

## Sand Dunes

Sand dunes are an important feature of Prince Edward Island's environment. A sand dune can generally be described as a large sand deposit created from the movement of sand by wind and/or wave action. Sand dunes are generally found parallel to the beach, and may or may not be covered with plants, like marram grass.

A more legal definition would describe a sand dune as a wind or wave-deposited formation of vegetated or drifting wind-blown sand that lies generally parallel to and landward of the beach and between the upland limit of the beach and the foot of the most inland dune slope. Types of sand dunes include: primary sand dunes, which are located immediately inland of the beach and may be vegetated with marram grass; and secondary sand dunes, which are located adjacent to and inland of a primary sand dune and may support vegetation such as marram grass, bayberry, lichen, and scattered white spruce.



Given how sensitive these natural sand features are, they have been protected under the *Environmental Protection Act* from disturbance by new developments, motorized vehicle traffic, or alteration of any kind. A Watercourse, Wetland and Buffer Zone Activity Permit or a Special Permit is required in order to carry out any prohibited activities in or around any sand dune on PEI.

Sand dunes often form long chains of barrier islands and spits along the PEI coast. In 2000, the total area classified as sand dune on PEI was 3,500 ha or 0.62 % of the Province. Another way to look at sand dunes is to consider these different descriptions:

- **Barrier-bay mouth dunes** which form a barrier across a bay or lagoon (i.e., the sandpits at Gascoigne Cove or Basin Head);
- **Islands**, such as the Conway Sandhills on the north shore, or the Indian Point Sandhills on the south shore; and

- **Barrier beach (barachois) dunes** which provide a barrier to inundation, and enclose ponds and river mouths (i.e., Miminegash and North Lake).

Dune areas are vegetated primarily with marram grass which is resistant to drying out and the influence of the nearby salt water environment. This natural grassland is home to birds such as the horned lark and the savannah sparrow. The red-breasted merganser specializes in nesting on isolated sand spits or islands near nesting colonies of gulls and terns. As well, there are many other wildlife species that depend on sand dunes. Piping Plovers favour sand beaches, and the threatened Gulf of St Lawrence Aster can be found on a few north shore dunes near the high water mark. Hardiness is essential to any plant or animal for survival in dune habitats.

Coastal erosion has always been a threat to sand dunes, but has become a much more significant issue on PEI in the last two decades. As sea levels are predicted to continue to rise over the coming decades, the loss of more dunes systems into the ocean is almost guaranteed. Lack of ice around the shoreline in winter, more frequent tidal surges and increased storm events will only increase the threat to these sensitive and unique features.