

Topic 9: Data Collection, Management, and Reporting

*Department of Water Resources - Sustainable Groundwater Management Program
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1.0 PURPOSE

The purpose of this paper is to provide information to advance the discussion with stakeholders and the public as the Department of Water Resources (DWR) develops emergency regulations as required in the Sustainable Groundwater Management Act (SGMA). DWR identified a series of ten topics related to the development of Groundwater Sustainability Plan (GSP) regulations that were deemed of special interest to further discuss with stakeholders and the public. This paper covers information specific to Topic 9: Data Collection, Management, and Reporting.

2.0 BACKGROUND

In 2014, legislation was passed that provides a statewide framework for sustainable groundwater management in California (Senate Bill [SB] 1168, Assembly Bill [AB] 1739, and SB 1319). This legislation, referred to as the SGMA, is intended to support local groundwater management through the oversight of a Groundwater Sustainability Agency (GSA). Only local agencies can elect to be a GSA. To avoid intervention by the State Water Resources Control Board (SWRCB), the SGMA requires that all area of a basin be covered by one or more GSAs in all high- and medium-priority basins or subbasins by June 30, 2017. The legislation requires high- and medium-priority basins subject to critical conditions of overdraft to be managed under a GSP by January 31, 2020, and requires all other groundwater basins designated as high- or medium-priority to be managed under a GSP by January 31, 2022, and to require GSAs to achieve sustainability goals by 2040 or 2042.

This document presents preliminary draft information to promote discussion and is subject to revision. Furthermore, because this discussion paper addresses a variety of issues raised by individuals and entities outside of DWR, inclusion of the issues in this document does not constitute an endorsement of any particular issue. DWR invites comment and input on the preliminary draft information and questions presented in this document. Comments should be submitted to sgmps@water.ca.gov.

3.0 SELECT CALIFORNIA WATER CODE SECTIONS

The SGMA legislation places significant new requirements on local agencies to collect and report water management information to the State to demonstrate sustainable groundwater management through implementation of GSPs. This section highlights some of the key areas of SGMA that will motivate comprehensive data collection, management, and reporting.

3.1 Defining Sustainable Groundwater Management

Section 10721

(u) “Sustainable groundwater management” means the management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results.

(w) “Undesirable result” means one or more of the following effects caused by groundwater conditions occurring throughout the basin:

(1) Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply if 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.

(2) Significant and unreasonable reduction of groundwater storage.

(3) Significant and unreasonable seawater intrusion.

(4) Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies.

(5) Significant and unreasonable land subsidence that substantially interferes with surface land uses.

(6) Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water.

3.2 Groundwater Sustainability Plans – Required Elements

Section 10727.2

A groundwater sustainability plan shall include all of the following:

(a) A description of the physical setting and characteristics of the aquifer system underlying the basin that includes the following:

(1) Historical data, to the extent available.

(2) Groundwater levels, groundwater quality, subsidence, and groundwater-surface water interaction.

(3) A general discussion of historical and projected water demands and supplies.

(4) A map that details the area of the basin and the boundaries of the groundwater sustainability agencies that overlie the basin that have or are developing groundwater sustainability plans.

(5) A map identifying existing and potential recharge areas for the basin.

3.3 Groundwater Sustainability Plans – Additional Elements

Section 10727.4

In addition to the requirements of Section 10727.2, a groundwater sustainability plan shall include, where appropriate and in collaboration with the appropriate local agencies, all of the following:

- (a) Control of saline water intrusion.*
- (b) Wellhead protection areas and recharge areas.*
- (c) Migration of contaminated groundwater.*
- (d) A well abandonment and well destruction program.*
- (e) Replenishment of groundwater extractions.*
- (f) Activities implementing, opportunities for, and removing impediments to, conjunctive use or underground storage.*
- (g) Well construction policies.*
- (h) Measures addressing groundwater contamination cleanup, recharge, diversions to storage, conservation, water recycling, conveyance, and extraction projects.*
- (i) Efficient water management practices, as defined in Section 10902, for the delivery of water and water conservation methods to improve the efficiency of water use.*
- (j) Efforts to develop relationships with state and federal regulatory agencies.*
- (k) Processes to review land use plans and efforts to coordinate with land use planning agencies to assess activities that potentially create risks to groundwater quality or quantity.*
- (l) Impacts on groundwater dependent ecosystems.*

3.4 Groundwater Sustainability Plans – Requirements for Coordinated Plans

Section 10727.6

Groundwater sustainability agencies intending to develop and implement multiple groundwater sustainability plans pursuant to paragraph (3) of subdivision (b) of Section 10727 shall coordinate with other agencies preparing a groundwater sustainability plan within the basin to ensure that the plans utilize the same data and methodologies for the following assumptions in developing the plan:

- (a) Groundwater elevation data.*
- (b) Groundwater extraction data.*
- (c) Surface water supply.*
- (d) Total water use.*
- (e) Change in groundwater storage.*
- (f) Water budget.*
- (g) Sustainable yield.*

3.5 Annual Reporting by Groundwater Sustainability Agency to Department

Section 10728

On the April 1 following the adoption of a groundwater sustainability plan and annually thereafter, a groundwater sustainability agency shall submit a report to the department containing the following information about the basin managed in the groundwater sustainability plan:

- (a) Groundwater elevation data.*
- (b) Annual aggregated data identifying groundwater extraction for the preceding water year.*
- (c) Surface water supply used for or available for use for groundwater recharge or in-lieu use.*
- (d) Total water use.*
- (e) Change in groundwater storage.*

3.6 Groundwater Extraction Reporting for Probationary Basins

Section 5203

Each report shall be prepared on a form provided by the board. The report shall include all of the following information:

- (a) The name and address of the person who extracted groundwater and of the person filing the report.
- (b) The name of the basin from which groundwater was extracted.
- (c) The place of groundwater extraction. The location of the groundwater extraction facilities shall be depicted on a specific United States Geological Survey topographic map or shall be identified using the California Coordinate System or a latitude and longitude measurement. If assigned, the public land description to the nearest 40-acre subdivision and the assessor's parcel number shall be provided.
- (d) The capacity of the groundwater extraction facilities.
- (e) Monthly records of groundwater extractions. The measurements of the extractions shall be made by a methodology, water-measuring device, or combination thereof satisfactory to the board.
- (f) The purpose of use.
- (g) A general description of the area in which the water was used. The location of the place of use shall be depicted on a specific United States Geological Survey topographic map or on any other maps with identifiable landmarks.
- (h) As near as is known, the year in which the groundwater extraction was commenced.
- (i) Any information required pursuant to paragraph (3) of subdivision (c) of Section 10735.2.
- (j) Any other information that the board may require by regulation and that is reasonably necessary for purposes of this division or Part 2.74 (commencing with Section 10720) of Division 6.

3.7 Reporting Requirements for Entity Administering Adjudication

10720.8(f)

- (3) By April 1, 2016, and annually thereafter, submit to the department a report containing the following information to the extent available for the portion of the basin subject to the adjudication:
- (A) Groundwater elevation data unless otherwise submitted pursuant to Section 10932.
 - (B) Annual aggregated data identifying groundwater extraction for the preceding water year.
 - (C) Surface water supply used for or available for use for groundwater recharge or in-lieu use.
 - (D) Total water use.
 - (E) Change in groundwater storage.
 - (F) The annual report submitted to the court.

4.0 SUMMARY OF TOPIC ISSUES, IMPLEMENTATION CHALLENGES, AND QUESTIONS

Questions:

1. Data Collection at the GSA Level.
 - a. What new data will GSAs need to collect to implement SGMA that are not currently collected by another entity?
 - b. As each basin and plan may be unique, what will be the appropriate spatial (i.e., area and distribution) and temporal (i.e., timing and frequency) level for data collection to evaluate sustainability?
2. Data Management at the GSA Level.
 - a. What data management software, spreadsheets, or tools are GSAs expected to make use of to support SGMA implementation?
3. Data Coordination between Adjacent GSAs and with the State.
 - a. What issues will GSAs face with standardization and formats of the data both internally and externally with other agencies?
4. Data Reporting to DWR and SWRCB.
 - a. What issues will GSAs face in submitting data/information to DWR and SWRCB?
 - b. What types of data standards should DWR and SWRCB provide for data reporting?
 - c. What would a statewide data reporting system for GSAs to provide data to the State look like?
5. Statewide Technical Assistance.
 - a. What data sets should the State provide that could be used by all GSAs to support development of GSPs?
 - b. What State support do GSAs require to provide robust data management practices at the GSA, subbasin, or basin scale?