

Classes of Information

- How much will the sea rise
- The direct effects (erosion, flood, etc.)
- Response options
- Effects of the response options
- People
 - Government regulations and subsidies
 - How will other people respond?

Information Used in Decisions about Sea Level Rise

- Awareness—Outreach/Communication
- Concern—Magnitude of Impact
- Response—Evaluation of options
 - Costs
 - Results

Example Decisions

- Elevate house
- Elevate streets
- Ensure wetlands can migrate inland
- Historic Examples

Should We Elevate Our House?





Concern: Do We Elevate Home?

- Models and Observations:
 - 1962 storm 7 inches below floor
 - Sea level has risen 7 inches since 1962
 - FEMA base flood 1.8ft above floor
- Our Own Eyes Tell Us
 - Yard has standing water after it rains
 - SUV's at yacht club block view of the water
- We have no flood insurance

Options Evaluation: Elevate Home

Inaction

- Repairs a hassle—the flood will occur eventually
- Will township elevate streets making our yard an impoundment?
- Will yacht club elevate parking lot?

Action

- Better view, more storage, less flooding, but:
- Will yacht club block our view anyway with more building?
- Can't get straight answer on permit requirements
 - How high?
 - Survey?
 - Surprise electrical
 - Surprise plumbing

Should Township Elevate Streets when Repaving?



Ship Bottom, New Jersey





Should Township Elevate Streets when Repaving?



Should Township Elevate Streets when Repaving?

Inaction

- If no dike built: Floods keep getting worse
- If dike built, inaction does no harm
- Will sea rise be small between now and next paving project?

Action

- If residents do not elevate, then higher street causes impoundments
- If residents do elevate, higher street reduces flooding.

Does USFWS or a Conservancy
Work to Enable Wetlands to
Migrate Inland?

TODAY



Your proposal to fill the wetlands violates the Public Trust Doctrine, the Tidal Wetlands Act, and §404 of the Clean Water Act!



BUT... THIRTY YEARS LATER



MUCH BETTER!



Does USFWS or a Conservancy Work to Enable Wetlands to Migrate Inland?

Inaction

- Will vegetated wetlands keep pace with sea level rise
- What is ecological significance of the unvegetated systems?
- How much will sea rise?
- Will property owners abandon these areas anyway as they become too hazardous to inhabit

Action

- What can we do?
- Will property owners cooperate?
- Will our efforts eventually be overtaken by the rising sea anyway?

Other Cases Where Sea Level Rise Led to Different Decision

Incremental Modification

- Higher Structures
 - Bridge to PEI
 - Shell Oil Platform
 - Dutch Dikes
- Land Reclamation
- Higher Base Flood Elevation

Decision to maintain a performance standard

Different Path

- Build Thames Barrier
- Ocean City switch from groins to sand replenish
- Retreat for the sake of ecosystems

Recognition that status quo even less defensible than taking the action