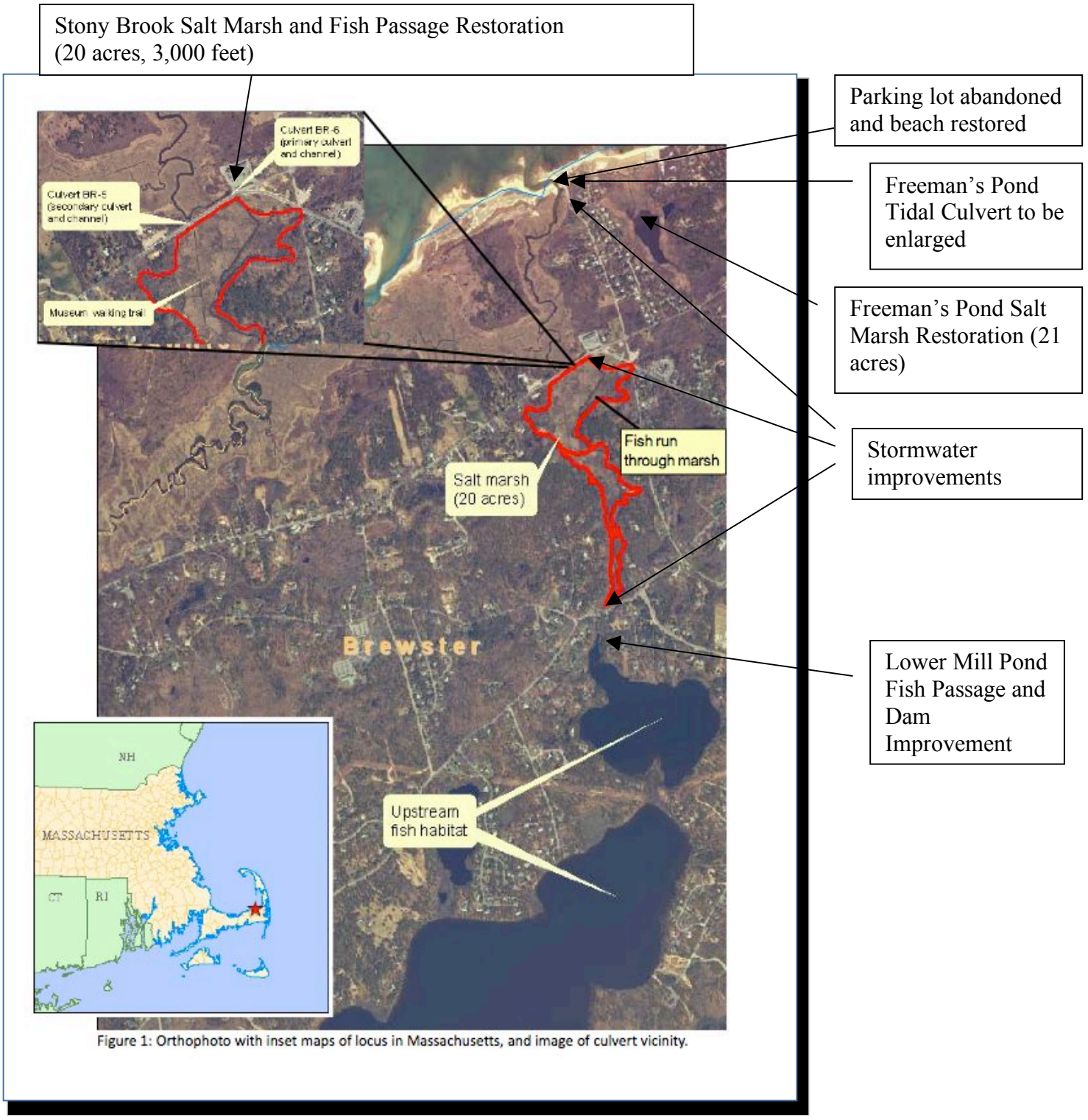

Figure 1. Locus map of Stony Brook watershed, Brewster, Massachusetts. Note: The names Stony Brook and Paines Creek apply to the same estuary. Paines Creek is often applied to the downstream portion of the estuary while Stony Brook is often applied to the portion of the estuary upstream of the state highway.

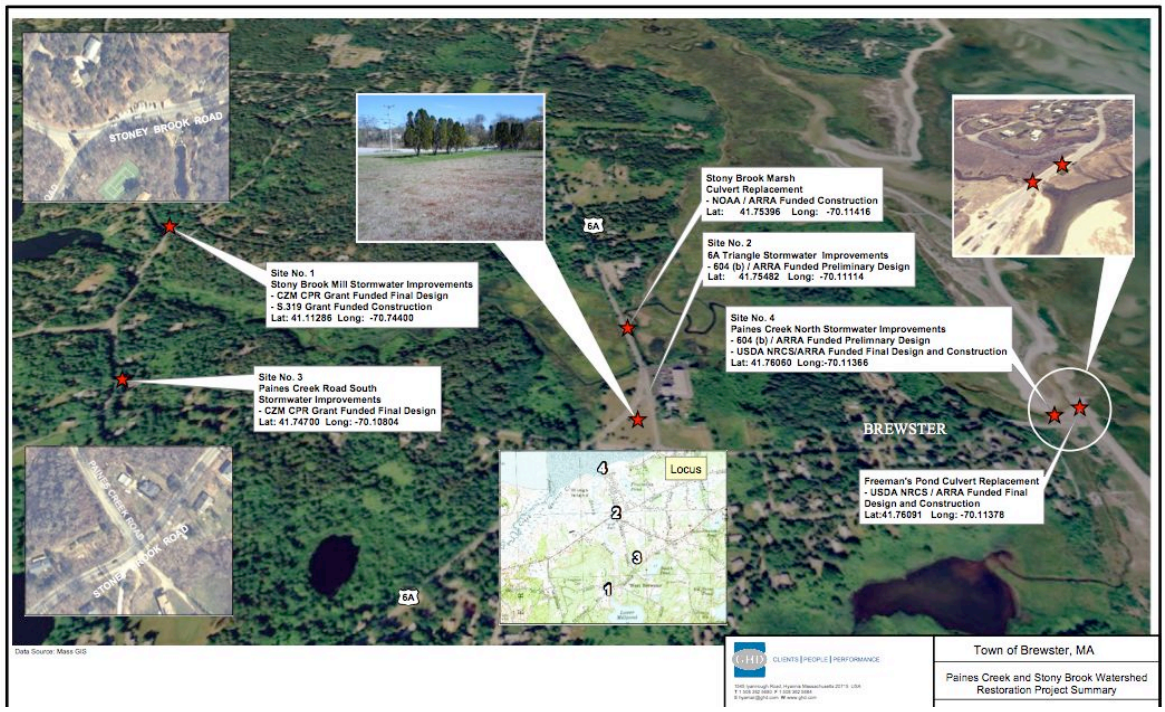

Figure 2. Detail of stormwater project sites, Stony Brook watershed.

Project 1. Stony Brook Salt Marsh and Fish Passage Restoration, Stony Brook component.

Figure 3. Stony Brook tidal culvert before restoration. South (restricted) side. 2010. The culvert is 4 feet in diameter (outside diameter).

Figure 4. Stony Brook tidal culvert before restoration. North (unrestricted) side. 2006.

Figure 5. Construction of culvert. The steel sheet piling forms the coffer dam to keep water out during construction. The unrestricted and restricted sides of the marsh are on the right and left sides of the roadway, respectively. Construction was funded by a $1.6 million grant from NOAA and the American Recovery and Reinvestment Act of 2009 (ARRA).

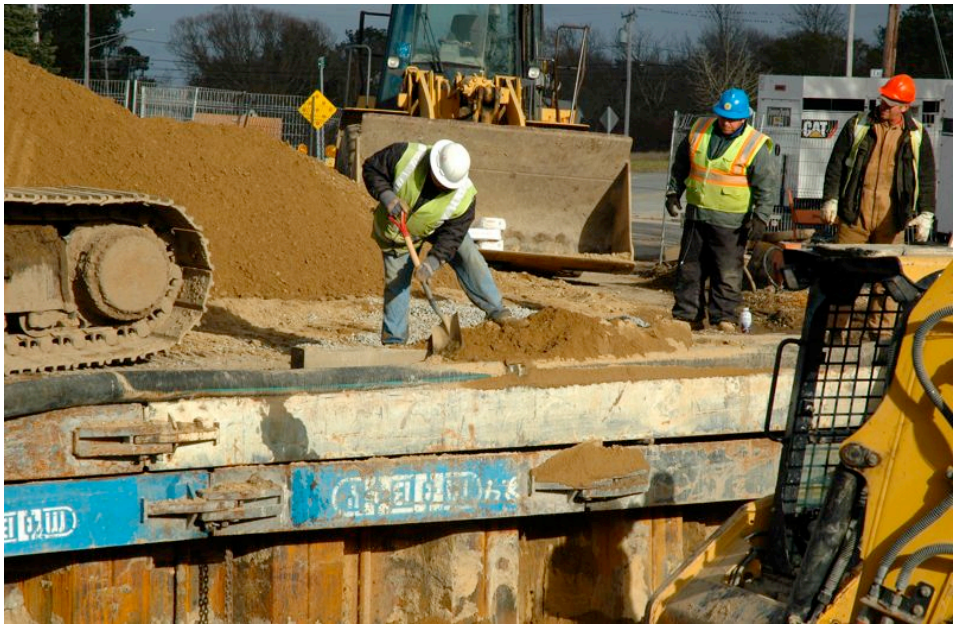

Figure 6. Culvert construction in progress. Culvert construction was done by P A Landers, Inc.

Figure 7. Culvert sections prior to installation. Construction oversight manager Bruce Heben from CLE Engineering, Inc. is in the foreground.

Figure 8. Stony Brook tidal culvert following restoration. North (unrestricted) side. The culvert is now 18 feet in diameter. December 2010.

Figure 9. Stony Brook salt marsh following restoration, during a high tide. The south side of the new culvert is visible at the right. The state highway is off the right edge. December 2010.

Figure 10. Improvements being made in marsh trail to increase tidal flow over the marsh at Stony Brook. November 2010. The trail was located on a low berm that served to impede tidal flow across the marsh. By removing sections of the berm and providing small footbridges, tidal flow across the marsh was improved. Construction work on the trail was done by Green & Robinson, Inc. of Kingston, Rhode Island.

Figure 11. Work on observation platform overlooking the marsh to be restored. Dana Green, of Green & Robinson, Inc. built the platform and trail improvements. November 2010.

Figure 12. New salt marsh observation platform and trail signage installed as part of Stony Brook salt marsh restoration.

Freeman's Pond Salt Marsh Restoration, Freeman's Pond Subwatershed to Stony Brook

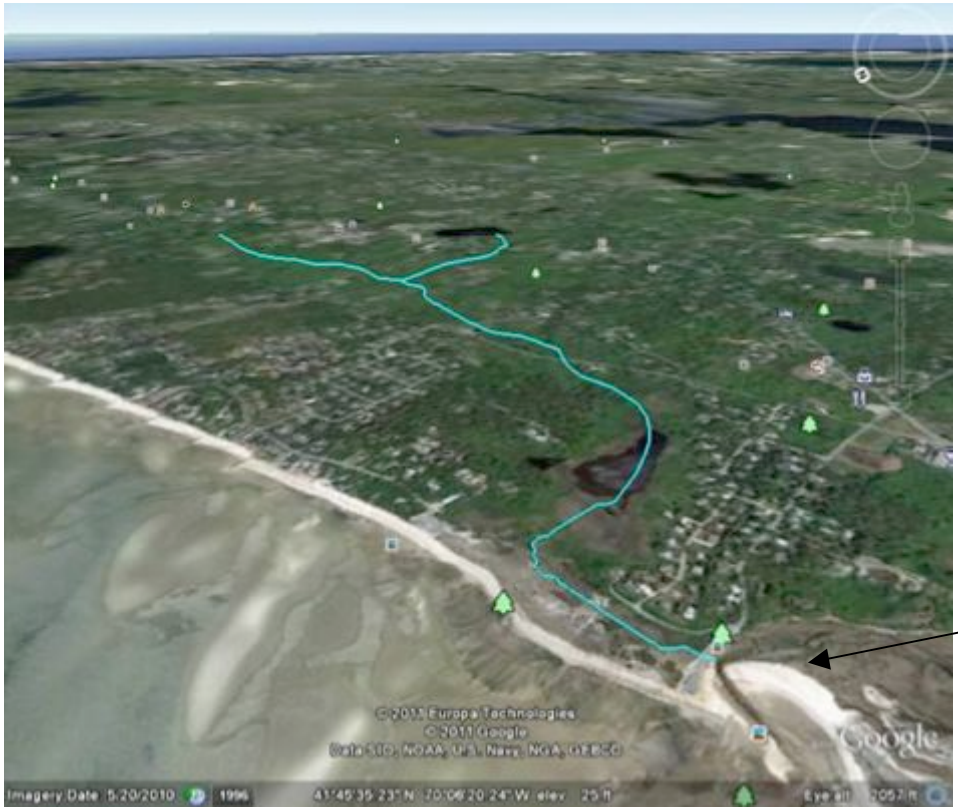

Figure 13. Aerial map of Freeman's Pond subwatershed to Stony Brook, looking southeast. The main stream of Stony Brook is located off the right side of the photo.

Figure 14. Seaward side of Freeman's Pond tidal culvert prior to restoration. The 3'-wide culvert, which is damaged, discharges into Paines Creek near Paines Creek Beach, a barrier beach on Cape Cod Bay. 2006.

Figure 15. Restricted side of Freeman's Pond culvert prior to restoration.

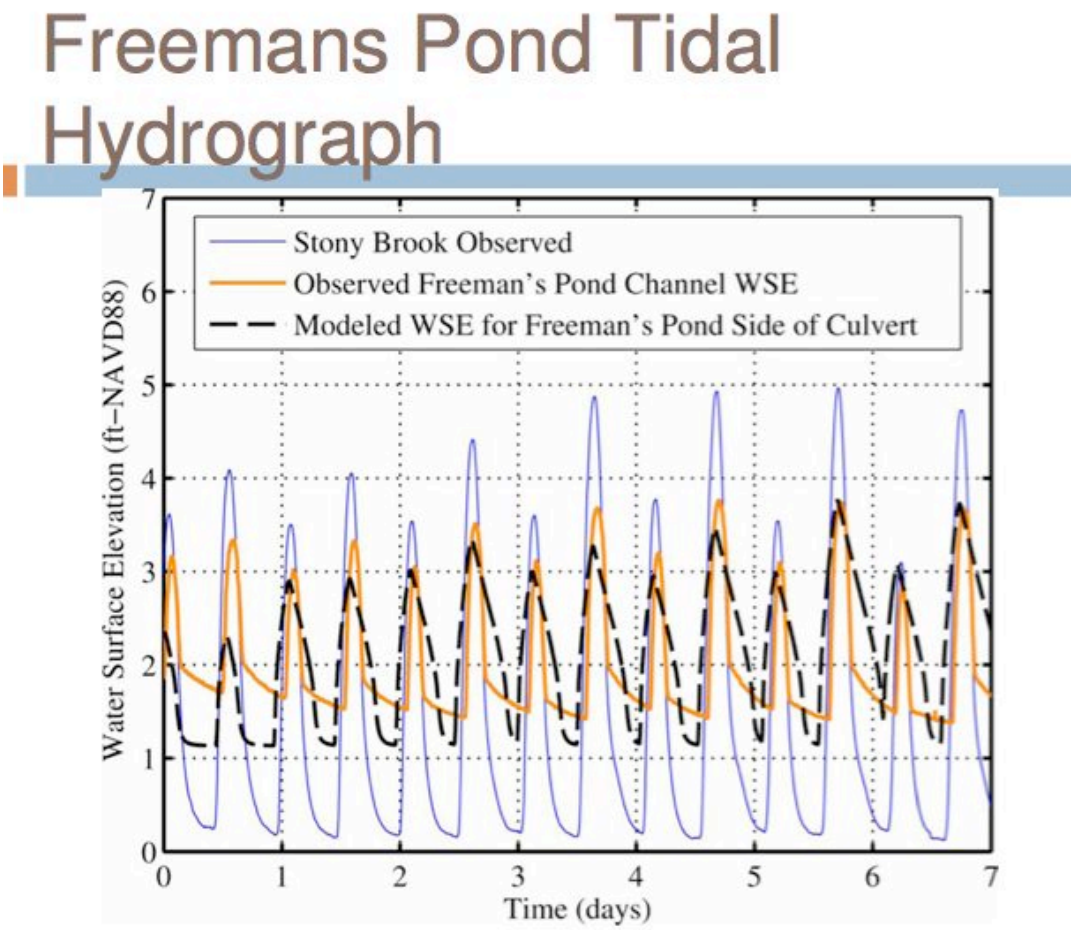

Figure 16. Tidal hydrograph of Freeman's Pond tributary channel compared to Stony Brook, which is the main estuary. The observed water surface elevation for the Freeman's Pond channel (orange) is lower than that of Stony Brook (blue) because the culvert restricts tidal flow. The restoration objective is to increase tidal flow and restore salt marsh by replacing the 3' culvert with a 10' culvert.

Paines Creek Beach Restoration at the mouth of Paines Creek (aka Stony Brook)

Figure 17. Paines Creek Beach parking area in the winters of 2009-2010 and 2010-2011. The parking lot was repeatedly demolished by winter storms and by 2011 the north end of the parking lot was gone. In 2011, the parking area was abandoned and removed. The area will be restored to a beach. This area is located adjacent to the tidal culvert at Freeman's Pond and stormwater improvements at Paines Creek Beach.

Lower Mill Pond Fish Passage and Dam Improvement, Upper Stony Brook

Figure 18. Lower Mill Pond Dam and fish ladder before restoration. The state Office of Dam Safety determined that the dam was failing. Lower Mill Pond is the first of five headwater ponds that provide 386 acres of spawning habitat for river herring and feeding and nursery habitat for American eels. Above, right, a sea gull waits during the annual spring herring run.

Figure 19. Lower Mill Pond Dam. A failing water control structure is shown at right. The water control structure is in need of repair and non-functional. Both the water control structure and dam are needed to maintain safe water levels in Lower Mill Pond and four other ponds in the watershed that together provide 386 acres of habitat for river herring, American eels and other fish and wildlife. The Town commenced engineering design and permitting as of August 1, 2011.