

5.2.3 Cottonwood Creek Recharge

The following describes the Cottonwood Creek Recharge Project, which will capture available surface water and recharge the aquifer through the creek bed. Eventually it may also facilitate in-lieu recharge through decreased use of groundwater wells by using the floodwater for irrigation. The length of Cottonwood Creek expected to be used for recharge is shown in **Figure 5-3**.

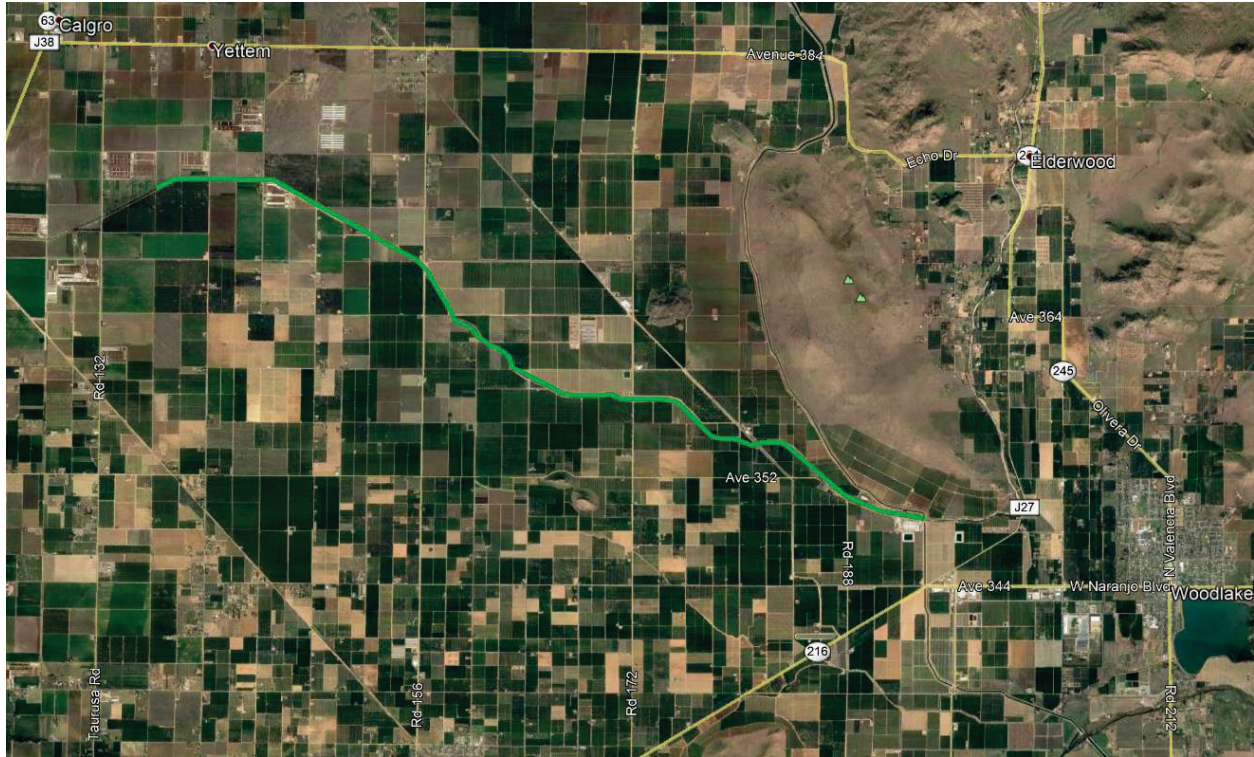


Figure 5-3 Cottonwood Creek Alignment within EKGS

Project Title: Cottonwood Creek Recharge	Project ID: EK2
Project Type	
Recharge (delivery to existing channel)	
Project Location	
Intersection of Friant-Kern Canal and Cottonwood Creek west to the GSA boundary. West of Woodlake and Northeast of Ivanhoe in Tulare County – T17S R26E and T17S R25E.	
Implementing Agency	
Stone Corral Irrigation District (SCID) & Ivanhoe Irrigation District (IID)	
Project Description - 354.44(a)	
The Cottonwood Creek Recharge Project will entail construction of a turnout from Friant-Kern Canal into Cottonwood Creek to capture CVP water supplies when available and recharge the underlying aquifer. The total length of the portion of the creek acting as a recharge facility is just over 8 miles.	

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Measurable Objective(s) Addressed - 354.44(b)(1)

The project will primarily help stabilize groundwater levels and increase the amount of groundwater in storage. Indirectly there could be secondary benefits of some groundwater quality improvement from high quality surface water, and reduction in land subsidence.

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| <input checked="" type="checkbox"/> Chronic Lowering of Groundwater Levels | <input checked="" type="checkbox"/> Reduction of Groundwater Storage |
| <input type="checkbox"/> Seawater Intrusion – <i>not applicable</i> | <input checked="" type="checkbox"/> Degraded Water Quality |
| <input checked="" type="checkbox"/> Land Subsidence | <input checked="" type="checkbox"/> Depletion of Interconnected Surface Water |

Circumstances and Criteria for Implementation - 354.44(b)(1)(A)

The project is in the conceptual stage and no feasibility study work has begun. Infiltration is expected based on general knowledge of the soil characteristics in the immediate project area. Construction of the project would depend upon successful outcome of a feasibility study including geotechnical work to validate the capacity for percolation. Environmental clearance would be necessary under CEQA and NEPA. This is a high priority project because it utilizes a readily available recharge area to address several of the measurable objectives. It is an integral piece of the EKGSA’s overall effort to reach sustainability and will be implemented after a feasibility study is completed and funding becomes available.

Process to Provide Notice of Implementation - 354.44(b)(1)(B)

The EKGSA will have ongoing efforts to engage stakeholders and the general public in the sustainability process, communicating the statutory requirement, the objectives of the GSP, and progress toward each identified measurable objective. Neighboring landowners will be notified about the project prior to implementation and environmental documents will be available for public review.

Estimated Annual Project Benefits (AF/yr) - 354.44(b)(2)

The actual recharge rate of the proposed project will be determined by the on-site soils. The project is expected to recharge approximately 1,800 acre-feet per year, on average. This is based on an anticipated delivery capacity of 60 AF/day and 30 days of CVP water available per year.

Permitting and Regulatory Requirements - 354.44(b)(3)

The project shall complete all necessary permitting and regulatory requirements. It will require CEQA and NEPA documentation, a DCP, and a SWPPP. The project will utilize CVP water, when available, for groundwater recharge.

Project Schedule - 354.44(b)(4) Anticipated Start & Completion, Timeframe to accrue benefits

No project schedule has been determined, and a project feasibility study and analysis need to be completed, including a geotechnical study. Once a source of project funding is secured, a comprehensive schedule including environmental review, design, permitting and construction will be developed. Project construction and implementation is anticipated to occur within 5 to 10 years of GSP submittal.

Evaluation of Benefits - 354.44(b)(5)

The volume of water delivered for recharge will be measured daily and summarized monthly by Stone Corral and/or Ivanhoe IDs. The rate of accrual of benefits will depend on the frequency of water availability and the percolation capacity of the soil. The water level of groundwater wells in the area will be measured and water quality in the vicinity of the project will be monitored. This data will be used to determine project impacts and benefits.

How will project be accomplished, and what is the water source? - 354.44(b)(6)

The project will be accomplished by Stone Corral & Ivanhoe IDs with the support of EKGSA. The water source will be CVP water.

Project Title: Cottonwood Creek Recharge	Project ID: EK2
Legal Authority - 354.44(b)(7)	
Stone Corral & Ivanhoe IDs have the legal authority to deliver CVP water to the creek for recharge since the EKGSA area is within the Place of Use.	
Project Cost - 354.44(b)(8) Estimated Capital Cost Estimated annual cost/AF	
The estimated project capital cost is approximately \$200,000 and the annual cost over a 20-year return period is estimated to be \$11 to \$14/AF, including operational and capital costs.	
Funding Source - 354.44(b)(8)	
The funding source will likely be a combination of grant funding, Stone Corral ID, Ivanhoe ID, and/or EKGSA.	
Management of Groundwater Extractions and Recharge - 354.44(b)(9)	
The project would be managed by Stone Corral & Ivanhoe IDs under the oversight of the EKGSA. Recharge volumes will be measured and reported by Stone Corral & Ivanhoe IDs. Groundwater extraction will be by landowners in the area within Stone Corral ID, Ivanhoe ID, and the EKGSA area. Performance of the project would be a necessary part of the EKGSA's reporting requirements as well as evaluations of measurable objectives.	
Level of Uncertainty - 354.44(d)	
The level of uncertainty primarily involves funding availability, permeability of the intended recharge area, and frequency of available water. The overall level of uncertainty is moderate for the volume of recharge water indicated.	