



Wetlands

Wetlands are those areas that are inundated or saturated by surface water or groundwater 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 (EPA 2001, p. 12).

In other words, wetlands are land areas that are literally “wet” during part or all of the year because of their location in the landscape (Kadlec and Knight 1996, p. 3). Wetlands are frequently transitional between uplands (terrestrial systems) and continuously or deeply flooded (aquatic) systems. They generally include swamps, marshes, bogs, and similar areas. A wetland contains specific:

- *Hydrology* (amount and period of time that water is present)
- *Hydrophytic vegetation* (wetland plants adapted to wet soils)
- *Hydric soils* (soils low or absent in oxygen due to their saturation in water).

Types of wetlands:

- *Marine* – saltwater wetlands along coasts.
- *Estuarine* – coastal wetlands within estuaries (zones where fresh and salt water mix). Estuarine wetlands usually have some access to oceans, with significant inflows of freshwater.
- *Riverine* – wetlands in the channels of rivers and streams.
- *Lacustrine* – wetlands around lakes and reservoirs. They are larger than twenty acres or contain water depths of six feet. Like marine and estuarine wetlands, lacustrine wetlands are exposed to wave action.
- *Palustrine* – isolated, inland wetlands not associated with lakes or reservoirs. Smaller and shallower than lacustrine wetlands, palustrine wetlands include marshes, wet meadows, bogs, potholes, and playas.



Moscow Wastewater Treatment Plant

Photo: Palouse-Clearwater Environmental Institute



Photo: Idaho Fish and Game.

Whether permanent or seasonal, wetlands provide valuable habitat for insects, amphibians, reptiles, birds, and some fish and mammals. They act like giant sponges, absorbing water during floods and storms. Instead of washing downstream and transporting sediment, water in wetlands slowly soaks into the ground to recharge aquifers and other sources of ground water. Sediments settle out as the water slows; the soil particles bind with pollutants, and some plants absorb the nutrients and toxins that otherwise would wash into our lakes, rivers, and coastal waters. Some communities use this natural cleansing ability of wetlands to treat the wastewater and sewage that we produce. Wastewater treatment wetlands in Moscow, Idaho not only provide habitat for birds, but also clean the water before it flows down Paradise Creek (Idaho Fish and Game). For more information, visit

<http://www.pcei.org/water/ui2001/mwwt1997.htm>.

References:

Kadlec, R.H. and Robert L. Knight. 1996. *Treatment Wetlands*. CRC Press, Inc. Boca Raton, Florida. 893 p.

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EPA 841-B-01-001. June 2001. 199 p.

Wetlands. Idaho Fish and Game Information. (07/21/03). <http://www2.state.id.us/fishgame/info/programsinfo/wetlands/index.htm>