

# Lubbock Southeast Water Reclamation Plant Update Turning Wastewater into a Valuable Resource

The City of Lubbock receives and treats about 23 million gallons of wastewater each day. Wastewater is treated to comply with state regulations 24 hours a day and 365 days a year. Advances in technology make it feasible to treat wastewater to levels that begin to make it a valuable resource.

Since the 1930s, the City has disposed of wastewater through crop irrigation at land application sites. Recognizing that properly treated wastewater is a valuable resource, City staff began evaluating alternatives in 2004 to treat wastewater to higher quality standards which creates water recycling opportunities.

A preliminary engineering report was completed in 2005, proposing improvements to the Southeast Water Reclamation Plant (SEWRP) to enable stream discharge and future water reuse options. The SEWRP consists of four separate treatment plants. Plant #1 has been abandoned. Plant #2 will be abandoned in 2011. Plants #3 and #4 will be improved and expanded. Improvements will be made in four phases. Phase I, which is currently underway, includes upgrades to the



▼ Aeration Basins at the Water Reclamation Plant.

influent lift station. The project is expected to be completed in 2008.

Funding for Phase II was approved in February 2008. It will enable the treatment of 18 million gallons of wastewater a day at stringent stream discharge standards. Phases III and IV will optimize the removal of sludge and enable the treatment of an additional 13.5 million gallons of wastewater a day. The combined capacity of 31.5 million gallons a day will provide quality treatment of wastewater until 2030.

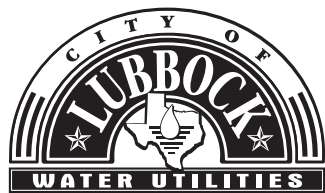
The new treatment technology is called Integrated Fixed Film

Activated Sludge treatment. The process uses a small plastic media to house naturally occurring microbes that clean the wastewater. The plant upgrades include the use of ultra violet light to kill bacteria instead of chlorine. This change is more environmentally friendly and meets increasingly strict state regulations.

The total project will cost about \$124 million and will enable the City of Lubbock to move toward the recycling of wastewater within the next 25 years. Wastewater recycling is part of the City's 100-year water plan.

## SEWRP Upgrade Facts

Treatment Standards	Total Suspended Solids = 5 mg/L Biochemical Oxygen Demand = 5 mg/L Total Nitrogen = 8 mg/L Total Phosphorus = 1 mg/L
Average Treatment Volume	22 million gallons per day
Phase 1 Headworks Cost	\$3,000,000
Phase 2 Plant 3 & 4 Upgrades Cost	\$55,000,000
Phase 3 Solids Handling Costs	\$31,000,000
Phase 4 Plant 3 final Upgrades Cost	\$35,000,000



## SEWRP Upgrade Timeline

1940	Plant 1 constructed (Demolished in 1994)
1962	Plant 2 constructed (Proposed to be abandoned in 2011)
1970	Plant 3 constructed (Final upgrade proposed by 2015)
1994	Plant 4 constructed (Final upgrade proposed by 2011)

For more information contact the Water Conservation and Education Department at 775-2595 or visit us online at <http://water.ci.lubbock.tx.us>