

Wetlands of North America: Chapter 4

Total Wetland Area: 2.4 million km² or nearly 30% of the world's wetlands, about 50% have been lost in the last 200 years

Type	Area in US (x 10 ⁶ ha)
Coastal	
Tidal Salt Marsh	1.9
Tidal Freshwater	0.8
Mangrove	0.5
Inland	
Freshwater Marsh	27
Peatlands	55
Swamp/Riparian	25
Total	111

Coastal (Atlantic, Gulf of Mexico, Pacific, Alaska)

Tidal salt marshes – Typical vegetation: *Spartina alterniflora* (cordgrass)

Tidal freshwater – as tide comes in it pushes up rivers, creating a range of salinity along the river that varies over time, from 0 parts per thousand (ppt) up river, to 30 ppt at the ocean

Mississippi – largest, but diminishing

Typical vegetation – cattails

Mangroves – in Florida on the Gulf of Mexico side, some in Texas, Louisiana, also in southern Gulf of California

Three main genera – *Rhizophora* (red mangrove), *Avicennia* (black mangrove) and *Laguncularia* (white mangrove)

Inland

Freshwater marshes – variety of types

Typical vegetation: emergent, soft-stemmed, aquatic plants such as cattails (*Typha*), reeds (*Phragmites australis*), bulrushes (*Scirpus*) and sedges (related to *Scirpus*)

Peatlands

Most boreal peatlands are found in Wisconsin, Michigan, Minnesota and the glaciated Northeast

Pocosins are found in the coastal plain of the Southeast

Alaska and Canada have vast amounts (estimated to be 163 million ha)

Caused by vegetation filling in glacial lakes

Freshwater Swamps – have aquatic trees, always flooded

Typical vegetation: Cypress (*Taxodium*), gum/topolo (*Nyssa*)

Riparian

Occasionally flooded, river bottomlands (many converted to agriculture)

US Wetland Status

Time	Amount of Wetlands
Presettlement	Maybe 87×10^6 ha (without Alaska)
1922	40×10^6 ha
1940	40×10^6 ha
1954	44×10^6 ha
1970s	$40-42 \times 10^6$ ha
1980s	40×10^6 ha

Number stays the same, but there are many conversions

“No Net Loss” – law required wetlands destroyed (for agriculture/development) to be replaced by constructed wetlands. Also paid farmers to stop farming certain areas to return them to wetlands. These wetlands are often of a lower ecological value than those that were destroyed.

Major Regional Wetlands – see map from Chapter 4

Peace-Athabasca – largest inland boreal delta

Prairie potholes – from glacial scours, breeding grounds for birds

Eastern Province wetlands

Hudson Bay lowlands – sedges, birches

Great Kankakee

Great Dismal Swamp – white cedar

Pocosins – bogs

Big Rivers

Okefenokee Swamp – marsh, swamp, floating vegetation mats, now a wildlife refuge

Everglades – “River of (saw)grass” – *Cladium jamaicense* sedge, hammocks with trees, tropical/subtropical to Florida Bay, where there is eelgrass and mangroves, lost approximately 50% to agriculture, now “under repair”

Big Cypress Swamp – hardwoods, in Everglades

Mississippi Delta – riparian, freshwater tidal, salt marsh

Nebraska Sandhills – largest stable dunes, above the Ogallala aquifer

San Francisco Bay – drainage from the San Joaquin valley, lots of *S. foliosa*, now reduced flow, 1849ers started draining