

White River Flood Irrigation and Return Flows

One of the oldest irrigation methods is surface or flood irrigation where water flows down small furrows or over fields to water the crops. While water is running over a field it percolates through the soils. Plants use a portion of the water while much of it permeates deeper and recharges the alluvial aquifer, increasing groundwater levels. The White River community is cultivated around these processes with considerable dependence. Water in the aquifer eventually returns to the White River, applicably referred as “return flows”. A significant portion of flood irrigation water applied in the upper basin eventually returns to the river system for other downstream water users’ (irrigation, Rangeland drinking water, environmental) use later in the year.

Water conservation is important and irrigation efficiencies have benefits including providing more water in the streams during the spring and early summer for fish habitat and recreation. However unintended consequences must be considered prior to implementation. With ongoing and increasing drought severity, our alluvial aquifer and related return flows become even more critical. The induced aquifer recharge provided by flood irrigation is the primary storage mechanism, meeting a large variety of reuse water needs across the White River basin later in the summer, fall, and winter when water is more scarce.

Irrigation efficiencies such as conversion to sprinklers may negatively impact domestic wells, late season stream flows, and cause other unintended injury. The neighbor well or diversion structure that is now struggling to obtain water might be the unintended recipient of truly well-intended irrigation efficiency project. Careful review and consideration should be part of all irrigation efficiency planning efforts. To learn more scan the below link and contact:

- Rio Blanco Water Conservancy District 970-675-5055
- CSU Extension 970-878-9490
- White River & Douglas Creek Conservation Districts 970-878-9838
- Natural Resources Conservation Service (NRCS) 970-878-5628

Scan Link: <https://www.coloradoriverdistrict.org/wp-content/uploads/2017/11/2017-seminar-summary-irrigation-efficiency.pdf>