

WHAT IS "MARSH MIGRATION" AND WHY IS IT IMPORTANT TO PROTECT THE ABILITY OF MARSHES TO MIGRATE?

What is marsh migration?

Marsh migration is a natural process where salt marshes shift inland as sea levels rise, seeking higher ground to avoid inundation. This movement is a response to the changing coastal environment and allows salt marshes to persist despite rising sea levels.

Why preserve land for marsh migration?

Preserving space for salt marshes to move inland as sea level rises is an important strategy to improve community resilience to sea level rise and flooding and to promote long-term sustainability of these habitats and carbon sinks.

RI-DEM's Jen West and URI's Mike Bradley have done an analysis of RI coastal communities where they have identified priority parcels of land that are potential marsh migration areas where migration could be facilitated through easements or other land protection strategies. They projected potential marsh habitat using projected sea level rise in 2050 (2.8 ft rise in sea level) and 2100 (8.8 ft rise in sea level) by running the Sea Level Affecting Marshes Model (SLAMM) with NOAA data, updated tide ranges and salt marsh vegetation maps. They then conducted a GIS analysis to prioritize the **“Tier 1 Parcels”**; New Shoreham has the third highest number (11) of Tier 1 parcels in the state.

Tier 1 Parcels are:

- Larger than 0.5 acres (a field delineation of the present wetland area still needs to be done to get a precise wetland area).
- Have potential salt marsh habitat between 5 and 75% of the parcel area;
- Are adjacent to existing conserved land;
- Have impervious surface that is less than 10% of the parcel area.
- Has more than 50% prime farmland and Statewide important soil types.

Finally, we have developed a web mapping tool that allows users to zoom into their town to view the salt marsh migration areas and important parcels for conservation (see monitor!). The idea is to get the information and tools in the hands of decision-makers and stakeholders in coastal communities, particularly the communities with the highest number of Tier 1 parcels (“priority towns”).

What can we do?

The following are draft recommendations for the Town regarding Marsh Migration:

1. Create list (by Lot and Plat #) of Tier 1 parcels not already protected by conservation organizations – to be used by Town Planner, the Planning Board, and Zoning Board.
2. Hire an evaluator to come and ground truth each of the 11 Tier 1 parcels.
3. Reach out to Tier 1 property owners to share this information as well as information on opportunities for conservation efforts.
4. Coordinate with the BI Land Trust and conservation organizations to consider prioritizing acquisition or conservation easements on Tier 1 parcels.
5. Consider amending zoning regulations allowing variances for setbacks for construction so that marshes are allowed to migrate – using no more than 30-year projections for such migration data.
6. Incorporate into the new Comprehensive Plan the Map on Potential Loss and Migration of Marshes due to Sea Level Rise.

What do you think of these draft recommendations? Do you have others?