

Plum Island Animal Disease Center Operation & Maintenance Challenges

1st International Biosafety and Biocontainment Symposium

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Plum Island Animal Disease Center

Mission: To protect U.S. livestock from the accidental or deliberate introduction of high-consequence foreign animal diseases (FADs).

Work Conducted:

- Train Veterinarians in the Diagnosis of FADs
- Laboratory Identification of FADs
- Maintain the North American FMD Vaccine Bank
- Research FADs
- Develop Vaccines for FADs



Plum Island Animal Disease Center

Operational Activities

- Major operational activities needed to support the mission include:
 - Electrical generation and utilities
 - Wastewater treatment
 - Security program and systems
 - IT and communications systems
 - Environmental, health, and safety programs
 - Transportation (marine and land)
 - Infrastructure including buildings and grounds
 - Administrative and management programs
 - Emergency preparedness and response (fire, rescue, and emergency)



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Plum Island Animal Disease Center Operation & Maintenance Challenges

- **Meet safety, security and environmental requirements to support work with high consequence FAD agents including FMD**
- **Maximize operational resources to support research**
- **Comply with Federal and State requirements**
- **Conduct operations on an island location**
- **Ensure maintenance for aging facility and equipment**
- **Sustain positive and constructive community relationships**

Plum Island Animal Disease Center Operation & Maintenance Challenges

*Challenge: Meet safety, security, and
environmental requirements*

- **FMD has unique requirements for biocontainment and biosecurity**
- **Regulatory select agent oversight by USDA and CDC are increasing for facility select agent certificate**
- **Evolving DHS security requirements**
- **Environmental oversight is increasing for waste removal and treatment and air emissions from biocontainment facilities**



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***Challenge: Maximize operations resources
to support current and future research***

- Original BSL 3 Ag rooms can hold only pigs or a few cattle
- New rooms built in 1985 are larger and two can hold up to 25 cattle each
- 2 new rooms just being completed can hold 25 cattle each so double the number of cattle in a vaccine trial



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***Challenge: Maximize operations resources
to support current and future research***

- Two new animal rooms for vaccine development
- Expanded and upgraded necropsy
- Convert storage to BSL-3 laboratory space for forensic and high throughput laboratory support
- Enhancements in water supply, electric distribution, and air conditioning systems



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***Challenge: Maximize operations resources
to support current and future research***

- **Increase in Science staff and research conducted today at PIADC require reviews of operational resources due to:**
 - **Increased space requirements because of new science programs (ARS, APHIS & DHS)**
 - **Increased operational support for waste treatment**
 - **Increased operational support for animal handling**
 - **Increased operational support for animal disposal**
 - **Increased space requirements for storage of supplies, freezers and animal feed**



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Challenge: Comply with Federal and State requirements

- **Biosurety and personnel reliability requirements**
- **Select Agent and Biosafety requirements**
- **Environmental regulatory requirements**
- **Occupational Health and Safety requirements**
- **Emergency response and fire safety requirements**
- **Animal welfare statutory requirements**



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Challenge: Island location

- Marine vessels required for staff, cargo, and animals
- Response time considerations for ill/injured transportation
- Interruption of work schedules (staff, delivery of materials, etc.) due to weather (wind) conditions
- Fuel transfer and management in a marine environment



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Challenge: Maintenance of aging facility and equipment

- Requires continued infrastructure investment to sustain the mission (until NBAF facility is operational)
- Implement state-of-the-art security, including security hardening and intrusion detection
- Provide modern IT Infrastructure and meet evolving IT policies
- Upgrade liquid waste transfer piping and decontamination/sterilization facility



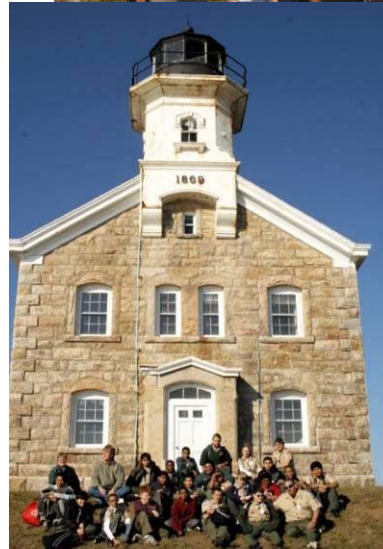
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Challenge: Building and Sustaining Public Trust

- Promote openness and transparency
- Community Forum and other events for interested members of general public
- Organizational group tours
- Special tours geared toward youth
- Special interest groups



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