



# Coastal Storm Impacts & Increasing Resilience in New England

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Coastal Zone Management**

# 2018 Nor'easters

Jan. 4

Mar. 2-4

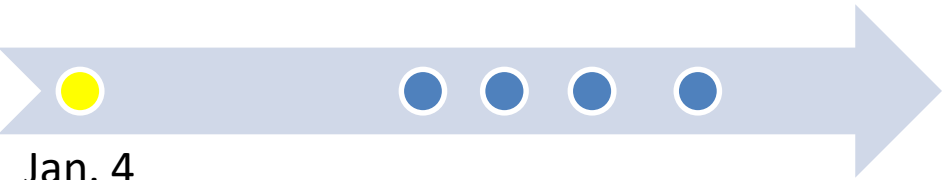
Mar. 13-14



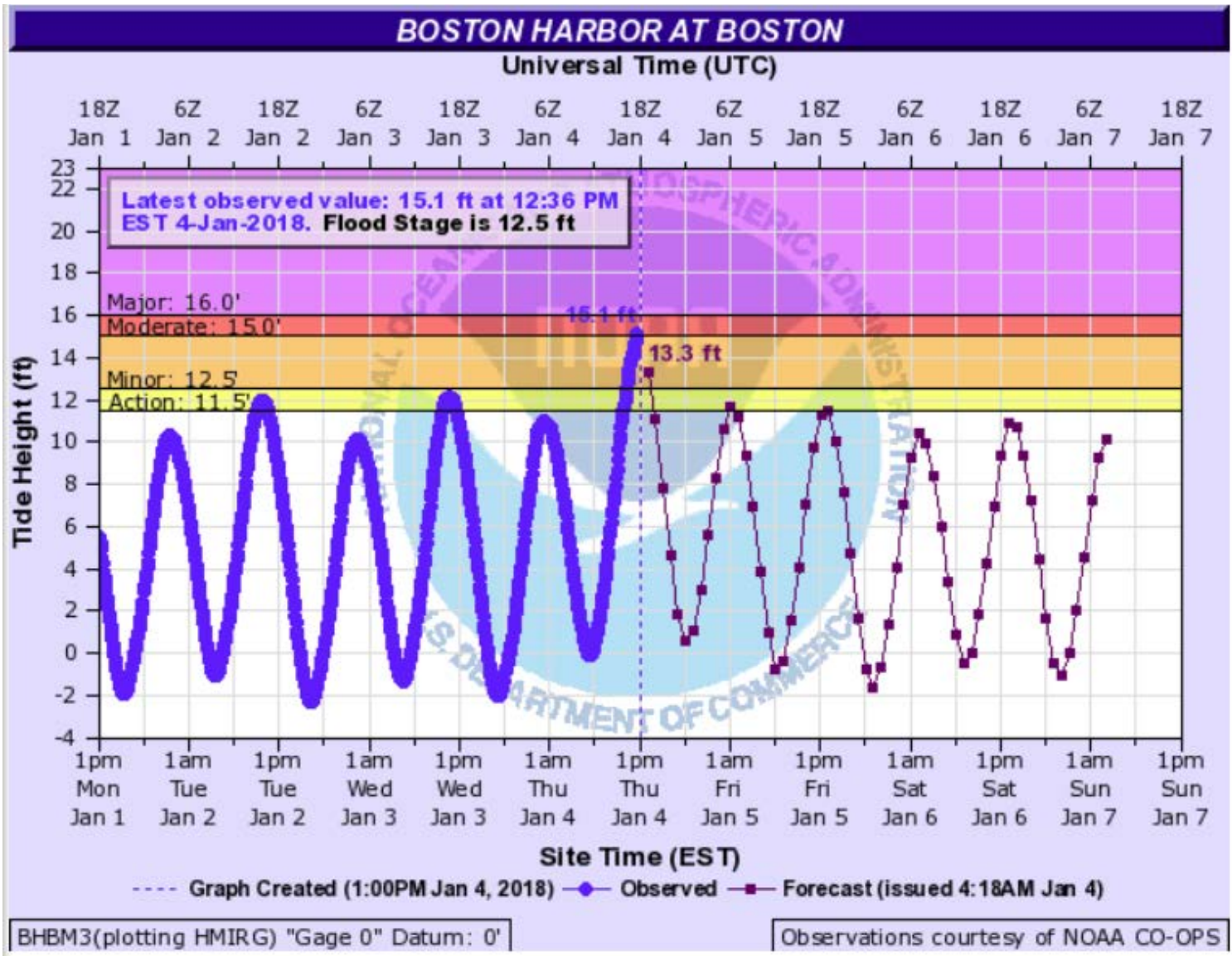
Mar. 8

Mar. 21-22

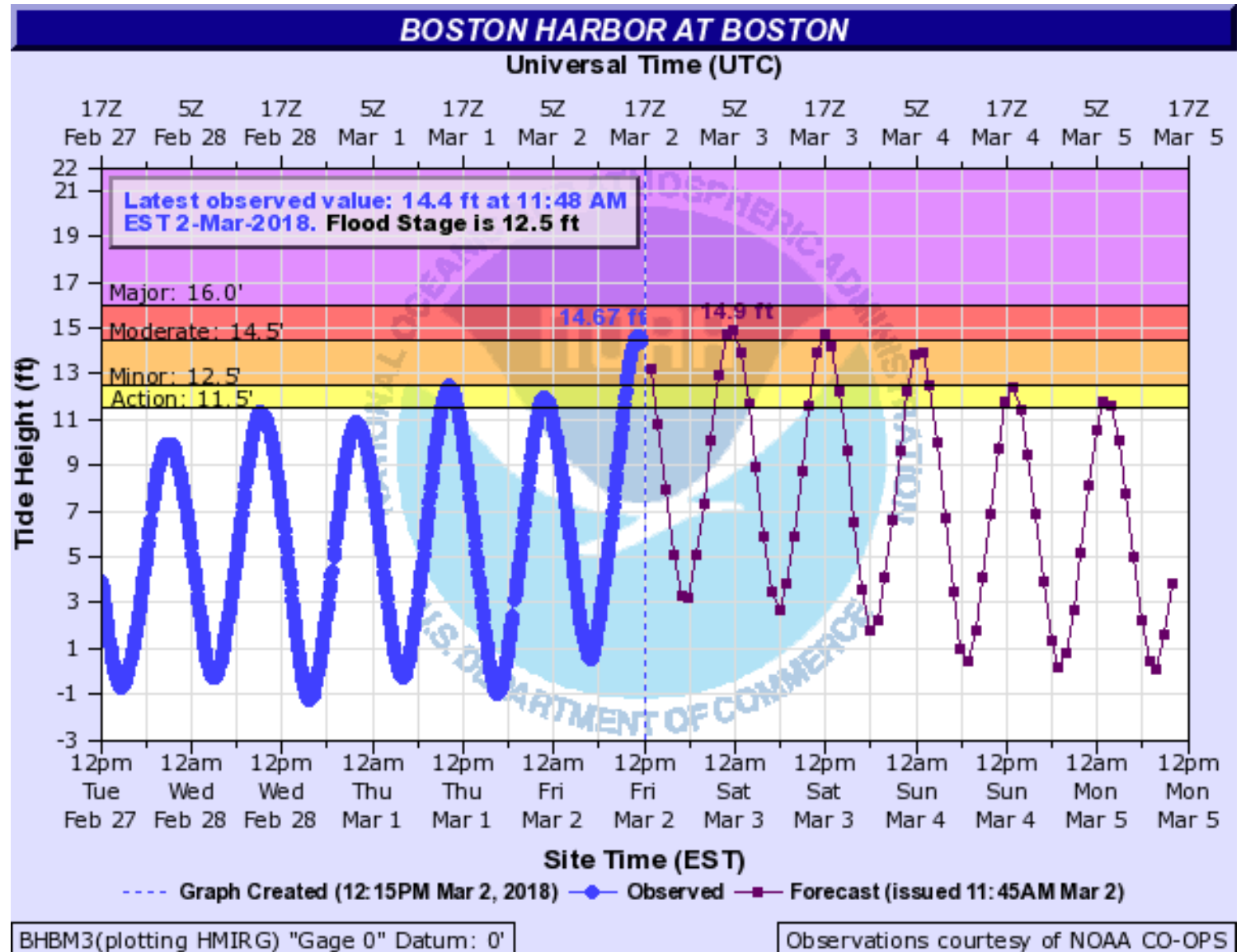




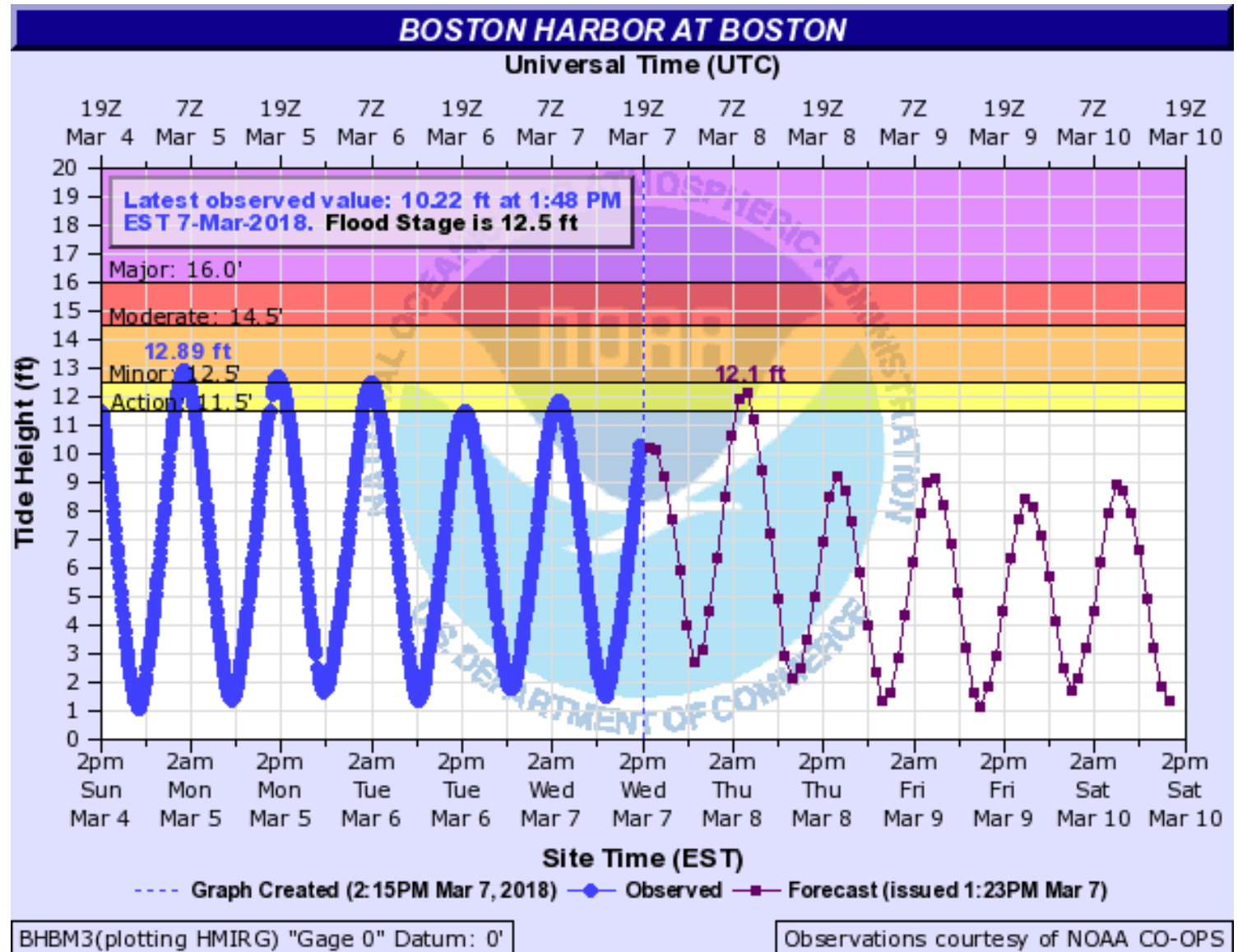
Jan. 4



Mar. 2-4



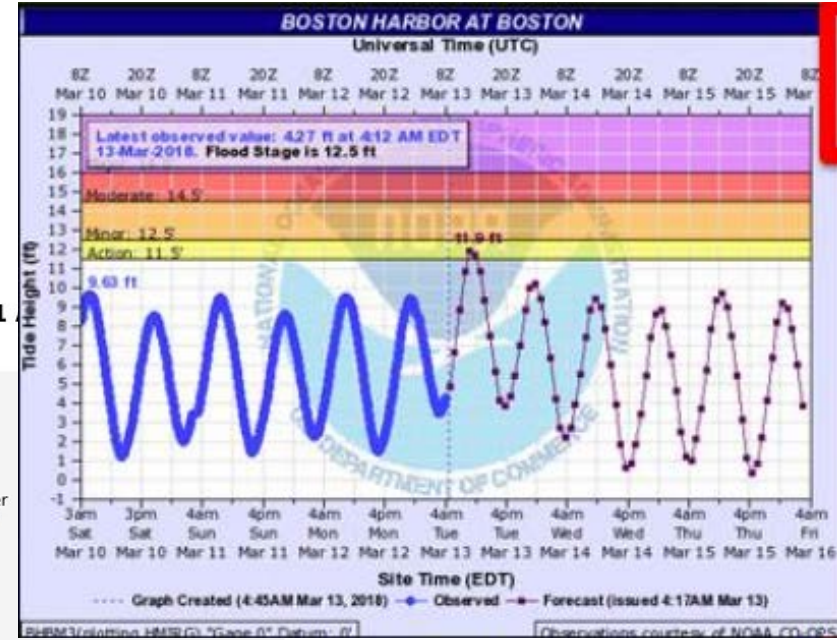
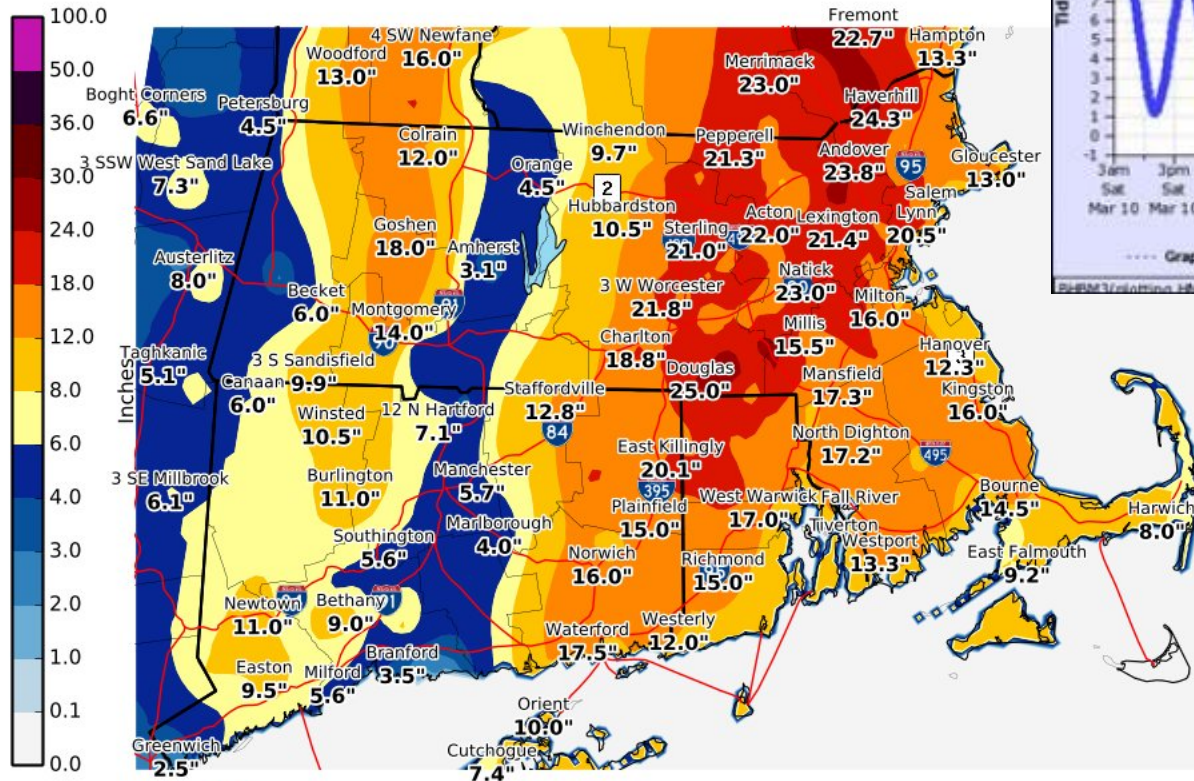
Mar. 8





Mar. 13-  
14

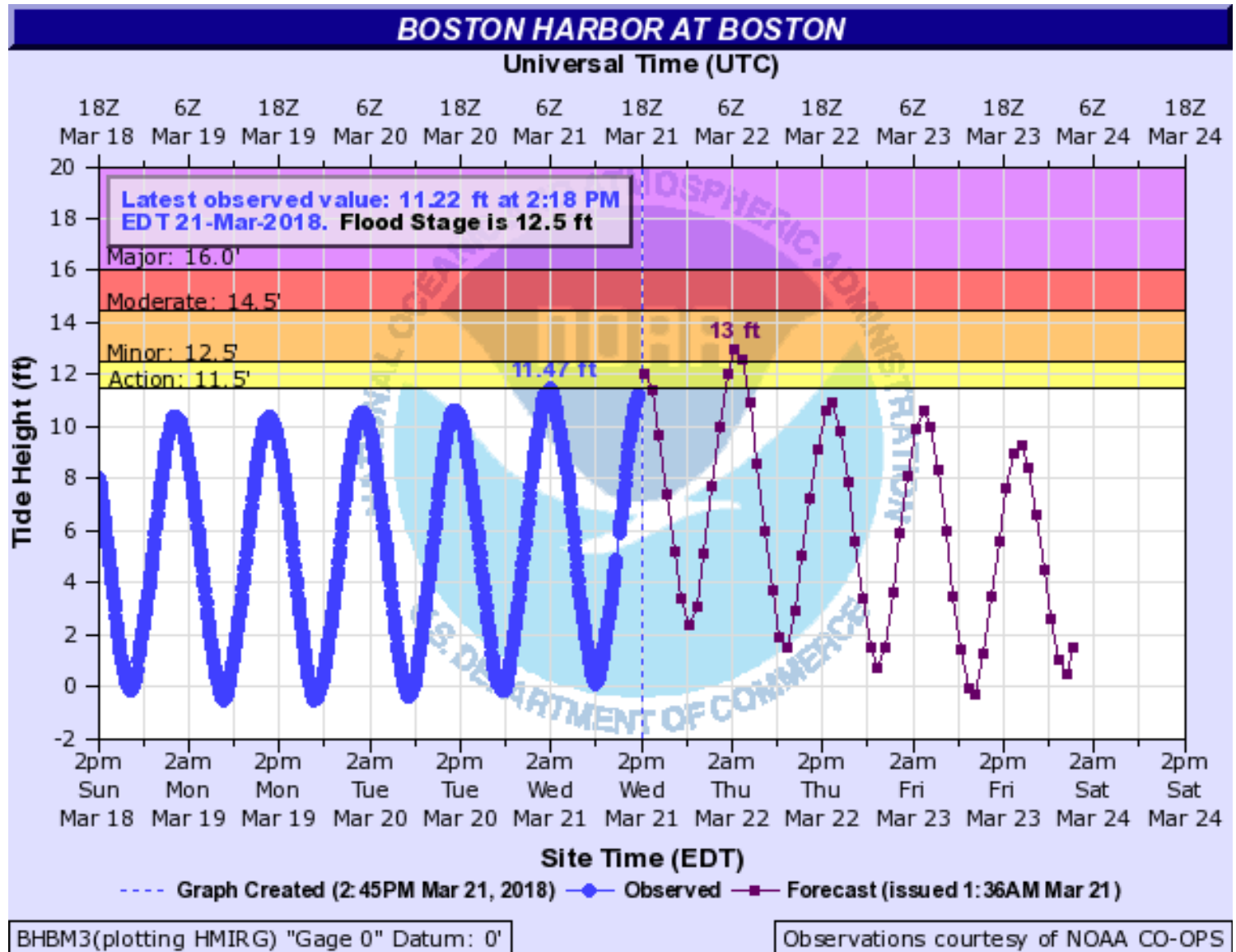
# **Observed Storm Total Snowfall (in)** Previous 10 Hours Ending: Wednesday, March 14, 2018 at 01



**National Weather Service**  
**Taunton, MA**  
03/14/2018 01:12 AM EDT

**Follow Us:**     
[weather.gov/Boston](http://weather.gov/Boston)

Mar. 21-  
22





# Coastal Flooding Categories

- **MINOR (Coastal Flood Advisory)**

flooding of vulnerable roads, minimal property damage, no significant threat to life

- **MODERATE (Coastal Flood Watch)**

widespread flooding of roads, some damage to vulnerable structures, lives may be at risk when people put themselves in harms way



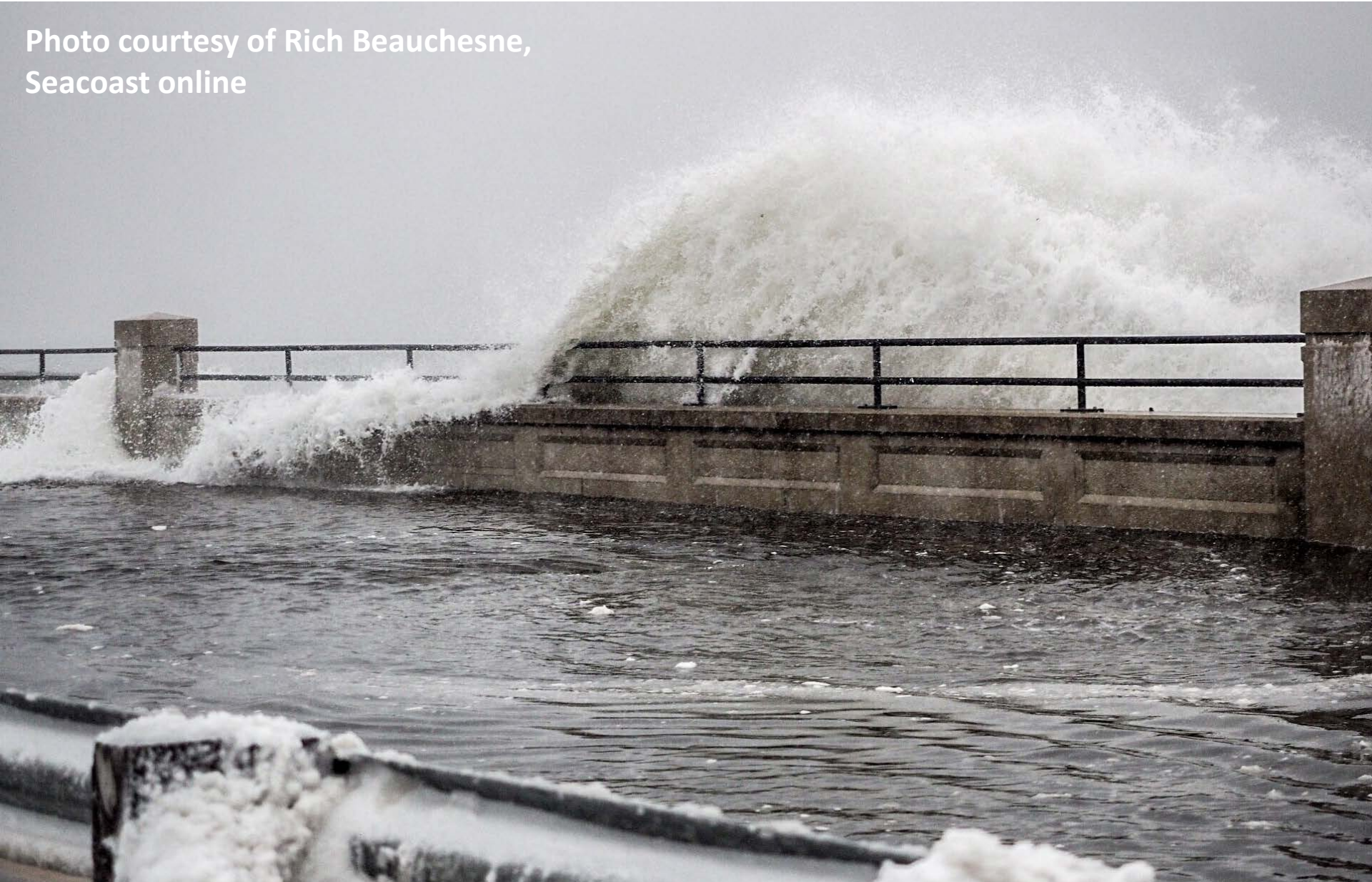
- **MAJOR (Coastal Flood Warning)**

numerous roads become impassable, structural damage to vulnerable buildings & infrastructure, some evacuations necessary



# Splashover & Road Flooding (Hampton, NH)

Photo courtesy of Rich Beauchesne,  
Seacoast online





# Minor Flooding Impacts (Hampton, NH)



Photo courtesy of Rich Beauchesne,  
Seacoast online



# Minor Property Impacts (Hampton, NH)





# Emergency Response (Hampton, NH)



Photo courtesy of Rich Beauchesne,  
Seacoast online



# Scour Behind Coastal Structures (Rye, NH)





# Sediment & Debris Washed onto Roads (Rye, NH)





# Road Clearing (NH)





# Low-lying Infrastructure Flooding (Portsmouth, NH)



Photo courtesy of Elizabeth Dinan



# Widespread Flooding (Scituate, MA)

Photo courtesy of Mass Wing Civil Air Patrol





# Property Damages (Gloucester, MA)



Gloucester High School



Photo courtesy of fire departments  
of New England  
on Facebook  
@firedepartmentsofnewengland

# Damage to Vulnerable Buildings (Seabrook, NH)





# Barrier Beach Overwash (Scituate, MA)

Photo courtesy of Mass Wing Civil Air Patrol





# Wave Impacts (Scituate, MA)

Photo courtesy of Mass Wing Civil Air Patrol





# Coastal Structure Failure (Rye, NH)



Photo courtesy of Kim Reed



# Coastal Structure Failure (Chatham, MA)



Photo courtesy of Mass Wing Civil Air Patrol



# Erosion (Chatham, MA)





# Erosion & Building Damages (Sandwich, MA)



Photo courtesy of Mass Wing Civil Air Patrol

# Destruction of Buildings (Sandwich, MA)





# Public Health & Environmental Issues (Sandwich, MA)



# Coastal Storm Damage Reporting



**MyCoast: Massachusetts**



**49 communities**



**1,143 coastal storm reports**



**64 king tide photos**



# Federal Data Collection

- Flagged high water marks
- Deployed storm-tide & wave sensors
- Collected aerial imagery



# Promoting Living Shorelines Regionally

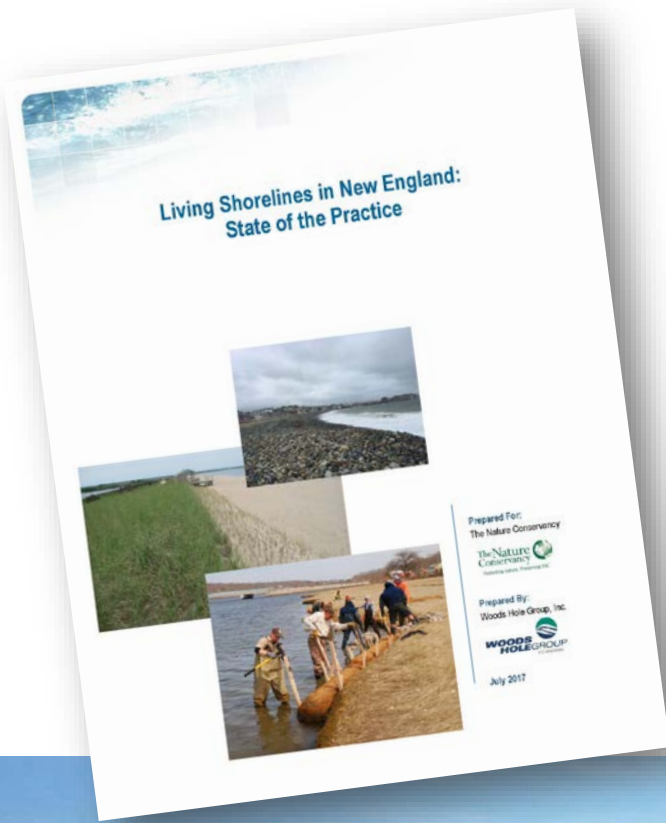


Photo courtesy of Wilkinson Ecological Design