

US EPA ARCHIVE DOCUMENT

Table 1: Site Types for Great Lakes Coastal Wetlands

Aquatic Context	Site Type	Definition	Landform Context	Wetland Development
Lacustrine	Open embayment. <i>Plates 1a & 1b.</i>	Embayment open to the lake, but in areas where shallow water depth and gently sloping bottom topography reduce wave height and energy.	Sand lakeplain.	Shifting sediments and wave energy limit wetland development to a narrow fringe.
			Clay lakeplain.	Fine-textured substrates are ideal for aquatic macrophytes, resulting in continuous wet meadow and emergent marsh.
	Protected embayment. <i>Plate 1c.</i>	Deep indentation or embayment in upland shoreline that provides protection from wind and wave energy.	Bedrock, moraine ridges, or clay lakeplain.	Extensive emergent wetland development.
	Barrier-beach lagoon. <i>Plate 2.</i>	Sand and gravel deposition create a barrier bar across the mouth of an embayment resulting in the formation of a shallow pond or lagoon.	Sand accumulation over bedrock, till, or lakeplain.	Extensive shallow water emergent vegetation; composition reflects degree of connectivity with Great Lakes.
	Sand-spit embayment and Sand-spit swale. <i>Plate 3a.</i>	Sand spits projecting along the coast create and protect shallow embayments on their landward side. Large, compound sand spits may also completely enclose small swales.	Gently sloping and curving sections of shoreline where sand transport is not impeded.	Sheltered embayments allow for sediment accumulation and wetland development; sand spits are exposed shallow water sites with unstable sediments.
	Dune and swale complex. <i>Plate 3b.</i>	Low sand dunes or beach ridges alternate with swales.	Sand lakeplain.	Swales adjacent to lake may contain herbaceous wetlands and/or open water.
	Tombolo. <i>Plate 3c.</i>	Island connected to the mainland by a series of beach ridges	Sand accumulation over bedrock.	Enclosed lagoons can contain a dense growth of aquatic vegetation; embayment leeward of tombolo may contain a fringe of emergent and submergent vegetation.

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Connecting Channel & Riverine	Channel-side wetland.	Stream-side site fronting the main channels of connecting river and exposed to current and wave action.	Diverse contexts, including glacial lakeplain and till plain.	Vegetation is frequently limited to a thin fringe paralleling the shore.
	Channel embayment.	Embayment along connecting river channels which provide some protection from erosive elements.		Extensive monotypic wetland development can occur.
	Delta. <i>Plate 4a.</i>	Stream sediments are deposited and accumulate at the mouth of a river creating multiple shallow channels, low islands, and abandoned meanders.		Extensive diverse wetland development can occur.
Estuarine	Open estuary. <i>Plate 4b.</i>	Drowned river mouth displaying open, branching inlet form.	Sand lakeplain or till plain.	Protected, fertile wetland habitat that may extend inland for several miles.
	Barred estuary. <i>Plate 4c.</i>	Drowned river mouth with partial barrier bar or dune across the mouth.		