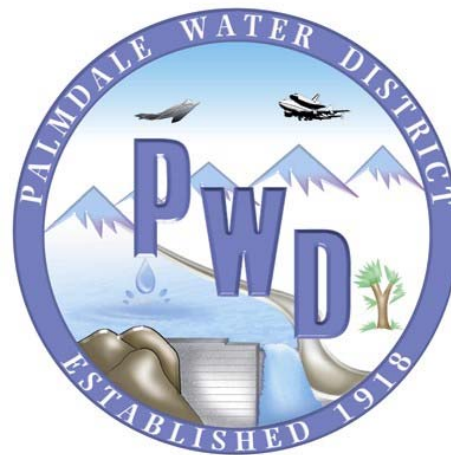


Leslie O. Carter Water Treatment Plant 2017



State Water Project (Calif. Aqueduct)

- Calif. Dept. of Water Resources (DWR) turnout



Lake Inlet



Lake Palmdale

- Capacity 2812.5 ft
- 4,250 Acre Feet
- 1,384,868,585 gallons



Littlerock Reservoir



- Capacity 3270 ft.
- 3,500 acre ft. capacity
- 1.1 billion gallons

From Dam to Lake Palmdale



- Raw water travels through an earthen channel called Palmdale Ditch

Lake Palmdale outlet

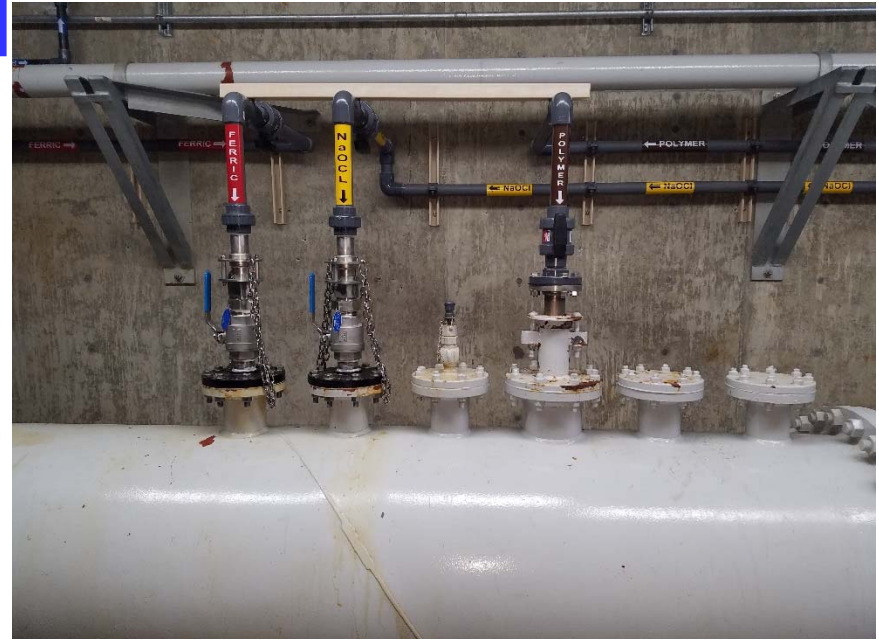
- All raw water entering the LOCWTP comes from Lake Palmdale through this structure



Lake Outlet into treatment plant



Headworks and Flash Mix



Rapid Mix Pump

- Stream of raw water is pumped in opposite direction at high pressure to create zone of turbulence for mixing chemicals

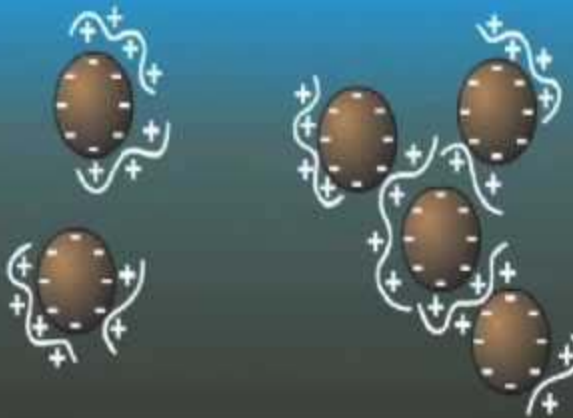


Chemical Feed Systems



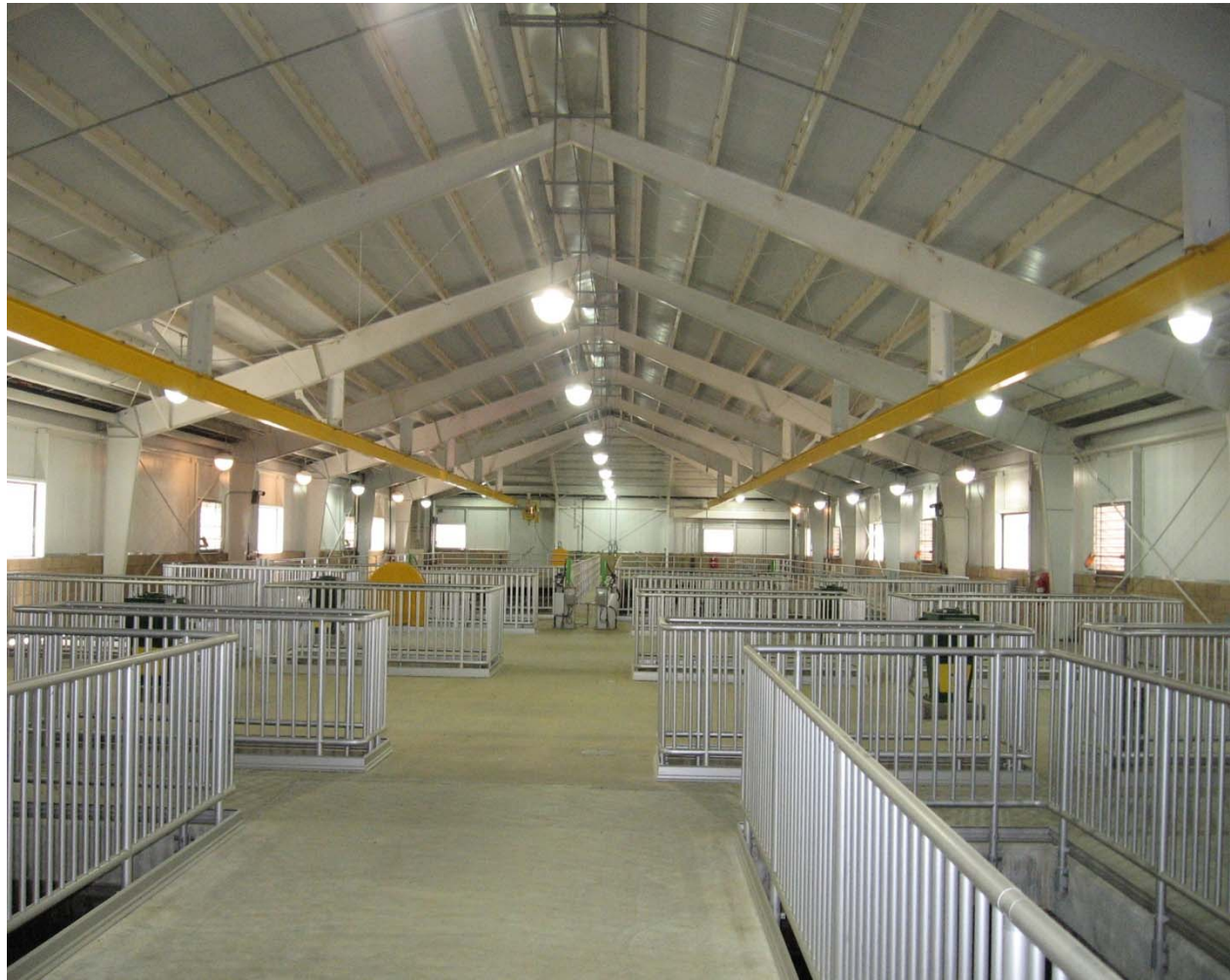
Chemicals are added to aid in the formation of settleable particles

Microfloc Formation



Flocculation Basins

- The Flocculation process mixes the water and the coagulant chemicals to gather particles together to form larger heavier floc particles.



Sedimentation

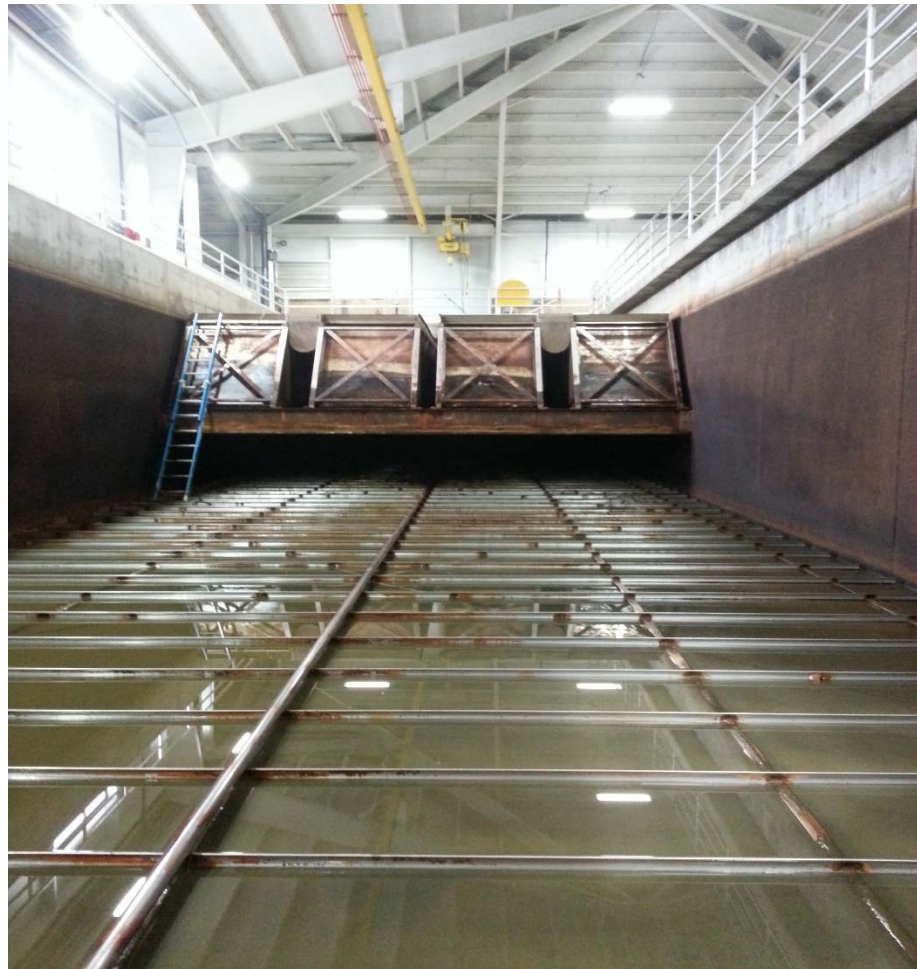
- Purpose – remove flocculated particles and other impurities from water by gravitational settling
- 5 rectangular basins are extensions of their respective flocculation basins
- Each basin approx. volume – 257,000 gallons



drain valve control ↓



- A look inside a basin
- Super Scrapers
- Plate Settlers



Filter Influent Pipeline

- Water from the settled water channel moves to the filter influent channel through a 42-inch pipeline



Filtration



- Filters provide the final step in particulate removal
- 12 dual media gravity filters
- Media – 36 inches of anthracite on top of a 12" sand layer

Water flows down through the media;
each filter is 13' wide by 26.5' long



Silica Sand and Anthracite Coal Media



- Filters get backwashed and scrubbed clean



Intermediate Pump Station (IPS)



GAC Contactors



8' of GAC media in each Contactor
over 200,000 lbs.



Granular Activated Carbon F-400 (GAC)



Contactors get backwashed too

- Contactor-to-waste Valve Actuator →
- Contactor Waste Wash water Valve Actuator ↓



Clearwell, 6 MG



- Provides contact time necessary to achieve disinfection requirements
- Has hydraulic baffles

Sediment Bio-Solids

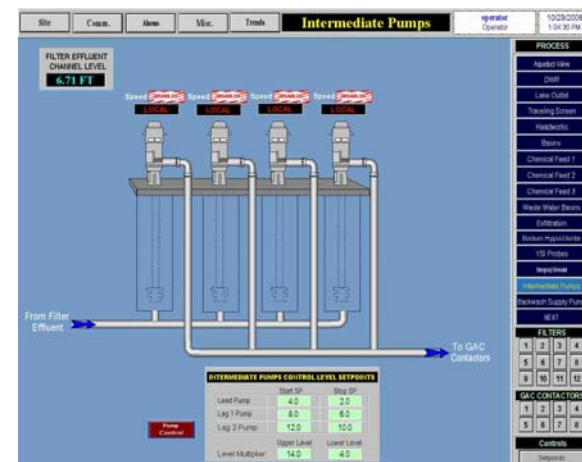
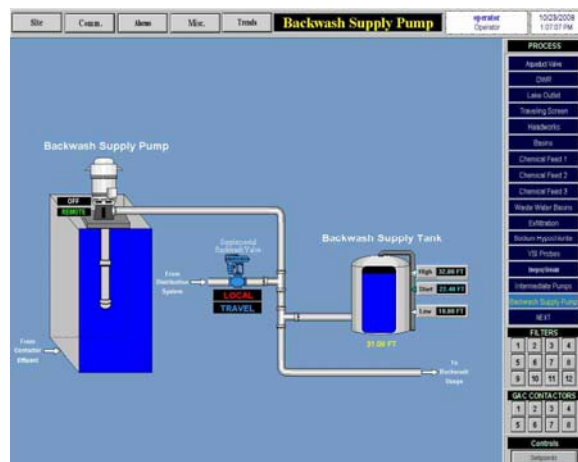
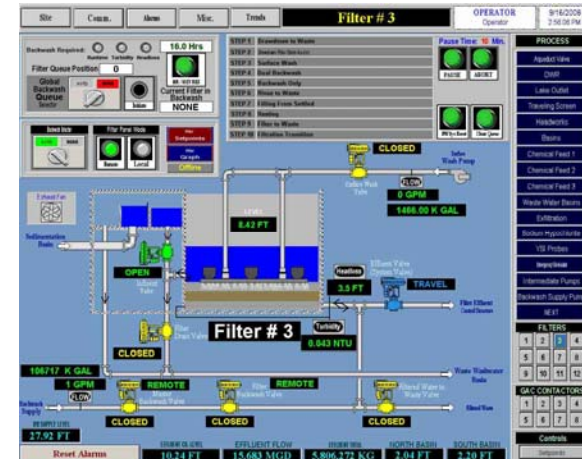
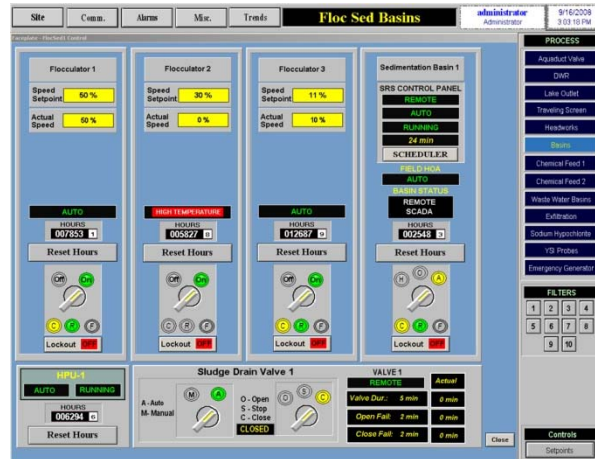


Sodium Hypochlorite, 0.8% solution



SCADA

provides automatic monitoring and control of processes



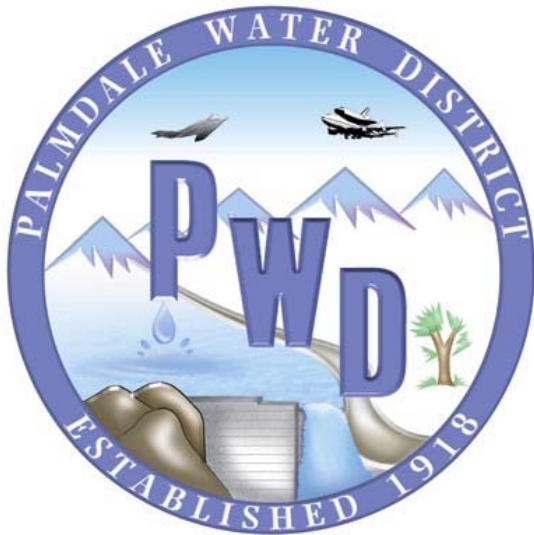
Water Quality Lab



Water Quality monitoring



Leslie O. Carter Water Treatment Plant



Thank you