AND ASSESSMENT: Air Quality-New Orleans Area



- Fully operational since Sept. 14, 2005
- No exceedances of Louisiana or EPA's Air Quality Standards
- VOCs (14 samples since Katrina, 100 parameters per sample)
- 5760+ hours measured since Katrina for the parameters below:
  - Carbon Monoxide
  - Hydrogen Sulfide
  - Nitrogen Oxides
  - Ozone
  - Particulate Matter 2.5 (PM<sub>2.5</sub>)
  - Sulfur Dioxide (SO<sub>2</sub>)





ST. TAMMANY  
PARISH

Lake Pontchartrain

ORLEANS  
PARISH

New Orleans

Lake Borgne

JEFFERSON  
PARISH

ST. BERNARD  
PARISH

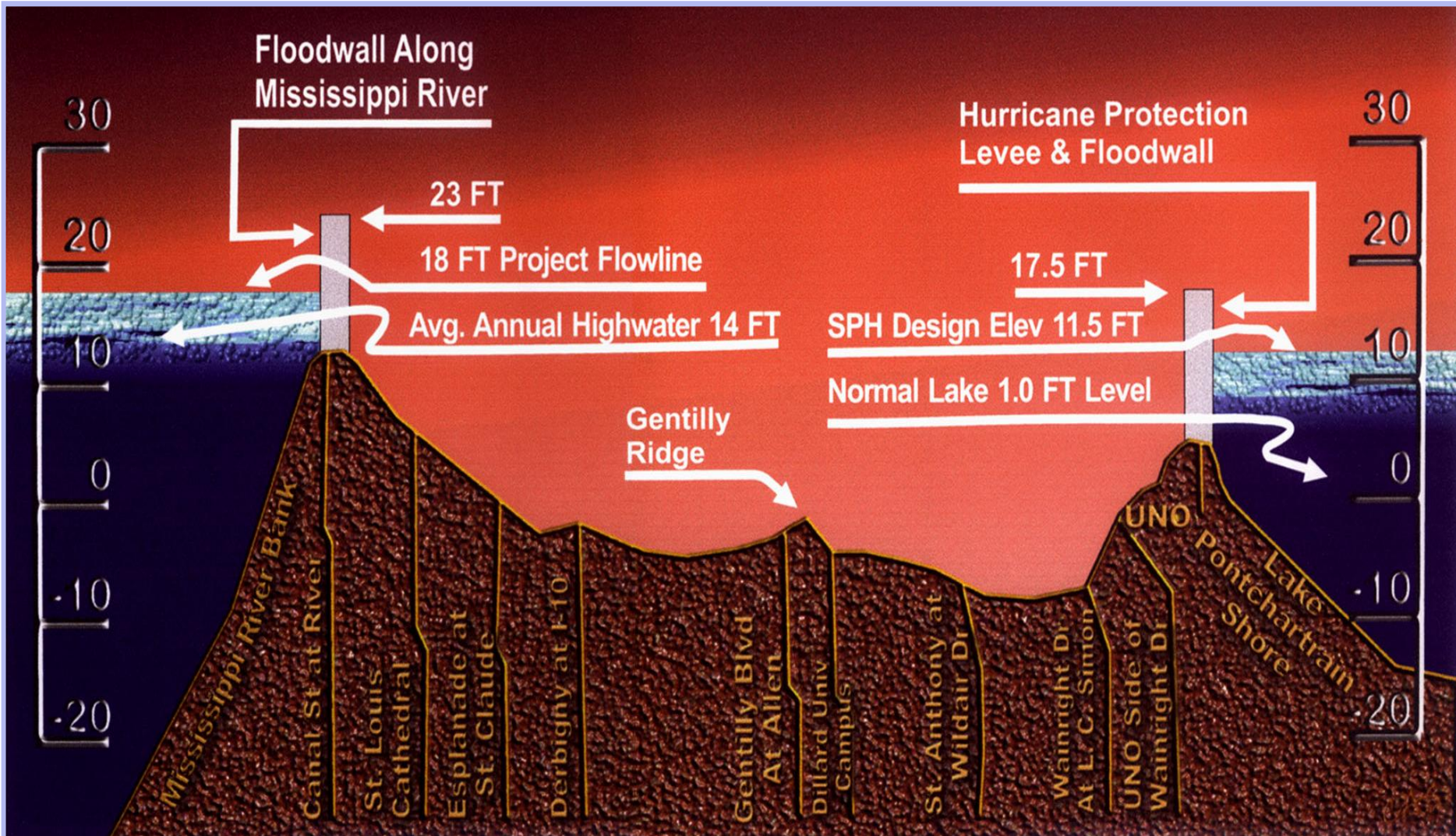
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ST. CHARLES  
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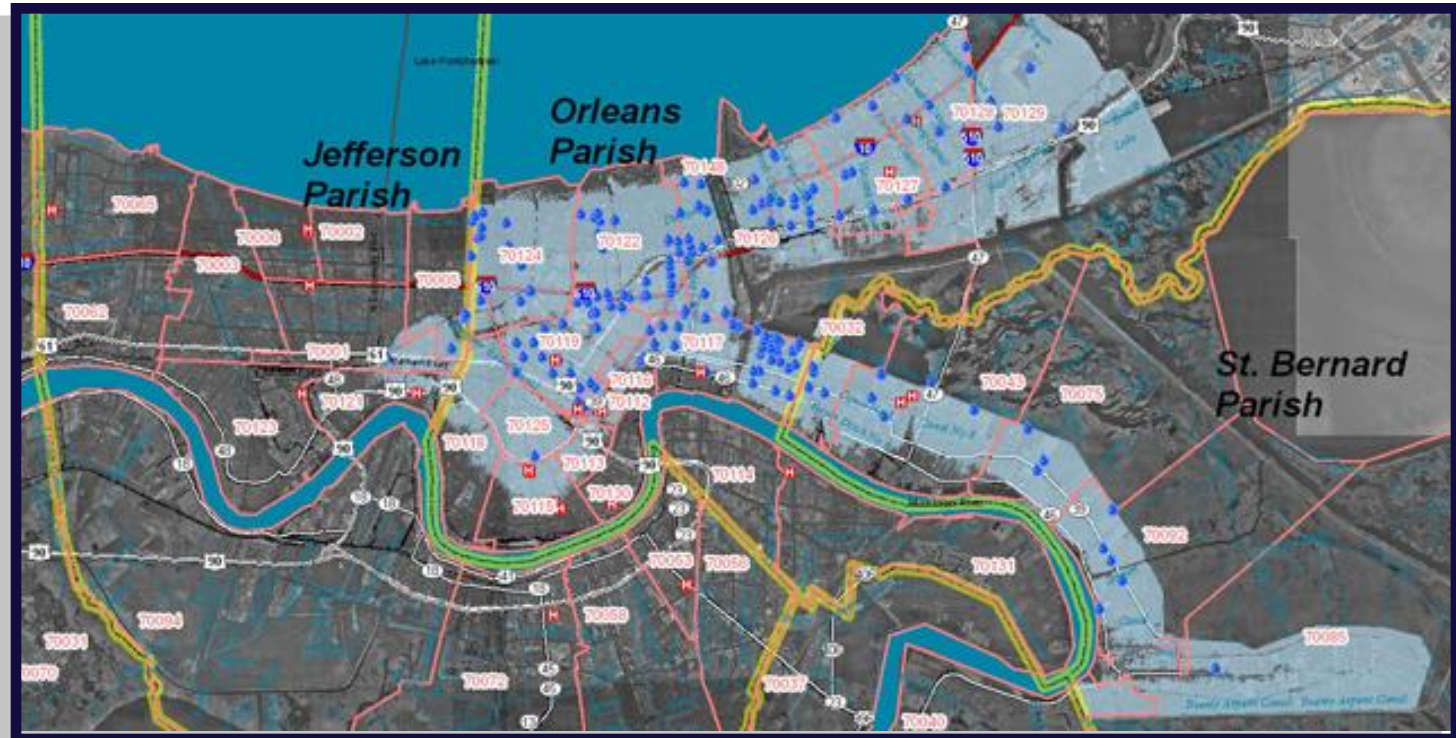
Lake Cataouatche

▲ Pump Stations  
— Levees

# About New Orleans . . .

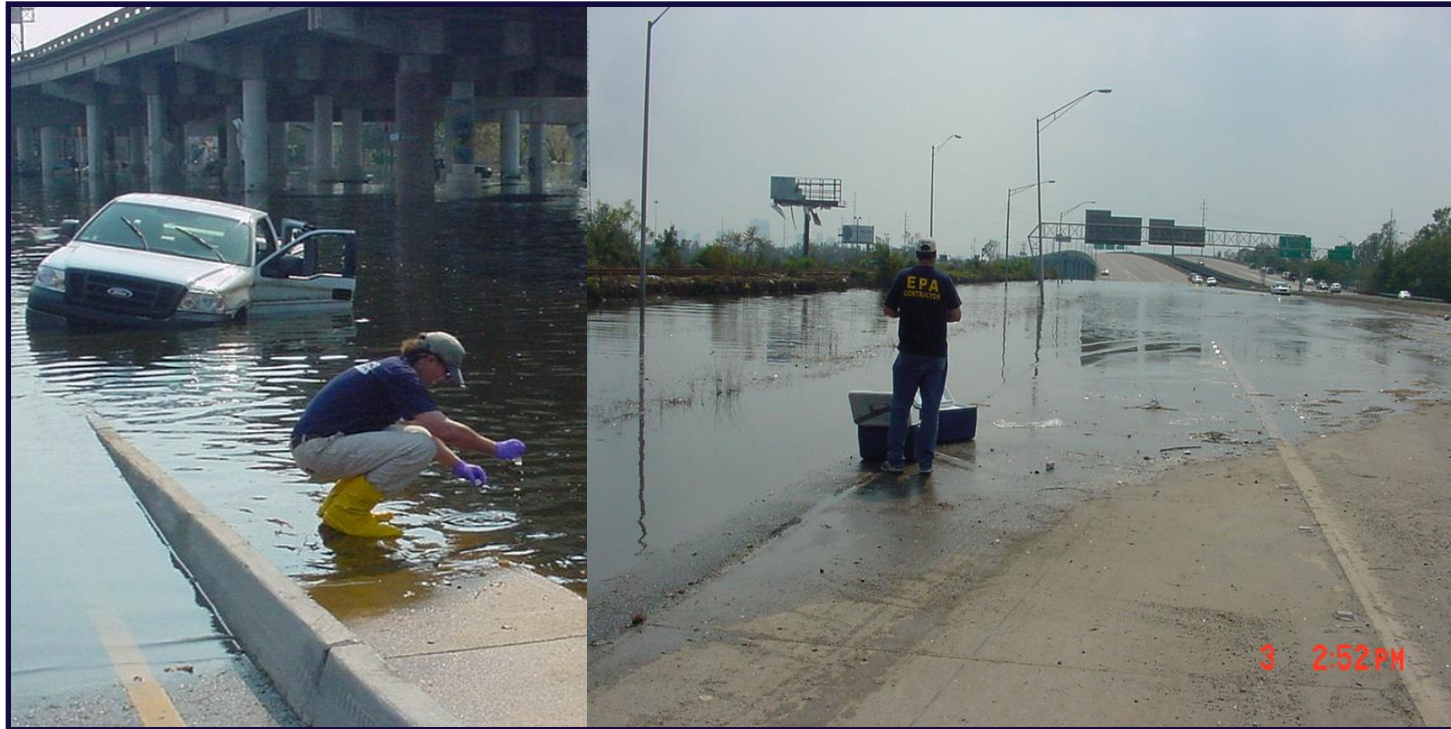


# ENVIRONMENTAL SAMPLING AND ASSESSMENT:



# ENVIRONMENTAL SAMPLING AND ASSESSMENT:

Water Sampling - New Orleans Area



**Flooded commercial and residential areas,  
wastewater plants, drinking water facilities,  
areas in the vicinity of Superfund sites**

# ENVIRONMENTAL SAMPLING AND ASSESSMENT: Surface Waters-Lake Pontchartrain



Total estimated volume pumped from New Orleans to Lake Pontchartrain was 8.86 billion cubic feet or 4.5% of the volume of Lake Pontchartrain.

# ENVIRONMENTAL SAMPLING AND ASSESSMENT:

Surface Waters-Lake Pontchartrain and surrounding waters

- Used 49 historic water quality sites plus 9 new sites to assess impacts to area water bodies
- Conducted more than 55,000 analyses for water quality
- Conducted biotoxicity testing on floodwaters pumped into the lake



# **Sediment/Soil Sampling in Katrina Flooded Areas**

Over 1000 soil/sediment samples collected

- Samples analyzed for over 200 chemicals
- Tiered approach with multiple phases (Phases I, II & III)





# ENVIRONMENTAL SAMPLING AND ASSESSMENT: Sediments



**Considerable sampling and analysis of sediments deposited throughout the flooded areas was done to address public health concerns**







# Oil Spills

- Estimate from all oil discharged 8-9 million gallons.
- Exxon Valdez 10 – 11 million gallons discharged.



# Bass Oil

- Largest Katrina release



- 4 million gallons discharged to Mississippi River.
- Coast Guard is charged with Federal lead for oil spill clean-up activities to waterways.









# Murphy Oil

- 1 million gallons released to floodwaters



- St. Bernard Parish – Impacted by Katrina and re-flooded by Rita
- Spill affected 1/3 of a large residential community (~10,000 residents affected)



# Emergency Response Activities



# Chlorine Cylinder Recovery



# Propane tank recovery





# Debris Management

- Being sorted into 6 categories of waste: green, household, construction, chemical, appliances and vehicles.

- Disposal of 22 million tons of debris.
- More than current landfill capacity can hold.
- More than any American city produces in a year.



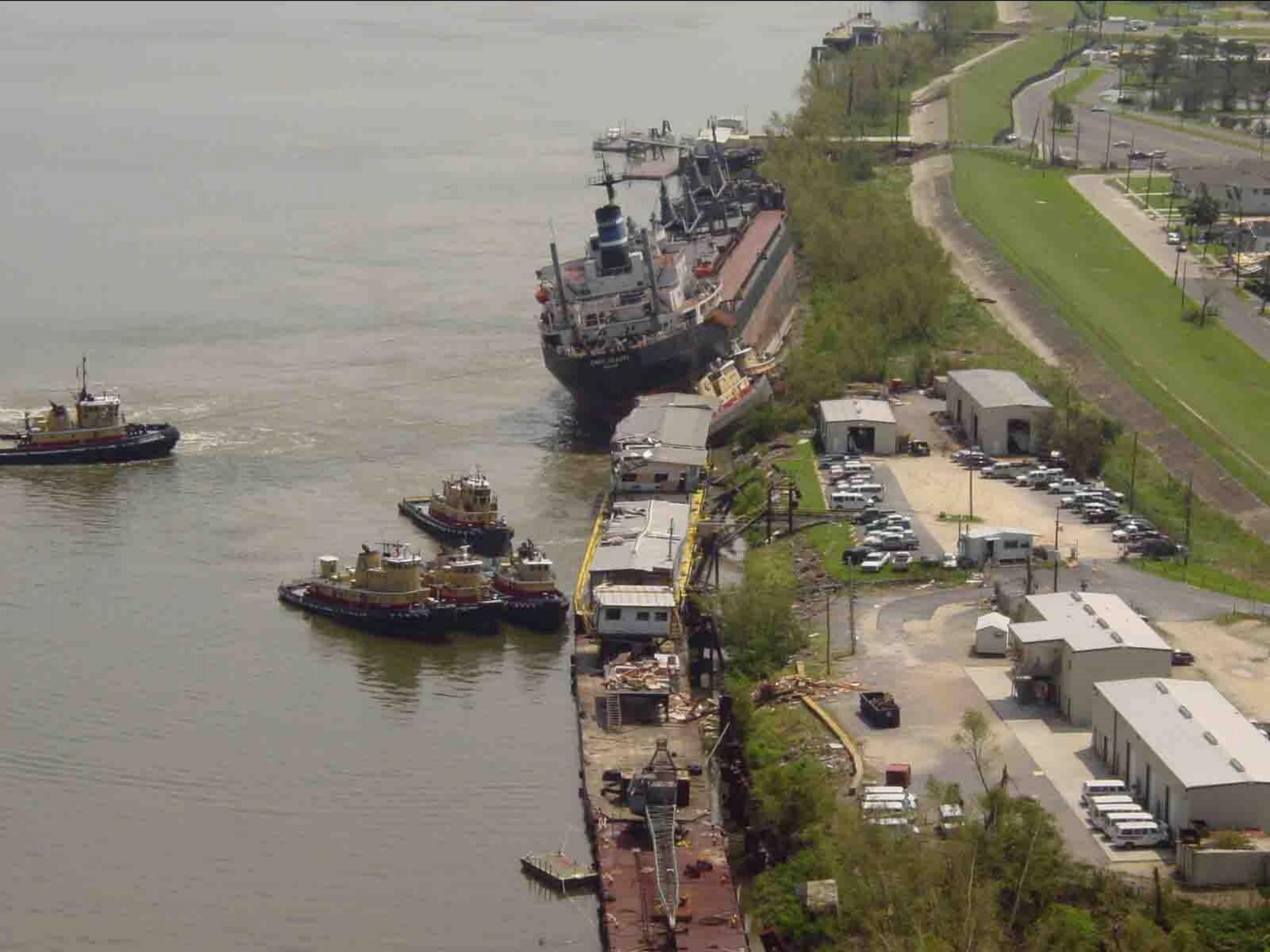
# Boats and Cars



- 60,000 boats were damaged or destroyed.

- 360,000 cars need to be drained of fuel and oil, with batteries removed before they can be recycled.













# **Perform ESF-10 Functions**

- **Confirm/Secure radioactive materials**
- **Continue Mitigating Oil Spills**  
**(coordinating with US Coast Guard)**
- **Respond to HazMat ERs**
- **Collect Household Hazardous Wastes**
- **Collect White Goods/Retrieve CFCs**
- **Collect Orphan Containers**
- **Collect Abandoned Ammunition/Firearms**
- **Mitigate Abandoned School Chemistry Labs**

# HOUSEHOLD HAZARDOUS WASTE COLLECTION

- EPA's Community Involvement Coordinators are working with community stakeholders and have distributed over 850,000 flyers in 32 Parishes.









GASOLINE  
BULKING AREA  
NO IDLE OR FUELS BURNING

Enterprise

Enterprise

Enterprise



# White Goods

- EPA working with the Army Corps of Engineers on recycling white goods.



- Refrigerators are cleaned out, drained of oil and Freon, crushed, melted down and recycled.
- Mold, maggots and foul odors pose challenges.
- Two landfills in Gentilly and Jefferson Parish prepared to process more than 350,000 refrigerators.







# Orphan Containers





10/18/2005







# **Evaluating The Progress**

- **What Worked?**
- **What Were the Problems?**
- **What Was Successful?**

# **What Worked?**

## **Unified Command**

- EPA**
- LOSCO**
- LDEQ**
- US Coast Guard**

# What Were the Problems?

**Regulatory inflexibility**

**Inconsistent guidelines**

**Attitudes/Interpretations**

**Private Property Access**



# **What Was Successful?**

**Deploying federal personnel from across the country**

**Integrating highly motivated individuals into NIMS**

**Overcoming challenges from many entities**

**Coordinating large scale contracting resources**

**Setting new standards for future responses**

**Establishing new friendships among career professionals**

# **What Was Successful?**

**Emergency declarations allowing for:**

**Temporary discharges of wastewater from potable water treatment systems in the emergency area**

**Temporary sanitary discharges from sewer treatment facilities**

**Temporary authorization for debris management sites and staging areas**



# Contact:

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Division Administrator  
[Jeff.Meyers@LA.GOV](mailto:Jeff.Meyers@LA.GOV)

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Baton Rouge, La 70821-4312

