

# Coastal Advisory Committee Meeting Minutes

Town of Marshfield, Massachusetts

Hearing Room 2 — Marshfield Town Hall  
2015 April 30

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## COMMITTEE PRESENT:

- Ben Cowie-Haskell (Acting Chair)
- Thomas Fleming
- Sean Robinson (Clerk)

## ALSO PRESENT (in audience):

- Kirk Bosma (Woods Hole Group, coastal engineer)
  - Greg Guimond (Town Planner)
  - Rod Procaccino (Town Engineer)
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### 1. Call to order

Mr. Cowie-Haskell called the meeting to order at 7:08 pm.

### 2. Approval of Clerk's Minutes

Mr. Cowie-Haskell called for objections or corrections to the minutes of the 2015 April 09 meeting of the Committee. Seeing none, he declared the minutes approved as distributed.

### 3. Presentation by Kirk Bosma of the Woods Hole Group on modeling vulnerability for the MA DOT

Mr. Bosma of the Woods Hole Group (WHG) made a technical presentation titled "Storm Surge Risk and Coastal Engineering Adaptations in a Changing Climate" about WHG's recent work for the Massachusetts Department of Transportation (DOT) in collaboration with Prof. Kerry Emmanuel of MIT on detailed modeling of probability distributions for future storm events in Coastal Massachusetts.

The following are selected points made during the presentation and in response to questions.

- The study was sponsored to evaluate risks to DOT assets, but resulted in extensive cobenefit to all of coastal Massachusetts, including Marshfield.
- The goal is to *asses risk* from sea level rise and storm surge. Some currently available resources:
  - FEMA NFIP maps: leave a lot to be desired from a planning perspective.
  - “Bathtub model” maps like those used in the Kleinfelder report: ignore dynamics like tides and waves. Provide a first-order approximate approach.
  - Hurricane evacuation maps (*e.g.* SLOSH): provide worst case scenario. Good for evacuation planning, but not for flood proofing decisions.

Ideally want dynamical models as base for adaptation planning decisions.

- WHG’s dynamical model uses high spatial-resolution dynamical grids (5–10 meter grid spacing).
- WHG’s dynamical model uses a Monte Carlo statistical ensemble of simulated hurricanes vetted against historic storms.
- Output maps are probability outlines for water levels at each time period, *i.e.* realistic, probability based results.
- Area around Boston Harbor is done. Full results will be ready in two years, but towns can apply for grants to move that time line up to now.
- One possible time line would be:
  - (a) Get a grant, *e.g.* a coastal resiliency grant from CZM.
  - (b) Do a resiliency study based on the existing lower resolution model results.
  - (c) Use that as a basis for setting priorities.
  - (d) Then, update those results in two years by integrating the high resolution models that become available then.
- It was stated as an admittedly unsubstantiated claim that typical coastal adaptations save 4:1 over the cost of damages incurred without adaptations, with a range than can be as high as 20:1.

No motion or votes on this agenda item.

4. Discussion with Jim O’Connell on changes to Rexhame Beach and implications for the FEMA 540 Rule (*to be confirmed*)

This agenda item was not discussed due to scheduling difficulties which prevented Mr. O’Connell’s attendance.

5. Adjourn

Mr. Flemming moved to adjourn the meeting. Mr. Robinson seconded the motion. No further discussion. The Committee voted 3-0 in favor. The meeting adjourned at 8:56 pm.

Respectfully submitted,

Sean Robinson  
Coastal Advisory Committee Clerk