5.2.1 Lewis Creek Recharge

The following describes the Lewis 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 surface water for irrigation. The length of Lewis Creek expected to be used for recharge is shown in **Figure 5-2**.

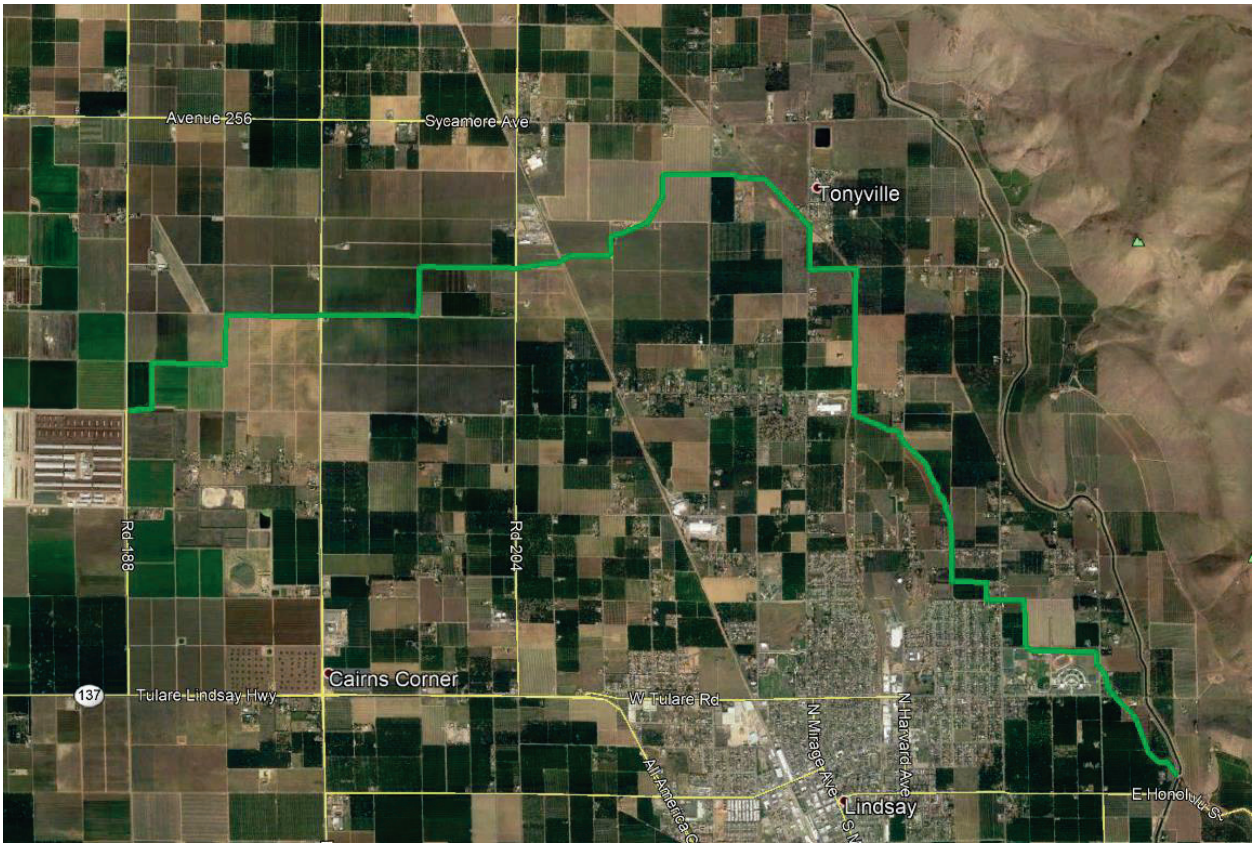

Figure 5-2 Lewis Creek Alignment within EKGSA

Project Title: Lewis Creek Recharge	Project ID: EK1
Project Type	
Recharge (delivery to existing channel)	
Project Location	
Lewis Creek from intersection at Friant-Kern Canal east of City of Lindsay and heading west along the channel to the western EKGSA boundary in Tulare County – T20S R27E, T19S R27E, and T19S R26E.	
Implementing Agency	
Lindmore Irrigation District (LID).	
Project Description - 354.44(a)	
The Lewis Creek Recharge Project will entail construction of a turnout from Friant-Kern Canal into Lewis 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 nearly 9 miles.	

Project Title: Lewis Creek Recharge	Project ID: EK1

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.

- ☒ Chronic Lowering of Groundwater Levels
- ☐ Seawater Intrusion – *not applicable*
- ☒ Land Subsidence
- ☒ Reduction of Groundwater Storage
- ☒ Degraded Water Quality
- ☒ 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 viewed as an integral piece of the EKGSA's overall effort to reach sustainability.

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 requirements, 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 3,000 acre-feet per year, on average. This is based on an anticipated delivery capacity of 100 AF/day and 30 days of CVP water available per year on average.

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

The project will complete all necessary permitting and regulatory requirements. It will require CEQA and NEPA documentation, and potentially a Dust Control Plan (DCP) and a Storm Water Pollution Prevention Plan (SWPPP). The project will utilize CVP water for groundwater recharge.

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

No set project schedule has been determined; however, it is the goal of the EKGSA to have this Project operating by 2022. The key steps that will dictate schedule will be funding, CEQA/NEPA compliance, and construction of a turnout from the FKC into Lewis Creek.

Evaluation of Benefits - 354.44(b)(5)

The volume of water delivered for recharge will be measured daily and summarized monthly by LID. The rate of accrual of benefits will depend on the frequency of water availability and the infiltration 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 LID with the support of EKGSA. The water source will be CVP supplies when available.

Project Title: Lewis Creek Recharge	Project ID: EK1

Legal Authority - 354.44(b)(7)

LID has the legal authority to deliver CVP water to Lewis Creek for recharge since portions of the creek are within the District boundaries and is within the CVP Place of Use.

Project Cost - 354.44(b)(8) Estimated Capital Cost Estimated annual cost/AF

The estimated project capital cost is approximately $350,000 and the annual cost over a 20-year return period is estimated to be $12 to $15/AF, including operational and capital costs.

Funding Source - 354.44(b)(8)

The funding source will likely be a combination of grant funding, EKGSA funds, and possibly LID funds.

Management of Groundwater Extractions and Recharge - 354.44(b)(9)

The project would be managed by LID with the oversight by the EKGSA. Recharge volumes will be measured and reported by LID. Groundwater extraction will be by landowners in the area within LID and to the western 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 high flow water. The overall level of uncertainty is moderate for the volume of recharge water indicated.