

# WMA

Santa Ynez River Valley Groundwater Basin  
Western Management Area  
Groundwater Sustainability Agency

# February 2020 Status Update



**DUDEK**

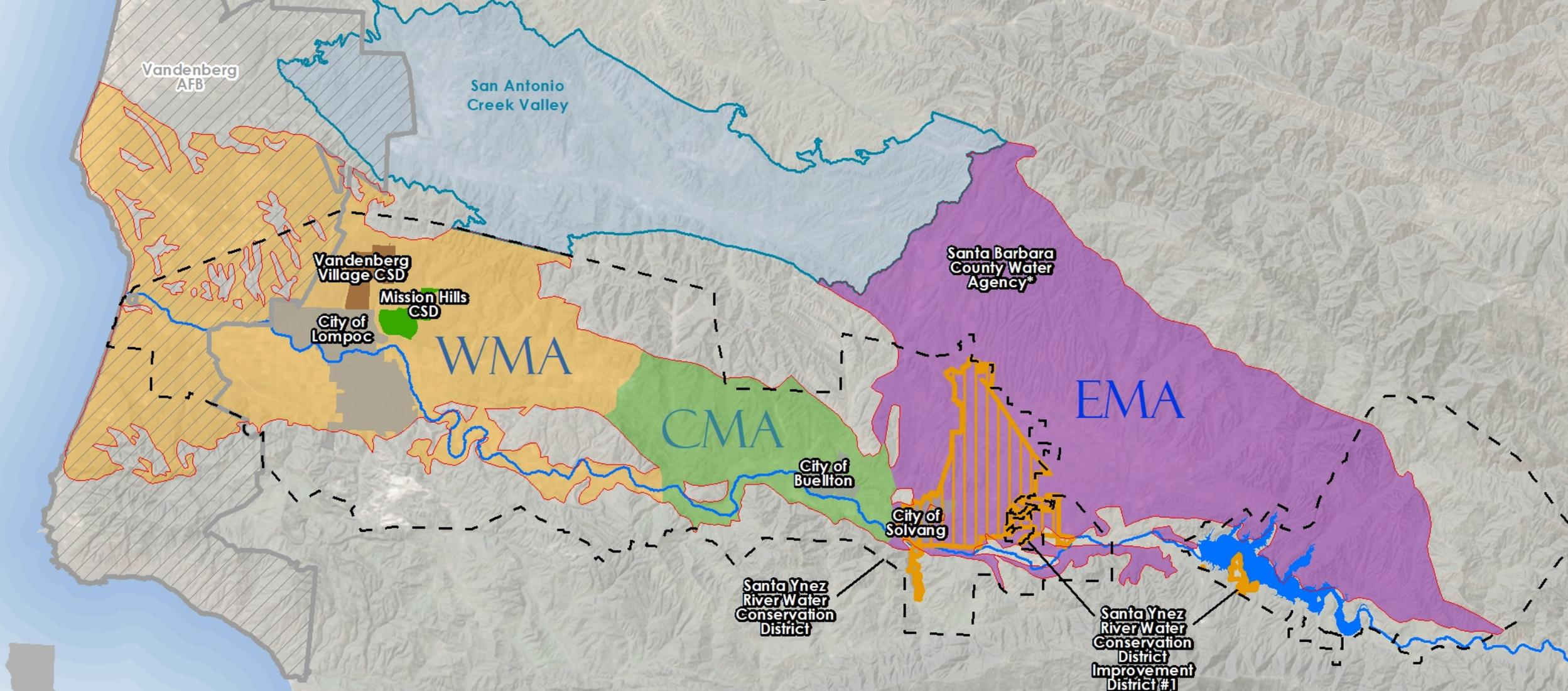
Geosyntec   
consultants

engineers | scientists | innovators

# Agenda

1. SGMA Overview & Milestones
2. Consultant Team Work Products
  - Final products
  - Initiated and on-going work
3. Next Steps
4. Questions

# Santa Ynez River Valley Groundwater Basin



## SGMA GSAs/Management Areas

\* Management Areas outside of Santa Ynez River Water Conservation District under jurisdiction of Santa Barbara County Water Agency

Note: Groundwater basin boundary from DWR Bulletin 118 (2018 Update)

# WMA

Santa Ynez River Valley Groundwater Basin  
Western Management Area  
Groundwater Sustainability Agency

PACIFIC OCEAN

Vandenberg Air Force Base

Santa Ynez River Water Conservation District Boundary

Vandenberg Village  
Community Services District

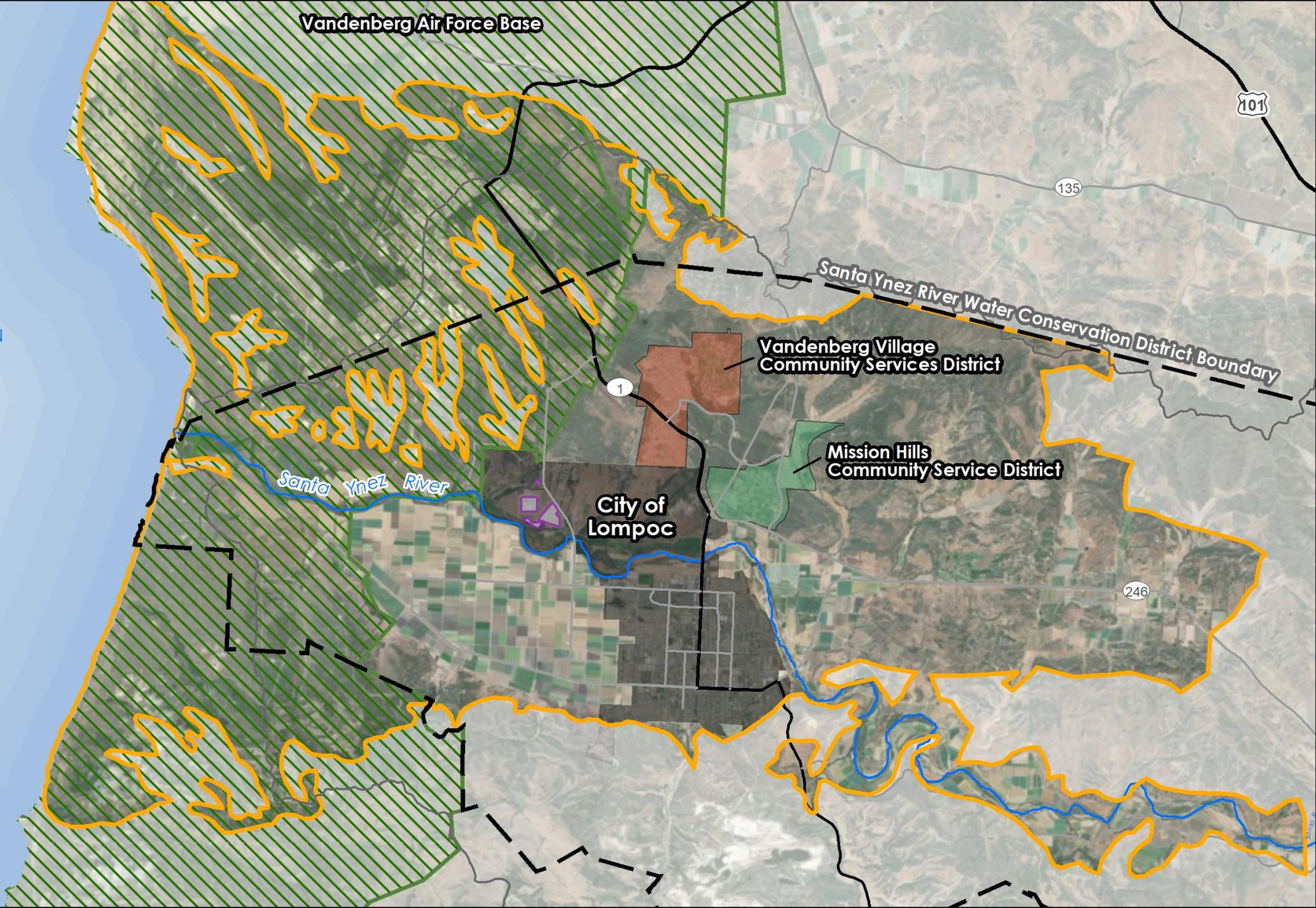
Mission Hills  
Community Service District

City of  
Lompoc

Santa Ynez River



0 1 2 Miles

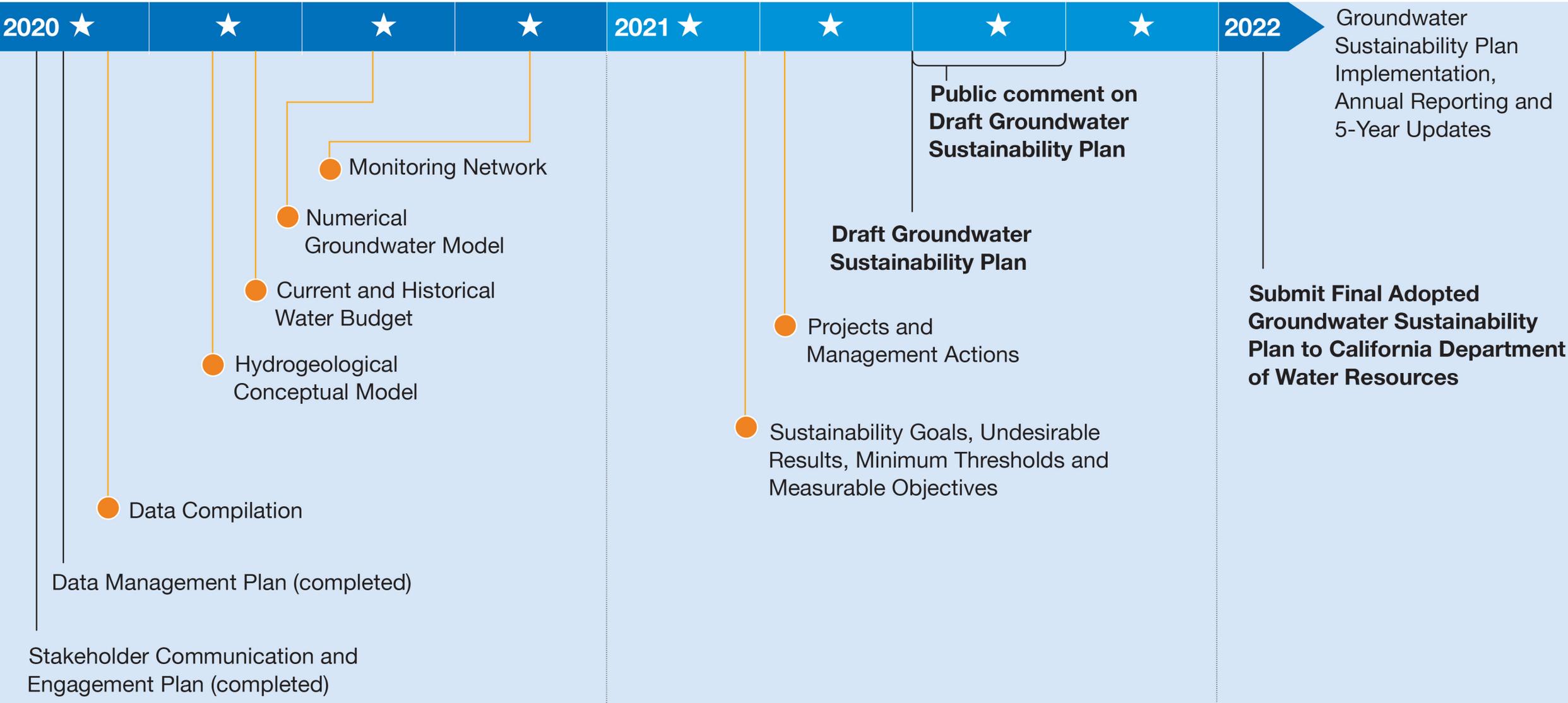


# Groundwater Sustainability Plan Development Milestones

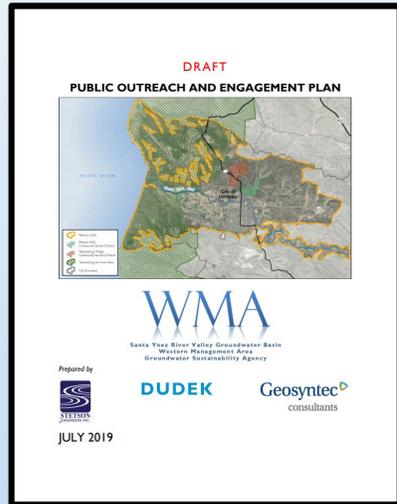


★ Groundwater Sustainability Agency Committee Public Meeting

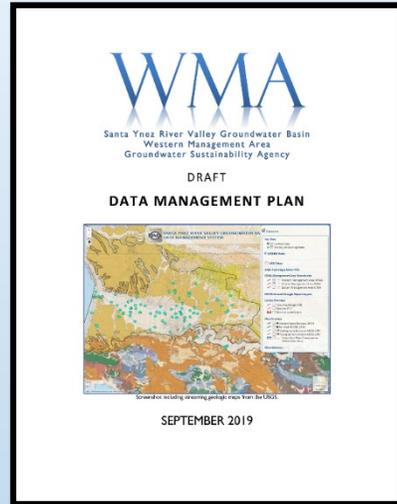
● Technical Memorandum



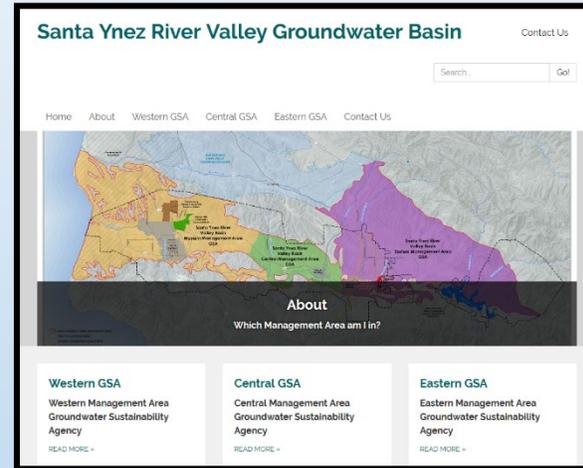
# Consultant Team Progress



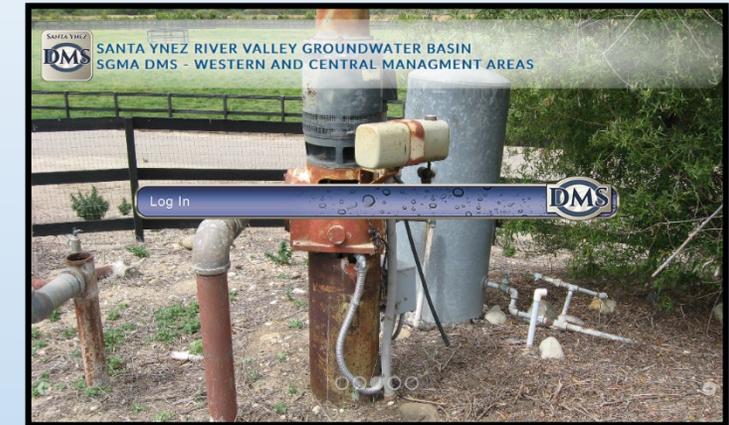
Draft Final OEP



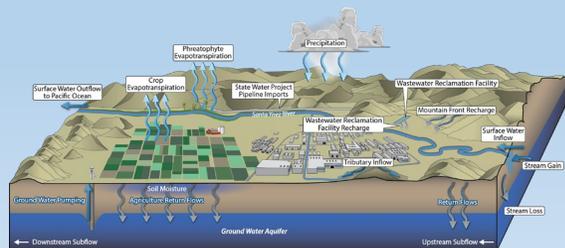
Draft Final DMP



Release Website



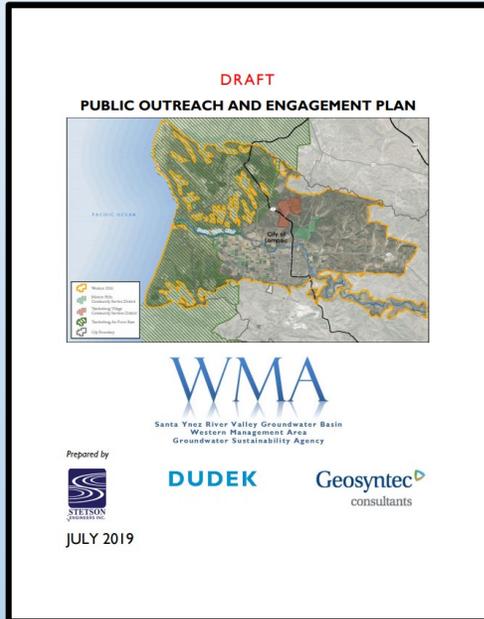
Prepare DMS  
Technical Memo



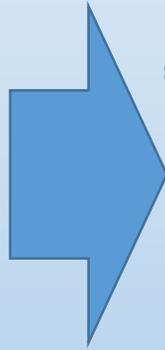
Initiate Hydrogeological Conceptual Model & Water Budget

# Outreach & Engagement Plan

## SGMA Compliant Outreach Plan



Plan Development  
(July)

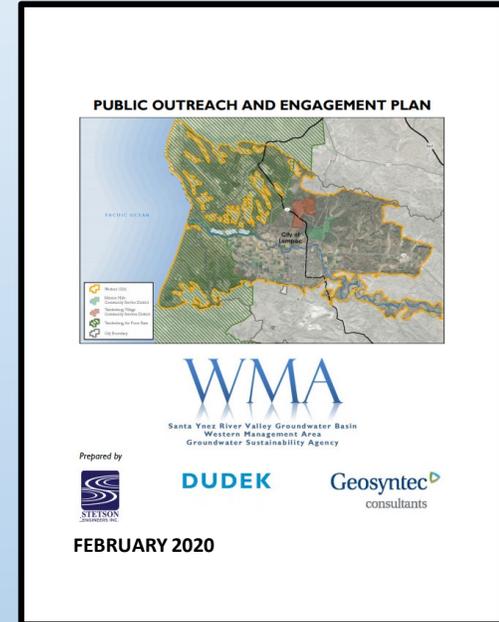


Discussed at  
WMA GSA  
Committee  
Meetings  
(July 24 &  
October 23)



WMA Citizen  
Advisory Group  
(CAG) Meetings  
(October 6 & 16)

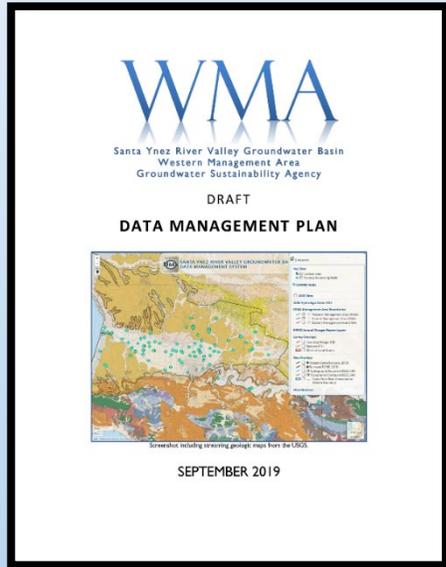
Document available for  
Public Comment  
(through November 2019)



Draft Final  
submitted to  
WMA GSA  
(February)

# Data Management Plan

## SGMA Compliant Data Management Approach



Plan Development  
(May-September)

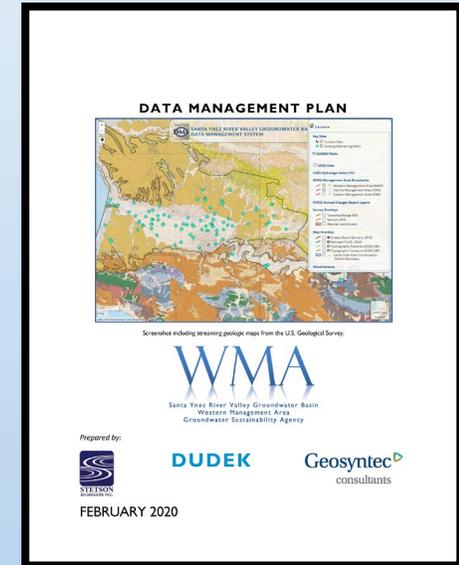


Discussed at  
WMA GSA  
Committee  
Meeting  
(September 25)

Public  
Comment  
Period

WMA  
Citizen Advisory  
Group (CAG)  
Meeting  
(October 16)

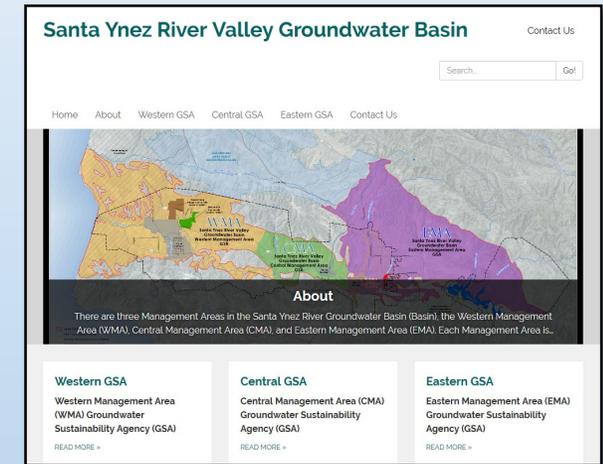
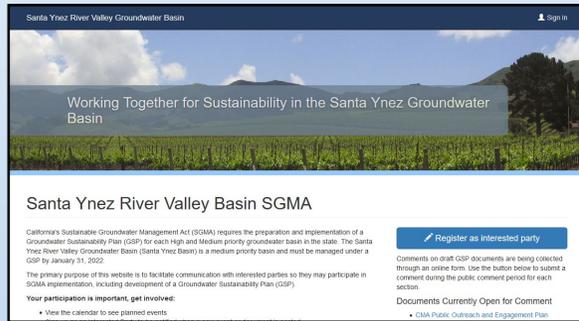
Document available  
for Public Comment  
(through November 2019)



Draft Final  
submitted to  
WMA GSA  
(February)

# Santa Ynez Water.org Website

## SGMA Compliant Outreach & Engagement Tool

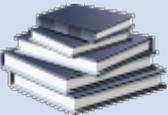


Internal Beta  
Release to  
Consultants  
(October)

Released to GSA  
Committees, CAG &  
Public in Q4 2019

Email Invitation to  
Registered  
Interested Parties  
(November, January)

# Data Management

	Type	Data Uploaded
	Pumping Data	Buellton (2007-17), Lompoc (2003-13), Vandenberg Village Community Services District (2005-19), Public Water System Statistics Surveys (2006-18) Santa Ynez River Water Conservation District (2011 - 18)
	Water Level Measurements	United States Geological Survey/County of Santa Barbara (1940-2019), United States Bureau of Reclamation (1972-2019), Buellton (2003-2017), Lompoc (1964-2013), Vandenberg Village Community Services District (2005-19)
	Water Quality	California State Waterboard GeoTracker GAMA
	Map Layers	Committee Agency Extents, General Reference: Digital Elevation Model/Topography, parcels, roads, watersheds, PLSS, etc. Linked Layers: Air Imagery/Geologic Maps
	Reports / Publications	187 Total, Examples: Santa Ynez River Water Conservation District Annual Reports, United States Geological Survey (USGS) Reports, California Department of Water Resources (DWR) Reports, Plans – Ex: Urban Water Management Plan/ Integrated Regional Water Management/ General Plans

# **Initiated and On-Going Work**

# Hydrogeological Conceptual Model

*Describes the conceptual understanding of the general physical characteristics of the groundwater basin.*

The Hydrogeological Conceptual Model consists of:

- Written narrative description
- Graphical representation of the basin that clearly portrays the geographic and climatic setting, regional geology and structures, groundwater basin geometry, general groundwater water quality, and consumptive water uses in the basin.

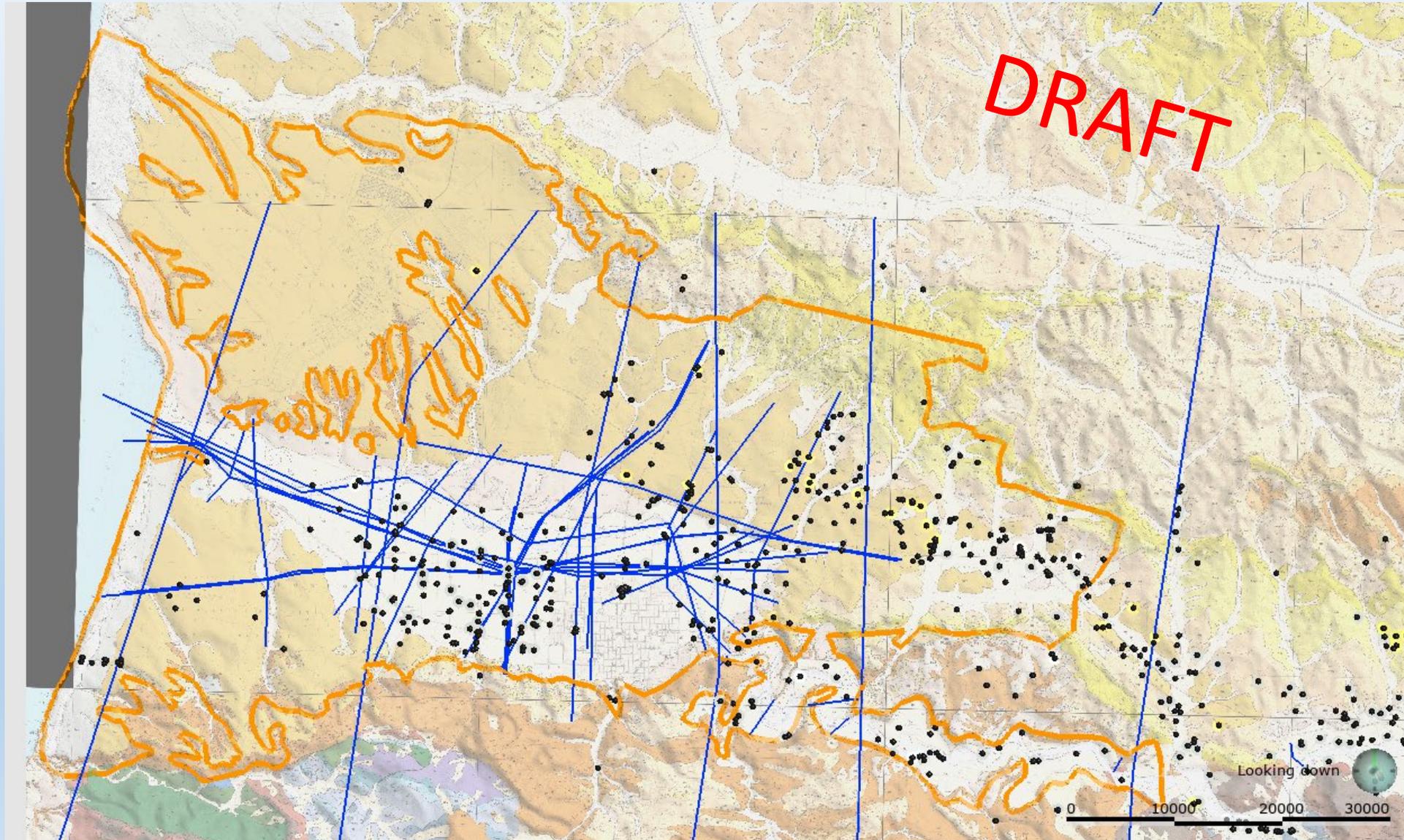
# Hydrogeological Conceptual Model

## 3D Geologic Visualization

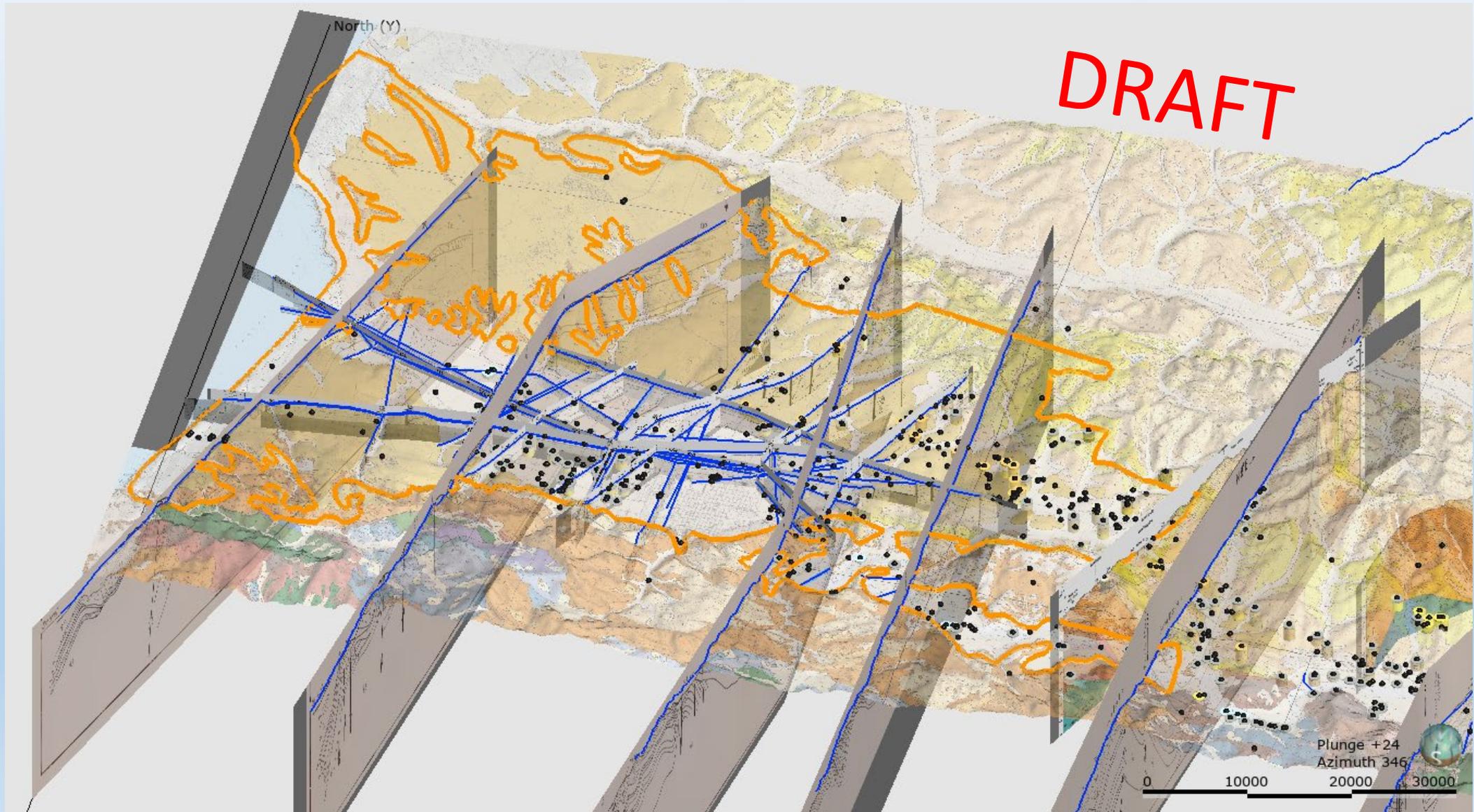
### Regional Geology – Basin Geometry:

- 3D visualization, or, geologic model, that integrates previous models and regional studies, updated and extended with new data and techniques.
- 3D extents will be exported for basin groundwater modeling.
- Graphical representation of mathematical equations, computer algorithms, and geologic interpretation.

# Hydrogeological Conceptual Model 3D Visualization Inputs – Aerial View



# Hydrogeological Conceptual Model 3D Visualization Inputs – Oblique View



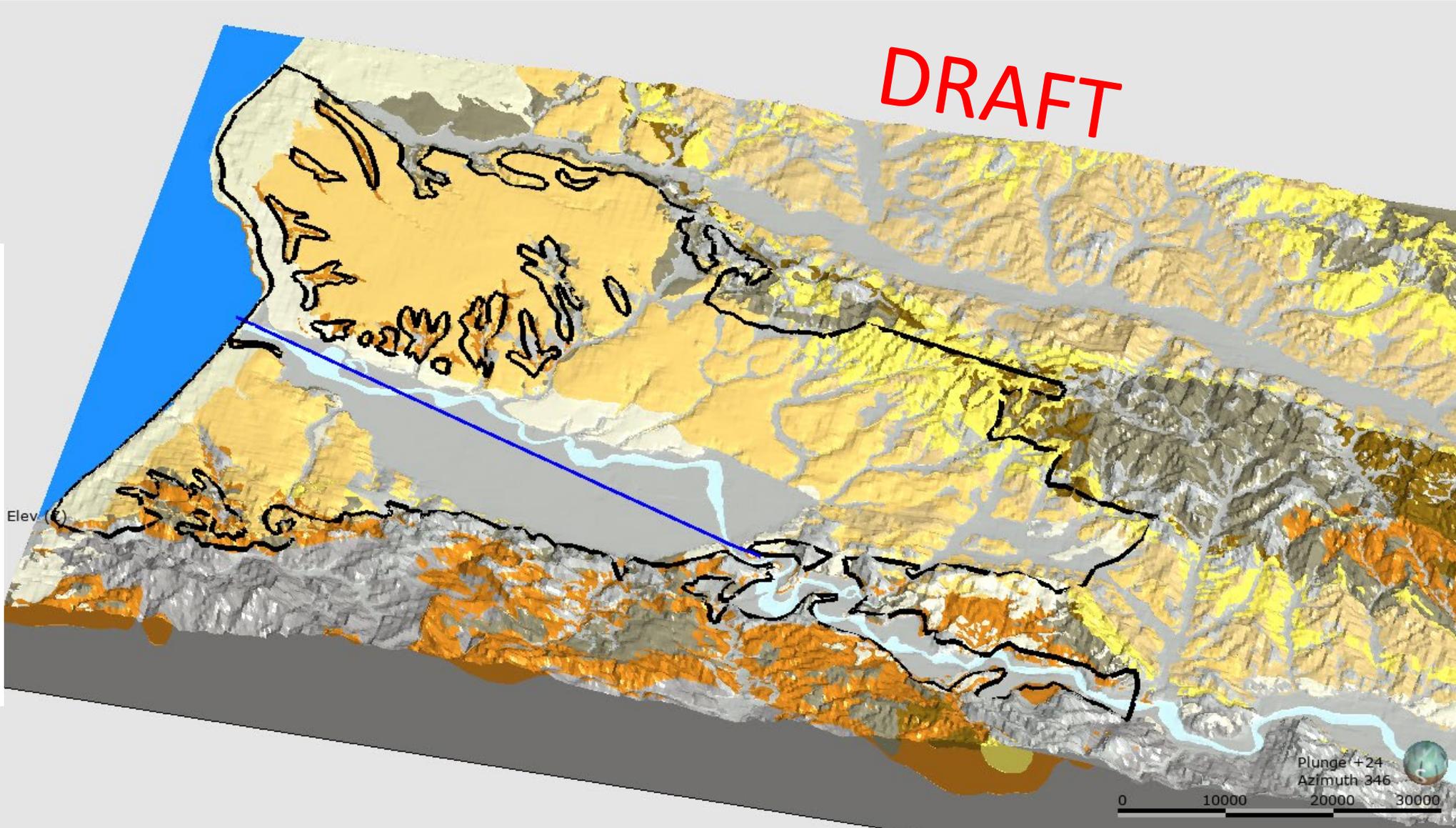
# Hydrogeological Conceptual Model

## 3D Visualization Geologic Model – Oblique View

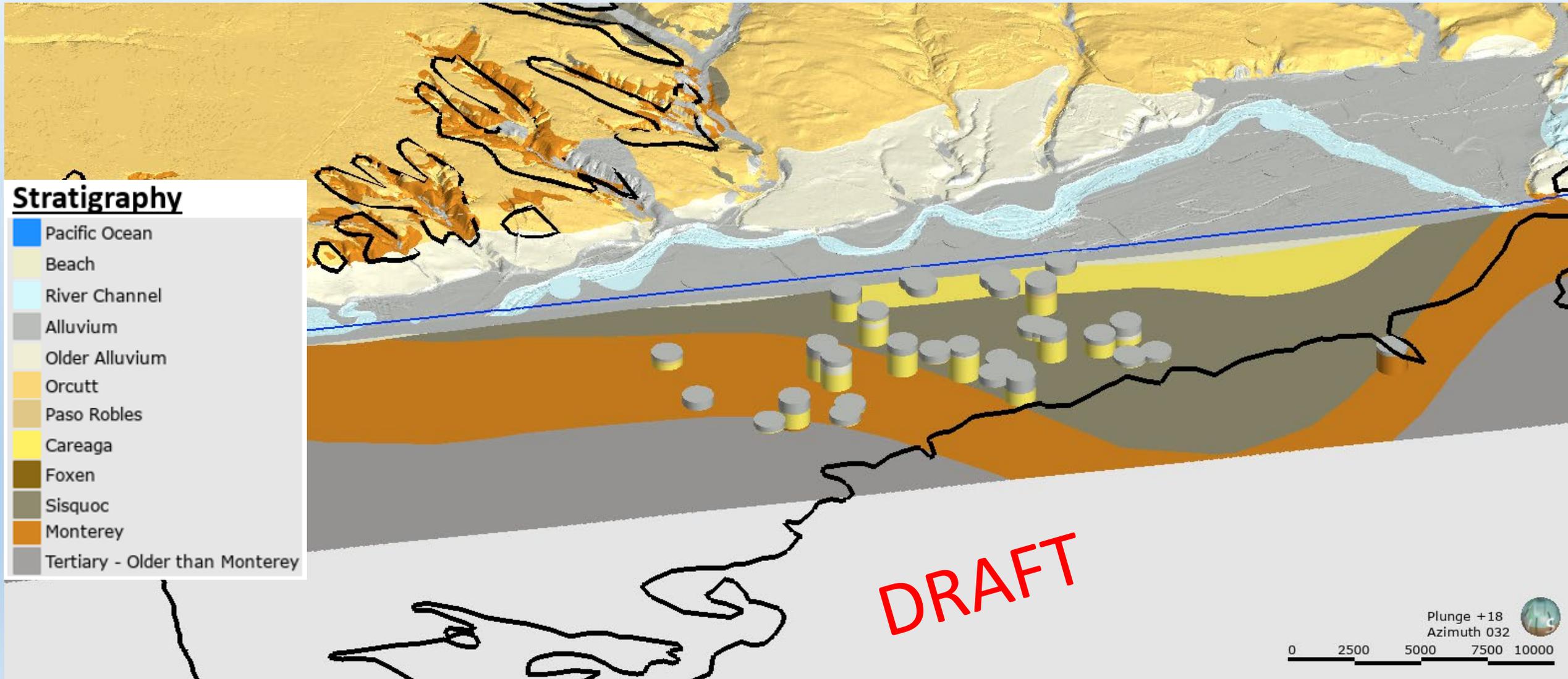
DRAFT

### Stratigraphy

Blue	Pacific Ocean
Light Yellow	Beach
Light Blue	River Channel
Grey	Alluvium
Light Orange	Older Alluvium
Orange	Orcutt
Dark Orange	Paso Robles
Yellow	Careaga
Brown	Foxen
Dark Grey	Sisquoc
Dark Orange	Monterey
Dark Grey	Tertiary - Older than Monterey



# Hydrogeological Conceptual Model 3D Visualization - WMA



# Water Budget

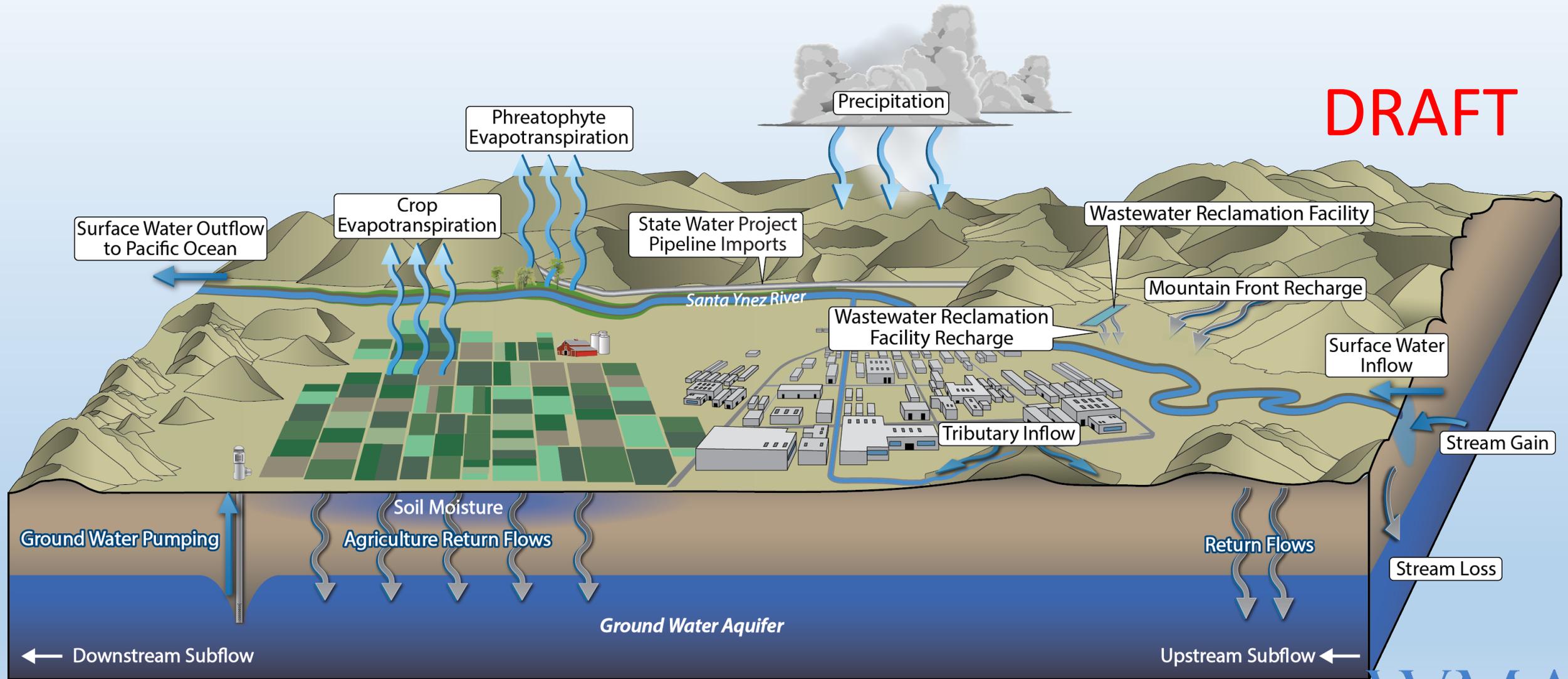
*The accounting and characterization of spatial and temporal distribution of inflows and outflows to a watershed, groundwater basin, or management area.*

## Key Water Budget components:

- Total surface water entering and leaving the basin
- Inflows and outflows to the groundwater system
- The annual change in groundwater storage volume

# WMA Water Budget

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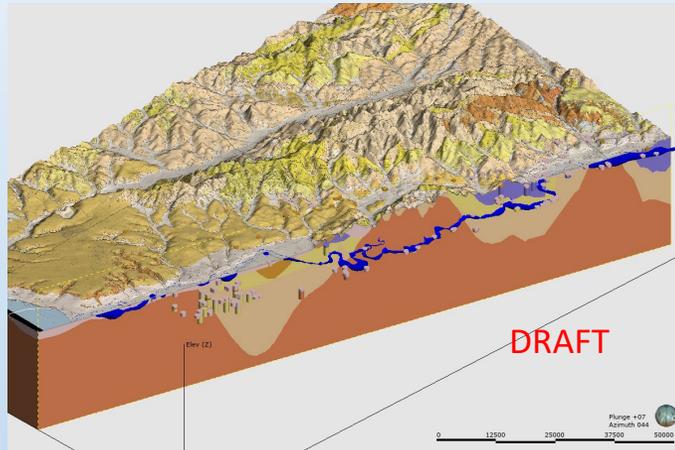


# Next Steps

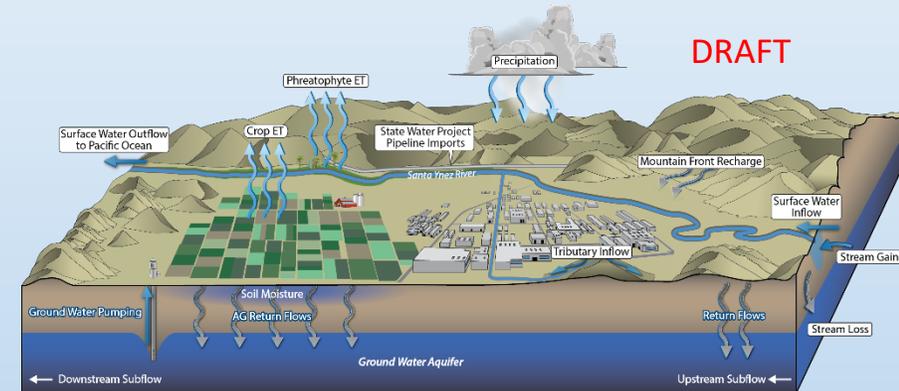
First Quarter 2020



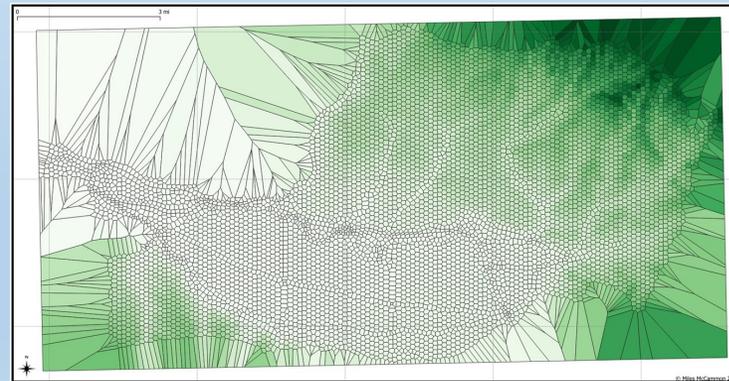
DMS Updates and  
Technical Memorandum



Hydrogeologic  
Conceptual Model  
3D Visualization



Water Budget



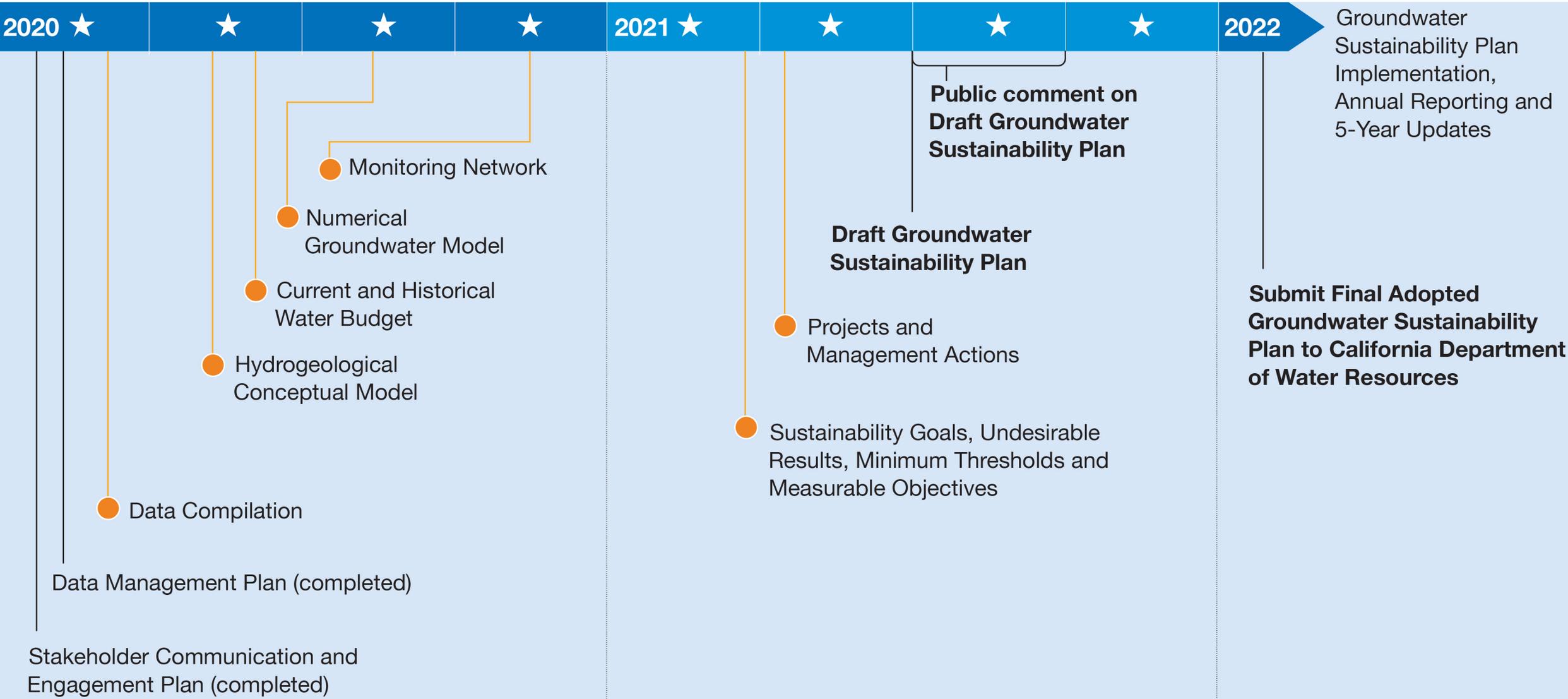
Initiate Groundwater Model

# Groundwater Sustainability Plan Development Milestones



★ Groundwater Sustainability Agency Committee Public Meeting

● Technical Memorandum



# Questions?



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consultants  
engineers | scientists | innovators