Working Tidal

Active Recreation

In Working Tidal restored wetland habitats absorb sea level changes and are nestled between the site's existing sports fields and features. Only some active sports field space would be absorbed by habitat restoration; most fields remain in place or are shifted slightly to accommodate new site features. New boating facilities in the lagoon will reach out to neighborhood residents and increase their exposure – at greatly reduced rates – to kayaking, canoeing, sailing, and windsurfing. Existing field uses would remain, but fields would be renovated to allow subsurface flood storage.

Habitat Restoration

Diversion of roadways and parking leaves space for salt marsh restoration and the establishment of beach dunes. Dune plantings such as American beachgrass, beach pea, and seaside goldenrod hold sand with their root systems, while shrubs such as beach heather, bayberry, and beach plum provide wildlife habitat and additional stabilization. Salt marsh plants (dominantly Spartina species) cycle nutrients, protect against flooding and storm surges, and provide food sources and habitat for wildlife.

Economic Engagement

Urban aquaculture endeavors have the potential to create jobs and revive Boston's historic fisheries economy. According to the Department of Fish & Game's Designated Shellfish Growing Maps, the area has been deemed suitable for soft shell clam production, as long as the animals undergo depuration before being distributed for human consumption. Nearby stretches of shoreline have been determined suitable for blue mussel production, so possibilities for mussel farming could be further explored in this area. Presently, a rapidly-expanding category of aquaculture in the Northeast is in seaweed and kelp production. Marketing varies from fresh consumption to use as a stabilizing additive in other foods (i.e. carageenan production), and the industry has great potential in Massachusetts. Urban agriculture programs like the Food Project and the Urban Farming Institute of Boston are successfully running career training and educational programs already – why not expand to the sea? Carson Bay holds the potential for local economic growth that includes the surrounding community, while being at the forefront of seaweed agriculture in New England.

Shifting Infrastructure

Future infrastructure developments in Working Tidal prioritize a transition to reduced vehicular infrastructure and an increase in pedestrian and bicycle infrastructure. A major alteration is the closing of the portion of Day Boulevard that runs around Moakley Park. Vehicular traffic would be diverted to Old Colony Avenue, which connects Morrissey Boulevard and Columbia Road to Day Boulevard. The portion of the road that serves as an entrance to the State Police would be preserved. In place of the road and beach front parking, an entrance drive and drop-off serve users that require vehicular access to the site. Working Tidal proposes a collaboration with UMass Boston to allow park users to park at UMass lots at non-peak hours for the University, and utilize a new shuttle system that would take visitors from the lots to the beach pavilion. The shuttle would also make a stop at the JFK/UMass T station, encouraging mass transit use. The closed portion of Day Boulevard would be converted to a multi-use path which would connect to raised boardwalks and trails throughout the site, but most importantly to the new breakwater path that stretches out into Carson Bay. In addition to supporting energy-generating turbines, the breakwater would also include infrastructure for a commuter ferry stop, allowing quick downtown access for residents and diversifying transit options in the area. In addition, the path loop Is an extension of the Harborwalk, and an opportunity for less confident bicyclists to feel safe in a vehicle-free zone while developing their skills.

Connecting Neighborhoods

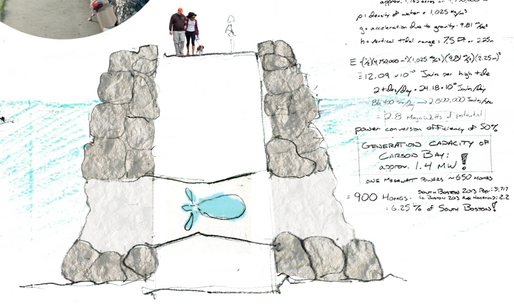
Well-programmed urban parks naturally attract users from their surrounding neighborhoods, which is one of their principal functions. Through support of active and passive recreational engagement, opportunity for economic training and growth, and serving as a pedestrian, cycling, and mass transportation link, Moakley Park will fulfill its potential as a connection within this neighborhood and with other parts of the city.

Educational Opportunities

Boardwalks and raised trails through Moakley Park's marshes, dunes, and fields are an ideal opportunity for groups of all ages to gain exposure to natural habitats found in Massachusetts. Interpretive signage highlights key species and functions, and explains ecological concepts using an accessible, easy-to-understand approach. Community gardens offer a chance for neighbors to grow their own food, and teach others how to do so. Neighborhood children and adults are able to learn how to use and develop confidence in small watercraft in the protected lagoon. Urban aquaculture and power generation activities in the lagoon will attract visitors, engineers, scientists, and researchers that will use the park as a working laboratory and classroom. The concentration of STEM activity at the park can be leveraged for school groups and summer camps, increasing exposure to marine-related studies and careers, and fostering an understanding of valuable ecosystems.

Harnessing Energy

With an area of about 1175 acres, Carson Bay would move about 2.8 billion gallons of tidewater between high and low tides. With leading-edge modern technology underwater turbines, such as those slated for use in the Swansea Bay Tidal Lagoon project in Wales, that amount of water could produce an average of 1.4 mW per hour of power. That's enough energy to power 900 homes – about 1/16 of South Boston's approximately 14,400 residences! Embedded in the seawall that would be installed as part of Working Tidal, the turbines would include baffles which maximize and stabilize the energy output. The baffles can also be used in emergencies to help control storm surge – similar breakwater projects have been designed using natural materials to withstand 500-year storm surge events, and are easily extended upward as sea levels rise.



Images from multiple sources: more information available by request.