

Disaster Planning for Laboratory Animal Facilities: Lessons Learned from Hurricane Katrina

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Outline

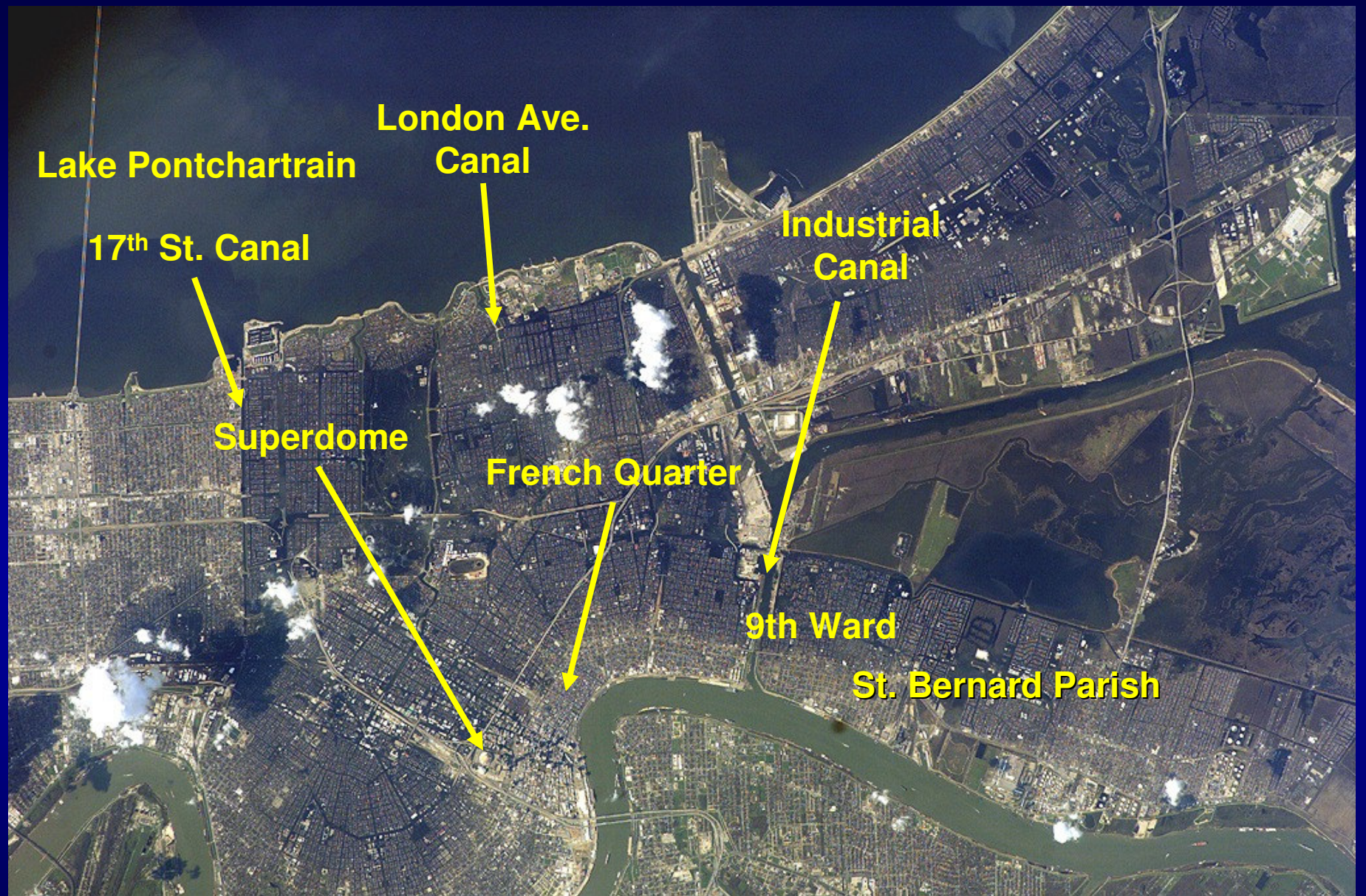
- Impact of Hurricane Katrina
- Research Animal Response Efforts
- Lessons Learned
 - Disaster Response
 - Disaster Planning

A satellite image of Hurricane Katrina, showing a well-defined eye and a dense, swirling cloud structure over the Gulf of Mexico. The surrounding landmasses of North and South America are visible in shades of green and brown.

KATRINA

Sunday, August 28, 2005
Category 5 Hurricane





**New Orleans and St. Bernard Parishes
View from International Space Station on Thursday, September 8, 2005**







Pre-Katrina Assumptions

- Only a temporary interruption of services
 - Pre-storm evacuees would return soon
 - Many decided to ride out the storm
- Hardened structures could continue to operate
 - Emergency generators could keep facilities operational

Post-Katrina: The Reality

- Total infrastructure failure
 - Mandatory evacuation of New Orleans
 - > 500,000 people
- Absence of critical services
 - Power
 - Sewer and Water
 - Law Enforcement
 - Emergency Services

Impact of Katrina

- **Employees displaced**
 - Relocated 50- 2000 miles away
- **Communications compromised**
 - Telephones inoperable
 - Cell phone service poor to non-existent
- **Access to city closed**
 - Limited to authorized personnel



Impact on Animal Facilities

- Staff unable to access facilities
- No lighting, ventilation, temperature control
- No water and sewer
- Similar impact on hospitals, nursing homes, etc.



Disaster Response: Animal Issues

- Research animals
- Evacuated pets
- Rescued pets
- Livestock
- Zoo, wildlife, and marine animals

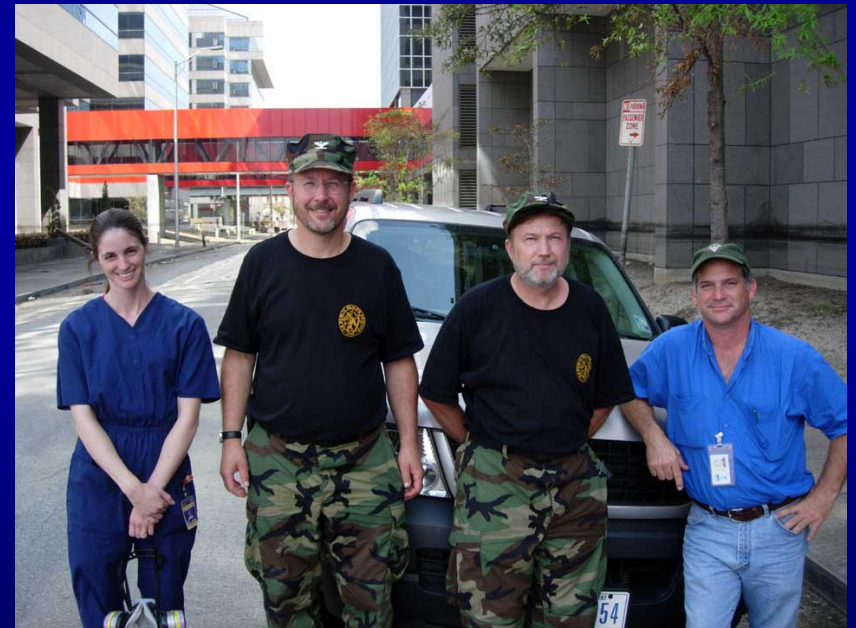


**US Public Health Service Veterinary Team
Commissioned Corps Readiness Force
Baton Rouge, September 2005**



Disaster Response: Research Animals

- Coordinated by State Animal Response Incident Command
- Assisted 2 local institutions
 - Rescued animals
 - NHPs, Transgenics, others
 - Humane euthanasia
 - USPHS, USDA, State, University veterinarians & technicians



What did we learn from this experience?

- Disaster Response
- Disaster Planning



Disaster Planning and Response for Animal Facilities: Goals

- **Avoid or minimize adverse impacts on animal welfare**
- **Avoid or minimize adverse impacts on research**
- **Provide for the health and safety of personnel**



Lessons Learned: Disaster Response

- Provide for safety of response personnel
 - Security
 - Personnel Protective Equipment
 - Communications
 - Radio checks, buddy system
 - EMS/Fire/Rescue



Lessons Learned: Disaster Response

- Bring everything you need
- Animal Rescue
 - Caging
 - Vehicles
 - Tranquilizers
- Humane Euthanasia
 - CO2
 - Controlled substances
 - Needles and syringes



Lessons Learned:

Disaster Planning

- **Communications Plan**
 - Institutional contacts
 - Work, home, cell, email, home addresses
 - All animal program staff, IO, response team
 - Other institutions
 - Other contacts
 - Local and state Emergency Operations Centers
 - State veterinarian, state public health veterinarian
 - USDA AVIC, AC
 - Provide IO, AV contact information
 - Additional Resources
 - EOCs: Satellite phones, radio operators

Lessons Learned: Disaster Planning

- Establish contingency plans with other institutions
 - Housing for evacuated and rescued animals
 - Transportation, technical & veterinary staff



Lessons Learned:

Disaster Planning

- Maintain accessible critical information
 - Location and numbers/species of animals
 - Priorities for evacuation/rescue
 - Location of keys
 - Location and nature of chemical, biologic, and radiological hazards
- Maintain in a secure off-site location

Lessons Learned: Disaster Planning

- Pre-Disaster action plan
(If advance warning)
 - Animal evacuations
 - Which animals, how, where
 - Final preparations
 - Extra water, food
 - Move animals above flood/storm surge levels
 - Signage for rescue teams
 - *Attempt to save: transgenics, genetic resources*
 - *Ok to euthanize*



Lessons Learned: Disaster Planning

- **After the disaster:**
 - **Assess accessibility of facility**
 - **Assess availability of personnel**
 - **Communicate needs and coordinate rescue efforts with local/state EOC and/or Animal Response Incident Command**



Disaster Planning: Lessons Learned

- **After the disaster (cont.)**
 - Communicate accurate information
 - IC Post, OLAW, Animal Care
 - Comply with reporting requirements
 - OLAW: animal harm or deaths as a result of disasters
 - Others as required

Lessons Learned: Disaster Plans

- Prepare for all-hazards
 - Natural disasters
 - Hurricanes, floods, icestorms, tornados, earthquakes, fires
 - Manmade disasters
 - Chemical, Biological, Radiological, Explosive
- Semi-annual review of disaster plans
- Ensure staff awareness of responsibilities

Lessons Learned: Disaster Planning

- **Conduct training and exercises**
 - Tabletop exercises
 - Local, state, regional, national exercises



Disaster Planning: Summary

- Plan and train for the unexpected
- Coordinate with local and state emergency response officials
- Have a disaster plan to:
 - Optimize animal welfare
 - Minimize disruption to research
 - Ensure personnel safety



For more information

- OLAW
 - Disaster Response and Planning Resources
 - http://grants.nih.gov/grants/olaw/disaster_planning.htm
 - Updated 3/22/06
- *The Federal Response to Hurricane Katrina: Lessons Learned, February, 2006*
 - <http://www.whitehouse.gov/reports/katrina-lessons-learned/>

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