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## MEMORANDUM

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**TO:** YSGA BOARD OF DIRECTORS

**FROM:** YSGA EXECUTIVE OFFICER

**SUBJECT:** HYDROGEOLOGIC CONCEPTUAL MODEL

**DATE:** JUNE 15, 2018

**CC:** YSGA WORKING GROUP

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### **BACKGROUND**

A Hydrogeologic Conceptual Model (HCM) provides a general understanding of the physical setting, characteristics, and processes that govern groundwater occurrence within the basin. Specifically, an HCM provides 1) an understanding of the general physical characteristics related to regional hydrology, land use, geology and geologic structure, water quality, principal aquifers, and principal aquitards of the basin setting; 2) the context to develop water budgets, mathematical (analytical or numerical) models, and monitoring networks; and 3) a tool for stakeholder outreach and communication (DWR HCM BMP, 2016).

### **GSP REGULATIONS**

DWR's Groundwater Sustainability Plan (GSP) Regulations require that the GSP include a narrative and graphical form of an HCM that provides an overview of the physical basin characteristics and uses of groundwater in the basin and sets the stage for the basin setting (GSP Regs §354.14(a)). The two main types of information that must be included in the HCM:

1. The narrative and graphical representation must clearly portray the **geographic setting, regional geology, basin geometry, general water quality, and consumptive uses** in the basin.
2. A series of geographic maps and scaled cross-sections to provide a vertical layering representation and a geographic view of individual datasets including the **topography, geology, soils, recharge and discharge areas, source and point of delivery of imported water supplies, and surface water systems** that are significant to management of the basin (DWR HCM BMP, 2016).

### **YOLO SUBBASIN GSP PLANNING PROCESS**

The YSGA has a significant amount of historical data, and numerous technical reports that were produced on behalf of the member agencies. Historical reports and empirical data that have been gathered will be the main source of information used to develop the HCM. A search of reports that have been created in the different parts of the Yolo Subbasin will be conducted during the development of the HCM and Water Budget.

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**Cost Estimate:** \$54,000 (\$50,000 Proposition 1 Grants Funds/\$4,000 Agency Cost Share)

**Schedule:** May – September 2018