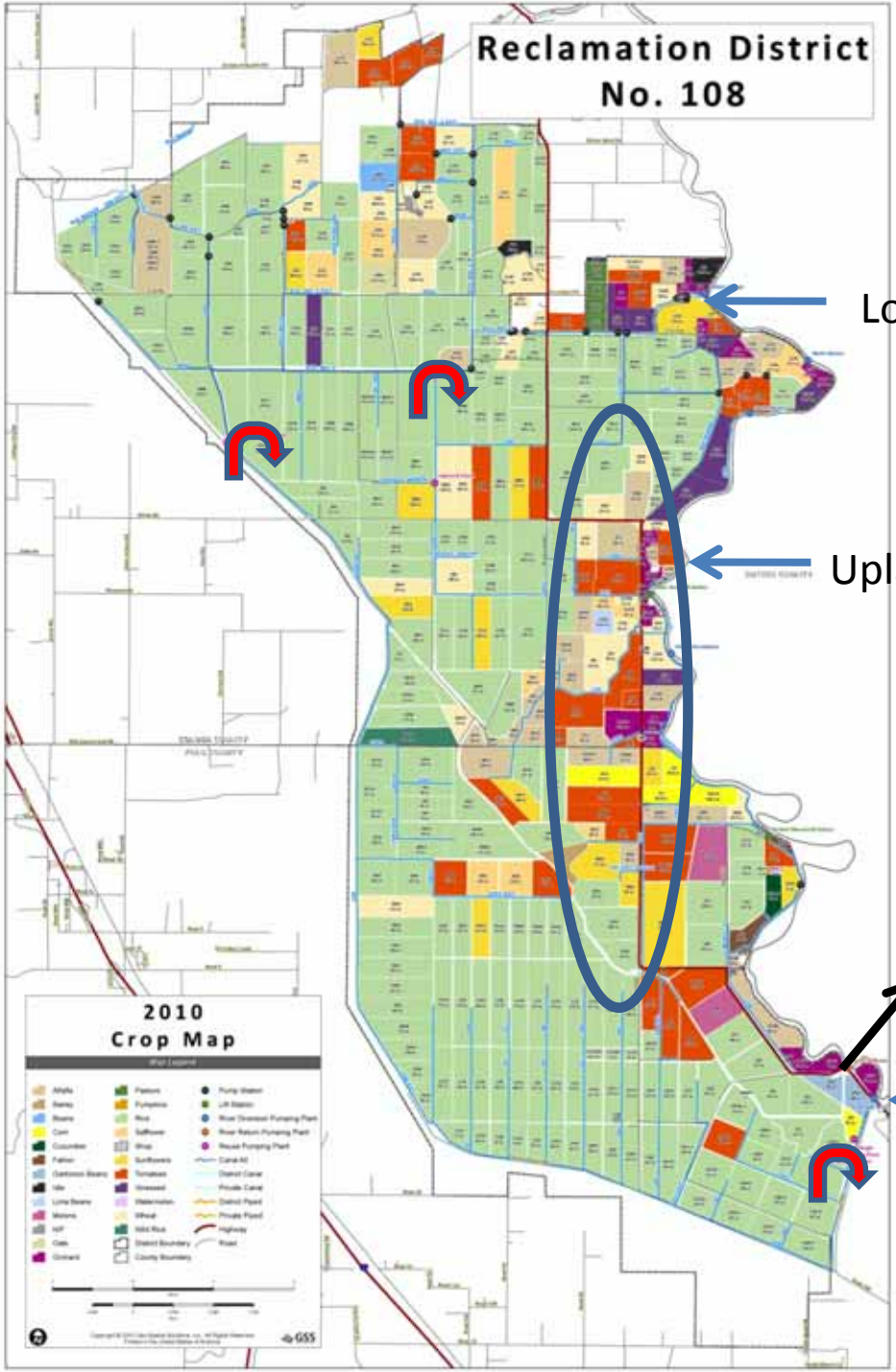
RD 108
Water Delivery System

A Microcosm of the Sacramento Valley



Lowland System Diversion

Upland System Diversion

- Bathtub
- High Groundwater
- Elevation
- Diversion Points
- Reuse
- Return to River

Return to Sacramento River

Lowland System Diversion

2 Very Different Distribution Systems

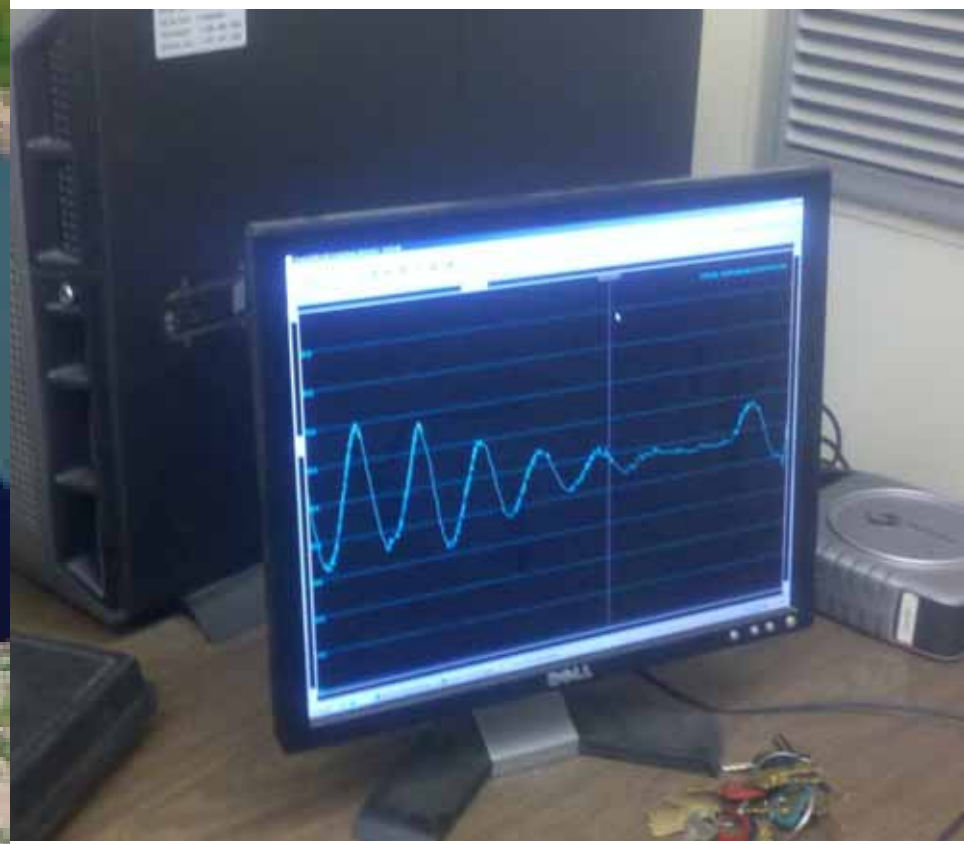
Upland Area
ET driven cropping
Soils with higher infiltration rates
Considerable slope

Lowland Area
Rice dominant cropping
Clay soils with very low infiltration rates
Extremely flat

Upland Distribution System

- Limit seepage
- Flexible on/off
- Stable flows required for:
  - Pump systems for sprinkler, micro sprayers and drip systems
  - Siphon pipe
- Small range of delivery rates
- Measurement throughout system
- Ability to monitor multiple changes
- Rubicon Total Channel Control
- No reuse due to slope

Emery Poundstone Pumping Plant and Fish Screen



Main Canal Headgate

Lateral Headgate

Long Crested Weir

Meter Gate

Rubicon Spill (monitoring)

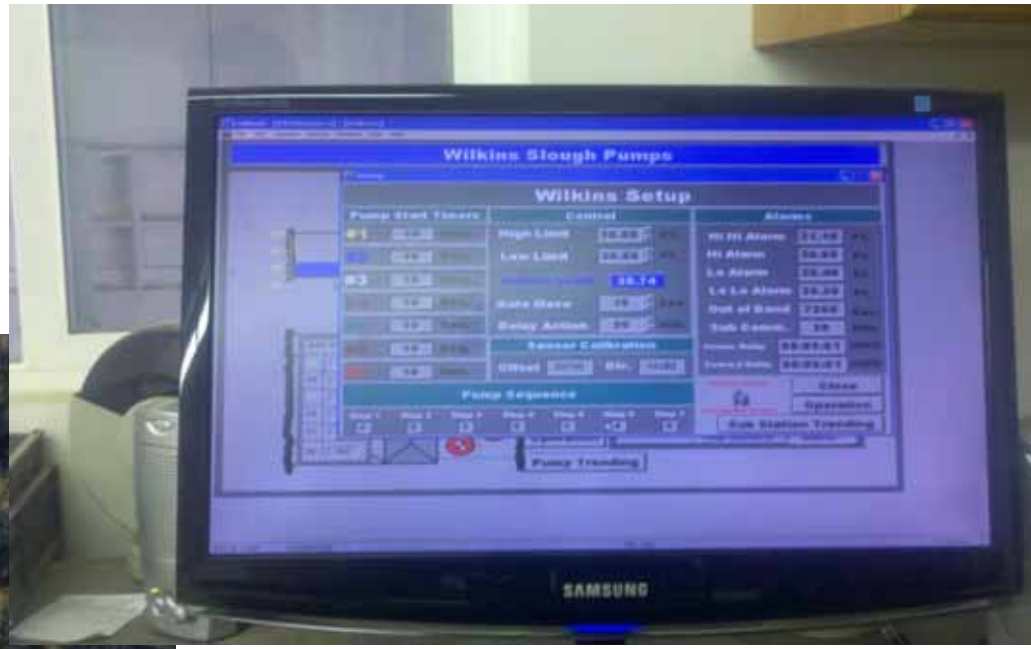
Lowland Distribution System

•Primarily downstream “Demand” control system using SCADA

•Flat, high capacity, large volume system

- Extreme delivery rates
  - flood up (30 cfs)
  - maintenance flows (3 cfs)
- Flow through for salt management
- Control water depth in field vs. ET
- Recovery of Upland/Lowland tailwater
- Rich wetland habitat in fields, canals and drains

Wilkins Slough Pumping Plant and Fish Screen



Jacob’s Point and Canal 14B

Rice Drain Riser

Drainage System

Over 300 miles of “Linear” Storage

Reuse Facility

System Efficiency

An indication of system efficiency is the ratio of consumptive use divided by Applied Water

Upland System = Consumptive Use/ Diversions =

25,300 AF/38,800 AF = **65%**

Lowland System Efficiency = Consumptive Use/(Applied Water = Diversions + Reuse) =

106,700 AF/ 168,800 AF = **64%**

Combined System Efficiency = Consumptive Use/(Diversions – Return Flows) =

132,000 AF/ 137,500 AF = **96%**