



# Existing Built Environment and Infrastructure

## PRIORITY OPTION PROPOSALS

### EBEI-2: Observation System for Changes in Coastal Areas

#### Option Description

Develop and/or strengthen a system for the comprehensive surveillance, monitoring, documentation, and dissemination of rates and locations of sea-level rise in Maryland. This includes the installation of surveillance equipment in coastal sites where current public/private infrastructure is potentially vulnerable to small increases in sea level.

#### Option Design

- **Targets:** TBD
- **Timing:** TBD
- **Parties Involved:** TBD
- **Other:** TBD

#### Implementation Mechanisms

TBD

#### Related Policies/Programs in Place

TBD

#### Estimation of Adaptation Benefits and Costs

- **Cost:** TBD
- **Flexibility:** TBD
- **Adaptive capacity:** TBD
- **Other:** TBD

## **Documentation of Adaptation Benefits and Costs**

- **Data Sources:** TBD
- **Quantification Methods:** TBD
- **Key Assumptions:** TBD
- **Key Uncertainties:** TBD

## **Additional Benefits and Costs**

TBD

## **Feasibility Issues**

TBD

## **Status of Group Approval**

TBD

## **Barriers to Consensus**

TBD

## EBEI-3: Adaptation of Vulnerable Coastal Infrastructure

### Option Description

Conduct a comprehensive adaptation assessment for all public and private properties located in coastal zones susceptible to sea level rise. The assessment should include an evaluation of existing and future unprotected reaches of shoreline with respect to existing infrastructure.

### Option Design

- **Targets:** TBD
- **Timing:** TBD
- **Parties Involved:** TBD
- **Other:** TBD

### Implementation Mechanisms

TBD

### Related Policies/Programs in Place

TBD

### Estimation of Adaptation Benefits and Costs

- **Cost:** TBD
- **Flexibility:** TBD
- **Adaptive capacity:** TBD
- **Other:** TBD

### Documentation of Adaptation Benefits and Costs

- **Data Sources:** TBD
- **Quantification Methods:** TBD
- **Key Assumptions:** TBD
- **Key Uncertainties:** TBD

### Additional Benefits and Costs

TBD

### Feasibility Issues

TBD

**Status of Group Approval**

TBD

**Barriers to Consensus**

TBD

## EBEI-4: Inundation Mapping

### Option Description

Develop a system for the regular updating of flood inundation mapping from changes due to sea level rise. This includes the development of a comprehensive system to integrate the results of the observation system into a series of spatial maps amenable to regular updating.

### Option Design

- **Targets:** TBD
- **Timing:** TBD
- **Parties Involved:** TBD
- **Other:** TBD

### Implementation Mechanisms

TBD

### Related Policies/Programs in Place

TBD

### Estimation of Adaptation Benefits and Costs

- **Cost:** TBD
- **Flexibility:** TBD
- **Adaptive capacity:** TBD
- **Other:** TBD

### Documentation of Adaptation Benefits and Costs

- **Data Sources:** TBD
- **Quantification Methods:** TBD
- **Key Assumptions:** TBD
- **Key Uncertainties:** TBD

### Additional Benefits and Costs

TBD

### Feasibility Issues

TBD

**Status of Group Approval**

TBD

**Barriers to Consensus**

TBD

## **EBEI-6: Assessment of Coastal Zone Adaptation Options and Evaluation of Shoreline Protection Structures**

### **Option Description**

Evaluate potential structural and non-structural options for beach protection including flood walls, dune restoration and creation, and periodic beach nourishment. This includes a) the evaluation of shoreline protection structures to determine their effectiveness under varying sea level rise scenarios, evaluation of the need for modification/replacement/abandonment, b) the evaluation of shoreline erosion buffers for zones subject to flooding in which significant infrastructure is located, and c) a detailed analysis and inventories of the pros and cons of application of hard structural options (such as dikes, levees, floodwalls, and saltwater intrusion barriers) and soft structural options such as dune restoration and creation, wetland restoration, creation, periodic beach nourishment, temporary barriers and other options.

### **Option Design**

- **Targets:** TBD
- **Timing:** TBD
- **Parties Involved:** TBD
- **Other:** TBD

### **Implementation Mechanisms**

TBD

### **Related Policies/Programs in Place**

TBD

### **Estimation of Adaptation Benefits and Costs**

- **Cost:** TBD
- **Flexibility:** TBD
- **Adaptive capacity:** TBD
- **Other:** TBD

### **Documentation of Adaptation Benefits and Costs**

- **Data Sources:** TBD
- **Quantification Methods:** TBD
- **Key Assumptions:** TBD
- **Key Uncertainties:** TBD

**Additional Benefits and Costs**

TBD

**Feasibility Issues**

TBD

**Status of Group Approval**

TBD

**Barriers to Consensus**

TBD

## **EBEI-8: Building Code Revisions, including New Design Standards and Codes to Facilitate Retreat, Avoid SLR Risks and Increase Resilience**

### **Option Description**

Strengthen existing building codes for new infrastructure and incorporate an increase in building inspection effectiveness as part of the strengthened codes. This includes the evaluation of infrastructure design standards/codes associated with retrofitting activities for existing infrastructure to account for sea level rise and increased severity of storms and storm surges, as well as a strengthening of construction protocols/conventions for piers and wharves for wave strength.

Specifically, the option would a) implement new design standards, building and zoning codes to reflect the need for retreat from areas exposed to sea level rise and associated hazards, b) guide future development out of areas vulnerable to sea level rise and associated hazards, c) establish a mechanism to evaluate and recommend new design standards for structures that may be vulnerable to SLR and associated hazards, and d) institute new hazard-resistant building codes and design standards to reduce vulnerability of structures to future sea level rise and associated hazards.

### **Option Design**

- **Targets:** TBD
- **Timing:** TBD
- **Parties Involved:** TBD
- **Other:** TBD

### **Implementation Mechanisms**

TBD

### **Related Policies/Programs in Place**

TBD

### **Estimation of Adaptation Benefits and Costs**

- **Cost:** TBD
- **Flexibility:** TBD
- **Adaptive capacity:** TBD
- **Other:** TBD

### **Documentation of Adaptation Benefits and Costs**

- **Data Sources:** TBD

- **Quantification Methods:** TBD
- **Key Assumptions:** TBD
- **Key Uncertainties:** TBD

**Additional Benefits and Costs**

TBD

**Feasibility Issues**

TBD

**Status of Group Approval**

TBD

**Barriers to Consensus**

TBD

## EBEI-10: Disclosure

### Option Description

Develop operational protocols that specify disclosure requirements for coastal hazards. This includes information related to the purchase/sales of property for residential and commercial properties.

### Option Design

- **Targets:** TBD
- **Timing:** TBD
- **Parties Involved:** TBD
- **Other:** TBD

### Implementation Mechanisms

TBD

### Related Policies/Programs in Place

TBD

### Estimation of Adaptation Benefits and Costs

- **Cost:** TBD
- **Flexibility:** TBD
- **Adaptive capacity:** TBD
- **Other:** TBD

### Documentation of Adaptation Benefits and Costs

- **Data Sources:** TBD
- **Quantification Methods:** TBD
- **Key Assumptions:** TBD
- **Key Uncertainties:** TBD

### Additional Benefits and Costs

TBD

### Feasibility Issues

TBD

**Status of Group Approval**

TBD

**Barriers to Consensus**

TBD