StormSmart Coasts – Improving Local Efforts to Reduce Storm Impacts

Rebecca Haney
Coastal Geologist
Massachusetts Office of Coastal Zone Management
Coastal Development
Developed Coasts and Hazards

erosion

flooding

storm surge

coastal inundation
StormSmart Properties Fact Sheets

Provide information for property owners:
- Inform decisions about shore protection techniques
- What the technique involves
- How it reduces storm damage
- Relative benefits
- Limitations
- Ways to minimize impacts
- Design considerations to maximize effectiveness
- Permitting
- Professional services
- Project timeline
- Maintenance
- Costs
- Additional information/resources
StormSmart Properties Fact Sheets

Review Teams:

• CZM Regional Staff
• State agencies
  • Department of Environmental Protection
  • Department of Conservation and Recreation
• MassWildlife - Endangered Species
• Division of Marine Fisheries
• Private Consultants
  • Coastal Engineers
  • Coastal Geologist
• Landscape Designers
Dune Nourishment & Artificial Dunes

Dune nourishment
- Add compatible sediment to eroded dunes
- Vegetation

Artificial Dune
- Construct dune seaward of an eroding coastal bank/bluff
- Vegetation
- Sand Fencing
Beach and Dune Nourishment
Vegetation

- Use native, salt-tolerant plants with extensive root systems
- Establish stable slope
- Address invasives
Bioengineering: Coir Rolls & Vegetation

Before

During Construction

10 Years later

- Native salt-tolerant plants with extensive root systems
- Establish a stable slope
- Combined with natural fiber blankets
- Natural fiber mesh
Bioengineering – Natural Fiber Blankets

• Blankets stabilize soils while vegetation gets established
• Use in conjunction with coir rolls
• No synthetic fibers
Sand Fencing

- Thin wood slats & twisted wire preferred
- Site landward of annual storm waves
- Avoid plastic, metal, fences that become structures
Runoff Control

- Remove and reduce impervious surfaces
- Capturing runoff
- Redirecting water
- Minimize maintained lawn areas
Questions?