



# STANISLAUS COUNTY GROUNDWATER WELL METERING MONITORING AND REPORTING PROGRAM GUIDELINES October 29, 2024

## I. Purpose

In 2014, Stanislaus County (County) adopted Chapter 9.37 of the Stanislaus County Ordinance Code (SCOC), the “Groundwater Ordinance,” to address sustainable groundwater management and the export of groundwater from within the County. The Groundwater Ordinance codifies requirements, prohibitions, and exemptions that ensure the sustainable management of the County’s groundwater resources. This Groundwater Ordinance serves as a framework primarily based on California’s Sustainable Groundwater Management Act (SGMA), enacted in 2014.

SGMA mandates the creation of Groundwater Sustainability Agencies (GSAs) to manage groundwater subbasins within their jurisdictions. These GSAs are required to develop and implement subbasin-specific Groundwater Sustainability Plans (GSPs), which must identify sustainable management criteria for the subbasin and outline projects and management actions to achieve these sustainability goals over a 20-year implementation period. The four groundwater subbasins within the County’s boundaries are the Eastern San Joaquin, Modesto, Turlock, and Delta-Mendota Groundwater Subbasins, as shown in Attachment 1.

The sustainable management of groundwater resources is essential for maintaining agricultural production, supporting a viable economy, and enhancing community infrastructure to accommodate current and future development within the County. It is also crucial to prevent the following undesirable results from occurring such as:

- **Chronic lowering of groundwater levels** indicating a significant and unreasonable depletion of supply continued over the planning and implementation horizon. Overdraft during a period of drought is not sufficient to establish a chronic lowering of groundwater levels if extractions and recharge are managed as necessary to ensure that reductions in groundwater levels or storage during a period of drought are offset by increases in groundwater levels or storage during other periods.
- **Significant and unreasonable reduction of groundwater storage.**
- **Significant and unreasonable degraded water quality**, including the migration of contaminant plumes that impair water supplies.
- **Significant and unreasonable land subsidence** that substantially interferes with surface land uses.
- **Depletion of interconnected surface water** which has significant and unreasonable adverse impacts on the beneficial uses of the surface water.

The purpose of the Stanislaus County Groundwater Well Metering Monitoring and Reporting Program Guidelines (Guidelines) is to provide guidance for compliance with SGMA and state GSP regulations. These Guidelines outline the minimum requirements necessary for accurate monitoring and measuring groundwater extractions, and for obtaining and reporting essential data. There is a critical need for water well construction and extraction data to analyze and understand the degree of groundwater depletion or recharge, establish water budgets, and balance the conjunctive use of groundwater resources.

Metering, monitoring, and reporting requirements are crucial for sustainable groundwater management, as they provide the necessary data to understand and manage groundwater resources accurately, ensure compliance with regulations, and optimize resource use. The data obtained will foster transparency and collaboration between the County, the public, and other GSAs. This will enable the County to detect issues early and allow for proactive adaptive management strategies to best respond to changing subbasin conditions, securing equitable and long-term water source reliability for all beneficial uses and to protect the quality of life for all County residents.

## **II. Authority**

The Stanislaus County Department of Environmental Resources (DER) is responsible for protecting the health, welfare and safety of County residents by ensuring that the County's groundwater resources are protected from adverse environmental impacts resulting from unsustainable groundwater extraction. These impacts include, but are not limited to, a decline in property values, increased pumping, treatment, and well replacement costs, damage to critical infrastructure, loss of groundwater storage, lowering of groundwater levels, depletion of interconnected surface waters, and degradation of groundwater-dependent ecosystems.

The County's authorities and requirements are contained within the Groundwater Ordinance, which allows for the adoption of new regulations to establish the frequency and timing of required periodic reports of groundwater information. These reports must be reasonably necessary to monitor the existing condition of groundwater resources within the County, to determine trends, or to develop effective sustainable groundwater management plans and policies. The new regulations shall specify the required information to be monitored, including water level and pumping data, or other data necessary for any other method to determine groundwater production, (SCOC Section 9.37.065). Under the Groundwater Ordinance, the County has the authority to regulate all non-de minimis groundwater well extractors located in the unincorporated areas of the County, including public water agencies, which shall submit detailed groundwater information reports to the DER as necessary and upon request.

In 2014, SGMA empowered GSAs, made up of local public agencies with water supply or land use authority (or both), to use various management tools to achieve sustainability in the affected groundwater subbasin. The County is a member of five GSAs, with additional authorities granted under SGMA to adopt rules required for sustainable groundwater management. SGMA expanded the authorities of local agencies to include additional powers, such as, but not limited to, well registration, extractor measurements and reporting, regulating groundwater extractions (including limiting or prohibiting groundwater production), and imposing fees and assessments (California Water Code Sections 10725-10726.4, 10730.2, 10732, 10735.2). These Guidelines comply with the above authorities.

## **III. Implementation**

DER will utilize the following information in implementing these Guidelines, in conjunction with the Groundwater Ordinance, the applicable GSP, and any additional adopted plans, policies, ordinances, or regulations enacted to fulfill the intent and purpose of these Guidelines under state legislation and County ordinances and codes:

- References, reports and studies regarding the known hydrology and groundwater water quality conditions associated with Stanislaus County;
- DER's "[Programmatic Environmental Impact Report, Discretionary Well Permitting and Management Program\(PEIR\)](#)," dated June 2018;
- [Stanislaus County Groundwater Well Siting and Construction Guidelines, August 29, 2023](#);
- [Technical Memorandum Approach for Screening Well Construction Permit Applications Under Section 9B of Executive Order N-7-22](#), Formation Environmental, May 9, 2022;
- [Draft Best Management Practices for the Sustainable Management of Groundwater, Sustainable Management Criteria BMP](#), California Department of Water Resources, November 2017;
- [Water Data Library Station Map](#), California Department of Water Resources;
- [SGMA Data Viewer](#), California Department of Water Resources;
- [Well Completion Report Map Application](#), California Department of Water Resources;
- [Revised July 2024 Modesto Subbasin Groundwater Sustainability Plan](#);
- [Revised July 2024 Turlock Subbasin Groundwater Sustainability Plan](#);
- [Eastern San Joaquin Revised Groundwater Sustainability Plan \(2022\)](#);
- [Delta-Mendota Subbasin Groundwater Sustainability Plan](#);
- [Pumping Reduction Framework for the Delta-Mendota Subbasin](#), EKI Environment & Water, March 2024;
- [Northern Delta-Mendota Region's Proposed Plan to Address Groundwater Overdraft](#), EKI Environment & Water, February 2024.

The resulting Guidelines are consistent with all local, regional, and state regulations. These Guidelines will be revised as necessary when future GSP updates, amendments, or supplemental plans, policies, or programs are adopted.

#### **IV. Application:**

These Guidelines are applicable only in the unincorporated, "white areas" of the County if a well metering, monitoring, and reporting program is mandated by an adopted GSP. The GSA may adopt additional policies for the regulation of groundwater extraction measurements, monitoring, reporting, and data collection requirements. In cases where there is a conflict between the requirements specified in these Guidelines and those in the GSP or GSA policy, the GSP and/or GSA Policy shall prevail. However, where there is a conflict between the GSP or GSA policy and the Groundwater Ordinance, the provisions of the Groundwater Ordinance shall prevail.

All non-de minimis wells constructed after November 25, 2014, that extract groundwater in the "white areas" of the County shall be required to comply with the requirements included in these Guidelines. Existing wells constructed before November 25, 2014, that extract less than 10 acre-feet of groundwater per year are exempt from the requirements of these Guidelines because they operate at a scale that has minimal impact on water resources and regulatory oversight of these extractors would not yield substantial benefits, would be inefficient, and impose significant burdens to disadvantaged communities.

Small pumpers operating prior to November 25, 2014, that extract less than 40 acre-feet of groundwater per year typically operate at a scale that has a limited impact on overall water

resources. The cost of installing and maintaining well metering equipment for these small operations can be disproportionately high compared to the benefits derived and can threaten the viability of their operations. Small pumpers are required to comply with the mandatory well registration, monitoring and reporting requirements specified in these Guidelines but may use an alternative method of groundwater extraction measurement, to prevent undue financial burden on users without compromising the overarching goals of the GSP or Stanislaus County water resources management. In the absence of metering, small pumpers may use evapotranspiration products to estimate monthly groundwater extractions and shall include all reports for any surface water deliveries that occurred during the groundwater extraction monitoring and reporting period.

New non-de minimis wells constructed on or after January 1, 2025, and existing inactive wells shall demonstrate compliance with these Guidelines prior to the well-being placed into operation or returned to service on or after January 1, 2025. Landowners shall be responsible for compliance with these regulations by any lessee or well operator on their property.

#### V. Definitions:

- A. **Abandoned:** A well is considered abandoned, or prematurely inactive, if it has not been used for one year and there is no intention of future use. Abandoned wells must be destroyed (decommissioned) immediately unless the owner demonstrates "intent for future use" and maintains the well in accordance with California Health and Safety Code Section 115700.
- B. **Agricultural Wells:** Water wells are used to supply water only for irrigation or other agricultural purposes, including so-called "stock wells".
- C. **Aquifer:** A body of rock or sediment that is sufficiently porous and permeable to store, transmit, and yield significant quantities of groundwater to wells and springs. (DWR Bulletin 118: California's Groundwater, 2003)
- D. **Bacteria:** Microscopic single-celled organisms lacking a distinct nucleus.
- E. **Confined groundwater:** Confined groundwater is isolated from the atmosphere by geologic materials of low permeability and generally is present under pressures that are higher than atmospheric pressure. (Groundwater and Wells, 2007, modified)
- F. **Confined aquifer:** An aquifer overlain by a confining layer. (Applied Hydrogeology, Fetter, 1994)
- G. **Confining layer:** A bed or stratum of rock or sediment stratigraphically above or below and significantly less permeable than one or more aquifers.
- H. **Contaminant:** Any physical, chemical, biological or radiological substance or matter in water listed in the Primary or Secondary Contaminant List in the Safe Drinking Water Act (SDWA).
- I. **Contamination:** An impairment of the quality of the waters of the state by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. Contamination includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.
- J. **Corcoran Clay:** A low-permeability, regionally extensive, lacustrine deposit as much as 200-ft thick that divides the groundwater-flow system of the western San Joaquin Valley into an upper semi-confined zone and a lower confined zone.
- K. **County:** means the County of Stanislaus.
- L. **De minimis extractor:** a person who extracts two acre-feet or less of groundwater per year.
- M. **Department:** Means the Stanislaus County Department of Environmental Resources.
- N. **Exempt Well:** A de minimis extractor or a well that was constructed before November 25, 2014, that extracts less than 10 acre-feet of groundwater per year.
- O. **Formation:** A body of rock or sediment sufficiently homogeneous or distinctive to be mappable as a unit.

- P. Groundwater:** The water that occurs beneath the surface of the Earth within the zone below the water table in which the soil is completely saturated with water but does not include water that flows in known and definite channels.
- Q. Groundwater Ordinance:** Means the Stanislaus County Groundwater Ordinance codified as Chapter 9.37 Groundwater of the Stanislaus County Ordinance Code.
- R. Groundwater Sustainability Plan:** A plan adopted pursuant to California Water Code Section 10727 et seq.
- S. Pollution:** Pollution” means an alteration of the quality of the waters of the state by waste to a degree which unreasonable affects: (1) Such water for beneficial use; or (2) Facilities which service such beneficial uses. Pollution may include contamination.
- T. Qualified Professional:** A Professional Engineer, Professional Geologist, or equivalent with experience in the design and construction of wells and related infrastructure.
- U. Small Pumper:** A well that was constructed prior to November 25, 2014, that is not a de minimis well but extracts less than 40 acre-feet of groundwater per year.
- V. Special Management Area:** Areas in Stanislaus County where, due to local soil, geologic or hydrogeologic conditions, minimum setback screening distances and construction requirements have been adopted pursuant to the “Technical Memorandum Approach for Screening Well Construction Permit Applications Under Section 9B of Executive Order N-7-22,” to prevent impacts to nearby wells and infrastructure, (Tech Memo...). Several Special Management Area have been designated. They are demarked as SMA1; SMA2, & SMA3, in Section IX and **Attachment 5** of these Guidelines;
- W. Minimum Setback Screening Distance, (MSSD):** The distance between a proposed well and existing nearby wells and nearby infrastructure, outside of which the proposed well is not likely to interfere with the production and functioning of existing nearby wells or cause subsidence that would adversely impact or damage nearby infrastructure.
- X. Minimum Thresholds:** A quantitative value that represents the groundwater conditions at a representative monitoring site that, when exceeded individually or in combination with minimum thresholds at other monitoring sites, may cause an undesirable result(s) in a groundwater Subbasin (Draft Best Management Practices for the Sustainable Management of Groundwater, Sustainable Management Criteria BMP, California Department of Water Resources, November 2017).
- Y. Sustainable Groundwater Management:** The management and use of groundwater in a manner that can be maintained during a GSP planning and implementation horizon without causing or substantially contributing to undesirable results as described by California’s Sustainable Groundwater Management Act of 2014.
- Z. Target Aquifer:** That aquifer or water bearing zone that is screened to access groundwater.
- AA. Trigger:** A trend and/or groundwater level(s) established by an adopted GSP or GSA Policy that, refers to a predefined level or condition of groundwater that, when reached or exceeded, indicates that the groundwater resource is approaching or has reached a critical limit that requires actions to be taken to prevent a minimum threshold exceedance and undesirable results from occurring.
- BB. Unconfined Aquifer:** An aquifer without a confining layer at the top. The top of an unconfined aquifer is the water table, which is the plane where groundwater pressure is equal to atmospheric pressure. (Groundwater Hydrology, 1978, modified).
- CC. Unsustainable Extraction of Groundwater:** The extraction of groundwater in a manner that is not sustainable groundwater management as defined by state law.
- DD. Upper Zone:** In SMA1, the Upper Zone shall be defined as the groundwater-bearing zone that overlies the Corcoran Clay. In SMA2, the Upper Zone shall be as defined for the Nitrate Control Program adopted by the Central Valley Regional Water Quality Control Board and published in the report prepared titled “Region 5: Updated Groundwater Quality Analysis and High Resolution Mapping for Central Valley Salt and Nitrate Management Plan,” prepared for

the Central Valley Salinity Alternatives for Long-term Sustainability (CV-SALTS) program dated June 2016. Different aquifer zones are not defined in SMA3.

- EE. Water Well:** Any artificial excavation constructed by any method for the purpose of extracting water from, or injecting water into, the underground. This definition shall not include: (a) oil and gas wells, or geothermal wells constructed under the jurisdiction of the Department of Conservation, except those wells converted to use as water wells; or (b) wells used for the purpose of (1) dewatering excavation during construction, or (2) stabilizing hillsides or earth embankments. (California Water Code Section 13710)
- FF. Water Year:** The twelve-month period October 1, for any given year, through September 30 of the following year, and designated by the calendar year in which it ends.
- GG. White Areas:** These include unincorporated areas that are not in the jurisdictional boundaries of a public water agency covered by a Groundwater Management Plan or a Groundwater Sustainability Plan.

**VI. Hydrogeology.** The Eastern Alluvial Fans, Western Alluvial Fans and Basin Deposits are part of complex set of interbedded aquifers and aquitards that comprises the regional aquifer system within the San Joaquin Valley Groundwater Basin (SJVGB). In Stanislaus County, the SJVGB is bounded by the relatively impermeable basement rocks of the Sierra Nevada foothills to the northeast and the Coast Range to the southwest and subdivided along the major rivers into the Delta-Mendota, Eastern San Joaquin, Modesto, and Turlock groundwater subbasins. The aquifers tend to be unconfined to semi-confined in the upper alluvial fan areas, grading to semi-confined and confined near the valley axis due to the presence of better-defined stratification and aerially-extensive lacustrine clays in this area. The cumulative thickness of the water-bearing formations in the basin ranges from a few hundred feet near the SJVGB margins to over 1,000 feet in the center of the basin. Separating the shallow and deep aquifers in the area of the Basinal Deposits is the Corcoran Clay, a laterally extensive lacustrine unit of the Upper Tulare and Upper Turlock Lake Formations. The Corcoran Clay occurs at a depth of approximately 250 to 300 feet below ground surface (bgs), is approximately 150 to 250 feet thick, and acts as a regional aquitard, impeding groundwater exchange between upper and lower aquifers. As a result, groundwater quality is often variable in the shallow and deep aquifers. It extends through the width of the county in a swath on either side of the San Joaquin River.

Depth to groundwater generally increases with distance away from the San Joaquin River, although this pattern can be locally modified by well extraction or recharge from irrigation. In the Basinal Deposit area, the depth to groundwater varies between approximately 2 and 20 feet bgs, and in the Eastern and Western Alluvial Fans, depths vary between 20 and 200 feet bgs. In the Foothills geomorphic region, groundwater flows through fractures in the bedrock, and is typically found at depths greater than 100 feet. Groundwater in the Coast Range is also usually found depths greater than 100 feet, where it exists in either the pores of sedimentary rocks or in fractures in metamorphic rock, and occasionally reaches the surface in natural springs.

**VII. Water Quality:** Groundwater in Stanislaus County is generally of good quality, although some elevated concentrations of pollutants and contaminants do occur. Extensive agricultural activities in the county have led to areas where nitrate levels are above drinking water standards, especially in the shallow aquifer system. Animal waste associated with dairy farming in addition to fertilizers used in agriculture and lawns were identified as the most likely sources of nitrate contamination, with onsite wastewater treatment systems (OWTS) noted as another potential source. Basinal sediments in the valley can be locally anoxic, a condition that

favours bacterial denitrification and the reduction of nitrate to nitrogen gas. Nitrate impacts may locally extend into the deeper aquifers when drawn down by municipal pumping.

Elevated concentrations of uranium have been identified primarily in shallow groundwater in the middle and lower Eastern Alluvial Fan area in the vicinity of Modesto and Ceres. Uranium is naturally contained in sediments derived from the granitic rocks of the Sierra Nevada, and is believed to have been mobilized as modern, alkaline recharge water penetrated into the shallow aquifer system. In Modesto, it has been found to be strongly correlated with nitrate. Also, coincident with elevated nitrate levels in portions of agricultural regions in the middle and lower Eastern Alluvial Fan area are elevated concentrations of soil fumigant residuals such as 1,2,3-trichloropropane (1,2,3-TCP) and dibromo-chloro-propane (DBCP). Municipal supply wells have also been impacted in some areas by these agricultural chemicals, which tend to persist in the environment and can be drawn deeper into the aquifer system by pumping municipal wells.

Elevated concentrations of arsenic have been detected at various depths in some areas of Eastern Alluvial Fan and Basinal Deposit areas, for example near Modesto, Salida and Hughson. Arsenic behaves in a complex way geochemically and can be mobilized under a variety of conditions. It is often associated with older, anoxic water or with the dissolution of ferric complexes as groundwater is drawn from anoxic into oxic zones by pumping. It can occur in the shallow and the deep aquifer system.

Similarly, wells serving the communities of Newman, Patterson, Grayson and Crows Landing have been locally impacted by hexavalent chromium in sediments derived from the Diablo Range. Concentrations of hexavalent chromium are generally greater in oxic groundwater compared to anoxic groundwater, but it is found at various depths.

Urban sources of groundwater contamination in the County include dry-cleaning operations, landfills, industrial sites, and leaking underground storage tanks. Historical dry-cleaning facilities remain a source of the organic contaminant, perchloroethylene (PCE) near contamination sites in Modesto and Turlock. Methyl tert-butyl ether (MTBE) originates from leaking underground gasoline storage tank sites.

Elevated concentrations of salts (total dissolved solids or TDS) are found at depth beneath the freshwater aquifers in the County, generally below a depth of about 1,000 feet bgs. However, elevated TDS is also found in some areas both above and below the Corcoran Clay in the Basinal Deposit area. Operation of deep-water wells has locally caused upwelling of deep saline groundwater that underlies the base of freshwater in some parts of the San Joaquin Valley.

#### **VIII. Special Management Areas (SMAs)**

The following SMAs are established for the purposes of these Guidelines, based on specific geologic and hydrogeologic conditions in various parts of the County as shown in **Attachment 5**. For each SMA, minimum setback screening distances (MSSDs) can be identified using the procedure, defined in the “Technical Memorandum Approach for Screening Well Permit Applications under Section 9B of Executive Order N-7-2022.” The MSSD is the minimum distance a new well must maintain so that it will not likely cause interference with the production and functioning of nearby wells, or subsidence that would cause adverse impacts to or damage to critical infrastructure.

- **SMA1 Corcoran Clay Area.** In this area, the Corcoran Clay represents a regional aquitard that separates an upper unconfined to semi-confined aquifer system from a lower confined aquifer system. These systems may have different water quality conditions and groundwater levels, and cross connecting the aquifers above and below the Corcoran Clay can lead to vertical migration of pollution. The boundaries of this area shall be based on the extent of the Corcoran Clay as mapped by the United States Geological Survey in Professional Paper 1766, or as updated in the future. Pursuant to the “Stanislaus County Well Siting and Construction Guidelines,” (WSCG) all wells located within the area underlain by the Corcoran Clay and penetrating the Corcoran Clay shall be constructed in such a manner that prevents the intermixing of water above and below the Corcoran Clay layer.
- **SMA2 Alluvial Fans.** The boundaries of this area extend from the outer groundwater basin boundaries as determined in the latest edition of DWR Bulletin 118 to the boundary of the Corcoran Clay. In these alluvial fan areas, vertical groundwater movement is less impeded and oxygenated groundwater extends deeper into the aquifer system. All wells located within SMA2 shall be constructed in a manner that prevents the intermixing of water between the Upper Zone and underlying aquifers, as required by the WSCG.
- **SMA3 Fractured Bedrock.** The boundaries of this area extend from the County line to the outer groundwater basin boundaries as determined in the latest edition of DWR Bulletin 118. These areas are underlain by fractured bedrock aquifers of the Coast Range, or of the crystalline bedrock area east of the San Joaquin Valley alluvial basin.

#### **IX. Well Registration, Requirements and Fees**

A “Well Registration Form,” (WRF) (Attachment-2) must be completed and submitted to the DER with the well registration fee before January 1, 2026, for each operating non-de minimis or non-exempt well. The WRF shall include the well owner’s (landowner) name and contact information, well use and demand data; assessor’s parcel number, global positioning system (GPS) coordinates, date of construction or estimate, well permit number, well depth, diameter, pump capacity, instantaneous pump flow rate and well casing screening interval(s). The WRF shall be accompanied by a Well Completion Report or equivalent record to certify well construction details, from a licensed C-57 Water Well Contractor, licensed in accordance with the California Water Code (Section 13750.5) or a Qualified Professional.

A new “Well Registration Form,” must be completed and submitted to the DER within 30 days of change of property ownership, well use or operational status, including a change in off-site use.

#### **X. Monitoring and Reporting Requirements**

Unless de minimis or exempt, all groundwater well extractors shall install and maintain a metering device as part of the water supply and distribution system to document groundwater extraction from each well in gallons per month. Proof from a qualified professional or licensed contractor verifying that the device is installed and operational (a manual and photos) shall be submitted to the DER for each non-de minimis or non-exempt well prior to January 1, 2026. The device shall be maintained as required by the manufacturer for the life of the well. Small pumpers shall comply with the monitoring and reporting requirements specified in these Guidelines, but can use an alternative approved method of measurement, other than installation of an approved meter.



The metering device shall consist of a propeller type (turbine meter), suitable for the range of extraction flows expected and shall be installed in a straight piping run at least 10 pipe diameters from any valves, bends or fittings, and shall register total gallons and instantaneous flow rate in gallons per minute. Electromagnetic flow metering devices shall be either a flange type or saddle type meter and contain a flow sensor based on Faraday's law of electromagnetic induction.

All metering devices shall meet American National Standards Institute, (ANSI) Cold-Water standards, to measure groundwater use and be accurate within 2% of actual flow, be installed according to the manufacturer and be appropriately sized for the production rate and discharge piping of the well. The meter shall measure all flow rate in gallons per minute, or cubic feet per second, and totalize extractions in gallons, cubic feet or acre-feet.

The DER may accept other devices that measure flow rate and totalize volume if sufficient evidence is provided to the DER to indicate that the device meets or exceeds these standards, and DER approval is provided in writing prior to installation.

By January 1, 2026, and each November 1, thereafter, the well owner shall submit an the annual "Groundwater Extraction Monitoring Report," (Attachment 3) to the DER that details the volume of groundwater extracted each month from the well for the previous water year in gallons and acre-feet per month. In addition to recording groundwater use, a photograph of the face of the water meter with sufficient resolution to read the meter value shall be taken on the date of the last meter reading of each water year and submitted with the annual "Groundwater Extraction Monitoring Report," (GEMR) for each well. For newly installed meters, a copy of the licensed contractor or qualified professional's installation inspection report shall be attached to the annual GEMR. The report shall include the date of the meter's installation and indicate that the meter was installed according to the manufacturer's instructions. For all wells, a certified meter calibration report shall be attached to the GEMR showing proof of calibration within the past five years. Subsequent meter calibration records shall be made available to the DER upon request

In areas where groundwater levels decline below an established "trigger" or if a minimum threshold is exceeded, the DER may require an increased frequency of groundwater extraction reporting to proactively monitor the implementation of localized pumping reductions and other management actions to assess groundwater level recovery and determine the need for additional corrective actions to avoid undesirable results.

If the DER has cause to believe that a well extractor's groundwater production is in excess of that reported to the DER, the DER may request additional information from the landowner to substantiate the reported production amount.

Data obtained for the implementation of groundwater extraction measuring, monitoring, and reporting regulations under these Guidelines is presumptively confidential and proprietary information, including geological, geophysical, plant production data, or trade secrets. The DER had determined that the need to receive or obtain such data, and to maintain its confidentiality, outweighs the public need for site specific private information and the public will have access to the aggregate of such information which is a better measure of the cumulative status of groundwater resources (SCOC Section 9.37.020).

## **XI. Inspections**

All meters shall be installed in a manner that makes it reasonably accessible for inspection and reading. The DER or DER representative may enter the property at all reasonable

times during normal business hours to conduct inspections to assure compliance with the requirements of these Guidelines.

## **XII. Non-compliance and Enforcement Actions**

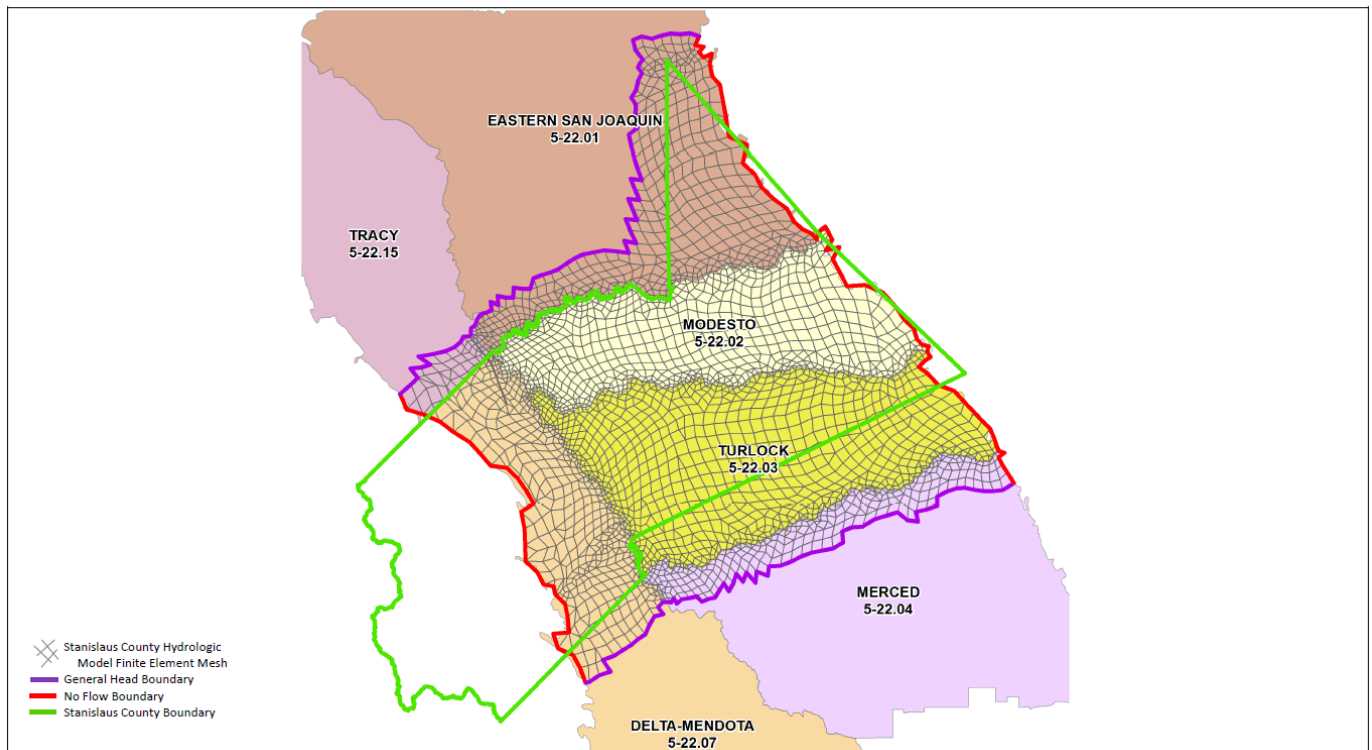
Insufficient landowner participation in this program may warrant the initiation of more restrictive backstop groundwater management programs and state intervention to ensure that all groundwater subbasins within Stanislaus County are sustainably managed in accordance with SGMA, (Water Code Sections 10735.2 (a)(1)-(5), 10735.8(a)).

Landowners shall be responsible for compliance with these rules and regulations by any lessee or well operator on their property. Failure to comply with the requirements specified in these Guidelines may result in legal action as set forth in SCOC Section 1.36.010, 9.37.070 and Chapter 2.92 which includes, but is not limited to, abatement, and the issuance of administrative citations, and penalties. If the violation remains uncorrected, it shall be deemed a public nuisance and may create a cause of action for injunctive relief, including, but not limited to, any remedy under Chapter 5 (commencing with Section 17200) of Part 2 of Division 7 of the Business and Professions Code.

## **XIII. Attachments**

- Attachment 1: Groundwater Subbasins in Stanislaus County
- Attachment 2: Well Registration Form
- Attachment 3: Groundwater Extraction Monitoring Report
- Attachment 4: Map Showing Applicability of the Groundwater Ordinance
- Attachment 5: Figure 1 Location of Special Management Zones

**ATTACHMENT 1**  
**Groundwater Subbasins in Stanislaus County**



JACOBSON | JAMES  
& associates, inc

Stanislaus County Hydrologic Model: Development and Forecasts  
Stanislaus County, California

PROJECT NO.	DATE	DRAWN BY	APPR. BY
STANCO.002	11/10/17	JH	MT

FIGURE 3-3

Groundwater Subbasins in Stanislaus County

**ATTACHMENT 2**  
**Well Registration Form**



# Well Registration Form

## Groundwater Well Metering, Monitoring and Reporting Program

Fill out a separate form for each well you/your company owns. If you/your company owns multiple wells, please make copies of the form and fill one out for each well and return it to the Department of Environmental Resources Groundwater Resources Division (209) 525-6700.

Property Owner Name: \_\_\_\_\_ City: \_\_\_\_\_ APN: \_\_\_\_\_

Well Location: Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

Mailing Address: \_\_\_\_\_ Company: \_\_\_\_\_

Owner Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Well Operator Name: \_\_\_\_\_ Well Operator Title: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

\* If there is a change in ownership, well operator, or operational status, the DER must be notified of this change and a new "Well Registration Form" may be required.

Well Status	
<input type="checkbox"/> Active <input type="checkbox"/> Inactive <input type="checkbox"/> Abandoned	
Water Well Type (check all that apply)	
<input type="checkbox"/> Domestic Public	<input type="checkbox"/> Industrial
<input type="checkbox"/> Agricultural	<input type="checkbox"/> Irrigation
<input type="checkbox"/> De minimus	<input type="checkbox"/> Exempt
<input type="checkbox"/> Commercial (type: _____)	
<input type="checkbox"/> Other (type: _____)	
<input type="checkbox"/> Small Pumper	
Groundwater Extraction Monitoring	
<p>The Department of Environmental Resources (DER) has adopted the "<a href="#">Stanislaus County Well Metering Monitoring and Reporting Guidelines</a>," (Guidelines) as authorized by SCOC Section 9.37.065.</p> <p>Pursuant to the Guidelines, all non-de minimus or non-exempt groundwater extractors in an unincorporated area of a groundwater subbasin shall submit periodic reports of groundwater information that are reasonably necessary to monitor the existing conditions of groundwater resources within the county, to determine trends and to develop and implement effective groundwater management plans and policies that are required by an adopted Groundwater Sustainability Plan.</p>	
Exemptions	
<p>All de-minimus (2 AFY or less) wells and existing wells constructed before November 25, 2014, that extract less than 10 acre-feet of groundwater per year shall not be required to register with the DER or participate in the Well Metering Monitoring and Reporting Program. Small Pumpers that extract less than 40 acre-feet of groundwater per year, may use an alternative approved method of measurement and shall complete all registration, monitoring and reporting requirements.</p>	
Well Registration	
Well Name:	Flowmeter Type/Model:
Well Depth:	Horsepower:      Power Source:
Well Casing Diameter:	Well Casing Screening Interval:
Flowmeter Present? <input type="checkbox"/> Yes <input type="checkbox"/> No	Pump Manufacturer and Model:
Pump Capacity:	Pump instantaneous flow rate:
Well distance from property line:	

Describe all uses that are served by the well (ex: 10 acres of almonds, residence, and a dairy) : \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Does the well provide the primary source of water for the existing use?  Yes  No

Are there additional water sources available?  Yes  No

If yes, list additional available sources (surface water, public/district water, additional wells, etc.)

\_\_\_\_\_  
\_\_\_\_\_

What is the average annual historical water demand supplied by the well over the past 10 years (AFY): \_\_\_\_\_  
\_\_\_\_\_

### Off-Site Well Use

Does the well supply any off-site uses  Yes  No

If yes, list parcels also supplied by this well \_\_\_\_\_  
\_\_\_\_\_

(attach a separate sheet if necessary).

Are the parcels supplied by this well contiguous under the same ownership?  Yes  No

### Owner Agreement

I agree to comply with the rules and regulations set forth by the Guidelines and all applicable county codes including, but not limited to, installation, maintenance and calibration of an approved flow meter unless exempt, payment of the well registration fee, compliance with groundwater extraction monitoring and reporting requirements, allowing the DER or DER representative access to the property for inspection of the meter, water well, and related appurtenances. I consent to notify subsequent property owners of the Stanislaus County Well Metering Monitoring and Reporting Program and acknowledge that upon a change in use, operator or operational status the DER will be notified and completion of a new well registration form and fee may be required.

Owner Signature \_\_\_\_\_

Date \_\_\_\_\_

Owner Signature \_\_\_\_\_

Date \_\_\_\_\_

For office use only

Groundwater Subbasin \_\_\_\_\_

Groundwater Sustainability Agency \_\_\_\_\_

Special Management Area:  SMA1  SMA2  SMA3

Well Registration Number \_\_\_\_\_

Reviewed By \_\_\_\_\_ Date \_\_\_\_\_

**ATTACHMENT 3**  
**Groundwater Extraction Monitoring Report**





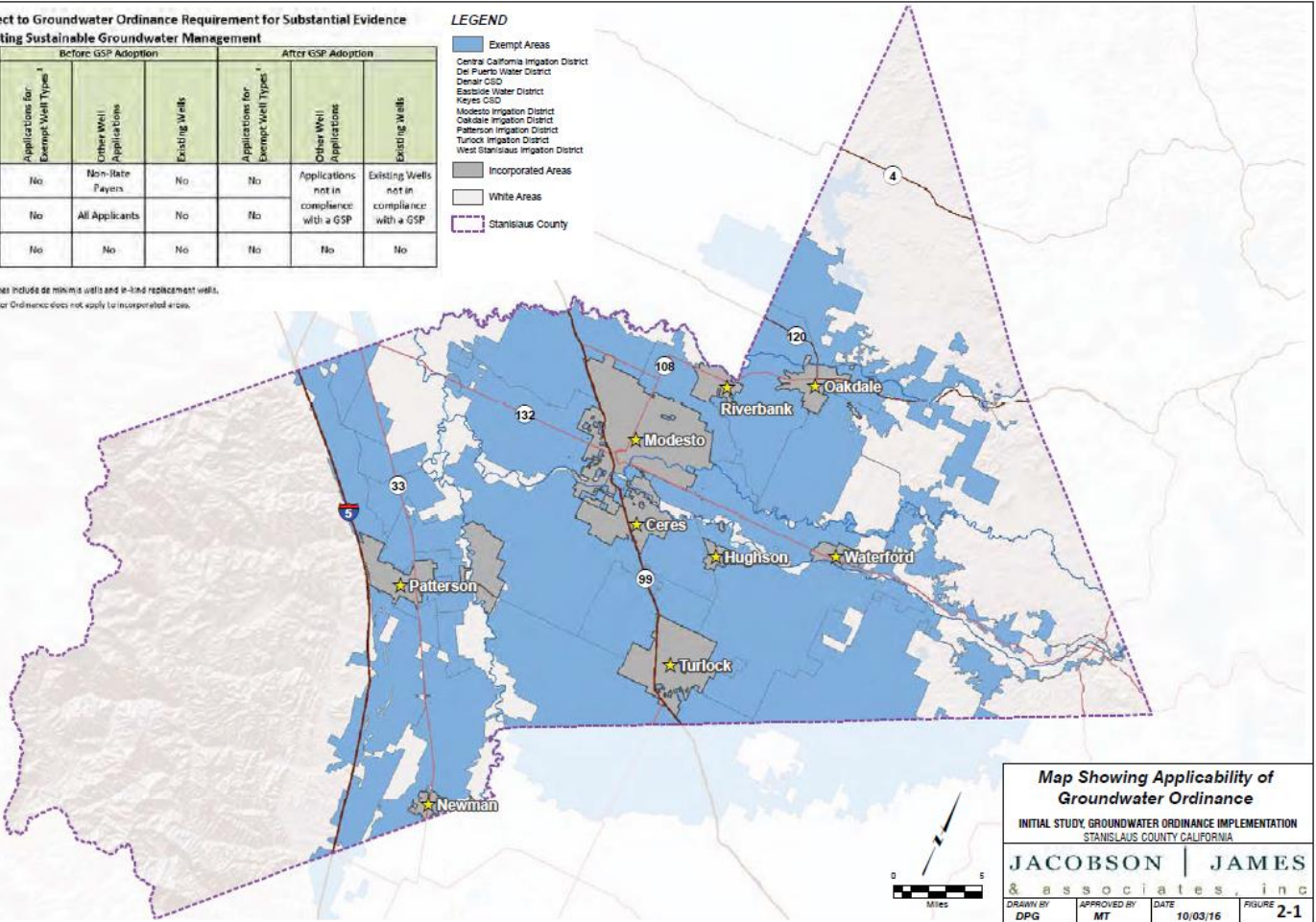
**ATTACHMENT 4**  
**Map Showing Applicability of the Groundwater Ordinance**

**Wells Subject to Groundwater Ordinance Requirement for Substantial Evidence Demonstrating Sustainable Groundwater Management**

Area	Before GSP Adoption			After GSP Adoption		
	Applications for Exempt Well Types <sup>1</sup>	Other Well Applications	Existing Wells	Applications for Exempt Well Types <sup>1</sup>	Other Well Applications	Existing Wells
Exempt Areas	No	Non-Rate Payers	No	No	Applications not in compliance with a GSP	Existing Wells not in compliance with a GSP
White Areas	No	All Applicants	No	No		
Incorporated Areas <sup>2</sup>	No	No	No	No	No	No

- LEGEND**
- Exempt Areas
  - Central California Irrigation District
  - De Puerto Water District
  - Denair CSD
  - Earlridge Water District
  - Keyes CSD
  - Modesto Irrigation District
  - Oakdale Irrigation District
  - Patterson Irrigation District
  - Turlock Irrigation District
  - West Stanislaus Irrigation District
  - Incorporated Areas
  - White Areas
  - Stanislaus County

Notes:  
 1. Exempt well types include de minimis wells and in-kind replacement wells.  
 2. The Groundwater Ordinance does not apply to incorporated areas.



**Map Showing Applicability of Groundwater Ordinance**

INITIAL STUDY, GROUNDWATER ORDINANCE IMPLEMENTATION  
 STANISLAUS COUNTY CALIFORNIA

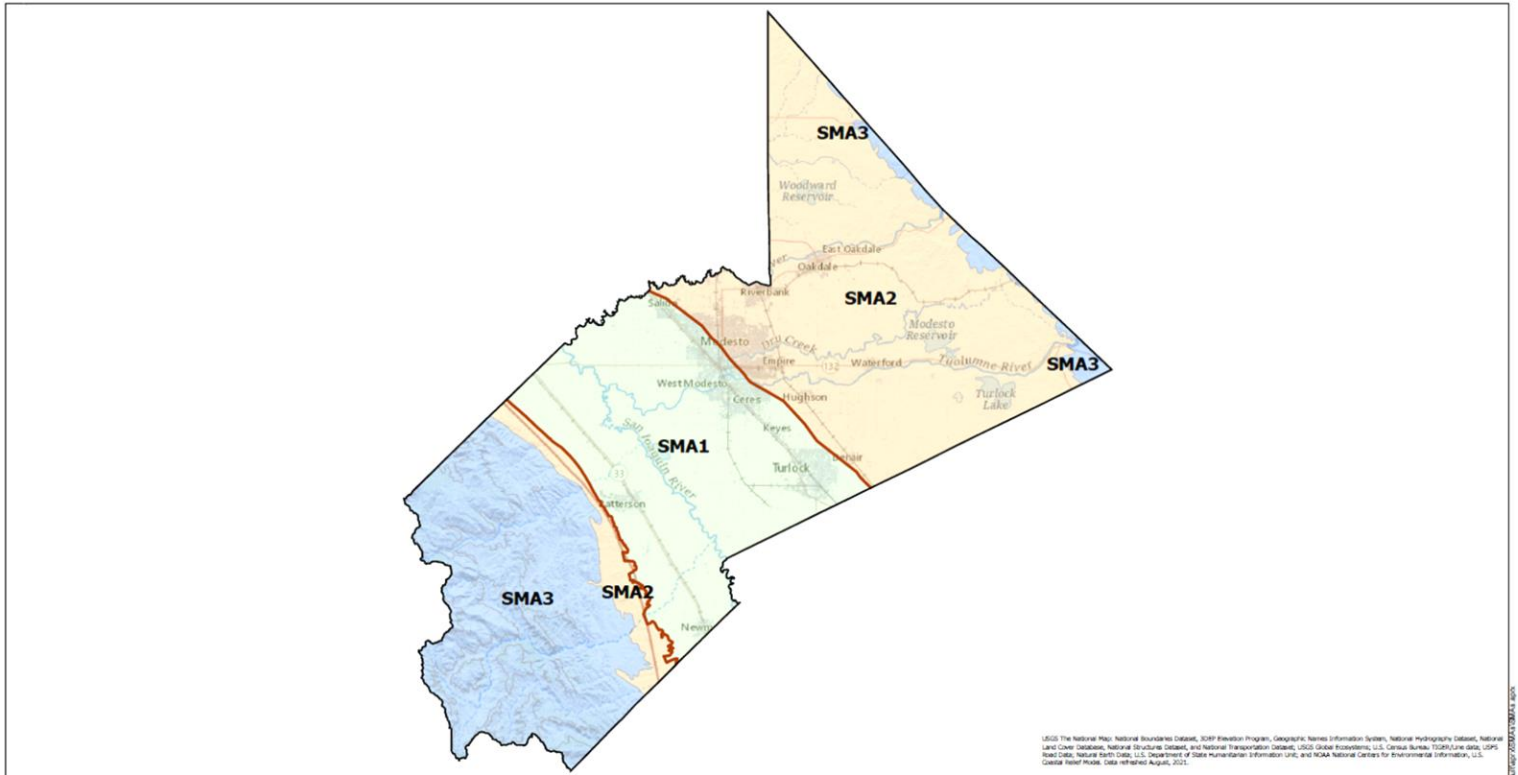
**JACOBSON | JAMES**  
 & associates, inc

DRAWN BY DPG	APPROVED BY MT	DATE 10/03/16	FIGURE 2-1
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## **ATTACHMENT 5**

**Figure 1. Location of Special Management Zones**



USGS The National Map, National Boundaries Database, 30M Riverline Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Database, and National Transportation Database; USGS Global Elevation, U.S. Census Bureau, TIGER/Line data; USGS Road Data; National Earth Data, U.S. Department of State Humanitarian Information Unit, and NOAA National Centers for Environmental Information, U.S. Coastal Relief Profile. Data refreshed August, 2021.

FIGURE 1

**LOCATIONS OF SPECIAL MANAGEMENT ZONES**

*Stanislaus County Groundwater Well Siting and Construction Guidelines*

- Legend**
- Stanislaus County Boundary
  - SMA1 - Area Underlain by the Concrete Clay
  - SMA2 - Alluvial Fan Area
  - SMA3 - Inactive Areas of Coal Range and Sierra Nevada Foothills

Scale for basemap

0 4 8 Miles

Stanislaus County

DATE: MAR. 09, 2022