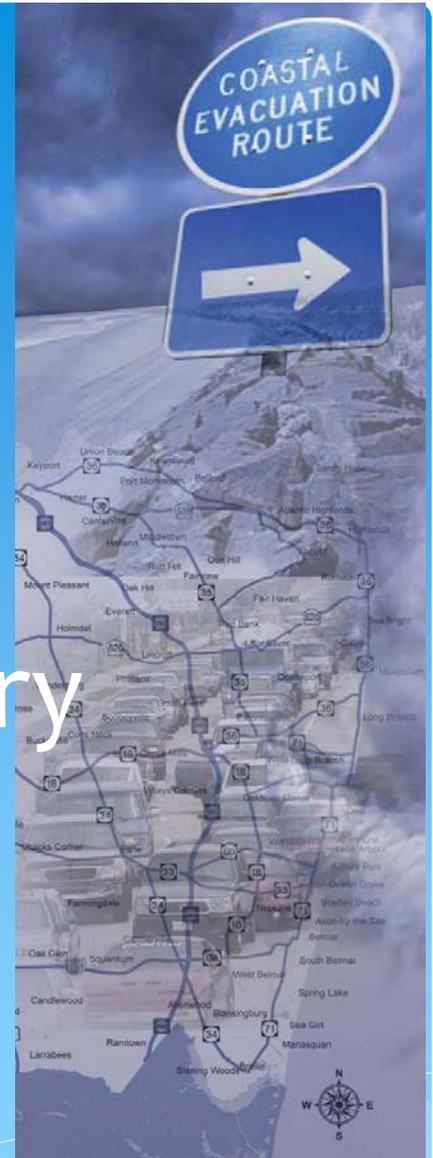


Westerly RI

Re-Entry and Recovery After Sandy

May 28, 2015



Rhode Island Evacuation Zones and Hurricane Surge Inundation

Town of Westerly

Legend

-  Fire Stations
-  Police Stations
-  Hospitals
-  Schools*
-  Hurricane Approved Shelters

Hurricane Evacuation Areas

-  Evacuation Area A
-  Evacuation Area B
-  Area C (Providence)

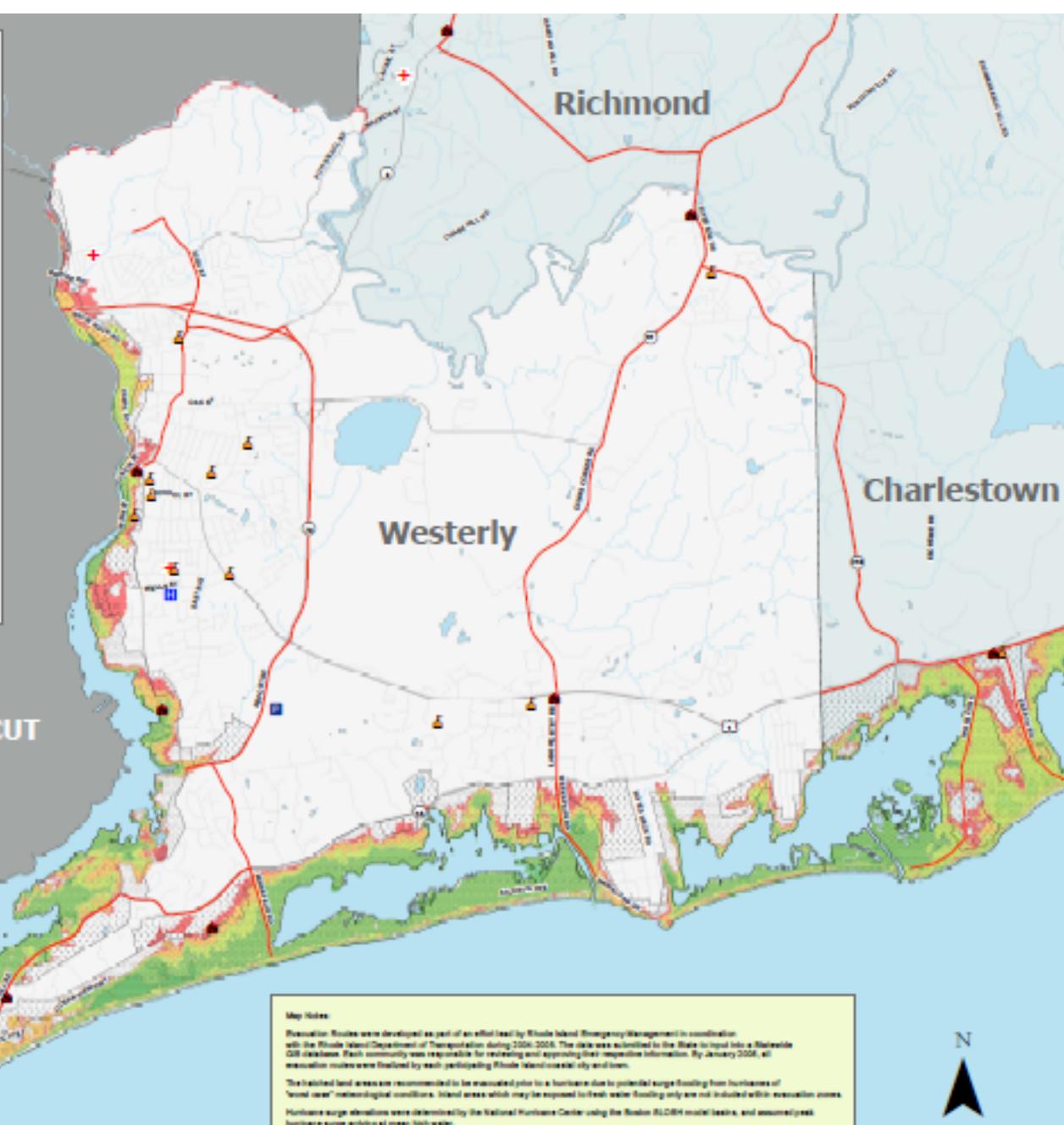
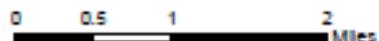
Hurricane Surge Inundation

-  Category 1
-  Category 2
-  Category 3
-  Category 4

Roads

-  Highways
-  Local Roads
-  Evacuation Routes

* Excluding schools that serve as a shelter



CONNECTICUT

Map Notes

Evacuation Routes were developed as part of an effort led by Rhode Island Emergency Management in coordination with the Rhode Island Department of Transportation during 2004-2006. The data was submitted to the State to input into a National GIS database. Each community was responsible for reviewing and approving their respective information. By January 2008, all evacuation routes were finalized by each participating Rhode Island coastal city and town.

The hatched land areas are recommended to be evacuated prior to a hurricane due to potential surge flooding from hurricanes of "low end" meteorological conditions. Inland areas which may be exposed to fresh water flooding only are not included within evacuation zones.

Hurricane surge elevations were determined by the National Hurricane Center using the Boston RCOB model basins, and assumed peak hurricane surge activity at mean high water.

The hurricane surge inundation areas shown on this map depict the inundation that can be expected to result from a worst case combination of hurricane wind/speed, forward speed, and direction for each hurricane category.



March 2010 Flood Impacts

- * Riverine flooding : approx, 150-200 homes affected
- * 25-30 commercial structures affected
- * Ground water table (flooding) 400+ home that we know of!
- * Power loss 3-6 days in most affected areas “made for very a soggy situation!
- * Struck the manufacturing district and most densely populated low lying neighborhood
- * Surge was rapid and flooded National Grid Main Power Station.
- * Extensive debris was washed into the Pawcatuck River

March Flood Photos



Sandy Impact to Westerly

- * Storm surge impacted two city blocks or 500 structures
- * 3-4 feet of sand on road for several miles
- * Unsafe structures and debris throughout impacted area
- * Primarily secondary homes and seasonal businesses



What We Did

- * Evacuation had been mostly successful
- * Area allows for traffic control points to keep people out and DPW vehicles to block off other roads
- * Re-entry phased by area as soon as roads were clear of sand
- * Attempted to use pass system with help from Greater Westerly Chamber of Commerce

Rapid Assessments



- * Many properties in Misquamicut at ground level which is approximately 5-7 feet below base flood elevation.

- * Over 500 buildings posted using the Rapid Assessment Form



Placarding

- * Utilized RI USAR Architects & Engineers and other building officials
- * Placarded over 500 structures using ATC-45 standards
 - * Red – Unsafe
 - * Yellow – Restricted Use
 - * Green – Inspected
- * Small area and took approximately 3-4 days

Sand Sand Sand

- * 3-4 feet of sand on the roads
- * Littered with construction debris
- * Is it contaminated?
- * Sand everywhere!



A Coordinated Effort to Cleanup Misquamicut



North shore of Winnapaug Pond

- * Unimproved private property owned by Audubon Society and the Westerly Land Trust
- * 79 tons of debris – which matched the amount of debris already picked up from within the residential/commercial areas in Misquamicut



- * FEMA will reimburse for the tipping fees and equipment usage to haul the debris to the RI Resource Recovery





**TOWN OF WESTERLY
EMERGENCY ROAD CLOSURES**

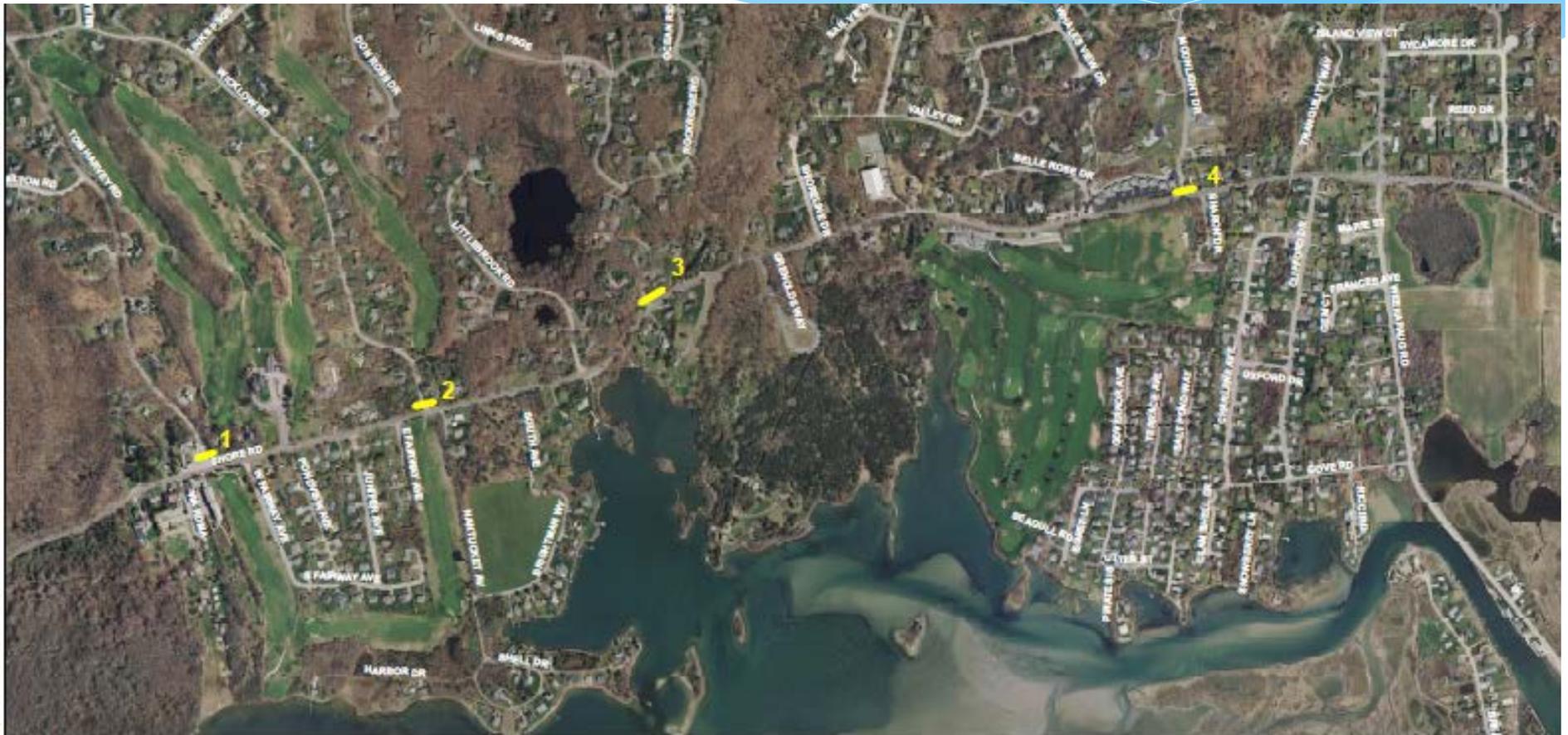
**"Watch Hill and
Miquamicut Areas"**

- 1 - Watch Hill Road at Browning Road**
- 1A - Watch Hill Road at Happy Valley Road**
- 2 - Oceanview Highway and Shore Road**

- 3 - Ice Pond Road at Shore Road**
- 4 - Winnapaug Road and Shore Road**

Barricade Ocean View Avenue and Bayberry Road

Barricade Only Map



**TOWN OF WESTERLY
EMERGENCY ROAD CLOSURES**

**SHORE ROAD
BARRICADES**

**1 - Tom Harvey Road
2 - Wicklow Road**

**3 - Rock Ridge Road
4 - Moonlight Drive**



Re-Entry Operations

- * National Guard set up a TOC to manage their operations



How we did it

- * Established checkpoints with local police, state police, and National Guard



Public Information

- * Constant press releases with updates
- * Same updates went out on Facebook through the Westerly Chamber of Commerce and the Misquamicut Business Association
- * Established hotline



Challenges



- * Some people didn't evacuate and felt they had a right to come and go as they please.
- * Secondary property owners were eager to see their properties or send their property manager
- * Business owners and residences were worried about looting
- * Property owners that were adhering to Town's request were frustrated seeing pictures of their properties on Facebook or the news.
- * Started re-entry early and it made it difficult for crews to remove sand safely without people gawking
- * Messaging was not clear and consistent to checkpoints

What we've Done Since Sandy

- * We wrote an official Re-Entry Plan with participation from fire, police, and emergency management.
- * Each Fire District within an evacuation zone has sent out two passes to each property.

Re-Entry Pass



TOWN OF WESTERLY • POLICE DEPARTMENT

60 Airport Road Westerly, Rhode Island 02891 • 401-596-2022 FAX 401-596-7501



HURRICANE EVACUATION HOME/BUSINESS OWNER IDENTIFICATION PASS

This pass verifies the identification of the bearer and members of his/her party as either home or business owner and allows entry into the zone designated as an evacuation area during the pre and post hurricane event. The bearer of said pass assumes all responsibility for actions taken within the designated zone of evacuation and releases the Town of Westerly and the Westerly Police Department from any and all liability resulting from injury and/or death as well as any and all other claims not stated herein.

NOTE: PHOTO ID REQUIRED WITH PASS. LIMIT OF TWO PERSONS IN PARTY WITH BEARER.

FIRST NAME:		LAST NAME:		DATE OF BIRTH:	
ADDRESS OF HOME OR BUSINESS OWNED:				PHONE:	
PLAT NUMBER:			LOT NUMBER:		
NAME OF PERSON(S) IN PARTY ENTERING:		DOB:	ADDRESS:		PHONE:

What We Will Do Differently

- * Phased approach
- * Ensure all checkpoints have a script to read to people
- * Ensure all checkpoints have a local and/or state police officer with a National Guardsman
- * More communication with fire districts during evacuation and re-entry operations

Re-Entry Procedures

- * Issue passes at locations other than checkpoints (e.g., shelters) to reduce bottlenecks at control points.
- * Set up area to verify credentials for people with questionable identification.

Responsibilities

- * Re-entry operations require coordination with various organizations and agencies.
- * A successful Re-entry Plan depends upon prior assignment of responsibility and coordination.

Other Considerations

- * Assess the damages and hazards.
- * Decide on full-scale or phased re-entry.
- * Establish a re-entry schedule.
- * Establish a method for identifying authorized vehicles and individuals.
- * Establish control points.

Other Considerations (cont.)

- * Arrange public transportation, if needed.
- * Provide emergency response personnel and equipment in the re-entered area.
- * Plan and carry out a public information strategy.
- * Control traffic.
- * Provide security.

Long Term Recovery

The slide features a solid blue background. At the bottom, there are several overlapping, wavy, light blue shapes that create a sense of movement or a horizon line. The text 'Long Term Recovery' is centered in the upper half of the slide.

Building Permits Suspended



- * Immediately after the storm we suspended the issuance of building permits for two weeks.
- * All electrical permits issued, even if in your own home, had to be pulled by a licensed electrician because we knew electrical components were wet.

On-Site Meetings

- * To facilitate the process, we scheduled on-site meetings with RIDEM, CRMC, and the Town to discuss individual properties.



Disaster Recovery Emergency Provisions

- * Applicable to renovation, restoration, and/or replacement of structures impacted by Sandy if:
 - * Use remains the same
 - * Building volume is not increased; and
 - * The wastewater flow as measured by RIDEM regulations is not increased



Disaster Recovery Emergency Provisions (cont.)

- * Alternate Permitting Procedure
 - * If the conditions listed were met then Development Plan Review will not be required instead:
 - * Town Planner will review the proposed plan and provide recommendations for consideration by the Building Official and Zoning Official in the grant of permits; and
 - * The Town Assessor will review proposed plan to verify pre-existing structure size, etc.

Disaster Recovery Emergency Provisions (cont)

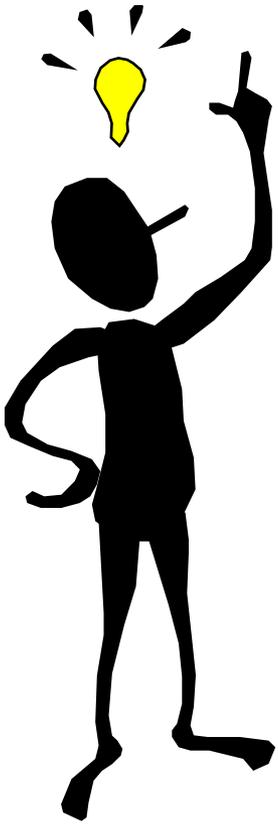
- * Conformity to Dimensional Regulations
 - * Where structures are to renovated, restored, and/or replaced:
 - * Rear, front, and side yard setbacks may be equal to the pre-existing structure to the extent of any nonconformity;
 - * Except for such nonconformity shall conform to rear, front, and side yard setbacks

Disaster Recovery Emergency Provisions (cont)

- * Provided all conditions met the height of any structure shall not exceed the height provided in the Zoning Ordinance plus up to 3 feet of freeboard.
- * Expired 18 months after adoption.
- * Passed January 2013



Freeboard Ordinance



- * We liked our idea so much – we wanted to continue it!
- * Allows for structures to elevate with up to 3 feet of freeboard.
- * For example, height allowance is 25ft, the structure can go as high as 28ft above BFE if 3ft is freeboard

FEMA PA Improved Project



- * Elevating Town Pavilion with FEMA PA as an improved project and CDBG DR
- * Mitigation and Resilience!

Still Going....

- * Rebuilding
- * Mitigation
- * Grant Opportunities
 - * HMGP
 - * CDBG DR
 - * NROC
 - * NRCS EWP
 - * Global Green



WESTERLY HAZARDS TRAINING TOOL

www.PrepareWesterly.org

Do you know how to reduce your risks and losses from hurricanes, winter storms and flooding?



Visit the Town of Westerly website or www.PrepareWesterly.org to enroll in the free, online Westerly Hazard Mitigation Education Course.



HAZARDS TRAINING TOOL

Westerly, RI



The Westerly Hazard Mitigation Education Course will teach you how to prepare for and protect yourself against future disasters.

The goal of this course is to empower Westerly residents and business owners to make us a more resilient community.

Valuable coupons from these local business will be awarded upon successful completion of the course.



Why Mitigation Matters to Us

- * 4 Federally declared disasters in 4 years
- * Riverine and coastal flooding
- * Climate change and coastal erosion
- * Opportunity Knocks!!



Contact Information

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