

Wonderful Wetlands

Every last drop counts in nature's water purification system.

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Hearing the squeak of soggy sneakers as you walk through an open meadow may not be the most welcoming sound, but taking a closer look at the squishy ground below may reap tremendous rewards. Despite representing less than 2 percent of the land surface area in Wyoming, wetlands fulfill life requirements for more than 80 percent of wildlife species. In addition to their benefits to wildlife, wetlands minimize the impacts of flooding, act as natural water purification systems and are among the most biologically diverse areas in the state.

The Army Corps of Engineers, the federal agency with jurisdiction over all "waters of the United States," defines wetlands as areas "that are inundated or saturated by surface 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." In other words, wetlands are areas that are wet often enough to develop soils that indicate periods of saturation and that support hydrophytic, or water loving, plants. So despite the name, wetlands are not always wet. And even though your sneakers may be wet, you may in fact not be in a wetland.

Other than areas around rivers, lakes and ponds, the four major types of freshwater wetlands are marshes, swamps, bogs and fens. The semi-arid climate of our region limits wetland occurrence to marshes and fens. Fens are fed predominantly by groundwater and have thick organic soils, known as peat. Peat formation occurs over hundreds to thousands of years as dead plant material accumulates. Marshes are characterized by a lack of peat accumulation and are fed by surface or groundwater.

Riparian Areas: The interface between land and water, riparian areas make up less than 5 percent of the landscape, yet they contain up to 75 percent of our plant and animal diversity. A riparian area is the land adjacent to a river or stream that is periodically influenced by flooding, which determines the type and productivity of vegetation, such as willows, alders and cottonwoods, found along watercourses. Riparian areas generally have soils with high permeability and a high water table, making them unsuitable for traditional septic systems.

Other wondrous waterbodies

Streams: Streams offer important habitat for wildlife. In Teton County, a stream is defined as a body of running water that is not an identified river or an irrigation ditch, and has an average annual flow of 3 cubic feet per second or greater and/or provides winter habitat for trumpeter swans or is a cutthroat trout spawning area. To protect habitat, development must be set back at least 50 feet from streams. Setbacks are 150 feet from trout-spawning streams.

Source: *Rural Living Handbook* by the Teton Conservation District

Both fens and marshes occur in Jackson, you just have to know where to look. The Bert Raynes Wildlife Observation Deck at the visitors center on North Cache is a good place to start.

Teton County Land Development Regulations require the protection of water bodies, 10-year floodplains and wetlands. In most cases, a 30-foot buffer is required between a wetland and any development. Developing any site therefore necessitates the delineation of a wetland's boundary to avoid impacts to the resource. While wetland delineation will identify the location of hydrophytic vegetation and hydric soils, identifying the boundary of a wetland does not necessarily equate to wetland protection. True wetland protection involves maintaining the water source that sustains the wetland. In many cases wetland boundaries may have been protected, but the water that supports the wetland has been diverted or altered in such a way that the wetland becomes degraded.

As conflicts over water grow in intensity, the need for increased vigilance in the protection of wetlands and their water sources also grows. Despite our geographic gift of being in a headwaters area, the threats to wetlands are remarkably similar to those across the West. Climate change, changing irrigation practices, increasing regulation of stream flows and development represent the most pressing threats to wetlands.

Because wetlands are among our most valuable resources, for wildlife and humans alike, stewardship must be a top priority. In order to best steward our wetland resources here in Jackson, we need to recognize that alteration in water flows, including groundwater flow paths, can have a major impact on wetlands. Keep this in mind the next time you change irrigation practices, alter flow regimes or conduct development of any kind. ♦

Floodplains: Development in Teton County's waterbodies and floodplains is prohibited with very limited exceptions. A 10-year floodplain is land that is subject to a 10 percent or greater chance of flooding in any given year. Flooding is a temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland waters and/or the unusual and rapid accumulation or runoff of surface waters from any source.

Groundwater: Groundwater is stored in, and moves slowly through, moderately to highly permeable rocks called aquifers. An aquifer may be a layer of gravel, sand, sandstone or cavernous limestone, or even a large body of massive rock that has sizeable openings. Groundwater is replenished by precipitation and, depending on local climate and geology, is unevenly distributed in both quantity and quality. Most rural landowners in Teton County rely on a well for their drinking water, which may become contaminated if not protected from pollution.

