

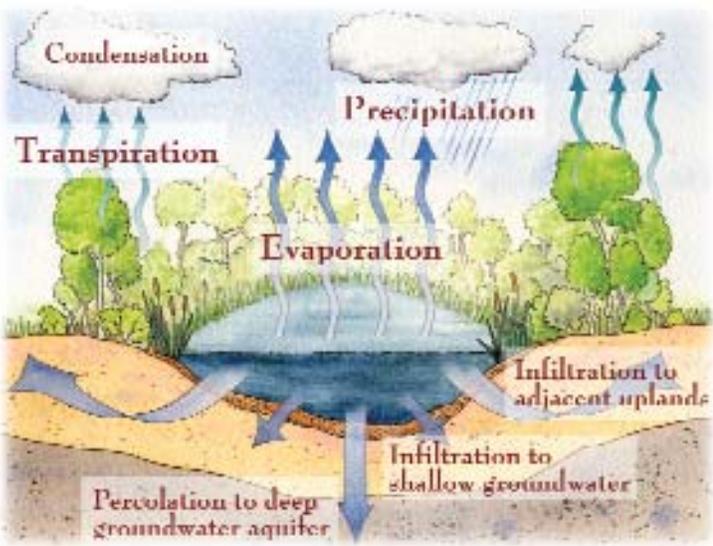
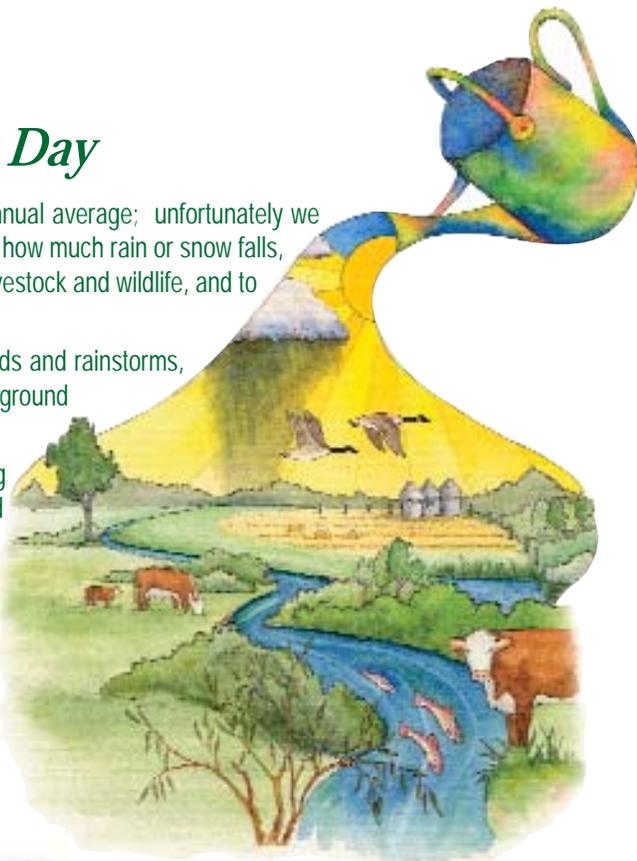
Water in the Bank

Putting Water Away on a Rainy Day

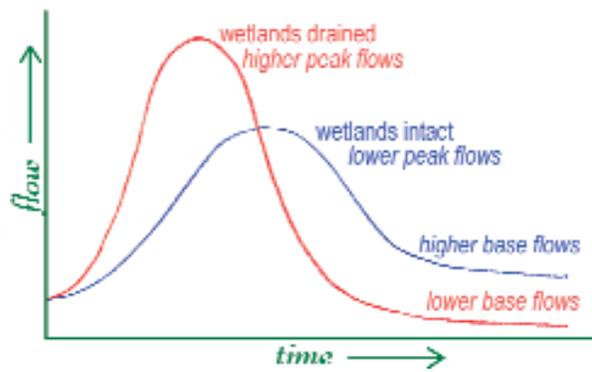
We live in a land where precipitation varies greatly around an annual average; unfortunately we can't count on the average every year. Although we can't change how much rain or snow falls, we can influence how much stays, to fuel plant growth, to water livestock and wildlife, and to provide flow in streams and water levels in lakes.

Stream valleys, wetlands and lake basins store water during floods and rainstorms, like a "sponge". How much they store and how quickly the underground reservoirs empty are affected by how we treat riparian areas.

Streams and rivers are the sum of many tributaries including dozens, sometimes hundreds of smaller streams, channels and drainages that collectively are known as the watershed. Watersheds also include wetlands and lakes. Even though these may not have surface drainage, water moves underground between wetlands, lakes, rivers and streams. Watersheds, in simple terms, shed water. They collect and deliver the water from rainfall or snowmelt. The physical characteristics of the watershed, the abundance, diversity and health of vegetation plus land uses, reflect the pattern of runoff.



Changing and removing vegetation cover combined with wetland drainage can cause runoff to occur more quickly as well as produce higher peak flows. That translates into more stream horsepower to do damage plus less retention time for water to soak into the soil and underlying substrate.



Draining wetlands has a direct effect on local stream flows. When wetlands are drained, higher peak flows (flooding) and lower base flows result. Where wetlands are intact, they store water and release it slowly. The net result is less flooding, increased base stream flows and groundwater replenishment.

	Maximum	Minimum	Average (mm)
Medicine Hat	642 (1927)	148 (2001)	340 (1911-2002)
Camrose	734 (1973)	236 (1929)	434 (1929-2002)
Rocky Mountain House	743 (1965)	335 (1950)	546 (1945-2002)
Lac La Biche	685 (1977)	216 (2002)	455 (1959-2002)
Fairview	606 (1973)	215 (1981)	386 (1944-2002)

"Average" precipitation is a theoretical figure, not something to be counted on every year. These are some average precipitation levels, plus the highs and the lows, for several Alberta locations.

An understanding of how a watershed collects, stores and releases water may help us to save more water and benefit from it, especially during those years of below average precipitation.