WATER TREATMENT AND WATER QUALITY

East Cedar Creek Fresh Water Supply District (ECCFWSD) operates two water treatment plants. The McKay Water Treatment Plant (WTP) provides water to customers in the southern portion of the district and the Brookshire WTP services customers in the northern sector.

The McKay WTP, located off Hwy 198 in Payne Springs, Tx and the Brookshire WTP, located off Welch Lane in Gun Barrel City, Tx.

The water treatment process is the same at both plants. The raw water pumps withdraw water from Cedar Creek Reservoir directly to the plants with screening in place to prevent debris from entering the plants.

At the plants, coagulation, sedimentation and filtration occur to settle and remove suspended matter from the water. Just prior to raw water entering the plant clarifiers, a chemical coagulant is added to cause organic (algae, bacteria, etc.) and inorganic (sand, metals, plastic, etc.) matter to become heavy enough to settle by gravity to the bottom of these sedimentation tanks or clarifiers.

Water is skimmed off the top of the clarifiers and routed to the plant filters, the last step in the removal of suspended solids. The filters contain layers of anthracite (granular charcoal), sand, and gravel which essentially duplicate the filtering process that naturally occurs when surface water percolates through the soil to replenish underground aquifers.

Most of the water impurities are removed in the clarifiers by the sedimentation process with plant filters removing the rest. Remaining microscopic / bacteriological concerns are controlled by chemical disinfectants.

The Texas Commission on Environmental Quality has established high standards for water quality. They monitor performance and periodically inspect for compliance.

Water quality measurements are taken every four hours at the Brookshire and McKay plants. Both plants are always well above treatment compliance standards with water quality measurements meeting all major maximum contaminant level standards. The plants are working diligently to constantly meet all MCL's.

The plants are equipped with computer-controlled systems which call out alarms if a chemical imbalance or other disruption occurs in the water treatment process. The plants have assigned licensed operators during normal working hours. Qualified on-call staffs are prepared to react to any alarm after normal working hours or on weekends.

From the plant filters, transfer pumps move treated water to ground storage tanks and then on to the water tower as customer demand is placed on the water distribution system. The elevated storage provides the necessary water pressure on the linear water distribution lines to reach district customers.