POLICY SCENARIO NARRATIVES

Scenario 1: Baseline
Continuation of present day policies. Adaptive measures are responsive rather than proactive, and provide a baseline to compare with other scenarios.

Scenario 2: Realign
Policies or decisions are implemented that involve changing human activities to suit the changing environment (e.g. relocation of infrastructure and/or people).

Scenario 3: Restore
Policies or decisions are implemented that accommodate environmental change and prioritize habitat protection and conservation (e.g. restore dunes or nourish beaches).

Scenario 4: Protect
Policies or decisions are implemented that involve resisting environmental change in order to protect existing infrastructure and human activities (e.g. building or strengthening shoreline armour).

USEFUL TERMS

Backshore Protection Structure (BPS) - A structure, such as a rock revetment, built to control erosion by armoring the dune face. These structures dissipate wave energy and prevent further recession of the backshore.

Dune Restoration Project (DRP) - A constructed dune that is built to be a natural barrier to the destructive forces of waves and high water levels, and to help control erosion and damage to inland structures. DRPs are examples of natural or nature-based (green) infrastructure.

Erosion - A general term applied to the wearing away and movement of earth materials, in this case sand and sediment, by gravity, wind, water, and ice.

Flooding - An overflow of water onto lands that are normally above sea level. Flooding can be produced by storm surge, sea level rise, and/or allowing the frequency of major El Niño events to increase or decrease.

CLIMATE IMPACT SCENARIO NARRATIVES

Scenario 1: Low Impact
A low impact climate scenario uses low-end projections of SLR.

Scenario 2: Medium Impact
A medium impact climate scenario uses mid-range projections of SLR.

Scenario 3: High Impact
A high impact climate scenario uses high-end projections of SLR.

Climate Variability:
All climate impact scenarios have the ability to randomize future climate variability by allowing changes in storminess (e.g., increasing or decreasing average and extreme wave heights) and/or allowing the frequency of major El Niño events to increase or decrease.

Sea Level Rise (SLR) - Increases in the height of mean sea surface elevation. In this application, SLR will take regional factors (e.g., vertical land motions, ocean dynamics, and cryosphere and fingerprinting effects) affecting sea level in Washington into account.

Significant Wave Height (SWH) - A statistical measure of wave height, related to the average of the 1/3 highest waves. This measurement was intended to express the wave height estimated by a “trained observer.”

Total Water Level (TWL) - The combination of the water level (tides and non-tidal residuals) with waves. In Washington, the wave-induced component can account for as much as 60% of the elevation of the total water level (Serafin and Ruggiero 2014).

REFERENCES


