

NIEHS Environmental Health Sciences Data Resource Portal

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12 October 2007

Children's Environmental Health Initiative

A research, education, and outreach program committed to fostering environments where all children can prosper.



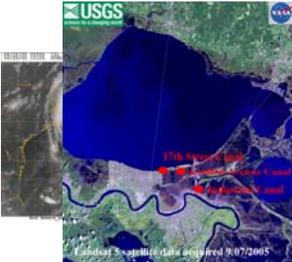
New Orleans: Before and After Hurricane Katrina

Before



LandScan 7 satellite data acquired 4/24/2005

After

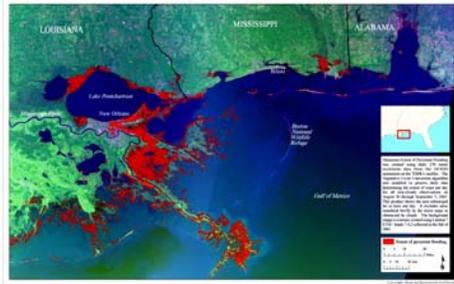


17th Street Canal
80th Street Canal
Industrial Canal

LandScan 5 satellite data acquired 9/07/2005

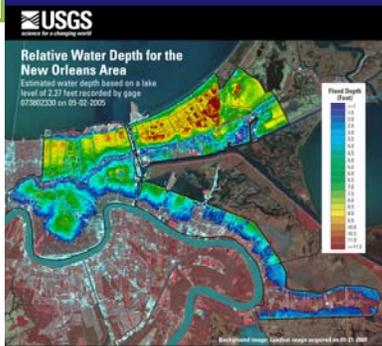
Regional Overview

Maximum Extent of Persistent Flooding Caused by Hurricane Katrina



Map Labels: LOUISIANA, MISSISSIPPI, ALABAMA, Lake Plaquemine, New Orleans, Gulf of Mexico

Extent of Flooding



USGS
Relative Water Depth for the New Orleans Area
Estimated water depth based on a lake level of 2.27 feet recorded by gauge 07080200 on 09-05-2005

Flood depth estimated from 10-m elevation data derived from 5-m lidar data collected in 2002.

U.S. Department of the Interior
U.S. Geological Survey

Industrial Canal Levee Breach

Lower 9th Ward Pre Katrina



Lower 9th Ward September 1st, 2005



Lower 9th Ward December 14th, 2005



Key Health Consequence Questions

- Mold and respiratory health
- Contaminant transport
- Solid waste management
- Mental health

NIEHS Response: Web Portal

- Build and maintain extensive data archive designed to investigate environmental health consequences of the hurricanes
- Provide a collaborative workspace for analysis of georeferenced data
- Provide a Gulf Coast resource to support environmental health research more broadly

Collaborative Team

- NIEHS
- Columbia University (CIESIN)
- University of Kentucky
- Research Triangle Institute
- San Diego State University
- University of California, San Diego
- Duke University

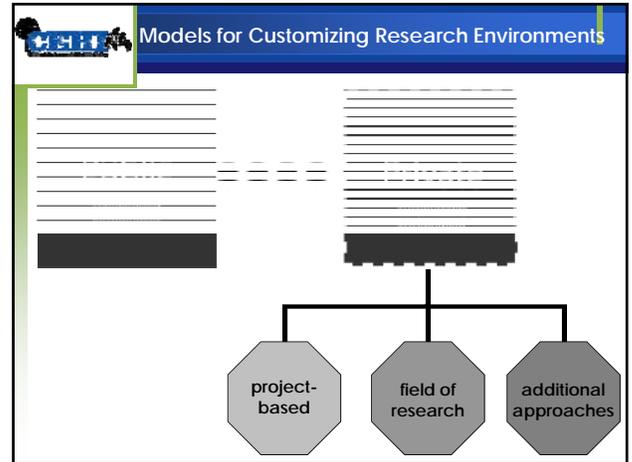
NIEHS Hurricane Response Web Portal

<http://www.niehs.nih.gov>

Drinking water surface intakes and TRI facilities

Analysis Tools

NO.	ORGANIZATION	STATION NA	LAUNCH DATE	CHARACTER	MEDIUM	CAS_NUM
1	NATRINAB	AD STREET LANDFILL	11/27/00-00/0000	Benzo(a)pyrene	Sediment	30-30-2
2	NATRINAB	AD STREET LANDFILL	11/27/00-00/0000	Benzo(a) acid	Sediment	30-30-2
3	NATRINAB	AD STREET LANDFILL	11/27/00-00/0000	Benzo(a) anthracene	Sediment	100-51-8



Project Based Research Environment

NIEHS Environmental Health Science Data Resource Portal

Navigation: Home, NIEHS, NIEHS Data, NIEHS Reports, Collaborative Data Resources

Layers:

- Point Hurricane Information
- Contaminant
- EPA Sampling Locations
- Administrative
- Potential Contaminant Sources
- TRI
- Industrial Facilities
- Agricultural Facilities
- National Priority List Sites
- Natural Priority List
- Oil and Natural Gas
- Boundaries
- Infrastructure
- Hurricane Damage
- Physiographic
- Demographic

Imagery:

- Terrestrial 30 m imagery
- Terrestrial 1000 3m Aerial Photography
- Aerial Photography
- Street Map

Search: Enter Address, Zip, or Place, Trace, New (Orlando, LA)

Table: School Report

Custom Reports

HEALReport

Benjamin Franklin Senior High School
 2001 Leah C. Simon Drive
 New Orleans, LA 70122

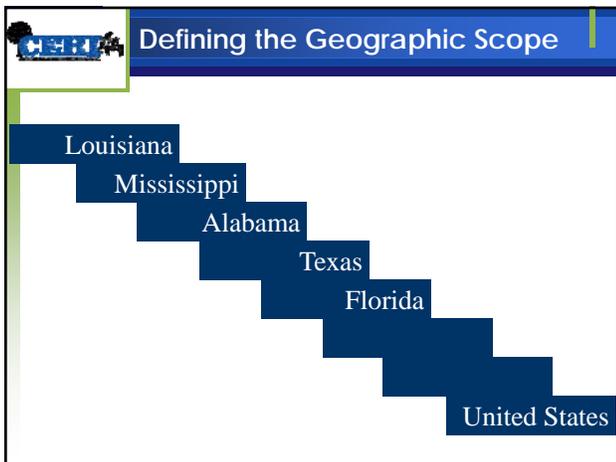
Hurricane Katrina Damage
 Duration of Flooding: 0 days
 Details: 14512 Orleans City Park Wreck/Pileup 30 01101-90 06410 Clearing, Woodwaste Authorized

EPA Sampling Locations
 No Potentials Found

Estimated Replacement Costs
 \$0.00

Potential Contaminant Sources
 Crop Businesses: 1
 Gas Stations: 1
 Grocery Stores: 1
 Health Care: 1
 Hotels: 1
 Industrial: 1
 Laboratories: 1
 Libraries: 1
 Medical: 1
 Museums: 1
 Parks: 1
 Pharmacies: 1
 Religious: 1
 Schools: 1
 Shopping: 1
 Sports: 1
 Universities: 1
 Veterinary: 1
 Wholesale: 1

Demographics
 Census Tract: 70030
 Population: 10,000
 Population Density: 1000
 Median Household Income: \$10,000
 Median Age: 30



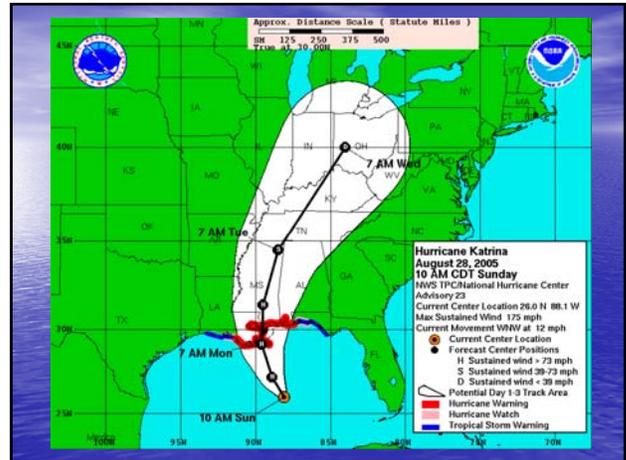
Acknowledgements

<http://www.niehs.nih.gov>
hurricane@niehs.nih.gov

Children's Protection in the Aftermath of a Natural Disaster: Tools for Recovery and Communicating Risks

Tales from Ground Zero:
Hurricane Katrina and Pediatric Environmental Health in Coastal Mississippi

Scott Needle, MD, FAAP
October 12, 2007



Photograph courtesy of David Bailey, copyright 2005





Interior, pediatric office trailer, Bay St. Louis, MS

Risks after Katrina: knowns, surprises, and in-betweens

- Debris
- Mold
- Gastrointestinal illness
 - "Katrina Cough"
 - "Katrina Brain"
- Psychological trauma and the honeymoon period

Formaldehyde and FEMA Trailers



A Case Study

Lessons Learned

- Blurring the line b/t "public" and "private"
- Shortage of resources in disaster area
- Communication is the priority
- Keep eyes and ears open
- Flexibility and ingenuity