

## **What are the Impacts of TLP on Salt Marsh Foraminifera?**

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Salt marshes are an important environment for young fish and crustaceans and act as a buffer to protect our shorelines. Salt marshes are currently at risk due to the impacts of global climate change, such as sea level rise. If climate change continues as currently projected, Narragansett Bay salt marshes may be underwater within the next 100 years. As a way to combat this, the RI DEM (Rhode Island Department of Environmental Management) has been adding sediment to salt marshes through a method called thin layer placement (TLP) to assist in restoration and reduce the effects of degradation. The restoration has shown a positive effect on vegetation and reducing degradation in the marsh, but its effect in intertidal zones has not been studied. Within intertidal zones, single-celled organisms called foraminifera are abundant. Species within this phylum help mediate nitrogen and carbon cycling in salt marshes and can serve as important indicators of benthic health. By monitoring foraminifera populations in Narragansett Bay salt marshes we may be able to better understand how the TLP restoration has impacted the intertidal regions of salt marshes. In this study, three salt marsh sites with either no TLP restoration or TLP restoration performed 3 or 5 years ago were sampled to compare the abundance and diversity of foraminifera populations. Preliminary results suggest that restoration has not had a negative impact on foraminifera populations and may have increased foraminifera abundance and diversity within specific marshes.