



Figure 1. Two years after placement of protective reef balls that now support a growing oyster population, the salt marsh grasses have increased in density and height at the Stratford Point living shoreline project on the Housatonic River estuary.

COASTAL OBSERVATIONS:

Tips for a superior coastal natural infrastructure project

By

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ASPBA announced the winners of the 2020 Best Restored Shores (BRS) award on 14 September 2020. This award has three goals: First, to boost recognition of the importance of shoreline restoration for building coastal resilience to climate change; second, to acknowledge the teams that put the hard work necessary to complete a project that delivers; and, third, to advance others' capabilities and success. In this article, winners of the BRS award and the BRS Award Committee share their thoughts based on their project experience. Follow this advice and you too can implement a great coastal natural infrastructure solution and, perhaps, find your team on the receiving end of this award.

■ Ten things every shoreline restoration project manager needs to consider during planning:

- 1) Assemble a team with different areas of expertise.
- 2) Examine the history of the site and the predicted flood maps for 50- and 100-year storms.
- 3) Study and draw a contour map of the benthic area from high tide out at least 250 feet.
- 4) Talk with and learn from your stakeholders.
- 5) Examine nearby natural coastal habitats to help determine shoreline contours and native plant species.
- 6) Find out what might be hidden below your site — e.g., utilities, historic resources.
- 7) Develop a soup-to-nuts material acquisition, transport, and staging plan — right up to final placement. Think of reliability, efficiency, safety, and schedule.
- 8) Consider labor requirements, capabilities, management, safety and comfort —especially if using volunteers.
- 9) Prepare for the unexpected by assessing the risks and developing a contingency plan.
- 10) Rarely does everything go exactly as planned, be ready to be adaptive.

■ ***Ingredients in the special sauce that made the project a success:***

- 1) Tenacity and long-term commitment.
- 2) Hard work that sparks joy.
- 3) Good partners that share information and communicate well — no surprises and joint problem solving.
- 4) Engagement in outreach and education.

■ ***Money and resources are important, but here are five other attributes of the perfect partner:***

- 1) Thinks outside the box, is open-minded, flexible, and adaptive.
- 2) Shares your energy and excitement for the project and the resource.
- 3) Has tenacity and is willing to engage throughout the project.
- 4) Willing to have open communication.
- 5) Has realistic expectations.

■ ***Four things never to forget:***

- 1) Engage stakeholders early and often.
- 2) Non-biodegradable products harm coastal ecosystems.
- 3) Field conditions are unpredictable and changeable between design and implementation. Be prepared to be adaptable, efficient, and safe.
- 4) Funding for a monitoring plan so that you know if your project achieved the desired outcomes.



Figure 2 (above). Several creative solutions aided restoration of Gandy's Beach Preserve, New Jersey. (A) Rafts were designed and constructed to transport materials to their final deployment site. (B) Specialized stacking and anchoring of shell bags allowed their placement in higher energy environments than typical.

Figure 3 (below). Before (A) and after (B) restoration of Cooks Beach, New Jersey, demonstrate that the double-rowed oyster reefs that allow horseshoe crabs to move through the reef are successfully slowing erosion and increasing habitat diversity.

