Arroyo Grande Subbasin GSP

Stakeholder Workshop #1: Basin Setting and Visioning

December 15, 2020

COUNTY of SAN LUIS OBISPO

CITY OF ARROYO GRANDE CALIFORNIA 1911

Presenters

TIFFANY MEYER
Water Systems Consulting

DAN HEIMEL
Water Systems Consulting

DAVID O'ROURKE, PG, CHG
Hydrogeologist, GSI Water Solutions

Q&A Panelists

DICK TZOU, PE
County of San Luis Obispo

SHANE TAYLOR
City of Arroyo Grande

Who's Here


CITY OF
ARROYO GRANDE
CALIFORNIA
1911


COUNTY OF SAN LUIS OBISPO


WSC
WATER SYSTEMS CONSULTING, INC.


GSI
Engineering


CHG


DEPARTMENT OF WATER RESOURCES
STATE OF CALIFORNIA


CALIFORNIA
STATE PARKS
SINCE 1864


San Luis Obispo County
FARM BUREAU


TALLEY
VINEYARDS


SINCE 1948
TF
TALLEY FARMS
ARROYO GRANDE, CALIFORNIA


COASTAL SAN LUIS
RESOURCE
CONSERVATION
DISTRICT


CREEK
LANDS
Conservation


OCEANO COMMUNITY
SERVICES 1981 DISTRICT

Workshop Goals

- Share project overview, timeline and alignment with other projects
- Share key requirements of SGMA
- Share basin setting overview
- Document stakeholder's shared vision of what a "sustainable Arroyo Grande subbasin" means

Workshop Agenda

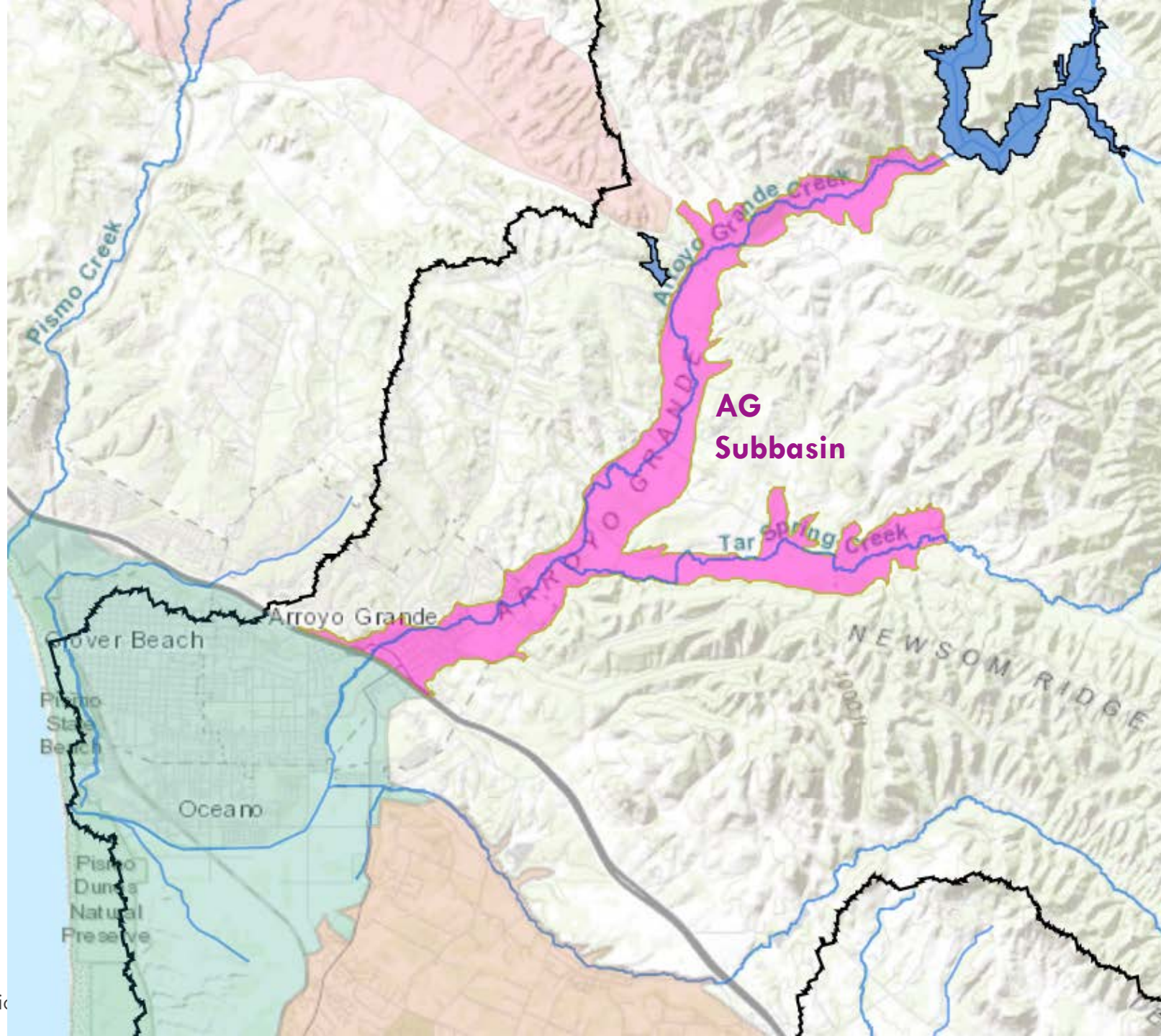
10 min	Project Overview
10 min	Groundwater 101
20 min	Overview of the Basin Setting
40 min	Group Activity: Visioning
5 min	What's Next

Project Overview

DAN HEIMEL, WSC

Continuing to secure sustainable groundwater in the Arroyo Grande Subbasin

- SGMA-compliant GSP
- Not required for low priority basins
- Supports parallel efforts
- Includes development of a surface water / groundwater model



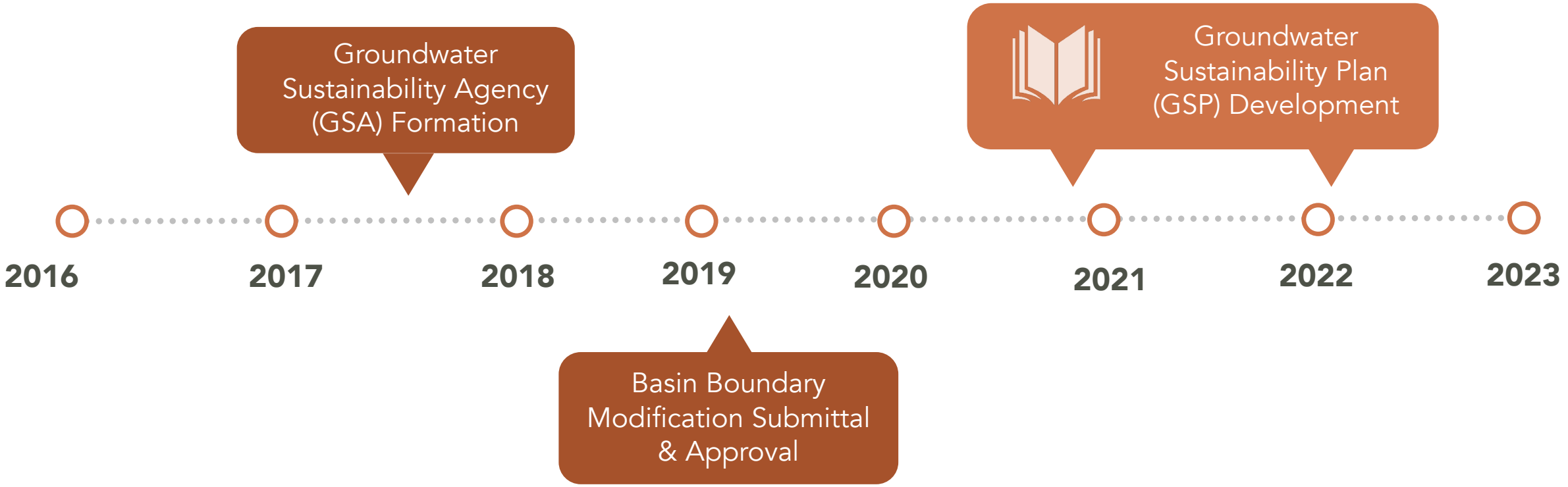
Basin Governance

GROUNDWATER SUSTAINABILITY AGENCIES (GSA)

Dick Tzou, PE
Water Resources Engineer,
County of San Luis Obispo

Shane Taylor
Utilities Manager,
City of Arroyo Grande

Basin Governance Timeline



Sustainable Groundwater Management Act (SGMA) Deadlines

Schedule and Opportunities to Inform the GSP

*Schedule subject to change

Step 1. Establish Governance Structure

CHAPTERS 1-3

NOV '20 – JAN '21

STAKEHOLDER WORKSHOP #1: BASIN SETTING AND VISIONING
DEC 15, 2020

PUBLIC COMMENT PERIOD
Q1 2021

WE ARE HERE

Step 2. Document Basin Setting and Develop Integrated Model

CHAPTERS 4-6

NOV '20 – MAY '21

PUBLIC COMMENT PERIOD
MAY 2021

PUBLIC MEETING PROJECT UPDATES — PER DEFINED SCHEDULE
- County Board of Supervisors SGMA Update
- City of AG City Council

Step 3. Set Sustainability Goals

CHAPTERS 7-8

FEB '21 – JUN '21

STAKEHOLDER WORKSHOP #2: SUSTAINABLE GOAL SETTING
MAR 3, 2021

PUBLIC COMMENT PERIOD
JUN 2021

PUBLIC MEETING PROJECT UPDATES — PER DEFINED SCHEDULE
- County Board of Supervisors SGMA Update
- City of AG City Council

Step 4. Develop Plan to Sustainability

CHAPTERS 9-10

JAN '21 – JUL '21

STAKEHOLDER WORKSHOP #3: PROJECTS AND MANAGEMENT ACTIONS
MAY 12, 2021

PUBLIC COMMENT PERIOD
JUL 2021

PUBLIC MEETING PROJECT UPDATES — PER DEFINED SCHEDULE
- County Board of Supervisors SGMA Update
- City of AG City Council

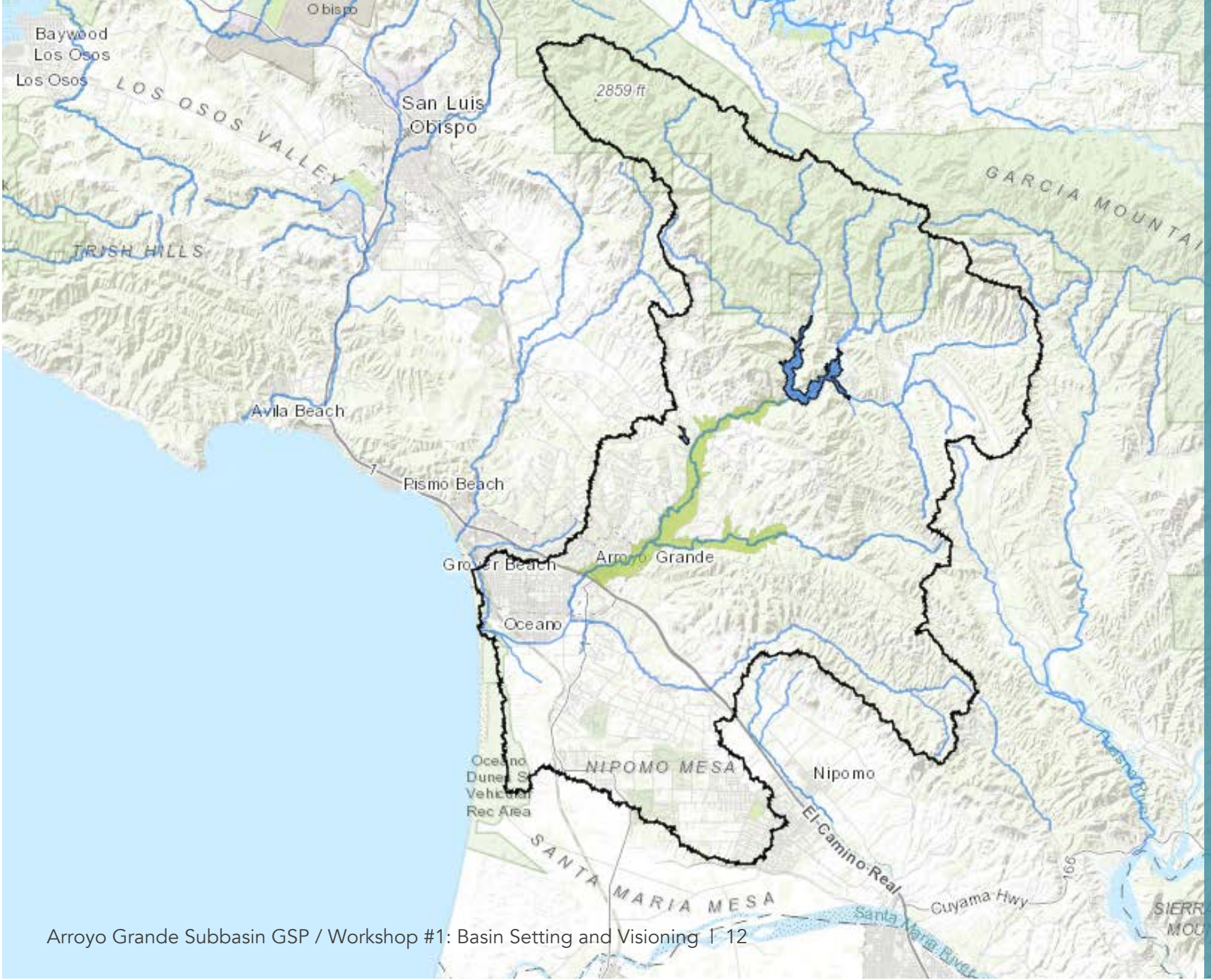
Step 5. Complete the Plan

FINISHED PLAN

APR '21 – JAN '22

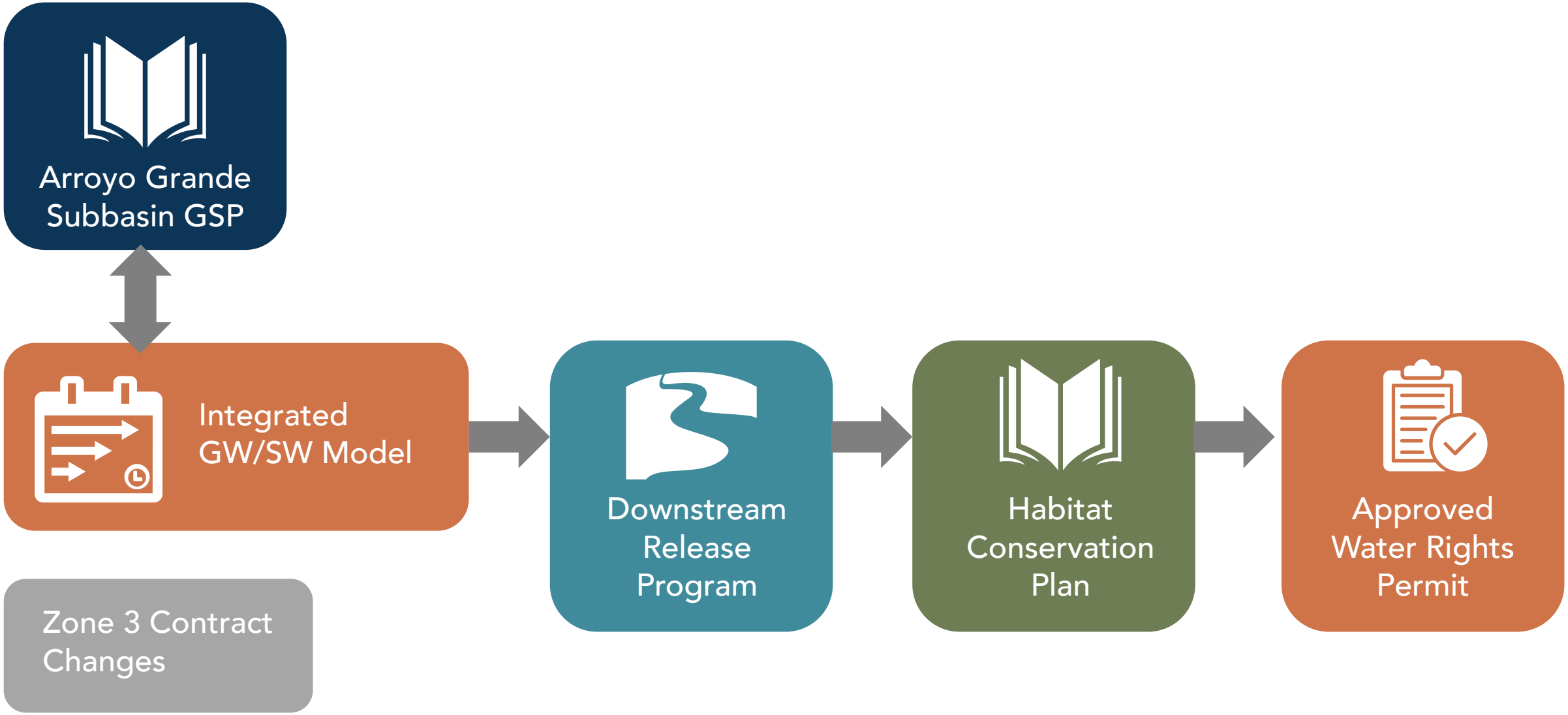
FULL DRAFT GSP / PUBLIC COMMENT PERIOD
NOV 2021

PUBLIC MEETING PROJECT UPDATES — PER DEFINED SCHEDULE
- County Board of Supervisors SGMA Update
- City of AG City Council



The Arroyo Grande Subbasin is a critical component of a much larger regional surface and groundwater system.

GSP Supports Critical AG Creek Initiatives



GSP Project Benefits

Regulatory Compliance

- National Marine Fisheries Services (NMFS) need for enhanced modeling toolsets to support the HCP
- HCP is required for an incidental-take permit and approved water rights permit

Leveraged Grant Funding

- SGMA GSP grant provides a funding source for development of critical modeling toolsets

GSP Project Benefits

Improved Hydrologic Analysis

- Surface water/groundwater hydrologic model for entire Arroyo Grande Creek watershed
- Upper watershed (above the dam) modeling allows for more accurate evaluation of climate change and cloud seeding impacts on reservoir inflow
- Enhanced stormwater flow and capture evaluation opportunities

Enhanced Management

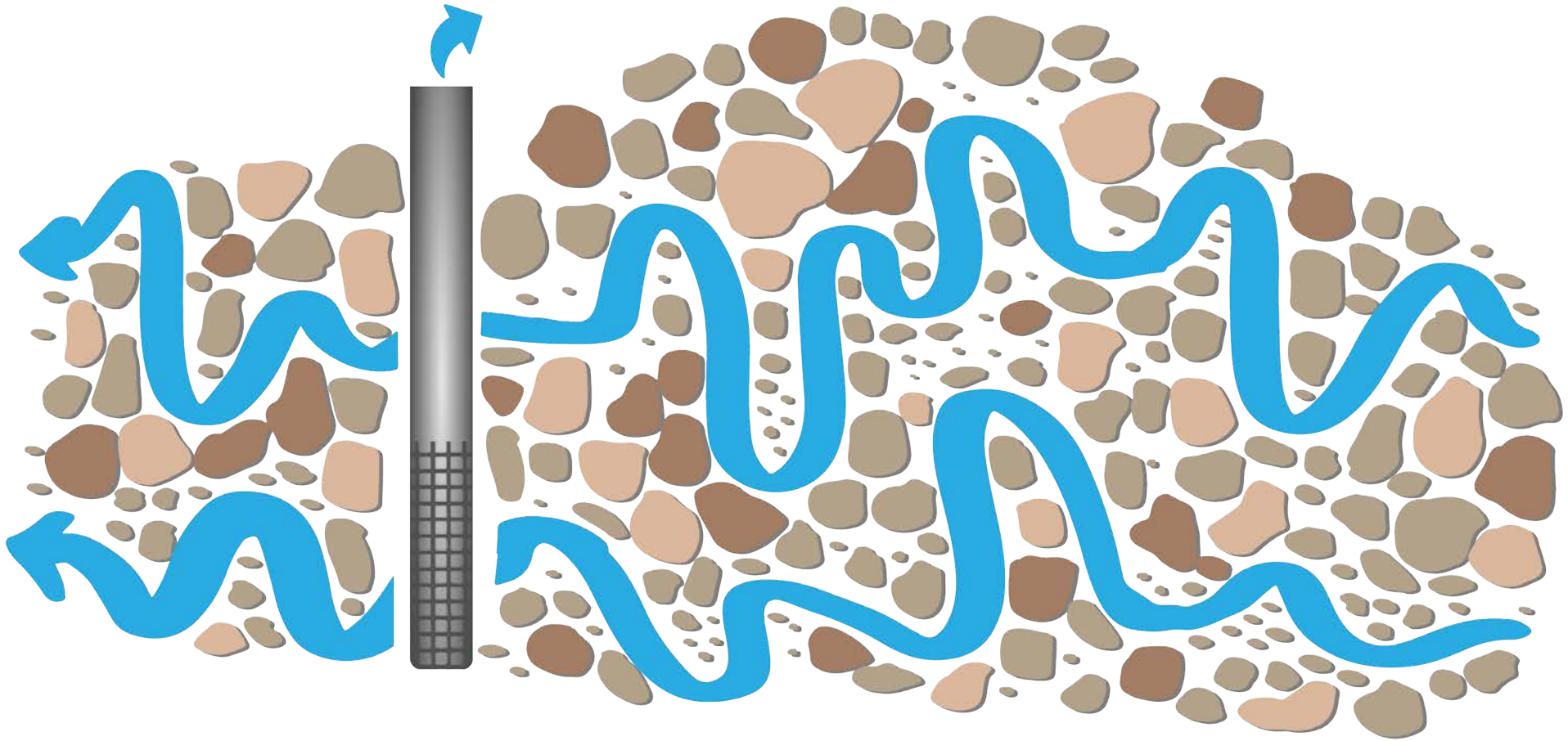
- The surface water/groundwater model integrated with the reservoir operations model (MODSIM)


Questions?

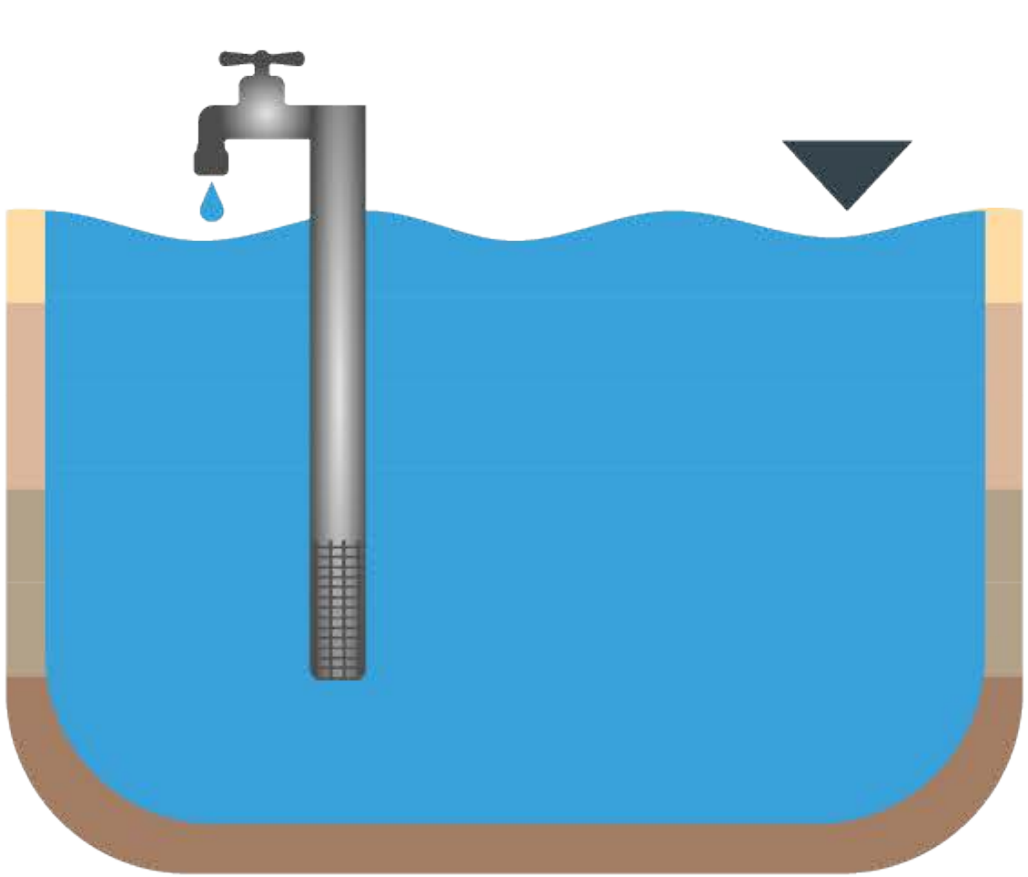
Groundwater 101

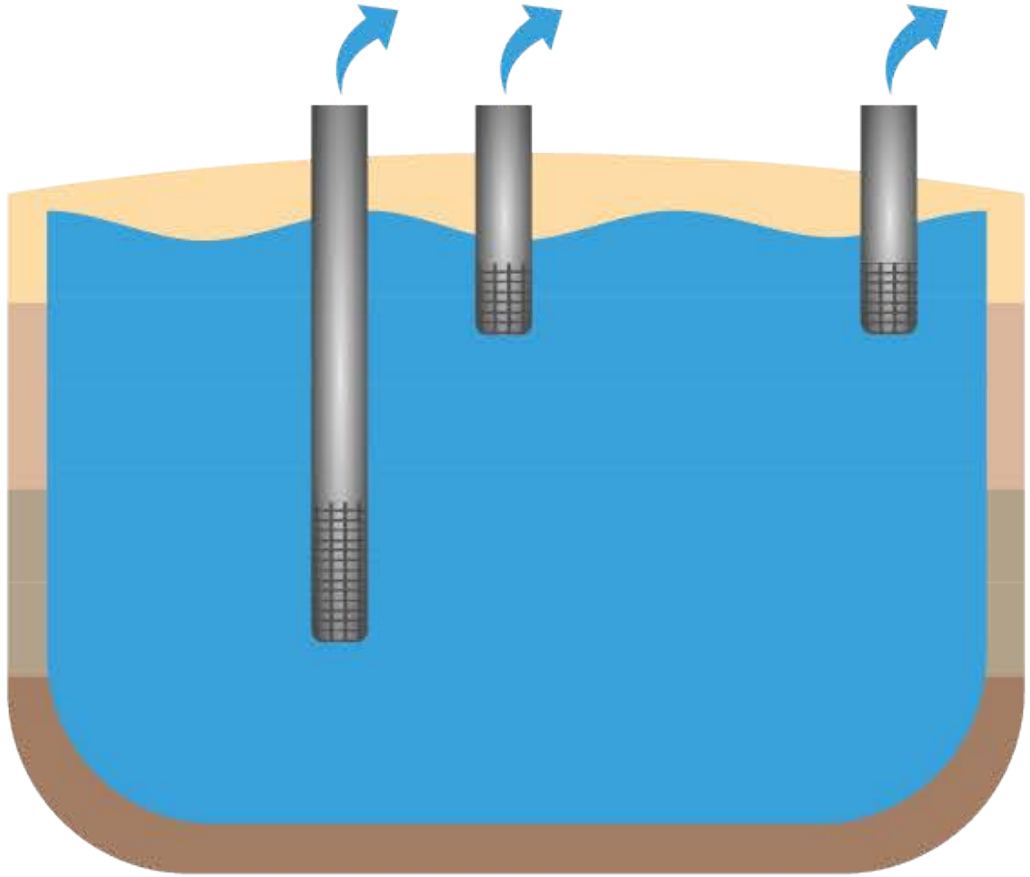
DAVE O'ROURKE, WSC

What is groundwater?

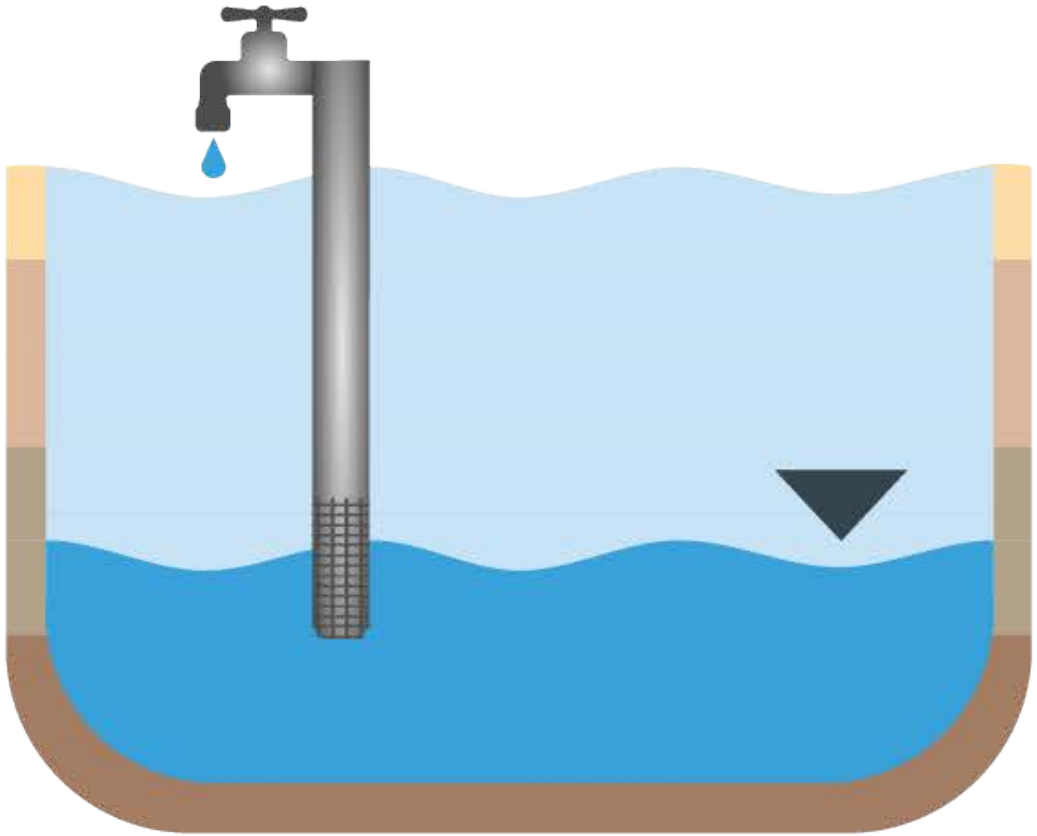


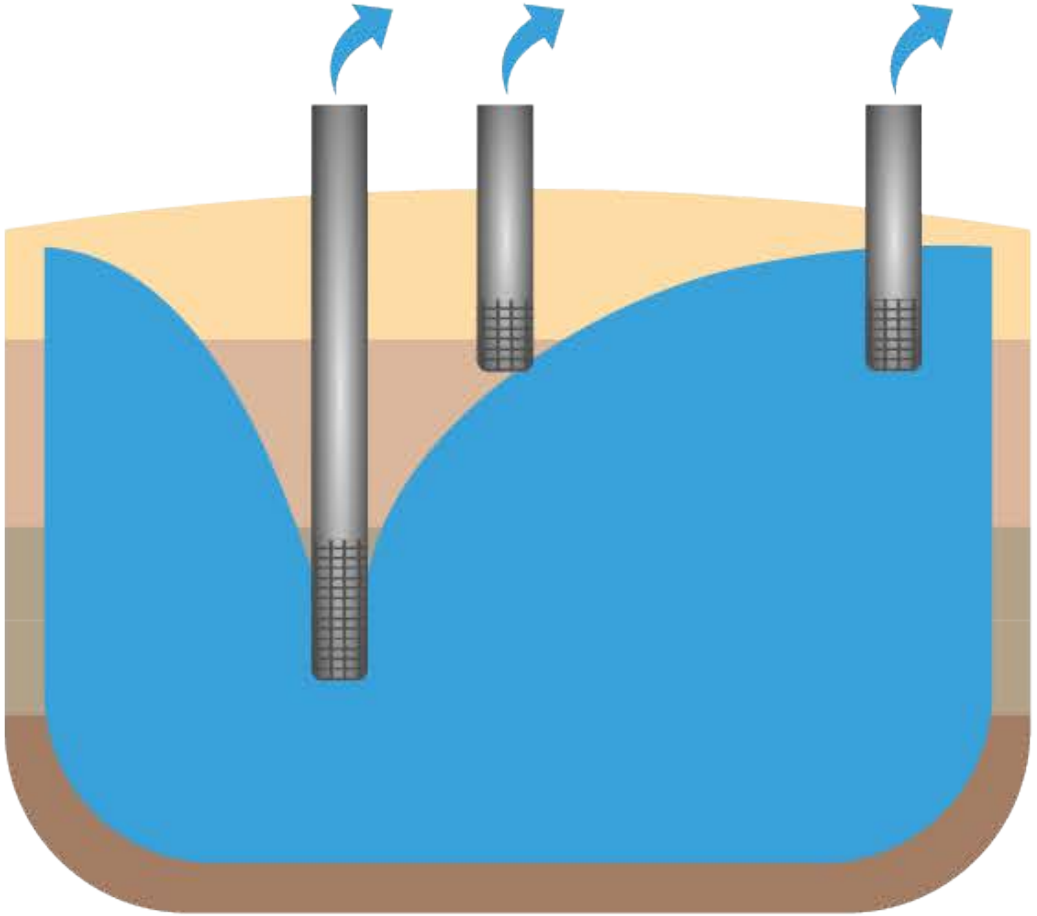
Surface Water vs. Groundwater





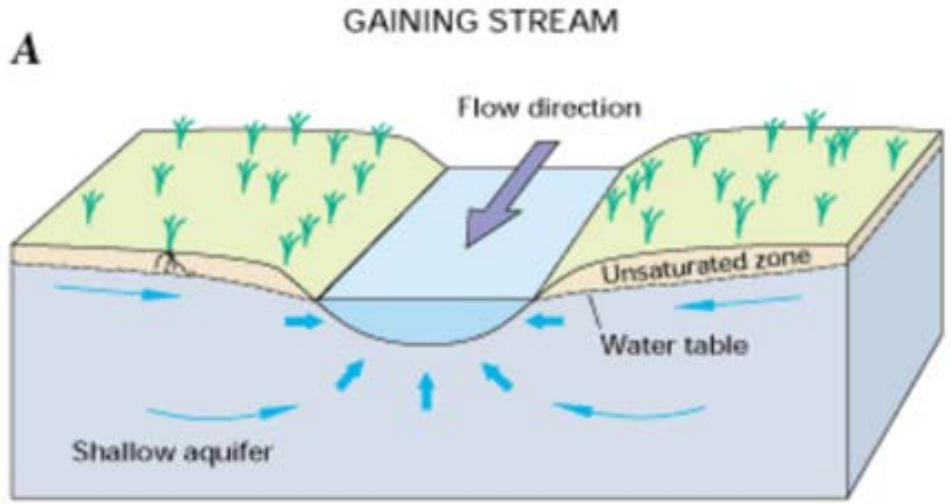
Surface Water vs. Groundwater

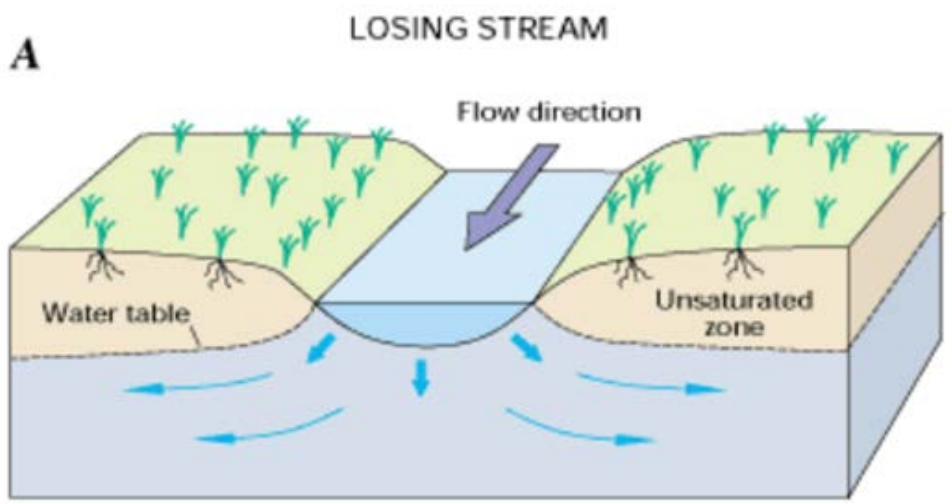


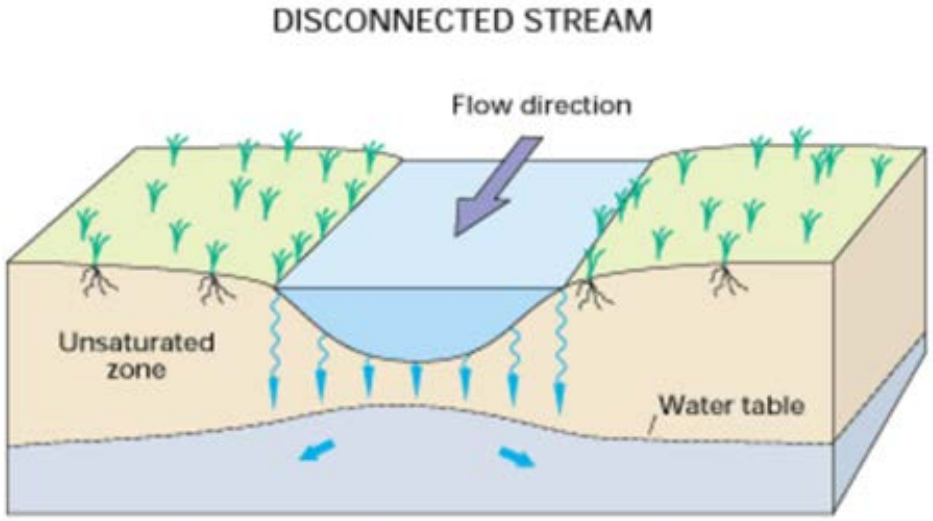


Surface Water Groundwater Interaction

Gaining and Losing Stream Examples







- **The same stream may be gaining or losing at different locations, or may change seasonally.**

Groundwater Sustainability Indicators

CHRONIC LOWERING OF GROUNDWATER LEVELS

REDUCTION OF GROUNDWATER STORAGE

LAND SUBSIDENCE

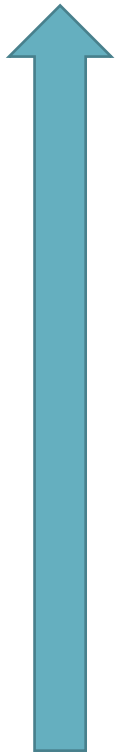
WATER QUALITY DEGRADATION

INTERCONNECTED SURFACE WATER DEPLETIONS

SEAWATER INTRUSION

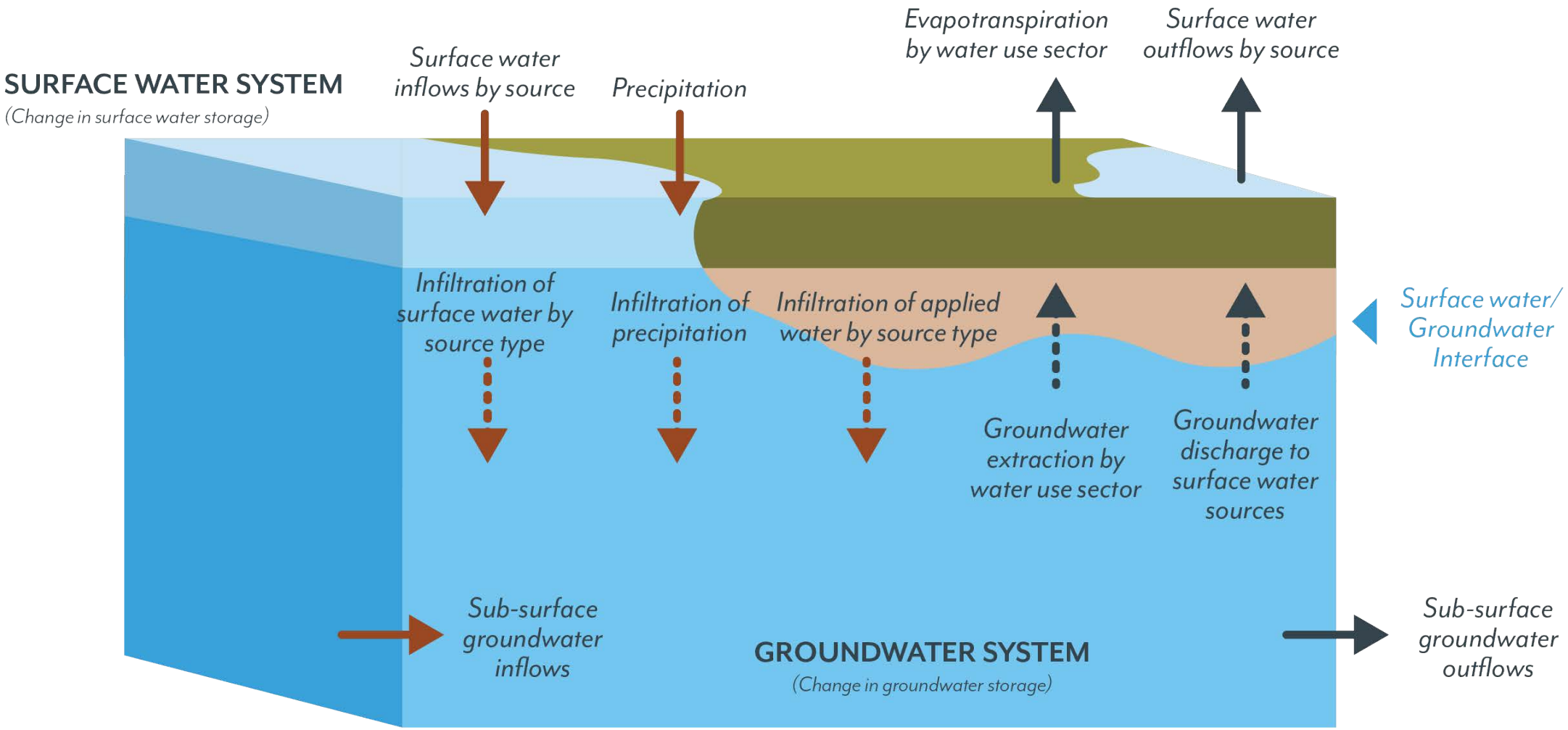
Groundwater Data We Use and Analyze

- **Water Level Hydrographs:** Point in space over variable time
- **Water level map:** Point in time over **variable space**
- **Changes in water levels:** Addition/subtraction of water level mapped surfaces
- **Water budget:** Uses indirect data



Increasing reliability of data

The Water Budget

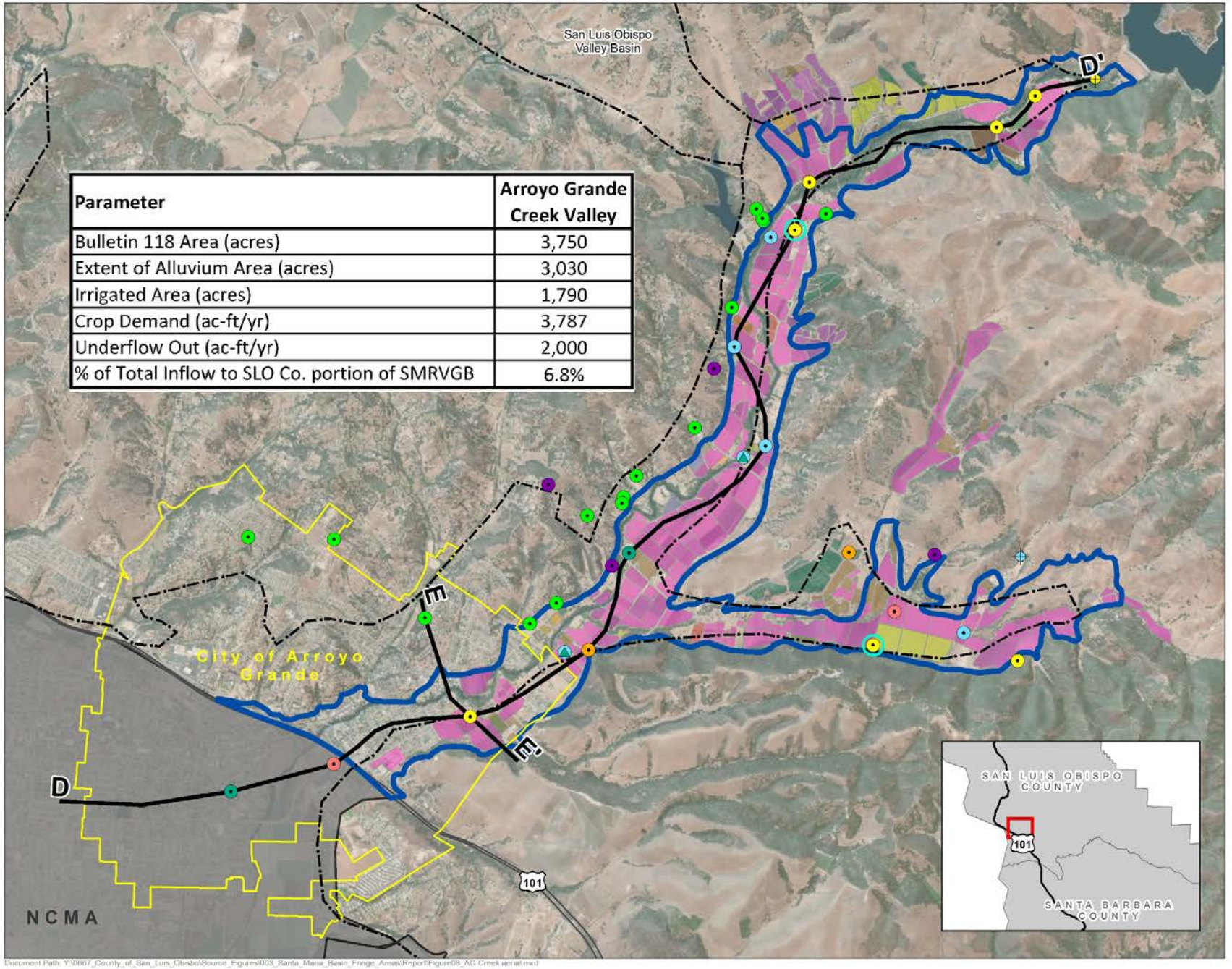


Overview of the Basin Setting

DAVE O'ROURKE

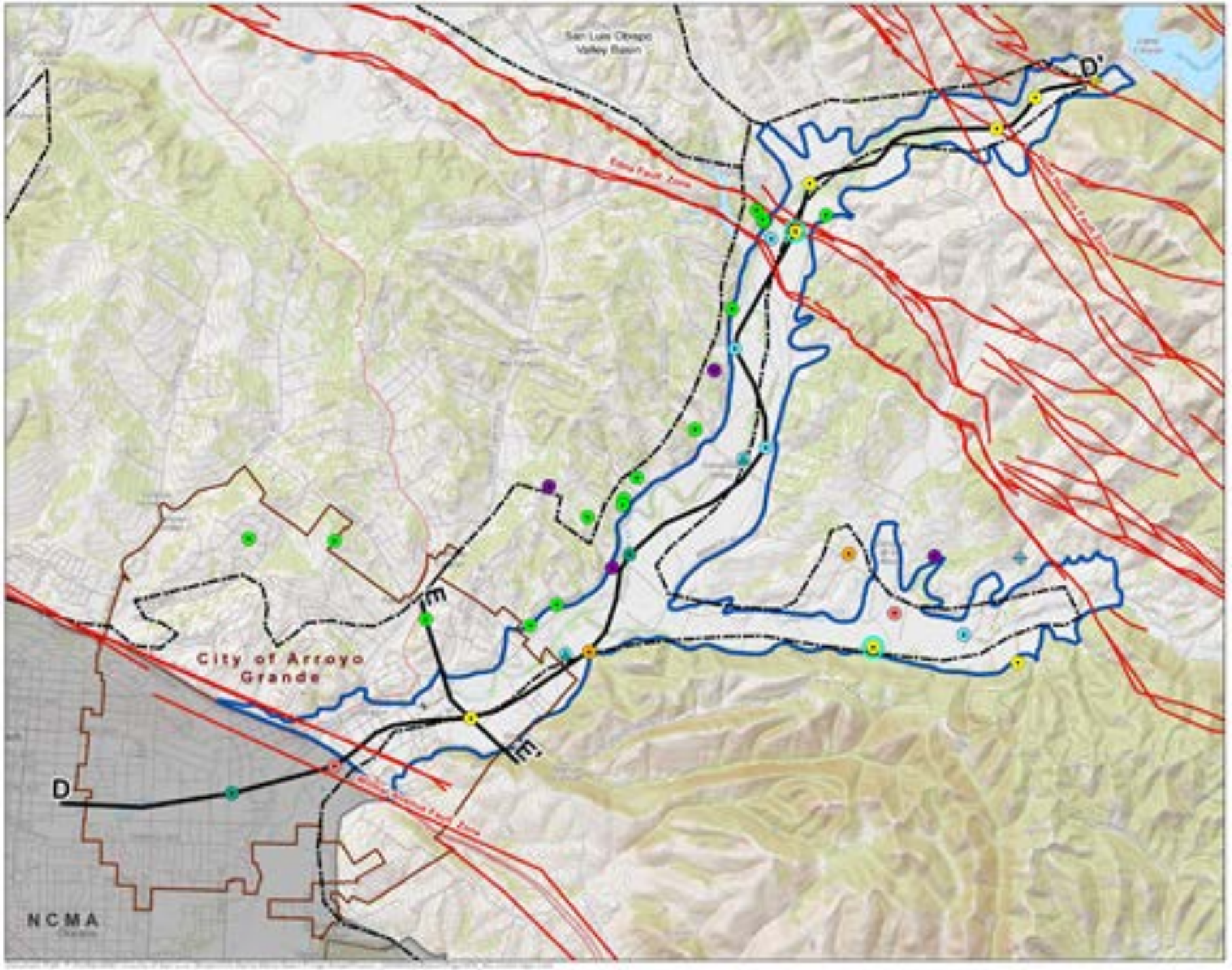
Aerial Photograph of Subbasin

- Agriculture is primary land use
- Arroyo Grande Creek flow depends on Lake Lopez Releases
- Tar Springs Creek has natural flow.

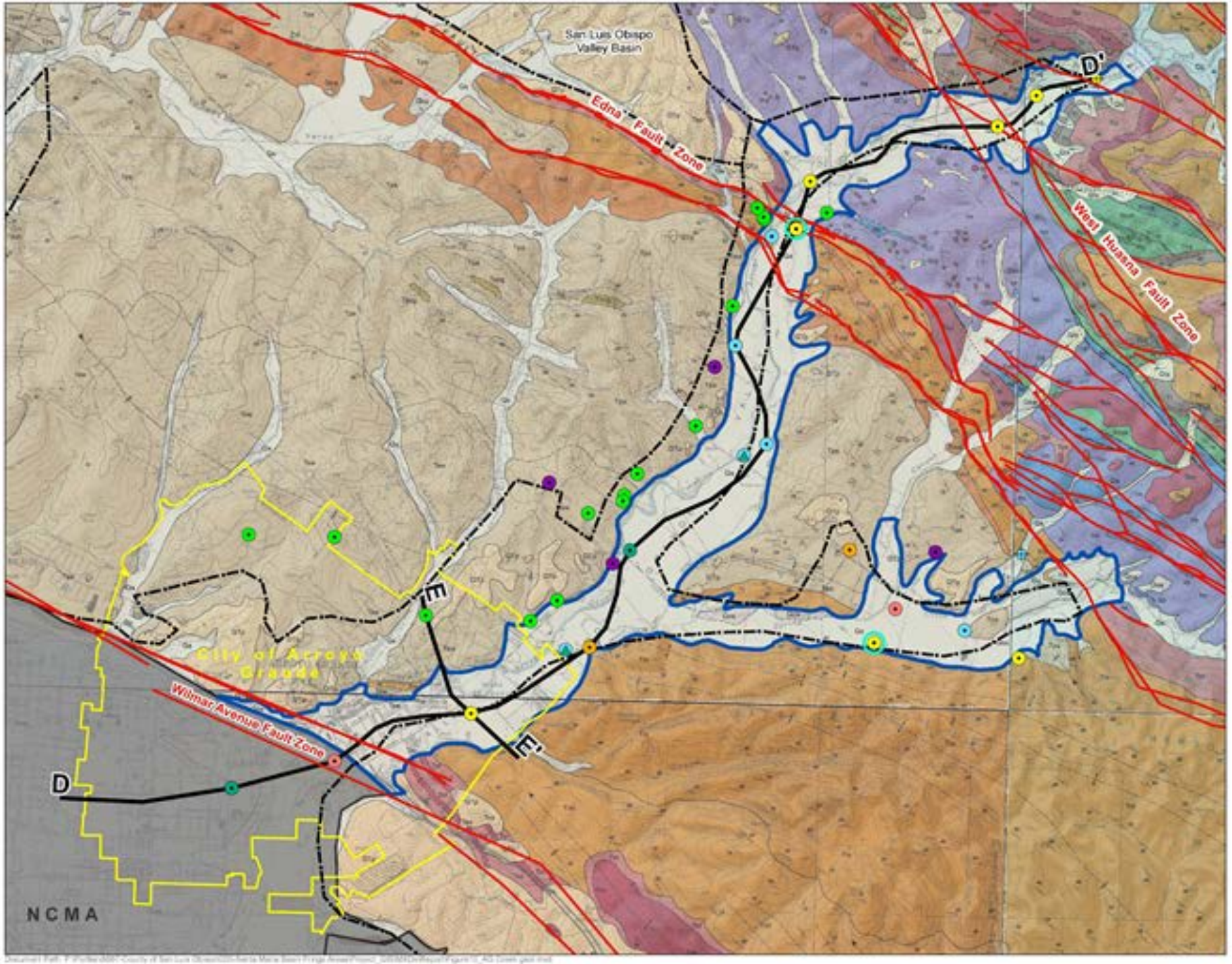


Parameter	Arroyo Grande Creek Valley
Bulletin 118 Area (acres)	3,750
Extent of Alluvium Area (acres)	3,030
Irrigated Area (acres)	1,790
Crop Demand (ac-ft/yr)	3,787
Underflow Out (ac-ft/yr)	2,000
% of Total Inflow to SLO Co. portion of SMRVGB	6.8%

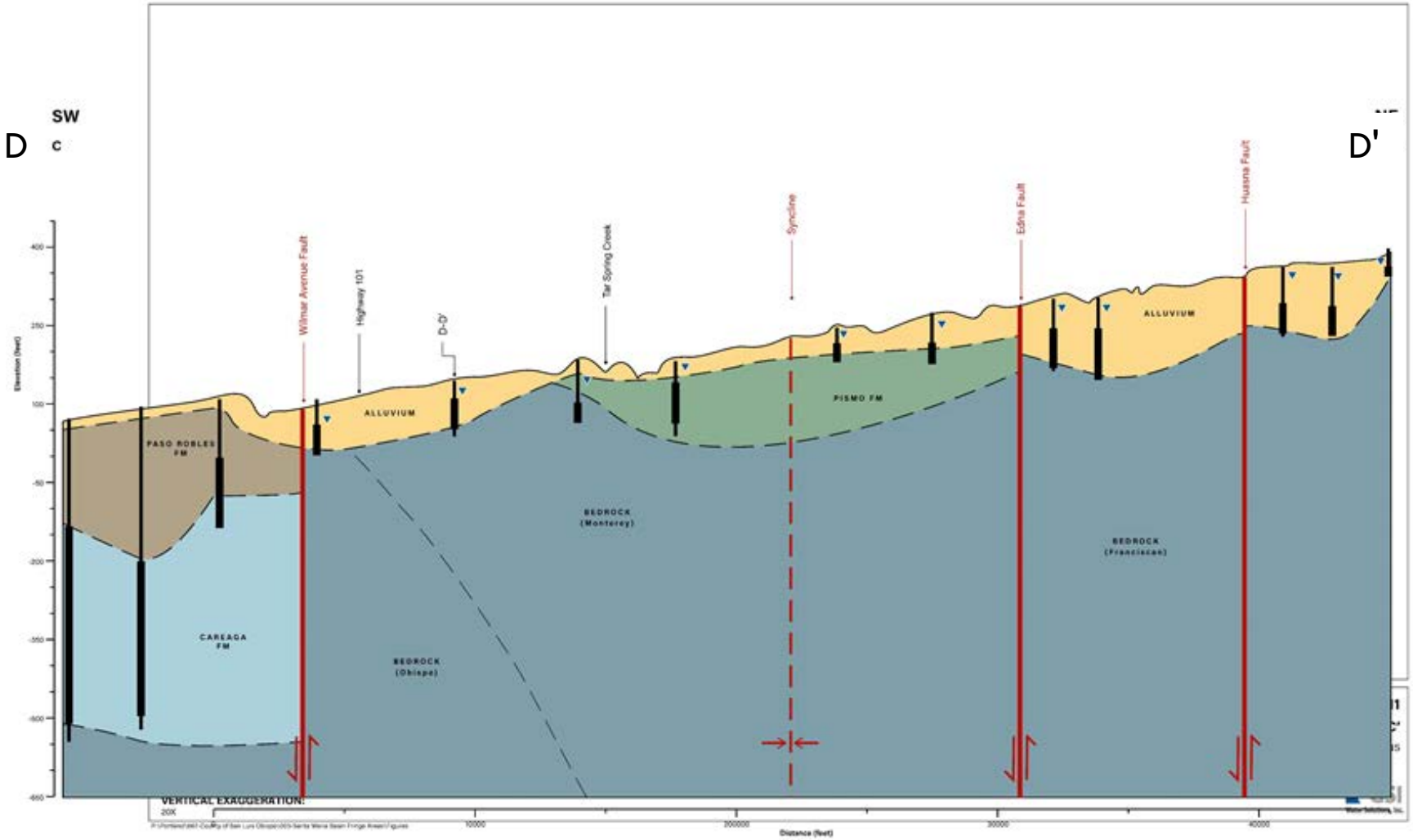
Topographic Map of Subbasin



Geologic Map of Subbasin

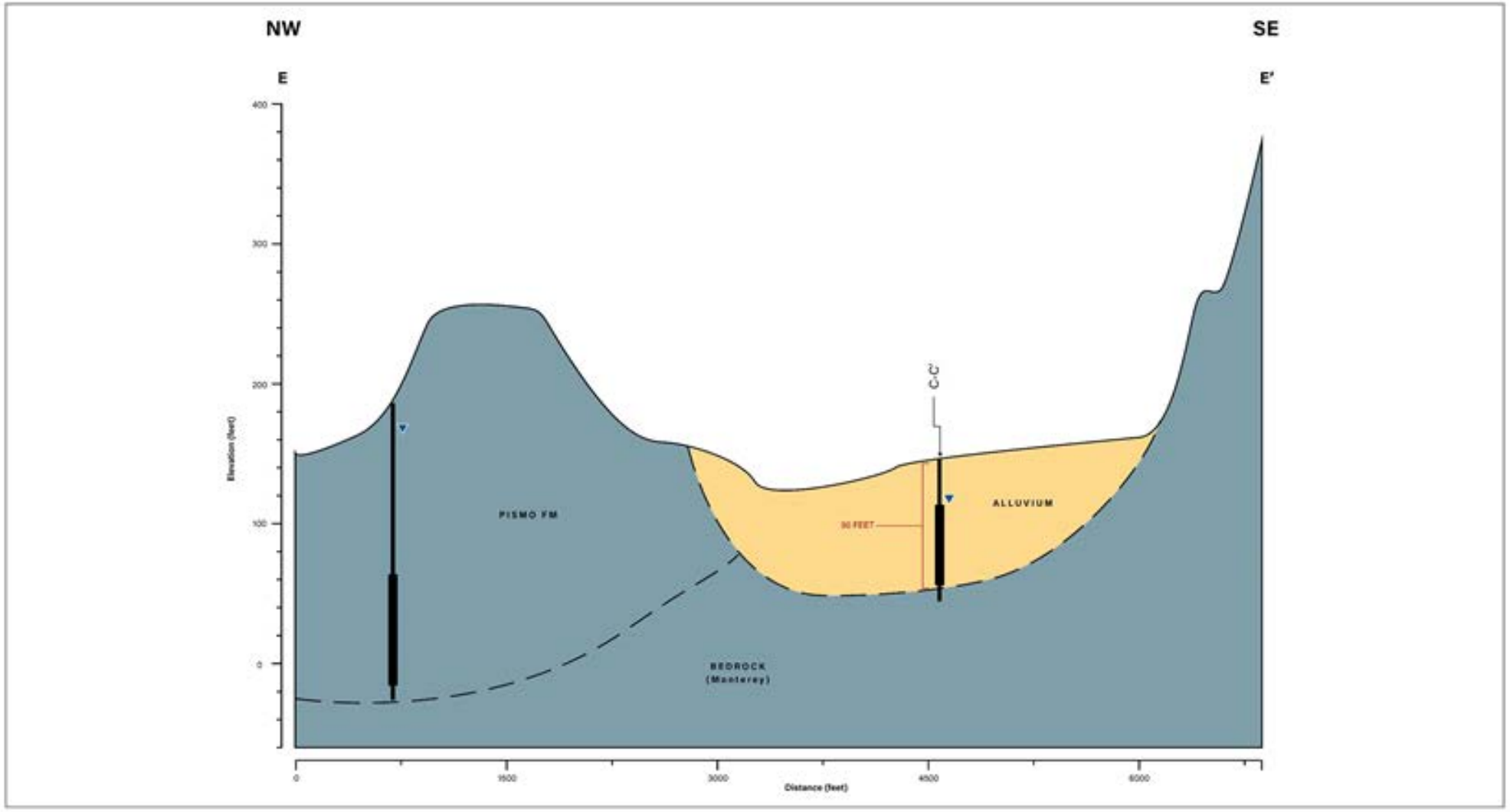


Conceptual Cross-Section of Basin (Down Valley)

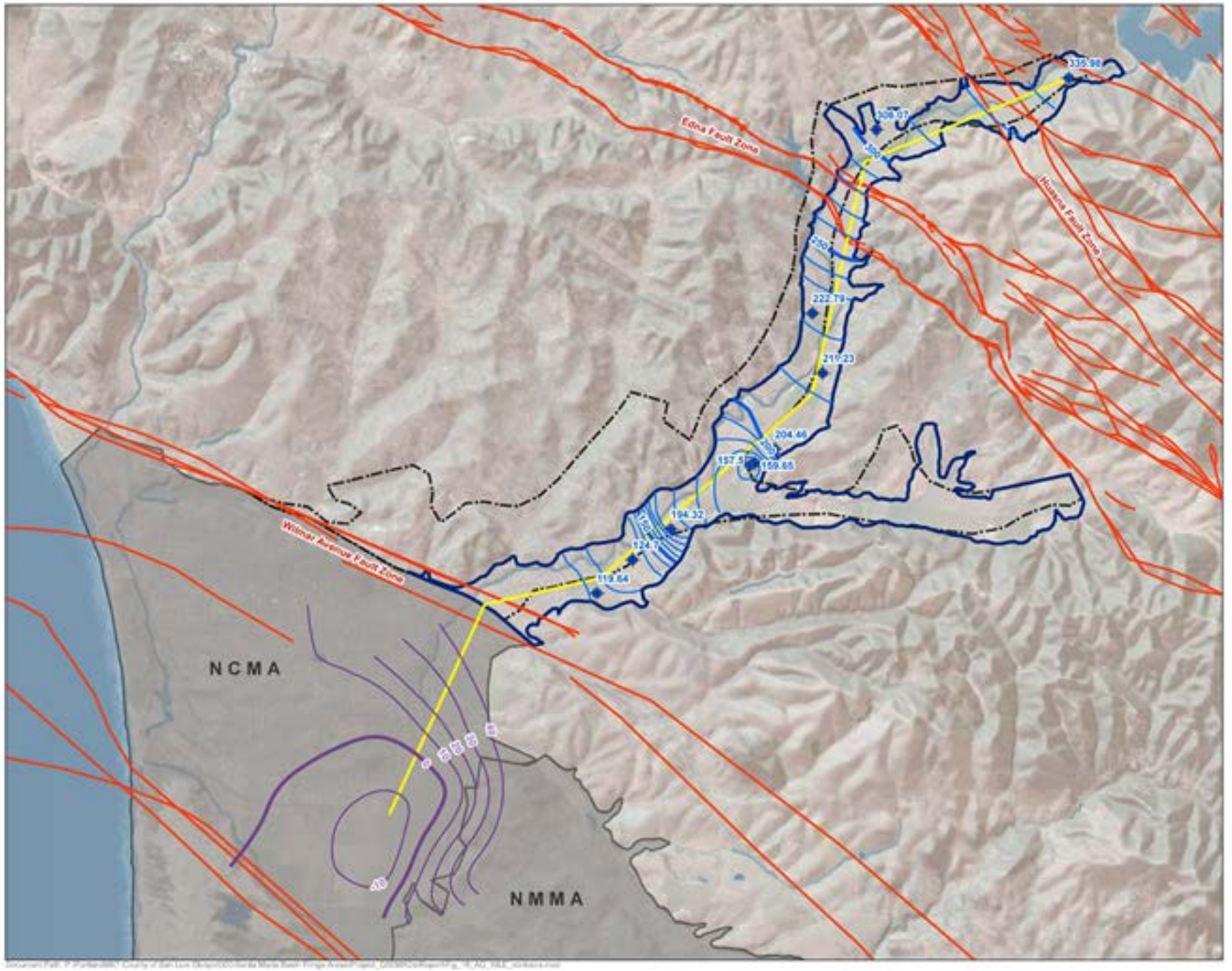


- 100-150 feet of alluvial sediments atop bedrock.
- Wilmar Avenue Fault is downgradient extent of sub-basin

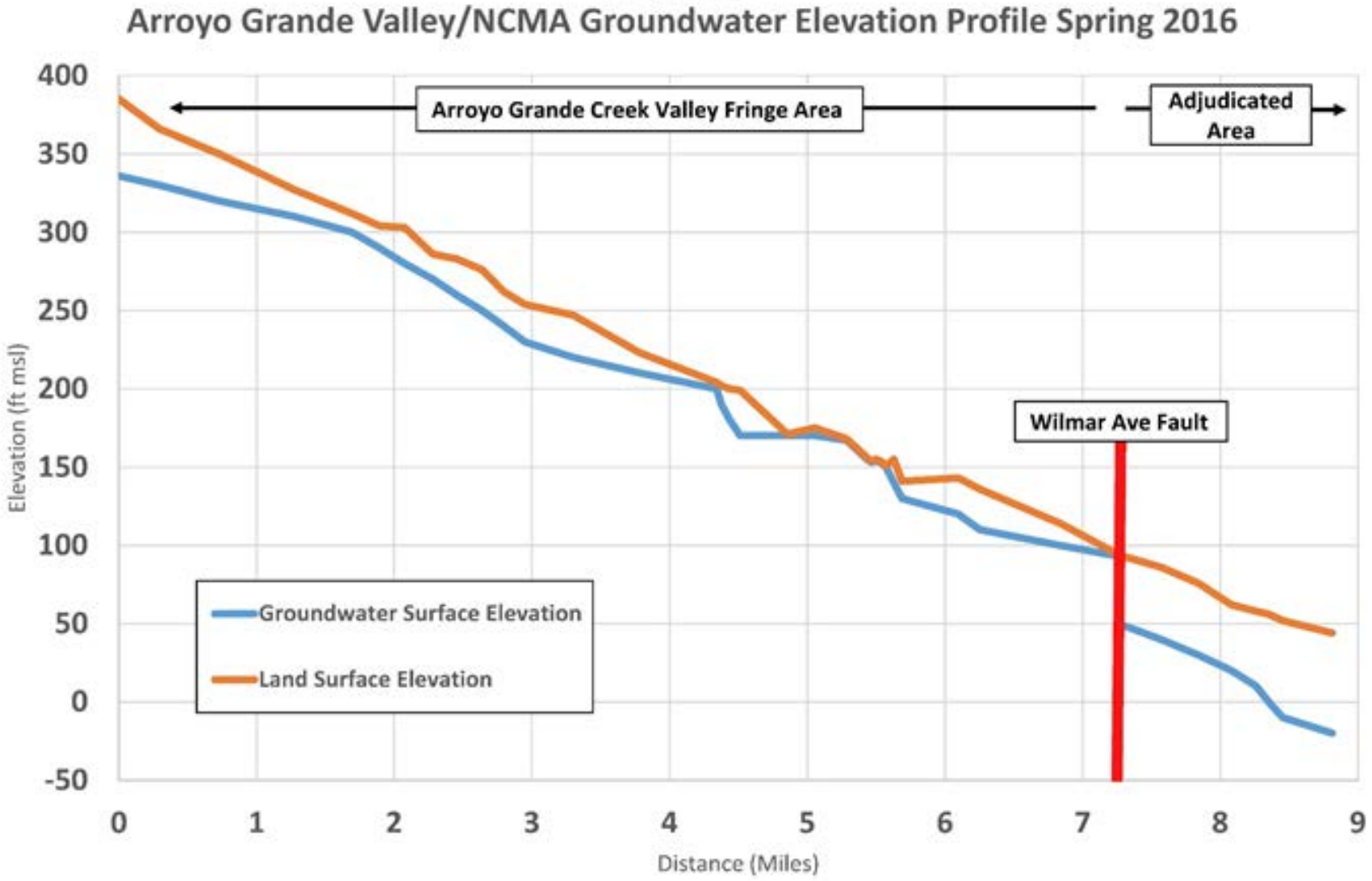
Conceptual Cross-Section of Basin (Cross Valley)



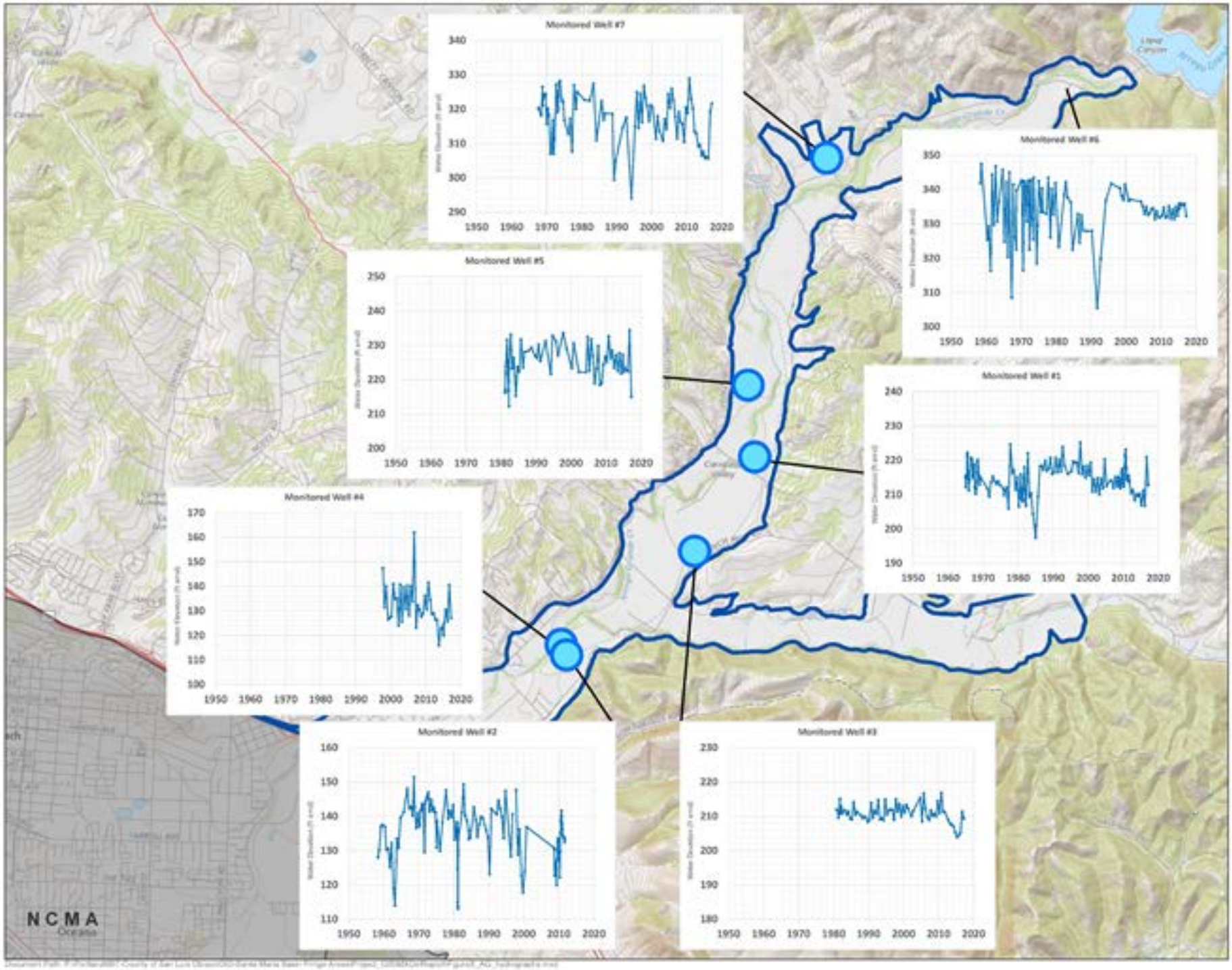
Spring 2016 Groundwater Elevation Contour Maps



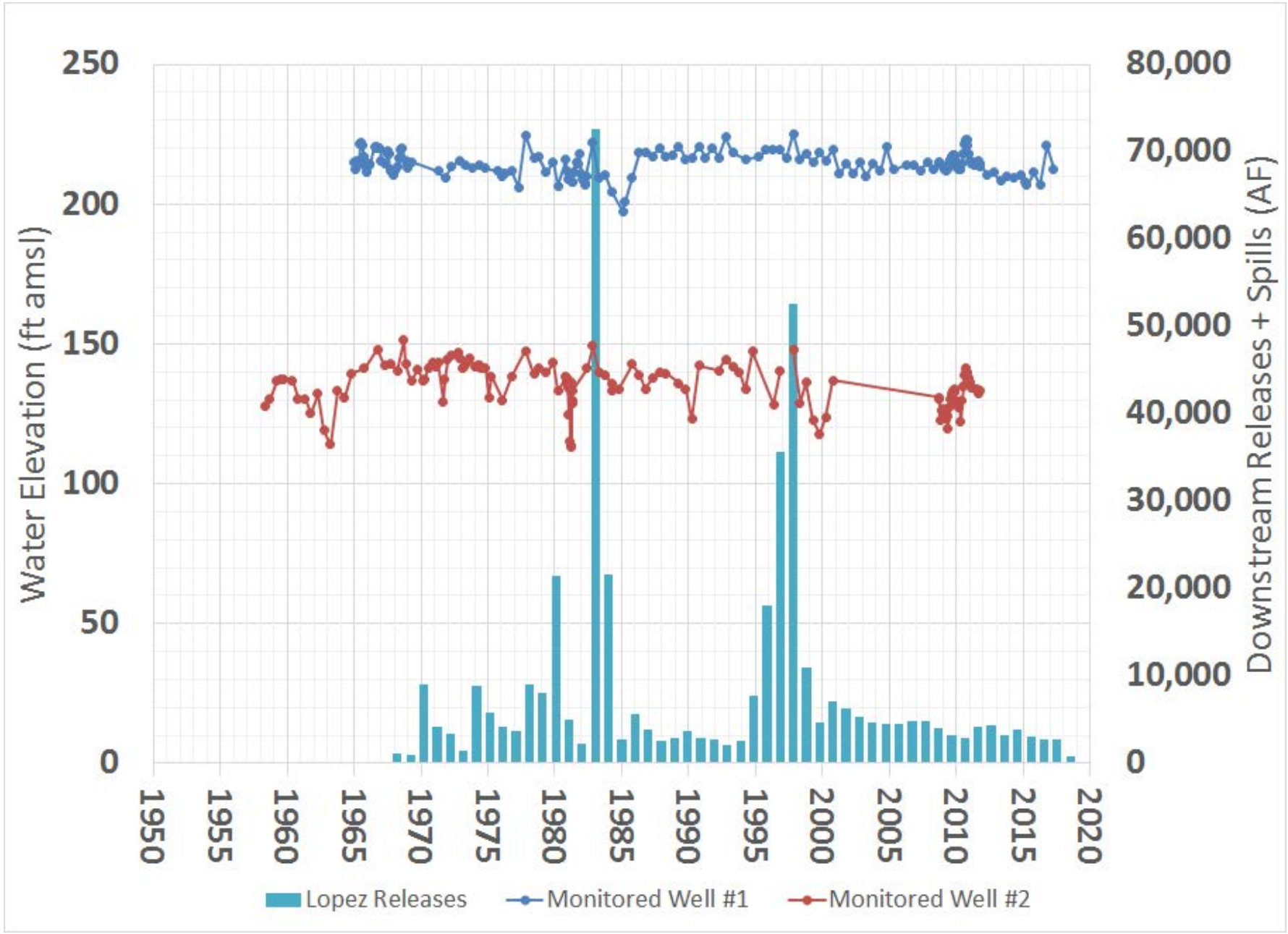
Groundwater Elevation Profile



Groundwater Elevation Hydrograph



Lopez Releases and Groundwater Elevations



Groundwater Data Request

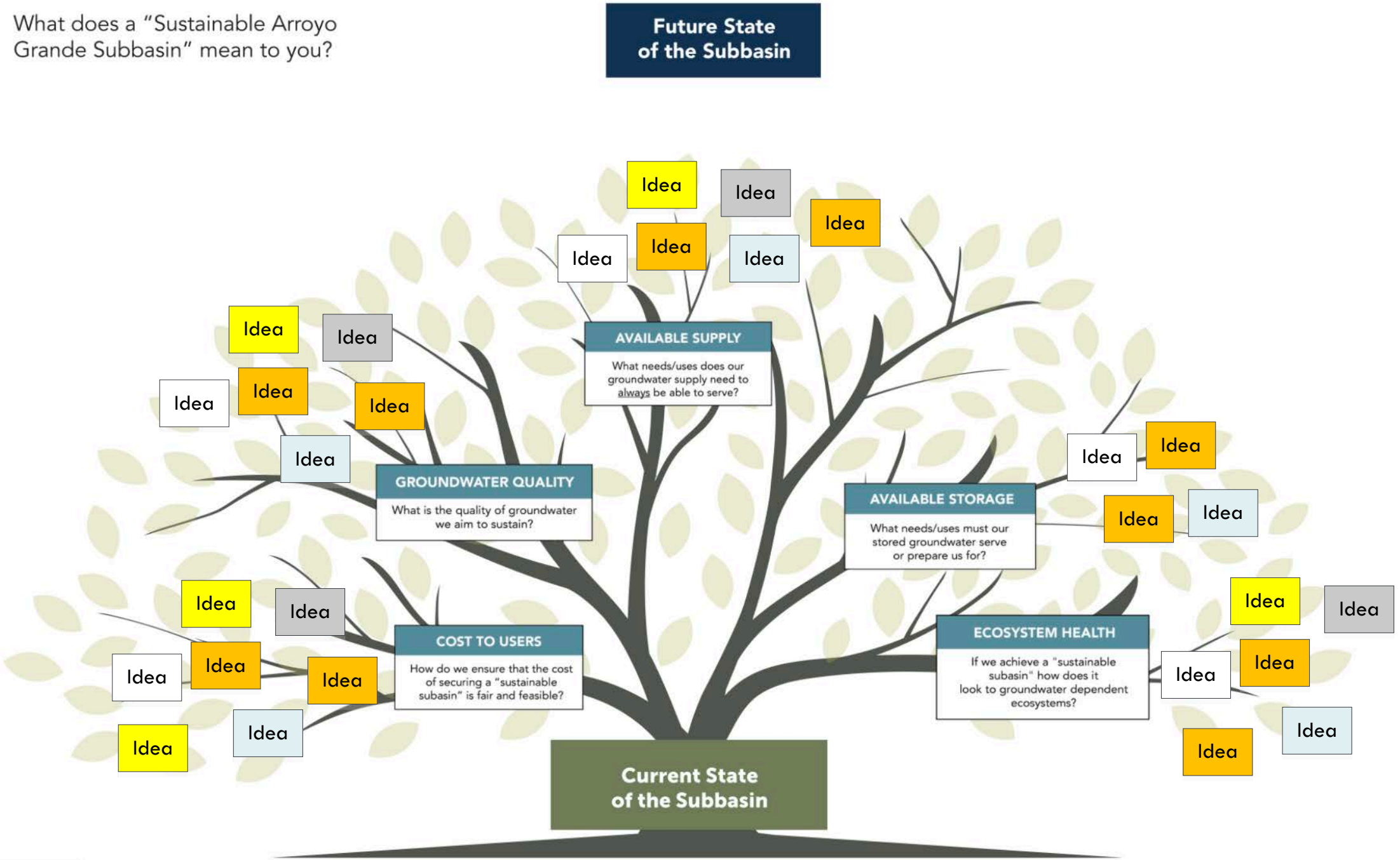
Arroyo Grande Subbasin GSP / Workshop #1: Basin Setting and Visioning | 36

Visioning Exercise

TIFFANY MEYER, WSC

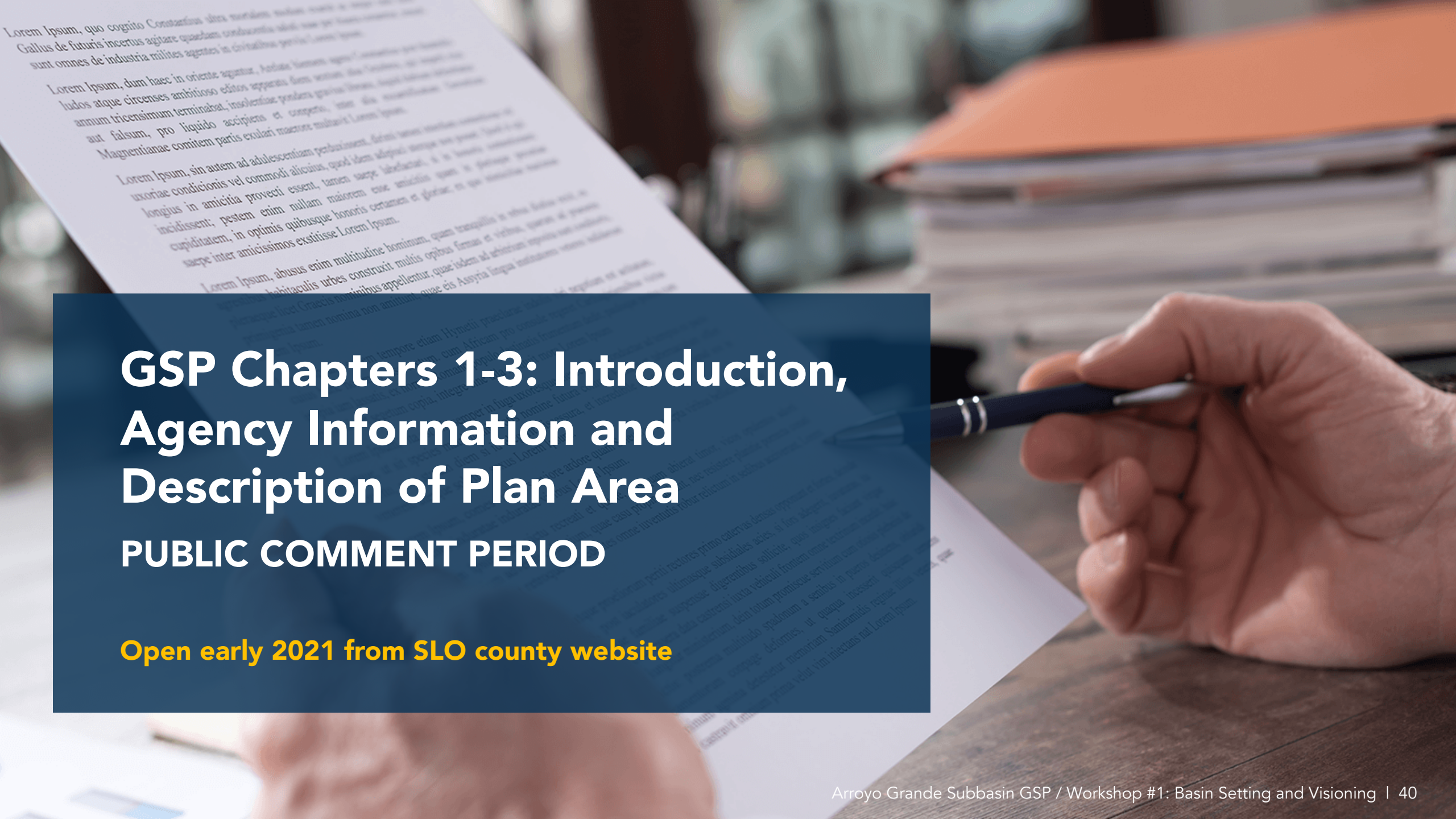
BASIN VISIONING EXERCISE

What does a "Sustainable Arroyo Grande Subbasin" mean to you?



What's Next?

TIFFANY MEYER, WSC



GSP Chapters 1-3: Introduction, Agency Information and Description of Plan Area

PUBLIC COMMENT PERIOD

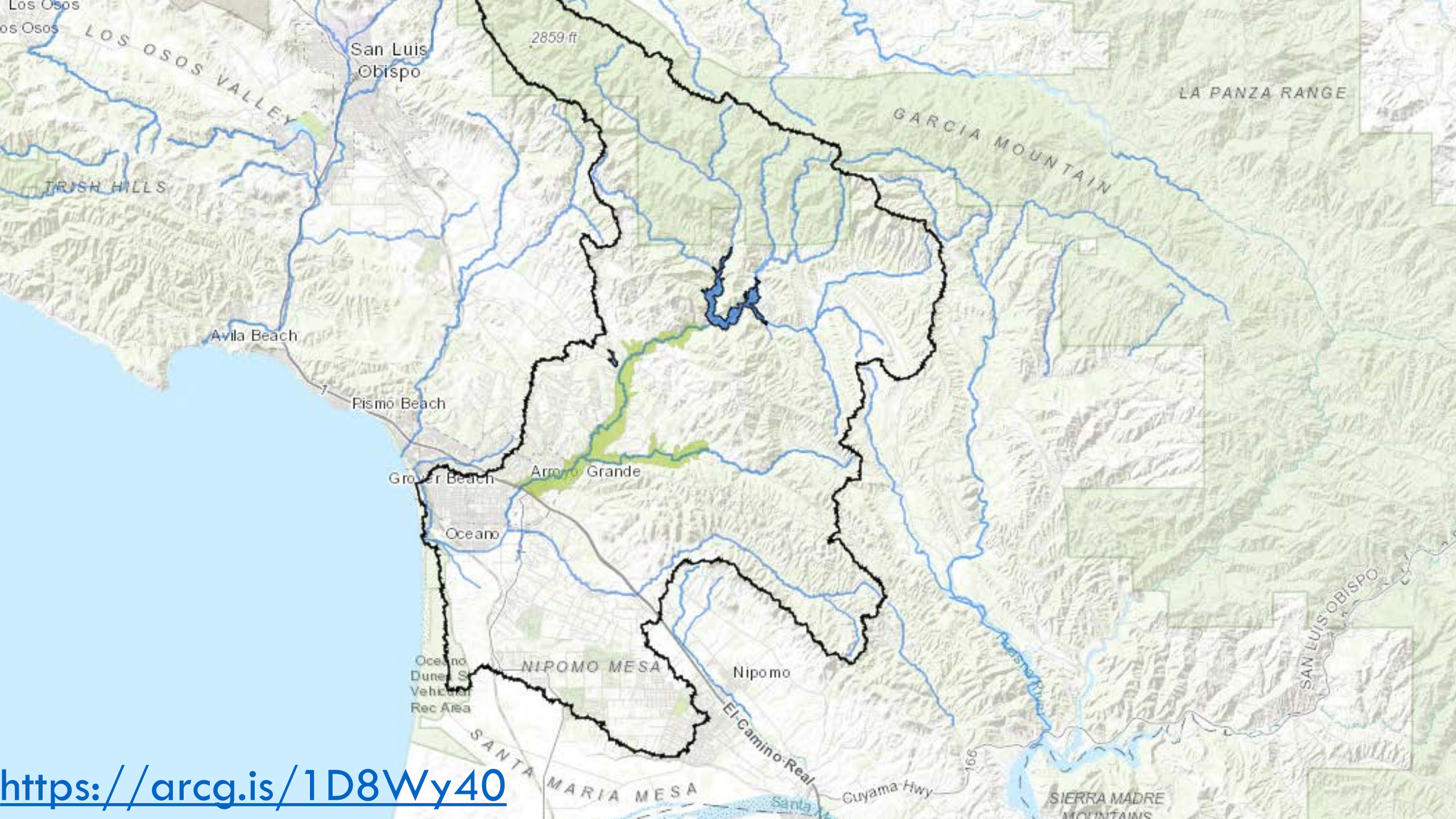
Open early 2021 from SLO county website

Workshop #2: Sustainable Goal Setting

Mar. 3, 2021 • 3:00pm-5:00pm •
Virtual via Zoom Meetings

Subscribe for email alerts

www.SLOCounty.ca.gov/AGBasin



https://arcg.is/1D8Wy40