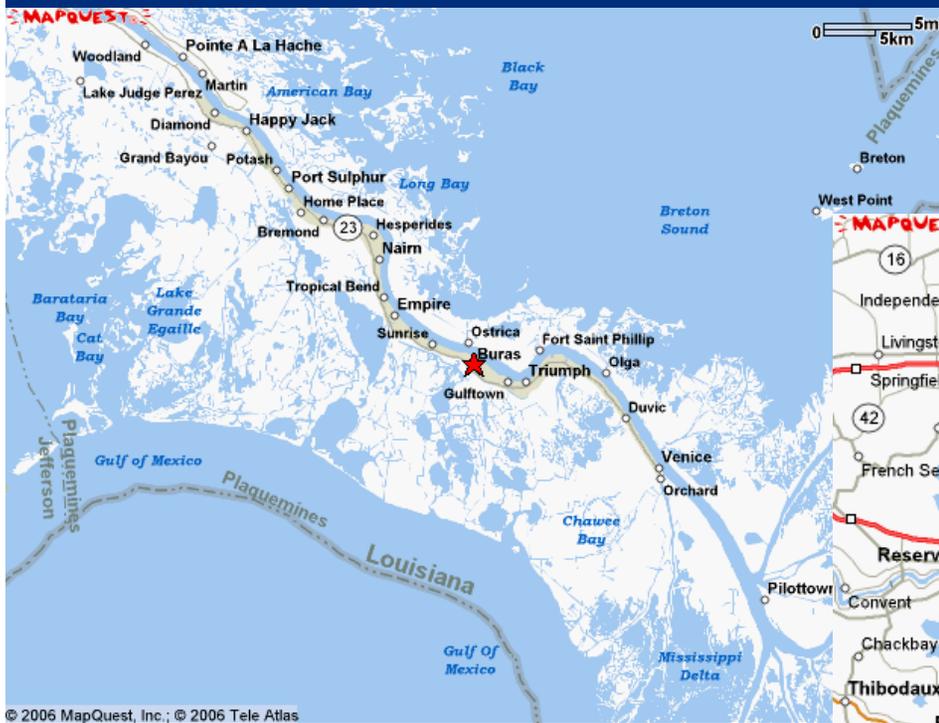


OSHA Emergency Response & Resources

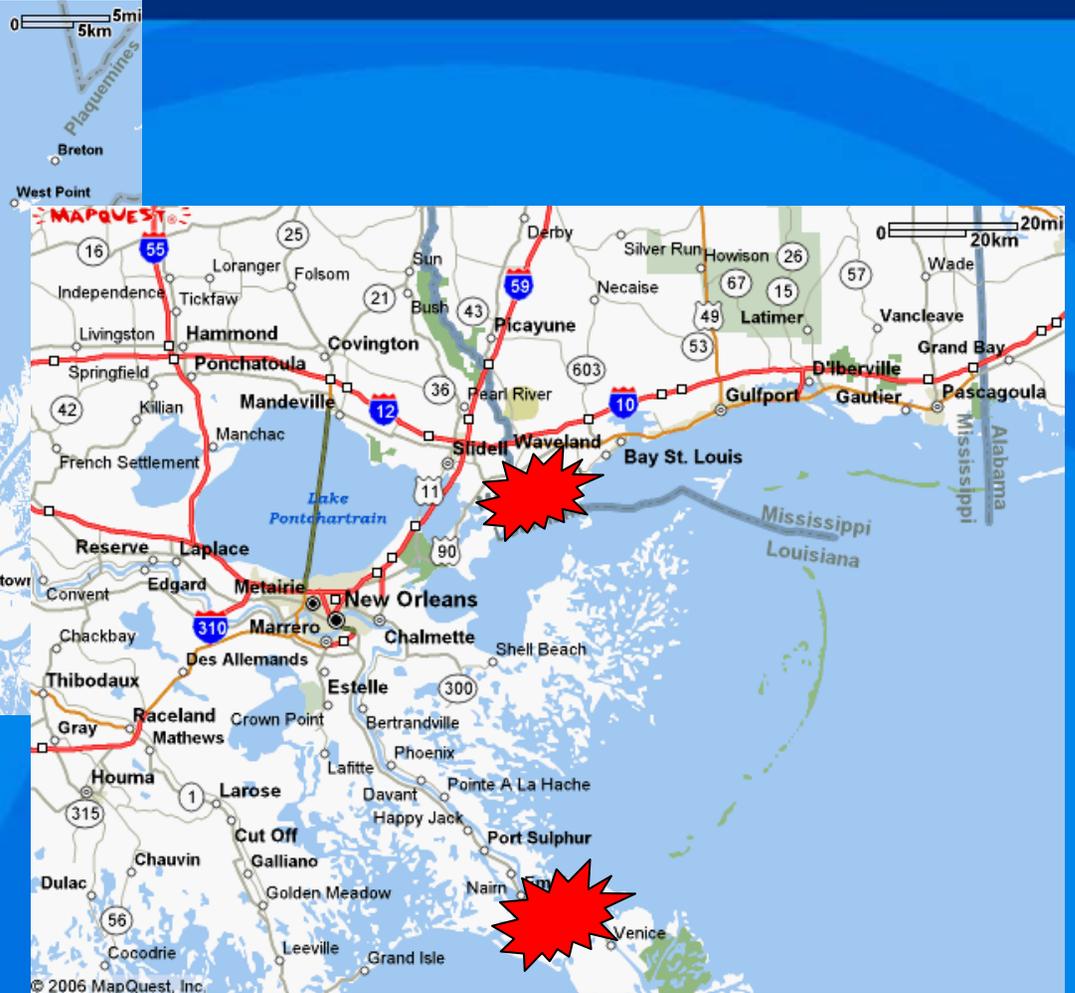
Glenn Lamson, CIH
OSHA Health Response Team



Location of Landfall Buras-Triumph, Plaquemines Parish



© 2006 MapQuest, Inc.; © 2006 Tele Atlas



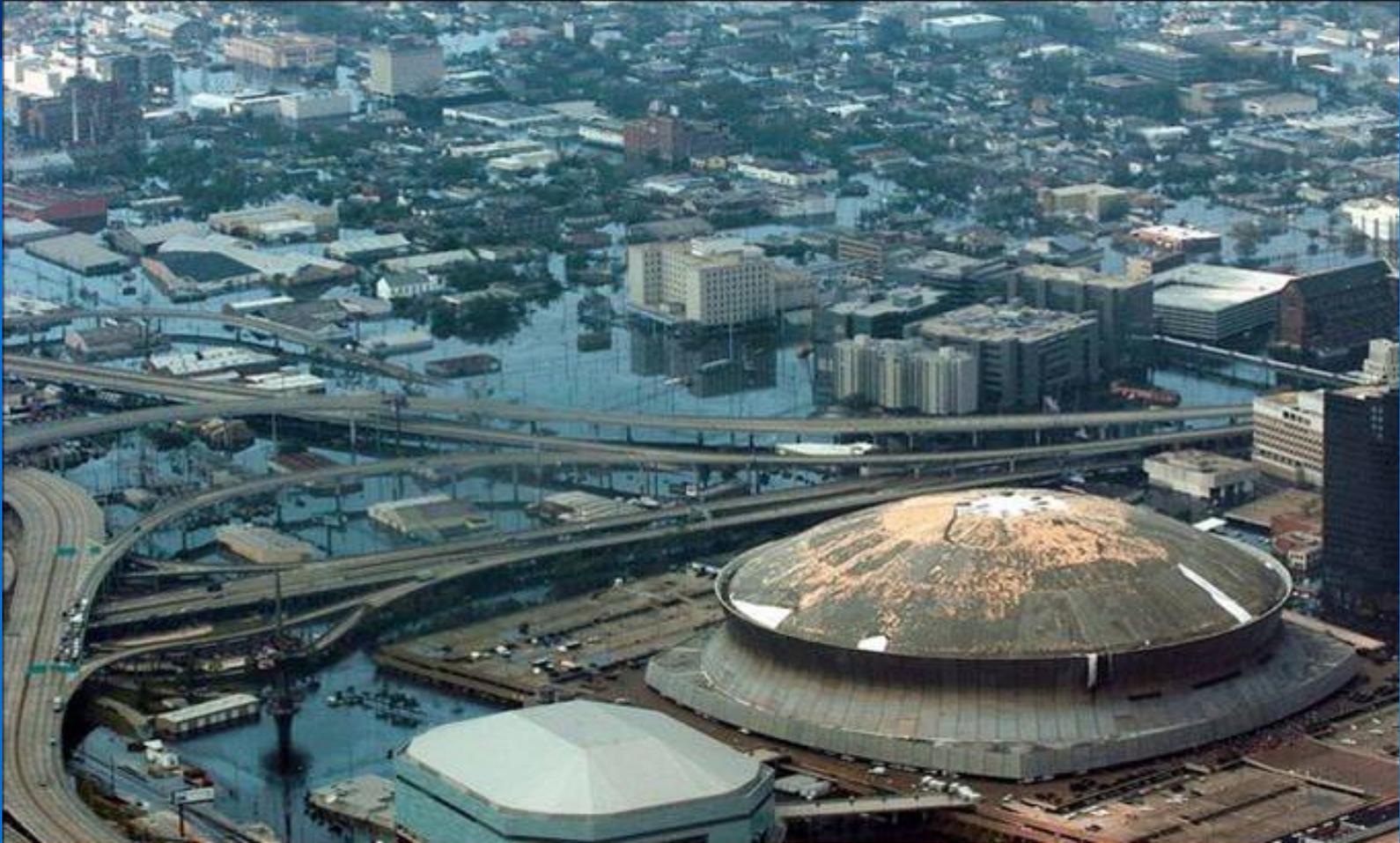
© 2006 MapQuest, Inc.

Buras Water Tower



New Orleans Floods

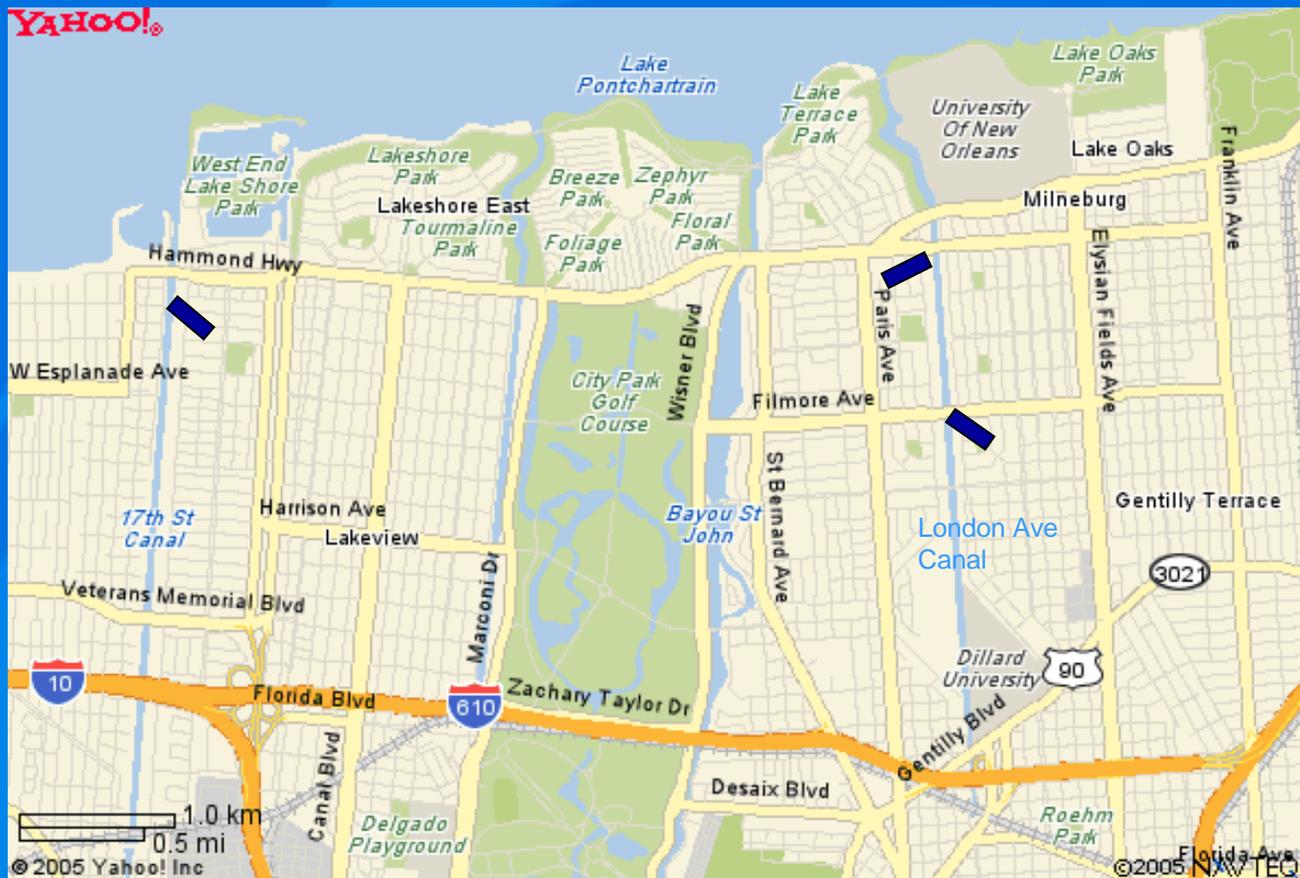
Over 250 Billion gallons of water



43 Days to Drain

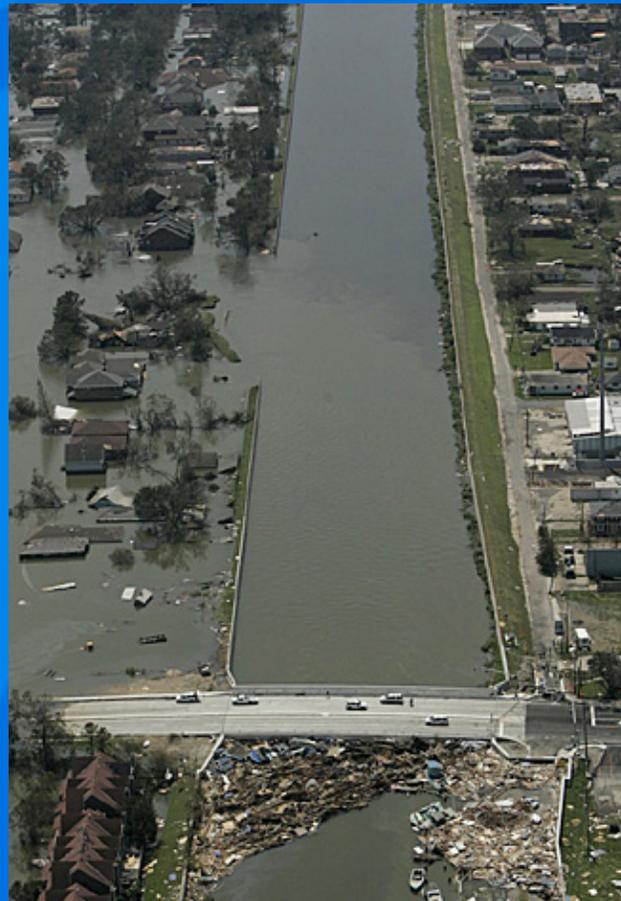


Lakeview Levee Breaches

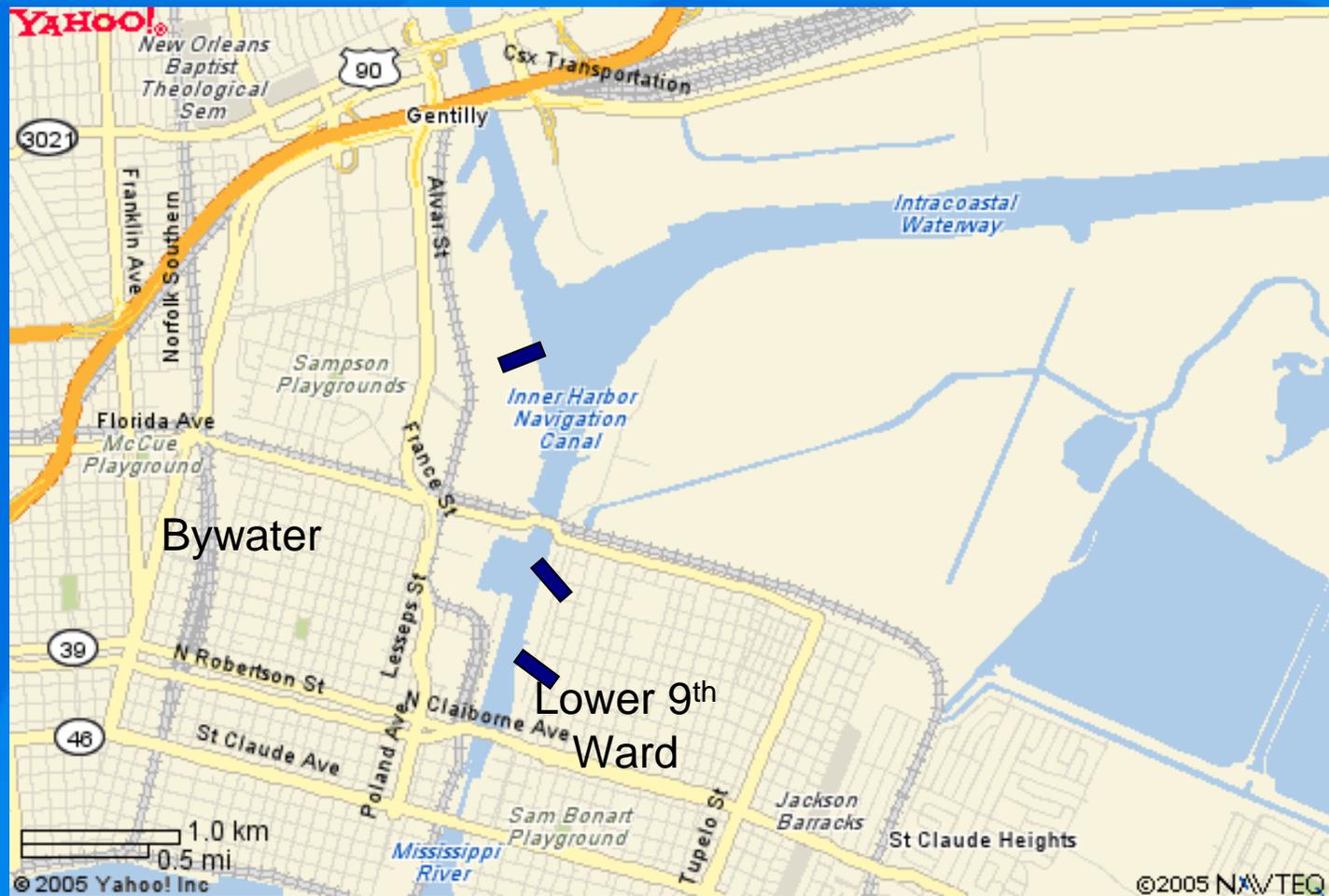


17th Street Levee Breach

- 17th Street Canal



9th Ward Levee Breaches



9th Ward Levee Breach



I-10 Bridge







Baton Rouge Staff Conducts Initial Assessments of Damage



OSHA Responds Sets Up Norco Base Camp



Oh, Home on the range....



Where they Eat, Sleep & Work



And Work ...



And Send Crews Out To Work ...



And Work ...



Issues

Logistics

- Sleeping accommodations
- Bathing & laundry facilities
- Work areas
- Maps
- Utilities
- Fuel and maintenance for vehicles
- Safe food, water & supplies
- Evacuation plans
- Interaction with host facility
- Access to medical care
- Safety and security
- Working with local law enforcement

Effective communications

- Other agencies
- Between command post and field teams
- With regional office
- With national office

Access to money

- No ATMs

Adverse weather condition (i.E. Rita & tornados)

Common Hazards

- Electrical
- Tree Trimming
- Heat Stress
- Sanitation



Electrical Hazards

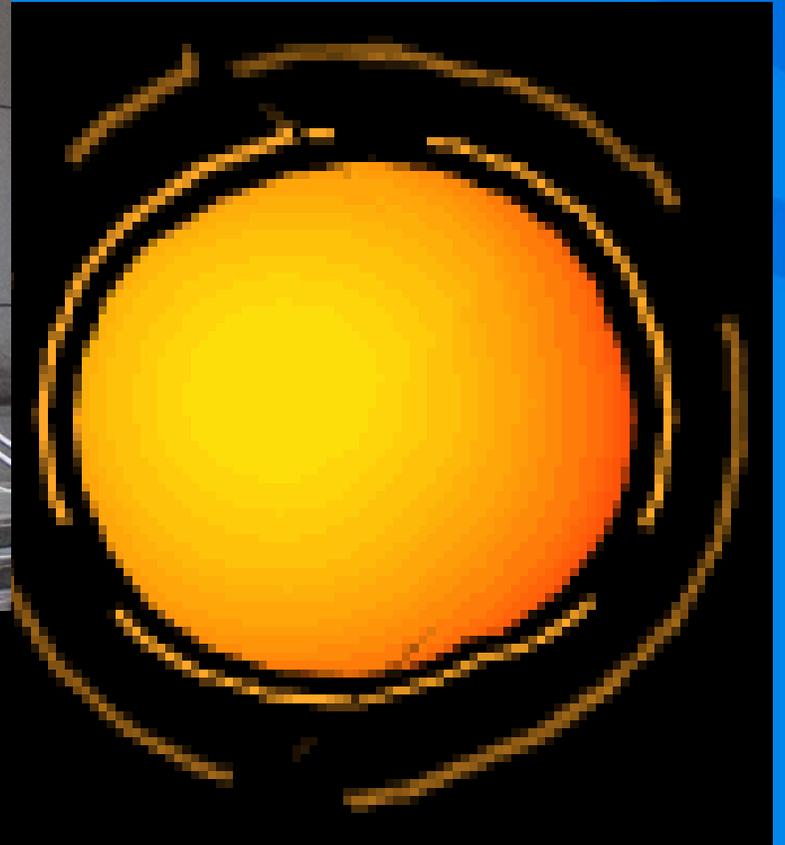


Tree Trimming/Removal



10.02.2005 11:54

PPE & Heat & Humidity = A Deadly Mix



Sanitation

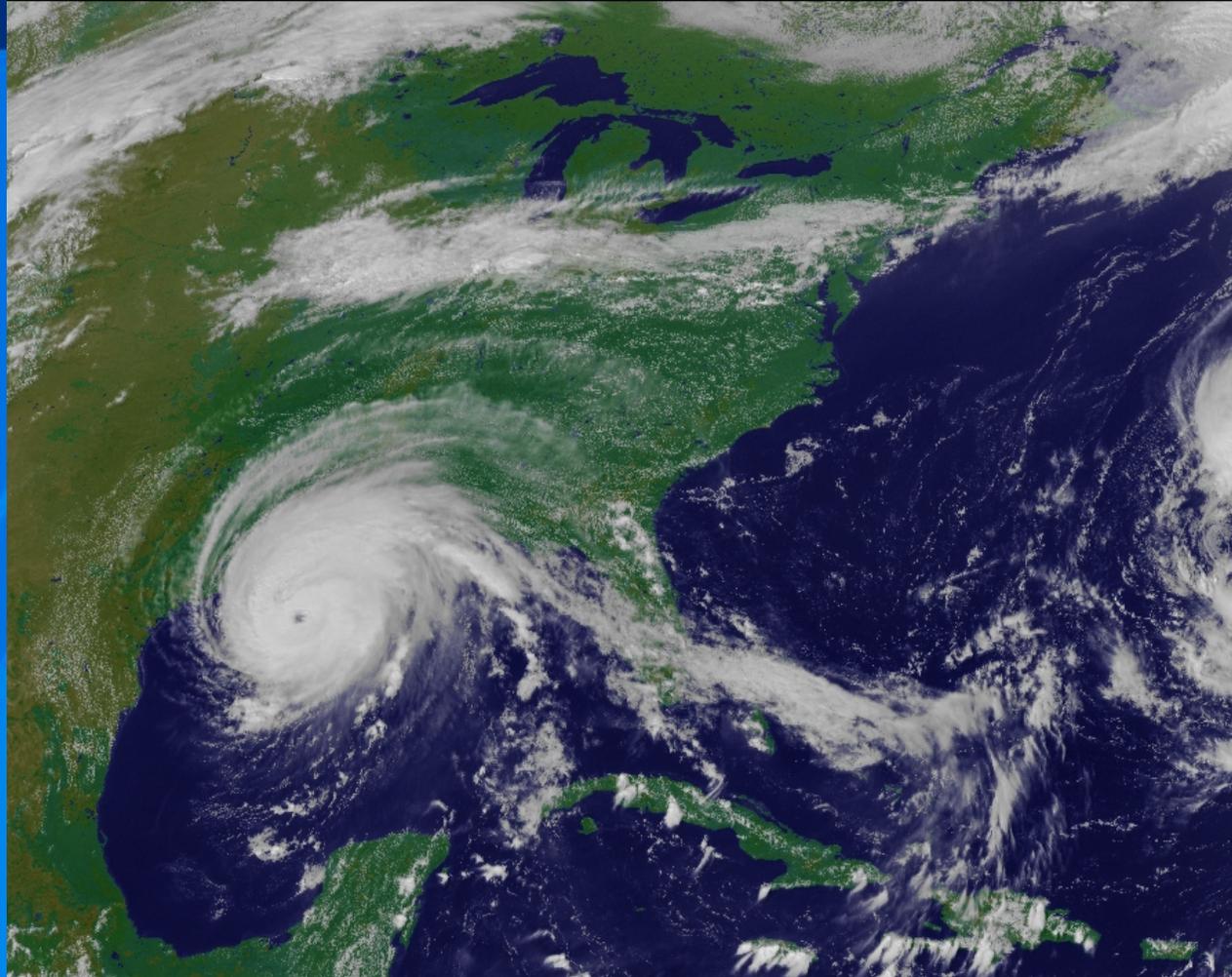


Along Came Rita 9/24/05

NOAA GOES-12

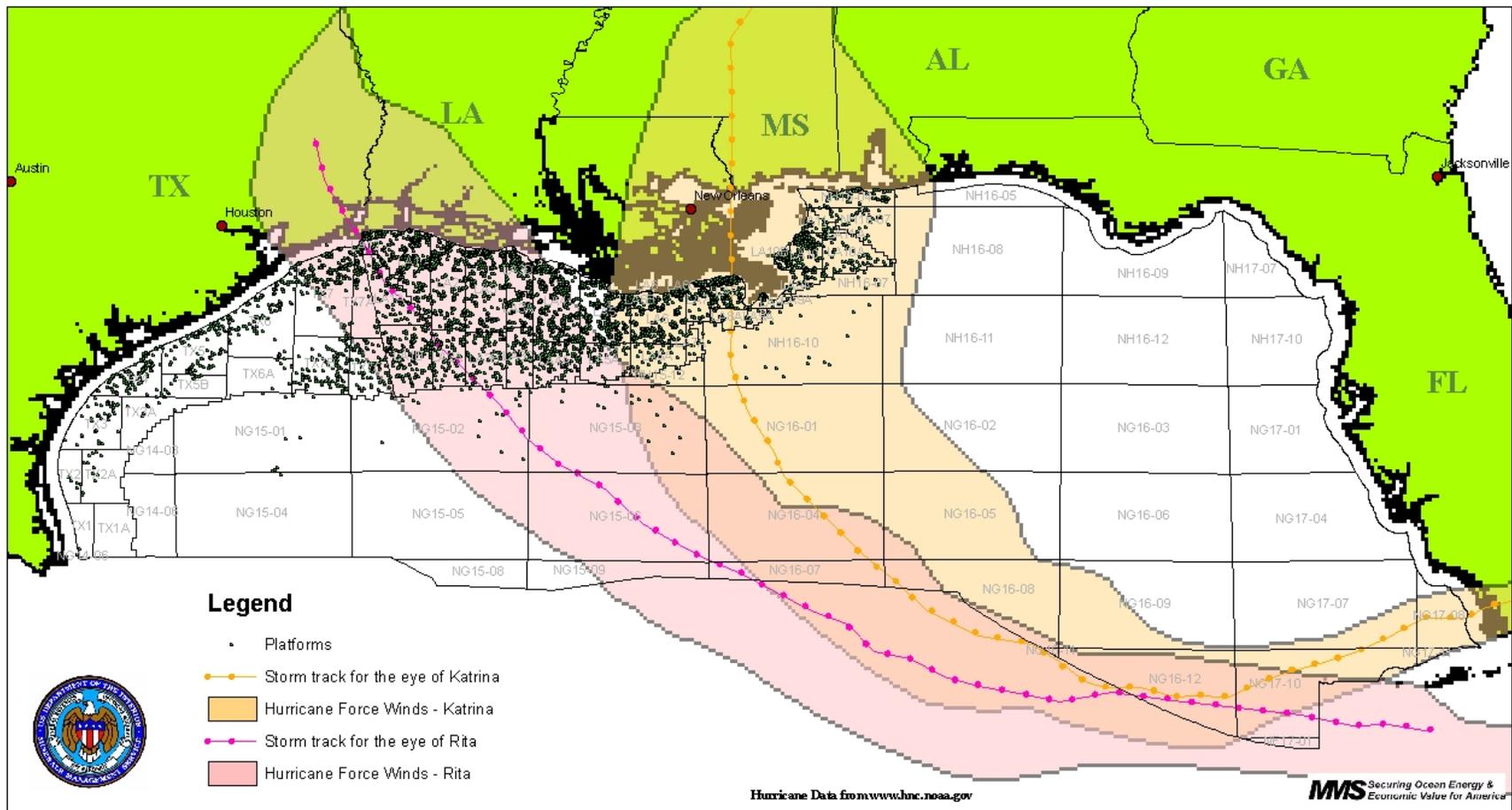
050923 1859 UTC

NASA GSFC Lab for Atmospheres



Paths of Destruction

Hurricanes Rita and Katrina, August - September 2005



Effects of Rita

- Demolished towns along the southwestern coast of Louisiana.
- Caused second flood in Orleans Parish.
- Spreading resources and personnel across southern Louisiana.
- Requested the assistance from Houston north to cover southwestern parishes.

National Response Plan

- Created via Homeland Security Presidential Directive – 5
- Aligns Federal coordination structures, capabilities and resources into a unified, all-discipline and all-hazards approach to domestic incident management
- Specifies a role for OSHA

OSHA's Role within the NRP

- **Worker Safety and Health Annex**

- Ensures that threats to responder safety and health are anticipated, recognized, evaluated and controlled consistently so that responders are properly protected during incident management operations.
- OSHA is the coordinating agency providing technical assistance for carrying out incident safety management activities including:
 - Identification and characterization of incident hazards
 - Assessments and analyses of health risks and exposures to responders
 - Medical monitoring
 - Incident risk management

Worker Safety & Health Annex

Actions

- Provide occupational safety and health technical advice and support to the JFO Safety Officer
- Develop a site-specific occupational safety and health plan and ensure consistency
- Identify and assess health and safety hazards
- Carry out responder personal exposure monitoring
- Provide responder medical surveillance and medical monitoring
- Assess responder safety and health resource needs
- Develop, implement, and monitor an incident personal protective equipment (PPE) program

Worker S&H Annex

Actions

- Collect and manage data (exposure data, accident/injury documentation, etc.)
- Communicate with labor unions, contractors, and other organizations regarding responder safety and health issues
- Coordinate and provide incident-specific responder training
- Provide psychological first aid during and after incident response and recovery activities
- Identify appropriate immunization and prophylaxis for responders and recovery workers

Worker Health & Safety Plan (HASP)

- Basic safety and health requirements for Federal workers and contractors involved in response and recovery operations.
- Each agency and contractor must establish a safety and health plan consistent with HASP.
- Outlines basic safety and health hazards with protective measures.

Introduction to ICS

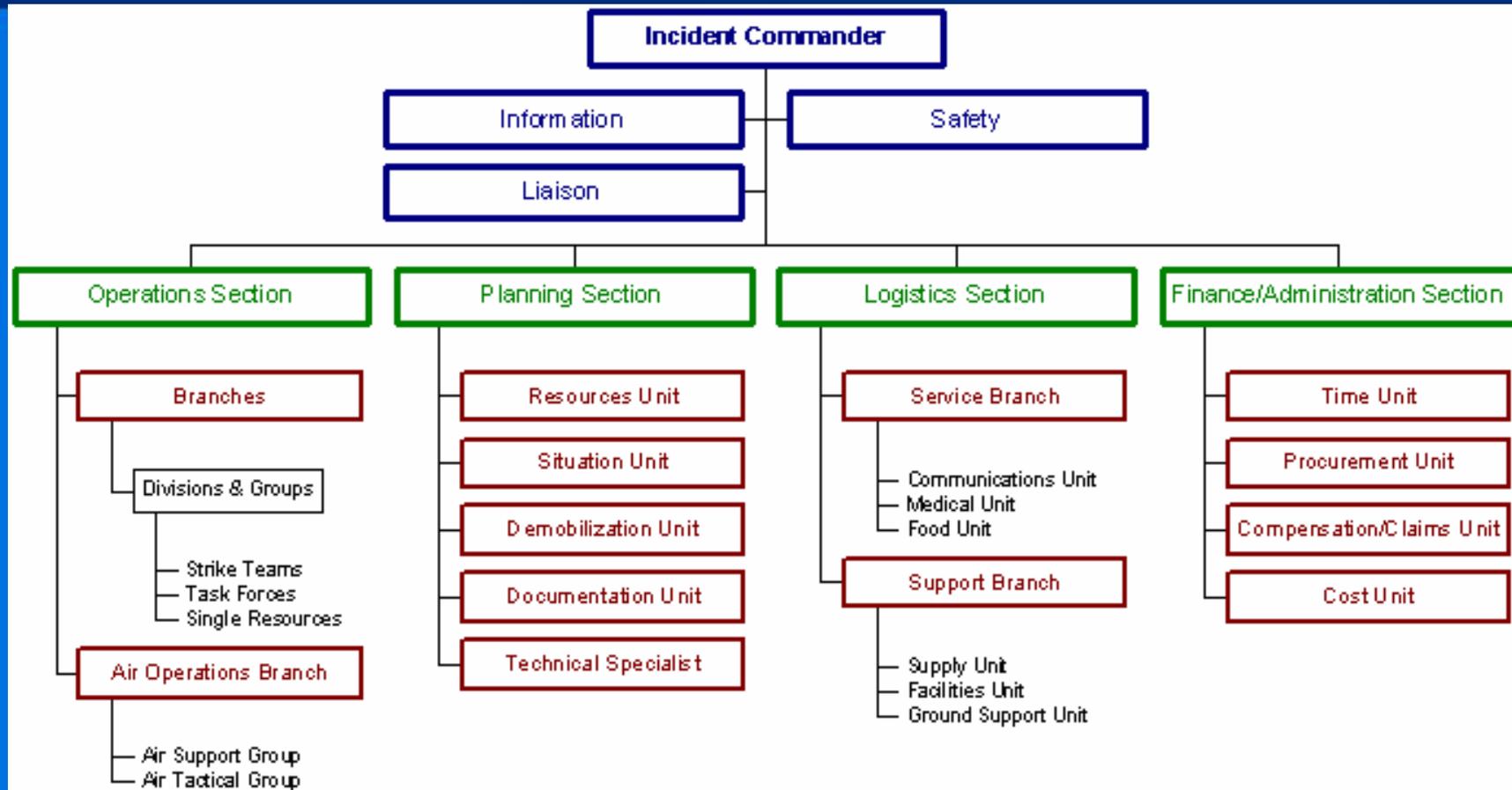
Incident Command System

- Developed early 1970s by California wild land firefighters who needed a scalable command structure
- Provides a structured organization for managing responses of all sizes
- More information at www.nifc.gov

Benefits of ICS

- Easily allows a single incident commander to manage all aspects of a response
- Scalable to fit all sizes of responses as they grow and contract
- Uniform across all response agencies. Specifically mandated in the National Incident Management System (NIMS)

ICS Organizational Chart

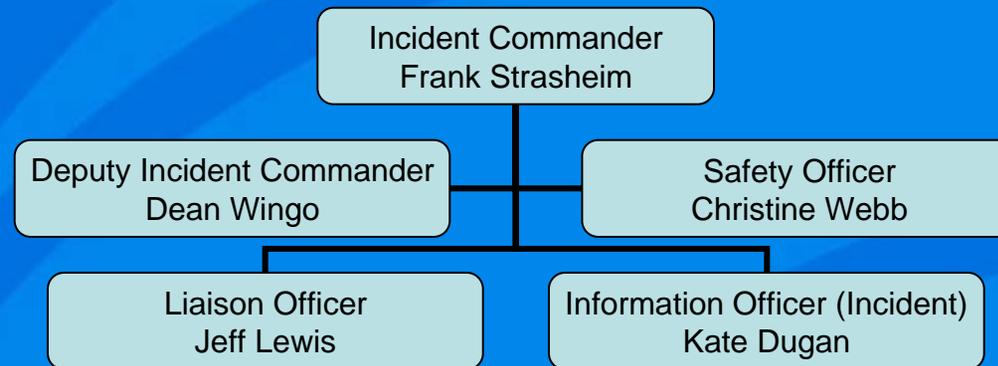


NOLA OPERATIONS

- Staff
- Rotation
- Assignment
- Interventions
- Sampling

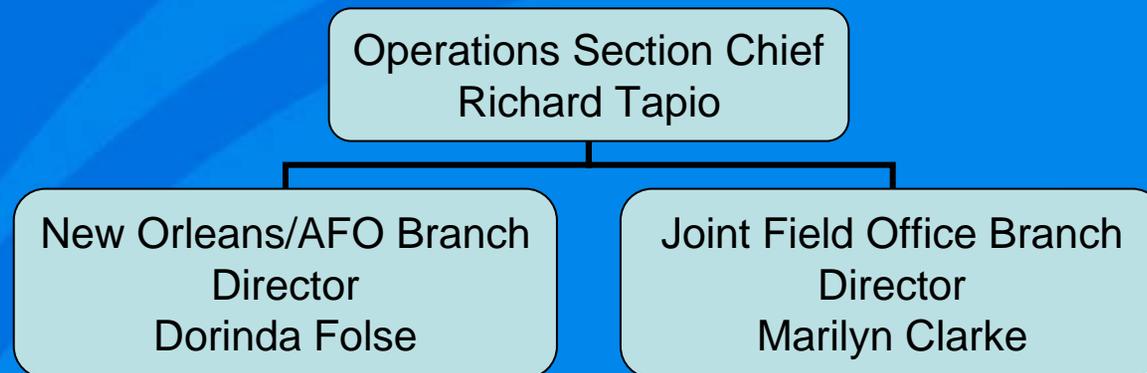


Operation Hurricane Katrina OSHA Command Staff



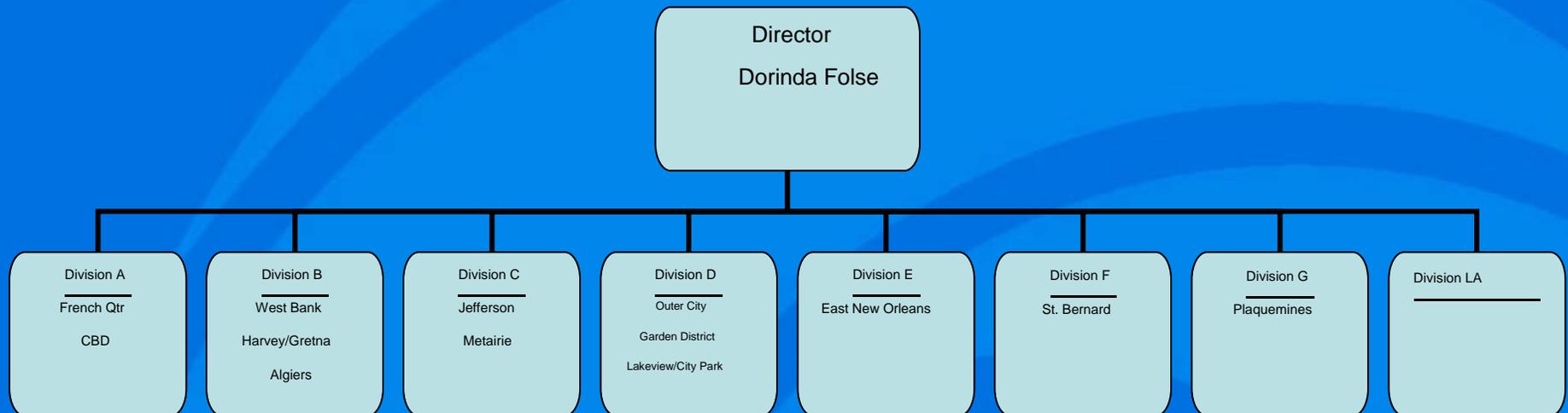
Operational Period February 24-27, 2006
0000-2400 hrs

Operation Hurricane Katrina Operations Section



Operational Period February 24-27, 2006
0000-2400 hrs

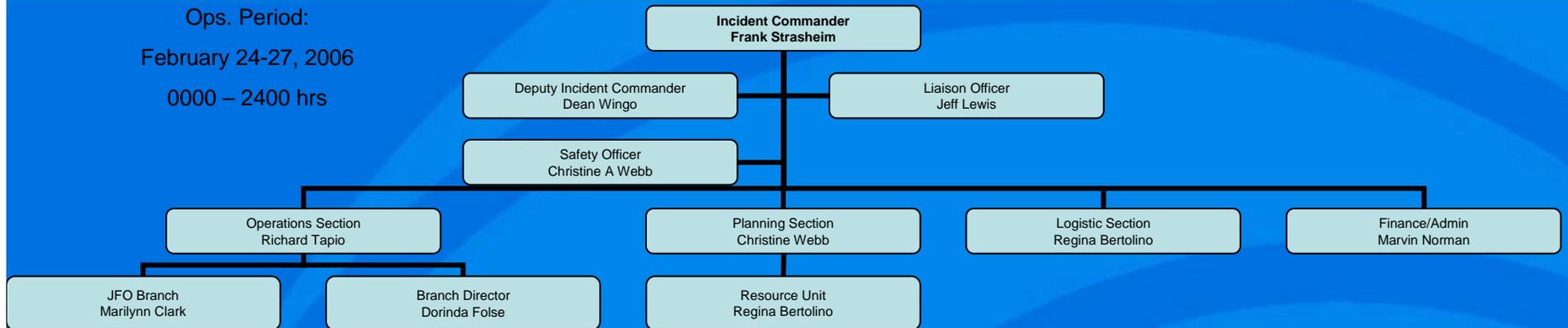
OPERATION HURRICANE KATRINA NEW ORLEANS/AFO BRANCH



Operational Period February 24-27, 2006
0000-2400 hrs

Operation Hurricane Katrina

Ops. Period:
February 24-27, 2006
0000 – 2400 hrs



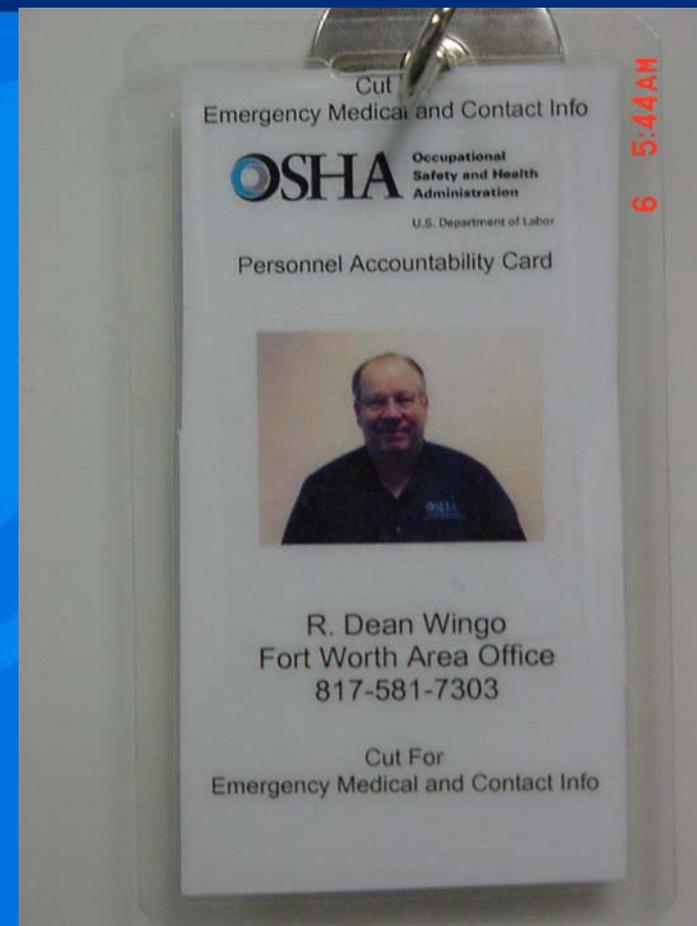
NOLA STAFF

- Operations Chief- Richard F. Tapio
- Administrative Assistant- Regina Bertolino.
- Operations Director- 30 day rotations
- Planning Chief-30 day rotations
- Katrina Response Workers (KRW) 2 week rotations

Include Safety, Industrial Hygiene and Engineering professionals from federal OSHA, MSHA, and State Consultation across the United States.

Personnel Accountability System, PAS

- Each has two photos with med/emergency info between
- Leave one badge with planning section when going into field
- Retrieve badge upon return from field
- Wear second badge as ID in field



Inside NOLA



Ops and Planning



IH Equipment



Information Board



Frequently Used Numbers And Staff Count

OPS PERIOD MAR 5, 2006 119 DAYS REGION VII - 972-850-4115
 AFD: West Park Office - 1500
 1. Seawall Dr, Suite 500
 New Orleans, LA 70114

NOLA BRANCH
 OPS - 504-762-2131
 PLANNING - 504-762-2152
 EXT - 504-762-2193
 FAX - 504-762-2871
 INFO OFFICER (100) 215-861-5101
 TELECON - 800-857-7641
 CODE 84692
 BATON ROUGE - 225-298-5958
 FAX - 225-298-5957
 AFD FEMA SAFETY 225-347-2355
 HOLIDAY INV: 504-581-1600
 330 Loyola Ave
 New Orleans, LA 70112

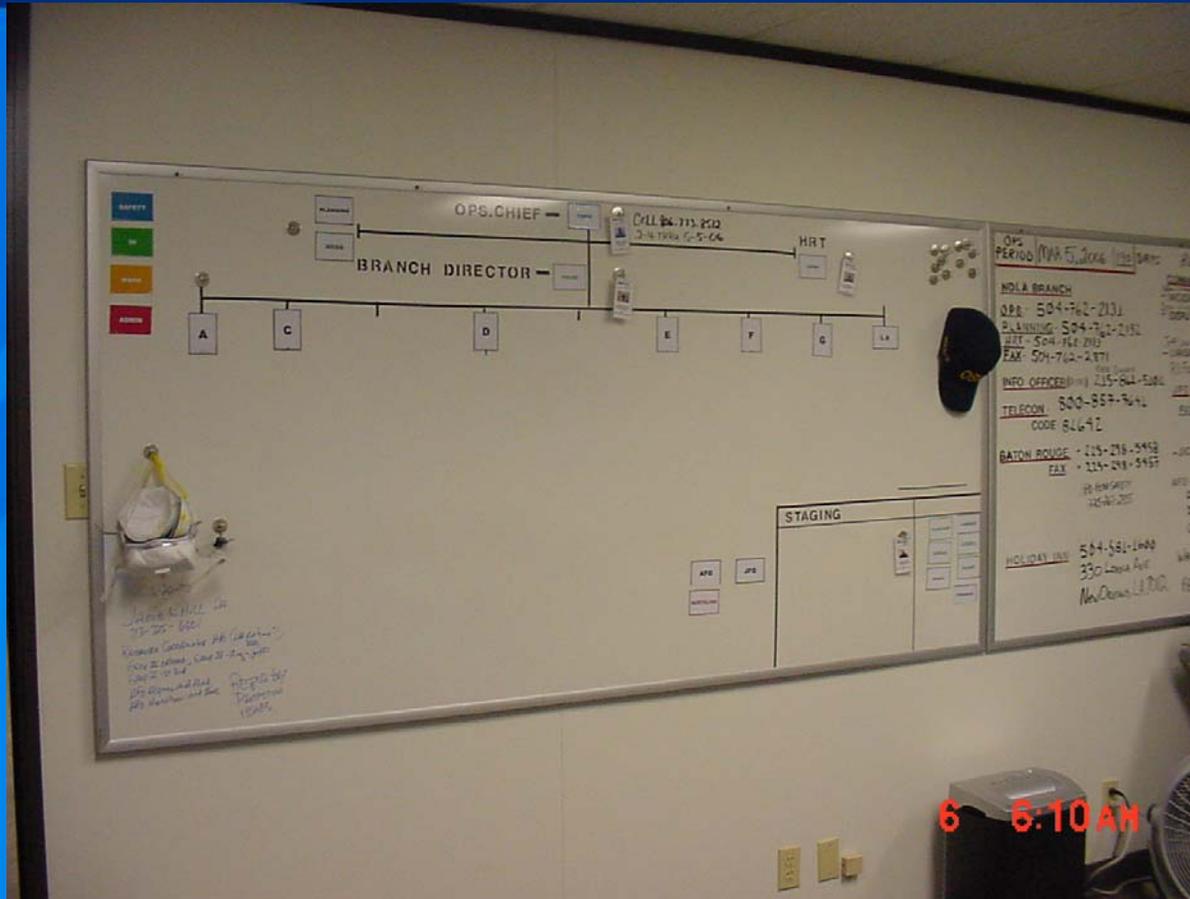
COMBAND
 INCIDENT CMDR - 972-850-4157
 DEPT. CHIEF DEPUTY - 972-850-4166
 - 817-688-9844 Cell
 JEFF LIAISON - 972-850-4177
 - 972-430-1101
 RD FAX - 972-430-1101
 JFD - 225-267-2904
 FAX - 225-387-8342
 225-346-4744
 JIC (FD) (100) 225-376-5000
 AFD -
 DESK - 504-762-2356
 DESK - 504-762-2355
 CELL - 703-258-9096
 WAGE + HOUR 1-866-487-9293
 504-457-6247
 FEMA AFD SAFETY - Bob Davidson

	COMBAND	NOLA	JFD AFD	TOTAL
TOTAL	20	99	16	129
Blue	5	0	5	10
Green	0	0	0	0
Orange	2	0	0	2
Red	0	0	0	0
TOTAL	9	0	14	23

DATE/TIME 3-5-2006 0700

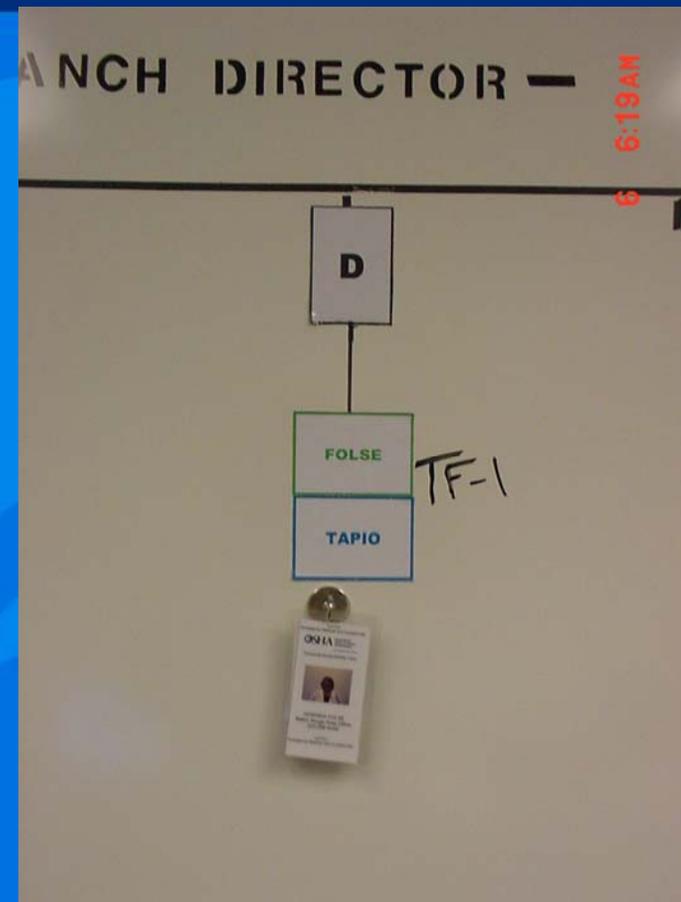
6 6:11 AM

Staff Accountability Board



Accountability

- In Sector D
- Task Force One
- TF1 Consists of
 - 1 Industrial Hygienist (Green)
 - 1 Safety (Blue)
- The Team member on top is the team leader, Folsie



Our Job – In General

- DOL/OSHA coordinates federal safety and health assets to provide proactive consideration of all potential hazards;
- Ensures availability and management of all safety resources needed by responders;
- Shares responder safety related information;
- Coordinate among federal agencies, state, local and tribal governments and private-sector organizations involved in incident response.

Information

- Gathered by everyone on the NOLA staff:
 - Attending meetings.
 - Participating on conference calls.
 - Create safety work groups with other federal agency's safety personnel and the safety staff of main contractors to these agencies.
 - JFO liaison and field work

Meetings/Conferences/Work Groups



- Debris meetings
- Safety meetings
- Planning meeting
- AFO Sr. Staff meeting
- JFO Sr. Staff meeting
- Operation meeting

Assignment List - ICS Form 204

- Work assignment
- Work hours
- Location of work assignment
- Team members
- Communication information
- Safety precautions
- Special instructions

Field Work



More Field Work



Interventions

- Provide Technical assistance to workers
- Provide OSHA handouts and Quick Cards to workers
- Document safe and unsafe behaviors
- Nontraditional OSHA role
- Providing many new challenges

Documentation Differences

- **Traditional Enforcement (and Consultation)**

- Document hazard for legal sufficiency
 - Exactly how high, how much, how far, etc.
- Hazard abatement via OSHA's legal authority

- **Technical Intervention**

- Document hazard for statistical purposes
 - Data used for trend analysis, developing hazard control strategies
 - Data reported to Federal Funded Source
- Hazard abatement via Contractual Authority between contractor and Federal Funding Source

Transitional Challenges

- Volume of Data – to be generated, sorted, and interpreted
- Format of Data – OSHA and other Agency data
- Existing System Limitations
 - Limited Capability for Direct Reading Data
 - Input critical for this setting not standardized
 - Output not aligned to needs of this setting

Response Documentation Goals

- Standardize and link incident data
- Collect safety and industrial hygiene data
 - From technical assistance interventions,
 - OSHA Sampling Forms (OSHA 91R, 92R, and 93R)
- Facilitate mobile data collection
 - Use Portable and lightweight hardware
 - Minimize duplicate data entry and data entry errors

Response Documentation Goals

- User friendly data entry software
 - 2-week deployment cycles
 - Similar to intervention form developed for incident
- Consolidate data into a central repository
- Facilitate timely analysis and reporting of data
 - Real-time
 - Historical
- Support other OSHA tools and resources for response and recovery

Hazard Exposure & Risk Assessment Matrix

- Matrix of Response and Recovery Jobs, Hazards, and Recommended Protective Actions
- Built From: Data collection efforts, HASP, Sampling Plans, Situation Reports, OSHA JHAs and Fact Sheets
- Under development – living document
- Final product will be a hard copy publication and a web-based e-tool
 - To include Sample Data and Safety Intervention Data

Intervention Tracking Forms

OSHA Safety Hazard Tracking Form (for Intervention Use Only)							
RID	Outdoors (Y or N) Y	Date 11/19/2005	Total Time Onsite 1.25 hr	Employees Removed - Imminent Danger (#)	Employees Removed from Hazards (#) 7	All Hazards Abated? Y	
Information	Employer Name, Address, and Phone Hi-Tech Roofing (561) 586-3110 2266 4 th Ave. North Lake Worth, FL 33461		GPS Coordinates Latitude Longitude		Site Location Information 1620 Congress in Delray		
			Annex <input type="checkbox"/> Non-Annex <input type="checkbox"/>		CSHO Name Bohan & Brown		Team Number
			Photo (Y or N) No		CSHO ID		
Operation -- Choose the one that best applies							
<input type="checkbox"/> Demolition <input type="checkbox"/> Power Line Construction – New Power <input type="checkbox"/> Power Line Construction – Repair <input type="checkbox"/> Sewer Line Construction – New <input type="checkbox"/> Sewer Line Construction – Repair <input type="checkbox"/> Site Clearing <input type="checkbox"/> Tree Trimming/Cutting <input type="checkbox"/> Utility Work – New <input type="checkbox"/> Utility Work – Repair <input type="checkbox"/> Communication Restoration <input type="checkbox"/> Damage Assessment <input type="checkbox"/> Debris Collection <input type="checkbox"/> Debris Reduction <input type="checkbox"/> Demolition <input type="checkbox"/> Electrical Power Restoration <input type="checkbox"/> Maritime Port Restoration <input checked="" type="checkbox"/> Roof Repair <input type="checkbox"/> Sand Removal <input type="checkbox"/> Search and Rescue Operations <input type="checkbox"/> Sewer & Water Restoration <input type="checkbox"/> Temporary Facility Construction and Placement <input type="checkbox"/> Transportation Restoration <input type="checkbox"/> Tree Clearing <input type="checkbox"/> Unique Debris Removal							
<i>Please select hazardous conditions observed – MARK AS MANY AS APPLY</i>							
Hazards	Biological <input type="checkbox"/> Bloodborne pathogens <input type="checkbox"/> Mold <input type="checkbox"/> Other _____		Confined Space <input type="checkbox"/> Atmospheric Hazard <input type="checkbox"/> Rescue provisions <input type="checkbox"/> Other _____		Electrical <input type="checkbox"/> Energized substations <input type="checkbox"/> Exposed wiring or conductors <input type="checkbox"/> General Grounding <input type="checkbox"/> GFCI <input type="checkbox"/> Power Lines - Approach Distance <input type="checkbox"/> Power Lines - Grounding <input type="checkbox"/> Power Lines - Hot Sticks & Protective Equipment <input type="checkbox"/> Power Lines - Overhead lines <input type="checkbox"/> Power Lines - PPE <input type="checkbox"/> Power Lines - Underground lines <input type="checkbox"/> Safe Work Practices <input type="checkbox"/> Other _____		
	Chemicals <input type="checkbox"/> Ammonia <input type="checkbox"/> Asbestos <input type="checkbox"/> Carbon Monoxide <input type="checkbox"/> Chlorine <input type="checkbox"/> Flammable Liquid/Gas <input type="checkbox"/> Hazardous Waste <input type="checkbox"/> Hydrogen Sulfide <input type="checkbox"/> Lead <input type="checkbox"/> Metals (other than lead) <input type="checkbox"/> Organic Vapors <input type="checkbox"/> Oxygen <input type="checkbox"/> Particulates <input type="checkbox"/> Silica <input type="checkbox"/> Other _____		Cranes <input type="checkbox"/> Working under load <input type="checkbox"/> Damaged Crane Component <input type="checkbox"/> Improper Rigging <input type="checkbox"/> Personnel platform <input type="checkbox"/> Swing Radius Barricaded <input type="checkbox"/> Work Practices <input type="checkbox"/> Other _____		Fall Hazards <input type="checkbox"/> Aerial lift <input type="checkbox"/> Fall protection systems <input type="checkbox"/> Ladders -- damaged <input checked="" type="checkbox"/> Ladders -- used improperly <input type="checkbox"/> Platform <input type="checkbox"/> Scaffolds <input type="checkbox"/> Other _____		
	Tools <input type="checkbox"/> Chainsaw <input type="checkbox"/> Grinders <input type="checkbox"/> Hand Tools <input type="checkbox"/> Other powered tools <input type="checkbox"/> Pneumatic powered tools <input type="checkbox"/> Other _____		Demolition <input type="checkbox"/> Chutes <input type="checkbox"/> Demolition Survey <input type="checkbox"/> Explosives <input type="checkbox"/> Manual Demolition <input type="checkbox"/> Mechanical Demolition (e.g., demolition ball) <input type="checkbox"/> Other _____		PPE <input type="checkbox"/> Chaps <input type="checkbox"/> Eye Protection <input type="checkbox"/> Flame-Retardant Clothing <input type="checkbox"/> Foot Protection <input type="checkbox"/> Gloves <input type="checkbox"/> Hard Hat <input type="checkbox"/> Personal Flotation Devices <input type="checkbox"/> Reflective Vests <input type="checkbox"/> Respirator <input type="checkbox"/> Other _____		
	Diving <input type="checkbox"/> Diving Hazards		Traffic Control <input type="checkbox"/> Cones or Barricades <input type="checkbox"/> Flag/Flagger <input type="checkbox"/> Other Work Zone hazards <input type="checkbox"/> Signs		Material Handling Equipment <input type="checkbox"/> Audible backup alarm <input type="checkbox"/> Brakes <input type="checkbox"/> Forklift <input type="checkbox"/> Lights <input type="checkbox"/> Loader/Excavator <input type="checkbox"/> Rollover protection <input type="checkbox"/> Seats & Seatbelts <input type="checkbox"/> Skid-Steer Loader <input type="checkbox"/> Other _____		
	Lockout/Tagout <input type="checkbox"/> Lockout/Tagout Procedures		Physical Hazards <input type="checkbox"/> Heat Stress <input type="checkbox"/> Ionizing radiation <input type="checkbox"/> Lasers <input type="checkbox"/> Non-ionizing radiation (not lasers)		Struck-By <input type="checkbox"/> Building Material <input type="checkbox"/> Overhead Load <input type="checkbox"/> Tree <input type="checkbox"/> Unstable Materials <input type="checkbox"/> Unstable Structure <input type="checkbox"/> Vehicle		
	Monitoring Towers <input type="checkbox"/> Safe Access		Insect/Animal/Plant <input type="checkbox"/> Alligator <input type="checkbox"/> Insects <input type="checkbox"/> Poisonous Plant <input type="checkbox"/> Rodents <input type="checkbox"/> Snake <input type="checkbox"/> Spider <input type="checkbox"/> Other _____		Other (Please write in)		
	Noise <input type="checkbox"/> Noise Hazards		Violence <input type="checkbox"/> Workplace Violence				
	Trenching & Excavations <input type="checkbox"/> Exposure to vehicular traffic <input type="checkbox"/> Means of Egress <input type="checkbox"/> Protective Systems <input type="checkbox"/> Other _____						
	Flammables <input type="checkbox"/> Dispensing - Grounding/Bonding <input type="checkbox"/> Flammable Gas <input type="checkbox"/> Dispensing/Refilling <input type="checkbox"/> Flammable Gas Storage <input type="checkbox"/> Flammable Liquid Storage <input type="checkbox"/> Other _____						
	Sanitation <input type="checkbox"/> Drinking water <input type="checkbox"/> Rest room facilities						

Sampling and a Sampling Plan

- Provides a strategy for identifying, prioritizing and characterizing worker exposures during the activities and operations associated with response to and recovery from Hurricane Katrina and Rita.
- Used to meet OSHA's responsibilities under the "Mission Assignment" from FEMA covering federal employees and federally deployed assets, including contractors to all departments and Agencies.
- Sample for Dust, Silica, Metals, Asbestos, Noise, Gas (i.e. Organic Vapors)

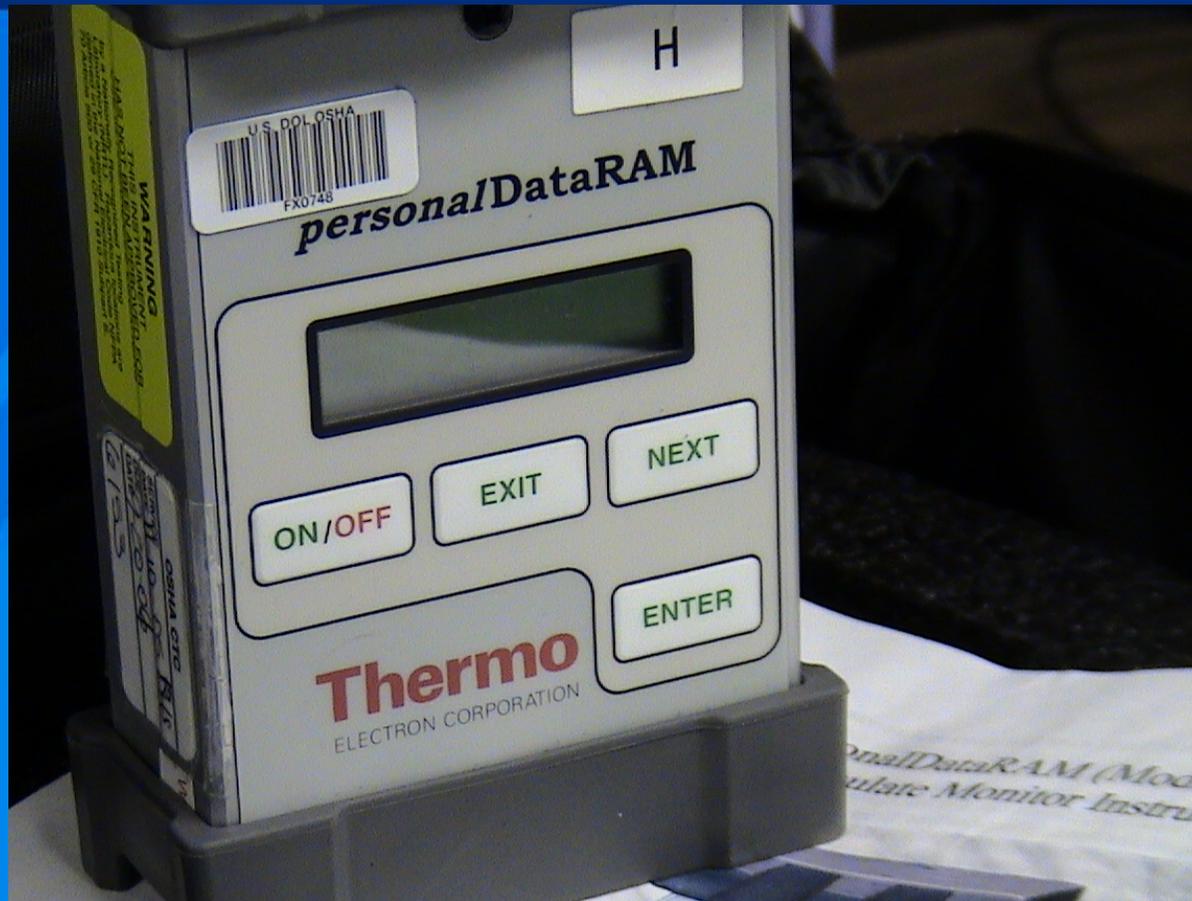
Sampling Equipment



SKC Pumps w/ DryCal Calibrator



Thermo Personal Data RAM



Dräger PacIIIs



MultiRAE Gas meter w/ FID



Quest Noise Dosimeter w/ Calibrator



CSHOs in Action Monitoring Employees



Other Equipment & Supplies

- FEMA Cell Phone
- GPS
- First Aid Kits
- Flashing Lights
- Downloading & Printing Photographs
- PPE
- Sampling Equipment & Media

Major Changes

- 10/26/05- Command post was combined and moved with NOLA into the Clearview Mall in Metairie, LA.
- 11/26/05- Command post was moved to a Banquet room at the Holiday Inn Superdome.
- 11/05 Debris Stream begins changing from mostly vegetative debris to trash, white goods and household hazardous waste.
- 1/01/06- NOLA Command moves to the AFO in Algiers.

Activities

Beginning vs. Now

- Electrical
 - Lines
 - Generators
- Tree Trimming
- Vegetative Debris clean-up
- Burning of Vegetative Debris
- Discard of Animal carcasses and rotting meat.
- Storm Wash Debris
- Roadway/Bridge Repairs
- Some Electrical
- Demolition
- Construction & Demolition (C&D) Debris pick up
- Shredding/Grinding of (C&D)

Electrical



Vegetative Debris



Burning of Vegetative Debris



Debris Stands



Storm Wash



Twin Span Bridge Repair



Activity Now



Proposed Demolition (USACE)

Location	Structures	Cubic Yards
Carrolton/Uptown	1,193	328,000
Mid City	2,439	671,000
Lake	2,420	66,000
Gentilly	3,370	927,000
New Orleans East	6,598	1,815,000
Upper 9 th Ward	2,635	725,000
Lower 9 th Ward	7,500	2,063,000
CBD/Central City	446	123,000

Demolition in Lafitte, LA. Much more Demolition Will Come!



Clean up...



Ninth Ward Debris



ING 4727 in Ninth Ward



ACM in Ninth Ward



Asbestos Containing Material (ACM) Roadside Collection



ACM Sorters at Debris Site



ACM Sorters



Diver Amongst Debris



Roadside Debris Collection



Roadside C&D Collection



Roadside Debris Collection



Roadside Debris Collection



USACE Debris Site



Shredder at Debris Site



Cleaning Out Sewers ...



Creates Work in Confined Spaces



Residual Solid Cleanup of Lakeview Area



Common Hazards No Matter Where You are -- Trenching



Joint Inspections with EPA at their Collection Sites



and Falls





Safety and Health Add Value

To Your Business
To Your Workplace
To Your Life

To Your Hurricane Recovery

Any Questions?