

**DRAFT Work Plan, Amended 11.15.2016**

Selected Pre-GSP Foundational Actions	Other Potential Benefits/Utility during GSA Formation and Early GSP Development	Associated Cost	Costs Notes	Funding Source	SUM	
Technical and Reporting Standards (Article 3) Develop County-wide monitoring plan, involving assessment of existing monitoring well network, other existing wells, and the need for additional monitoring sites.	Monitoring plan will provide the basis for defining costs associated with expanding and improving the County's monitoring network to meet SGMA requirements. Supports integration of County monitoring with monitoring plans developed by others. Also supports SGMA budgeting process, cost allocation determinations, and preparation of grant funding proposals.	\$71,000.00	Additional County in-kind	Prop 1 Grant		
Technical and Reporting Standards (Article 3) Develop a groundwater data management system to support SGMA-mandated analyses and reporting.	Data management system phased implementation plan supports SGMA budgeting process, cost allocation determinations and preparation of grant funding applications. The initial implementation phase will improve data access, management and reporting of groundwater data.	\$90,000.00	Additional County in-kind	Prop 1 Grant		
Description of Plan Area (Article 5, Subarticle 1, §354.8) Describe existing groundwater development	Description of well characteristics supports development of the county-wide groundwater monitoring program. Also supports preliminary assessment of subbasin sustainability, particularly as related to the vulnerability of shallow production wells to declining groundwater levels.	\$76,000.00	Additional County in-kind	Prop 1 Grant		
					<b>\$237,000.00</b>	
Hydrogeologic Conceptual Model (Article 5, Subarticle 2, §354.14)	A more detailed Hydrologic Conceptual Model (HCM) would provide a basis for developing a common understanding of subbasin structure and characteristics, and provide the basis for comparing and evaluating the suitability of existing groundwater models, and, ultimately, for refining a groundwater model for Colusa County. The HCM and groundwater model will be needed for GSP development.	\$75,000.00	± 30%			
Water Budget (Article 5, Subarticle 2, §354.18) Develop detailed surface layer water budgets (on par with those developed for the Area of Interest).	The budgets will provide detailed information about land use and cropping patterns, which informs discussion of governance and development of potential management actions and projects. (For example, the possible "scaling back" of groundwater production to avoid excessive groundwater decline.) The budgets will quantify and characterize the spatial distribution of groundwater recharge and pumping. and spatial distribution of recharge and pumping. Additionally, the budgets will feed directly into development of a groundwater model.	\$100,000.00	± 30%			
Water Budget (Article 5, Subarticle 2, §354.18) In areas with declining groundwater levels, prepare estimates of the reductions of groundwater storage over time and of sustainable groundwater yield.	Estimating groundwater volume declines will improve understanding of the extent to which pumping might need to be reduced or surface water use increased to achieve sustainability, which informs the formulation of potential management actions and projects.	\$50,000.00	± 50%			
Develop integrated surface water and groundwater model - Compare and evaluate alternative existing models and select preferred model to be refined to support GSP development	Saves time during GSP development. Provides basis for developing approach and estimating costs for groundwater modeling.	\$15,000.00	± 30%			
Develop integrated surface water and groundwater model - Identify and initiate refinements to selected model to incorporate local data; calibrate refined model	Saves time during GSP development; supports establishment of Minimum Thresholds and Measureable Objectives; provides basis for formulating and evaluating alternative management actions and projects	\$100,000.00	\$50,000 to \$250,000			
						<b>\$340,000.00</b>

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Notice and Communication (Article 5, Subarticle 1, §354.10) - Identify and describe all beneficial uses and users of groundwater in the county.	Provides clarity and transparency to County decision-making. Ensures effective outreach. Provides basis for estimating County costs for outreach and public participation.	\$30,000.00	± 50%		<b>\$615,000.00</b>
Management Area Description (Article 5, Subarticle 2, §354.20)- Based on assessment of Groundwater Conditions and Water Budgets, identify Management Areas based on the likelihood that management actions and projects will be needed to achieve sustainability.	Identifies groundwater pumpers who may need to cooperate in planning and implementing management actions and projects, and sharing related costs. Enables early input from stakeholders and the public.	\$20,000.00	± 30% requires completion of other efforts first)		
Sustainable Management Criteria (Article 5, Subarticle 3) * Sustainability Goal, Undesirable Results, Minimum Thresholds, and Measureable Objectives for each applicable sustainability indicator over the 20-year Plan implementation * Supported by basin conditions, basin setting, and maps	N/A		N/A	N/A	
Monitoring Networks (Article 5, Subarticle 4) - Based on the Monitoring Plan being developed under the Prop 1 grant project, identify and implement selected monitoring improvements to address high-priority data gaps; seek grant funding for same.	Improves knowledge of groundwater conditions. Establishes baseline conditions for Management Areas. Supports development of GSP.	\$375,000.00	\$250,000 to \$1,000,000 +		
Projects and Management Actions (Article 5, Subarticle 5)	Identifies most cost-effective options for achieving sustainability. Provides basis for seeking grant finding to conduct more detailed planning and design, if necessary.	\$100,000.00	±50%		
Groundwater Conditions as related to Undesirable Results (Article 5, Subarticle 2, §354.16) - Assemble and analyze available data to evaluate existing and potential future effects on land subsidence, streamflow depletion and Groundwater Dependent Ecosystems (GDE) due to groundwater pumping. Assess the probability of each of these SGMA Sustainability Indicator posing limits on operation of the subbasin, and potentially requiring implementation of management actions and projects (tools).	Provides a more reliable basis for assessing subbasin sustainability, for identifying the types and locations of management actions and projects that may be required to achieve sustainability, and for initiating discussion of Minimum Thresholds and Measureable Objectives. Informs the decision of whether management actions and projects to address sustainability should be formulated.	\$50,000.00	± 50%		
Groundwater Conditions as related to Undesirable Results (Article 5, Subarticle 2, §354.16) - Assemble and analyze well drawdown and water use data in areas with declining groundwater levels to assess the degree to which declining levels are due to local versus regional pumping.	Analysis will improve understanding and identify data gaps regarding whose pumping is contributing to groundwater level declines.	\$40,000.00	± 30%		
		<b>\$1,192,000.00</b>			

	In progress
	Near term benefits
	Can be completed later, during Plan development

Potential Other Non-Regulatory Potential Early Actions

- 1) Funding Plan to bridge period between present and initiation of GSP development (potentially including a Prop 218 Study)