

# Lower San Joaquin River - EC Water Quality Objective (Preferred Alternatives)

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The following preferred alternatives have been developed by the Lower San Joaquin River Committee after consideration of a broad spectrum of alternative water quality objectives and implementation actions:

## In Section 3 (Water Quality Objectives Section) of the Basin Plan

### Preferred Alternative for EC Water Quality Objective in Reach 83 of the LSJR (as measured at Crows Landing)

Period	Irrigation Season		Non-irrigation Season
	March – June	July - October	November - February
Non-extended dry period <sup>A</sup>	1550 µmhos/cm		
Extended dry period <sup>B, C</sup>	2200 µmhos/cm		

<sup>A</sup>1550 µmhos/cm as 30-day running average, except during an *extended dry period*

<sup>B</sup> Extended dry period is defined as follows:

The SWRCB's San Joaquin Valley Water Year Hydrologic 60-20-20 Classification shall be assigned the following indicator values: Wet – 5, Above Normal – 4, Below Normal – 3, Dry – 2, Critical – 1. These indicators will be used to determine an extended dry period as follows:

- An extended dry period shall be triggered when the sum of the current year's 60-20-20 indicator and the previous two year's 60-20-20 indicators is six (6) or less.
- An extended dry period shall be deemed to exist for one water year (12 months) following a period with an indicator value of six or less.

<sup>C</sup> During an extended dry period, as defined in footnote B, the EC water quality objective in Reach 83 shall be 2200 µmhos/cm as 12-month running average to protect the designated potential MUN use in the LSJR. The narrative water quality objective to protect AGR beneficial use in Reach 83 shall be implemented to avoid a diminishment of water volumes for agricultural supply in the LSJR. EC concentrations shall not result in requirements for increased water quality releases from New Melones reservoir to meet the Vernalis EC objectives.

## In Section 4 (Implementation Section) of Basin Plan

### Preferred Alternative for Implementation of EC Water Quality Objective in Reach 83 of LSJR (as measured at Crows Landing)

Water Year Type	Irrigation Season		Non-irrigation Season
	March – June	July - October	November - February
Wet	1350 (goal)		1550
Above Normal	1350 (goal)		1550
Below Normal	1350 (goal)	1550	
Dry	1350 (goal)	1550	
Critical	1550		

#### Explanation:

1550  $\mu\text{mhos/cm}$  Water Quality Objective (30-day Running Average) with a Seasonal 1350  $\mu\text{mhos/cm}$  Performance Goal (30-day Running Average), except during an extended dry period, as described below.

The SWRCB's San Joaquin Valley Water Year Hydrologic 60-20-20 Classification shall be assigned the following indicator values: Wet – 5, Above Normal – 4, Below Normal – 3, Dry – 2, Critical – 1. These indicators will be used to determine an extended dry period as follows:

- An extended dry period shall be triggered when the sum of the current year's 60-20-20 indicator and the previous two year's 60-20-20 indicators is six (6) or less.
- An extended dry period shall be deemed to exist for one water year (12 months) following a period with an indicator value of six or less.

During an extended dry period, as defined above, the EC water quality objective in Reach 83 shall be 2200  $\mu\text{mhos/cm}$  as 12-month running average to protect the designated MUN use in the LSJR. The narrative water quality objective to protect AGR beneficial use in Reach 83 shall be implemented to avoid a diminishment of water volumes for agricultural supply in the LSJR. EC concentrations shall not result in requirements for increased water quality releases from New Melones reservoir to meet the Vernalis EC objectives.

1350  $\mu\text{mhos/cm}$  is recommended to be established as a goal during the irrigation season in specific water years to enhance the ability to manage salts for multiple benefits.

The proposed water quality objective and performance goal should take effect at a future date (e.g. 2019), to allow full implementation of Grasslands Bypass project and other planned actions affecting salinity levels in Reach 83

A re-opener should be established in the Basin Plan to consider 1350  $\mu\text{mhos/cm}$  as a numeric water quality objective in Reach 83 by a date certain (e.g. 2030). The date must be far enough into the future to allow for evaluation of the ability to achieve this EC concentration in Reach 83 under varying water year and seasonal conditions. The 1350  $\mu\text{mhos/cm}$  EC goal would only become a numeric water quality

objective through a future Basin Plan amendment. Such action would require information to demonstrate that 1350  $\mu\text{mhos/cm}$  EC would be consistently achievable in the long term.

The Basin Plan should include language in the implementation section that would emphasize the intent to attain the 1350  $\mu\text{mhos/cm}$  EC performance goal through implementation of a salinity management plan (e.g. Real Time Management). Specific actions to be taken in the event the goal is not achieved should include:

- Reporting by responsible parties including evaluation of the reason(s) for the failure to attain the goal.
- Review by Regional Water Board
- Appropriate follow up actions

A stakeholder group should be formed to support sustainable salinity management in the Lower San Joaquin River, especially during extended dry periods. The Salt and Boron TMDL for the San Joaquin River, adopted in 2006, has established the framework for a real time management effort for salinity management in the Reach 83 watershed to meet current EC water quality objectives at Vernalis. Stakeholders involved in the Real Time Management effort should be encouraged to take on the additional responsibilities for salinity management to meet the proposed EC objectives and goals in Reach 83.

The proposed stakeholder group would provide a forum for collaborative management of salts in balance with water supply needs within the basin. Group would provide information to Regional Water Board to support salinity management during extended dry periods. Participation in the group should be a prerequisite for consideration of regulatory relief during extended dry periods.

The proposed group is recommended to include all stakeholders in the LSJR basin, including, but not limited to, those using water from the river and downstream waters, those discharging agricultural runoff to Reach 83 and upstream tributaries, those operating wetlands and refuges, municipalities discharging treated effluent to Reach 83, operators of east-side reservoirs, users of water from east-side reservoirs, regulatory agencies, USBR, and DWR.