

"PLANNED"

1. Controlled Timing of Salinity Discharges

Northwest	East Valley Floor [^]	Grassland Drainage Area	Grassland Bypass*	Other
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ASSUMPTIONS: Irrigation districts in the Northwest, East Valley Floor, and Grassland Drainage Area subareas will have the capability to withhold the discharge of all drainage volume for up to one week with existing facilities when needed for Real Time Mgmt Program (RTMP) timed releases. Riparian areas would not hold back discharges. It is acknowledged that East Valley Floor drainage was identified as having relatively low salinity and could be used as a dilution source for the LSJR.

MODELING APPROACH: The modeling of RTMP discharges will be handled through post-processing of WARMF simulated results.

2c. Reduce Point Sources - Existing Industrial/Food Processing Sources Control and/or Pretreatment

Northwest	East Valley Floor (w/ Stevinson Subarea)	Grassland Drainage Area	Grassland Bypass	Other: Cities of Modesto and Turlock
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ASSUMPTIONS: The cities of Modesto and Turlock are the only municipalities in the region that discharge treated effluent to the LSJR. Modeled WWTP flows to the river will reflect 2013 discharge rates.

MODELING APPROACH: WWTP discharges are included in WARMF. Input values for WWTP salinity loading will be reduced by 3%.

3a. Reduce Nonpoint Sources - Reduce Application of Salts in Fertilizers and Soil Amendments

Northwest	East Valley Floor [^]	Grassland Drainage Area	Grassland Bypass*	Other
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ASSUMPTIONS: A 10% reduction in the application of nitrogen-based fertilizers in select subareas is assumed based on requirements from the Central Valley Water Board's Irrigated Lands Reporting Program (ILRP). No change in the type or formulation of fertilizer is assumed. Soil amendments are not anticipated to decrease in their application in the project area.

MODELING APPROACH: Fertilizer application is included in WARMF. The input value for nitrogen-based fertilizer usage in the identified subareas will be reduced by 10%.

8b. Water Conservation - Optimize Existing Irrigation Efficiency

Northwest	East Valley Floor	Grassland Drainage Area	Grassland Bypass*	Other
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ASSUMPTIONS: It is assumed that any water conserved by an irrigation district or individual grower will be used by the entity who conserved the water or will be sold to another entity in the project area who will use the water. In this way, the amount of irrigation water (and its associated salts) will not be reduced. To this end, there is no net reduction in salt loading.

MODELING APPROACH: No change in baseline modeling assumptions.

9a. Installation of New High Efficiency Irrigation and Delivery Systems (increase retention of soluble salts)

Northwest	East Valley Floor	Grassland Drainage Area	Grassland Bypass*	Other
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ASSUMPTIONS: Similar assumptions as indicated for 8b.

MODELING APPROACH: No change in baseline modeling assumptions.

10b. Sequential Reuse and Volume Reduction - Salt Accumulation Area (SJRIP)

Northwest	East Valley Floor	Grassland Drainage Area	Grassland Bypass	Other
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ASSUMPTIONS: There currently exists one salt accumulation area project (SJRIP) in the Grassland Bypass Project (GBP) area within the Grassland Drainage Area. There are no other sequential reuse and volume reduction projects planned for the project area within the bundle's planning period (5-10 years). It is assumed that the SJRIP project will continue its operation and sequester salts as predicted, resulting in zero discharge of salts from the GBP area. No treatment or disposal of the salts accumulating in the perched zone will be carried out during the 5-10 year time frame of this bundle.

MODELING APPROACH: WARMF includes inputs from the GBP area. The San Luis Drain will be disconnected from the rest of the watershed in WARMF so the Grasslands Bypass will not contribute any flow or loading to the San Joaquin River.

12a. Drainage Water Recirculation - Tailwater Recovery

Northwest	East Valley Floor	Grassland Drainage Area	Grassland Bypass*	Other
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ASSUMPTIONS: Tailwater can be blended with irrigation supply to result in reduction in tailwater discharge and usage of fresh irrigation supply water. Planned tailwater recovery projects, as reported by irrigation districts and water quality coalitions, will be simulated in WARMF.

MODELING APPROACH: Water "savings" (in AFY) resulting from use of recovered tailwater will be modeled in WARMF as a reduction in fresh irrigation water that is applied to those subareas and a corresponding net increase in irrigation efficiency where irrigation districts or water quality coalitions report planned tailwater recovery projects that will occur within the bundle's planning period (5-10 years).

12b. Drainage Water Recirculation - Tilewater Recovery

Northwest	East Valley Floor	Grassland Drainage Area	Grassland Bypass	Other
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ASSUMPTIONS: Tilewater can be reused directly or blended with irrigation supply to result in volume reduction of tilewater and of fresh irrigation water supply. Planned tilewater recovery projects, as reported by irrigation districts and water quality coalitions, will be simulated in WARMF.

MODELING APPROACH: Water "savings" (in AFY) resulting from use of recovered tailwater will be modeled in WARMF as a reduction in fresh irrigation water that is applied to those subareas and a corresponding net increase in irrigation efficiency where irrigation districts or water quality coalitions report planned tailwater recovery projects that will occur within the bundle's planning period (5-10 years).

[^] Includes Stevinson Minor Subarea located in the East Valley Floor

* WARMF inputs from the Grassland Bypass Project will be set to zero (0) under implementation actions 10b and 12b and are not explicitly considered under the current implementation action.