

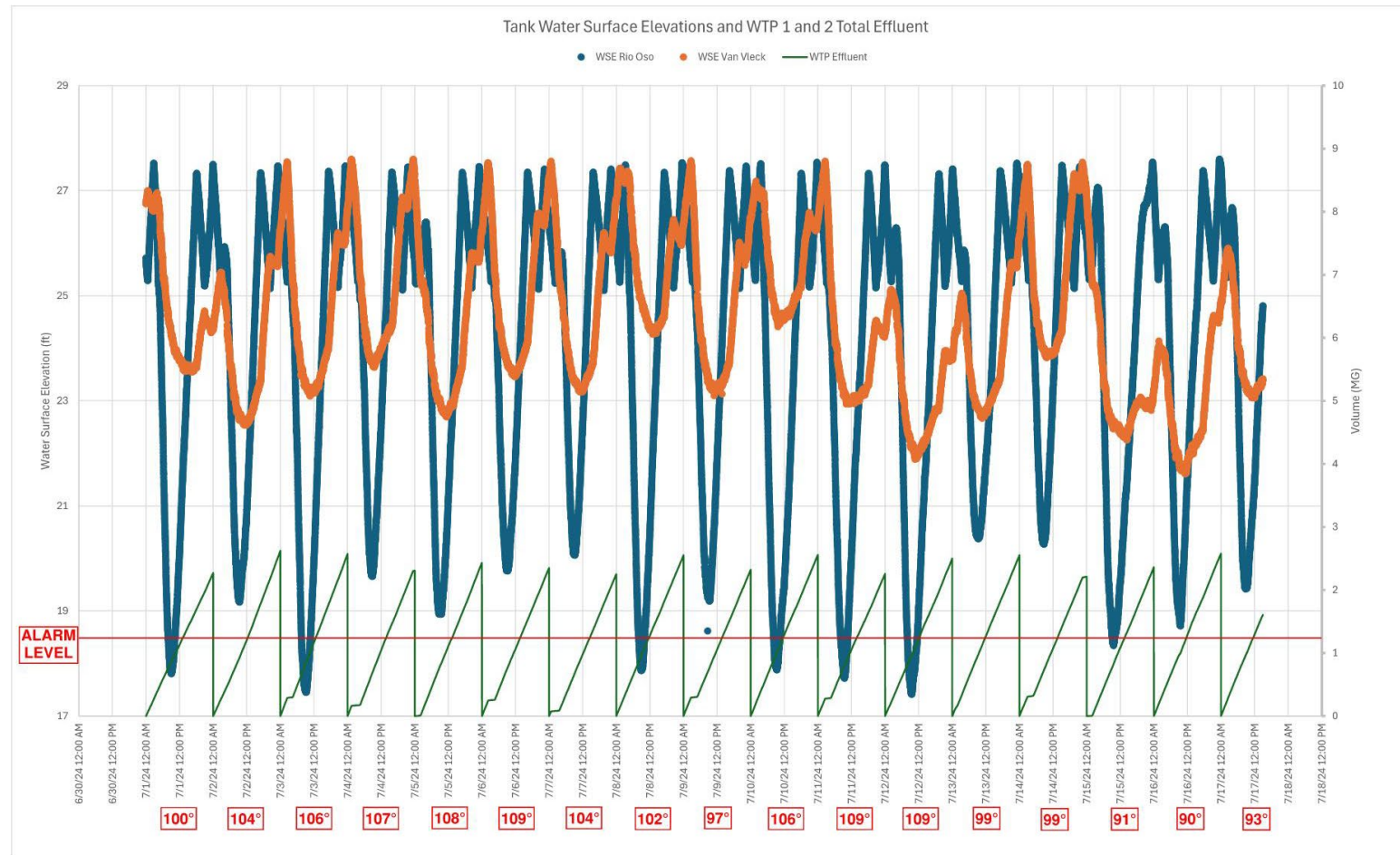


Rancho Murieta Community Services District

Assessing Available Storage and Capacity for the Rio Oso Tank

July Tank Data – Storage Issue

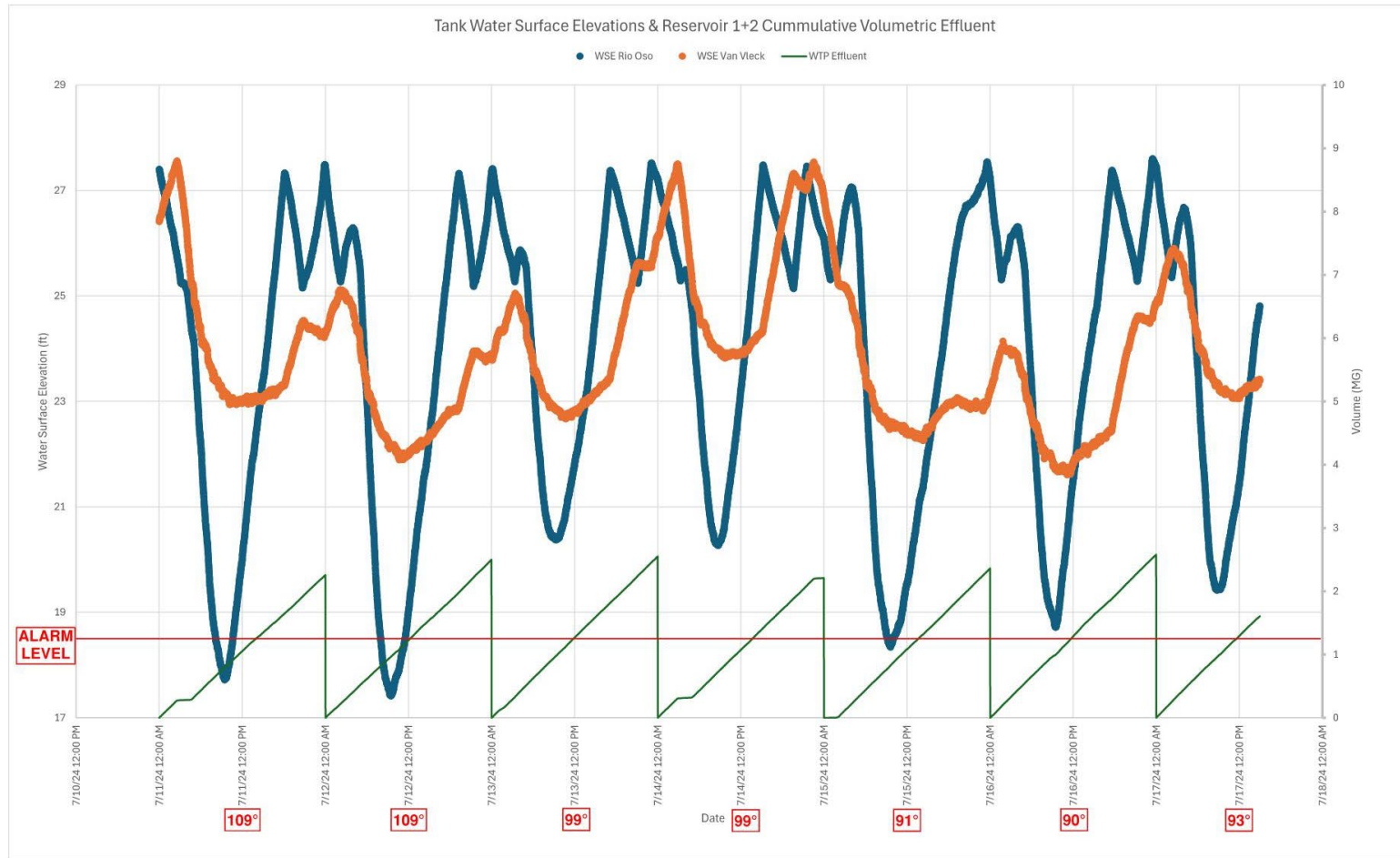
7/1 – 7/17



- This slide shows the relationship between water surface elevation and plant production during July.
- The Rio Oso Tank water surface elevation consistently dropped below alarm levels (18.5') in July due to demand exceeding supply.

July Tank Data – Storage Issue

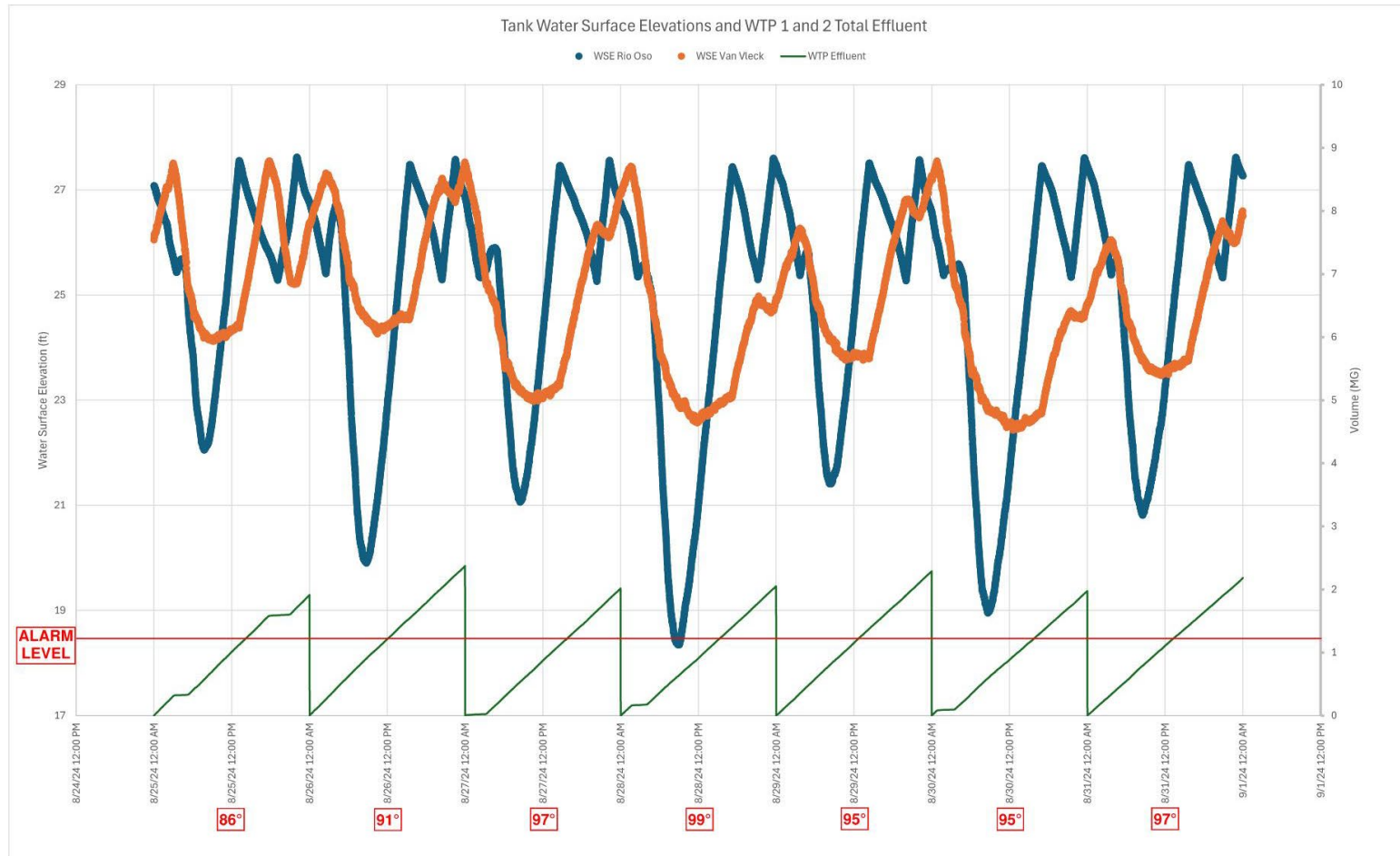
7/11 – 7/17



- The zoomed-in view highlights how sudden drops in plant production lead to immediate declines in tank levels.
- This closer analysis reinforces the direct relationship between supply fluctuations and water storage stability.

August Tank Data – Similar Storage Issue

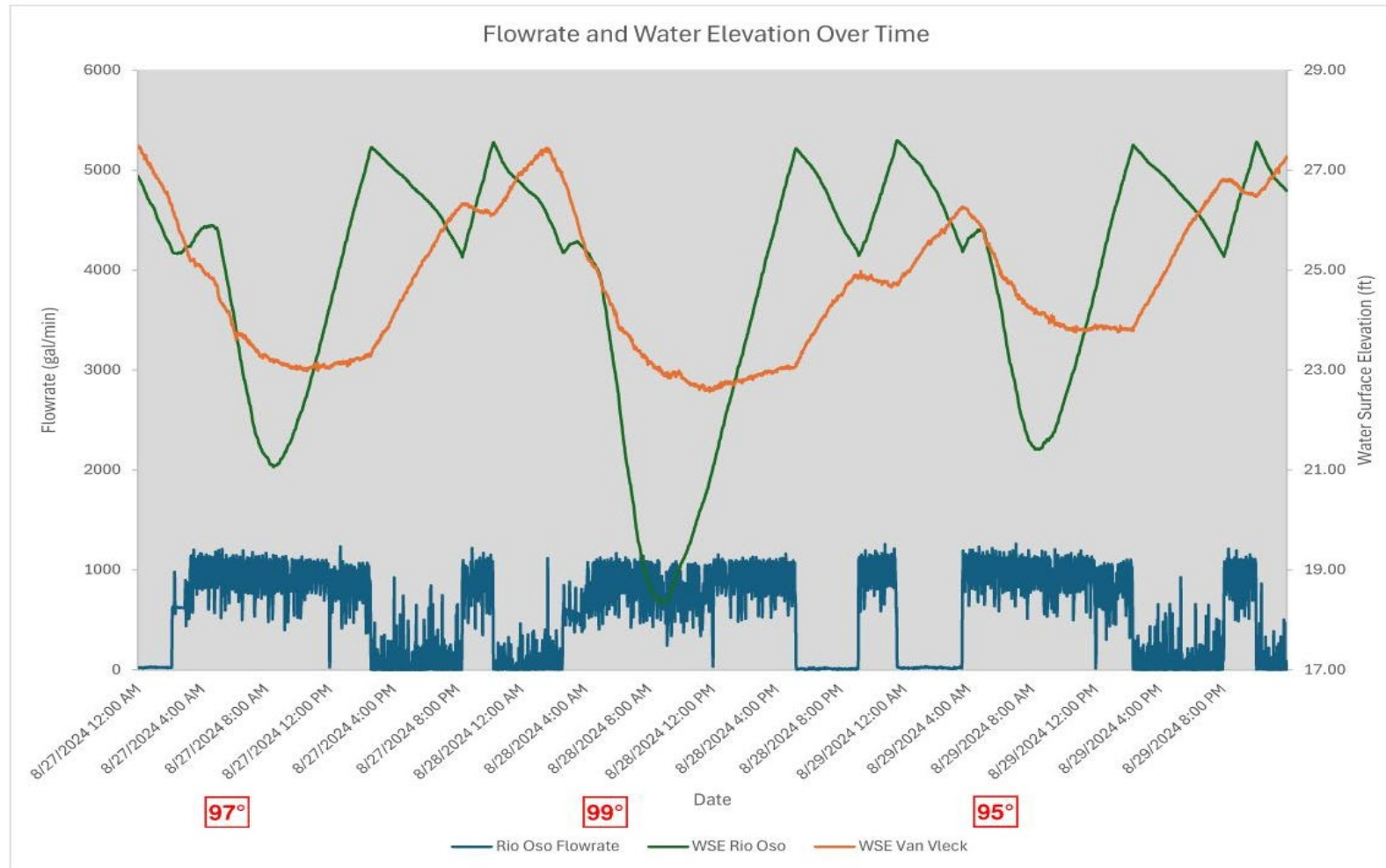
8/25 – 8/31



- In contrast to July, the water surface elevation in Rio Oso Tank remained more stable in August, with fewer instances of falling below alarm levels (18.5').
- Less frequent and less severe drops in water surface elevation reflect a seasonal shift in consumption patterns.

August Metered Tank Data

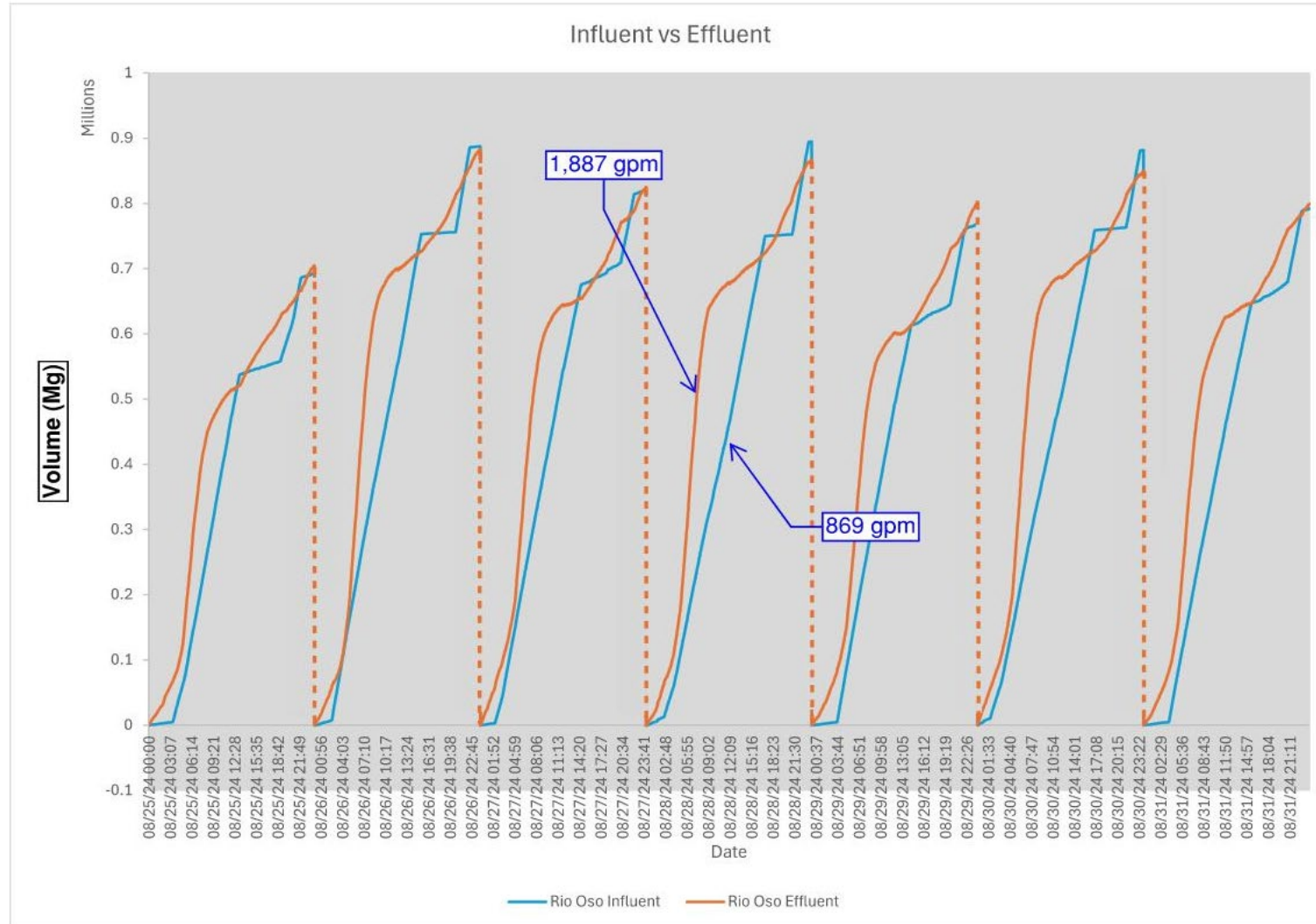
8/27 – 8/29



- This slide shows the relationship between water surface elevation in Rio Oso Tank and the metered inflow over the hottest period in August.

August Rio Oso Tank Demands

8/25 – 8/31



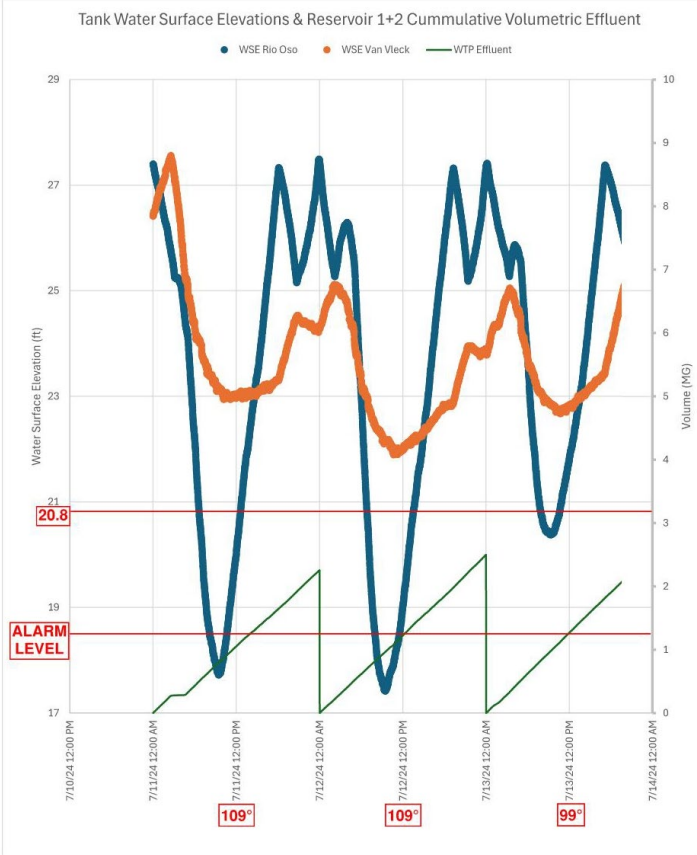
- During the peak demand window (4-9 AM), tank outflow exceeds inflow, highlighting supply limitations.
- This graph also displays the total maximum day demand in August which is on average around 0.9 Mg for Rio Oso.

Operational Storage & Interim Solution Water Supply Transfer from Van Vleck to Rio Oso

Throttling Alternative

Tank	Lowest Tank Level (July 12)	Level Change by Throttling (ft)	Matching Tank Level after throttling (ft)	Throttling Volume Change (gal)	Minimum Allowable Tank Level (ft)*	Storage Level Available (ft)**	Storage Volume Available (gal)*
Van Vleck	22.0	-1.2	20.8	131,261	20.0	0.8	86,059
Rio Oso	17.3	+3.5	20.8	131,261	20.0	0.8	29,745

* Provides a minimum cushion of 1.5ft to alarm level
 ** Storage level available after throttling



Projected Additional Available Capacity with Throttling

Allowable Additional Units

Tank	Storage Available (ft)	Storage Available (gal)	Peak 5 hours Storage Required per EDU (gal)	Equitable Additional Units *
Van Vleck	0.8	86,059	591	146
Rio Oso	0.8	29,745	591	50

* Equals Storage Available/Peak 5 Hour Storage Required per EDU

In summary, the system may accommodate additional units by reallocating water supply from Van Vleck to Rio Oso.

1. This increase in capacity is feasible due to a throttling situation where more water supply is diverted to Rio Oso from Van Vleck.
2. An estimated additional 146 units can be added to Van Vleck, and 50 units can be introduced to Rio Oso.
3. In order to meet future operational demand, fire flow, and emergency storage, a new tank will be required. The size and location will require further analysis.

Questions?