

GROUNDWATER & SGMA INFORMATION MODULES

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PROVING & DOCUMENTING HOW MUCH WATER YOU HAVE PUMPED EACH YEAR

Under the Sustainable Groundwater Management Act (SGMA), or if you are in a groundwater adjudication, you will have to prove based upon acceptable evidence what you have pumped from each of your wells for the preceding water year and possibly up to the preceding ten calendar years. A reporting form for first notice of groundwater extraction and instructions for filing are at the end of this module.

Proving to a Groundwater Sustainability Agency

SGMA¹ requires that each groundwater subbasin or basin, which is classified as either high or medium priority, to be managed by a groundwater sustainability agency (GSA) or agencies by July 1, 2017. Your GSA is in turn required to prepare and adopt a groundwater sustainability plan (GS Plan). Under SGMA, your GSA is granted many powers, including the following: (1) to require you to purchase and install at your expense a water-measuring device satisfactory to your GSA for each well, (2) to require you at your expense to periodically calibrate the water-measuring device for each well, and (3) to require you to file an annual statement with the GSA reporting the total extractions in acre-feet from each of your wells during the preceding water year (October 1 through September 30), and (4) to regulate, limit or suspend extractions from your individual wells.

Proving to the State Water Resources Control Board (SWRCB)

If no GSA for your area has been formed by June 30, 2017, or if your groundwater subbasin is otherwise on probationary status as determined by the SWRCB, e.g., for your GSA failing to adopt a compliant GS Plan for your Critically Overdrafted subbasin by January 31, 2020, then the SWRCB has the authority to require you to file a report of groundwater extraction² by December 15 of each year for extractions made during the preceding October 1 through September 30 on a form

¹ Water Code Section 10720, et seq.

² Water Code Section 5200, et seq.

prescribed by the SWRCB. The form shall include the following, among other requirements: the location of each of your wells, capacity of each of your wells/pumps, monthly records of groundwater extractions determined using a methodology, water-measuring device or combination thereof satisfactory to the SWRCB (see the next section on what those might be), the purpose of use, and the area where the water pumped was used.

The SWRCB has not yet developed the required SGMA extracting reporting form yet. But we have attached a possible example of what that form may look like: the SWRCB's First Notice of Extraction and Diversion of Water, which pumpers within Riverside, San Bernardino, Los Angeles, and Ventura counties are required to file with the SWRCB, along with the instruction sheet. A more draconian SWRCB form is the Subsurface (Groundwater) Diversion form pursuant to the SWRCB's Russian River Tributaries Informational Order. The SWRCB has instituted proceedings to impose administrative civil liability penalties on pumpers for failing to provide information required under the Russian River Tributaries Informational Order.

Proving to a California Superior Court in a Groundwater Adjudication

If your groundwater area is subject to a groundwater adjudication, then you would need to participate in the court proceeding (by "appearing") to protect your groundwater rights. In order to participate, you will need to file an "initial disclosure" with the information required by Code of Civil Procedure 842, which states:

- (a) Except as otherwise stipulated by the parties or ordered by the court, *within 6 months of appearing in a comprehensive adjudication*, a party shall serve on the other parties and the special master, if one is appointed, an initial disclosure that includes all of the following information:
 - (1) The name, address, telephone number, and email address of the party and, if applicable, the party's attorney.
 - (2) *The quantity of any groundwater extracted from the basin* by the party *and the method of measurement used* by the party or the party's predecessor in interest *for each of the previous 10 years preceding the filing of the complaint*.
 - (3) The type of water right or rights claimed by the party for the extraction of groundwater.
 - (4) A general description of the purpose to which the groundwater has been put.

- (5) The location of each well or other source through which groundwater has been extracted.
- (6) The area in which the groundwater has been used.
- (7) Any claims for increased or future use of groundwater.
- (8) The quantity of any beneficial use of any alternative water use that the party claims as its use of groundwater under any applicable law, including, but not limited to, Section 1005.1, 1005.2, or 1005.4 of the Water Code.
- (9) Identification of all surface water rights and contracts that the party claims provides the basis for its water right claims in the comprehensive adjudication.
- (10) The quantity of any replenishment of water to the basin that augmented the basin's native water supply, resulting from the intentional storage of imported or non-native water in the basin, managed recharge of surface water, or return flows resulting from the use of imported water or non-native water on lands overlying the basin by the party, or the party's representative or agent, during each of the 10 calendar years immediately preceding the filing of the complaint.
- (11) The names, addresses, telephone numbers, and email addresses of all persons possessing information that supports the party's disclosures.
- (12) Any other facts that tend to prove the party's claimed water right.

(Emphasis added.)

Taking Action Now

From both a SGMA and groundwater adjudication perspective, it is very prudent for you to begin proving, documenting, and recording your groundwater use now. SWRCB extraction report and groundwater adjudication initial disclosure filing deadlines are fixed once they are triggered. If you wait until a filing deadline is triggered, you are not going to have much time to collect the required information, which can be extensive. The most difficult part is proving what you have pumped each year from each of your wells. This is easier if you have a recording water meter on each of your wells.

How do I prove what I have pumped each year from each of my wells?

To do this you may need help from professional specialists, like well drillers, pump contractors, groundwater geologists, or certified crop advisors. An outline of the steps needed follows.

Compile well installation records that show the date of installation, driller, and details of construction – copies of well records can be requested through the California Department of Water Resources.³ If you have a totalizing flow meter on your well and have been keeping regular data (monthly) you need only compile and chart the data.

- Plot date in months on the X-axis and pumping in units of acre-feet (ac.ft.) on the Y-axis.
- Be prepared to explain noticeable variations. For example, if high pumping occurred in one period note that it coincided with low surface water deliveries; or if incorrect low pumping was recorded at other times, note the reason. Retain dated repair records to support claims of pumping at rates higher than recorded.
- The new SGMA regulations will require flow meter calibration, and if you have calibration records, they should be retained.
- If one flow meter serves more than one well, independent well tests or well records should be used to rationalize estimates of the proportional monthly flows from each well.

If you do not have a recording water meter on your well, the SWRCB has provided acceptable alternative methods⁴ for documenting surface water diversions and some of those methods may be used by you or adopted by your GSA to measure your groundwater extractions. Two methods to consider are (1) power consumption records and (2) crop duty and consumption use estimates:

- 1) Power consumption records include fuel for diesel pumps or electricity for electric pumps. Efficiency is power consumption per acre-foot (ac.ft.) of pumped groundwater. It usually degrades with time due to many factors such as pump wear, well screen clogging, lower water tables and higher total dynamic head from new irrigation systems, etc. To properly account for prior use, the pumper should estimate the pumping efficiency over the 10-year period.
 - a) Compile all power consumption values for a given well or set of wells for the past 10 years, or over the full history of newer well(s). For whole farm power values, subtract a percentage for non-well uses and allocate the

³http://www.water.ca.gov/groundwater/wells/well_completion_reports.cfm.

⁴http://www.waterboards.ca.gov/waterrights/water_issues/programs/diversion_use/wm_alt_mthds.shtml.

remainder among the wells. Organize the power consumption data by month in average gallons of fuel (gal) or kilowatt hours (kwh) at each well.

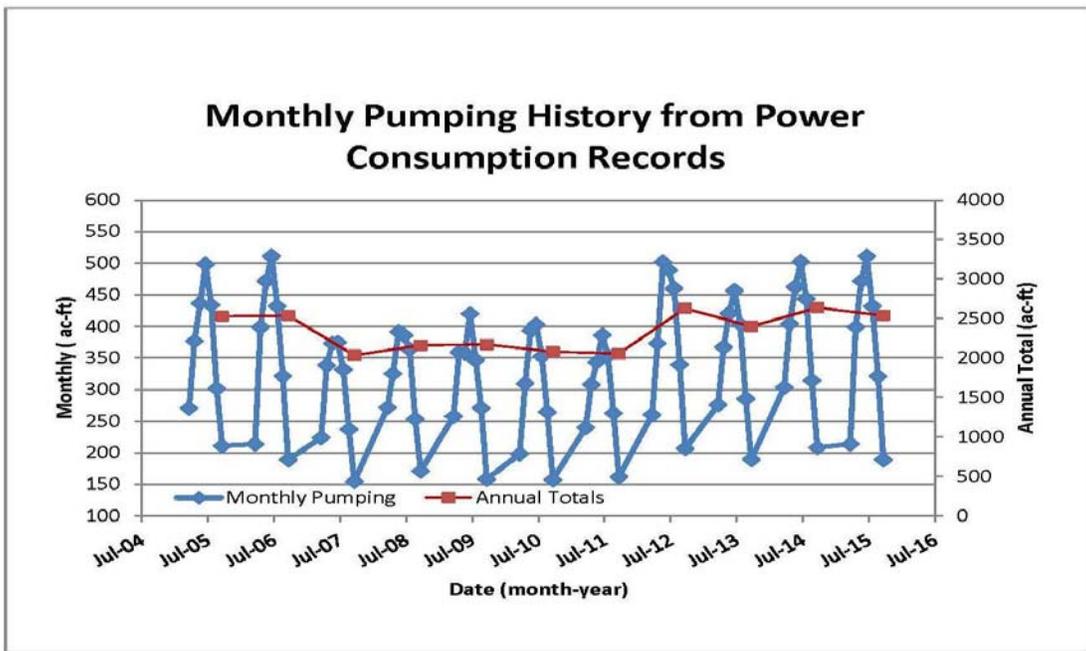
b) Compile efficiency testing reports at each well. These tests are run routinely by pumping contractors when pumps are installed or to monitor power usage for well maintenance. They identify the well and report useful data such as the standing water level, pumping level, flow rate of the test, total head, and overall pumping efficiency (e.g. units of kwh/ac-ft). Efficiency values can be interpolated between the dates of the different reports to generate monthly efficiency numbers for each well. If no such reports are available, have one run soon to establish efficiency.

c) Divide monthly power consumption (C) by efficiency (E) for each well to calculate the pumped groundwater (Q) in ac-ft.

$$\frac{C(kwh)}{E\left(\frac{kwh}{acft}\right)} = Q(acft)$$

Plot the data with date in months on the X-axis and pumping (P) in ac-ft on the Y-axis. Sum the months in each year to calculate annual rates.

d) Investigate explanations for noticeable variations.



- 2) Crop consumption estimates should document that the irrigation supplied was groundwater from a known well(s).
 - a) Crop consumption estimates should document that the irrigation supplied was groundwater from a known well(s).
 - b) Acreage planted and harvested can be documented from planting and harvesting records, seed sales, harvested product sales records, or other means, including book values from agricultural publications. Historic aerial photography showing crop in production are potentially very useful to corroborate claims.

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[updated August 2016]

Complete a separate notice for each well.

State of California
State Water Resources Control Board
DIVISION OF WATER RIGHTS
P.O. Box 2000, Sacramento, CA 95812-2000
Info: (916) 341-5300, FAX: (916) 341-5300, Web: <http://www.waterrights.ca.gov>

Recordation Number
State Well Number
(Division of Water Rights Use Only)

**FIRST NOTICE OF EXTRACTION
AND DIVERSION OF WATER**
(GROUNDWATER RECORDATION PROGRAM)
(Pursuant to Part 5, Division 2 of the Water Code)

1. Name of person owning the well _____
(Unless otherwise indicated, annual notices will be sent to this name and address)

Address _____
Street address or P.O. Box number City State Zip Code

Telephone Number () _____ - _____

2. Name of person extracting groundwater (if different than Item 1) _____

Address _____
Street address or P.O. Box number City State Zip Code

Telephone Number () _____ - _____

WELL LOCATION

3. Owner's designation of well _____ 4. County _____

5. County Assessor's Parcel Number _____

6. Describe location of well to the nearest 40-acre quarter section. State well number (if known) _____

_____ 1/4, of _____ 1/4, Section _____, Township _____

Range _____, _____ B. & M.

7. Indicate location of well in the section grid below, or provide a copy of the USGS quadrangle map with the well location marked. The place of use should also be indicated. The grid represents one whole section.

Section _____, Township _____, Range _____

Quadrangle map name _____

WATER USE

8. Describe the Place of Use (If sketch is required, please use grid under item 7) _____

9. Quantity and Use of water extracted and method used in determining quantity for the last calendar year.

Calendar Year	EXTRACTIONS		USE		
	Annual extractions in acre-feet or _____ (specify unit)	Method of measurement or of estimate (specify)	When use is for irrigation		When use is other than irrigation
			Crops served	Acreage Supplied	Nature and extent of use, i.e. population, products manufactured, number and kind of stock watered
20					

10. Do you also divert surface water? _____
Yes or No

11. If answer (to 10 above) is yes, how are you reporting surface water uses?
- a. Under Statement of Water Diversion and Use procedures
 - b. Under Annual Recordation Notice procedures
 - c. Under Appropriative Water Right procedures
 - d. Not reporting

WELL DATA

12. Is the place of use also served by another well? _____ Another water source? _____
Yes or No Yes or No
13. If yes to either, describe _____
14. Type, make and horsepower of pump _____ Date installed _____
15. Pump tests _____
Conducted by _____ Date _____ Discharge rate gpm _____ Pump efficiency _____
16. Power supply _____
Source _____ Meter No. _____ Date installed _____
17. Depth of well _____ feet. 18. Casing diameter _____ inches.
19. Is well gravel-packed? _____ 20. Date drilled _____
Yes or No
21. What are the upper and lower depths of casing perforations? Upper _____ Lower _____
(Show feet from ground surface)
22. Is log of well available? _____ Where? _____
Yes or No
23. Has a chemical analysis of well water been made? _____ If yes, where can it be obtained? _____
Yes or No
24. Are water level measurements available? _____ Where? _____

PLEASE NOTE THAT:

A willful misstatement in this notice is a misdemeanor pursuant to Section 5008 of the Water Code.

A \$50.00 filing fee must accompany each notice.

I certify that the foregoing required statements and the following optional additional statements, if any, are true and correct to the best of my knowledge and belief.	
Name _____	
Signature _____	
Title _____	Date _____
At (City of P.O.) _____	
Firm or Corporate Name _____	



State Water Resources Control Board

INSTRUCTIONS FOR FILING FIRST NOTICE GROUND WATER EXTRACTION

A SEPARATE FIRST NOTICE FOR EACH WELL should be typewritten or legibly written in ink. Where supplemental sheets are used, please make reference to the item number involved. Instructions for completing different ITEMS in the First Notice are as follows:

1. The person (or firm) in whose name the notice is to be recorded should be stated here. Please use the same name for all wells.
2. Names of persons not included in Item 1 who are known to be using the well or claim an interest in water extracted there from should be listed in this item or on a supplemental sheet. It is not necessary to include names of persons if the extractor is a mutual water company, public utility or public agency.
3. The owner's designation by number and/or name may be given in this item in order to properly identify the well referred to in the notice. If this is the only well, it will suffice to insert "No. 1" in this item.
4. It is important to state the COUNTY in which the well is located. This determines the first two numbers of the recordation number.
5. The County ASSESSOR'S PARCEL NUMBER is important and must be included.
6. The description of the well location should be sufficiently clear to enable a stranger to find it on the ground or to locate it on a map of the area. The description may be made on the grid in Item 6. Post Office Box or Rural Route Numbers are NOT ACCEPTABLE.
7. The complete grid represents one section. The township, range, and section number is necessary for the computer program to accept the data. The quadrangle map name is shown in the lower right hand corner of the United States Geological Survey map.
8. If the water is used on an area within one mile of the well a statement to that effect will suffice otherwise a description or sketch of the general area of use must be given. It is preferred that the United States public land survey system of Township, Range, Section, and portion thereof be used to describe the area of use. If a sketch is drawn in lieu of such description, it should outline the area served with the distances clearly shown to roads or other prominent landmarks, which may be easily located. A mutual

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

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water company, public utility or public agency may attach a map outlining the general service area. In this regard, submission of one copy of a map delineating the service area for several wells will be sufficient.

9. The total amount of water extracted must be reported in this item. It is preferable to report the amount in acre/feet, but it may also be reported in cubic feet or gallons. The unit of measurement used must be noted in the space provided. If the amount of water extracted was estimated rather than being measured by a meter, weir, volumetric, or any other direct measuring device, the method by which the quantity was estimated should be specified, such as a depth of applied water and acreage served, power records, lift and pump test, or other.

(1 acre/foot = 43,560 cubic feet = 325,851 U.S. gallons). The use of water extracted should be indicated by giving total acreage of each crop served. If more than one kind of crop is served by water from the well, list separately the number of acres under each crop. If use is for purposes other than irrigation the amount of the use should be indicated. For example, the water may be used for domestic purposes for 20 persons and 6 residences, and stockwatering for 200 head of cattle. (If more space is needed the information may be entered on another sheet of paper and attached to this notice).

10. through 24.

Information supplied under these items will tend to support the claim of right to the use of ground water and will assist in reducing the cost of verification of the data contained in the notice in the case where such verification is requested under Water Code section 5007.

EACH NOTICE MUST BE SIGNED, DATED, AND SUBMITTED WITH THE
REQUIRED FILING FEE TO:

STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS
POST OFFICE BOX 2000
SACRAMENTO, CA 95812-2000

If we can assist you in any way, please call Ashley Holloman at (916) 341-5801 or email Ashley.holloman@waterboards.ca.gov