

What Does Adaptation Look Like?

Some examples from NH towns

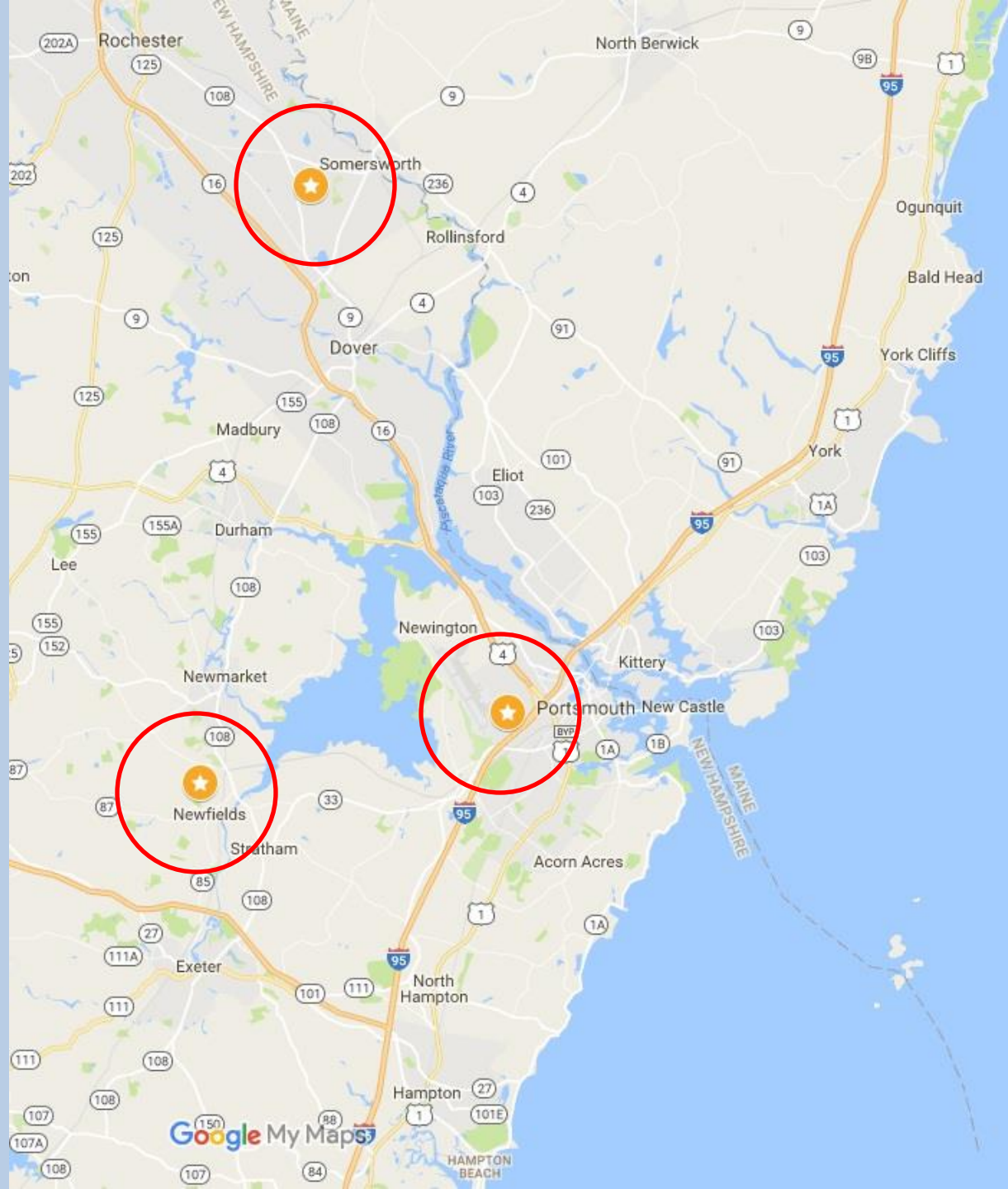


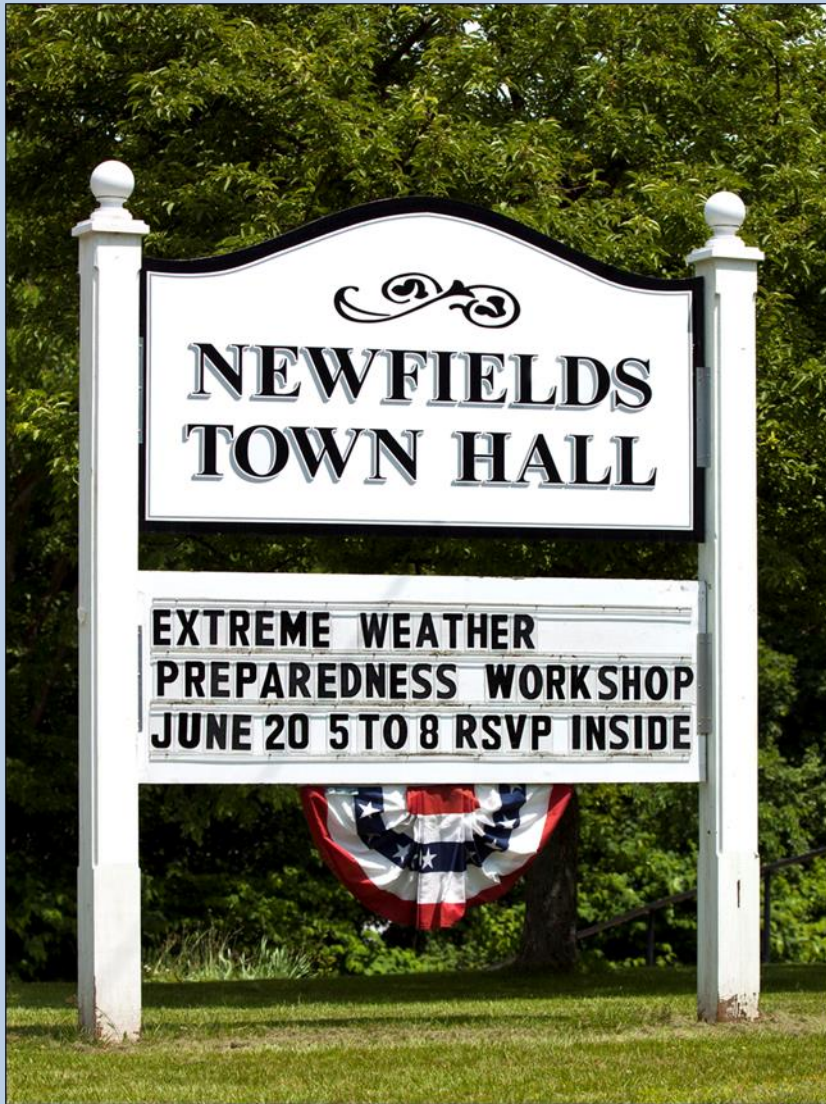
Sherry Godlewski

NH Department of Environmental Services

Upper Valley Adaptation Workgroup

October 25, 2016





2012



Town of Newfields, NH
Population < 2000

Located on Great Bay
in Squamscott & Lamprey
River watersheds

Community Meetings

Identified their concerns:

- Stormwater & flooding
- Emergency Preparedness
→ Power Outages

They formed sub-groups to address these issues



Bulk Generator Purchase

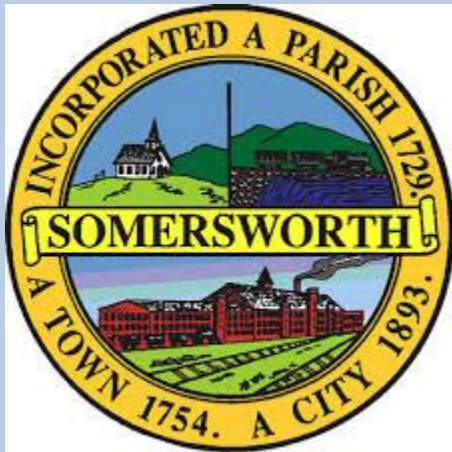
Select board approval for bulk-purchase of generators!

Residents got a discounted price & professional installation.



Somersworth, NH

- Located on the Salmon Fall's River
- Population 11,777



Somersworth, NH Drinking Water Treatment Facility



May 14th, 2006



First flood
Sunday
(Mother's Day)



Exceeded 100 & 500 year flood



What to do?

- Initial shock  chaos  response
- Assess risks & damages
- Notify superiors, management & public
- Contact large water users

Velro USA, General Electric, Dialysis Center, General Linen

- What to do if facility could be offline (permanently?)
- How to ensure potable water supply & fire protection?
- Floodwaters have never been as high in recorded history !
- Emergency response plan was available but lacking
- Relied on teamwork, ingenuity, and dedication
- Began repairs & reconstruction

April 16th, 2007

- Second flood
- Monday
- Staff on regular duty
- Watched the waters encroach
- Second event worse
- Facility undergoing construction
- Still awaiting FEMA funding
- Open pits, no garage door, debris and materials on site
- Floodwaters higher and faster
- Lost more equipment (pumps, blowers, PLC, generator, HVAC)
- Debris was throughout entire facility







Elevated Generator



Propane Tanks strapped to Cement Pad



Covers for air intakes



Front Door Dam



Ian Rohrbacher

Garage Door Dam



Elevated pumps



**PREPARE.
PROTECT.
PORTSMOUTH.**



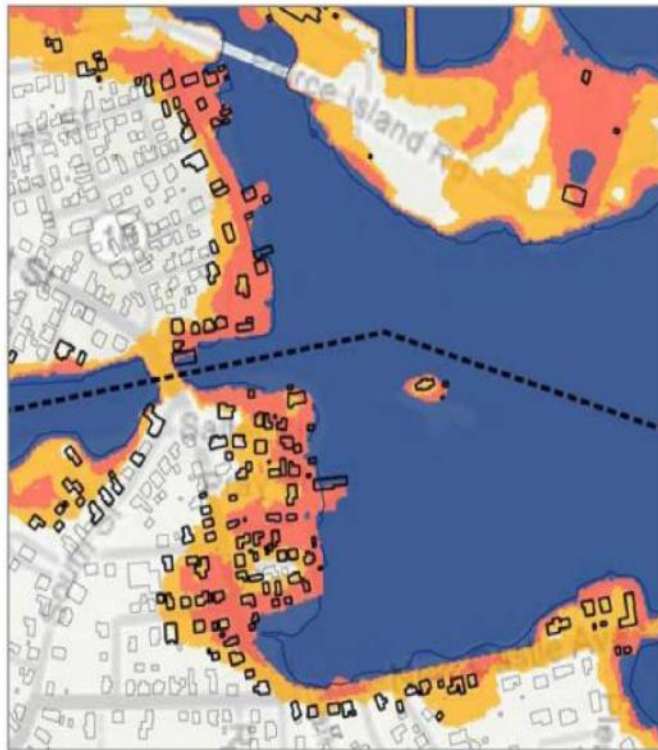
Portsmouth

- Located on the Piscataqua River
- Population 21,598
- Secured \$30,000 grant from NOAA
- The Coastal Resilience Initiative
- Detailed 50-page report
 - impacts of climate change
 - possible adaptation measures
- First detailed vulnerability assessment in NH!



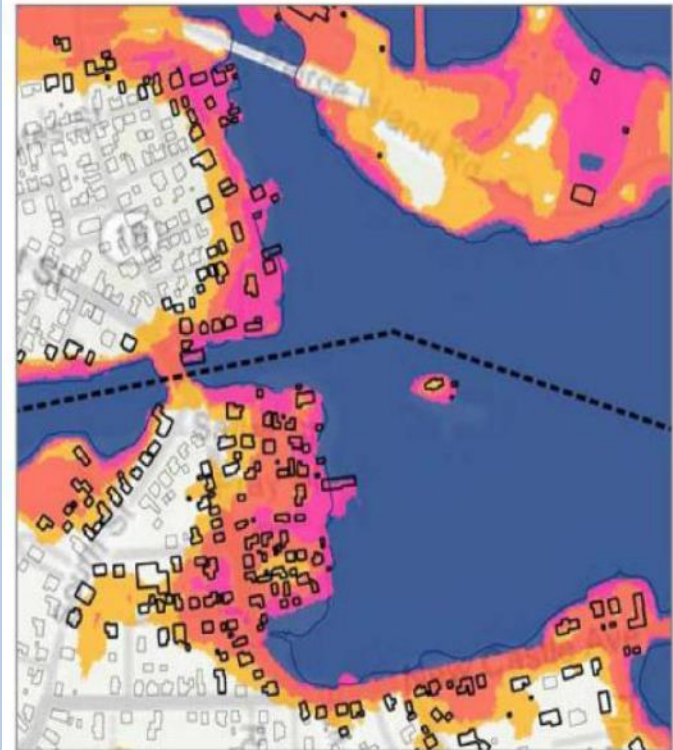
Detailed Maps

**Current 100-Year Storm
Surge = 6.8 feet**

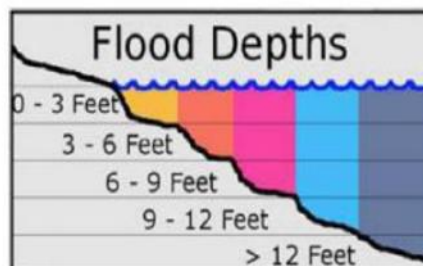


Stillwater Elevation 11.5 Feet NAVD

**2050 100 year flood
high emissions scenario**



Stillwater Elevation 13.5 Feet NAVD



Report Summary

- Adaptation strategies for infrastructure & associated capital & operating costs
 - Protection
 - Accommodation
 - Retreat/Abandonment
- Impacts to tidal & freshwater wetlands
- Impacts to public health
- Policy & planning recommendations



Report Roll Out Community Engagement



Presentation of Maps



Walking tour



Investments in Adaptation

It's not a question of **IF** we'll pay to adapt

It's a question of **WHEN** we'll pay

We can plan ahead & get where we want to go

We can incur damages, clean up the mess & live with the consequences

Anticipatory Adaptation

River & Stream buffers

Help to Decrease :

- storm water runoff
- erosion
- flooding

\$1.00

OR

\$4.00

Reactionary Adaptation

