Table 4.3-1 Potential Projects and Management Actions for Sierra Valley

Category	Title	Description	Potential Actions

Demand Management	Agricultural efficiency improvements	Various equipment and operational improvements designed to reduce overall water demand	• Develop individualized conservation plans with ranchers/other irrigators to
			  ○ Install soil moisture sensors
			  ○ Fix leaking irrigation pipes
			  ○ Convert to low-profile (near ground-level) sprinkler applicators, as appropriate
			  ○ Manage irrigation time of day to reduce evaporative and wind drift losses
			  ○ Reduce use of end guns on center pivots
			  ○ Convert flood irrigation to sprinkler
			  ○ Convert wheel lines to center pivot systems
			• Evaluate cost implications for landowners and approaches to addressing costs including supporting potential for grant funding for improving irrigation efficiencies

Other Management Actions	Well Inventory Expansion	Enhance inventory and metering efforts to support groundwater management. Expand the inventory to all types of wells, including domestic wells used for drinking water.	• Consider adding inventory for domestic, commercial, industrial, and stock well inventory and use estimation
Supply augmentation	Reoperation of, or adjustments to, surface water supplies	More efficient use of surface water resources to reduce long-term groundwater pumping	• Investigate process and evaluate feasibility of modifying surface water rights delivery from Frenchman Lake and Little Last Chance Creek for more efficient use of surface water • Divert some Lake Davis water into Sierra Valley • Gain benefit from winter spills from Frenchman Lake and winter runoff from other streams by winter diversions to pasture (icing) • Evaluate feasibility of increasing capacity of Frenchman Lake (long-term project)
Supply augmentation	Off-stream storage	Develop off-stream surface water storage projects	• Increase on-farm storage of surface water (Smithneck and Little Last Chance) • Store flood water for later use through catchments, tanks

Category	Title	Description	Potential Actions
Other Management Actions	Drought mitigation & planning	Drought mitigation planning and identification of drought triggers tied to precipitation, runoff, and other factors	• Develop Drought Mitigation Plan to address this critical element of water management in the valley including determination of drought status and what tiers of drought would trigger actions and adjustments
Demand Management	Water Conservation	Develop a water conservation program to reduce water demand to offset ground and surface water pumping	• Develop voluntary water conservation agreements (e.g., only going to irrigate to crop ET, foregoing a fourth cutting, cutting back pumping by x %, moving irrigation start date from March 1 to March 15) • Develop pilot program for implementation of water use conservation agreement
Demand Management	Groundwater Trading and Allocations System	Develop an approach for establishing groundwater pumping allocations if other management actions do not result in needed reductions	• Develop an approach for limiting groundwater extractions, – that would be available if and as needed – to incrementally reduce the permitted pumping amount, allowing for transfers and flexibility. • Develop approach for trading or transferring allocations
Supply Augmentation	Watershed and Upland Management and Restoration	Implement multi-benefit projects that enhance precipitation retention and infiltration (i.e., reducing runoff), reduce fuel loads, and support ecosystem services such as reducing peak flood flows and enhancing summer baseflows; Improvement of recharge in the higher elevations and provide multi-benefits, including potential benefit for fire prevention.	• Watershed management • Upland management (forest/meadow restoration, road improvements or removal, soil decompaction) • Enhance wetlands and meadows to better retain water in GDEs • Planning study with pilot program • Forest treatment to promote recharge

Category	Title	Description	Potential Actions
Demand Management	Voluntary Managed Land Repurposing	This includes a wide range of voluntary activities that make dedicated, managed changes to land use (including crop type) on specific parcels in an effort to reduce consumptive water use in the SV Subbasin	• Support alternative crop conversion There are limits to what can be grown. Early freezes affect what is planted in the fall. Some crops will survive the early freezes. • Develop terms contracts through a Conservation Reserve Program (need more details) this would involve marginal lands – might be a benefit to wildlife. This is for dryland cultivated land. Would not generally be applicable, raising more concerns than benefits. • Develop crop rotation program • Develop irrigated margin reduction
Supply Augmentation	Groundwater Recharge / Managed aquifer recharge (MAR)	Develop aquifer recharge projects to store and augment water supply.	• Planning study/GIS study to determine the feasibility of MAR in SV Subbasin • Spreading SV Subbasins • Flooding agricultural fields • Injection wells • Streams and canals: e.g., diversion from Badenaugh Creek • Indirect recharge • Distributed stormwater collection and MAR
Supply Augmentation	Assessment of post-fire hydrology – water supply augmentation	The Plumas County Fire Safe Council has received funding and is in the process of developing the Eastern Plumas Wildfire Protection Project to reduce fuel conditions that can contribute to catastrophic wildfires.	• SVGMD will coordinate with Plumas County Fire Safe Council to identify opportunities for monitoring changes in streamflow and groundwater levels that result from the project actions. • Other specific actions to be identified as the project is developed
Other Management Actions	Climate Change Impact Assessment	Incorporate additional climate change scenarios into the hydrologic model to assess potential impacts and to evaluate and prioritize PMAs.	• Identify funding source(s) to evaluate additional climate change scenarios. • Assess how climate change may impact reaching sustainability. • Use refined model results based on climate change scenarios to prioritize PMAs for implementation.