Project Site Example: Lateral 6/8 Recirculation System Plan

- 75 acre-foot regulating reservoir (live storage)
- 10,200-ft pipeline from the reservoir (water flows in both directions)
- VFD-equipped pump at the reservoir for water level control in Lateral 6
- Automated control valve at the reservoir for gravity inflow
- Automated control valve at the downstream end of the Lateral 6 pipeline
- Automated flow control structure at the new start of Lateral 6
- Automated flow control structure at the new start of Lateral 8
- Automated sluice gate entrance for water level control in the Lateral 8 pool at the reservoir
- Low-lift pump inlet to the regulating reservoir from Lateral 8
- 5,400-ft pipeline from Lateral 6 to Lateral 8
- VFD-equipped pump at Lateral 6 for water level control in Lateral 8
- Automated control valve at Lateral 6 for gravity inflow from the Lateral 8
- New turnouts (available on-demand)

Irrigation Infrastructure Plan Highlights

- Replacement of Dry Creek Flume
- New regulating reservoir on the Lower Modesto Main Canal
- Upgraded control structures in the Main Canal and lateral canals
- Lateral regulating reservoirs to integrate operations of multiple lateral systems
- Pumped lateral inter-ties systems to route operational flows between key control points
- Remote monitoring system and electronic flow meters (SCADA)

Modesto Irrigation District

Infrastructure Final Design

Main Canal Automation

Main Canal Reservoir

Lateral 6 Reservoir

Lateral 6 /8 Recirculation System

Mobile laptop communicating with system

Butler Lateral: Reprogramming the control of existing gates so they function properly

Modernization Components
- New Regulating Reservoirs
- New Flow Measurement
- New Flow Control
- New Automated Trash Screen

Upgraded SCADA Sites
- Automated Flow Control
- Automated Flow and Water Level Control
- Automated Water Level Control
- Canal Flow Measurement
- Canal Spills
- Pump Control
- Reservoir Water Level Measurement

New Pipeline Systems
- WMC Interceptor Pipeline
- H-12 Interceptor Pipeline
- Lateral 4 & Lateral 5 System
- Lower Lateral 3 & Lateral 7 System
- Lateral 6 & Lateral 8 System

General
- Canals
  - MID Main Canal
  - Canals
  - River or Creek
  - Modesto_JD_Boundary

Butler Lateral flows in opposite direction

Looking ahead to the future

Modesto Irrigation District

The Power to Grow

May 2015