

Table 4.1 Proposed Project Management Actions Table

Tier	Title	Description	Lead Agency	Category	Status	Anticipated Timeframe	Targeted Sustainability Indicator(s)/ beneficiaries
I	Inventory and Metering	Develop a complete inventory of wells in the basin and system for groundwater well registration, metering, and reporting. This action could include replacement of old meters, calibration of existing meters, and analysis for telemetry options including initial and maintenance costs. More precise metering could result in surface water diversion and provide multiple benefits.	GSA	Demand Management	Existing/Ongoing	Active	Groundwater levels
I	Data and Modeling	Develop tools for gathering data and recalibrate the groundwater model annually.	GSA	Other Management Actions	Existing/Ongoing	Active	Groundwater levels
I	Monitoring and Reporting	This action would involve data gathering, sharing, and analysis, including stream gauges and GDEs monitoring, or a groundwater monitoring network.	GSA	Other Management Actions	Existing/Ongoing	Next 3 years	Surface water; Groundwater levels
I	Water Conservation and Demand Management	Develop a water conservation program to reduce water demand to offset ground and surface water pumping. Projects may include a voluntary conservation agreement, conservation easements, or a pilot program to implement water use efficiency practices throughout the Basin. (See also Tier II – Agricultural efficiency improvements)	GSA	Demand Management	Existing/Ongoing	Next 5 years	Groundwater levels; surface water
I	Education and Outreach	Develop a quarterly education program that covers various topics related to sustainable groundwater management and BMP's for landowners. Involve the NRCS, RCD, etc.	GSA	Demand Management	Future Actions	Next 5 Years	Groundwater levels
I	Well Permit Ordinance	Establish ordinance to restrict the installation of high-capacity wells in specific areas of the Basin.	GSA	Demand Management	Existing/Ongoing	Active	Groundwater levels

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II	Aquifer characterization, pumping test	<p>Coordinate with parties that have large capacity wells to conduct aquifer characterization studies throughout the basin. Typically, these studies would include collection of one week of baseline data including static water level of the pumping well and static water level and water level trends of nearby wells, spring discharge measurements of any nearby springs, and an upstream and downstream flow measurements of any nearby streams. This data will be critical to better understand the geology and hydrogeology of the basin and will be used to:</p> <ol style="list-style-type: none"> 1. Update the numerical model to better represent hydrogeologic conditions. 2. Evaluate groundwater-surface water interactions for specific springs, reaches, and areas. 3. Evaluate location-specific project and management actions. Robust aquifer characterization will have high upfront costs but information from these tests will be incorporated and used indefinitely in sustainable groundwater management in the Basin. 	GSA	Other Management Actions	Future Actions	Next 5 years	Groundwater levels
II	Agricultural efficiency improvements	This action would achieve agricultural efficiency through various equipment improvements designed to reduce overall water demand such as soil moisture sensors.	GSA	Demand Management	Future Actions	Next 5 years	Surface Water
II	Avoiding Significant Increase of Total Net Groundwater Use from the	The goal of this action is to avoid water level declines and additional stream depletion in the Valley that would result from significant expansion of net groundwater use relative to the practice over the past two decades. Net groundwater use is defined as the difference between groundwater pumping and	GSA	Demand Management	Future Actions	Next 5 years	Groundwater levels

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	Basin	groundwater recharge in the Basin. Under conditions of long-term stable recharge (from precipitation, irrigation, streams, floods) and long-term stable surface water supplies in the Basin, significant increases in long-term average ET (or other consumptive uses) in the Basin lead to significant increases in long-term average net groundwater use.					
II	Drought mitigation & planning	Develop drought mitigation planning and identify drought triggers tied to precipitation, runoff, etc.	GSA	Supply Augmentation	Future Actions	Next 5 years	Groundwater levels
II	Off Stream Storage	Develop off-stream storage projects such as storage ponds.	GSA	Supply Augmentation	Future Actions	5+ years	Storage
II	Voluntary Managed Land Repurposing	Voluntary managed land repurposing programs include 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 Basin to improve and increase groundwater levels and instream flow during the critical late spring recess, summer baseflow, and early fall flush flow period. These activities may include any of the following: Terms contracts, Crop rotation, Irrigated Margin Reduction, Crop support	GSA	Demand Management	Future Actions	5+ years	Surface water

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III	Managed aquifer recharge (MAR) / Flood MAR	Through a planning study, establish the feasibility of a recharge project and its implementation. Identify locations for Managed aquifer recharge/ Flood MAR projects to increase groundwater storage in the shallow and/or deep aquifer layers.	GSA	Supply Augmentation	Future Actions	5+ years	Groundwater levels
III	Injection Well	Examine the feasibility of using existing wells for injection for additional groundwater recharge capacity to the Basin.	GSA	Supply Augmentation	Future Actions	5+ years	Groundwater levels
III	Upland management to enhance infiltration	Pilot program to improve recharge in the higher slopes and provide multi-benefits, including potential benefit for fire prevention.	GSA	Supply Augmentation	Future Actions	5+ years	Groundwater levels
III	Future basin actions: land use changes	This Project would develop a study of the economic impacts of the projects and management actions included in the GSP. This would include an evaluation of how the implementation of the project could affect the economic health of the region and on local agricultural industry. It would also consider the projected changes to the region's land uses and population and whether implementation of these projects would support projected and planned growth.	GSA	Other Management Actions	Future Actions	5+ years	Groundwater levels