Figure 1: The approximate subaerial and subaqueous floral and faunal habitat provinces found across the sandy beach as mentioned in the text. While the swash zone is often the smallest of the provinces in cross-shore width, it is typically the most prolific and densely populated in terms of invertebrate species.

Figure 2: A simplified beach ecosystem food web graphic showing select species, their relative trophic positions, and common habitats along the beach. The graph shown here is specific to the various species mentioned in the paper.

Figure 3: Beach in elevation at three stages of nourishment evolution. Profile A shows an idealized typical beach cross-shore profile prior to nourishment. Profile B depicts the beach profile, with the new sand volume added in the immediate aftermath of nourishment. The placed fill sand volume is positioned principally on the subaerial beach and is bulldozed into an initial design profile from which natural processes driven by local winds and waves will continue with redistribution toward equilibrium with local conditions. Profile C shows the profile after placement at a point where sand has been naturally redistributed onshore and offshore toward a profile geometry that is equilibrated to local conditions.

Figures 4a and b: Beach scarps along Pea Island on the North Carolina Outer Banks. Scarps form when the beach profile is out of equilibrium with wave conditions--in such cases wave energies in the adjacent surf zone are sufficiently high to erode sands from the subaerial beach, moving them offshore leaving behind steeply sloped scarp features along the beach. Scarp elevations can range from a few centimeters to three meters or more—in Figure 4a the scarp height is approximate 40 cm; in Figure 4b the scarp height is approximately 1 m. Such features are commonplace under erosive conditions such as during storms. They are also common following nourishment sand placement as the unstable beach profile undergoes morphological adjustment.