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
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
  – Updated 3/22/06

• *The Federal Response to Hurricane Katrina: Lessons Learned, February, 2006*
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