



Warwick Group CONSULTANTS



Water Resources Policy, Public Finance & Advocacy

Beneficial Use - A Success Story Plum Island, MA

In the early 1800's, Plum Island was a small village lined with shacks for fisherman and clam diggers. As the Merrimack River wound its way towards the beach, it would migrate the inlet between Plum Island and Salisbury (to the north) up to a mile. In 1812, stone jetties were designed to stabilize the inlet and to scour the floor of the river to naturally deepen the channel and increase navigability for fisherman and cargo. Since then, numerous modifications and repairs have been made to the jetties and other surrounding flood control infrastructure which have disrupted the natural flow of sediment. Since the late 1980s, the shoreline along Plum Island has continued to erode. As damages to life and property became imminent, the Plum Island Foundation sought the support of Warwick Group Consultants. As an established shore protection consulting firm representing over 170 local governments on sand and sediment related issues, no other firm understood the issues and challenges like Warwick Group did.

In 1996, Marlowe & Company (now Warwick Group Consultants) was essential in drafting the Regional Sediment Management (RSM) authority that allows the Corps to work with a non-Federal interest to beneficially reuse dredged sediment from navigation channels, instead of the least-cost disposal method (open water dumping). Armed with subject matter knowledge and expertise, Warwick Group went on to implement the first RSM Beneficial Use project in 2012 for a section of beach in the Town of Plum Island, MA. Since then, the project has retained 95% of its original volume of sand and still serves its purpose in protecting valuable property on the island.



Without-Project Condition. Plum Island, MA, 2009. Photo: Corps of Engineers

Today, Warwick Group still actively works with local governments, nonprofits, private firms and the Corps of Engineers to make beneficial use projects a reality. The Corps' least-cost disposal method places dredged material in confined disposal facilities that provide no benefit to nearby environments. Beneficial use projects provide environmental and social benefits for people and wildlife that maintain healthy ecosystems and protect life, property and critical infrastructure.

Beneficial use projects may include:

- Beach Nourishment
- Aquatic Ecosystem Restoration
- Habitat Creation
- Marsh Restoration

**For more information, contact the
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