ALLINS COVE GEOLOGICAL CHANGE AND HABITAT RESTORATION

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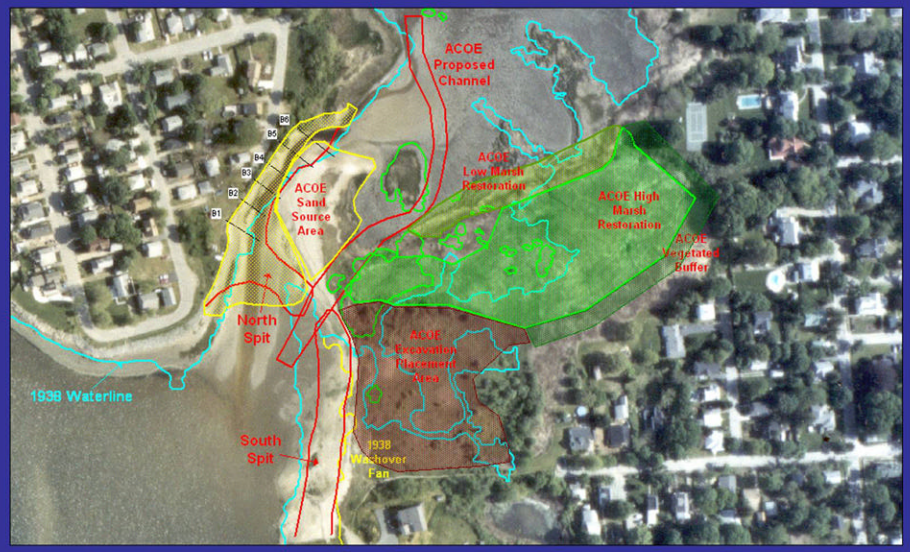
Allins Cove, located in Barrington Rhode Island, is a small sub embayment of Narragansett Bay estuary measuring about 21 acres in areal extent. Early vertical aerial photographs of Allins Cove shows an open water embayment with numerous salt marsh islands and fringing salt marsh behind a narrow barrier spit. The barrier spit was anchored to a low glacial headland to the south. A fairly wide inlet, approximately 100 feet at MHW, separated the barrier spit from the low glacial headland to the north in 1938. In 1959, the US Army Corps of Engineers (ACOE) filled 8 acres of salt marsh and intertidal flats in Allins Cove with dredged material from a nearby navigation project. Today, Phragmites marsh and upland habitat cover most of the disposal site. The barrier spit has migrated northward 250 feet and transgressed eastward about one spit width since 1938. The inlet has narrowed and is undercutting the low headland bluff to the north.
The RI Coastal Resources Management Council, the US Army Corps of Engineers and the Town of Barrington have embarked on a habitat restoration project for Allins Cove that will restore 3.6 acres of Spartina marsh and relocate the inlet to its pre-1938 position to inhibit erosion along the northwest shore of the cove

December 1938 aerial Photograph of Allins Cove salt marsh (1) and barrier spit (2). Note the wide inlet between the barrier spit and the headland area (3) to the northwest.

Allins Cove was designated Spoils Area #5 for the Bullocks Pt. Cove navigational dredging project. The bulk of the sediment from that project was hydraulically pumped to Allins Cove. This 1959 photograph (left), taken shortly after completion of the dredging, shows sediment covering much of the Allins Cove salt marsh area. Today this section of the cove consists of Phragmites marsh (4) and upland (5) (above). In addition, the barrier spit has migrated to the northeast, constricting the inlet channel (6). Flood tidal current flow through the channel causes undercutting to the existing salt marsh on the northeast shore of the cove. The rotation of the barrier spit has exposed the Byway Road erosional area to more southerly wave fetch over time, resulting in increased erosion of the bluff



Proposed habitat restoration includes removing fill from the existing Phragmites marsh to an elevation suitable for *Spartina* growth. *Spartina alterniflora* (low marsh) and *Spartina patens* (High marsh) areas are delineated on the above plan. Habitat restoration plans also include relocation of the tidal inlet to a pre-1938 position. Sand from the existing barrier spit will be used to fill the current channel and to create a spit on the north side of the proposed inlet. This will protect infrastructure and salt marsh on the northwestern bank of Allins Cove.

Construction for the Allins Cove Habitat Restoration Project is projected to begin in Fall 2003.

CRMC