

**The Transit Loss Model Update  
facilitated by the  
El Paso County Water Authority**

**1. What is transit loss?** Transit loss is the evaporation or other loss of water as it moves down stream. For non-native water sources, such as return flow (effluent) from Denver Basin wells, tracking the losses in transit to a downstream point is required if that water is to be exchanged or reused.

**2. What is the Transit Loss Model?** The current Transit Loss Model was developed by the U.S. Geologic Survey (USGS) for Colorado Spring Utilities (CSU) to track non-native water down Fountain Creek for exchange into Pueblo Reservoir. The original model begins at the Las Vegas Treatment Plant and assumes that all water upstream of the City is native water.

**3. Why is the El Paso County Water Authority facilitating an update to the Model?** The updating of the model reflects a confluence of several interests. Over time, the existing Model has been modified for use by water agencies below Colorado Springs to gain greater efficiency from non-native water, such as Frying Pan-Arkansas project water. With the construction of its North Reclamation Plant at Garden of the Gods road, CSU needed to update the model, extending it upstream to the discharge point of the new wastewater plant.

Following the U.S. Supreme Court's ruling under Kansas v. Colorado, the State Engineers Office has been forced to carefully document all water under augmentation plans (taken out of priority from a lake or stream but replaced by another source) in the Arkansas basin. Because the current model assumes all flow in Monument Creek is native, water agencies in Northern El Paso County have no means to demonstrate "dominion and control" for Denver Basin return flows as required under water law for reuse. As a regional entity, the El Paso County Water Authority stepped up to the task of facilitating an update of the model to serve the region's disparate interests.

**4. Why is an updated model important?** Efficient use of our local supplies is the foundation for any strategy to obtain a replacement supply for non-renewable water sources, such as the Denver Basin aquifers. The Transit Loss Model will provide a daily accounting tool for the State Engineer to affirm that reuse, exchange or sale of return flow for augmentation properly accounts for transit loss as the water moves downstream.

**5. Why are there on-going costs to maintain the Model?** The Transit Loss Model derives its credibility from the fact that it was developed by the USGS. The Model relies on USGS stream gauges to calibrate each stream reach. Annual costs are generated from cost sharing with USGS for the routine maintenance and calibration of the gauges.