

# Watershed MANAGEMENT



## Drought Information Center

**April 14, 2006**

On Tuesday, April 11, DEP Secretary Kathleen McGinty announced a statewide drought watch and asked the Commonwealth's citizens to voluntarily reduce water use by five percent. The announcement came as a result of deteriorating precipitation, stream flow and ground water conditions that are evidenced by ongoing monitoring across the Commonwealth.

During the past 30 days, precipitation deficits range from about 1.5 to 2.5 inches in the northwestern half of the state and 2.0 to 2.5 inches in the southeastern half. The 60-day deficits range from about 2.0 to 2.5 inches in the northwest and 3.5 to 4.5 inches in the southeast. The 90-day deficits, reflecting some winter precipitation, range from about 1.5 to 2.5 inches in the northwest, with 3.0 to 3.5 inch deficits in the extreme northwest, while the deficits range from about 2.0 to 4.0 inches in the southeast.

Precipitation deficits during the past three months, coupled with seasonally low ground water levels, have produced record low seasonal flows in streams in every region of the state, including: Loyalhanna Creek, Westmoreland County; the Clarion River, Clarion County; Dyberry Creek, Wayne County; the Schuylkill River, Schuylkill County; Muncy Creek, Sullivan County; and Conodoguinet Creek, Cumberland County. The Susquehanna River at Harrisburg was 65 percent below its normal flow.

Ground water normally recharges during the winter and spring, with snow melt providing a significant portion of that recharge. Ground water levels are normally at their peak by the end of April, and begin their descent with the advent of spring foliage. Ground water recharged early this winter, as a result of the above normal precipitation in late fall and early winter, but began to decline one to two months in advance of the normal May descent, due to the lack of spring snow melt and precipitation. This is evidenced statewide, and ground water levels in the northeastern counties and reaching down along the Ridge and Valley Province to the lower Susquehanna Valley dipped to seasonal record or near record low levels as early as March.

With foliage driving transpiration and summer temperatures driving evaporation, little precipitation penetrates to ground water during the late spring and summer months, so ground water declines naturally from May through September or October, absent major precipitation events. By early July, most precipitation is being lost to evapo-transpiration, and stream flows depend heavily upon base flow from ground water. Low ground water levels in late summer thus impact users of both ground and surface waters. While recent rains provided some recovery to ground water, wells along and southeast of the Ridge and Valley remain at levels that portend potentially serious problems in the summer.

