

Climate Change Evaluation Criteria

Projected impacts are based on the best available science for the Mid-Atlantic Region. Relative sea-level rise projections for the Maryland range between 1-1.3 feet by 2050 and 2.7-3.4 feet by 2100. Please refer to the companion guide that identifies the supporting data for this evaluation.

Property Name: _____ County: _____

Scoring: In interpreting the scale it is assumed that the higher the rating, the greater the capacity of the property to provide resiliency to climate change stressors of sea level rise and storm surge through adaptation and/or mitigation.

I. Sea Level Rise Resiliency

Identifying potential sea level rise vulnerability of a site will help establish a long-term management plan to help increase the resiliency of the site.

Overall Rating: slight low moderate high



Sea Level Rise Resiliency Potential

i. Is there potential for inundation on the property by 2050?

Yes No

If yes, roughly how much of the property would be inundated?

- a. 76-100% slight
- b. 51-75%
- c. 26-50%
- d. 25% or less high

ii. Is there potential for inundation on the property by 2100?

Yes No

If yes, roughly how much of the property would be inundated?

- a. 76-100% slight
- b. 51-75%
- c. 26-50%
- d. 25% or less high



II. Wetland Migration

Identifying the potential for future wetland areas can help prioritize sites to maintain coastal wetlands into the future.

Overall Rating: slight low moderate high



Wetland Migration Potential

i. Percentage of the property wetlands potentially inundated by 2050

- a. 76-100% of the property within the 0-2' elevation slight
- b. 51-75% of the property within the 0-2' elevation
- c. 26-50% of the property within the 0-2' elevation
- d. 25% or less of the property within the 0-2' elevation high

ii. Percentage of the property wetlands potentially inundated by 2100

- a. 76-100% of the property within the 2-5' elevation slight
- b. 51-75% of the property within the 2-5' elevation
- c. 26-50% of the property within the 2-5' elevation
- d. 25% or less of the property within the 2-5' elevation high

iii. Land Use/Land Cover

- a. Low to medium residential development slight
- b. Forested, orchards and open urban land
- c. Wetlands, scrub shrub, pastures, and cropland high
- d. Not applicable/no score if property is used by heavy transportation, high residential, and/or commercial development

iv. Living Shoreline Suitability (Worcester, Somerset and Calvert Counties)

- a. May not be suitable for living shoreline slight
- b. May be suitable for hybrid option
- c. May be suitable for soft stabilization high
- d. Not applicable/no score

III. Restoration Potential

Identifying restoration potential may help to build the resiliency of the site if forest canopy and wetland areas were improved and/or expanded.

Overall Rating: slight low moderate high



Restoration Potential

- i. Percentage of property currently forested _____%
- ii. Current or future reforestation projects on site yes _____ no _____
 - If yes:
 - a. Reforestation planned for _____ acres
 - 1. If most acreage is *within* 2-5' elevation slight
 - 2. If most acreage is *above* 2-5' elevation high
 - If no:
 - a. There is *no* potential for reforestation *above* 2-5' elevation slight
 - b. There is potential for reforestation *above* 2-5' elevation high
- iii. Percentage of property is wetland _____%
 - a. Wetlands onsite
 - 1. If *Phragmites* (invasive wetland grass) present high
 - 2. If wetlands are ditched or diked high
 - 3. Not applicable/no score

IV. Natural Storm Surge Protection

Identifying the natural capacity of storm surge protection a property may provide surrounding communities, protected lands, and/or adjacent properties may help prioritize the protection of the property.

Overall Rating: slight low moderate high



Natural Storm Surge Potential

i. Storm Surge Buffers

- a. Stabilization Structures present slight
- b. Bare bank
- c. Beach buffer present
- d. Marsh buffer present high

ii. Shoreline Rates of Change

- a. High (less than -8ft) slight
- b. Moderate (-4 to -7.99ft)
- c. Low (-2 to -3.99)
- d. Slight (less than -2ft) high

iii. Natural storm surge resiliency of the site: select the category that best describes the property

- a. Majority of the property is within Category 1 slight
- b. Majority of the property is within Category 1 & 2
- c. Majority of the property is within Category 2 & or 3
- d. Majority of the property is within Category 4 or above high
- e. Not applicable/no score

iv. Land Use/Land Cover

- a. Open urban lands slight
- b. Agriculture, row crops, cropland, pasture

- c. Brush, beaches, orchards and vineyards
- d. Wetlands and deciduous/mixed/evergreen forest high
- e. Not applicable/no score if property is bare ground/exposed rock or used by heavy transportation, residential/commercial/industrial development and/or feeding/breeding operations

V. Potential Barriers to Habitat Migration

Identifying the potential barriers to wetland migration under accelerated sea-level rise may help inform the long-term restoration potential for the site.

Overall Rating: slight low moderate high



Habitat Migration Potential

i. Stabilization Structures

- a. Yes, majority of shoreline is hardened slight
- b. Yes, some of the shoreline is hardened
- c. No hardened structures but not fully vegetated
- d. Living shoreline or fully vegetated high

*Additional structures present: groins, revetments, and breakwaters
 Yes, there is another type of shoreline protection: _____

ii. Bank Cover

- a. Bare Bank Cover slight
- b. Partial Bank Cover (partial vegetated)
- c. Total bank Cover (vegetated) high

iii. Bank Height

- a. 5 - 30 feet high slight
- b. 0 - 5 feet high high
- c. Not applicable/no score

iv. Is the Bank undercut?

- a. Yes slight
- b. No high
- c. Not applicable/no score

v. Shoreline Rates of Change

- a. High slight
- b. Moderate
- c. Low
- d. Slight high

VI. Environmental Hazard Mitigation

Identifying the potential hazards that inundation and temporal flooding of septic tanks and drain fields, fuel tanks, and animal feed operations may pose to the property will help inform an effective management plan to increase the long-term resiliency of the property through the removal of these hazards.

Overall Rating: slight low moderate high



Mitigation Potential

i. Does the property have a septic system?

- a. No slight
- b. Yes, but it is not likely to be inundated
- c. Yes, likely to be inundated by year 2100
- d. Yes, likely to be inundated by year 2050 high

ii. Does the property have an existing or decommissioned underground fuel tank?

- a. No slight
- b. Yes, but not likely to be inundated
- c. Yes, likely to be inundated by year 2100
- d. Yes, likely to be inundated by year 2050 high

iii. Current or past animal feeding operations present?

- a. No slight
- b. Yes and not likely be inundated by sea level rise
- c. Yes and likely to be inundated by year 2100
- d. Yes and likely to be inundated by year 2050 high