

Shelter Island, NY's Event and Post-Event Tool Set for Hurricane Sandy

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RIGIS/ NEURISA User Group Meeting

6/24/2014

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Email Dispatched Oct 28, 2012 4:00 PM (+/-)

Hi guys,

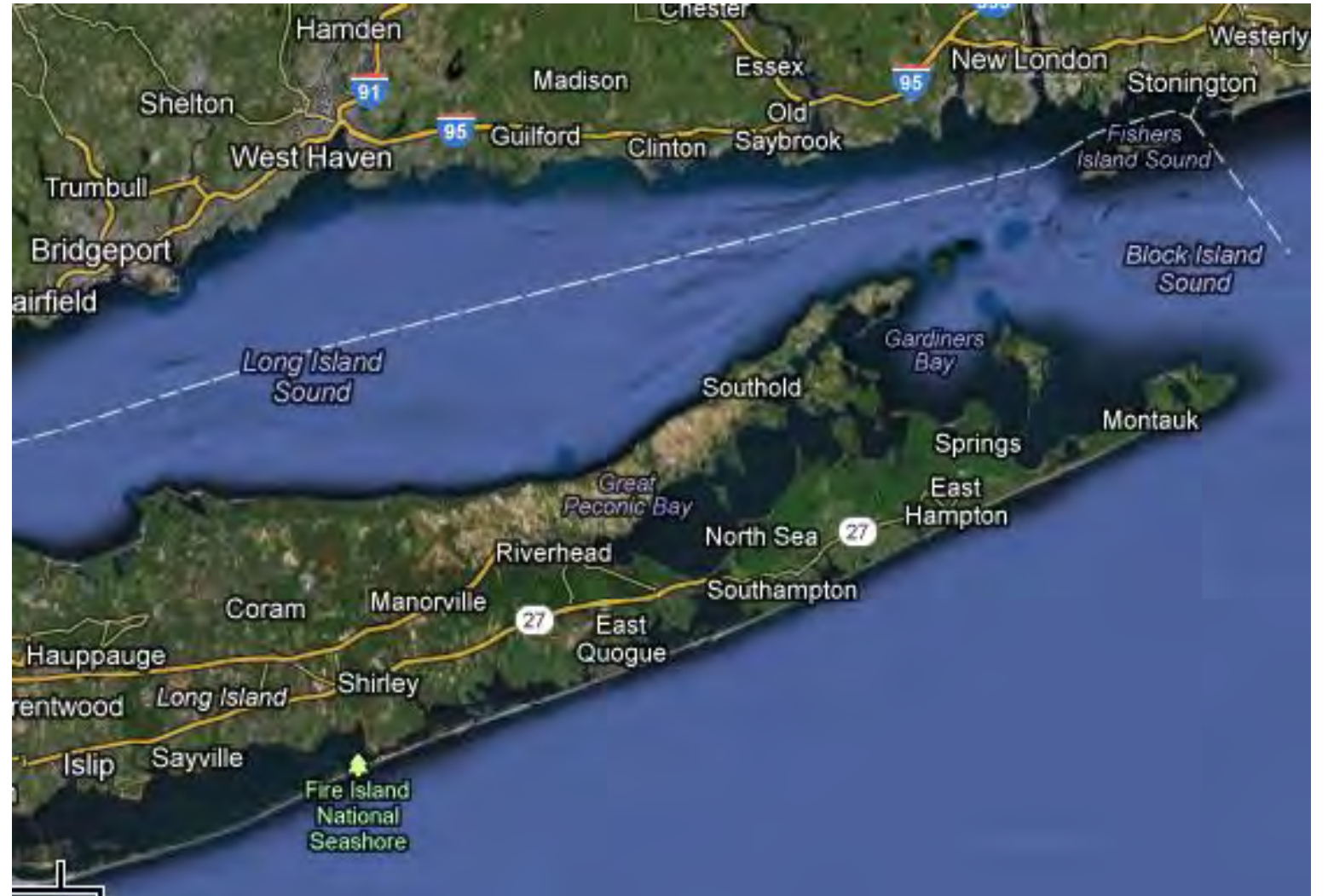
Storm coming in soon. Would like to track damage through internet. Can you help?

Thanks



Shelter Island

- Island between the North and South Forks of Long Island
- About 2,400 residents
- Only access by boat or short ferry ride
- 27.1 square miles
- Max height 56 ft



The “perfect place” for storm preparation

- There were no unknowns for response
 - All potential responding vehicles were on island
 - Police
 - Fire
 - Ambulances
 - Highway/ Town vehicles
 - Tree crews
 - ConEd electric utility vehicles
- Staging areas set up
- Response plan well defined
- Responders know the town well
- Most responders know most of the citizens (and vice versa)
- Access points well defined (ferry terminals)



Tough place to be “trapped” during and after a storm

- Storm surge flooded ferry terminal
- Reinforcements from the mainland had to wait
- Evacuations become difficult



Email response

- Yes we can...
 - Data structure allows for quick response.
 - Esri's Local government geodatabase model.
 - Includes dataset for emergency response and public works work orders.
 - Website model allows for widgets to be added.
 - Esri's flex community (and internal developers) developed widgets for emergency response and work orders)



Data to be captured

- Conference call at 5:30 PM(+/-), October 28
- Agreed data required includes:
 - Tree down
 - Tree down with wires
 - Wires down
 - Pole down
 - Flooded road- stagnant
 - Flooded road- running
 - Compromised building
 - Destroyed building



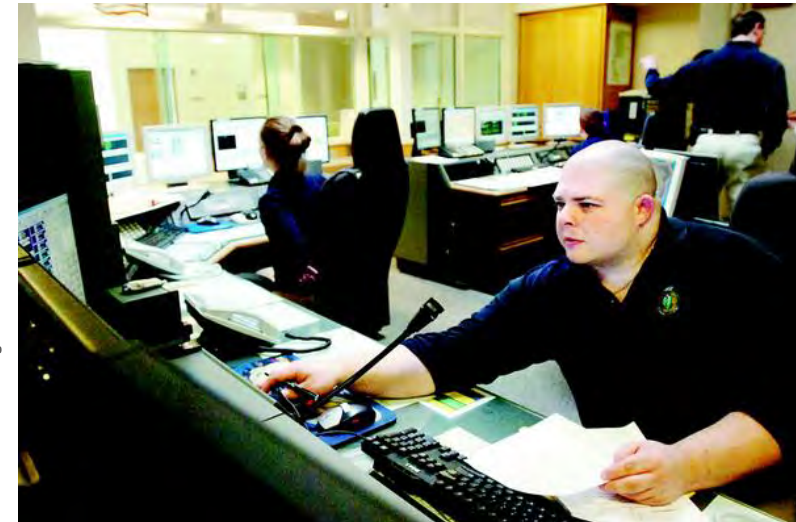
Pre-Storm (post data and site development)

- We now had less than 6 hours after data and site was designed, built, and deployed to train responders
 - Responders, who, by the way, were also frantically trying to prepare for the largest storm to hit the island in a long time
- Another call to Highway Superintendent and Harbor Master (our primary contact).
 - Taught them how to enter data in site
 - They in turn taught all emergency responders (including ConEd staff)
- One note... and one large benefit... All emergency vehicles on the island were equipped with a computer that had wireless connections to include the internet!



During the storm

- Responders on the road located problems as they saw them
 - These were saved on a server in CT and relayed back to other responders and dispatch in real time.
 - Ambulances and other emergency response vehicles were re-routed based on the live reports
 - Public works and utility crews were dispatched to clear paths based on these reports as well.
 - Once cleared, the problem was cleared from the map.



Early storm view of site

The screenshot displays the Town of Shelter Island Community Explorer Online GIS interface. The main map area shows an aerial view of a coastal town with a flooded road highlighted in yellow. Several blue circular markers are placed along the flooded road. The interface includes a top navigation bar with icons for Edit, Bookmarks, Legend, Find a Location, Draw and Measure, Print, and Identify. A 'Basemap' button is visible in the top right corner of the map area. Two panels are open: an 'Attributes' panel on the left and an 'Edit' panel on the right. The 'Attributes' panel shows the following information:

Field	Value
IssueType	Flooded Road- Running
Description	Road Flood by tidal Action
Date Submitted	10/29/2012
Request Status	Assigned
Facility Identifier	

The 'Edit' panel is titled 'Edit' and contains the following options:

- Select template to create feature
- Storm Cleanup
- Tree Down
- Tree Down with Wires
- Wires Down
- Pole Down
- Flooder Road- Stagnant
- Flooded Road- Running

Below the list are several icons for editing and navigation, including a red arrow, a red 'X', a blue pencil, and a magnifying glass. A scale bar at the bottom left of the map indicates 500 meters.



Post storm email Dispatched Oct 30, 2012

Hi guys,

We need to report all work done to state and federal agencies. Could we use this as a tool to assist?

Thanks



Response

- First (internally)...
 - Oh... maybe. What happened to those closed features? Deleted? Saved? Cross your fingers...
- Second (internally)...
 - Phew, they're all still here.
- Email response...
 - We have all the data, so we think so.



Another conference call

- What's the detail you need?
 - What we did (what was the type of problem)
 - Easy, that's the logged type
 - How long it took
 - New attribute, easy enough
 - When it was logged
 - We'll see... It was there in the SDE record!
 - When it was completed
 - Date of closing... attribute added
 - Who worked on it
 - Attribute added



And a printed report... daily, weekly, monthly, etc

- More complicated, but doable.
- Added on to widget to include a call to a crystal reports feature (similar to abutters list reports every website does)
- Report could be run by a custom date or date range, and also be filtered by types



Post post-event

- Shelter Island liked the tool so much they started using it for other work orders and job tracking



A different side of post event tracking

- Have been included as an advisor to help support fund dispersal for Federal Disaster money in New York
 - Need to determine fund availability for +/-22,000 houses that submitted damage claims to State due to Sandy
 - Dispersal of funds (obviously) is very time sensitive for political and humanitarian reasons
 - Quick, efficient, thorough evaluation of claims is critical



A different side of post event tracking

- Need for pre-event planning of database, responses, and methodology
 - State and federal red tape can make for a moving target, so flexibility in the design is critical
- Having GIS as a central component would greatly speed up evaluation
 - Knowing where the data is coming from, accuracies of data, last updated, etc are critical components
- Central repository of data and interconnectedness between specialists (archeologists, environmental, building, etc) with triggers to go to next step built into database would also speed up analyses



Summary

- Pre-planning and simple interfaces are imperative
- Training is required
- Getting all responders or users of the system is a lot like herding cats
 - You need to find a good dog that understands how to herd the cats if you want to be successful
 - For us, that dog was the Highway Superintendent



Questions and Answers

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