

MISSISSIPPI'S RESPONSE TO HURRICANE KATRINA

Mississippi Department of Environmental Quality

MDEQ Response Relative To Katrina Time-Line

Image Index
 3: 2005AUG28/07: 15: 00UTC
 4: 2005AUG29/14: 45: 00UTC

August 31, 2005

- MDEQ, FDEP and EPA coordinate plans
- 4 MDEQ Teams begin assessments along coastal MS
- 6 EPA Teams begin assessments along coastal MS and AL

August 30, 2005 005

- MDEQ Full SERT Katrina

August 26, 2005

- MDEQ SERT Activated
- MDEQ Preplanning
- MDEQ Preplanning plan for mobilization

August 23, 2005

Tropical Depression 12 Forms over Bahamas

August 28, 2005

- MDEQ Forward Team sent to Camp Shelby with MEMA
- EPA Staffs MS EOC

August 24, 2005

Upgrade to TS Katrina re-deployment Planning Begins



Planning and Logistics – Lead by Richard Harrell

- a) Be prepared to self-supply for first 2 weeks**
- b) Communication – local, state and national**
- c) Fuel**
- d) Housing/RV camps**
 - a) Water, sewer**
- e) Competing Laws – Stafford Act, Oil Pollution Act, RCRA, NESHAP (asbestos)**
- f) Don't be burden to impacted community**
- g) Make long term decisions – don't cave to short, sited decisions**
- h) Be sympathetic and remember community may have just lost loved ones, housing, heirlooms and can't see path forward.**

MDEQ'S PREPARED RESPONSE TO HURRICANE KATRINA

Management and Policies to address magnitude of event:

- Friday, September 2 – MDEQ Management begin plans for full deployment
- Sunday, September 4 – First non-emergency teams deployed and vegetative debris policy issued
- Monday, September 5 – Structural debris policy issued
- Tuesday, September 13 – Emergency Order No. 5062-05 issued

RESPONSE TO HURRICANE KATRINA

- Initial Response and Reconnaissance
- Implement SERT
 - Human Health & Safety
 - Environmental
 - Logistics
 - Field Camp
 - Situation Room
 - Assistance from others
- Administrative Orders for debris, fuel, asbestos, etc

Mission and Resources

Scope of Response

- **Assessment and response over more than 250 miles of coastline.**
- **Ground and/or aerial assessments and response conducted over an area greater than 4,000 sq. miles.**

Resources

- **More than 250 personnel at height of Response from EPA, OFA, and States**



MISSISSIPPI'S RESPONSE TO HURRICANE KATRINA

- Environmental Priorities
 - Hazardous Materials
 - Wastewater
 - Debris
 - Industrial Damage & Releases
 - Forestry
 - Environmental Assessment
 - Assistance
 - Rebuilding Opportunities

Securing Fuel is huge challenge



Basic housing, water, sanitary and food resources next challenge



MDEQ Headquarters - Gulfport, MS

Communications

- BP vs Katrina
- MSWIN and cellular now vs then



MDEQ Headquarters - Gulfport, MS



MDEQ Headquarters - Gulfport, MS



SRO Offices – Biloxi, MS

Logistics of navigating and finding streets



Residential Street, Biloxi, Mississippi: Pre-storm

Demolition Debris



Clearing Residential Street, Gulfport, MS



Assistance from others is crucial





OAKLAND
CATF-4
MIRIAM GOSSETT & IRENE

OAKLAND
CATF-4
MIRIAM GOSSETT & IRENE

PSG





Hazmat Response

Lead by J. T. Newman

- a) Clear access for other responders such debris removal, transportation corridors
- b) Industrial facilities
- c) Residential HHW
- d) Specialty waste (munitions, firearms, explosives)



Hazardous Materials









Gulfport, MS

09.08.2005





400 Sunken Boats in MS Alone











Industrial



Other Operations and Issues

National Priority List Site Reconnaissance

- **Reconnaissance performed at 9 NPL sites in coastal AL and MS.**
- **Sediment, surface water, groundwater sampling performed at 9 NPL and 2 non-NPL sites in coastal AL and MS.**
- **No findings of adverse impacts to sites due to Hurricane Katrina.**

Example Recovery Operation



Example Operation is being conducted in the marsh area to retrieve the tank. I-10 in background







Household Hazardous Waste

Program to Collect Household Hazardous Substances From Public Right-of-Ways or Being Disposed of by Residents Returning to Properties and/or During Right-of-Entry Demolition

- **Collection mechanisms**
 - Sweeps along public rights-of-way and on request during assessment and recovery operations.
 - Advertised curbside pickup in targeted areas, and
 - Advertised community drop-off locations.
 - Collection in coordination with Right-of-Entry (RoE) operations.
- **Collection mechanism transition over course of response from sweeps to curbside/drop-off to RoE operations**

Household Hazardous Waste



HHW Collection Day, Biloxi, Mississippi

Material Recovery Summary

Category	Total Alabama	Total Mississippi	Grand Total (number)	Percent of Total
Drums	250	3,747	3,997	1.6 %
Tanks	32	454	486	0.2 %
Totes	5	21	26	0.01 %
Cylinders	306	9,370	9,676	3.8 %
Batteries	160	13,292	13,452	5.3 %
Small Containers	3,004	225,139	228,143	89.1 %
Grand Total	3,757	252,023	255,780	100 %
Fuel	0*	90,400	90,400 (gal)	-
Oil/Water	4,000	157,900	161,900 (gal)	-

As of February 7, 2006

*Fuel and oil/water from vessels not reported.

NONHAZAROUS WASTE RESPONSE

Chris Sanders, P.E.
Mississippi Dept. of Environmental
Quality

Personal Impacts

- \$125 Billion in Damage
- 238 Identified Dead in Mississippi
- 67 Remain Missing
- 65,380 Homes destroyed in South Mississippi
- Over 900,000 experience power outages statewide (1/3 of the state)

Debris Management

- **Guidance Documents**
 - Vegetative Debris Disposal Guidance
 - Building and Structural Debris Guidance
 - Local Governments Request for Debris Emergency Sites
 - Special Waste (Automobile, White Goods, Ash)
 - Asbestos Demolition Guidance
- **Waste Management Concerns**
 - Separation of Waste
 - Volume Reduction
 - Safety at Disposal Sites

Debris Management

- ~ 45 Million Yds³ Statewide
 - Vegetative Debris (90% above Coast)
 - Garbage & Household Waste
 - Building/Structural Debris
 - Special Waste (White Goods, Vehicles, Vessels, Bulk Food Waste, Commercial/Industrial Waste, Asbestos)
- ~ 30 Million Yds³ in Coastal Counties
 - 70% Structural Waste
 - Six Existing Class I Rubbish Sites (8.8 Million Yds³ Capacity)
 - Approved 6 Temporary Class I Sites
 - Upgraded 7 Class II Sites
- Estimated 25% of all waste disposed in MS in 2005 was debris from Jackson, Harrison, and Hancock Counties

Debris Numbers

- Over 300 emergency sites approved for managing Katrina debris statewide (Disposal, Burn, Staging, Chipping)
 - 3 Coastal Counties had ~55 sites
 - Remaining Counties had ~275 sites
- Estimates indicate that over 100,000 white goods (refrigerators, freezers, washers, dryers) recycled





























Car Yard - Harrison County, MS



**White Goods Collection Site -
Harrison County, MS**

Status of Clean Up Efforts

- As of early November 2005, clean up had progressed as follows:
 - In the 3 Coastal Counties, ~27% (8 MCY) had been removed for disposal;
 - In the remaining counties, ~74% (9 MCY) had been removed for disposal.

Wastewater



09.15.2005

Wastewater Issues

- Most facilities/lift stations were down due to power loss;
- Emergency generators provided;
- Some facilities on coast received major damage;
- Most lift stations in beach area were destroyed;
- Significant overflows

Wastewater Issues

- Many facilities in coastal counties provided primary treatment at best;
- Several facilities functioned on emergency power;
- Overflows treated with chlorine tablets and lime.

Wastewater Issues

- 8/30/05 - 23 of 117 (20%) Wastewater Treatment Facilities were operating in affected areas
 - 0 of 15 in the Coastal Counties
- 9/9/05 - 107 of 117 (91%) Wastewater Treatment Facilities were operating in affected areas
 - 10 of 15 in Coastal Counties

Forestry

- State-wide ~ 19 billion board ft
 - 25% the annual consumption
 - enough to build 800,000 single family
 - 65% Private
 - 25% State
 - 10% Federal
- Typical Salvage Rates 25% to 33%
- Wet Deck Storage Capacity

The Human Element

- Unimaginable Loss
- “We are from the Government, and we are here to help!”
- Age/Respect
- Money, Money, Money

Rebuilding is possible



Biloxi Beach



08/05/2008



Hard Rock Casino, Biloxi, MS



08/05/2008



08/04/2008