

Massachusetts Coastal Resilience Grants Supporting Local Adaptation Efforts

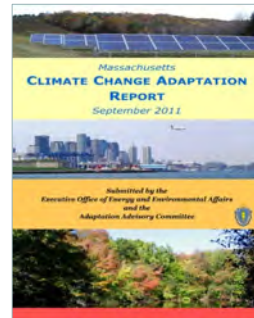


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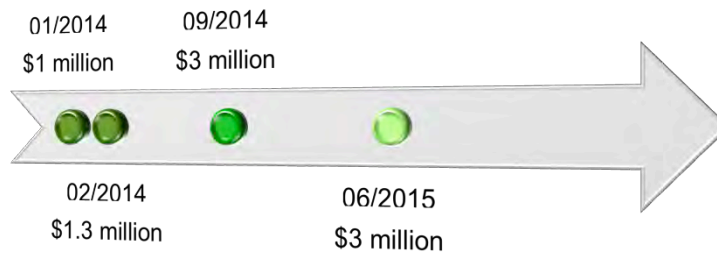


Commonwealth Climate Change Plan

- Coastal Community Resilience Grants
 advance new & innovative local efforts to increase awareness of climate impacts, identify vulnerabilities & implement measures to increase community resilience
- Green Infrastructure for Coastal Resilience Grants
 advance understanding & implementation of natural approaches to mitigate coastal erosion & flooding problems



EEA Capital Investment in Resilient Communities



Community Resilience Project Types

- Conducting public education & awareness or other communication initiatives
- Assessing vulnerability & risk
- Identifying & implementing management measures, standards or policies
- Redesigning to accommodate changing conditions
- Enhancing natural storm-damage protection



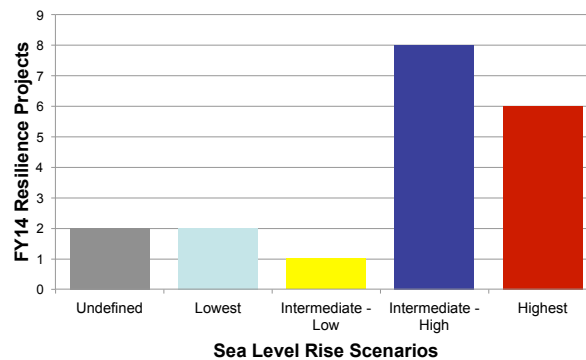
Green Infrastructure Project Types

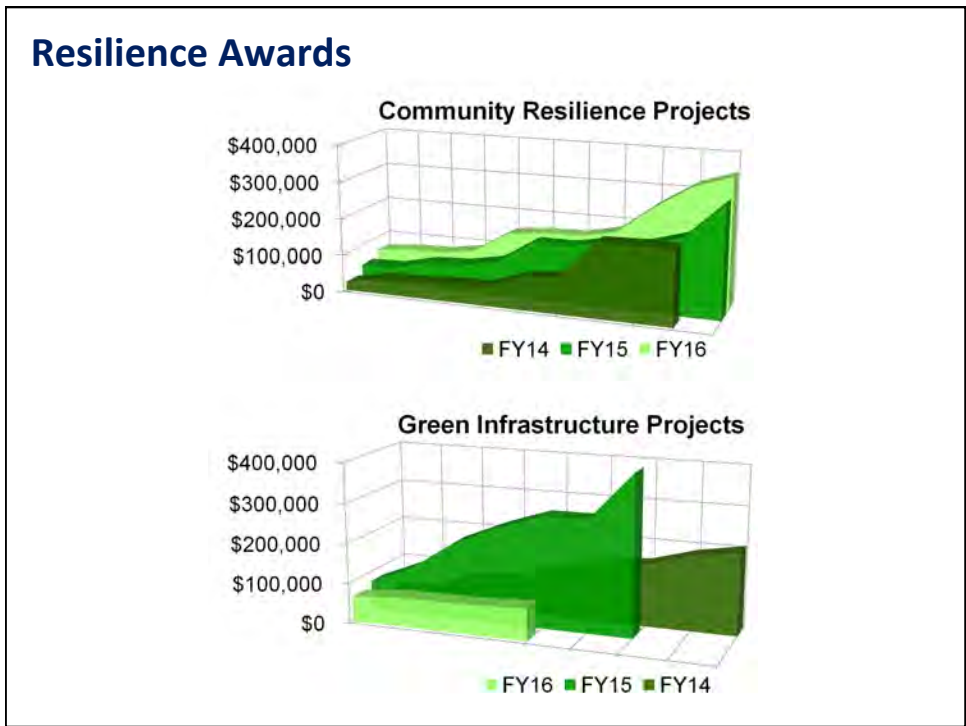
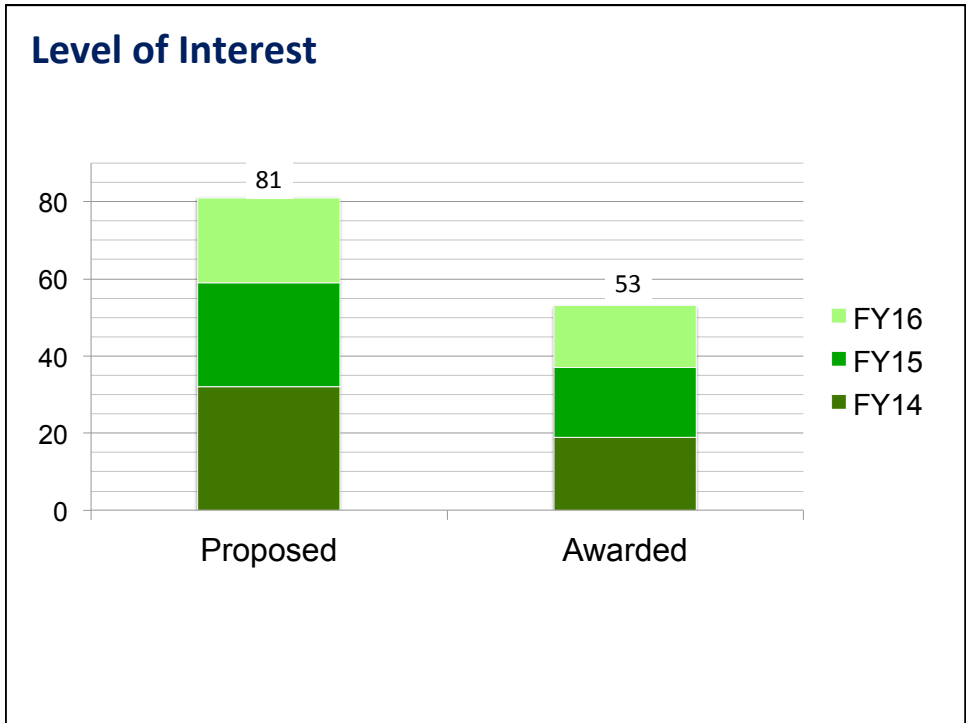


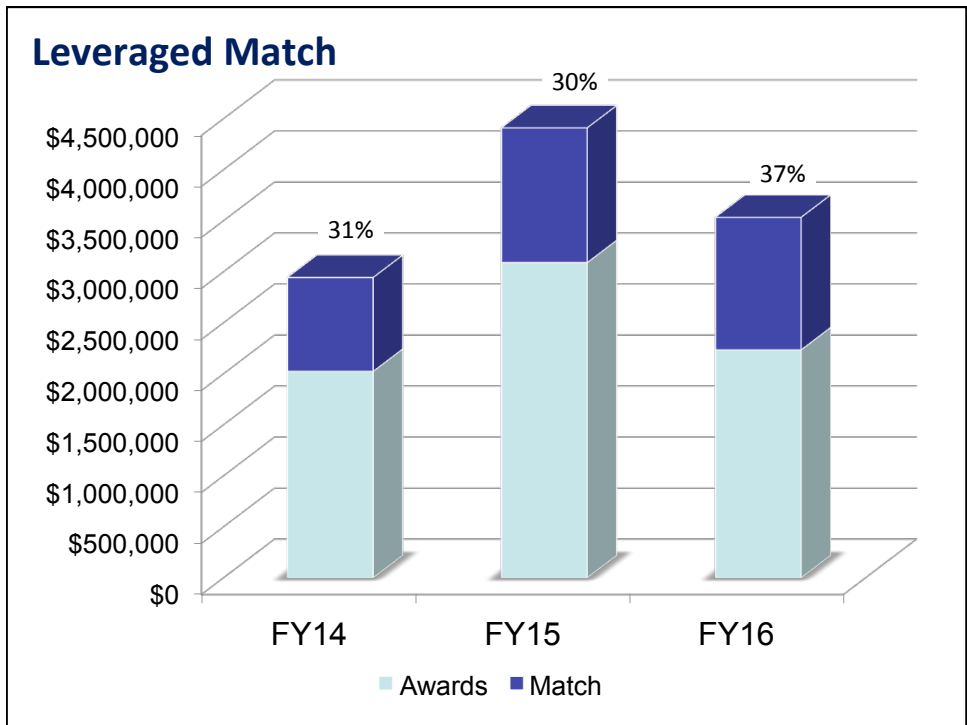
- Beach, berm & dune building, enhancement or restoration with compatible sediment & native vegetation
- Bio-engineering with coir rolls, natural fiber blankets & other organic, biodegradable materials with plantings
- Natural oyster or mussel reef creation, enhancement or restoration
- Fringing salt marsh creation or restoration

Competitive Evaluation Criteria

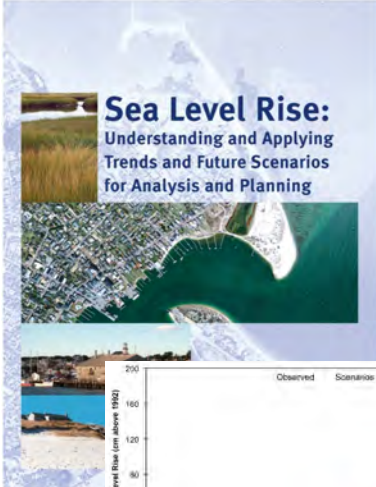
- Problem & need for assistance
- Current management approach
- Project description & public benefit
- Climate adaptation
- Transferability
- Timeline
- Budget including 25% match of total project cost
- Project management
- Partners



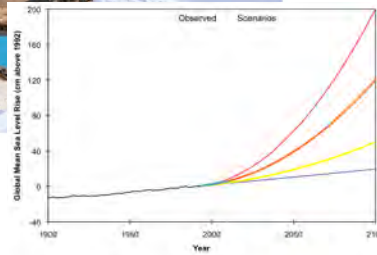




StormSmart Resources



Sea Level Rise: Understanding and Applying Trends and Future Scenarios for Analysis and Planning



StormSmart Coasts **StormSmart Properties Fact Sheet 4: Bioengineering - Coir Rolls on Coastal Banks**


The coast is a very dynamic environment and coastal shorelines – especially beaches, dunes, and banks – change constantly in response to wind, waves, tides, and other factors such as seasonal variations, sea level rise, and human alterations to the shoreline system. Consequently, many coastal properties are at risk from storm damage, erosion, and flooding. Inappropriate shoreline stabilization methods can actually do more harm than good by exacerbating beach erosion, damaging neighboring properties, impacting marine habitats, and diminishing the capacity of beaches, dunes, and other natural landmarks to prevent inland areas from storm damage and flooding. StormSmart Properties – part of the Massachusetts Office of Coastal Zone Management's (CZM) StormSmart Coasts program – provides coastal property owners with important information on a range of shoreline stabilization techniques that can effectively reduce erosion and storm damage while minimizing impacts to shoreline systems. This information is intended to help property owners work with consultants and other design professionals to select the best option for their circumstances.

What Are Bioengineering and Coir Rolls?

Coastal bioengineering projects reduce erosion and stabilize eroding shorelines by using a combination of deep-rooted plants and erosion-control products made of natural, biodegradable materials, such as coir rolls. Coir rolls are cylindrical rolls that span 12 to 20 inches in diameter, are packed with coir fibers (i.e., coconut husk fibers), and are held together with mesh. The rolls are typically 50- to 20-foot long and can be stitched together to provide continuous shoreline coverage. In contrast, coir envelopes are coir fabric filled with sand. Coir envelopes have very different impacts and design considerations and should not be confused with coir rolls.

Below: This coir roll has been planted with vegetation prior to installation.

No shoreline stabilization option permanently stops all erosion or storm damage. The level of protection provided depends on the option chosen, project design, and site-specific conditions such as the exposure to storms. All options require maintenance, and many also require steps to address adverse impacts to the shoreline system, called mitigation. Some options, such as seawalls and other hard structures, are only allowed in very limited situations because of their impacts to the shoreline system. When evaluating alternatives, property owners must first determine which options are allowable under state, federal, and local regulations and then evaluate their expected level of protection, predicted lifespan, impacts, and costs of project design, installation, mitigation, and long-term maintenance.



mass.gov/czm/stormsmart

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