

## CONCEPTUAL MBTA COMPLIANCE MEASURES

Best Management Practices developed for minimizing impacts to shorebirds are likely to use a resource group or guild (group of species in a community that exploit the same set of resources in a similar manner) approach. In general, shorebirds use the beach/dune system for breeding, foraging, resting, and/or loafing. Impact minimization measures will be implemented for each resource group without reference to any particular species. Thus, measures to protect one species of bird that forages in the wrack line would benefit all species that forage in the wrack line. Similarly measures to protect one species of bird that nests on the open beach would protect all other species that nest on the open beach.

### Potential Minimization Measures

1. Timing of construction outside of the shorebird nesting season (may vary among HCP regions and/or PSMU, but generally runs from April through August).  
NOTE: Additional PSMUs may be added to encompass the few (5-6) locations of large multi-species nesting aggregations around the state (these areas are largely static, but are likely to move over time).
2. Pre-construction monitoring of project site for presence of nesting shorebirds if construction occurs during the shorebird nesting season.
3. Conspicuous marking and avoidance of nest sites.
4. Restrictions on construction methods and/or timing in major wintering shorebird congregation areas, as applicable (may be specific to certain PSMUs). NOTE: Additional PSMUs may be added to encompass known locations of large-scale congregation areas around the state (these areas are largely static, but are likely to move over time).
5. Limitation on methods, extent of project area, and/or timing of beach cleaning activities to reduce impacts to forage habitat.
6. Restrictions on vehicle access locations and travel corridors to avoid disturbances to, and take of, nesting and resting shorebirds and their habitat. NOTE: Chicks may wander from posted areas. If construction occurs during the fledging period (chicks are mobile and testing flight), avian monitoring may be required to clear vehicle paths, particularly in the vicinity of large nesting colonies.

Note: In developing minimization measures for MBTA compliance, there may be conflicts between conservation measures implemented for sea turtles and those for developed for shorebirds. The relevant criterion for ITP issue is to minimize impacts to the maximum extent *practicable*. Minimization measures do not have to be so onerous as to effectively preclude the activity for which take authorization is being requested. However, the extent to which impacts can be avoided and/or minimized, will largely determine the amount of mitigation required to offset those impacts.