

**National Park Service - Construction Program Management**  
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# Partnerships and Caring for America's Resources

**The National Park Service and Hurricane Sandy**



**January, 2014 : Federal Utility Partnership Working Group (FUPWG)**

# Construction Program Management

## Overview:

- \$50-80M Annual Line Item Construction Program
- Division Programs
  - Value Analysis
  - Capital Asset Planning
  - Budget, Cost and Scope Oversight
  - Facility Planning Models
- Policy Guidance
  - Design and Construction
  - Climate Change
  - Sustainability
  - Freeze-the-Footprint



# Hurricane Sandy

**Oct. 28, 2012: Category 1 storm - 1,000 miles in width**

- Hurricane Sandy affected 24 states, including the entire eastern seaboard from Florida to Maine and west across the Appalachian Mountains to Michigan and Wisconsin, with particularly severe damage in New Jersey and New York. (Wikipedia)
- Damage US - \$65 billion
- Incident Command Response
- Several national parks hit by Sandy
  - Statue of Liberty, Ellis Island, Gateway, Fire Island, Asseteague, National Mall, etc.



# Hurricane Sandy

## The Response:

- Disaster Relief Appropriations Act: (DOI \$829.2 M)
  - National Park Service/Construction: \$348 million (\$329.8M post-sequester)
- Emergency Relief for Federally Owned Roads (ERFO)
  - Replacement-in-Kind – \$20+M
- Range of Project Types
  - Boardwalks, debris removal, roads, exhibits, restorations, bldgs.
  - Utility and HVAC
- Limited Scale Projects

Hurricane Sandy NPS Construction Projects				
Park Unit	State	Project #	Project Title	Amount (\$ in millions)
Statue of Liberty National Monument	NY	195020	Demolish 3 Houses and Rehabilitate 2 Structures for Mission Critical Support Requirements	0.6
Statue of Liberty National Monument	NY	195086	Remove Estimated 3.3 Tons of Hazardous Debris from the Main Buildings	3.1
Statue of Liberty National Monument	NY	195104	Repair Storm Damage at Liberty Island Dock, Pier and Ferry Slip	22.3
Statue of Liberty National Monument	NY	195336	Restore Concrete Foundation for Office Trailer Marina Unit for Park Police	0.1
Statue of Liberty National Monument	NY	195341	Repair Flood Damage in Basement at Concession Building #38	1.7
Statue of Liberty National Monument	NY	195342	Repair Damage to Heat, Utilities, Mechanical, and Electrical Systems at Main Immigration Building	19.2
Statue of Liberty National Monument	NY	195360	Repair Storm Damage to Liberty Island Temporary Retail Pavilion	0.2
Statue of Liberty National Monument	NY	195368	Repair Storm Damage to Heat and Utilities at Liberty Island	4.6

# Hurricane Sandy Recovery Projects

## Climate Change

- Hurricane Sandy Task Force (government-wide)
  - Adjusted Base Flood Elevation (ABFE +1 / +2 for Climate Change)
- NPS Director's Direction
  - Strong condition assessments
  - Good planning to ensure resiliency
    - Area wide planning
    - Rapid Review Team
    - Value Analysis
  - Design and Build Smart



# Rapid Review Team

## Team Composition:

- Senior leadership of NPS
- Subject Matter Experts (SME)
  - Facility
  - Natural Resource
    - Coastal Geographers
  - Cultural Resource
  - Business Services
  - Sustainability
- Regional Representatives



# Rapid Review Team (RRT)

## Review Process:

- RRT reviews at Pre-design
  - Servicewide RRT reviews all projects \$1.0 M and over
  - Regional RRT reviews projects less than \$1.0 M
- RRT facilitates tools for sustainable/resilient design
  - “Siting and Design Considerations”
  - Access to Coastal Geographers
  - Hurricane Sandy (RRT) SharePoint
  - Northeast Region GIS – inundation maps and sea level/storm surge scenarios
- RRT documents key value-based decision-making



# Statue of Liberty

- Tight Schedule
  - STLI Opened July 4<sup>th</sup> !!!!!
- Power and Utilities
- Two Docks to be replaced with more resilient designs and materials
- STLI Interim Screening Location
  - Battery to Ellis Island to Battery



# Ellis Island

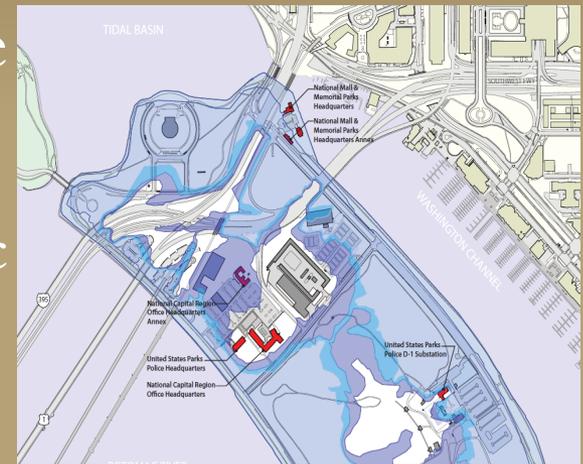
## Mechanical, Electrical and Power:

- Central Heating and Cooling
- Tight Schedule
  - Re-open by Halloween
  - Cooling for Summer 2014
- Increase Resiliency & Sustainability
  - Air Handlers at risk
  - Compromises



# The National Mall Haines Point

- Elements of park facilities at risk
  - Consolidate functions and relocate above flood
    - Park Headquarters, Maintenance, etc
    - Park Police Headquarters
    - Regional Office
  - Utilize and possibly expand surviving, existing facilities
- Energy Savings Performance Contracts



# Aspetague and Fire Island Boardwalks:

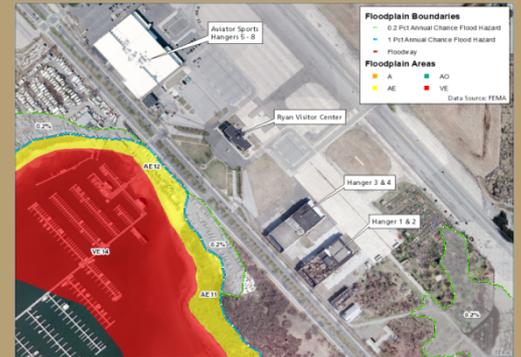
- Rebuild or Not???
- Increase Resiliency
- “Targeted” Resiliency
- Material Selection



# Gateway – Fort Hancock, etc.

## Multiple Areas:

- Gateway Areas Affected:
  - Maintenance Facilities
  - Fort Hancock – All buildings
    - Officers' Quarters
  - Floyd Bennett Field- wind damage
  - Fort Tilden
- Historic Assets
- Housing
- Sustainable HVAC
- Flood Elevations



# Hurricane Sandy

## Lessons Learned:

### ■ Fire Island Boardwalks:

- Consider not rebuilding - 2750+ LF not rebuilt
- Improve resiliency in a “targeted” way - Lighthouse

### ■ Sagamore Hill Beach Access

- Structural design criteria
- Limited improved resiliency

### ■ Value Planning:

- Fence Study
- Sandy Hook Wide HVAC
- Fort Tilden & Fort Hancock Historic Building Usage

### ■ Speedy Response needed w/ the right people

### ■ Post Storm Response by Facility Assessment Teams



# Hurricane Sandy Partnership Roles:

- Energy Savings Performance Contracts (ESPC)
  - Role in disasters??
  - Speed of Contracting?
  - Pre-disaster consultations
- NPS Planning and Design
  - Value Planning
    - Involvement early in the process
  - ESPC Contracting Options
    - Isle Royale
    - Haines Point
- Park and Regions
  - Key Players for NPS



# Hurricane Sandy

- **QUESTIONS??**



**THANK YOU!!!**