



## CITY OF SUGAR LAND

Engineering Department

**CIP Project Number:** SW1001

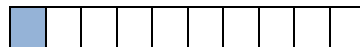
**Title:** Water Plant Upgrades for Surface Water Conversion

**Project Phase:** Design

**% of Phase Completion**

**Design**

**Construction**



2012

**Cost for this Phase:** \$ 650,000

**Funding Sources:** Revenue Bonds

**Project Manager:** Jessie Li

**Contractor:** TBD

**Consultant:** Malcolm Pirnie

### **Project Description:**

In preparation of surface water conversion, two water plants will need to be upgraded. Upgrades will include installation of a 1.5 MG GST at Lakeview Plant and upsizing of booster pump capacities and suction and distribution headers. Includes ammonia feed systems at all groundwater plants. Computational Fluid Dynamic (CFD) modeling at the ground storage tanks receiving surface water will be conducted to ensure proper blending.

**Justification:** The City must convert 30% of water usage to surface water by 2013. In order to distribute the treated surface water, existing groundwater plants will need to be upgraded. To accommodate the additional flow and to minimize the groundwater and surface water blending issue, ammonia feed systems will be installed to convert the groundwater disinfectant from free chlorine to chloramines.

### **Updates:**

**October 2009-** The design phase will not start until the completion of the PER expected summer 2010.

**November 2009-** no changes.

**December 2009** – no changes.