

# LATERAL 8 REGULATING RESERVOIR



**WATER & POWER**  
Serving Central California since 1887

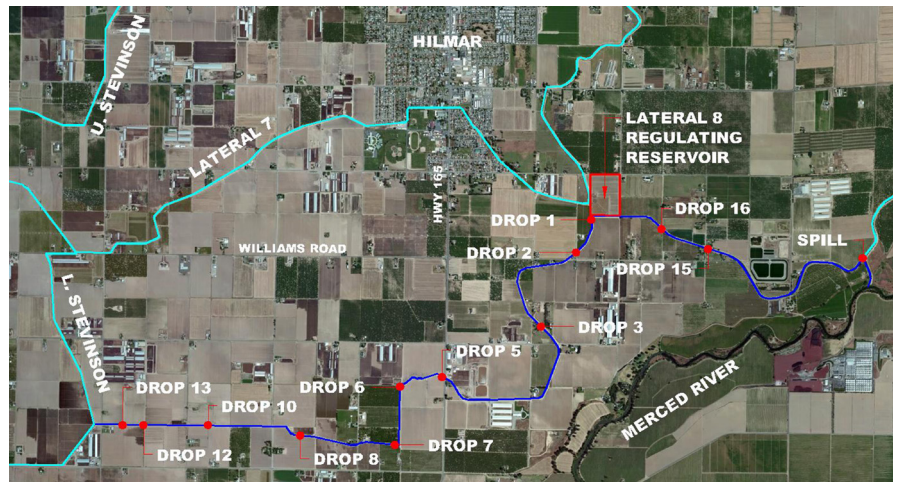


## QUICK FACTS:

- Regulates Flow in Canal by Providing Temporary Storage
- \$5 Million Project
- 9,000 Acre-ft Yearly Historic Average Water Savings
- 90% Reduction in Groundwater Pumping With Project Area
- Almost 10,000 cubic yards of Concrete Poured
- In-House Design and Construction
- 25.5 Acre Footprint
- 130 Acre-ft Storage Capacity
- 6.5 foot Average Water Depth
- 50 cfs (22,500 gpm) Gravity Intake from Highline Canal
- 20 cfs (9,000 gpm) Pump Intake from Lateral 7
- 40 cfs (18,000 gpm) Pump Discharge to Lateral 8
- 20 cfs (9,000 gpm) Pump Discharge to Lateral 7
- Redundant Level Monitoring
- Can be Monitored and Operated Remotely
- Automated to Capture Spill from Highline Canal and Balance Flows
- Concrete Lined to Reduce Infiltration

## *Dedication to Saving Water*

The Lateral 8 Regulating Reservoir was constructed to provide a location to store water that would otherwise spill from the District canal system to the Merced River. The District is then able to use this water to respond to shortages below it, improving customer service. In building this reservoir, the District is demonstrating its good stewardship of our water resources, its policy to save water during this time of drought, and its commitment to improving irrigation service to its customers.



The reservoir was expanded in 2016 from the original 2015 pilot reservoir to increase the project benefits and continues to take spill water from the Highline canal via gravity flow through a Rubicon flume gate and pumped water from Lateral 7. The enlarged reservoir is now able to supply up to 40 cfs of water to Lateral 8, which can in turn supply it to Lateral 7 through an existing pipeline. An additional 20 cfs of water can be supplied directly to Lateral 7 by another pump.



# LATERAL 8 TOTAL CHANNEL CONTROL PROJECT

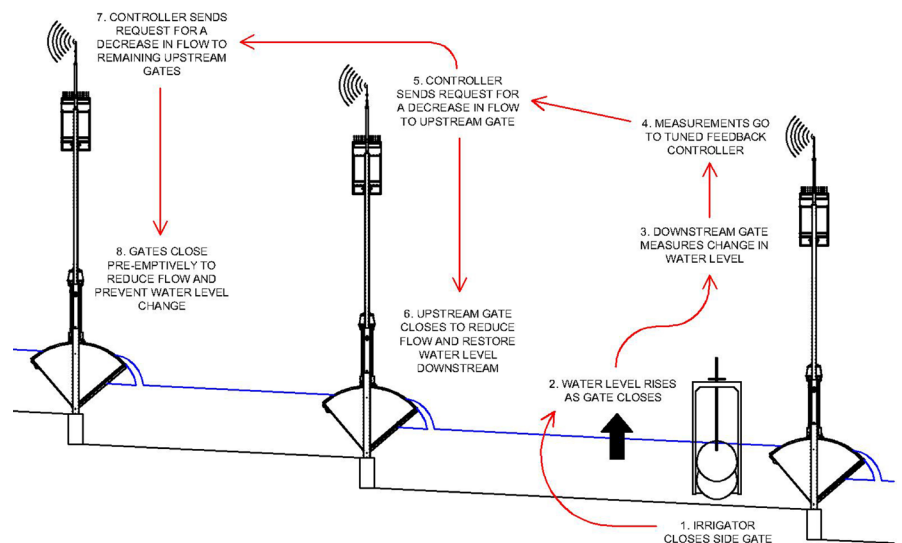


## Looking to the Future

The Lateral 8 Total Channel Control Project is a futuristic water management system pioneered by the Australian company Rubicon Water in response to their millennium drought. The system is designed to automatically regulate canal flow to minimize operational water losses. In choosing to install this system on a TID canal, the District is not only showing its dedication to preventing water losses on our canal system, but its desire to improve irrigation services to its customers.

### QUICK FACTS:

- Automated Canal System by Rubicon Water Inc.
- \$2.16 Million Project
- 2,900 Acre-ft of Potential Savings
- Rehabilitated 12 Existing Regulating Structures on Lateral 8 and the Highline Canal
- System Automatically Responds to Fluctuations and Minimizes Spill from Lateral 8
- System Automatically Routes Spill Water to the Lateral 8 Regulating Reservoir
- System is Remotely Accessible by Operators and Staff
- Manual Backup Provided at Each Regulator Site
- Gates are Solar Powered



Lateral 8 was previously operated utilizing a series of weirs and manually operated board bays, referred to as drops, to regulate flow and water level through the canal. When service flows were moved from one pool to another, any excess water resulting from imperfect transfer of the flow would run down to the bottom of the canal and spill to a natural watercourse. The most important distinction of the old system was that water levels in the pools were controlled by the downstream drops.

As opposed to the original system, the total channel control system operates by having each drop control the water level in the pool downstream. Changes in a pool level result in changes in flow and level upstream of the pool rather than downstream. Thus, water that would have normally spilled from the bottom is instead removed at a designated upstream site such as the Lateral 8 Regulating Reservoir.