



Wetlands Fact Sheet #1

What is a wetland and how can I identify it?

What is a wetland?

The term “wetlands,” by federal definition, means:

“Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”

Principle Wetland Components

The primary components of wetlands are:

- **Hydrology:** soil must be saturated to the surface for at least 5% of the growing season (typically 2 weeks).
- **Soils:** must contain unique characteristics indicating the presence of water, such as a thick, dark organic layer, or discolorations in the soil indicating prolonged saturation.
- **Vegetation:** must be dominated by wetland species that are specifically adapted to prolonged saturation in wet soils.



Riparian ecosystem wetlands lie in valley bottoms adjacent to streams. The large wetland area along the Little Susitna River is the largest single wetland polygon mapped.

Identifying Wetlands on Your Property

Wetland Delineations

If your property:

- Has low-lying areas where water collects in the spring or after heavy rain;
- Has an abundance of plants like alder, black spruce, or sedges; or
- Is located near a lake or stream;

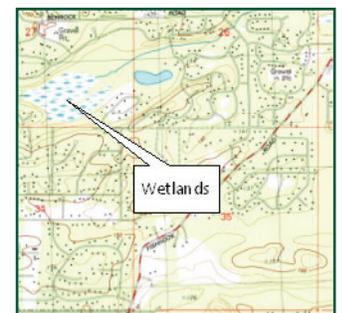
Then you may have wetlands on your property!

There are several resources that you can use to determine if and where there may be wetlands on your property.

- USGS Topographic Maps
- National Wetland Inventory Maps
- Plat Maps
- Mat-Su Wetland Mapping Project at <http://www.matsugov.us/wetlands/wetlands-map-viewer.html>.

Once you have reviewed the available information, the only way to determine exact wetland boundaries is to have a scientist perform a wetland delineation during the growing season.

Wetland delineations must be approved by the U.S. Army Corps of Engineers (Corps). To find out if there are wetlands on your property, contact the Corps for a listing of qualified wetland delineators at (907) 753-2712 or Toll Free at (800) 478-2712.



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Types of Wetlands in the Mat-Su

There are several different types of wetlands found within the Mat-Su. Plants that are commonly found in these wetlands include many species of sedges and grasses, black spruce, leatherleaf, sphagnum moss, and iris.

Not all wetlands are wet all the time. In the summer, vegetation is a good indicator of wetlands.

- **Glacial Lakebed Peatlands** develop over the deposits of former glacial lakes.
- **Discharge Slopes** occur over hydric mineral soils where shallow groundwater discharges at or near the surface. They often support only seasonally high water tables, and can be difficult to identify.
- **Kettles** are peatlands occupying depressions created when pockets of underlying ice melted at the end of the last glacial advance. They have a wetland or stream connection to Cook Inlet.
- **Depressions** are surrounded by uplands. They are common as peatlands on the glacial outwash deposits around Palmer and moraines south of Big Lake.
- **Spring Fens** are small peatlands surrounded by uplands. They occur between Butte and Houston below 1,000 feet elevation, in a region of moisture deficit, where evapotranspiration generally exceeds precipitation.
- **Headwater Fens** are small peatlands occupying headwater basins of first-order streams. There are few headwater fens in the area mapped.



Well-developed bogs in the Mat-Su are often forested by black spruce.



A glacial lakebed peatland, which develops over the deposits of a former glacial lake.

- **Relict Glacial Drainageways** are peatlands occupying old, sometimes abandoned, drainageway features. These are linear features which once drained more extensive glaciers.
- **Ripple Trough Peatlands** are uniquely arranged hills and valleys that are currently mapped as Rogen moraines, which are formed by deformation of till beneath a glacier. They have been reinterpreted as ripple features created by gigantic waves formed during catastrophic drainage of glacial Lake Atna down the Matanuska Valley.
- **Riverine Wetlands** lie in valley bottoms adjacent to streams. They are maintained by stream overflow, discharge through stream sediments, and groundwater discharge at the toe of valley walls.
- **Tidal Wetlands** are flooded by saltwater at least once per month; the frequency and duration of inundation creates distinct zones. Each zone supports a small number of characteristic salt-tolerant plants.
- **Drainageway-Tidal Wetlands** occur along the shores of Knik Arm. These wetlands are influenced by an extreme tidal range mixing large amounts of freshwater discharging from glacial sediments into already diluted saltwater.



This diagram depicts shallow groundwater flowing through relatively permeable sediments into and out of a wetland.