

GROUNDWATER AND SGMA 101

Stakeholder Workshop for the SLO Basin
Groundwater Sustainability Plan

AUGUST 14, 2019 • 6PM-8PM

PREPARED BY WATER SYSTEMS CONSULTING



SECURING
SUSTAINABLE
GROUNDWATER
in the SLO Basin



PRESENTERS



MICHAEL CRUIKSHANK, PG, CHG

Hydrogeologist, Water Systems
Consulting



DAVID O'ROURKE, PG, CHG

Hydrogeologist, GSI Water Solutions



TIFFANY MEYER

Strategic Communications,
Water Systems Consulting

PANELISTS



DICK TZOU, PE

Water Resources Engineer,
County of San Luis Obispo



MYCHAL BOERMAN

Deputy Director of Water,
City of San Luis Obispo

WORKSHOP AGENDA

6:00pm-8:00pm

1. **SGMA 101**
2. **Groundwater 101**
3. **The SLO Basin**
4. **The GSP Process**
5. **Stakeholder Participation**

KEY TERMS:

Use Your Cheat Sheet



SGMA 101

Michael Cruikshank

5 REASONS GROUNDWATER IS IMPORTANT TO CALIFORNIANS

1. Groundwater provides 30-60% of California's water — 83% in the Central Coast area of SLO County.
2. Some California communities rely entirely on groundwater for drinking water.
3. Groundwater is a critical resource for many farmers throughout the state
4. Groundwater is a finite resource.
5. It takes a long time to replenish over pumped aquifers.

WHY SGMA?

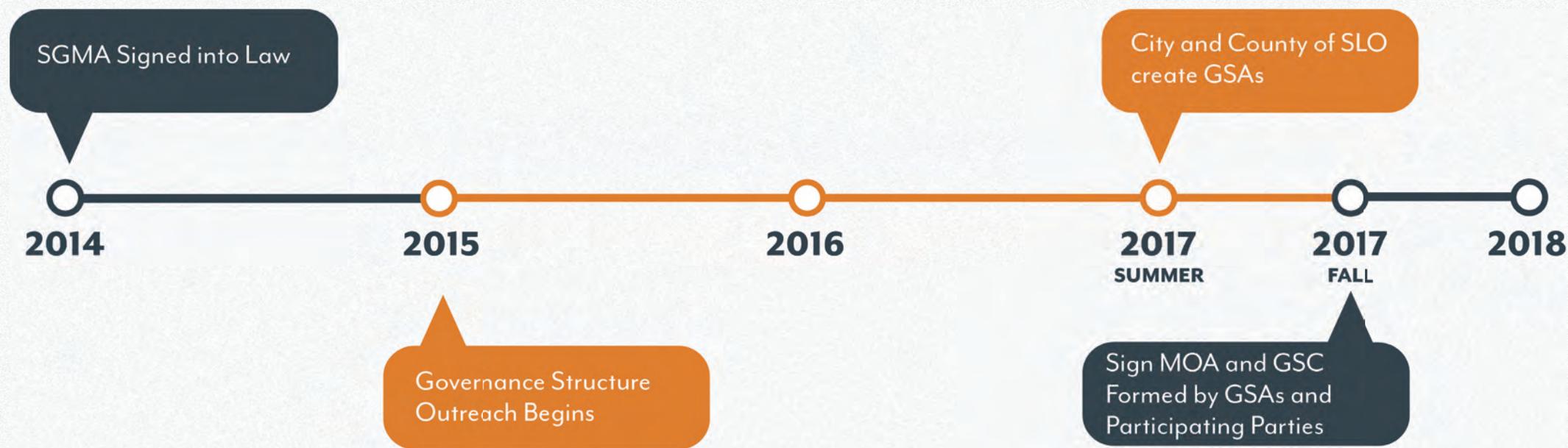
To ensure the sustainable use of California's groundwater and a water secure future for the State, the **Sustainable Groundwater Management Act (SGMA)** was signed into law in 2014.

HIGH AND MEDIUM PRIORITY BASINS

OPEN INTERACTIVE MAP

<https://gis.water.ca.gov/app/bp-dashboard/p2/>

GOVERNANCE TIMELINE



GSP GOVERNANCE

Groundwater Sustainability Agencies

Groundwater Sustainability Commission

GROUNDWATER SUSTAINABILITY COMMISSION (GSC)



Adam Hill
Member

Bruce Gibson
Alternate



Andy Pease
Member

Aaron Floyd
Alternate

**EDNA VALLEY
GROWERS
MWC**

Bob Schiebelhut
Chair

George Donati
Alternate

**EDNA RANCH
AND VARIAN
RANCH MWC**

Dennis Fernandez
Member

James Lokey
Alternate



Mark Zimmer
Vice Chair

Toby Moore
Alternate

**GROUNDWATER SUSTAINABILITY
AGENCIES (GSAS)**

SGMA DEADLINES





SGMA 101

Q&A





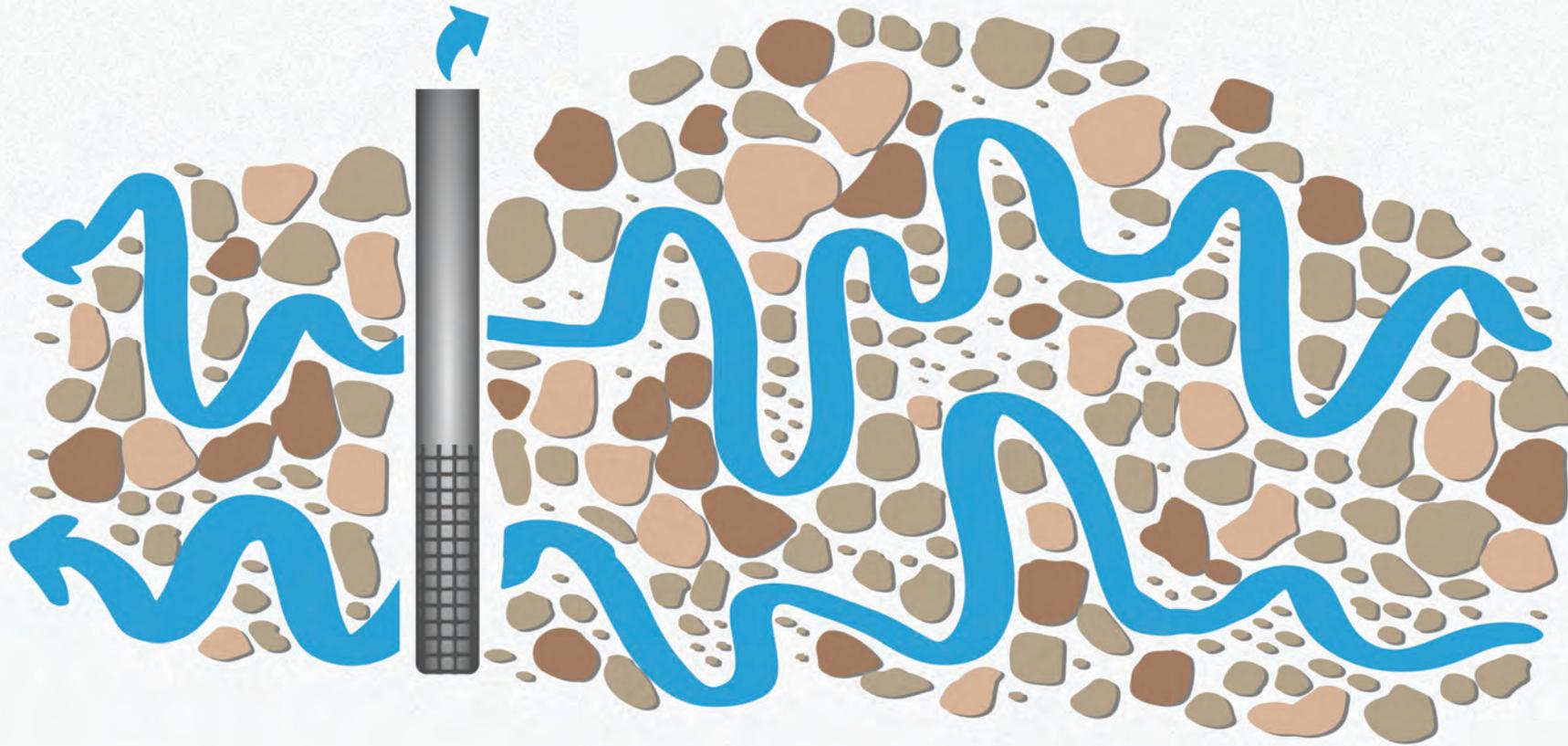
GROUNDWATER 101

David O'Rourke

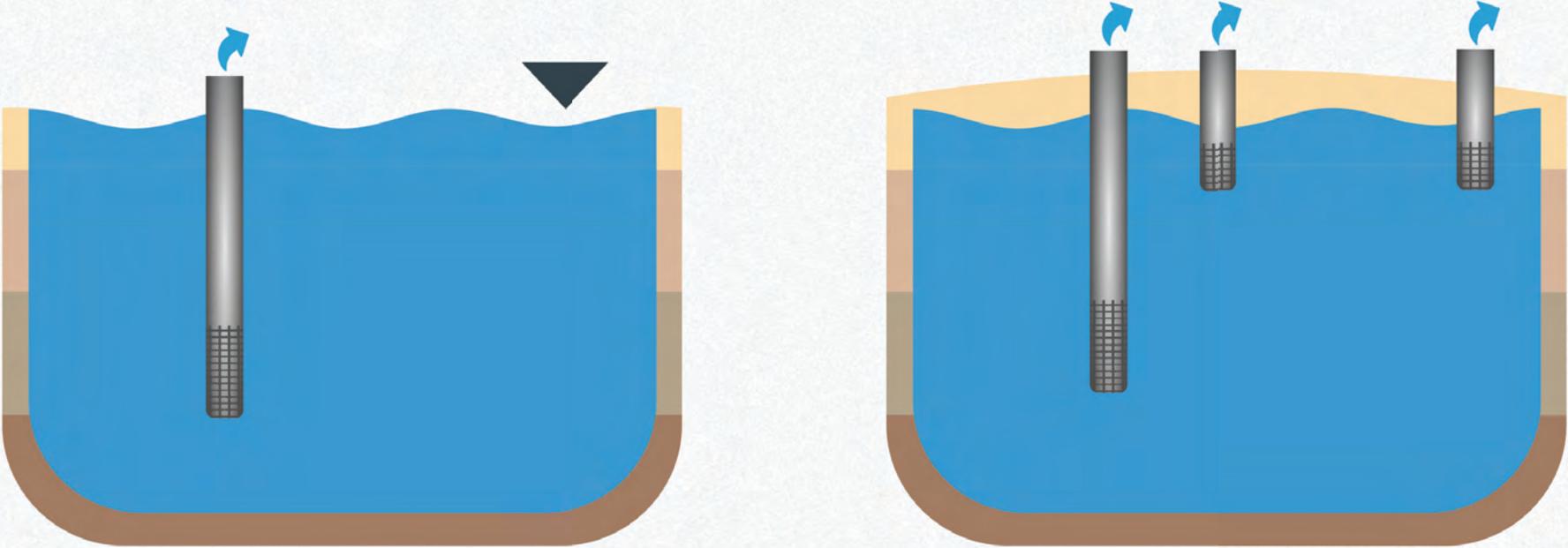
WHAT IS GROUNDWATER?

Groundwater is the water found underground in the cracks and spaces in soil, sand and rock. It is stored in and moves slowly through geologic formations of soil, sand and rocks called **aquifers**.

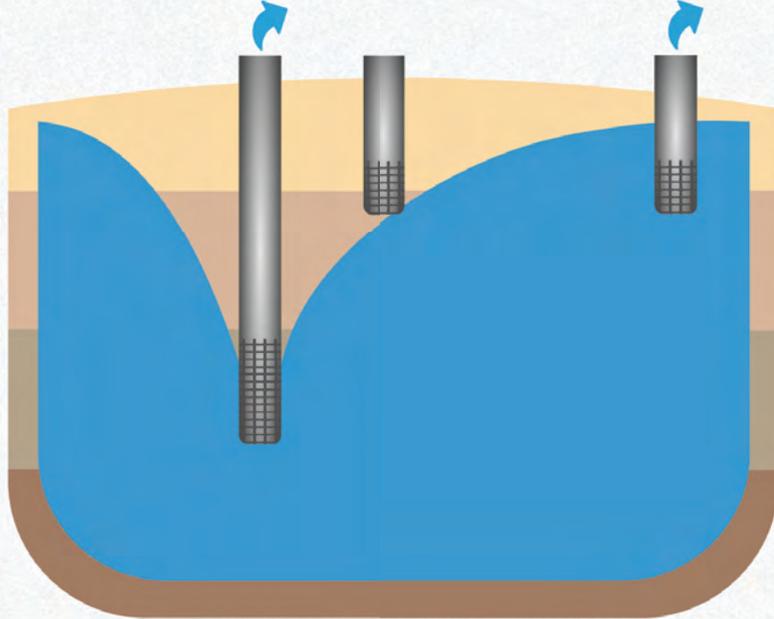
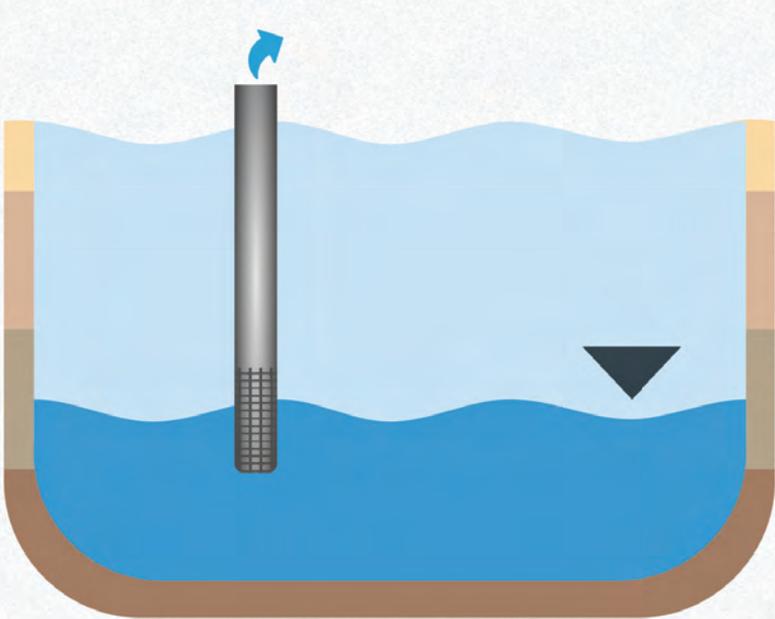
WHAT IS GROUNDWATER?



SURFACE WATER vs. GROUNDWATER



SURFACE WATER vs. GROUNDWATER



GROUNDWATER SUSTAINABILITY INDICATORS



Chronic Lowering of
Groundwater Levels



Reduction of
Groundwater Storage



Land Subsidence



Water Quality
Degradation



Interconnected Surface
Water Depletions



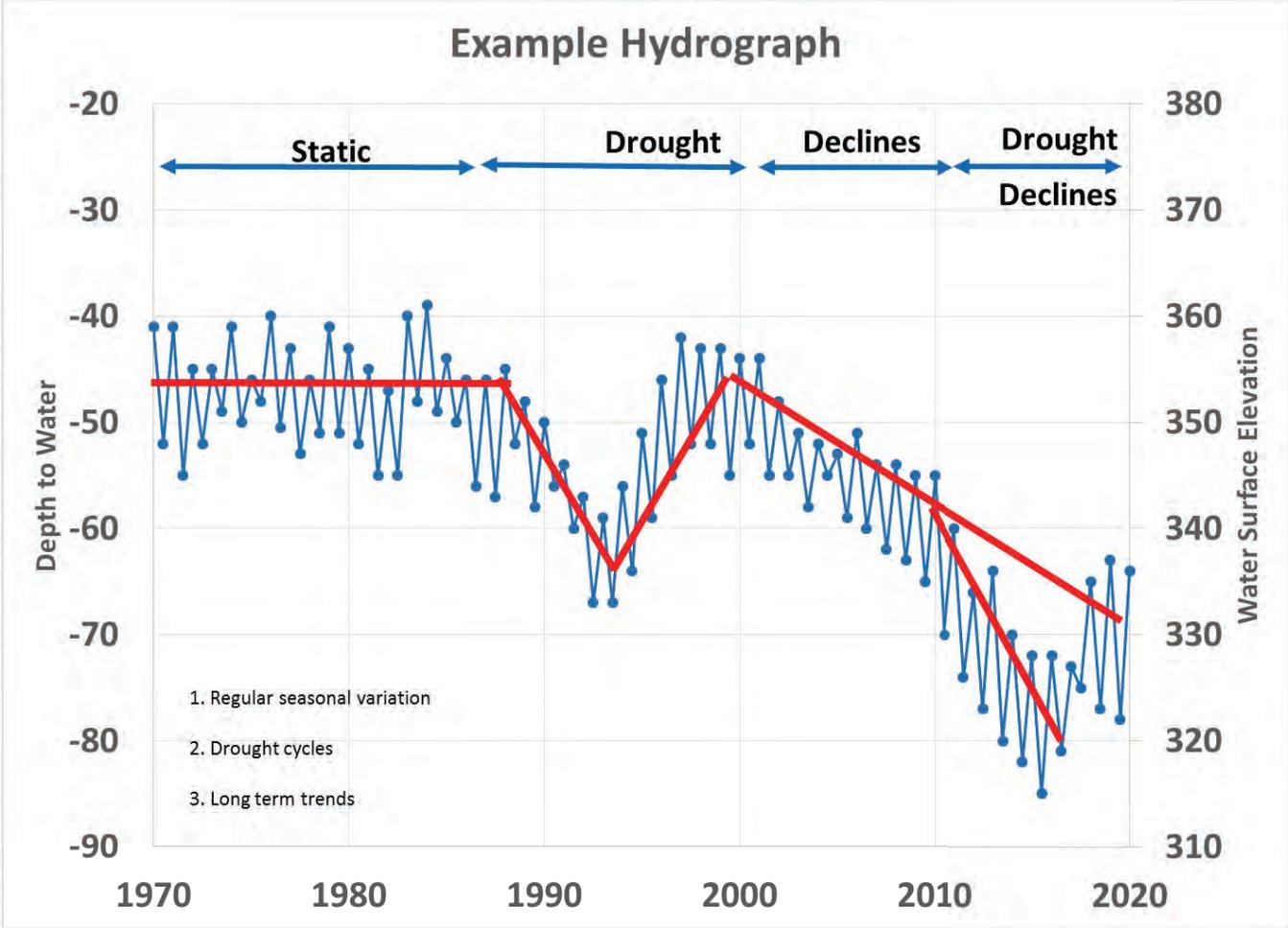
Seawater Intrusion

GROUNDWATER DATA

WHAT WE EXAMINE/ANALYZE:

- Hydrographs
- Water level map
- Changes in water levels
- Water budget

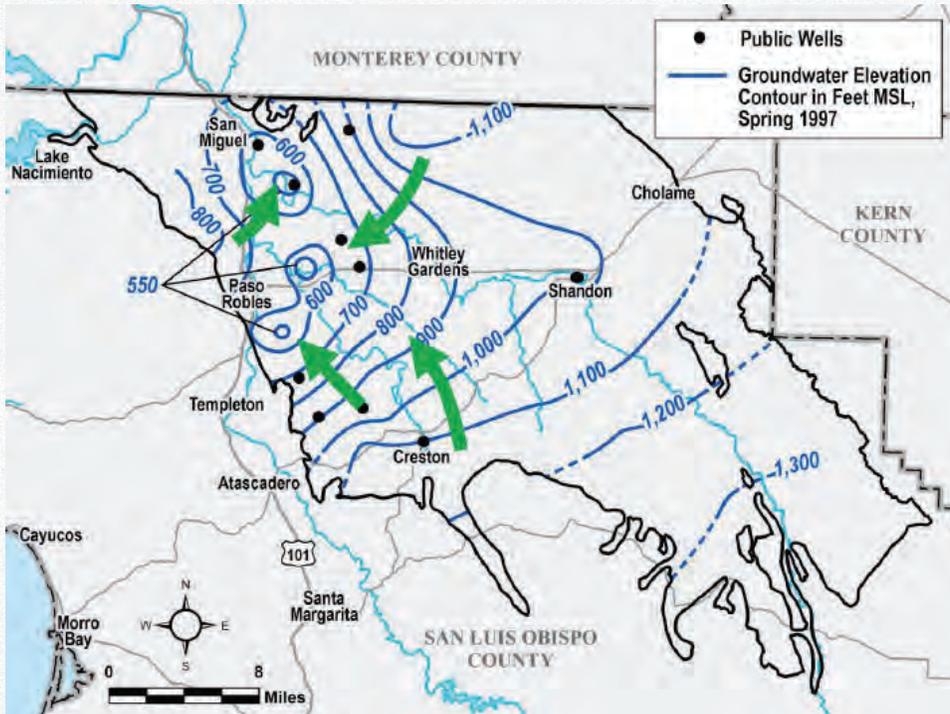
GROUNDWATER ELEVATION HYDROGRAPH



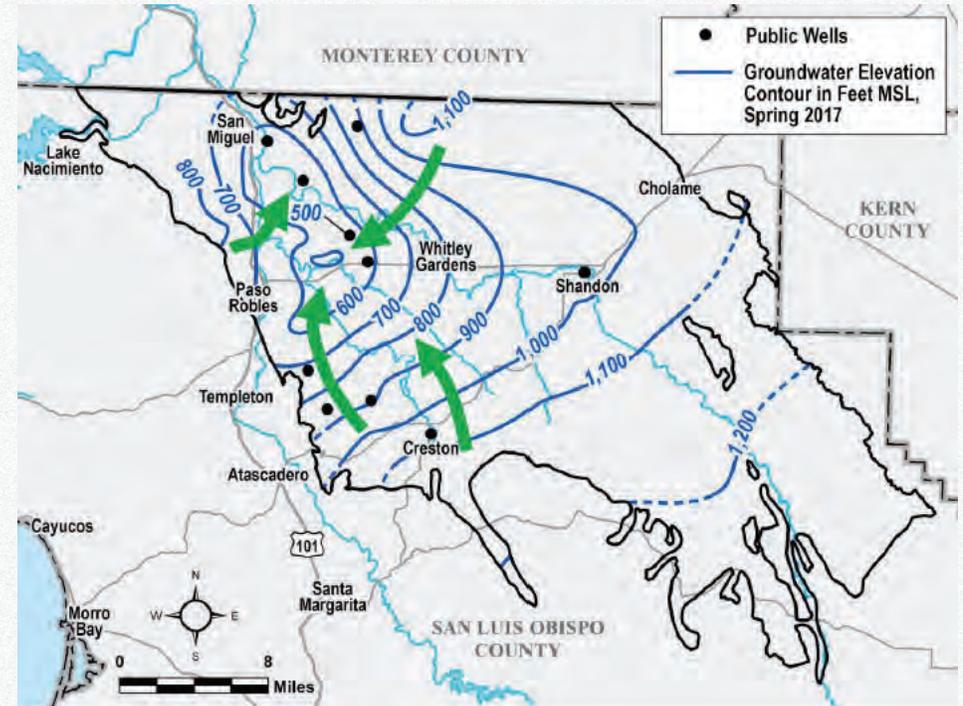
GROUNDWATER ELEVATION CONTOUR MAPS

Paso Robles Formation Aquifer

1997



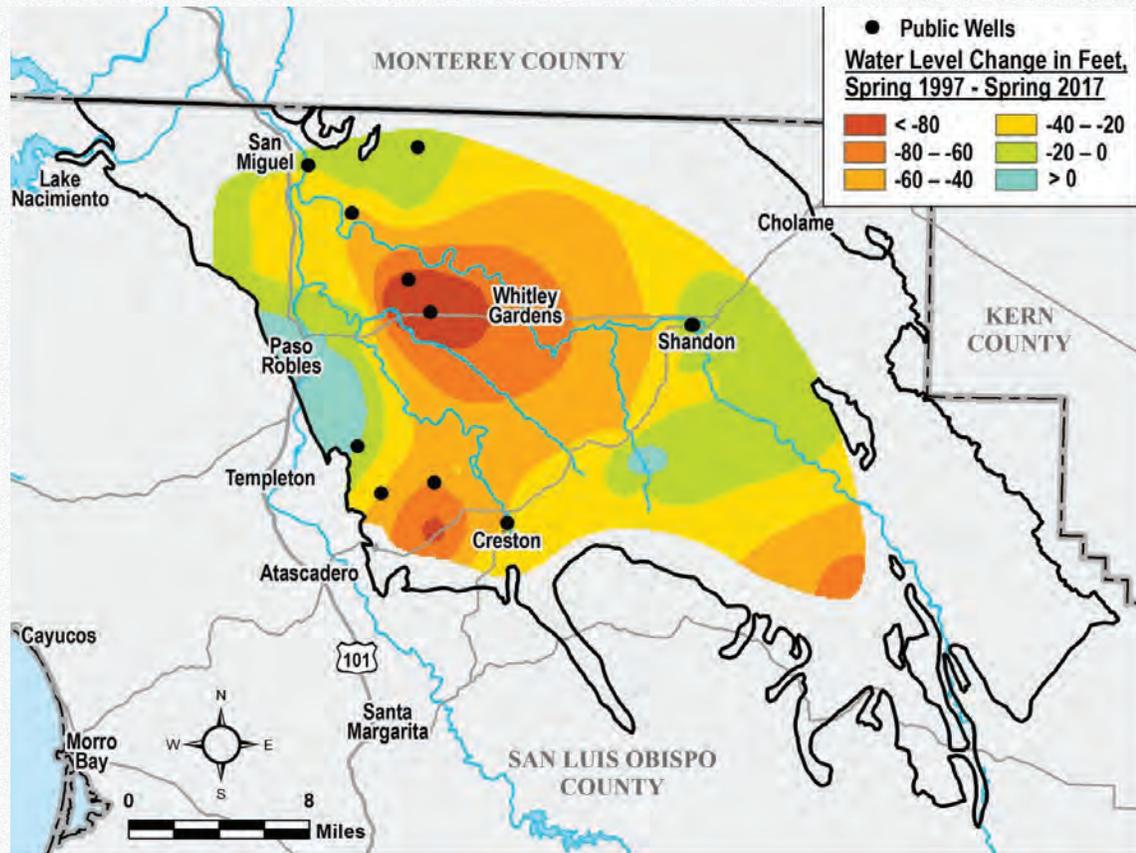
2017



Inferred Groundwater Flow Direction

CHANGE IN SPRING GROUNDWATER ELEVATIONS

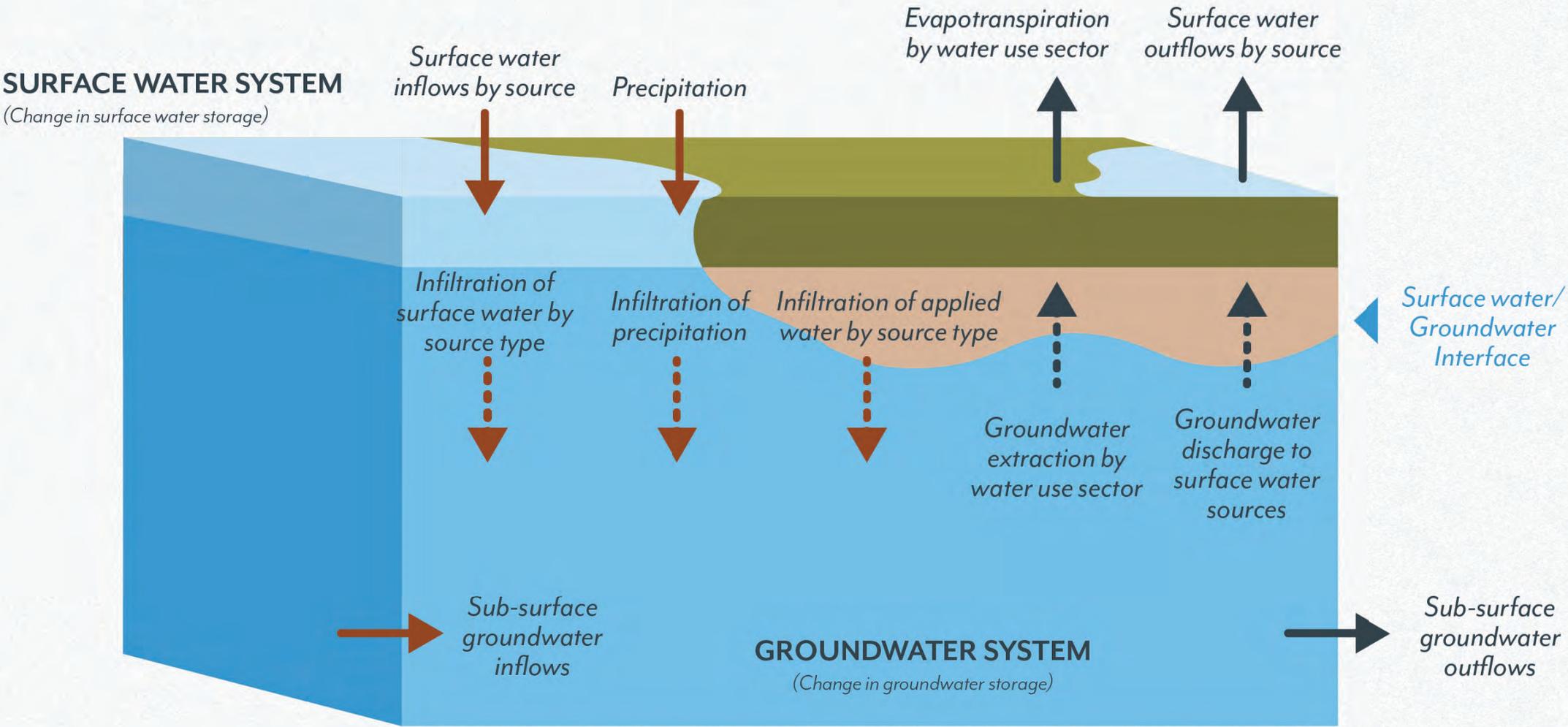
1997 to 2018 – Paso Robles Formation Aquifer



OBSERVATIONS:

- Decline in GW elevation over most of subbasins
- Areas of largest decline in Estrella and Creston areas
- Declines in GW elevations result in depletion of GW in storage

THE GROUNDWATER BUDGET





GROUNDWATER 101

Q&A





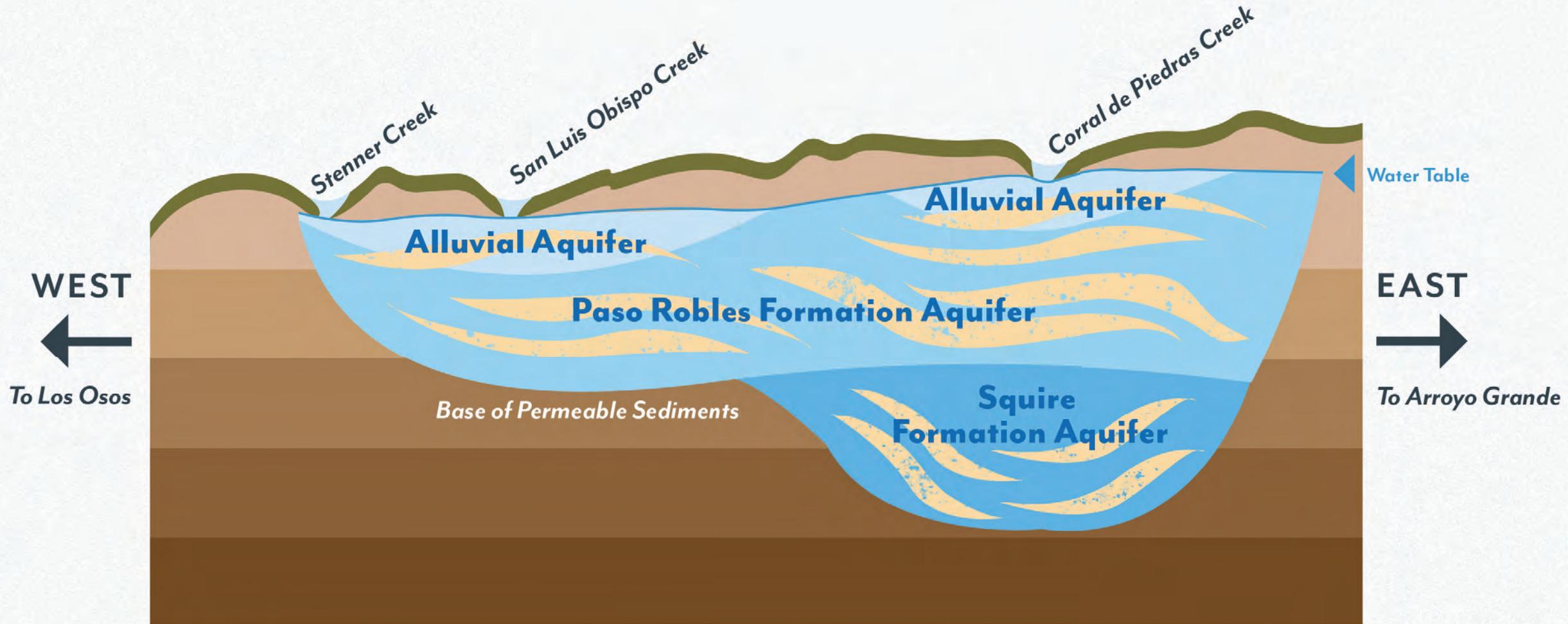
THE SLO BASIN

David O'Rourke

MAP OF THE SLO BASIN



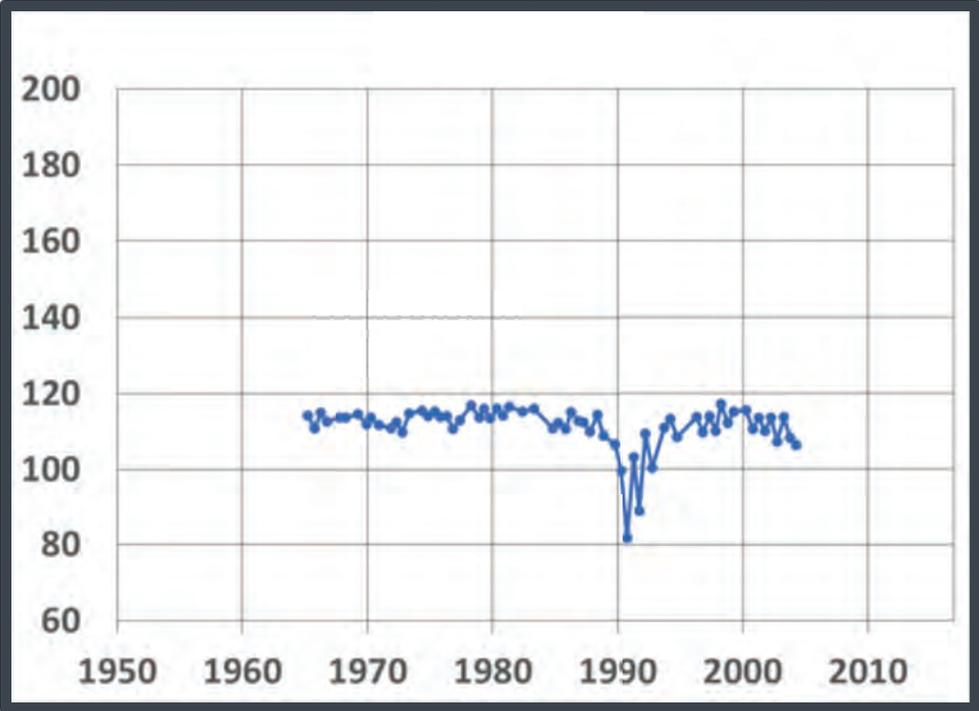
CONCEPTUAL CROSS-SECTION OF ACQUIFERS



Not to Scale

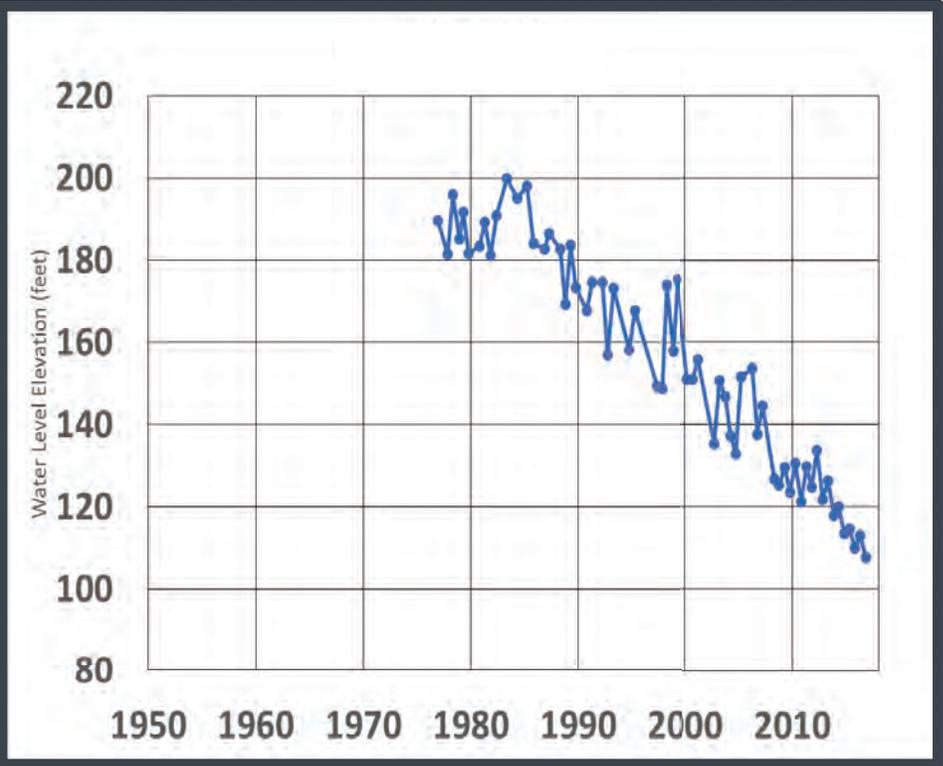
GROUNDWATER ELEVATION HYDROGRAPH

San Luis Valley

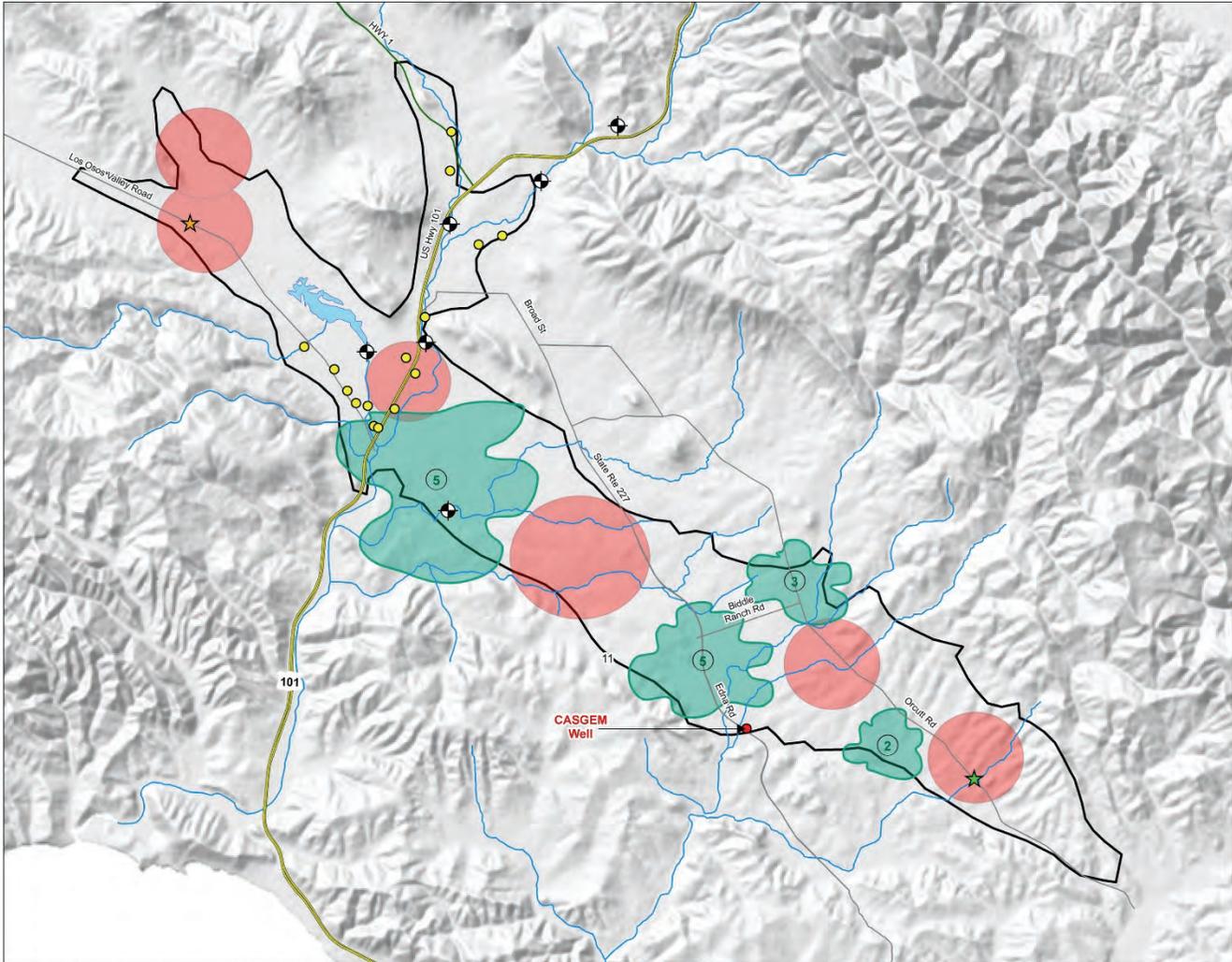


GROUNDWATER ELEVATION HYDROGRAPH

Edna Valley

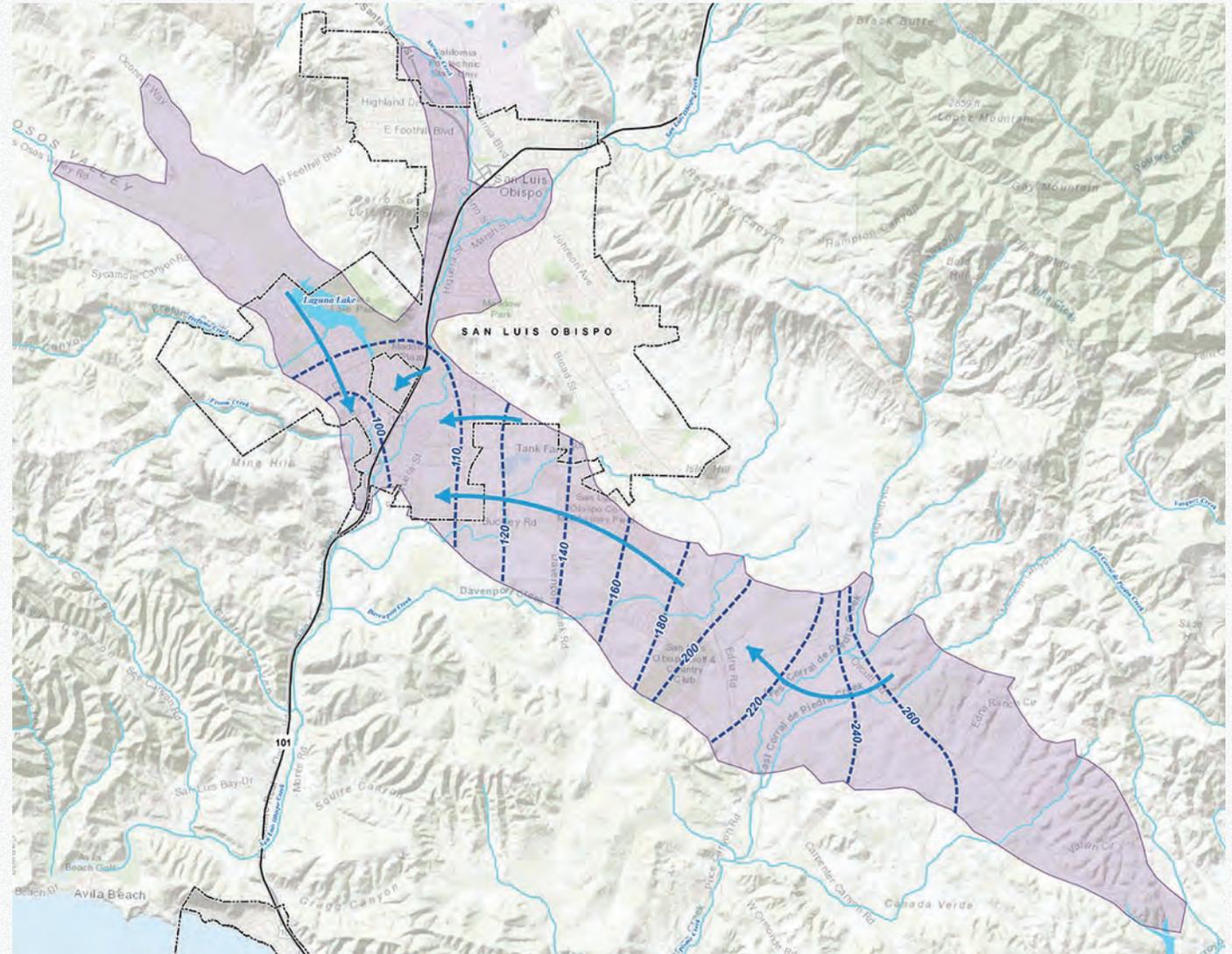


GROUNDWATER DATA GAPS



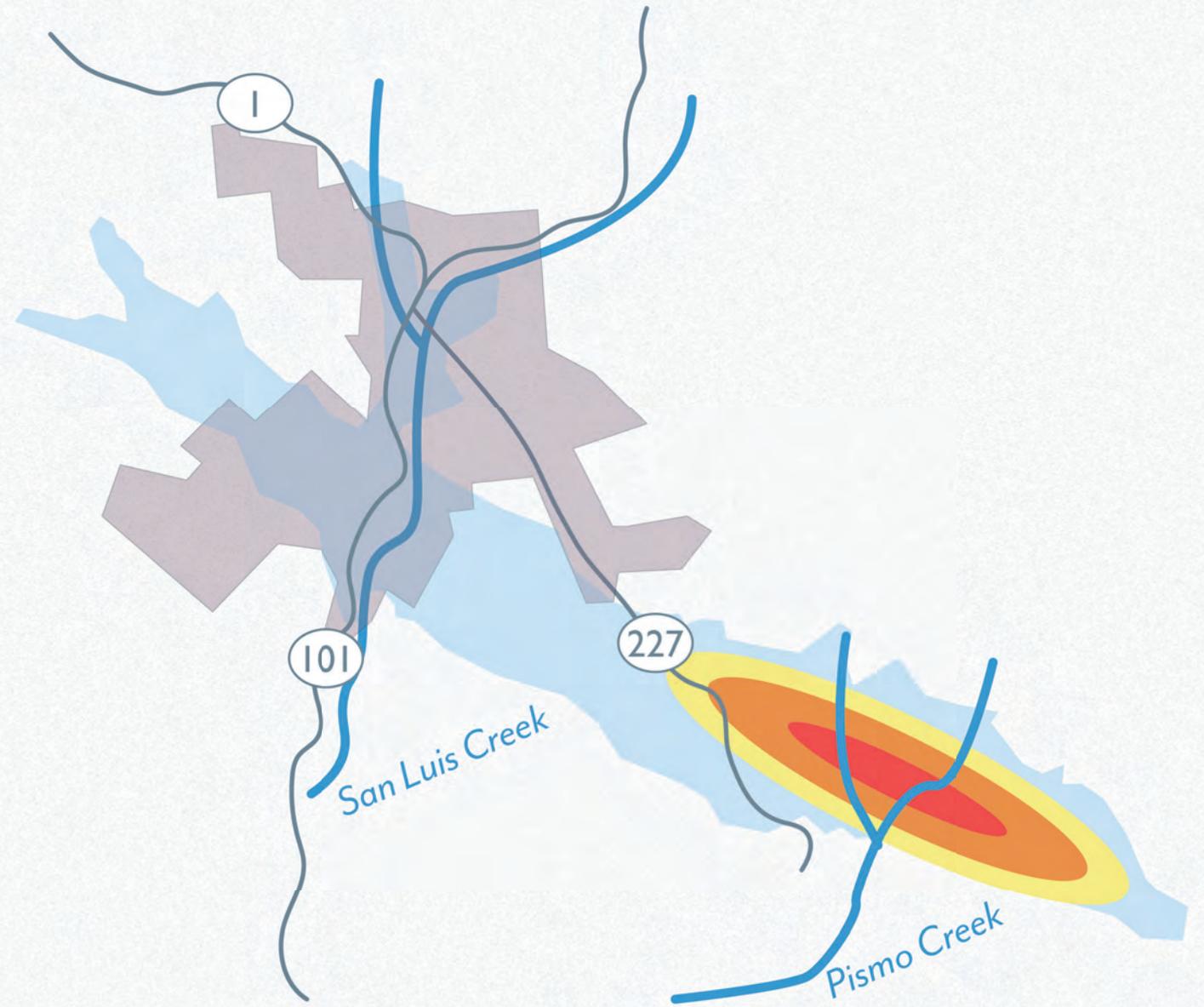
GROUNDWATER ELEVATION CONTOUR MAPS

SLO Basin



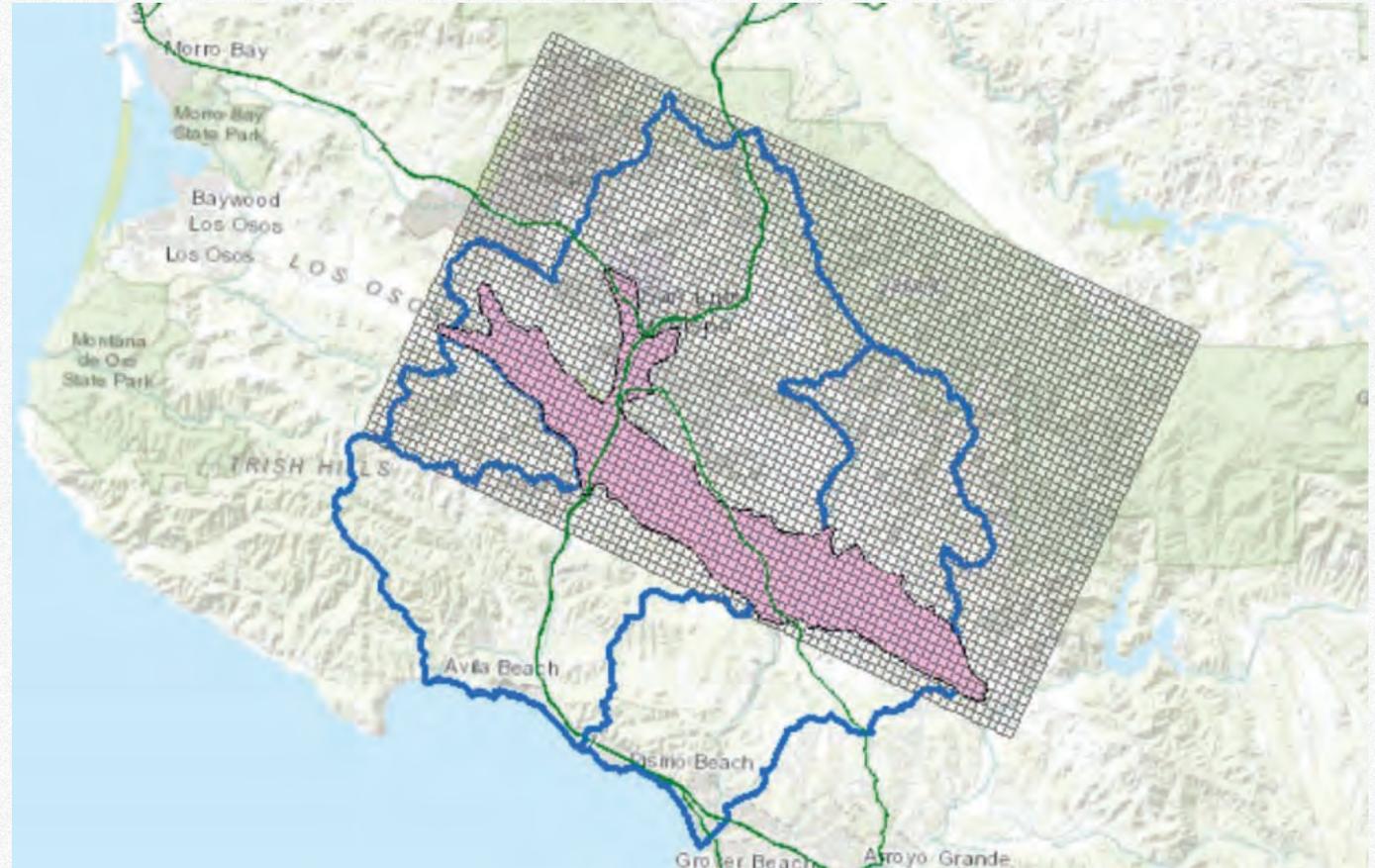
WATER DECLINE LEVEL MAP

SLO Basin



THE GROUNDWATER MODEL

- Tool for evaluation of future conditions
- Computer Analysis of Groundwater and Surface Water Flow
- Calibration attempts to duplicate past observed data
- Future scenario runs simulate impacts of projects and management actions



SLO BASIN CHARACTERIZATION REPORT

San Luis Obispo Valley Basin Characterization and Monitoring Well Installation

January 18, 2018

Prepared for
San Luis Obispo County Flood Control
and Water Conservation District

Prepared by



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SLO BASIN

Q&A





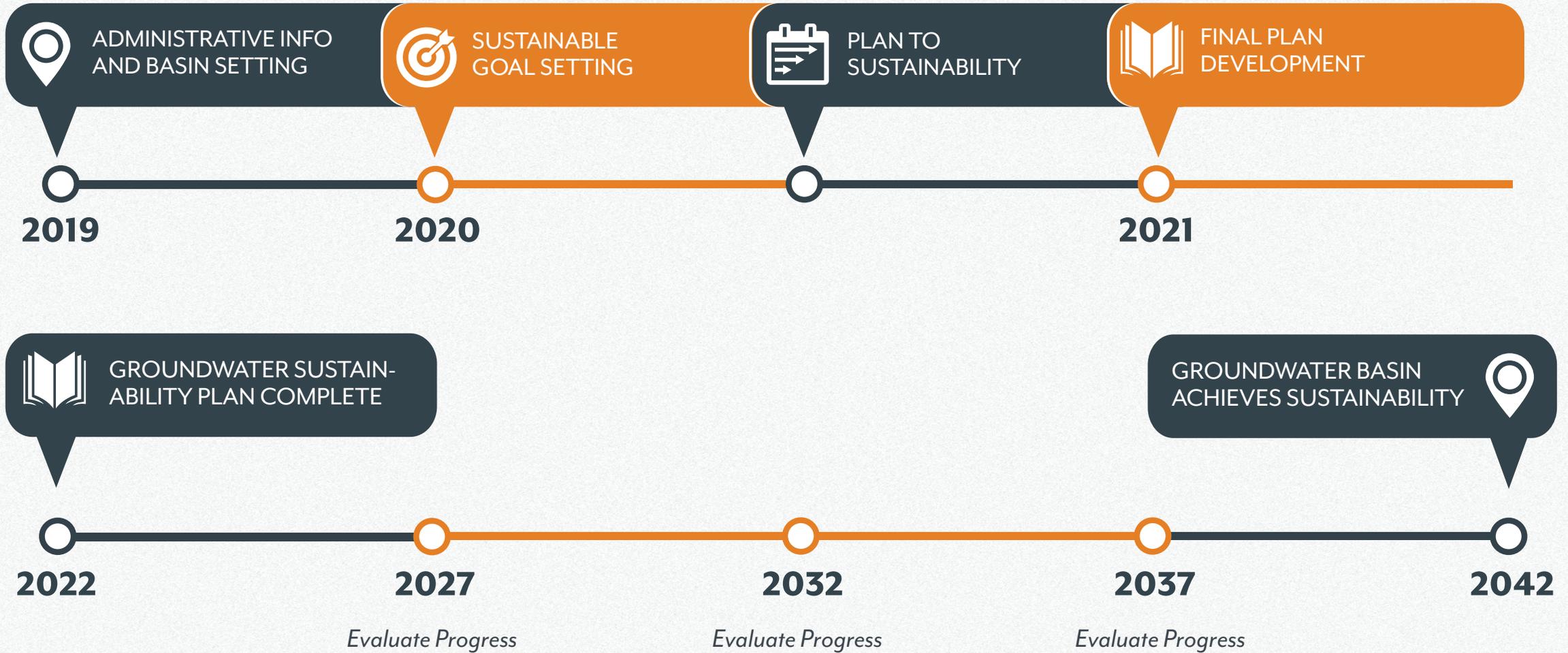
THE GSP PROCESS

Michael Cruikshank

GSP DEVELOPMENT TIMELINE



GSP DEVELOPMENT TIMELINE





GSP PROCESS

Q&A





STAKEHOLDER PARTICIPATION

Tiffany Meyer

STAKEHOLDER PARTICIPATION

**“Groundwater is best managed
at the local level.”**

The GSC will consider all **beneficial uses** and **users** of groundwater within the SLO Basin.

SLO BASIN STAKEHOLDERS



HOW TO PARTICIPATE



REGISTER.

Register as an interested party at **SLOWaterBasin.com** to receive email alerts.



MEETINGS.

Join quarterly GSC meetings to receive project news and to share your input.



WORKSHOPS.

Join interactive workshops to learn about and inform the development of the GSP.



REVIEW AND COMMENT.

Review and comment on sections/chapters of the GSP.

SLOWaterBasin.com

IMMEDIATE OPPORTUNITIES TO PARTICIPATE



MEETINGS.

Board of Supervisor Meeting

Aug. 20 • 9am

SGMA Implementation

Update Report

GSC Public Meeting

Sept. 11 • 3:30pm-5:30pm



REVIEW AND COMMENT.

Communications and Engagement Plan

Public comment closes Aug. 31

Learn more or take action at

SLOWaterBasin.com

SLOWWaterBasin.com DEMO

REQUEST ACCOMMODATIONS

Contact Dick Tzou
County of San Luis Obispo
dtzou@co.slo.ca.us
805-781-4473



PANEL

Q&A

