

A photograph showing three firefighters in silhouette, wearing helmets and gear, standing in a field of tall, dry grass. In the background, a large, intense wildfire is burning, with bright orange and yellow flames and thick smoke rising into the dark sky. The scene is backlit by the fire, creating a dramatic and high-contrast image.

## **Reducing Wildfire Risk from an Invasive Grass on Staten Island, New York**

Heidi Wagner  
Northeast Firewise Advisor  
National Fire Protection Association  
Wildland Fire Operations Division

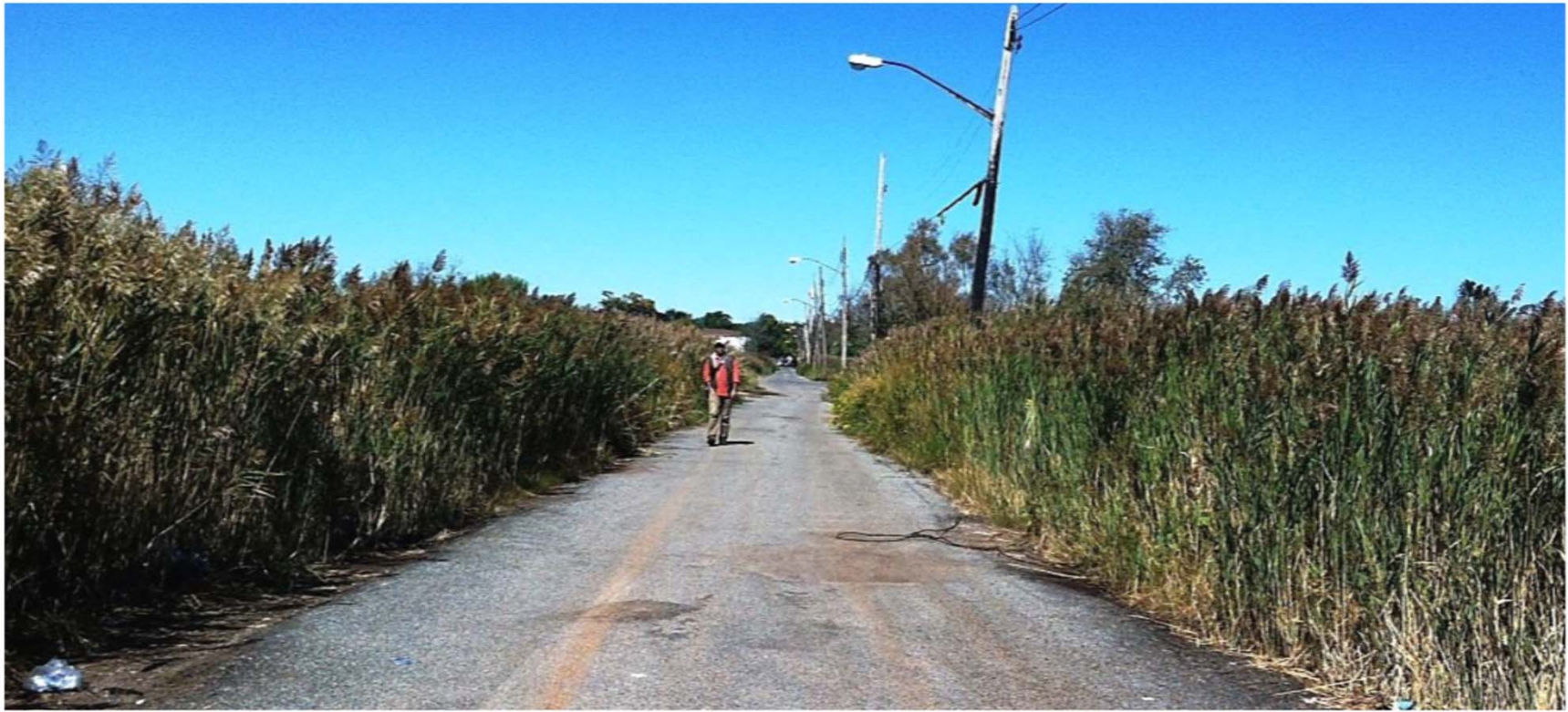
# The Wildland Urban Interface



# Common Reed (*Phragmites australis*)



- An invasive, perennial grass that is dramatically altering wetlands in North America
- Out competes all other plants, creating a monoculture
- Can reach heights of 20 feet and produce 56 to 83 foot flame lengths
- Standing dead stalks are highly ignitable and capable of high rates of spread.
- Seed heads can act as firebrands and can be carried ½ mile ahead of the fire.
- Has spread almost to the back doors and in between the homes on Staten Island



- Total of 7,390 *Phragmites* brush fires have occurred from 1996 through 2010.
- 300 of those brush fires were serious “all hands on” or greater.
- Although ignition can be accidental, most are incendiary (arson).
- Fires do not allow for direct attack without the use of aerial resources.
- FDNY has adapted its strategy by using ladder trucks to spray water over the tops of homes and structures.

Staten Island has the highest incidence of wildfire in the State of New York!





The rhizomes of *Phragmites* allow it to spread rapidly. Pieces of the rhizomes can break off, float away, and continue growing.







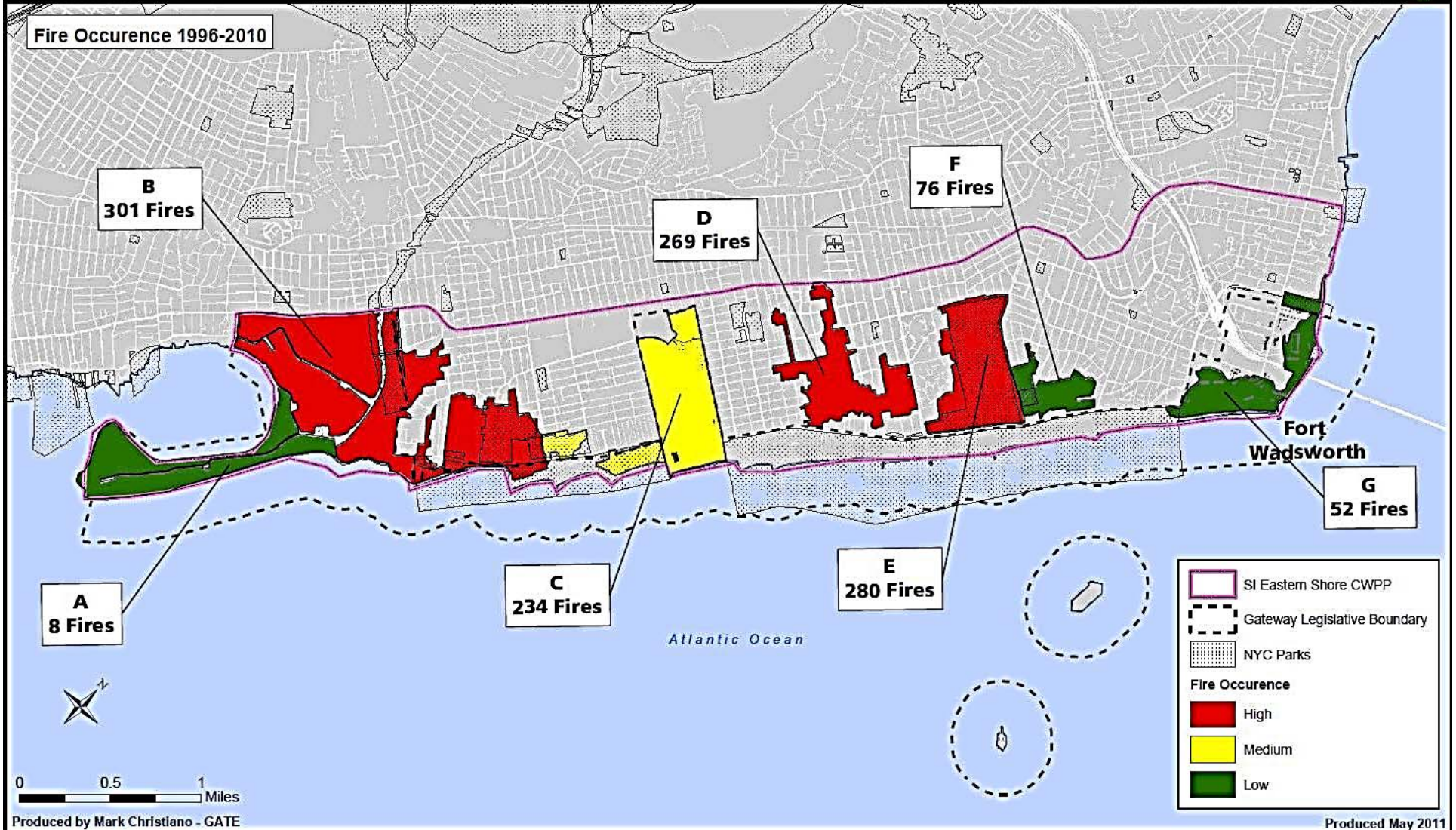
# East Shore, Staten Island Richmond County



# Fire Occurrence 1996-2010

Gateway National Recreation Area  
New York / New Jersey

National Park Service  
U.S. Department of the Interior



Produced by Mark Christiano - GATE

Produced May 2011



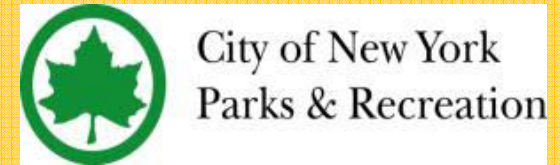
- In December, 2010 a public meeting was held in the East Shore community impacted by severe *Phragmites* wildfires.
- Residents expressed their frustration with government leadership in finding solutions for minimizing the wildfire threat from the *Phragmites* on the public lands bordering their homes.
- Strategy meetings followed between elected officials, local, state and federal agencies with jurisdiction in the East Shore communities.
- The concept of a **Community Wildfire Protection Plan (CWPP)** was introduced.

# Community Wildfire Protection Plan (CWPP)

- In 2003 Congress enacted the **Healthy Forest Restoration Act (HFRA)**.
- **Provides incentive for federal agencies to give consideration to local communities** as they develop and implement hazardous fuel reduction projects on forested and other lands.
- **Communities must first prepare a CWPP**, which is designed to aid at-risk communities to establish priorities and recommendations to protect their citizens, homes and essential resources from the destruction of catastrophic wildfire and to safeguard firefighters, while preserving and protecting the natural environment.
- **A necessary precursor to applying for federal fuel dollars** to assist with wildfire management within the defined CWPP area.



# CWPP Core Working Group Members



## **Federal:**

National Park Service (NPS)

## **State:**

NYS Department of Environmental Conservation (DEC)

## **City:**

Department of Environmental Protection (DEP)

City of New York Parks and Recreation (NYC Parks)

New York City Fire Department (FDNY)

Staten Island Borough President (SIBP)




# Open Space Resources Along the East Shore

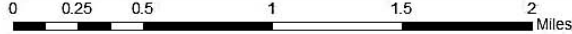


**Legend**

-  Boundaries of East Shore CWPP Project Site
-  NYC Parkland
-  Property Approved Through ULURP to be Acquired by DEP
-  National Parks Service
-  Property Under the Jurisdiction of DEP

**Fire Threat Zones**

-  High
-  Medium
-  Low



**City of New York Department of Parks and Recreation**  
 Planning and Parklands Division  
 Michael R. Bloomberg, Mayor  
 Adrian Benepe, Commissioner  
 Joshua Laird, Assistant Commissioner  
 Colleen Anderson, Director of Parklands

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# Goals and Objectives of CWPP

**Goal:** To eliminate damage and destruction to property and natural resources from wildfires along the East Shore

**Objectives :**

- Improve wildfire prevention techniques
- Improve the FDNY's ability to contain and extinguish wildfires
- Manage the fuel load of natural vegetation occurring on open spaces in the community
- Increase and maintain the community's understanding of wildfire



# Short-term Mitigation Alternatives (Immediate Implementation)

- **Treatment of structure ignitability:** Homeowners must share in protection of their homes and community by preparing their properties in the areas of home construction, maintenance and landscaping.
- **Homeowners should apply for NYSDEC permit to cut *Phragmites* on their property** and work together to create a continuous defensible space with neighbors. Permit allows cutting of *Phragmites* 100 feet from home, but no more than 50 feet beyond property lines.





- **Mechanical Fuels Reduction:** Mowing must occur several times a year. During two mowing demonstrations in 2011, the **Marshmaster** broke down due to illegally dumped debris hidden in the *Phragmites*, such as refrigerators, tires, shopping carts. All debris must be removed prior to mowings. Once removed, future maintenance cuttings will run more efficiently.



# Intermediate Term Alternatives (three to five years)

## Chemical treatment of vegetation:

- One of the most effective methods for treatment
- Must be applied by trained personnel
- May impact other plant species
- Spraying must occur for two successive years
- Large areas could be treated through aerial application



## Prescribed burning:

- Provides immediate wildland fire risk reduction
- Short range spotting of 100 feet may occur
- Burning can only occur when burn prescription is met



## Re-vegetation:

- Fire resistant native vegetation can be seeded or planted
- Spot treatment of *Phragmites* will still be required



**Aerial treatment of *Phragmites***

# Long Term Alternatives (10 years or more)

## Mid-Island Bluebelt:

- NYCDEP will construct storm water wetlands (retention ponds) in Oakwood Beach, New Creek and South Beach.
- *Phragmites* will be removed through excavation of fill soils that contain rhizomes, converting areas to standing water (most successful way to remove *Phragmites*).
- *Phragmites* in upland areas surrounding storm water wetland sites will be replaced with native plants.
- Will provide long-term solution for the control of *Phragmites*
- May take up to 30 years to be fully implemented



# Public Outreach and Education

## East Shore Fire Council:

- Efforts will be made to present materials to the public at least twice a year in late winter and late summer, before fire seasons.
- Will utilize the following: FDNY's Fire Safety Education program, NYDEC's Smokey the Bear program and the **Firewise** program

## Educate residents about the National Fire Danger Rating System:

- Encourage public to adapt their behavior and obey restrictions based on their knowledge of these levels



# Port Richmond County CERT



Port Richmond CERT members are delivering the Firewise message to their neighbors.



# Community Emergency Response Team

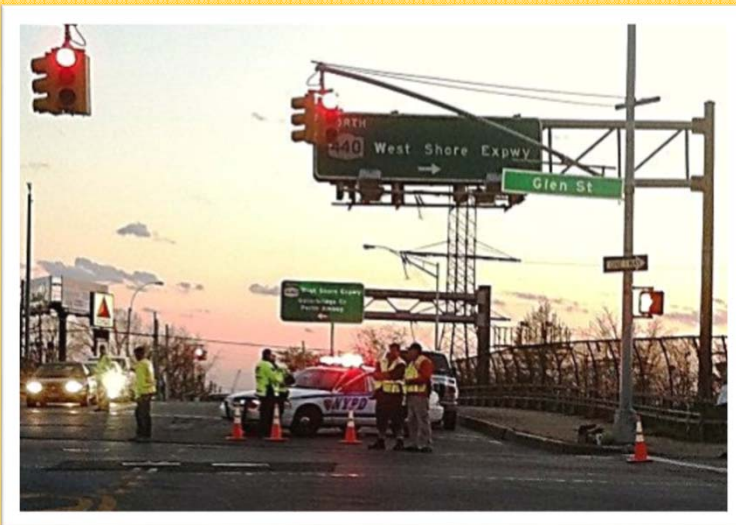
## CERT members:

- Volunteers trained in basic disaster response skills – 2,411 active CERT programs in the US
- Can assist others in their community when professional responders are not immediately available
- Support responding agencies during emergencies
- Inform their community about emergency preparedness





**Port Richmond CERT** has 50 members and host 60 table top events on Staten Island to distribute emergency preparedness information to residents.



**Port Richmond CERT** members assisting with traffic control during 4-alarm brush fire at the Fresh Kills Landfill on April 9, 2012



# Forest Fire Hazard Mitigation Grant

- NYC Department of Parks and Recreation has secured a federal grant to fund a hazardous fuel reduction project along the wildland urban interface in the East shore community.
  
- **Funds provided: \$325,000 Match: \$325,000**
  
- **The project will utilize a multi-faceted approach to:**
  1. Manage the fuel load of high risk locations
  2. Address community and homeowner education by introducing the ***Firewise*** program
  3. Create a buffer zone of native vegetation with low fuel potential and low height



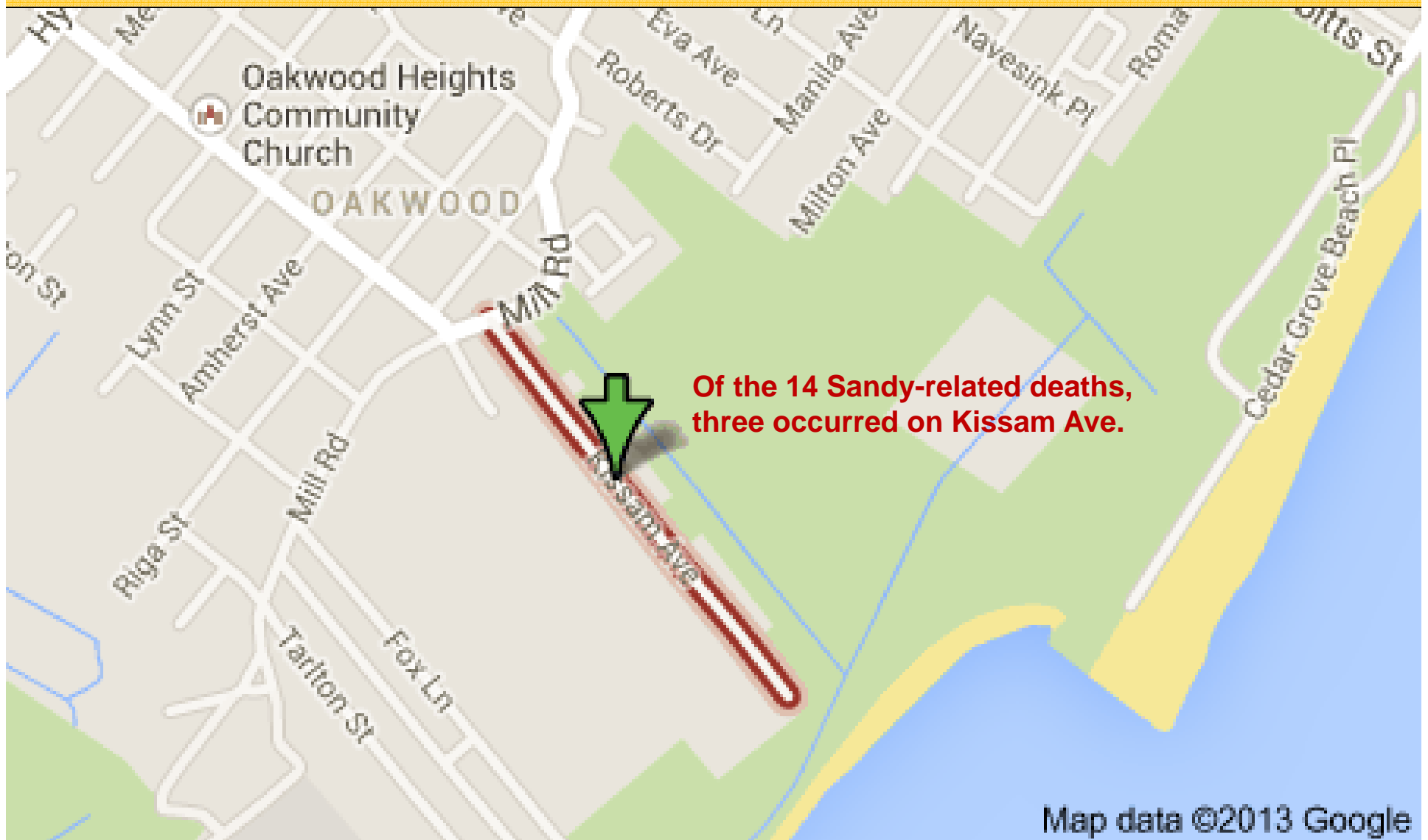
# Superstorm Sandy

October 29, 2012





# Kissam Avenue



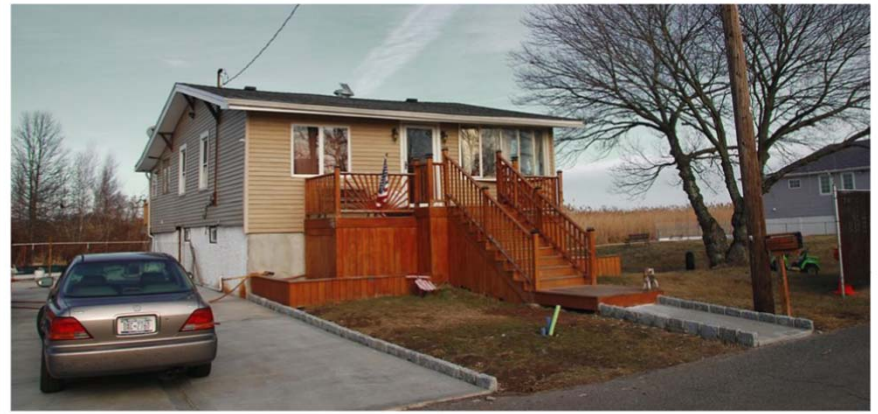


Phragmites

Phragmites

Oakwood Beach

# Kissam Avenue Before Sandy



# Kissam Avenue After Sandy





**Of the fifteen homes on Kissam Avenue, only three remain.**



# The Buyout Program

- In February, 2013 a buyout program of Oakwood Beach homes at 100% of pre-Sandy value was announced by the Cuomo administration.
- Up to \$400 million to buy and demolish over 400 homes wrecked by Sandy and permanently preserve the land as undeveloped coastline
- Average buyout of Oakwood Beach homes were in the \$400,000 range
- Open space will be used to create a barrier to repel future storm surges.



# Oakwood Beach Restoration

- **The Nature Conservancy (TNC)** is partnering with other agencies (NYC DEP, NYC Parks, NYC Planning, NYS DEC) on Staten Island to conduct an Oakwood Beach Feasibility Study, which will take into account future climate change and sea level rise.
- **TNC** asked to evaluate feasibility of salt marsh restoration in open space area created by buyback program.
- Returning the tide and salt water to this area would reduce the vigor of the *Phragmites* and remove the fire hazard.
- Dense stands of *Phragmites* would be then be replaced by salt marsh native vegetation.



**Spartina alterniflora seedlings**

# Ocean Breeze Community

## “The Bowl”



"We're below sea level." said Frank Moszczynski, who lives on a block where one house floated across the street and several others were demolished. "We're in a bowl that was created at the end of the ice age. We have the ocean in front of us and New Creek surrounding us completely in a loop."



# First Pilot Firewise Community?

- **Ocean Breeze** is a 4 block community with 150 homes along the East Shore.
- **“Spark Plug”** identified: Frank Moczynski! Connected to civic organizations and local public officials
- Plans are underway to introduce **The Firewise Communities/USA®** program and **Ready, Set, Go!** to the residents of Ocean Breeze in December.



A photograph of a field of tall grasses at sunset. The sky is a deep orange and yellow, with the sun low on the horizon, creating a strong backlighting effect on the grass. The grasses are silhouetted against the bright sky, and their tips are catching the light. In the lower-left foreground, the dark silhouette of a person's head and shoulders is visible, looking towards the field. The overall mood is serene and contemplative.

Questions or Comments?

[www.nycgovparks.org/pagefiles/47/CWPP.pdf](http://www.nycgovparks.org/pagefiles/47/CWPP.pdf)