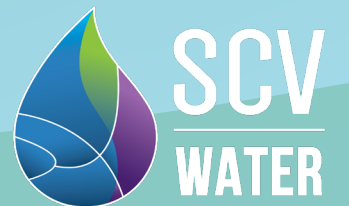


# RESTORING WELL V201 TO SERVICE WITH PERCHLORATE AND VOC TREATMENT

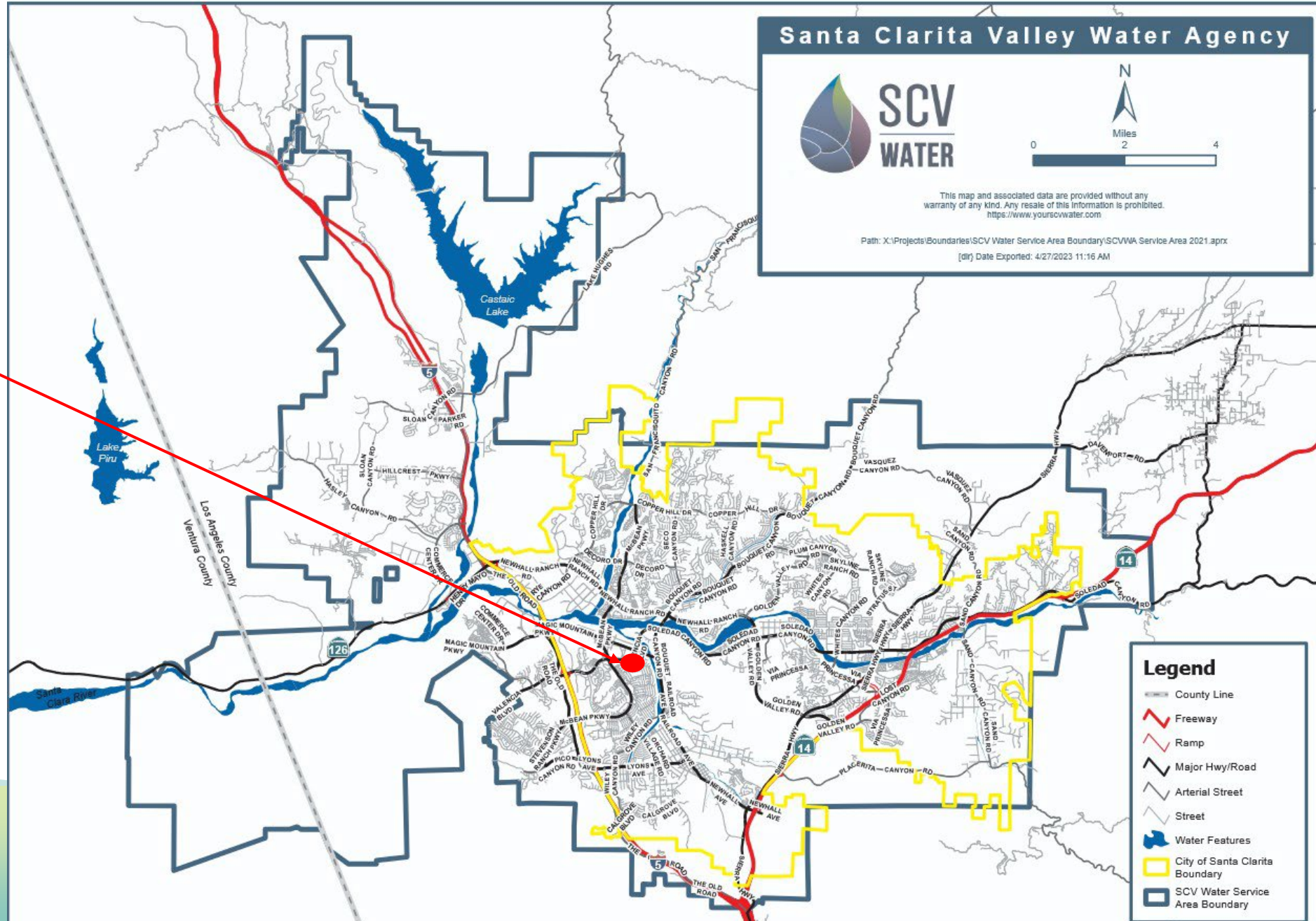
## V201 Groundwater Treatment Public Meeting

Jenny Anderson  
SCVWA

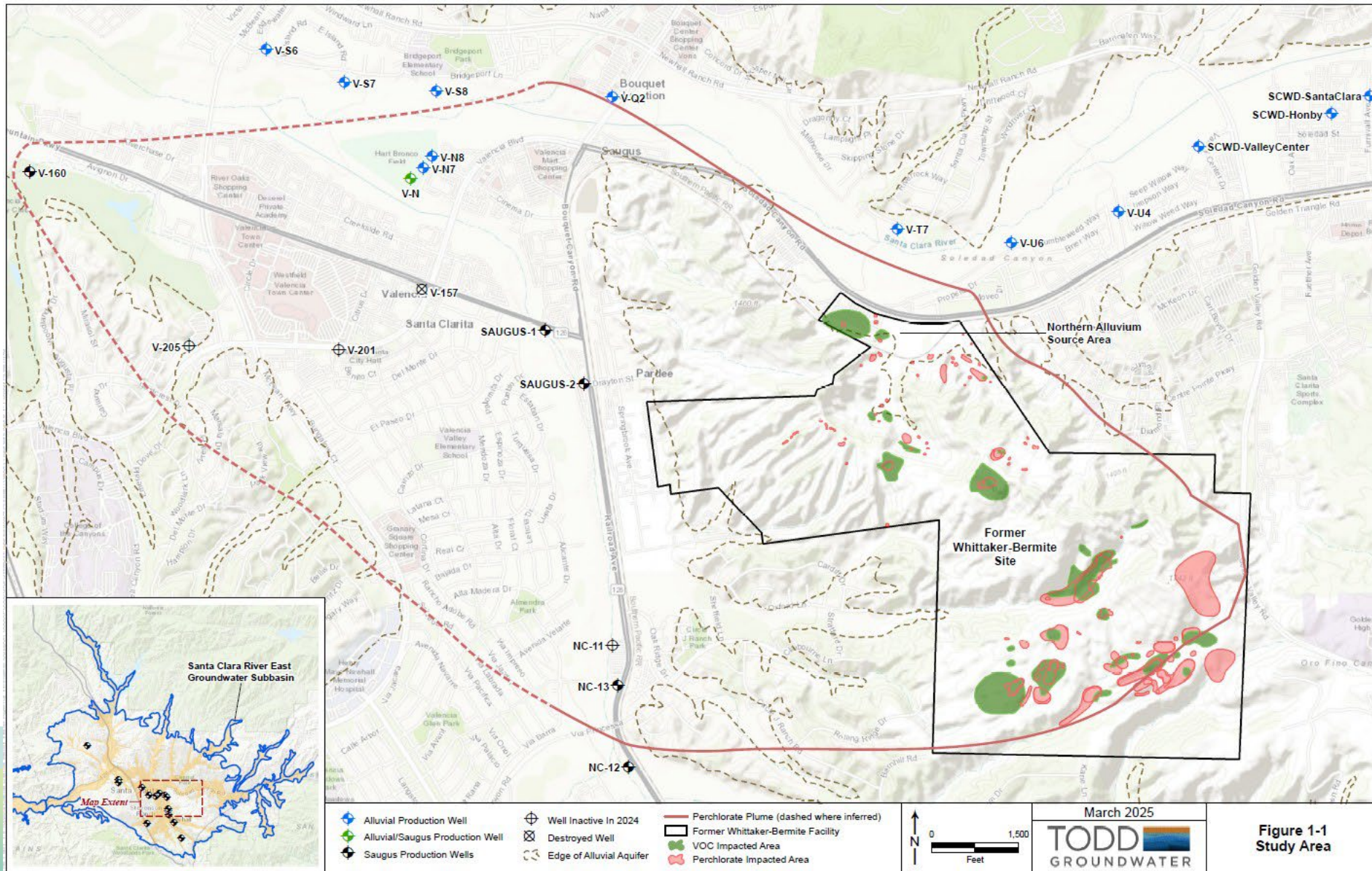


# SCV Water Service Area

## WELL V201 LOCATION 24050 VALENCIA BLVD



# PERCHLORATE AND VOC CONTAMINATION





# REMOVING PERCHLORATE SINCE 2010

- In 2011, the Saugus Perchlorate Treatment Facility (SPTF) was the first perchlorate treatment facility and restored two groundwater wells back into service.
- The two wells have a combined production rate of 2,200 gpm and operate year-round.

# WELL V201 OVERVIEW

- Constructed – 1989
  - Drilled to a depth of 1,690 feet below ground surface
  - Completed in the Saugus Formation aquifer
- Perchlorate detected and Well taken offline – 2010
- Volatile Organic Compounds (VOCs) detected – 2017
- Treatment – 2025
  - Perchlorate – Ion exchange
  - VOC – Granular activated carbon
- Pumping capacity – 2,000 gallons per minute

# WELL V201 OVERVIEW

- Water supply restoration
  - Restoring operation of local groundwater wells increases our local water supply reliability
- Contaminant plume protection
  - Resuming pumping at V201 helps limit the potential for the perchlorate plume to spread further west to other wells
- Treatment technologies
  - Ion exchange for the removal of perchlorate and granular activated carbon for the removal of volatile organic compounds are proven treatment technologies

# HISTORICAL WATER QUALITY

- Perchlorate
  - Concentrations range from <DLR -18 µg/L between 1997-2021
  - Treated water goals – Below the current Detection Limit for Purposes of Reporting (DLR) of 1 µg/L in the Ion Exchange lag effluent vessel.
- VOCs
  - TCE concentrations range from <DLR µg/L -1.0 µg/L between 1990-2021
  - Treated water goals – Below the current DLR of 0.5 µg/L in the GAC treatment effluent vessel.

# OPERATION SAFEGUARDS

- Ion Exchange Vessels

- System operates in a Lead-Lag Configuration
- When the Lead vessel becomes exhausted with perchlorate, the Lag vessel continues to remove perchlorate to a non-detect level.

After resin replacement:

The former Lead vessel will become the Lag vessel

The former Lag vessel will become the Lead vessel

- GAC Vessels

- Two vessels that operate in parallel.
- The vessels will achieve a 10-minute EBCT providing complete VOC removal

# OPERATION SAFEGUARDS

- Supervisory Control and Data Acquisition (SCADA)
  - Provides early warning, operational oversight and automated response to potential problems.
  - Provides historical alarms on flow rates, pressure, chlorine residual, and pump status.
- Routine Sampling
  - The 201 Treatment Facility will be sampled weekly for perchlorate and VOCs, with additional sampling conducted monthly, quarterly and annually.
  - Triggered monitoring for VOCs at the GAC vessels. Monitoring increases to weekly after two consecutive monthly TCE detections at the 50% port.
  - Monitoring wells will provide early detection of possible contaminants upstream of Well 201.

# PROJECT HISTORY

- Technical report submittal – DDW and SCVWA have worked in collaboration for nearly 10 years to restore Well 201 back to service.
- In 2024, GAC treatment was added to the permit to remove low level VOC detections.
- In September 2025, DDW completed a site inspection of the 201 Treatment Facility.
- In 2025, Well 201 will become SCVWA's first Treatment Facility to use GAC for VOC removal.

# CONSTRUCTION

## Ion Exchange Vessels



## GAC media Vessels



# WHAT IS RESIN AND GAC?



# RETURN TO SERVICE

Public Review period ends – December 6, 2025

Water quality samples will be collected during the week of December 1, 2025

The results will be reviewed and submitted to DDW for approval

DDW will issue a final permit, and the well will be placed online

**QUESTIONS?**