

# Communicating How to Assess Risk and What to Do Next



Photo Credit, RI DOT 2012

Dawn M. Kotowicz, Michelle Carnevale, Teresa  
Crean and Pam Rubinoff  
Coastal Resources Center/RI Sea Grant  
University of Rhode Island

Social Coast Forum  
February 10, 2016



Photo Credit: Melissa Devine

## Post-Sandy, 2012



Photo Credit: B. Gionfriddo

**Post-Snow, February 9, 2016**

# Drivers for Municipalities to Prepare

- Use of public funds
- State Mandate for Comprehensive Plans
- Executive Order 11988/13690



# Sea-Level Change Curve Calculator

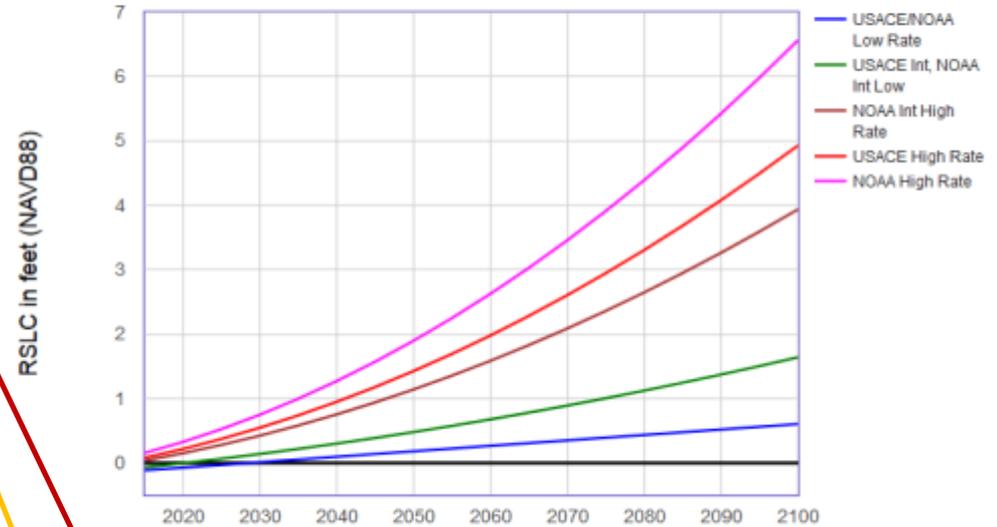
Estimated Relative Sea Level Change  
from 2015 To 2100  
8452660, Newport, RI  
NOAA's Published Rate: 0.00846 feet/yr  
All values are expressed in feet

8452660, Newport, RI  
NOAA's Published Rate: 0.00846 feet/yr

Year	NOAA Low	USACE Low	NOAA Int Low	USACE Int	NOAA Int High	USACE High	NOAA High
2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2020	0.04	0.04	0.07	0.07	0.12	0.14	0.17
2025	0.09	0.09	0.13	0.13	0.25	0.29	0.37
2030	0.13	0.13	0.21	0.21	0.39	0.47	0.59
2035	0.17	0.17	0.29	0.29	0.55	0.66	0.84
2040	0.21	0.21	0.37	0.37	0.72	0.87	1.12
2045	0.25	0.25	0.46	0.46	0.91	1.10	1.42
2050	0.30	0.30	0.55	0.55	1.11	1.35	1.74
2055	0.34	0.34	0.64	0.64	1.32	1.61	2.10
2060	0.38	0.38	0.75	0.75	1.55	1.90	2.47
2065	0.42	0.42	0.85	0.85	1.80	2.20	2.88
2070	0.47	0.47	0.96	0.96	2.05	2.53	3.30
2075	0.51	0.51	1.07	1.07	2.33	2.87	3.76
2080	0.55	0.55	1.19	1.19	2.61	3.23	4.24
2085	0.59	0.59	1.31	1.31	2.91	3.60	4.74
2090	0.64	0.64	1.44	1.44	3.23	4.00	5.27
2095	0.68	0.68	1.57	1.57	3.56	4.41	5.83
2100	0.72	0.72	1.71	1.71	3.90	4.85	6.41

Print Table

Relative Sea Level Change Projections - Gauge: 8452660, Newport, RI (05/01/2014)



20-year Comp Plan

30-year Mortgage

# Coastal Municipal Meetings Encouraging the Process

- Met with key staff in Washington County coastal municipalities
  - October 2015 – January 2016
- Municipal decision makers decided audience
  - Town officials or open to public
- Reviewed tools/strategies available
- Collected feedback
  - General views/barriers
  - Perceptions of Strategies



# Adaptation Strategies

1. Identify Areas at Risk
2. Develop a database of at risk property/infrastructure
3. Integrate into municipal permitting
4. Zoning changes for height variances
5. Require CIP & TIP evaluate for SLR impacts
6. Develop incentives for voluntary adaptation
7. Emergency Permitting Process
8. Planning process for impacts to transportation infrastructure
9. Apply & advance in CRS
10. Increase open space/reduce density in at risk areas

**Assessment**

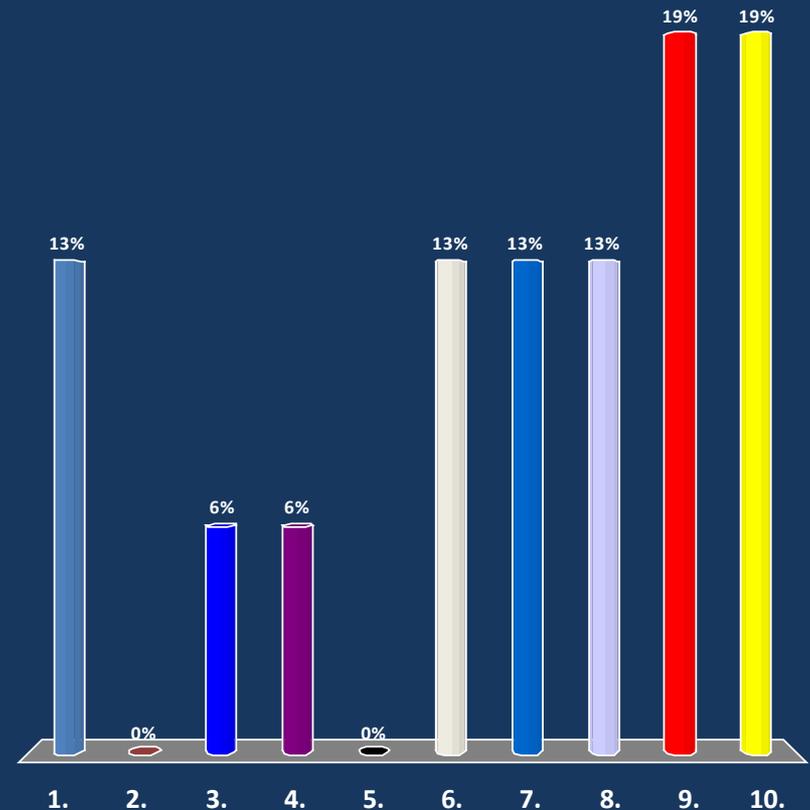
**Policy**

**Action**

# Clicker Responses (Sometimes)

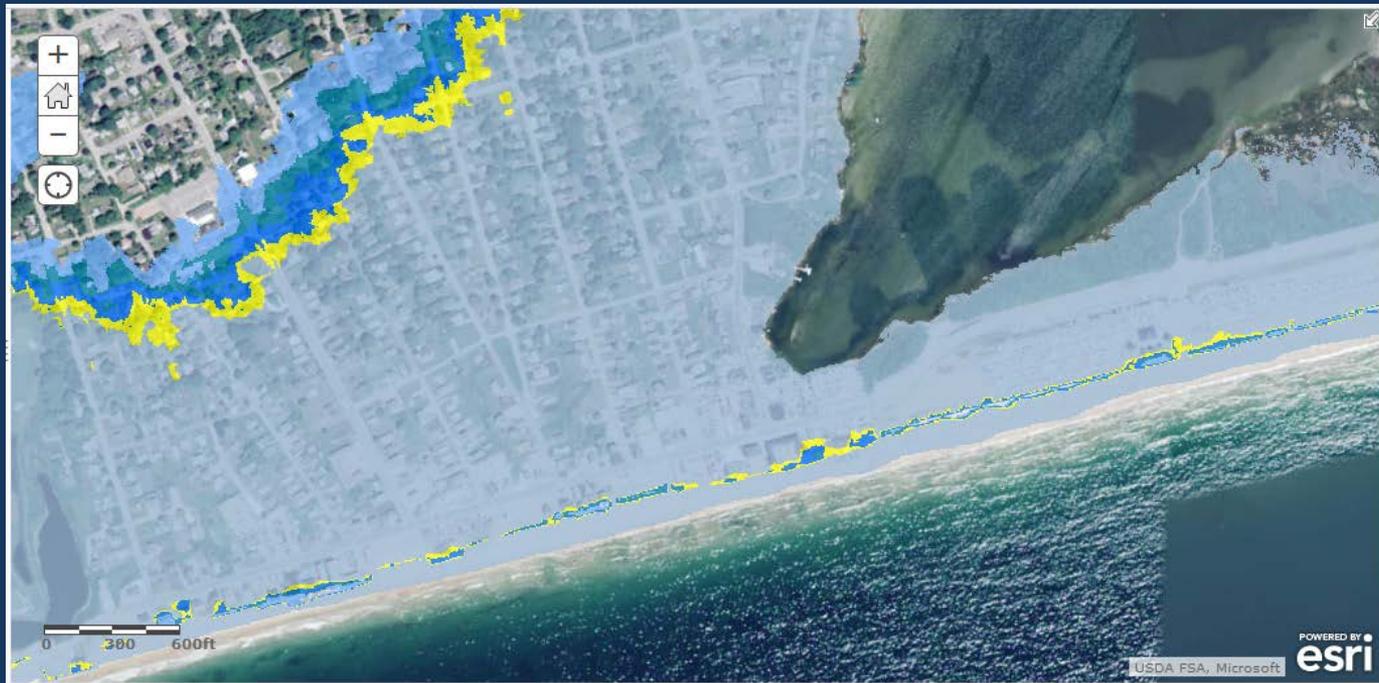
What are the top 3 strategies most likely to be implemented in your town?

1. Identify Areas at Risk
2. Develop a database of at risk property/infrastructure
3. Integrate into municipal permitting
4. Zoning changes for height variances
5. Require CIP & TIP evaluate for SLR impacts
6. Develop incentives for voluntary adaptation
7. Emergency Permitting Process
8. Planning process for impacts to transportation infrastructure
9. **Apply & advance in CRS**
10. **Increase open space/reduce density in at risk areas**



# Strategies Most Likely to be Implemented

1. Identifying at risk areas
2. Database of exposed property
3. Emergency permitting process post-storm



Atlantic Avenue, Westerly – 100 year storm

# Most Cost Effective Strategies

1. Identifying at risk areas
2. Incentives for voluntary adaptation
3. Emergency permitting process post-storm
4. Increase open space and reduce density



# Strategies to Learn More About

1. Planning for storm and SLR impacts to infrastructure
2. Increase open space and reduce density
3. Examples from other successes (not a strategy)



# Common Concerns

- Clear direction on planning horizons
- Roadway management and coordination with Department of Transportation
- Stormwater management
- Financing adaptation/Communicating importance to decision makers
- Designating where not to (re)build

# Common Concerns



# Risk Perception & Communication

- Assessing risk is (almost too) easy
- Communicating **Actionable Risk**
  - “What do we do about it”
- Sharing successful examples of adaptation
  - Learning from **others’ personal** experience

# Partnerships

RHODE ISLAND  
DIVISION OF  
PLANNING



Time Horizon	Projected Sea Level Rise (above 1990 water levels) in Rhode Island
2035	1 foot
2050	2-3 feet
2100	5-7 feet