



Adequate water is essential for operating Luminant's power plants. The largest private owner of reservoirs in Texas, Luminant uses them to cool its generating facilities. While large volumes of water are cycled, only a small percentage is consumed for plant operation. Most is returned to the reservoirs for reuse. Luminant's water-management programs at its plants and mines ensure outstanding water quality and exemplary compliance with state and federal regulations.

Practicing Good Stewardship



Luminant environmental technicians sample water used to cool Oak Grove's condensers as part of the company's program to ensure exemplary water quality and regulatory compliance.

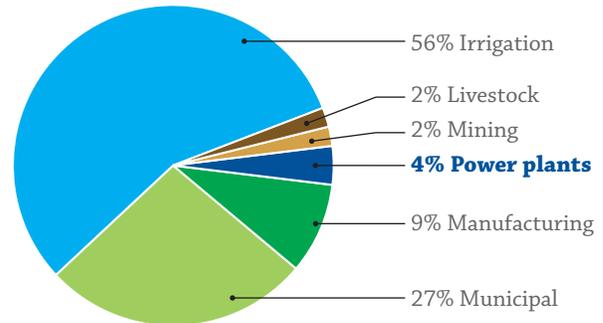
- An adequate, dependable, long-term supply of clean water is essential every day for the operation of Luminant's power plants.
- The company captures, monitors, treats when necessary, recycles, reuses or releases water at its plants and mines to ensure good water quality and maintain exemplary regulatory compliance.

Abundant in Luminant's plant reservoirs and in the water resources developed with land reclamation, the bluegill sunfish is an important sport species.



TEXAS WATER CONSUMPTION

Water demand for Texas electric generation is just 4 percent of the state's total water consumption.



Sources: Water for Texas 2012 Water Report; University of Texas

- While large volumes of water are cycled for cooling Luminant's plants, only a small percentage is consumed. Typically, more than 99 percent of it is returned to the reservoirs for reuse.
- As the largest private owner of Texas reservoirs, Luminant owns and operates 14 and also has power generation facilities on five other reservoirs in which it has invested in water and dams.
- Luminant's actions to conserve water and mitigate drought include use of man-made reservoirs instead of wet cooling towers, which consume significant quantities of water. The company also captures and uses storm water, recirculates process water, reuses wastewater from water purification systems, reuses treated discharge from floor drains and sump pumps, uses recycled water for landscape maintenance, employs piping to convey water to minimize evaporation and enhances pumping capacity.

Increasing Aquatic Habitat, Recreation



Luminant's Squaw Creek Reservoir, which serves as the cooling source for the company's nuclear plant, boasts some of the best bass fishing in Texas.

- Luminant's reservoirs provide thousands of acres of aquatic habitat for wildlife, and the dams also have provisions to release water to sustain fish and wildlife habitats downstream.
- Some of the largest reservoirs are open to the public for fishing, boating and other recreational activities, including several that have dedicated land for state and county parks.

Benefiting a Dry Land

- In the mid-1940s when they hired their first consultants to study West Texas and develop a plan for water supplies, Luminant's predecessor companies became a driving force behind construction of water resources, allowing this arid region to grow and prosper.
- The first two projects were development of an underground water supply for Monahans and construction of a reservoir on Morgan Creek near Colorado City. From these beginnings came the Colorado River Municipal Water District, Lake J.B. Thomas, Oak Creek Reservoir, Lake Leon, Lake Graham, Lake Arlington, Champion Creek Reservoir, Lake Limestone and Lake Granbury.
- Luminant's efforts to help develop water resources continue today. Luminant is active in planning for water conservation and use of water resources and maintains representation on the state Water Conservation Advisory Council, regional water planning groups and several of the Texas Clean Rivers Program steering committees.

Cooling the Plants

- Like most conventional power plants, Luminant's units generate steam to turn a turbine, which spins a generator. The spent steam is then routed to a condenser. Similar to a big radiator, the condenser contains thousands of pipes through which cold water flows. Steam swirling around these pipes is converted back to water, cooled and recirculated to the boiler to begin the cycle again.
- Water from reservoirs is cycled to cool the condenser. It is returned to the reservoir where it recirculates, cools naturally and can be used again.
- This once-through cooling system is the simplest, least expensive and most effective method for condensing steam.

