Date: 2/3/2021

GROUNDWATER SUSTAINABILITY PLAN ADVISORY COMMITTEE
MEMO

TO: Napa Valley Subbasin Groundwater Sustainability Plan Advisory Committee

FROM: LUHDORFF & SCALMANINI, CONSULTING ENGINEERS (LSCE)

SUBJECT: Sustainability Framework for the Napa Valley Subbasin - Background and Discussion Questions

SUMMARY

The Sustainable Groundwater Management Act (SGMA) established a new framework for groundwater management in state-defined groundwater basins. The framework has two core principles: local control (with support and oversight by the State) and common standards for defining sustainability. Local Groundwater Sustainability Agencies (GSAs) are authorized to establish sustainable management criteria for the groundwater basins that they manage. Management criteria should reflect relevant basin conditions and must be consistent with the standards defined by SGMA.

The sustainability standards defined by SGMA include a basinwide Sustainability Goal, Undesirable Results, Minimum Thresholds, Measurable Objectives, and Interim Milestones.

The Sustainability Goal provides a qualitative description of the local objective for sustainable management. The Undesirable Results provide qualitative descriptions of conditions that would constitute unsustainable management. Those qualitative criteria are bolstered by quantitative sustainable management criteria (including Minimum Thresholds, Measurable Objectives, and Interim Milestones), also established in the GSP. This memorandum focuses on the qualitative criteria to be established in the GSP. Additional resources will be provided in coming months related to the establishment of quantitative sustainable management criteria.

This memorandum:

- provides SGMA definitions for “sustainable groundwater management” and ”undesirable results”,
- presents undesirable results previously defined for the Napa Valley Subbasin by Napa County as part of SGMA implementation, and
- presents questions for GSPAC consideration related to the definitions of undesirable results to be included in the Napa Valley Subbasin Groundwater Sustainability Plan (GSP).

DISCUSSION

The Sustainable Groundwater Management Act (SGMA) established a new framework for groundwater management in state-defined groundwater basins. The framework has two core principles: local control (with support and oversight by the State) and common standards for defining sustainability. Local Groundwater Sustainability Agencies (GSAs) are authorized to establish sustainable management criteria for the groundwater basins that they manage. Management criteria should reflect relevant basin conditions and must be consistent with the standards defined by SGMA.

The sustainability standards defined by SGMA include a basinwide Sustainability Goal, Undesirable Results, Minimum Thresholds, Measurable Objectives, and Interim Milestones.

Napa County first adopted a groundwater sustainability goal, developed by the Groundwater Resources Advisory Committee[1], in 2014. The Board of Supervisors (BOS) revised the previous sustainability goal in 2016, to align it with the requirements of SGMA.

> *Napa Valley Subbasin SGMA Sustainability Goal (2016): To protect and enhance groundwater quantity and quality for all the people who live and work in Napa County, regardless of the source of their water supply. The County and everyone living and working in the county will integrate stewardship principles and measures in groundwater development, use, and management to protect economic, environmental, and social benefits and maintain groundwater sustainability indefinitely without causing undesirable results, including unacceptable economic, environmental, or social consequences.*

The sustainability goal provides a qualitative description of the local objective for basinwide sustainable management. The undesirable results provide qualitative descriptions of conditions that would constitute unsustainable groundwater management. Those qualitative criteria are bolstered by quantitative sustainable management criteria (including Minimum Thresholds, Measurable Objectives, and Interim Milestones), also established in the GSP. This memorandum focuses on the qualitative criteria to be established in the GSP. Additional resources will be provided in coming months related to the establishment of quantitative sustainable management criteria.

[1] In 2011, the Napa County Board of Supervisors appointed 15 Napa County residents representing diverse environmental, agricultural, and community stakeholder interests to the Groundwater Resources Advisory Committee (GRAC) for a term that ended in 2014. The GRAC assisted the County with General Plan implementation, particularly regarding policies and goals related to groundwater resources.

SGMA Definitions and State Guidance

SGMA provides the following definitions that will inform how the State will evaluate local efforts to achieve the Act's objectives:

> ***"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.*[2]
>
> ***"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 groundwater 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]

GSP Regulations include the following requirements regarding the determination of Undesirable Results:[4]

> *(a) Each Agency shall describe in its Plan the processes and criteria relied upon to define undesirable results applicable to the basin. Undesirable results occur when significant and unreasonable effects for any of the sustainability indicators are caused by groundwater conditions occurring throughout the basin.*
>
> *(b) The description of undesirable results shall include the following:*
>
> *(1) The cause of groundwater conditions occurring throughout the basin that would lead to or has led to undesirable results based on information described in the basin setting,*

[2] California Water Code §10721 (v)
[3] California Water Code §10721 (x)
[4] California Code of Regulations §354.26

and other data or models as appropriate.

(2) The criteria used to define when and where the effects of the groundwater conditions cause undesirable results for each applicable sustainability indicator. The criteria shall be based on a quantitative description of the combination of minimum threshold exceedances that cause significant and unreasonable effects in the basin.

(3) Potential effects on the beneficial uses and users of groundwater, on land uses and property interests, and other potential effects that may occur or are occurring from undesirable results.

SGMA does not define the term "significant and unreasonable"; however, in its Draft Best Management Practices guidance document[5] for establishing sustainable management criteria, the Department of Water Resources provides the following characterization:

GSAs must consider and document the conditions at which each of the six sustainability indicators become significant and unreasonable in their basin, including the reasons for justifying each particular threshold selected. A GSA may decide, for example, that localized inelastic land subsidence near critical infrastructure (e.g., a canal) and basinwide loss of domestic well pumping capacity due to lowering of groundwater levels are both significant and unreasonable conditions. These general descriptions of significant and unreasonable conditions are later translated into quantitative undesirable results, as described in this document. The evaluation of significant and unreasonable conditions should identify the geographic area over which the conditions need to be evaluated so the GSA can choose appropriate representative monitoring sites.

SGMA does not require that the GSP address undesirable results that may have occurred prior to January 1, 2015:

The plan may, but is not required to, address undesirable results that occurred before, and have not been corrected by, January 1, 2015. Notwithstanding paragraphs (1) to (3), inclusive, a groundwater sustainability agency has discretion as to whether to set measurable objectives and the timeframes for achieving any objectives for undesirable results that occurred before, and have not been corrected by, January 1, 2015.[6]

Undesirable Results Previously Defined for the Napa Valley Subbasin

Napa County previously defined conditions that constitute undesirable results for the Napa Valley Subbasin as part of SGMA implementation underway since 2016. Those Subbasin-specific undesirable results were defined for all six of the sustainability indicators identified by

[5] DWR. 2017. *C. Draft Best Management Practices for the Sustainable Management of Groundwater – Sustainable Management Criteria*. November 2017. https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Sustainable-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents/Files/BMP-6-Sustainable-Management-Criteria-DRAFT_ay_19.pdf

[6] California Water Code §10727.2 (b)(4)

SGMA and were also used to establish quantitative criteria for the Subbasin. These definitions were updated in 2018 based on the County's revised interpretation of SGMA requirements.[7]

Depletions of Interconnected Surface Water

Depletions of interconnected surface water would become significant and unreasonable if, as a result of groundwater extraction and use in the Subbasin:

1. the timing and duration of direct hydraulic connections between groundwater and surface water along the Napa River or its tributaries overlying the Subbasin are reduced relative to the extent of historical conditions or,

2. if the volume of surface water flowing into the groundwater system as a result of groundwater extraction and use in the Subbasin exceeds both flows that have occurred historically and flows that would otherwise occur due to climate change related shifts in precipitation, temperature, evapotranspiration, and soil moisture in the future.

Consistent with specifications contained in the GSP Regulations, significant and unreasonable depletions of interconnected surface water are determined based on effects resulting from groundwater extraction and use in the Subbasin.

Degraded Water Quality

Degraded water quality would become significant and unreasonable if groundwater conditions and land uses in the Subbasin result in increased concentrations of groundwater quality constituents contributed as a result of land use activities at a majority of the representative monitoring wells[8] in the Napa Valley Subbasin such that water quality no longer meets state or federal standards for the intended beneficial uses.

Seawater Intrusion

Seawater intrusion would become significant and unreasonable if groundwater conditions in the Subbasin increase the flow of seawater into the Napa Valley Subbasin such that chloride concentrations measured in representative monitoring wells reach levels that would result in groundwater being unsuitable for beneficial uses in portions of the following Napa County groundwater subareas that overly the Napa Valley Subbasin: Napa Valley Floor-Napa Subarea, Napa Valley Floor-Milliken-Sarco-Tulucay Subarea, or the Carneros Subarea.

Chronic Lowering of Groundwater Levels

Chronic lowering of groundwater levels would become significant and unreasonable if groundwater conditions in the Napa Valley Subbasin result in prolonged, year-to-year reductions in groundwater levels below levels recorded historically at a majority of the representative monitoring wells in the Subbasin, excluding groundwater level declines that may occur during

[7] Luhdorff & Scalmanini Consulting Engineers. 2018. *Napa Valley Groundwater Sustainability Northeast Napa Management Area: an amendment to the 2016 basin analysis report for the Napa Valley Subbasin*. Prepared for Napa County. January 2018. https://www.countyofnapa.org/DocumentCenter/View/10636

[8] GSP Regulations define "Representative monitoring" as "a monitoring site within a broader network of sites that typifies one or more conditions within the basin or an area of the basin" (California Code of Regulations §351(ac))

drought conditions[9] unless groundwater level declines observed during periods of drought result in reduced groundwater levels over a long-term period that is at least 10 years in length, not ending in drought conditions, and including a balance of above average and below average water years.

Due to the limited thickness of alluvial aquifer materials and the more restrictive hydraulic properties of the Tertiary sedimentary and Sonoma Volcanics formations, the potential exists for chronic lowering of groundwater levels in the Tertiary sedimentary and Sonoma Volcanics formations within the Northeast Napa Management Area[10] that do not propagate to other parts of the Napa Valley Subbasin. Nevertheless, chronic lowering of groundwater levels in the Tertiary sedimentary and Sonoma Volcanics formations due to groundwater conditions in the Northeast Napa Management Area would also be considered significant and unreasonable, excluding groundwater level declines that may occur during drought conditions unless declines during drought conditions are not ameliorated after at least two subsequent non-drought water years.

Reductions of Groundwater Storage

Reductions in groundwater storage would become significant and unreasonable if groundwater conditions in the Napa Valley Subbasin result in reductions in groundwater storage that exceed the Subbasin sustainable yield, excluding groundwater level declines that may occur during drought conditions unless groundwater storage declines observed during periods of drought result in reduced groundwater storage over a long-term period that is at least 10 years in length, not ending in drought conditions, and including a balance of above average and below average water years.

Land Subsidence

Land subsidence would become significant and unreasonable if groundwater conditions in the Napa Valley Subbasin result in permanent, inelastic subsidence to a degree that disrupts or causes accelerated damage to important public or private infrastructure (such as: roadways, railways, bridges, and water supply infrastructure).

Questions for GSPAC Consideration

1. Does the Sustainability Goal for the Napa Valley Subbasin sufficiently address the key priorities for sustainable groundwater management in the Napa Valley Subbasin and the

[9] The Sustainable Groundwater Management Act defines the undesirable result of chronic lowering of groundwater levels as “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 groundwater 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” (CA Water Code §10721(x)(1)).

[10] The Northeast Napa Management Area covers approximately 1,960 acres within the 45,928 acre Napa Valley Subbasin in an area east of the Napa River from Oak Knoll Avenue south to First Street. The Management Area was approved by the Napa County Board of Supervisors on March 30, 2018 as an amendment to the 2016 Basin Analysis Report for the Napa Valley Subbasin, consistent with the provisions for Management Areas provided in the GSP Regulations (California Code of Regulations §354.20).

requirements for sustainability goals presented in SGMA?

2. What groundwater conditions occurring throughout the Subbasin would constitute a significant and unreasonable effect on each SGMA sustainability indicator?

    a. In what ways would significant and unreasonable effects vary for different respective beneficial uses and users of groundwater in the Subbasin?

SUPPORTING DOCUMENTS

A. *A Compendium of California's Sustainable Groundwater Management Act.* provided by The Downey Brand Water Law Practice. Fall 2016

B. *Excerpt from the 2018 Napa Valley Subbasin Basin Analysis Report (Alternative GSP) Amendmen*t. Luhdorff & Scalmanini Consulting Engineers. Prepared for Napa County. adopted 3/20/2018

C. *Draft Best Management Practices for the Sustainable Management of Groundwater – Sustainable Management Criteria*. California Department of Water Resources. November 2017

D. *Napa County Comments on Draft Sustainable Management Criteria BMP*. Steve Lederer, Director of Public Works. 1/4/2018

SUPPORTING DOCUMENT

A Compendium of California's Sustainable Groundwater Management Act. provided by The Downey Brand Water Law Practice. Fall 2016

A Compendium of California's Sustainable Groundwater Management Act

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A Compendium of California's Sustainable Groundwater Management Act

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A Compendium of California's Sustainable Groundwater Management Act

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SUSTAINABLE GROUNDWATER MANAGEMENT ACT[1]

Uncodified Findings

(a) The Legislature finds and declares as follows:

(1) The people of the state have a primary interest in the protection, management, and reasonable beneficial use of the water resources of the state, both surface and underground, and that the integrated management of the state's water resources is essential to meeting its water management goals.

(2) Groundwater provides a significant portion of California's water supply. Groundwater accounts for more than one-third of the water used by Californians in an average year and more than one-half of the water used by Californians in a drought year when other sources are unavailable.

(3) Excessive groundwater extraction can cause overdraft, failed wells, deteriorated water quality, environmental damage, and irreversible land subsidence that damages infrastructure and diminishes the capacity of aquifers to store water for the future.

(4) When properly managed, groundwater resources will help protect communities, farms, and the environment against prolonged dry periods and climate change, preserving water supplies for existing and potential beneficial use.

(5) Failure to manage groundwater to prevent long-term overdraft infringes on groundwater rights.

(6) Groundwater resources are most effectively managed at the local or regional level.

(7) Groundwater management will not be effective unless local actions to sustainably manage groundwater basins and subbasins are taken.

(8) Local and regional agencies need to have the necessary support and authority to manage groundwater sustainably.

(9) In those circumstances where a local groundwater management agency is not managing its groundwater sustainably, the state needs to protect the resource until it is

[1] And related statutory provisions from SB1168 (Pavley), AB1739 (Dickinson), SB1319 (Pavley), AB 617 (Perea), AB 939 (Salas), SB 562 (Cannella), and SB 2874 (Gaines) as chaptered, current as of September 23, 2016.

determined that a local groundwater management agency can sustainably manage the groundwater basin or subbasin.

(10) Information on the amount of groundwater extraction, natural and artificial recharge, and groundwater evaluations are critical for effective management of groundwater.

(11) Sustainable groundwater management in California depends upon creating more opportunities for robust conjunctive management of surface water and groundwater resources. Climate change will intensify the need to recalibrate and reconcile surface water and groundwater management strategies.

(12) Sustainability groundwater management is part of implementation of the California Water Action Plan.

(b) It is, therefore, the intent of the Legislature to do all of the following:

(1) To provide local and regional agencies the authority to sustainably manage groundwater.

(2) To provide that if no local groundwater agency or agencies provide sustainable groundwater management for a groundwater basin or subbasin, the state has the authority to develop and implement an interim plan until the time the local groundwater sustainability agency or agencies can assume management of the basin or subbasin.

(3) To require the development and reporting of those data necessary to support sustainable groundwater management, including those data that help describe the basin's geology, the short-and long-term trends of the basin's water balance, and other measures of sustainability, and those data necessary to resolve disputes regarding sustainable yield, beneficial uses, and water rights.

(4) To respect overlying and other proprietary rights to groundwater, consistent with Section 1200 of the Water Code.

(5) To recognize and preserve the authority of cities and counties to manage groundwater pursuant to their police powers.

GOVERNMENT CODE

65350.5. Review and Consideration of Groundwater Requirements

Before the adoption or any substantial amendment of a city's or county's general plan, the planning agency shall review and consider all of the following:

(a) An adoption of, or update to, a groundwater sustainability plan or groundwater management plan pursuant to Part 2.74 (commencing with Section 10720) or Part 2.75 (commencing with Section 10750) of Division 6 of the Water Code or groundwater management court order, judgment, or decree.

(b) An adjudication of water rights.

(c) An order or interim plan by the State Water Resources Control Board pursuant to Chapter 11 (commencing with Section 10735) of Part 2.74 of Division 6 of the Water Code.

65352. Referral of Proposed General Plan Updates to Other Agencies

(a) Before a legislative body takes action to adopt or substantially amend a general plan, the planning agency shall refer the proposed action to all of the following entities:

(1) A city or county, within or abutting the area covered by the proposal, and any special district that may be significantly affected by the proposed action, as determined by the planning agency.

(2) An elementary, high school, or unified school district within the area covered by the proposed action.

(3) The local agency formation commission.

(4) An areawide planning agency whose operations may be significantly affected by the proposed action, as determined by the planning agency.

(5) A federal agency, if its operations or lands within its jurisdiction may be significantly affected by the proposed action, as determined by the planning agency.

(6) (A) The branches of the United States Armed Forces that have provided the Office of Planning and Research with a California mailing address pursuant to subdivision (d) of Section 65944 ,if the proposed action is within 1,000 feet of a military installation, or lies within special use airspace, or beneath a low-level flight path, as defined in Section 21098 of the Public Resources Code, and if the United States

Department of Defense provides electronic maps of low-level flight paths, special use airspace, and military installations at a scale and in an electronic format that is acceptable to the Office of Planning and Research.

(B) Within 30 days of a determination by the Office of Planning and Research that the information provided by the Department of Defense is sufficient and in an acceptable scale and format, the office shall notify cities, counties, and cities and counties of the availability of the information on the Internet. Cities, counties, and cities and counties shall comply with subparagraph (A) within 30 days of receiving this notice from the office.

(7) A public water system, as defined in Section 116275 of the Health and Safety Code, with 3,000 or more service connections, that serves water to customers within the area covered by the proposal. The public water system shall have at least 45 days to comment on the proposed plan, in accordance with subdivision (b), and to provide the planning agency with the information set forth in Section 65352.5.

(8) Any groundwater sustainability agency that has adopted a groundwater sustainability plan pursuant to Part 2.74 (commencing with Section 10720) of Division 6 of the Water Code or local agency that otherwise manages groundwater pursuant to other provisions of law or a court order, judgment, or decree within the planning area of the proposed general plan.

(9) The State Water Resources Control Board, if it has adopted an interim plan pursuant to Chapter 11 (commencing with Section 10735) of Part 2.74 of Division 6 of the Water Code that includes territory within the planning area of the proposed general plan.

(10) The Bay Area Air Quality Management District for a proposed action within the boundaries of the district.

(11) A California Native American tribe that is on the contact list maintained by the Native American Heritage Commission, and that has traditional lands located within the city's or county's jurisdiction.

(12) The Central Valley Flood Protection Board for a proposed action within the boundaries of the Sacramento and San Joaquin Drainage District, as set forth in Section 8501 of the Water Code.

(b) An entity receiving a proposed general plan or amendment of a general plan pursuant to this section shall have 45 days from the date the referring agency mails it or delivers it to comment unless a longer period is specified by the planning agency.

(c) (1) This section is directory, not mandatory, and the failure to refer a proposed action to the entities specified in this section does not affect the validity of the action, if adopted.

(2) To the extent that the requirements of this section conflict with the requirements of Chapter 4.4 (commencing with Section 65919), the requirements of Chapter 4.4 shall prevail.

65352.5. Requirement to Provide Water-Related Documents to General Plan Agency

(a) The Legislature finds and declares that it is vital that there be close coordination and consultation between California's water supply or management agencies and California's land use approval agencies to ensure that proper water supply and management planning occurs to accommodate projects that will result in increased demands on water supplies or impact water resource management.

(b) It is, therefore, the intent of the Legislature to provide a standardized process for determining the adequacy of existing and planned future water supplies to meet existing and planned future demands on these water supplies and the impact of land use decisions on the management of California's water supply resources.

(c) Upon receiving, pursuant to Section 65352, notification of a city's or a county's proposed action to adopt or substantially amend a general plan, a public water system, as defined in Section 116275 of the Health and Safety Code, with 3,000 or more service connections, shall provide the planning agency with the following information, as is appropriate and relevant:

(1) The current version of its urban water management plan, adopted pursuant to Part 2.6 (commencing with Section 10610) of Division 6 of the Water Code.

(2) The current version of its capital improvement program or plan, as reported pursuant to Section 31144.73 of the Water Code.

(3) A description of the source or sources of the total water supply currently available to the water supplier by water right or contract, taking into account historical data concerning wet, normal, and dry runoff years.

(4) A description of the quantity of surface water that was purveyed by the water supplier in each of the previous five years.

(5) A description of the quantity of groundwater that was purveyed by the water supplier in each of the previous five years.

(6) A description of all proposed additional sources of water supplies for the water supplier, including the estimated dates by which these additional sources should be available and the quantities of additional water supplies that are being proposed.

(7) A description of the total number of customers currently served by the water supplier, as identified by the following categories and by the amount of water served to each category:

(A) Agricultural users.

(B) Commercial users.

(C) Industrial users.

(D) Residential users.

(8) Quantification of the expected reduction in total water demand, identified by each customer category set forth in paragraph (7), associated with future implementation of water use reduction measures identified in the water supplier's urban water management plan.

(9) Any additional information that is relevant to determining the adequacy of existing and planned future water supplies to meet existing and planned future demands on these water supplies.

(d) Upon receiving, pursuant to Section 65352, notification of a city's or a county's proposed action to adopt or substantially amend a general plan, a groundwater sustainability agency, as defined in Section 10721 of the Water Code, or an entity that submits an alternative under Section 10733.6 shall provide the planning agency with the following information, as is appropriate and relevant:

(1) The current version of its groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720) of Division 6 of the Water Code.

(2) If the groundwater sustainability agency manages groundwater pursuant to a court order, judgment, decree, or agreement among affected water rights holders, or if the State Water Resources Control Board has adopted an interim plan pursuant to Chapter 11 (commencing with Section 10735) of Part 2.74 of Division 6 of the Water Code, the groundwater sustainability agency shall provide the planning agency with maps of recharge basins and percolation ponds, extraction limitations, and other relevant information, or the court order, judgment, or decree.

(3) A report on the anticipated effect of proposed action to adopt or substantially amend a general plan on implementation of a groundwater sustainability plan pursuant to Part 2.74 (commencing with Section 10720) of Division 6 of the Water Code.

WATER CODE

113. State Policy of Sustainable, Local Groundwater Management

It is the policy of the state that groundwater resources be managed sustainably for long-term reliability and multiple economic, social, and environmental benefits for current and future beneficial uses. Sustainable groundwater management is best achieved locally through the development, implementation, and updating of plans and programs based on the best available science.

348. Emergency Regulations for Electronic Filing

(a) The department or the board may adopt emergency regulations providing for the electronic filing of reports of water extraction or water diversion or use required to be filed with the department or board under this code, including, but not limited to, any report required to be filed under Part 5.1 (commencing with Section 5100) or Part 5.2 (commencing with Section 5200) of Division 2 and any report required to be filed by a water right permittee or licensee.

(b) Emergency regulations adopted pursuant to this section, or any amendments thereto, shall be adopted by the department or the board in accordance with Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code. The adoption of these regulations is an emergency and shall be considered by the Office of Administrative Law as necessary for the immediate preservation of the public peace, health, safety, and general welfare. Notwithstanding Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code, any emergency regulations or amendments to those regulations adopted under this section shall remain in effect until

revised by the department or the board that adopted the regulations or amendments.

1120. Reconsideration of State Water Board Decisions and Orders

This chapter applies to any decision or order issued under this part or Section 275, Part 2 (commencing with Section 1200), Part 2 (commencing with Section 10500) of Division 6, Chapter 11 (commencing with Section 10735) of Part 2.74 of Division 6, Article 7 (commencing with Section 13550) of Chapter 7 of Division 7, or the public trust doctrine.

1529.5. Fees for Groundwater Extraction Reports Filed with the State Water Board

(a) The board shall adopt a schedule of fees pursuant to Section 1530 to recover costs incurred in administering Chapter 11 (commencing with Section 10735) of Part 2.74 of Division 6. Recoverable costs include, but are not limited to, costs incurred in connection with investigations, facilitation, monitoring, hearings, enforcement, and administrative costs in carrying out these actions.

(b) The fee schedule adopted under this section may include, but is not limited to, the following:

(1) A fee for participation as a petitioner or party to an adjudicative proceeding.

(2) A fee for the filing of a report pursuant to Part 5.2 (commencing with Section 5200) of Division 2.

(c) Consistent with Section 3 of Article XIII A of the California Constitution, the board shall set the fees under this section in an amount sufficient to cover all costs incurred and expended from the Water Rights Fund for the purposes of Part 5.2 (commencing with Section 5200) and Chapter 11 (commencing with Section 10735) of Part 2.74 of Division 6. In setting these fees, the board is not required to fully recover these costs in the year or the year immediately after the costs are incurred, but the board may provide for recovery of these costs over a period of years.

1552. Authorized Expenditures for the Water Rights Fund

The money in the Water Rights Fund is available for expenditure, upon appropriation by the Legislature, for the following purposes:

(a) For expenditure by the State Board of Equalization in the administration of this chapter and the Fee Collection Procedures Law (Part 30 (commencing with Section 55001) of Division 2 of the Revenue and Taxation Code) in connection with any fee or expense subject to this chapter.

(b) For the payment of refunds, pursuant to Part 30 (commencing with Section 55001) of Division 2 of the Revenue and Taxation Code, of fees or expenses collected pursuant to this chapter.

(c) For expenditure by the board for the purposes of carrying out this division, Division 1 (commencing with Section 100), Part 2 (commencing with Section 10500) and Chapter 11 (commencing with Section 10735) of Part 2.74 of Division 6, and Article 7 (commencing with Section 13550) of Chapter 7 of Division 7.

(d) For expenditures by the board for the purposes of carrying out Sections 13160 and 13160.1 in connection with activities involving hydroelectric power projects subject to licensing by the Federal Energy Regulatory Commission.

(e) For expenditures by the board for the purposes of carrying out Sections 13140 and 13170 in connection with plans and policies that address the diversion or use of water.

1831. Cease and Desist Orders

(a) When the board determines that any person is violating, or threatening to violate, any requirement described in subdivision (d), the board may issue an order to that person to cease and desist from that violation.

(b) The cease and desist order shall require that person to comply forthwith or in accordance with a time schedule set by the board.

(c) The board may issue a cease and desist order only after notice and an opportunity for hearing pursuant to Section 1834.

(1) The board may issue a cease and desist order in response to a violation or threatened violation of any of the following:

(2) The prohibition set forth in Section 1052 against the unauthorized diversion or use of water subject to this division.

(3) Any term or condition of a permit, license, certification, or registration issued under this division.

(4) Any decision or order of the board issued under this part, Section 275, Chapter 11 (commencing with Section 10735) of Part 2.74 of Division 6, or Article 7 (commencing with Section 13550) of Chapter 7 of Division 7, in which decision or order the person to whom the cease and desist order will be issued, or a predecessor in interest to that person, was named as a party directly affected by the decision or order.

(5) A regulation adopted under Section 1058.5.

(6) Any extraction restriction, limitation, order, or regulation adopted or issued under Chapter 11 (commencing with Section 10735) of Part 2.74 of Division 6.

(d) This article does not authorize the board to regulate in any manner, the diversion or use of water not otherwise subject to regulation of the board under this part.

PART 5.2. Groundwater Extraction Reporting for Probationary Basins and Basins Without a Groundwater Sustainability Agency

5200. Findings

The Legislature finds and declares that this part establishes groundwater reporting requirements for the purposes of subdivision (b) of Section 10724 and Chapter 11 (commencing with Section 10735) of Part 2.74 of Division 6.

5201. Definitions

As used in this part:

(a) "Basin" has the same meaning as defined in Section 10721.

(b) "Board-designated local area" has the same meaning as defined in Section 5009.

(c) "De minimis extractor" has the same meaning as defined in Section 10721.

(d) "Groundwater" has the same meaning as defined in Section 10721.

(e) "Groundwater extraction facility" has the same meaning as defined in Section 10721.

(f) "Groundwater sustainability agency" has the same meaning as defined in Section 10721.

(g) "Person" has the same meaning as defined in Section 10735.

(h) "Personal information" has the same meaning as defined in Section 1798.3 of the Civil Code.

(i) "Probationary basin" has the same meaning as defined in Section 10735.

(j) "Water year" has the same meaning as defined in Section 10721.

5202. Applicability of Extraction Reporting Requirements

(a) This section applies to a person who does either of the following:

(1) Extracts groundwater from a probationary basin 90 days or more after the board designates the basin as a probationary basin pursuant to Section 10735.2.

(2) Extracts groundwater on or after July 1, 2017, in an area within a high- or medium-priority basin subject to the requirements of subdivision (a) of Section 10720.7 that is not within the management area of a groundwater sustainability agency and where the county does not assume responsibility to be the groundwater sustainability agency, as provided in subdivision (b) of Section 10724.

(b) Except as provided in subdivision (c), a person subject to this section shall file a report of groundwater extraction by December 15 of each year for extractions made in the preceding water year.

(c) Unless reporting is required pursuant to paragraph (2) of subdivision (c) of Section 10735.2, this section does not apply to any of the following:

(1) An extraction by a de minimis extractor.

(2) An extraction excluded from reporting pursuant to paragraph (1) of subdivision (c) of Section 10735.2.

(3) An extraction reported pursuant to Part 5 (commencing with Section 4999).

(4) An extraction that is included in annual reports filed with a court or the board by a watermaster appointed by a court or pursuant to statute to administer a final judgment determining rights to water. The reports shall identify the persons who have extracted water and give the general place of use and the quantity of water that has been extracted from each source.

(d) Except as provided in Section 5209, the report shall be filed with the board.

(e) The report may be filed by the person extracting water or on that person's behalf by an agency that person designates and that maintains a record of the water extracted.

(f) Each report shall be accompanied by the fee imposed pursuant to Section 1529.5.

5203. Extraction Reporting Requirements

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. If assigned, the public land description to the nearest 40-acre subdivision and the assessor's parcel number shall also be provided.

(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.

5204. Failure to File Extraction Report; Authority of the Board to Investigate

(a) If a person fails to file a report as required by this part, the board may, at the expense of that person, investigate and determine the information required to be reported pursuant to this part.

(b) The board shall give a person described in subdivision (a) notice of its intention to investigate and determine the information required to be reported pursuant to this part and 60 days in which to file a required report without penalty.

5205. Report is Not Evidence of Right to Divert or Use

A report submitted under this part or a determination of facts by the board pursuant to Section 5104 shall not establish or constitute evidence of a right to divert or use water.

5206. Personal Information Treated Like Utility Information

Personal information included in a report of groundwater extraction shall have the same protection from disclosure as is provided for information concerning utility customers of local agencies pursuant to Section 6254.16 of the Government Code.

5207. Limitations on Claims of Persons Not Filing Required Extraction Reports

A right to extract groundwater that may otherwise occur shall not arise or accrue to, and a statute of limitations shall not operate in favor of, a person required to file a report pursuant to this part until the person files the report.

5208. Enforcements

Section 5107 applies to a report or measuring device required pursuant to this part. For purposes of Section 5107, a report of groundwater extraction, measuring device, or misstatement required, used, or made pursuant to this part shall be considered the equivalent of a statement, measuring device, or misstatement required, used, or made pursuant to Part 5.1 (commencing with Section 5100).

5209. Submittal of Reports to Local Entities in Certain Circumstances

For groundwater extractions in a board-designated local area, reports required pursuant to this part shall be submitted to the entity designated pursuant to subdivision (e) of Section 5009 if both of the following occur:

(a) The board determines that the requirements of subdivision (e) of Section 5009 have been satisfied with respect to extractions subject to reporting pursuant to this part, in addition to any groundwater extractions subject to Part 5 (commencing with Section 4999).

(b) The designated entity has made satisfactory arrangements to collect and transmit to the board any fees imposed pursuant to paragraph (2) of subdivision (b) of Section 1529.5.

PART 2.74. Sustainable Groundwater Management

CHAPTER 1. General Provisions

10720. Title

This part shall be known, and may be cited, as the "Sustainable Groundwater Management Act."

10720.1. Legislative Intent

In enacting this part, it is the intent of the Legislature to do all of the following:

(a) To provide for the sustainable management of groundwater basins.

(b) To enhance local management of groundwater consistent with rights to use or store groundwater and Section 2 of Article X of the California Constitution. It is the intent of the Legislature to preserve the security of water rights in the state to the greatest extent possible consistent with the sustainable management of groundwater.

(c) To establish minimum standards for sustainable groundwater management.

(d) To provide local groundwater agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater.

(e) To avoid or minimize subsidence.

(f) To improve data collection and understanding about groundwater.

(g) To increase groundwater storage and remove impediments to recharge.

(h) To manage groundwater basins through the actions of local governmental agencies to the greatest extent feasible, while minimizing state intervention to only when necessary to ensure that local agencies manage groundwater in a sustainable manner.

(i) To provide a more efficient and cost-effective groundwater adjudication process that protects water rights, ensures due process, prevents unnecessary delay, and furthers the objectives of this part.

10720.3. Applicability of Part and Participating of Other Sovereigns

(a) This part applies to all groundwater basins in the state.

(b) To the extent authorized under federal or tribal law, this part applies to an Indian tribe and to the federal government, including, but not limited to, the United States Department of Defense.

(c) The federal government or any federally recognized Indian tribe, appreciating the shared interest in assuring the sustainability of groundwater resources, may voluntarily agree to participate in the preparation or administration of a groundwater sustainability plan or groundwater management plan under this part through a joint powers authority or other agreement with local agencies in the basin. A participating tribe shall be eligible to participate fully in planning, financing, and management under this part, including eligibility for grants and technical assistance, if any exercise of regulatory

authority, enforcement, or imposition and collection of fees is pursuant to the tribe's independent authority and not pursuant to authority granted to a groundwater sustainability agency under this part.

(d) In an adjudication of rights to the use of groundwater, and in the management of a groundwater basin or subbasin by a groundwater sustainability agency or by the board, federally reserved water rights to groundwater shall be respected in full. In case of conflict between federal and state law in that adjudication or management, federal law shall prevail. The voluntary or involuntary participation of a holder of rights in that adjudication or management shall not subject that holder to state law regarding other proceedings or matters not authorized by federal law. This subdivision is declaratory of existing law.

10720.5. No Modification of Water Rights or Priorities, and No Determination of Water Rights Pursuant to this Part

(a) Groundwater management pursuant to this part shall be consistent with Section 2 of Article X of the California Constitution. Nothing in this part modifies rights or priorities to use or store groundwater consistent with Section 2 of Article X of the California Constitution, except that in basins designated medium- or high-priority basins by the department, no extraction of groundwater between January 1, 2015, and the date of adoption of a groundwater sustainability plan pursuant to this part or the approval by the department of an alternative submitted under Section 10733.6, whichever is sooner, may be used as evidence of, or to establish or defend against, any claim of prescription.

(b) Nothing in this part, or in any groundwater management plan adopted pursuant to this part, determines or alters surface water rights or groundwater rights under common law or any provision of law that determines or grants surface water rights.

(c) Water rights may be determined in an adjudication action pursuant to Chapter 7 (commencing with Section 830) of Title 10 of Part 2 of the Code of Civil Procedure.

10720.7. Planning Deadlines

(a) (1) By January 31, 2020, all basins designated as high- or medium-priority basins by the department that have been designated in Bulletin 118, as may be updated or revised on or before January 1, 2017, as basins that are subject to critical conditions of overdraft shall be managed under a groundwater sustainability plan or coordinated groundwater sustainability plans pursuant to this part.

(2) By January 31, 2022, all basins designated as high- or medium-priority basins by the department that are not subject to paragraph (1) shall be managed under a groundwater sustainability plan or coordinated groundwater sustainability plans pursuant to this part.

(b) The Legislature encourages and authorizes basins designated as low- and very low priority basins by the department to be managed under groundwater sustainability plans pursuant to this part. Chapter 11 (commencing with Section 10735) does not apply to a basin designated as a low- or very low priority basin.

10720.8. Inapplicability of Part to Adjudicated Basins; Reporting Requirements for Entity Administering Adjudication

(a) Except as provided in subdivision (e), this part does not apply to the following adjudicated areas or a local agency that conforms to the requirements of an adjudication of water rights for one of the following adjudicated areas:

(1) Beaumont Basin.

(2) Brite Basin.

(3) Central Basin.

(4) Chino Basin.

(5) Cucamonga Basin.

(6) Cummings Basin.

(7) Goleta Basin.

(8) Lytle Basin.

(9) Main San Gabriel Basin.

(10) Mojave Basin Area.

(11) Puente Basin.

(12) Raymond Basin.

(13) Rialto-Colton Basin.

(14) Riverside Basin.

(15) San Bernardino Basin Area.

(16) San Jacinto Basin.

(17) Santa Margarita River Watershed.

(18) Santa Maria Valley Basin.

(19) Santa Paula Basin.

(20) Scott River Stream System.

(21) Seaside Basin.

(22) Six Basins.

(23) Tehachapi Basin.

(24) Upper Los Angeles River Area.

(25) Warren Valley Basin.

(26) West Coast Basin.

(b) The Antelope Valley basin at issue in the Antelope Valley Groundwater Cases (Judicial Council Coordination Proceeding Number 4408) shall be treated as an adjudicated basin pursuant to this section if the superior court issues a final judgment, order, or decree.

(c) Any groundwater basin or portion of a groundwater basin in Inyo County managed pursuant to the terms of the stipulated judgment in City of Los Angeles v. Board of Supervisors of the County of Inyo, et al. (Inyo County Case No. 12908) shall be treated as an adjudicated area pursuant to this section.

(d) The Los Osos Groundwater Basin at issue in Los Osos Community Service District v. Southern California Water Company [Golden State Water Company] et al. (San Luis Obispo County Superior Court Case No. CV 040126) shall be treated as an adjudicated basin pursuant to this section if the superior court issues a final judgment, order, or decree.

(e) If an adjudication action has determined the rights to extract groundwater for only a portion of a basin, subdivisions (a), (b), (c), and (d) apply only within the area for which the adjudication action has determined those rights.

(f) The watermaster or a local agency within a basin identified in subdivision (a) shall do all of the following:

(1) By April 1, 2016, submit to the department a copy of a governing final judgment, or other judicial order or decree, and any amendments entered before April 1, 2016.

(2) Within 90 days of entry by a court, submit to the department a copy of any amendment made and entered by the court to the governing final judgment or other judicial order or decree on or after April 1, 2016.

(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.

10720.9. Requirement of State Agencies to Consider this Part and Plans Developed Under this Part

All relevant state agencies, including, but not limited to, the board, the regional water quality control boards, the department, and the Department of Fish and Wildlife, shall consider the policies of this part, and any groundwater sustainability plans adopted pursuant to this part, when revising or adopting policies, regulations, or criteria, or when issuing orders or determinations, where pertinent.

CHAPTER 2. Definitions

10721. Definitions

Unless the context otherwise requires, the following definitions govern the construction of this part:

(a) "Adjudication action" means an action filed in the superior or federal district court to determine the rights to extract groundwater from a basin or store water within a basin, including, but not limited to, actions to quiet title respecting rights to extract or store groundwater or an action brought to impose a physical solution on a basin.

(b) "Basin" means a groundwater basin or subbasin identified and defined in Bulletin 118 or as modified pursuant to Chapter 3 (commencing with Section 10722).

(c) "Bulletin 118" means the department's report entitled "California's Groundwater: Bulletin 118" updated in 2003, as it may be subsequently updated or revised in accordance with Section 12924.

(d) "Coordination agreement" means a legal agreement adopted between two or more groundwater sustainability agencies that

provides the basis for coordinating multiple agencies or groundwater sustainability plans within a basin pursuant to this part.

(e) "De minimis extractor" means a person who extracts, for domestic purposes, two acre-feet or less per year.

(f) "Governing body" means the legislative body of a groundwater sustainability agency.

(g) "Groundwater" means water 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.

(h) "Groundwater extraction facility" means a device or method for extracting groundwater from within a basin.

(i) "Groundwater recharge" or “recharge” means the augmentation of groundwater, by natural or artificial means.

(j) "Groundwater sustainability agency" means one or more local agencies that implement the provisions of this part. For purposes of imposing fees pursuant to Chapter 8 (commencing with Section 10730) or taking action to enforce a groundwater sustainability plan, "groundwater sustainability agency" also means each local agency comprising the groundwater sustainability agency if the plan authorizes separate agency action.

(k) "Groundwater sustainability plan" or "plan" means a plan of a groundwater sustainability agency proposed or adopted pursuant to this part.

(l) “Groundwater sustainability program” means a coordinated and ongoing activity undertaken to benefit a basin, pursuant to a groundwater sustainability plan.

(m) “In-lieu use” means the use of surface water by persons that could otherwise extract groundwater in order to leave groundwater in the basin.

(n) “Local agency” means a local public agency that has water supply, water management, or land use responsibilities within a groundwater basin.

(o) “Operator" means a person operating a groundwater extraction facility. The owner of a groundwater extraction facility shall be conclusively presumed to be the operator unless a satisfactory showing is made to the governing body of the groundwater sustainability agency that the groundwater extraction facility actually is operated by some other person.

(p) "Owner" means a person owning a groundwater extraction facility or an interest in a groundwater extraction facility other than a lien to secure the payment of a debt or other obligation.

(q) "Personal information" has the same meaning as defined in Section 1798.3 of the Civil Code.

(r) "Planning and implementation horizon" means a 50-year time period over which a groundwater sustainability agency determines that plans and measures will be implemented in a basin to ensure that the basin is operated within its sustainable yield.

(s) "Public water system" has the same meaning as defined in Section 116275 of the Health and Safety Code.

(t) "Recharge area" means the area that supplies water to an aquifer in a groundwater basin.

(u) "Sustainability goal" means the existence and implementation of one or more groundwater sustainability plans that achieve sustainable groundwater management by identifying and causing the implementation of measures targeted to ensure that the applicable basin is operated within its sustainable yield.

(v) "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) "Sustainable yield" means the maximum quantity of water, calculated over a base period representative of long-term conditions in the basin and including any temporary surplus, that can be withdrawn annually from a groundwater supply without causing an undesirable result.

(x) “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 groundwater 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.

(y) "Water budget" means an accounting of the total groundwater and surface water entering and leaving a basin including the changes in the amount of water stored.

(z) "Watermaster" means a watermaster appointed by a court or pursuant to other law.

(aa) "Water year" means the period from October 1 through the following September 30, inclusive.

(bb) "Wellhead protection area" means the surface and subsurface area surrounding a water well or well field that supplies a public water system through which contaminants are reasonably likely to migrate toward the water well or well field.

CHAPTER 3. Basin Boundaries

10722. Use of Bulletin 118 Basin Boundaries

Unless other basin boundaries are established pursuant to this chapter, a basin's boundaries shall be as identified in Bulletin 118.

10722.2. Process for Requesting and Approving Basin Boundary Revisions

(a) A local agency or an entity directed by the court in an adjudication action to file the request may request that the department revise the boundaries of a basin, including the establishment of new subbasins. A request shall be supported by the following information:

(1) Information demonstrating that the proposed adjusted basin can be the subject of sustainable groundwater management.

(2) Technical information regarding the boundaries of, and conditions in, the proposed adjusted basin.

(3) Information demonstrating that the entity proposing the basin boundary adjustment consulted with interested local agencies and public water systems in the affected basins before filing the proposal with the department.

(4) Other information the department deems necessary to justify revision of the basin's boundary.

(b) By January 1, 2016, the department shall adopt regulations regarding the information required to comply with subdivision (a), including the methodology and criteria to be used to evaluate the proposed revision. The department shall adopt the regulations, including any amendments thereto, authorized by this section as emergency regulations in accordance with the Administrative Procedure Act (Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code). The adoption of these regulations is an emergency and shall be considered by the Office of Administrative Law as necessary for the immediate preservation of the public peace, health and safety, or general welfare. Notwithstanding the Administrative Procedure Act, emergency regulations adopted by the department pursuant to this section shall not be subject to review by the Office of Administrative Law and shall remain in effect until revised by the department.

(c) Methodology and criteria established pursuant to subdivision (b) shall address all of the following:

(1) How to assess the likelihood that the proposed basin can be sustainably managed.

(2) How to assess whether the proposed basin would limit the sustainable management of adjacent basins.

(3) How to assess whether there is a history of sustainable management of groundwater levels in the proposed basin.

(d) Prior to adopting the regulations pursuant to subdivision (b), the department shall conduct three public meetings to consider public comments. The department shall publish the draft regulations on its Internet Web site at least 30 days before the public meetings. One meeting shall be conducted at a location in northern California, one meeting shall be conducted at a location in the central valley of California, and one meeting shall be conducted at a location in southern California.

(e) The department shall provide a copy of its draft revision of a basin's boundaries to the California Water Commission. The California Water Commission shall hear and comment on the draft revision within 60 days after the department provides the draft revision to the commission.

10722.4. Prioritizations of Basins

(a) Pursuant to Section 10933, for the purposes of this part the department shall categorize each basin as one of the following priorities:

(1) High priority.

(2) Medium priority.

(3) Low priority.

(4) Very low priority.

(b) The initial priority for each basin shall be established by the department pursuant to Section 10933 no later than January 31, 2015.

(c) Any time the department updates Bulletin 118 boundaries pursuant to subdivision (b) of Section 12924, the department shall reassess the prioritization pursuant to Section 10933.

(d) If the department changes priorities pursuant to Section 10933 to elevate a basin from a low-or very low priority basin to a medium- or high-priority basin after January 31, 2015, the agency formation and planning deadlines of this part shall be extended as follows:

(1) A local agency shall have two years from the date of reprioritization to either establish a groundwater sustainability agency pursuant to Chapter 4 (commencing with Section 10723) or two years to satisfy the requirements of Section 10733.6.

(2) A groundwater sustainability agency shall have five years from the date of reprioritization to meet the requirements of subdivision (a) of Section 10720.7, except that if the reprioritization occurs before January 31, 2017, a groundwater sustainability agency subject to paragraph (2) of subdivision (a) of Section 10720.7 shall have until January 31, 2022.

CHAPTER 4. Establishing Groundwater Sustainability Agencies

10723. Election of Groundwater Sustainability Agency; Statutorily Designated Agencies and Opt Out Provision

(a) Except as provided in subdivision (c), any local agency or combination of local agencies overlying a groundwater basin may decide to become a groundwater sustainability agency for that basin.

(b) Before deciding to become a groundwater sustainability agency, and after publication of notice pursuant to Section 6066 of the

Government Code, the local agency or agencies shall hold a public hearing in the county or counties overlying the basin.

(c) (1) Except as provided in paragraph (2), the following agencies created by statute to manage groundwater shall be deemed the exclusive local agencies within their respective statutory boundaries with powers to comply with this part:

(A) Alameda County Flood Control and Water Conservation District, Zone 7.

(B) Alameda County Water District.

(C) Desert Water Agency.

(D) Fox Canyon Groundwater Management Agency.

(E) Honey Lake Valley Groundwater Management District.

(F) Kings River East Groundwater Sustainability Agency.

(G) Long Valley Groundwater Management District.

(H) Mendocino City Community Services District.

(I) Mono County Tri-Valley Groundwater Management District.

(J) Monterey Peninsula Water Management District.

(K) North Fork Kings Groundwater Sustainability Agency

(L) Ojai Groundwater Management Agency.

(M) Orange County Water District.

(N) Pajaro Valley Water Management Agency.

(O) Santa Clara Valley Water District.

(P) Sierra Valley Groundwater Management District.

(Q) Willow Creek Groundwater Management Agency.

(2) An agency identified in this subdivision may opt out of being the exclusive groundwater management agency within its

statutory boundaries by sending a notice to the department, which shall be posted on the department's Internet Web site within 15 days of receipt. If an agency identified in paragraph (1) opts out of being the exclusive groundwater management agency, any other local agency or combination of local agencies operating within the statutory boundaries of the agency that has opted out may notify the department pursuant to Section 10723.8 of its decision to be the groundwater sustainability agency.

(3) A local agency listed in paragraph (1) may comply with this part by meeting the requirements of Section 10733.6 or opting to become a groundwater sustainability agency pursuant to this section. A local agency with authority to implement a basin-specific management plan pursuant to its principal act shall not exercise any authorities granted in this part in a manner inconsistent with any prohibitions or limitations in its principal act unless the governing board of the local agency makes a finding that the agency is unable to sustainably manage the basin without the prohibited authority.

(d) The decision of a local agency or combination of agencies to become a groundwater sustainability agency shall take effect as provided in Section 10723.8.

10723.2. Consideration of All Interests of All Beneficial Uses and Users of Groundwater

The groundwater sustainability agency shall consider the interests of all beneficial uses and users of groundwater, as well as those responsible for implementing groundwater sustainability plans. These interests include, but are not limited to, all of the following:

(a) Holders of overlying groundwater rights, including:

(1) Agricultural users.

(2) Domestic well owners.

(b) Municipal well operators.

(c) Public water systems.

(d) Local land use planning agencies.

(e) Environmental users of groundwater.

(f) Surface water users, if there is a hydrologic connection between surface and groundwater bodies.

(g) The federal government, including, but not limited to, the military and managers of federal lands.

(h) California Native American tribes.

(i) Disadvantaged communities, including, but not limited to, those served by private domestic wells or small community water systems.

(j) Entities listed in Section 10927 that are monitoring and reporting groundwater elevations in all or a part of a groundwater basin managed by the groundwater sustainability agency.

10723.4. Maintenance of Interested Persons List

The groundwater sustainability agency shall establish and maintain a list of persons interested in receiving notices regarding plan preparation, meeting announcements, and availability of draft plans, maps, and other relevant documents. Any person may request, in writing, to be placed on the list of interested persons.

10723.6. Collective Action to Serve as Groundwater Sustainability Agency; Participation by PUC-Regulated Water Companies

(a) A combination of local agencies may form a groundwater sustainability agency by using any of the following methods:

(1) A joint powers agreement.

(2) A memorandum of agreement or other legal agreement.

(b) A water corporation regulated by the Public Utilities Commission or a mutual water company may participate in a groundwater sustainability agency through a memorandum of agreement or other legal agreement. The authority provided by this subdivision does not confer any additional powers to a nongovernmental entity.

10723.8. Notification of Department and Posting by Department

(a) Within 30 days of deciding to become or form a groundwater sustainability agency, the agency shall inform the department of its election or formation and its intent to undertake sustainable groundwater management. The notification shall include the following information, as applicable:

(1) The service area boundaries, the basin the agency is managing, and the other groundwater sustainability agencies operating within the basin.

(2) A copy of the resolution forming the new agency.

(3) A copy of any new bylaws, ordinances, or new authorities adopted by the local agency.

(4) A list of interested parties developed pursuant to Section 10723.2 and an explanation of how their interests will be considered in the development and operation of the

groundwater sustainability agency and the development and implementation of the agency's sustainability plan.

(b) The department shall post all complete notices received under this section on its Internet Web site within 15 days of receipt.

(c) The decision to become a groundwater sustainability agency shall take effect 90 days after the department posts notice under subdivision (b) if no other local agency submits a notification under subdivision (a) of its intent to undertake groundwater management in all or a portion of the same area. If another notification is file within the 90-day period, the decision shall not take effect unless the other notification is withdrawn or modified to eliminate any overlap in the areas proposed to be managed. The local agencies shall seek to reach agreement to allow prompt designation of a groundwater sustainability agency. If agreement is reached involving a material change from the information in the posted notice, a new notification shall be submitted under subdivision (a) and the department shall post notice under subdivision (b).

(d) Except as provided in subdivision (e) and (f), after the decision to be a groundwater sustainability agency takes effect, the groundwater sustainability agency shall be presumed to be the exclusive groundwater sustainability agency within the area of the basin within the service area of the local agency that the local agency is managing as described in the notice.

(e) A groundwater sustainability agency may withdraw from managing a basin by notifying the department in writing of its intent to withdraw.

(f) This section does not preclude the board from taking an action pursuant to Section 10735.6.

10724. Presumption that County will Manage Areas Not Covered by a Groundwater Sustainability Agency; Extraction Reporting to State Board if County Does Not Manage Those Areas

(a) In the event that there is an area within a high- or medium-priority basin that is not within the management area of a groundwater sustainability agency, the county within which that unmanaged area lies will be presumed to be the groundwater sustainability agency for that area.

(b) A county described in subdivision (a) shall provide notification to the department pursuant to Section 10723.8 unless the county notifies the department that it will not be the groundwater sustainability agency for the area. Extractions of groundwater made on or after July 1, 2017, in that area shall be subject to reporting in accordance with

Part 5.2 (commencing with Section 5200) of Division 2 if the county does either of the following:

(1) Notifies the department that it will not be the groundwater sustainability agency for an area.

(2) Fails to provide notification to the department pursuant to Section 10723.8 for an area on or before June 30, 2017.

CHAPTER 5. Powers and Authorities

10725. Authority Pursuant to this Part Supplementary to Existing Powers

(a) A groundwater sustainability agency may exercise any of the powers described in this chapter in implementing this part, in addition to, and not as a limitation on, any existing authority, if the groundwater sustainability agency adopts and submits to the department a groundwater sustainability plan or prescribed alternative documentation in accordance with Section 10733.6.

(b) A groundwater sustainability agency has and may use the powers in this chapter to provide the maximum degree of local control and flexibility consistent with the sustainability goals of this part.

10725.2. Authority of Groundwater Sustainability Agency; Notice

(a) A groundwater sustainability agency may perform any act necessary or proper to carry out the purposes of this part.

(b) A groundwater sustainability agency may adopt rules, regulations, ordinances, and resolutions for the purpose of this part, in compliance with any procedural requirements applicable to the adoption of a rule, regulation, ordinance, or resolution by the groundwater sustainability agency.

(c) In addition to any other applicable procedural requirements, the groundwater sustainability agency shall provide notice of the proposed adoption of the groundwater sustainability plan on its Internet Web site and provide for electronic notice to any person who requests electronic notification.

10725.4. Investigations

(a) A groundwater sustainability agency may conduct an investigation for the purposes of this part, including, but not limited to, investigations for the following:

(1) To determine the need for groundwater management.

(2) To prepare and adopt a groundwater sustainability plan and implementing rules and regulations.

(3) To propose and update fees.

(4) To monitor compliance and enforcement.

(b) An investigation may include surface waters and surface water rights as well as groundwater and groundwater rights.

(c) In connection with an investigation, a groundwater sustainability agency may inspect the property or facilities of a person or entity to ascertain whether the purposes of this part are being met and compliance with this part. The local agency may conduct an inspection pursuant to this section upon obtaining any necessary consent or obtaining an inspection warrant pursuant to the procedure set forth in Title 13 (commencing with Section 1822.50) of Part 3 of the Code of Civil Procedure.

10725.6. Registration of Extraction Facilities

A groundwater sustainability agency may require registration of a groundwater extraction facility within the management area of the groundwater sustainability agency.

10725.8. Measurement Devices and Reporting; Inapplicability of Section to de Minimus Extractors

(a) A groundwater sustainability agency may require through its groundwater sustainability plan that the use of every groundwater extraction facility within the management area of the groundwater sustainability agency be measured by a water-measuring device satisfactory to the groundwater sustainability agency.

(b) All costs associated with the purchase and installation of the water-measuring device shall be borne by the owner or operator of each groundwater extraction facility. The water measuring devices shall be installed by the groundwater sustainability agency or, at the groundwater sustainability agency's option, by the owner or operator of the groundwater extraction facility. Water-measuring devices shall be calibrated on a reasonable schedule as may be determined by the groundwater sustainability agency.

(c) A groundwater sustainability agency may require, through its groundwater sustainability plan, that the owner or operator of a groundwater extraction facility within the groundwater sustainability agency file an annual statement with the groundwater sustainability agency setting forth the total extraction in acre-feet of groundwater from the facility during the previous water year.

(d) In addition to the measurement of groundwater extractions pursuant to subdivision (a), a groundwater sustainability agency may use any other reasonable method to determine groundwater extraction.

(e) This section does not apply to de minimis extractors.

10726. Reporting of Diversion of Surface Water to Underground Storage

An entity within the area of a groundwater sustainability plan shall report the diversion of surface water to underground storage to the groundwater sustainability agency for the relevant portion of the basin.

10726.2. Additional Authorities of Groundwater Sustainability Agency Relating to Acquisitions; Augmentation of Local Water Supplies; Transfers and Exchanges of Water; and Treatment

A groundwater sustainability agency may do the following:

(a) Acquire by grant, purchase, lease, gift, devise, contract, construction, or otherwise, and hold, use, enjoy, sell, let, and dispose of, real and personal property of every kind, including lands, water rights, structures, buildings, rights-of-way, easements, and privileges, and construct, maintain, alter, and operate any and all works or improvements, within or outside the agency, necessary or proper to carry out any of the purposes of this part.

(b) Appropriate and acquire surface water or groundwater and surface water or groundwater rights, import surface water or groundwater into the agency, and conserve and store within or outside the agency that water for any purpose necessary or proper to carry out the provisions of this part, including, but not limited to, the spreading, storing, retaining, or percolating into the soil of the waters for subsequent use or in a manner consistent with the provisions of Section 10727.2. As part of this authority, the agency shall not alter another person's or agency's existing groundwater conjunctive use or storage program except upon a finding that the conjunctive use or storage program interferes with implementation of the agency's groundwater sustainability plan.

(c) Provide for a program of voluntary fallowing of agricultural lands or validate an existing program.

(d) Perform any acts necessary or proper to enable the agency to purchase, transfer, deliver, or exchange water or water rights of any type with any person that may be necessary or proper to carry out any of the purposes of this part, including, but not limited to, providing surface water in exchange for a groundwater extractor's agreement to reduce or cease groundwater extractions. The agency shall not deliver retail water supplies within the service area of a public water system without either the consent of that system or authority under the agency's existing authorities.

(e) Transport, reclaim, purify, desalinate, treat, or otherwise manage and control polluted water, wastewater, or other waters for subsequent use in a manner that is necessary or proper to carry out the purposes of this part.

(f) Commence, maintain, intervene in, defend, compromise, and assume the cost and expenses of any and all actions and proceedings.

10726.4. Additional Authorities of Groundwater Sustainability Agency

(a) A groundwater sustainability agency shall have the following additional authority and may regulate groundwater extraction using that authority:

(1) To impose spacing requirements on new groundwater well construction to minimize well interference and impose reasonable operating regulations on existing groundwater wells to minimize well interference, including requiring extractors to operate on a rotation basis.

(2) To control groundwater extractions by regulating, limiting, or suspending extractions from individual groundwater wells or extractions from groundwater wells in the aggregate, construction of new groundwater wells, enlargement of existing groundwater wells, or reactivation of abandoned groundwater wells, or otherwise establishing groundwater extraction allocations. Those actions shall be consistent with the applicable elements of the city or county general plan, unless there is insufficient sustainable yield in the basin to serve a land use designated in the city or county general plan. A limitation on extractions by a groundwater sustainability agency shall not be construed to be a final determination of rights to extract groundwater from the basin or any portion of the basin.

(3) To authorize temporary and permanent transfers of groundwater extraction allocations within the agency's boundaries, if the total quantity of groundwater extracted in any water year is consistent with the provisions of the groundwater sustainability plan. The transfer is subject to applicable city and county ordinances.

(4) To establish accounting rules to allow unused groundwater extraction allocations issued by the agency to be carried over from one year to another and voluntarily transferred, if the total quantity of groundwater extracted in any five-year period is consistent with the provisions of the groundwater sustainability plan.

(b) This section does not authorize a groundwater sustainability agency to issue permits for the construction, modification, or abandonment of groundwater wells, except as authorized by a county with authority to issue those permits. A groundwater sustainability agency may request of the county, and the county shall consider, that the county forward permit requests for the construction of new groundwater wells, the enlarging of existing groundwater wells, and the reactivation of abandoned groundwater wells to the groundwater sustainability agency before permit approval.

10726.5 Agreements with Private Parties

In addition to any other authority granted to a groundwater sustainability agency by this part or other law, the groundwater sustainability agency may enter into written agreements and funding with a private party to assist in, or facilitate the implementation of, a groundwater sustainability plan or any elements of the plan.

10726.6. Validation Proceedings; Venue; Time Limitations and Bringing Certain Actions

(a) A groundwater sustainability agency that adopts a groundwater sustainability plan may file an action to determine the validity of the plan pursuant to Chapter 9 (commencing with Section 860) of Title 10 of Part 2 of the Code of Civil Procedure no sooner than 180 days following the adoption of the plan.

(b) Subject to Sections 394 and 397 of the Code of Civil Procedure, the venue for an action pursuant to this section shall be the county in which the principal office of the groundwater management agency is located.

(c) Any judicial action or proceeding to attack, review, set aside, void, or annul the ordinance or resolution imposing a new, or increasing an existing, fee imposed pursuant to Section 10730, 10730.2, or 10730.4 shall be commenced within 180 days following the adoption of the ordinance or resolution.

(d) Any person may pay a fee imposed pursuant to Section 10730, 10730.2, or 10730.4 under protest and bring an action against the governing body in the superior court to recover any money that the governing body refuses to refund. Payments made and actions brought under this section shall be made and brought in the manner provided for the payment of taxes under protest and actions for refund of that payment in Article 2 (commencing with Section 5140) of Chapter 5 of Part 9 of Division 1 of the Revenue and Taxation Code, as applicable.

(e) Except as otherwise provided in this section, actions by a groundwater sustainability agency are subject to judicial review pursuant to Section 1085 of the Code of Civil Procedure.

10726.8. Relationship of This Part to Other Laws

(a) This part is in addition to, and not a limitation on, the authority granted to a local agency under any other law. The local agency may use the local agency's authority under any other law to apply and enforce any requirements of this part, including, but not limited to, the collection of fees.

(b) Nothing in this part shall be construed as authorizing a local agency to make a binding determination of the water rights of any person or entity, or to impose fees or regulatory requirements on activities outside the boundaries of the local agency.

(c) Nothing in this part is a limitation on the authority of the board, the department, or the State Department of Public Health.

(d) Notwithstanding Section 6103 of the Government Code, a state or local agency that extracts groundwater shall be subject to a fee imposed under this part to the same extent as any nongovernmental entity.

(e) Except as provided in subdivision (d), this part does not authorize a local agency to impose any requirement on the state or any agency, department, or officer of the state. State agencies and departments shall work cooperatively with a local agency on a voluntary basis.

(f) Nothing in this chapter or a groundwater sustainability plan shall be interpreted as superseding the land use authority of cities and counties, including the city or county general plan, within the overlying basin.

10726.9. Requirement of Plan to Take Account of General Plan Assumptions

A groundwater sustainability plan shall take into account the most recent planning assumptions stated in local general plans of jurisdictions overlying the basin.

CHAPTER 6. Groundwater Sustainability Plans

10727. Requirement to Develop Groundwater Sustainability Plan for Medium- and High-Priority Basins; Form of Plan

(a) A groundwater sustainability plan shall be developed and implemented for each medium- or high-priority basin by a groundwater sustainability agency to meet the sustainability goal established pursuant to this part. The groundwater sustainability plan

may incorporate, extend, or be based on a plan adopted pursuant to Part 2.75 (commencing with Section 10750).

(b) A groundwater sustainability plan may be any of the following:

(1) A single plan covering the entire basin developed and implemented by one groundwater sustainability agency.

(2) A single plan covering the entire basin developed and implemented by multiple groundwater sustainability agencies.

(3) Subject to Section 10727.6, multiple plans implemented by multiple groundwater sustainability agencies and coordinated pursuant to a single coordination agreement that covers the entire basin.

10727.2. Required Plan Elements

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. The map or maps shall identify the existing recharge areas that substantially contribute to the replenishment of the groundwater basin. The map or maps shall be provided to the appropriate local planning agencies after adoption of the groundwater sustainability plan.

(b) (1) Measurable objectives, as well as interim milestones in increments of five years, to achieve the sustainability goal in the basin within 20 years of the implementation of the plan.

(2) A description of how the plan helps meet each objective and how each objective is intended to achieve the sustainability goal for the basin for long-term beneficial uses of groundwater.

(3) (A) Notwithstanding paragraph (1), at the request of the groundwater sustainability agency, the department may grant an extension of up to 5 years beyond the 20-year

sustainability timeframe upon a showing of good cause. The department may grant a second extension of up to five years upon a showing of good cause if the groundwater sustainability agency has begun implementation of the work plan described in clause (iii) of subparagraph (B).

(B) The department may grant an extension pursuant to this paragraph if the groundwater sustainability agency does all of the following:

i. Demonstrates a need for an extension.

ii. Has made progress toward meeting the sustainability goal as demonstrated by its progress at achieving the milestones identified in its groundwater sustainability plan.

iii. Adopts a feasible work plan for meeting the sustainability goal during the extension period.

(4) The plan may, but is not required to, address undesirable results that occurred before, and have not been corrected by, January 1, 2015. Notwithstanding (1) to (3), inclusive, a groundwater sustainability agency has discretion as to whether to set measurable objectives and the timeframes for achieving any objectives for undesirable results that occurred before, and have not been corrected by, January 1, 2015.

(c) A planning and implementation horizon.

(d) Components relating to the following, as applicable to the basin:

(1) The monitoring and management of groundwater levels within the basin.

(2) The monitoring and management of groundwater quality, groundwater quality degradation, inelastic land subsidence, and changes in surface flow and surface water quality that directly affect groundwater levels or quality or are caused by groundwater extraction in the basin.

(3) Mitigation of overdraft.

(4) How recharge areas identified in the plan substantially contribute to the replenishment of the basin.

(5) A description of surface water supply used or available for use for groundwater recharge or in-lieu use.

(e) A summary of the type of monitoring sites, type of measurements, and the frequency of monitoring for each location monitoring groundwater levels, groundwater quality, subsidence, streamflow, precipitation, evaporation, and tidal influence. The plan shall include a summary of monitoring information such as well depth, screened intervals, and aquifer zones monitored, and a summary of the type of

well relied on for the information, including public, irrigation, domestic, industrial, and monitoring wells.

(f) Monitoring protocols that are designed to detect changes in groundwater levels, groundwater quality, inelastic surface subsidence for basins for which subsidence has been identified as a potential problem, and flow and quality of surface water that directly affect groundwater levels or quality or are caused by groundwater extraction in the basin. The monitoring protocols shall be designed to generate information that promotes efficient and effective groundwater management.

(g) A description of the consideration given to the applicable county and city general plans and a description of the various adopted water resources-related plans and programs within the basin and an assessment of how the groundwater sustainability plan may affect those plans.

10727.4. Additional Plan Elements

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, groundwater recharge, in-lieu use, 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.

10727.6. Requirements for Coordinated Plans, When Multiple Plans Cover a Basin

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.

10727.8. Public Notification and Participation

(a) Prior to initiating the development of a groundwater sustainability plan, the groundwater sustainability agency shall make available to the public and the department a written statement describing the manner in which interested parties may participate in the development and implementation of the groundwater sustainability plan. The groundwater sustainability agency shall provide the written statement to the legislative body of any city, county, or city and county located within the geographic area to be covered by the plan. The groundwater sustainability agency may appoint and consult with an advisory committee consisting of interested parties for the purposes of developing and implementing a groundwater sustainability plan. The groundwater sustainability agency shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the groundwater basin prior to and during the development and implementation of the groundwater sustainability plan.

(b) For purposes of this section, interested parties include entities listed in Section 10927 that are monitoring and reporting groundwater elevations in all or a part of a groundwater basin managed by the groundwater sustainability agency.

10728. Annual Reporting by Groundwater Sustainability Agency to Department

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.

10728.2. Periodic Review and Assessment

A groundwater sustainability agency shall periodically evaluate its groundwater sustainability plan, assess changing conditions in the basin that may warrant modification of the plan or management objectives, and may adjust components in the plan. An evaluation of the plan shall focus on determining whether the actions under the plan are meeting the plan's management objectives and whether those objectives are meeting the sustainability goal in the basin.

10728.4. Adoption or Amendment of Plan Following Public Hearing

A groundwater sustainability agency may adopt or amend a groundwater sustainability plan after a public hearing, held at least 90 days after providing notice to a city or county within the area of the proposed plan or amendment. The groundwater sustainability agency shall review and consider comments from any city or county that receives notice pursuant to this section and shall consult with a city or county that requests consultation within 30 days of receipt of the notice. Nothing in this section is intended to preclude an agency and a city or county from otherwise consulting or commenting regarding the adoption or amendment of a plan.

10728.6. CEQA Not Applicable to Plan Preparation and Adoption

Division 13 (commencing with Section 21000) of the Public Resources Code does not apply to the preparation and adoption of plans pursuant to this chapter. Nothing in this part shall be interpreted as exempting from Division 13 (commencing with Section 21000) of the Public Resources Code a project that would implement actions taken pursuant to a plan adopted pursuant to this chapter.

CHAPTER 7. Technical Assistance

10729. Technical Assistance by Department and Groundwater Sustainability Agency; Department Estimate of Water Available for Replenishment; Department Best Management Practices

(a) The department or a groundwater sustainability agency may provide technical assistance to entities that extract or use groundwater to promote water conservation and protect groundwater resources.

(b) The department may provide technical assistance to any groundwater sustainability agency in response to that agency's request for assistance in the development and implementation of a groundwater sustainability plan. The department shall use its best efforts to provide the requested assistance.

(c) The department shall prepare and publish a report by December 31, 2016, on its Internet Web site that presents the department's best estimate, based on available information, of water available for replenishment of groundwater in the state.

(d) (1) By January 1, 2017, the department shall publish on its Internet Web site best management practices for the sustainable management of groundwater.

(2) The department shall develop the best management practices through a public process involving one public meeting conducted at a location in northern California, one public meeting conducted at a location in the San Joaquin Valley, one public meeting conducted at a location in southern California, and one public meeting of the California Water Commission.

10729.2. Guideline, Criterion, Bulletin; Administrative Procedure Act Exception

With the exception of regulations required by Sections 10722.2 and 10733.2, a guideline, criterion, bulletin, or other technical or procedural analysis or guidance prepared by the department as required by this part is not subject to the Administrative Procedure Act (Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code).

CHAPTER 8. Financial Authority

10730. Regulatory Fees Authority; Limited Exception for De Minimis Extractions

(a) A groundwater sustainability agency may impose fees, including, but not limited to, permit fees and fees on groundwater extraction or other regulated activity, to fund the costs of a groundwater sustainability program, including, but not limited to, preparation, adoption, and amendment of a groundwater sustainability plan, and investigations,

inspections, compliance assistance, enforcement, and program administration, including a prudent reserve. A groundwater sustainability agency shall not impose a fee pursuant to this subdivision on a de minimis extractor unless the agency has regulated the users pursuant to this part.

(b) (1) Prior to imposing or increasing a fee, a groundwater sustainability agency shall hold at least one public meeting, at which oral or written presentations may be made as part of the meeting.

(2) Notice of the time and place of the meeting shall include a general explanation of the matter to be considered and a statement that the data required by this section is available. The notice shall be provided by publication pursuant to Section 6066 of the Government Code, by posting notice on the Internet Web site of the groundwater sustainability agency, and by mail to any interested party who files a written request with the agency for mailed notice of the meeting on new or increased fees. A written request for mailed notices shall be valid for one year from the date that the request is made and may be renewed by making a written request on or before April 1 of each year.

(3) At least 10 days prior to the meeting, the groundwater sustainability agency shall make available to the public data upon which the proposed fee is based.

(c) Any action by a groundwater sustainability agency to impose or increase a fee shall be taken only by ordinance or resolution.

(d) (1) As an alternative method for the collection of fees imposed pursuant to this section, a groundwater sustainability agency may adopt a resolution requesting collection of the fees in the same manner as ordinary municipal ad valorem taxes.

(2) A resolution described in paragraph (1) shall be adopted and furnished to the county auditor-controller and board of supervisors on or before August 1 of each year that the alternative collection of the fees is being requested. The resolution shall include a list of parcels and the amount to be collected for each parcel.

The power granted by this section is in addition to any powers a groundwater sustainability agency has under any other law.

10730.1

A groundwater sustainability agency, before imposing or increasing a fee pursuant to Section 10730 or 10730.2 relating to a groundwater basin that includes a water corporation regulated by the Public Utilities Commission, shall notify the Public Utilities Commission.

10730.2. Additional Fee Authority Following

(a) A groundwater sustainability agency that adopts a groundwater sustainability plan pursuant to this part may impose fees on the extraction of groundwater from the basin to fund costs of groundwater management, including, but not limited to, the costs of the following:

(1) Administration, operation, and maintenance, including a prudent reserve.

(2) Acquisition of lands or other property, facilities, and services.

(3) Supply, production, treatment, or distribution of water.

(4) Other activities necessary or convenient to implement the plan.

(b) Until a groundwater sustainability plan is adopted pursuant to this part, a local agency may impose fees in accordance with the procedures provided in this section for the purposes of Part 2.75 (commencing with Section 10750) as long as a groundwater management plan adopted before January 1, 2015, is in effect.

(c) Fees imposed pursuant to this section shall be adopted in accordance with subdivisions (a) and (b) of Section 6 of Article XIII D of the California Constitution.

(d) Fees imposed pursuant to this section may include fixed fees and fees charged on a volumetric basis, including, but not limited to, fees that increase based on the quantity of groundwater produced annually, the year in which the production of groundwater commenced from a groundwater extraction facility, and impacts to the basin.

(e) The power granted by this section is in addition to any powers a groundwater sustainability agency has under any other law.

10730.4. Authority to Use Fees for Activities Pursuant to Part 2.75

A groundwater sustainability agency may fund activities pursuant to Part 2.75 (commencing with Section 10750) and may impose fees pursuant to Section 10730.2 to fund activities undertaken by the agency pursuant to Part 2.75 (commencing with Section 10750).

10730.6. Fee Collection and Enforcement

(a) A groundwater fee levied pursuant to this chapter shall be due and payable to the groundwater sustainability agency by each owner or operator on a day established by the groundwater sustainability agency.

(b) If an owner or operator knowingly fails to pay a groundwater fee within 30 days of it becoming due, the owner or operator shall be liable to the groundwater sustainability agency for interest at the rate of 1 percent per month on the delinquent amount of the groundwater fee and a 10-percent penalty.

(c) The groundwater sustainability agency may bring a suit in the court having jurisdiction against any owner or operator of a groundwater extraction facility within the area covered by the plan for the collection of any delinquent groundwater fees, interest, or penalties imposed under this chapter. If the groundwater sustainability agency seeks an attachment against the property of any named defendant in the suit, the groundwater sustainability agency shall not be required to furnish a bond or other undertaking as provided in Title 6.5 (commencing with Section 481.010) of Part 2 of the Code of Civil Procedure.

(d) In the alternative to bringing a suit pursuant to subdivision (c), a groundwater sustainability agency may collect any delinquent groundwater charge and any civil penalties and interest on the delinquent groundwater charge pursuant to the laws applicable to the local agency or, if a joint powers authority, to the entity designated pursuant to Section 6509 of the Government Code. The collection shall be in the same manner as it would be applicable to the collection of delinquent assessments, water charges, or tolls.

(e) As an additional remedy, a groundwater sustainability agency, after a public hearing, may order an owner or operator to cease extraction of groundwater until all delinquent fees are paid. The groundwater sustainability agency shall give notice to the owner or operator by certified mail not less than 15 days in advance of the public hearing.

(f) The remedies specified in this section for collecting and enforcing fees are cumulative and may be pursued alternatively or may be used consecutively as determined by the governing body.

10730.8. No Limitation on Other Authorities; Personal Information Treated Like Utility Information

(a) Nothing in this chapter shall affect or interfere with the authority of a groundwater sustainability agency to levy and collect taxes, assessments, charges, and tolls as otherwise provided by law.

(b) Personal information included in a report or record pursuant to this chapter has the same protection from disclosure as is provided for information concerning utility customers of local agencies pursuant to Section 6254.16 of the Government Code.

10731. Authority to Determine Amounts Extracted

(a) Following an investigation pursuant to Section 10725.4, the governing body may make a determination fixing the amount of groundwater production from the groundwater extraction facility at an amount not to exceed the maximum production capacity of the facility for purposes of levying a groundwater charge. If a water-measuring device is permanently attached to the groundwater extraction facility, the record of production as disclosed by the water-measuring device shall be presumed to be accurate unless the contrary is established by the groundwater sustainability agency after investigation.

(b) After the governing body makes a determination fixing the amount of groundwater production pursuant to subdivision (a), a written notice of the determination shall be mailed to the owner or operator of the groundwater extraction facility at the address as shown by the groundwater sustainability agency's records. A determination made by the governing body shall be conclusive on the owner or operator and the groundwater charges, based on the determination together with any interest and penalties, shall be payable immediately unless within 20 days after the mailing of the notice the owner or operator files with the governing body a written protest setting forth the ground for protesting the amount of production or the groundwater charges, interest, and penalties. If a protest is filed pursuant to this subdivision, the governing body shall hold a hearing to determine the total amount of the groundwater production and the groundwater charges, interest, and penalties. Notice of the hearing shall be mailed to each protestant at least 20 days before the date fixed for the hearing. Notice of the determination of the governing body hearing shall be mailed to each protestant. The owner or operator shall have 20 days from the date of mailing of the determination to pay the groundwater charges, interest, and penalties determined by the governing body.

CHAPTER 9. Groundwater Sustainability Agency Enforcement Powers

10732. Civil Penalties

(a) (1) A person who extracts groundwater in excess of the amount that person is authorized to extract under a rule, regulation, ordinance, or resolution adopted pursuant to Section 10725.2, shall be subject to a civil penalty not to exceed five hundred dollars ($500) per acre-foot extracted in excess of the amount that person is authorized to extract. Liability under this subdivision is in addition to any liability imposed under paragraph (2) and any fee imposed for the extraction.

(2) A person who violates any rule, regulation, ordinance, or resolution adopted pursuant to Section 10725.2 shall be liable

for a civil penalty not to exceed one thousand dollars ($1,000) plus one hundred dollars ($100) for each additional day on which the violation continues if the person fails to comply within 30 days after the local agency has notified the person of the violation.

(b) (1) A groundwater sustainability agency may bring an action in the superior court to determine whether a violation occurred and to impose a civil penalty described in subdivision (a).

(2) A groundwater sustainability agency may administratively impose a civil penalty described in subdivision (a) after providing notice and an opportunity for a hearing.

(3) In determining the amount of the penalty, the superior court or the groundwater sustainability agency shall take into consideration all relevant circumstances, including, but not limited to, the nature and persistence of the violation, the extent of the harm caused by the violation, the length of time over which the violation occurs, and any corrective action taken by the violator.

(c) A penalty imposed pursuant to this section shall be paid to the groundwater sustainability agency and shall be expended solely for purposes of this part.

(d) Penalties imposed pursuant to this section are in addition to any civil penalty or criminal fine under any other law.

10732.2. State Entity Cooperation

If a groundwater sustainability agency finds that a state entity is not working cooperatively regarding implementation of a groundwater sustainability plan, the groundwater sustainability agency may file notice with the board regarding its finding. The board shall notice proceedings to investigate the finding of the groundwater sustainability agency. If the board determines that the failure of the state entity to work cooperatively regarding implementation of a groundwater sustainability plan compromises the ability of the groundwater sustainability agency to implement the plan in a manner that will likely achieve the sustainability goal, the board may direct the state entity to cooperate in the implementation of the groundwater sustainability plan unless the state entity indicates its authority for not complying with a groundwater sustainability plan in the same manner as subdivision (f) of Section 10735.8.

CHAPTER 10. State Evaluation and Assessment

10733. Department Review of Plans

(a) The department shall periodically review the groundwater sustainability plans developed by groundwater sustainability agencies

pursuant to this part to evaluate whether a plan conforms with Sections 10727.2 and 10727.4 and is likely to achieve the sustainability goal for the basin covered by the groundwater sustainability plan.

(b) If a groundwater sustainability agency develops multiple groundwater sustainability plans for a basin, the department shall evaluate whether the plans conform with Sections 10727.2, 10727.4, and 10727.6 and are together likely to achieve the sustainability goal for the basin covered by the groundwater sustainability plans.

(c) The department shall evaluate whether a groundwater sustainability plan adversely affects the ability of an adjacent basin to implement their groundwater sustainability plan or impedes achievement of sustainability goals in an adjacent basin.

10733.2. Department to Adopt Emergency Regulations Concerning Plan Review and Implementation

(a) (1) By June 1, 2016, the department shall adopt regulations for evaluating groundwater sustainability plans, the implementation of groundwater sustainability plans, and coordination agreements pursuant to this chapter.

(2) The regulations shall identify the necessary plan components specified in Sections 10727.2, 10727.4, and 10727.6 and other information that will assist local agencies in developing and implementing groundwater sustainability plans and coordination agreements.

(b) (1) The department may update the regulations, including to incorporate the best management practices identified pursuant to Section 10729.

(2) The regulations adopted pursuant to paragraph (1) of subdivision (a) shall identify appropriate methodologies and assumptions for baseline conditions concerning hydrology, water demand, regulatory restrictions that affect the availability of surface water, and unreliability of, or reductions in, surface water deliveries to the agency or water users in the basin, and the impact of those conditions on achieving sustainability. The baseline for measuring unreliability and reductions shall include the historic average reliability and deliveries of surface water to the agency or water users in the basin.

(c) By June 1, 2016, the department shall adopt regulations for evaluating alternatives submitted pursuant to Section 10733.6.

(d) The department shall adopt the regulations, including any amendments thereto, authorized by this section as emergency regulations in accordance with the Administrative Procedure Act (Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code). The adoption of these regulations is an emergency and shall be considered by the Office of Administrative Law as necessary for the immediate preservation of the public peace, health and safety, or general welfare. Notwithstanding the Administrative Procedure Act, emergency regulations adopted by the department pursuant to this section shall not be subject to review by the Office of Administrative Law and shall remain in effect until revised by the department.

(e) Before adopting the regulations pursuant to this section, the department shall conduct three public meetings to consider public comments. The department shall publish the draft regulations on its Internet Web site at least 30 days before the public meetings. One meeting shall be conducted at a location in northern California, one meeting shall be conducted at a location in the central valley of California, and one meeting shall be conducted at a location in southern California.

10733.4. Submittal of Plans to Department for Evaluation

(a) Upon adoption of a groundwater sustainability plan, a groundwater sustainability agency shall submit the groundwater sustainability plan to the department for review pursuant to this chapter.

(b) If groundwater sustainability agencies develop multiple groundwater sustainability plans for a basin, the submission required by subdivision (a) shall not occur until the entire basin is covered by groundwater sustainability plans. When the entire basin is covered by groundwater sustainability plans, the groundwater sustainability agencies shall jointly submit to the department all of the following:

(1) The groundwater sustainability plans.

(2) An explanation of how the groundwater sustainability plans implemented together satisfy Sections 10727.2, 10727.4, and 10727.6 for the entire basin.

(3) A copy of the coordination agreement between the groundwater sustainability agencies to ensure the coordinated implementation of the groundwater sustainability plans for the entire basin.

(c) Upon receipt of a groundwater sustainability plan, the department shall post the plan on the department's Internet Web site and provide

60 days for persons to submit comments to the department about the plan.

(d) The department shall evaluate the groundwater sustainability plan within two years of its submission by a groundwater sustainability agency and issue an assessment of the plan. The assessment may include recommended corrective actions to address any deficiencies identified by the department.

10733.6. Alternative Submittals

(a) If a local agency believes that an alternative described in subdivision (b) satisfies the objectives of this part, the local agency may submit the alternative to the department for evaluation and assessment of whether the alternative satisfies the objectives of this part for the basin.

(b) An alternative is any of the following:

(1) A plan developed pursuant to Part 2.75 (commencing with Section 10750) or other law authorizing groundwater management.

(2) Management pursuant to an adjudication action.

(3) An analysis of basin conditions that demonstrates that the basin has operated within its sustainable yield over a period of at least 10 years. The submission of an alternative described by this paragraph shall include a report prepared by a registered professional engineer or geologist who is licensed by the state and submitted under that engineer's or geologist's seal.

(c) A local agency shall submit an alternative pursuant to this section no later than January 1, 2017, and every five years thereafter.

(d) The assessment required by subdivision (a) shall include an assessment of whether the alternative is within a basin that is in compliance with Part 2.11 (commencing with Section 10920). If the alternative is within a basin that is not in compliance with Part 2.11 (commencing with Section 10920), the department shall find the alternative does not satisfy the objectives of this part.

10733.8. Department Review of Plans At Least Every Five Years

At least every five years after initial submission of a plan pursuant to Section 10733.4, the department shall review any available groundwater sustainability plan or alternative submitted in accordance with Section 10733.6, and the implementation of the corresponding groundwater sustainability program for consistency with this part, including achieving the sustainability goal. The department shall issue an assessment for each basin

for which a plan or alternative has been submitted in accordance with this chapter, with an emphasis on assessing progress in achieving the sustainability goal within the basin. The assessment may include recommended corrective actions to address any deficiencies identified by the department.

CHAPTER 11. State Intervention

10735. Definitions

As used in this chapter, the following terms have the following meanings:

(a) "Condition of long-term overdraft" means the condition of a groundwater basin where the average annual amount of water extracted for a long-term period, generally 10 years or more, exceeds the long-term average annual supply of water to the basin, plus any temporary surplus. Overdraft during a period of drought is not sufficient to establish a condition of long-term overdraft 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.

(b) "Person" means any person, firm, association, organization, partnership, business, trust, corporation, limited liability company, or public agency, including any city, county, city and county, district, joint powers authority, state, or any agency or department of those entities. "Person" includes, to the extent authorized by federal or tribal law and subject to the limitations described in subdivisions (c) and (d) of Section 10720.3, the United States, a department, agency or instrumentality of the federal government, an Indian tribe, an authorized Indian tribal organization, or interstate body.

(c) "Probationary basin" means a basin for which the board has issued a determination under Section 10735.2.

(d) "Significant depletions of interconnected surface waters" means reductions in flow or levels of surface water that is hydrologically connected to the basin such that the reduced surface water flow or levels have a significant and unreasonable adverse impact on beneficial uses of the surface water.

10735.2. Designation of Probationary Basins by State Water Board

(a) The board, after notice and a public hearing, may designate a high- or medium-priority basin as a probationary basin, if the board finds one or more of the following applies to the basin:

(1) After June 30, 2017, none of the following have occurred:

(A) A local agency has decided to become a groundwater sustainability agency that intends to develop a groundwater sustainability plan for the entire basin.

(B) A collection of local agencies has formed a groundwater sustainability agency or prepared agreements to develop one or more groundwater sustainability plans that will collectively serve as a groundwater sustainability plan for the entire basin.

(C) A local agency has submitted an alternative that has been approved or is pending approval pursuant to Section 10733.6. If the department disapproves an alternative pursuant to Section 10733.6, the board shall not act under this paragraph until at least 180 days after the department disapproved the alternative.

(2) The basin is subject to paragraph (1) of subdivision (a) of Section 10720.7, and after January 31, 2020, none of the following have occurred:

(A) A groundwater sustainability agency has adopted a groundwater sustainability plan for the entire basin.

(B) A collection of local agencies has adopted groundwater sustainability plans that collectively serve as a groundwater sustainability plan for the entire basin.

(C) The department has approved an alternative pursuant to Section 10733.6.

(3) The basin is subject to paragraph (1) of subdivision (a) of Section 10720.7 and after January 31, 2020, the department, in consultation with the board, determines that a groundwater sustainability plan is inadequate or that the groundwater sustainability program is not being implemented in a manner that will likely achieve the sustainability goal.

(4) The basin is subject to paragraph (2) of subdivision (a) of Section 10720.7, and after January 31, 2022, none of the following have occurred:

(A) A groundwater sustainability agency has adopted a groundwater sustainability plan for the entire basin.

(B) A collection of local agencies has adopted groundwater sustainability plans that collectively serve as a groundwater sustainability plan for the entire basin.

(C) (The department has approved an alternative pursuant to Section 10733.6.

(5) The basin is subject to paragraph (2) of subdivision (a) of Section 10720.7, and either of the following have occurred:

(A) After January 31, 2022, both of the following have occurred:

i. The department, in consultation with the board, determines that a groundwater sustainability plan is inadequate or that the groundwater sustainability plan is not being implemented in a manner that will likely achieve the sustainability goal.

ii. The board determines that the basin is in a condition of long-term overdraft.

(B) After January 31, 2025, both of the following have occurred:

i. The department, in consultation with the board, determines that a groundwater sustainability plan is inadequate or that the groundwater sustainability plan is not being implemented in a manner that will likely achieve the sustainability goal.

ii. The board determines that the basin is in a condition where groundwater extractions result in significant depletions of interconnected surface waters.

(b) In making the findings associated with paragraph (3) or (5) of subdivision (a), the department and board may rely on periodic assessments the department has prepared pursuant to Chapter 10 (commencing with Section 10733). The board may request that the department conduct additional assessments utilizing the regulations developed pursuant to Chapter 10 (commencing with Section 10733) and make determinations pursuant to this section. The board shall post on its Internet Web site and provide at least 30 days for the public to comment on any determinations provided by the department pursuant to this subdivision.

(c) (1) The determination may exclude a class or category of extractions from the requirement for reporting pursuant to Part 5.2 (commencing with Section 5200) of Division 2 if those extractions are subject to a local plan or program that adequately manages groundwater within the portion of the

basin to which that plan or program applies, or if those extractions are likely to have a minimal impact on basin withdrawals.

(2) The determination may require reporting of a class or category of extractions that would otherwise be exempt from reporting pursuant to paragraph (1) of subdivision (c) of Section 5202 if those extractions are likely to have a substantial impact on basin withdrawals or requiring reporting of those extractions is reasonably necessary to obtain information for purposes of this chapter.

(3) The determination may establish requirements for information required to be included in reports of groundwater extraction, for installation of measuring devices, or for use of a methodology, measuring device, or both, pursuant to Part 5.2 (commencing with Section 5200) of Division 2.

(4) The determination may modify the water year or reporting date for a report of groundwater extraction pursuant to Section 5202.

(d) If the board finds that litigation challenging the formation of a groundwater sustainability agency prevented its formation before July 1, 2017, pursuant to paragraph (1) of subdivision (a) or prevented a groundwater sustainability program from being implemented in a manner likely to achieve the sustainability goal pursuant to paragraph (2), (3), (4), or (5) of subdivision (a), the board shall not designate a basin as a probationary basin for a period of time equal to the delay caused by the litigation.

(e) The board shall exclude from probationary status any portion of a basin for which a groundwater sustainability agency demonstrates compliance with the sustainability goal.

10735.4. Opportunity for Remedy of Absence of Local Government before State Water Board Prepares Interim Plan

(a) If the board designates a basin as a probationary basin pursuant to paragraph (1), (2) or (4) of subdivision of Section 10735.2, a local agency or groundwater sustainability agency shall have 180 days to remedy the deficiency. The board may appoint a mediator or other facilitator, after consultation with affected local agencies, to assist in resolving disputes, and identifying and implementing actions that will remedy the deficiency.

(b) After the 180-day period provided by subdivision (a), the board may provide additional time to remedy the deficiency if it finds that a local

agency is making substantial progress toward remedying the deficiency.

(c) The board may develop an interim plan pursuant to Section 10735.8 for the probationary basin at the end of the period provided by subdivision (a) or any extension provided pursuant to subdivision (b), if the board, in consultation with the department, determines that a local agency has not remedied the deficiency that resulted in designating the basin as a probationary basin.

10735.6. Opportunity for Remedy of Plan Inadequacy or Lack of Plan Implementation before State water Board Prepares Interim Plan

(a) If the board designates a basin as a probationary basin pursuant to paragraph (3) or (5) of subdivision (a) of Section 10735.2, the board shall identify the specific deficiencies and identify potential actions to address the deficiencies. The board may request the department to provide local agencies, within 90 days of the designation of a probationary basin, with technical recommendations to remedy the deficiencies.

(b) The board may develop an interim plan pursuant to Section 10735.8 for the probationary basin one year after the designation of the basin pursuant to paragraph (3) or (5) of subdivision (a) of Section 10735.2, if the board, in consultation with the department, determines that a local agency has not remedied the deficiency that resulted in designating the basin a probationary basin.

10735.8. Interim Plans

(a) The board, after notice and a public hearing, may adopt an interim plan for a probationary basin.

(b) The interim plan shall include all of the following:

(1) Identification of the actions that are necessary to correct a condition of long-term overdraft or a condition where groundwater extractions result in significant depletions of interconnected surface waters, including recommendations for appropriate action by any person.

(2) A time schedule for the actions to be taken.

(3) A description of the monitoring to be undertaken to determine effectiveness of the plan.

(c) The interim plan may include the following:

(1) Restrictions on groundwater extraction.

(2) A physical solution.

(3) Principles and guidelines for the administration of rights to surface waters that are connected to the basin.

(d) Except as provided in subdivision (e), the interim plan shall be consistent with water right priorities, subject to Section 2 of Article X of the California Constitution.

(e) The board shall include in its interim plan a groundwater sustainability plan, or any element of a plan, that the board finds complies with the sustainability goal for that portion of the basin or would help meet the sustainability goal for the basin. Where, in the judgment of the board, an adjudication action can be relied on as part of the interim plan, either throughout the basin or in an area within the basin, the board may rely on, or incorporate elements of, that adjudication into the interim plan adopted by the board.

(f) In carrying out activities that may affect the probationary basin, state entities shall comply with an interim plan adopted by the board pursuant to this section unless otherwise directed or authorized by statute and the state entity shall indicate to the board in writing the authority for not complying with the interim plan.

(g) (1) After the board adopts an interim plan under this section, the board shall determine if a groundwater sustainability plan or an adjudication action is adequate to eliminate the condition of long-term overdraft or condition where groundwater extractions result in significant depletions of interconnected surface waters, upon petition of either of the following:

(A) A groundwater sustainability agency that has adopted a groundwater sustainability plan for the probationary basin or a portion thereof.

(B) A person authorized to file the petition by a judicial order or decree entered in an adjudication action in the probationary basin.

(2) The board shall act on a petition filed pursuant to paragraph (1) within 90 days after the petition is complete. If the board, in consultation with the department, determines that the groundwater sustainability plan or adjudication action is adequate, the board shall rescind the interim plan adopted by the board for the probationary basin, except as provided in paragraphs (3) and (4).

(3) Upon request of the petitioner, the board may amend an interim plan adopted under this section to eliminate portions of the interim plan, while allowing other portions of the interim plan to continue in effect.

(4) The board may decline to rescind an interim plan adopted pursuant to this section if the board determines that the petitioner has not provided adequate assurances that the groundwater sustainability plan or judicial order or decree will be implemented.

(5) This subdivision is not a limitation on the authority of the board to stay its proceedings under this section or to rescind or amend an interim plan adopted pursuant to this section based on the progress made by a groundwater sustainability agency or in an adjudication action, even if the board cannot make a determination of adequacy in accordance with paragraph (1).

(h) Before January 1, 2025, the state board shall not establish an interim plan under this section to remedy a condition where the groundwater extractions result in significant depletions of interconnected surface waters.

(i) The board's authority to adopt an interim plan under this section does not alter the law establishing water rights priorities or any other authority of the board.

10736. Procedures Applicable to Designating Probationary Basins and Adopting Interim Plans

(a) The board shall adopt or amend a determination or interim plan under Section 10735.2 or 10735.8 in accordance with procedures for quasi-legislative action.

(b) The board shall provide notice of a hearing described in subdivision (a) of Section 10735.2 or subdivision (a) of Section 10735.8 as follows:

(1) At least 90 days before the hearing, the board shall publish notice of the hearing on its Internet Web site.

(2) At least 90 days before the hearing, the board shall notify the department and each city, county, or city and county in which any part of the basin is situated.

(3) (A) For the purposes of this paragraph, the terms "board-designated local area" and "local agency" have the same meaning as defined in Section 5009.

(B) At least 60 days before the hearing, the board shall mail or send by electronic mail notice to all persons known to the board who extract or who propose to extract water from the basin, or who have made written or electronic mail requests to the board for

special notice of hearing pursuant to this part. If any portion of the basin is within a board-designated local area, the records made available to the board by the local agency in accordance with paragraph (4) of subdivision (d) of Section 5009 shall include the names and addresses of persons and entities known to the local agency who extract water from the basin, and the board shall mail or send by electronic mail notice to those persons.

(c) The board shall provide notice of proceedings to amend or repeal a determination or plan under Section 10735.2 or 10735.8 as appropriate to the proceedings, taking into account the nature of the proposed revision and the person likely to be affected.

(d) (1) Except as provided in paragraphs (2) and (3), Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 2 of Title 2 of the Government Code does not apply to any action authorized pursuant to Section 10735.2 or 10735.8.

(2) The board may adopt a regulation in accordance with Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 2 of Title 2 of the Government Code setting procedures for adopting a determination or plan.

(3) The board may adopt a regulation applying or interpreting this part pursuant to Section 1530 if the board determines that the emergency regulation is reasonably necessary for the allocation, administration, or collection of fees authorized pursuant to Section 1529.5.

10736.2. CEQA Applicability

Division 13 (commencing with Section 21000) of the Public Resources Code does not apply to any action or failure to act by the board under this chapter, other than the adoption or amendment of an interim plan pursuant to Section 10735.8.

10736.4. Extraction in Violation of an Interim Plan Shall not be Relied Upon to Support a Water Right Claim

The extraction or use of water extracted in violation of an interim plan under this part shall not be relied upon as a basis for establishing the extraction or use of water to support a claim in an action or proceeding for determination of water rights.

10736.6. Reports and Inspections

(a) The board may order a person that extracts or uses water from a basin that is subject to an investigation or proceeding under this

chapter to prepare and submit to the board any technical or monitoring program reports related to that person's or entity's extraction or use of water as the board may specify. The costs incurred by the person in the preparation of those reports shall bear a reasonable relationship to the need for the report and the benefit to be obtained from the report. If the preparation of individual reports would result in a duplication of effort, or if the reports are necessary to evaluate the cumulative effect of several diversions or uses of water, the board may order any person subject to this subdivision to pay a reasonable share of the cost of preparing reports.

(b) (1) An order issued pursuant to this section shall be served by personal service or registered mail on the party to submit technical or monitoring program reports or to pay a share of the costs of preparing reports. Unless the board issues the order after a hearing, the order shall inform the party of the right to request a hearing within 30 days after the party has been served. If the party does not request a hearing within that 30-day period, the order shall take effect as issued. If the party requests a hearing within that 30-day period, the board may adopt a decision and order after conducting a hearing.

(2) In lieu of adopting an order directed at named persons in accordance with the procedures specified in paragraph (1), the board may adopt a regulation applicable to a category or class of persons in accordance with Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 2 of Title 2 of the Government Code.

(c) Upon application of a person or upon its own motion, the board may review and revise an order issued or regulation adopted pursuant to this section in accordance with the procedures set forth in subdivision (b).

(d) In conducting an investigation or proceeding pursuant to this part, the board may inspect the property or facilities of a person to ascertain whether the purposes of this part are being met and to ascertain compliance with this part. The board may obtain an inspection warrant pursuant to the procedures set forth in Title 13 (commencing with Section 1822.50) of Part 3 of the Code of Civil Procedure for the purposes of an inspection pursuant to this subdivision.

CHAPTER 12. Determination of Rights to Groundwater

10737. Groundwater Adjudication

Except as provided in this chapter, an adjudication action to determine rights to groundwater in a basin shall be conducted in accordance with the Code of

Civil Procedure, including pursuant to Chapter 7 (commencing with Section 830) of Title 10 of Part 2 of that code.

10737.2. Adjudication, Proceedings and Sustainability Plan

In an adjudication action for a basin required to have a groundwater sustainability plan under this part, the court shall manage the proceedings in a manner that minimizes interference with the timely completion and implementation of a groundwater sustainability plan, avoids redundancy and unnecessary costs in the development of technical information and a physical solution, and is consistent with the attainment of sustainable groundwater management within the timeframes established by this part.

10737.4. Department Review of Judgment

(a) Chapter 11 (commencing with Section 10735) shall not apply to a judgment approved by the court pursuant to Section 850 of the Code of Civil Procedure if both of the following apply:

(1) A local agency or a party directed by the court to file the submission submits the judgment to the department for evaluation and assessment pursuant to paragraph (2) of subdivision (b) of Section 10733.6.

(2) The department determines that the judgment satisfies the objectives of this part for the basin.

(b) A party or group of parties proposing a stipulated judgment pursuant to subdivision (b) of Section 850 of the Code of Civil Procedure may submit the proposed stipulated judgment to the department for evaluation and assessment pursuant to paragraph (2) of subdivision (b) of Section 10733.6.

(c) Notwithstanding subdivision (c) of Section 10733.6, a judgment or proposed stipulated judgment pursuant to this section may be submitted to the department after January 1, 2017.

(d) A determination of the department on a submission pursuant to this section is subject to judicial review pursuant to Section 1085 of the Code of Civil Procedure. Venue shall be in the court with jurisdiction over the adjudication action and the case shall be coordinated with the adjudication action.

10737.6. Department Assessments and Recommendations

If the department determines that a judgment satisfies the objectives of this part in accordance with paragraph (2) of subdivision (a) of Section 10737.4, the department shall submit to the court the assessments and any recommended corrective actions that the department issues pursuant to Section 10733.8. The court, after notice and, if necessary, an evidentiary hearing, shall determine whether to amend the judgment pursuant to Section

852 of the Code of Civil Procedure to adopt the department's recommended corrective actions.

10737.8. Court Findings

In addition to making any findings required by subdivision (a) of Section 850 of the Code of Civil Procedure or any other law, the court shall not approve entry of judgment in an adjudication action for a basin required to have a groundwater sustainability plan under this part unless the court finds that the judgment will not substantially impair the ability of a groundwater sustainability agency, the board, or the department to comply with this part and to achieve sustainable groundwater management.

PART 2.75. Groundwater Management

10750.1. Limitations on Authority to Adopt New Plans

(a) Beginning January 1, 2015, a new plan shall not be adopted and an existing plan shall not be renewed pursuant to this part, except as provided in subdivision (b). A plan adopted before January 1, 2015, shall remain in effect until a groundwater sustainability plan is adopted pursuant to Part 2.74 (commencing with Section 10720).

(b) This section does not apply to a low- or very low priority basin as categorized for the purposes of Part 2.74 (commencing with Section 10720).

(c) This section does not apply to a plan submitted as an alternative pursuant to Section 10733.6, unless the department has not determined that the alternative satisfies the objectives of Part 2.74 (commencing with Section 10720) on or before January 31, 2020, or the department later determines that the plan does not satisfy the objectives of that part.

PART 2.11. Groundwater Monitoring

10927. Entities Authorized to Assume Responsibility for Monitoring and Reporting

Any of the following entities may assume responsibility for monitoring and reporting groundwater elevations in all or a part of a basin or subbasin in accordance with this part:

(a) A watermaster or water management engineer appointed by a court or pursuant to statute to administer a final judgment determining rights to groundwater.

(b) (1) A groundwater management agency with statutory authority to manage groundwater pursuant to its principal act that is monitoring groundwater elevations in all or a part of a groundwater basin or subbasin on or before January 1, 2010.

(2) A water replenishment district established pursuant to Division 18 (commencing with Section 60000). This part does not expand or otherwise affect the authority of a water replenishment district relating to monitoring groundwater elevations.

(3) A groundwater sustainability agency with statutory authority to manage groundwater pursuant to Part 2.74 (commencing with Section 10720).

(c) A local agency that is managing all or part of a groundwater basin or subbasin pursuant to Part 2.75 (commencing with Section 10750) and that was monitoring groundwater elevations in all or a part of a groundwater basin or subbasin on or before January 1, 2010, or a local agency or county that is managing all or part of a groundwater basin or subbasin pursuant to any other legally enforceable groundwater management plan with provisions that are substantively similar to those described in that part and that was monitoring groundwater elevations in all or a part of a groundwater basin or subbasin on or before January 1, 2010.

(d) A local agency that is managing all or part of a groundwater basin or subbasin pursuant to an integrated regional water management plan prepared pursuant to Part 2.2 (commencing with Section 10530) that includes a groundwater management component that complies with the requirements of Section 10753.7.

(e) A local agency that has been collecting and reporting groundwater elevations and that does not have an adopted groundwater management plan, if the local agency adopts a groundwater management plan in accordance with Part 2.75 (commencing with Section 10750) by January 1, 2014. The department may authorize the local agency to conduct the monitoring and reporting of groundwater elevations pursuant to this part on an interim basis, until the local agency adopts a groundwater management plan in accordance with Part 2.75 (commencing with Section 10750) or until January 1, 2014, whichever occurs first.

(f) A county that is not managing all or a part of a groundwater basin or subbasin pursuant to a legally enforceable groundwater management plan with provisions that are substantively similar to those described in Part 2.75 (commencing with Section 10750).

(g) A voluntary cooperative groundwater monitoring association formed pursuant to Section 10935.

10933. Groundwater Elevation Monitoring; Prioritization of Basins by the Department

(a) The department shall commence to identify the extent of monitoring of groundwater elevations that is being undertaken within each basin and subbasin.

(b) The department shall prioritize groundwater basins and subbasins for the purpose of implementing this section. In prioritizing the basins and subbasins, the department shall, to the extent data are available, consider all of the following:

(1) The population overlying the basin or subbasin.

(2) The rate of current and projected growth of the population overlying the basin or subbasin.

(3) The number of public supply wells that draw from the basin or subbasin.

(4) The total number of wells that draw from the basin or subbasin.

(5) The irrigated acreage overlying the basin or subbasin.

(6) The degree to which persons overlying the basin or subbasin rely on groundwater as their primary source of water.

(7) Any documented impacts on the groundwater within the basin or subbasin, including overdraft, subsidence, saline intrusion, and other water quality degradation.

(8) Any other information determined to be relevant by the department, including adverse impacts on local habitat and local streamflows.

(c) If the department determines that all or part of a basin or subbasin is not being monitored pursuant to this part, the department shall do all of the following:

(1) Attempt to contact all well owners within the area not being monitored.

(2) Determine if there is an interest in establishing any of the following:

(A) A groundwater sustainability plan pursuant to Part 2.74 (commencing with Section 10720).

(B) A groundwater management plan pursuant to Part 2.75 (commencing with Section 10750).

(C) An integrated regional water management plan pursuant to Part 2.2 (commencing with Section 10530) that includes a groundwater management component that complies with the requirements of Section 10753.7.

(D) A voluntary groundwater monitoring association pursuant to Section 10935.

(d) If the department determines that there is sufficient interest in establishing a plan or association described in paragraph (2) of subdivision (c), or if the county agrees to perform the groundwater monitoring functions in accordance with this part, the department shall work cooperatively with the interested parties to comply with the requirements of this part within two years.

(e) If the department determines, with regard to a basin or subbasin, that there is insufficient interest in establishing a plan or association described in paragraph (2) of subdivision (c), and if the county decides not to perform the groundwater monitoring and reporting functions of this part, the department shall do all of the following:

(1) Identify any existing monitoring wells that overlie the basin or subbasin that are owned or operated by the department or any other state or federal agency.

(2) Determine whether the monitoring wells identified pursuant to paragraph (1) provide sufficient information to demonstrate seasonal and long-term trends in groundwater elevations.

(3) If the department determines that the monitoring wells identified pursuant to paragraph (1) provide sufficient information to demonstrate seasonal and long-term trends in groundwater elevations, the department shall not perform groundwater monitoring functions pursuant to Section 10933.5.

(4) If the department determines that the monitoring wells identified pursuant to paragraph (1) provide insufficient information to demonstrate seasonal and long-term trends in groundwater elevations, the department shall perform groundwater monitoring functions pursuant to Section 10933.5.

PART 6. Water Development Projects

Chapter 7.5. Protection of Groundwater Basins

12924. Identification of Groundwater Basin

(a) The department, in conjunction with other public agencies, shall conduct an investigation of the state's groundwater basins. The department shall identify the state's groundwater basins on the basis of geological and hydrological conditions and consideration of political boundary lines whenever practical.

The department shall also investigate existing general patterns of groundwater extraction and groundwater recharge within those basins to the extent necessary to identify basins that are subject to critical conditions of overdraft.

(b) The Department may revise the boundaries of groundwater basins identified in subdivision (a) based on its own investigation or information provided by others.

(c) The department shall report its findings to the Governor and the Legislature not later than January 1, 2012, and thereafter in years ending in 5 or 0.

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ARTICLE 1. Introductory Provisions

340. Authority and Purpose

These regulations specify the information a local agency is required to provide when requesting that the Department revise the boundaries of a basin or subbasin, including the establishment of new subbasins, and the methodology and criteria used by the Department to evaluate a modification to existing basin or subbasin boundaries.

340.2. Intent

The revision of the boundaries of any basin or subbasin or creation of new subbasins that are adopted by the Department shall be consistent with the State's interest in the sustainable management of groundwater basins as expressed in the Sustainable Groundwater Management Act (Part 2.74 of Division 6 of the Water Code, beginning with Section 10720).

340.4. Basin Boundaries

Unless other basin or subbasin boundaries are established pursuant to these regulations, a basin or subbasin's boundaries shall be as identified in Bulletin 118. A clear and unambiguous written description of a basin or subbasin boundary in Bulletin 118 shall prevail over any inconsistent basin or subbasin boundary as depicted on a map, in an electronic data file, or otherwise, except when modified pursuant to these regulations. Any discrepancy or uncertainty shall be resolved by the Department based upon the best available technical information.

ARTICLE 2. Definitions

341. Definitions

In addition to terms defined in the Sustainable Groundwater Management Act and in Bulletin 118, which definitions apply to these regulations, the following terms used in this Chapter have the following meanings:

(a) "Act" means the Sustainable Groundwater Management Act (Part 2.74 of Division 6 of the Water Code, beginning with Section 10720).

(b) "Administrative adjustment" means a basin or subbasin boundary adjustment by the Department that either (1) amends existing basin or subbasin boundary data files to accurately reflect an unambiguous

written basin or subbasin boundary description as defined in Bulletin 118 or amended pursuant to this Part, or (2) restates the description of a basin or subbasin boundary to more precisely reflect a mapped basin or subbasin boundary consistent with the original description.

(c) "Affected agency" means a local agency, as defined in Water Code Section 10721(m), whose jurisdictional area would, as a result of a boundary modification, include more, fewer, or different basins or subbasins than without the modification.

(d) "Affected basin" means a basin or subbasin that is the subject of a boundary modification request and any basin or subbasin where the ability to achieve sustainable groundwater management could be significantly affected by groundwater use or management practices in another existing or proposed basin or subbasin. An adjacent basin or subbasin is presumed to be an affected basin for purposes of this Subchapter. The Department may determine a non-adjacent basin or subbasin is an affected basin if convincing evidence shows that the hydraulic connection to another basin or subbasin is likely to affect the ability of the non-adjacent basin or subbasin to achieve sustainable groundwater management over the planning and implementation horizon.

(e) "Affected system" means a public water system, as defined in Water Code Section 10721(r), whose service area would, as a result of a boundary modification, include more, fewer, or different basins or subbasins than without the modification.

(f) "Aquifer" refers to a three-dimensional body of porous and permeable sediment or sedimentary rock that contains sufficient saturated material to yield significant quantities of groundwater to wells and springs, as further defined or characterized in Bulletin 118.

(g) "Basin" is defined in the Sustainable Groundwater Management Act as a groundwater basin or subbasin identified and defined in Bulletin 118. For purposes of this Chapter, unless the context indicates otherwise, those terms are further defined as follows:

(1) The term "basin" shall refer to an area specifically defined as a basin or "groundwater basin" in Bulletin 118, and shall refer generally to an aquifer or stacked series of aquifers with reasonably well-defined boundaries in a lateral direction, based on features that significantly impede groundwater flow, and a definable bottom, as further defined or characterized in Bulletin 118.

(2) The term "subbasin" shall refer to an area specifically defined as a subbasin or "groundwater subbasin" in Bulletin 118, and shall refer generally to any subdivision of a basin based on

geologic and hydrologic barriers or institutional boundaries, as further described or defined in Bulletin 118.

(h) "Basin consolidation" refers to any boundary modification that would reduce the number of subbasins within a basin or merge two or more adjacent basins but would change only shared boundaries and would not change the external boundary of any basin or subbasin.

(i) "Basin subdivision" refers to any boundary modification that would increase the number of subbasins within a basin or subbasin.

(j) "Boundary modification" means a change to the boundaries of an existing basin or subbasin or the establishment of a new subbasin.

(k) "Commission" means the California Water Commission.

(l) "County basin consolidation" means the consolidation of all contiguous basins or subbasins within a county into a single basin or subbasin whose boundaries do not extend beyond those of the county. If there are non-contiguous basins within a county, the consolidation applies separately to each basin or group of contiguous basins in the county. A county basin consolidation may redefine the shared boundaries of one or more adjacent basins or subbasins, but would not result in a net change in the amount of area included within a basin.

(m) "Department" means the Department of Water Resources.

(n) "External boundary modification" refers to any proposal that would modify the boundary between the groundwater basin and the area outside any basin.

(o) "GIS" means a Geographic Information System that collects, stores, analyzes, and displays spatial or geographically referenced data.

(p) "Hydrogeologic barrier" refers to any subsurface feature that significantly impedes groundwater flow. "Hydrogeologic conceptual model" means a description of the geologic and hydrologic framework governing the occurrence of groundwater and its flow through and across the boundaries of a basin and the general groundwater conditions in a basin or subbasin.

(q) "Internal boundary modification" refers to any boundary modification that would modify the location of a boundary between subbasins within a basin or the shared boundary between adjacent basins.

(r) "Professional engineer" means a professional engineer licensed pursuant to Business and Professions Code, Division 3, Chapter 7, Section 6700 et seq.

(s) "Professional geologist" means a professional geologist licensed pursuant to Business and Professions Code, Division 3, Chapter 12.5, Section 7800 et seq.

(t) "Qualified map" means a geologic map of a scale no smaller than 1:250,000 that is published by the U. S. Geological Survey or the California Geological Survey, or is a map published as part of a geologic investigation conducted by a state or federal agency, or is a geologic map prepared and signed by a professional geologist that is acceptable to the Department.

(u) "Requesting agency" means the local agency that requests a boundary modification as authorized by Water Code Section 10722.2.

(v) "Request manager" is an employee or authorized representative of a requesting agency who has been delegated responsibility for submitting the boundary modification request and serving as the point of contact between the requesting agency and the Department.

(w) "State" means the State of California.

(x) "Technical study" means a geologic or hydrologic report prepared and published by a state or federal agency, or a study published in a peer-reviewed scientific journal, or a report prepared and signed by a professional geologist or by a professional engineer.

(y) "Written notice" means notification by electronic mail or U.S. Mail

ARTICLE 3. Boundary Modification Categories

342. Introduction to Boundary Modifications

This Article describes different categories of boundary modifications. The identified categories are scientific modifications, based on geologic or hydrologic criteria, and jurisdictional modifications, which promote sustainable groundwater management. An administrative adjustment does not constitute a boundary modification subject to this Subchapter.

342.2. Scientific Modification

A scientific modification to a basin or subbasin boundary consists of one of the following modifications and involves the addition, deletion, or relocation of a boundary based on the geologic or hydrologic conditions that define a groundwater basin or subbasin:

(a) An external boundary modification. Except in the case of some basin consolidations involving adjacent basins, external basin boundaries will only be modified as a result of scientific modifications.

(b) An internal boundary modification. A basin or subbasin boundary may be modified, deleted, or added based on the presence or absence of a hydrogeologic barrier.

342.4. Jurisdictional Modification

A jurisdictional modification involves the addition, deletion, or relocation of a basin or subbasin boundary that is not a scientific modification but promotes sustainable groundwater management and is one of the following:

(a) Internal boundary modification.

(b) Basin consolidation, including county basin consolidation.

(c) Basin subdivision.

342.6. Other Boundary Modifications

Any boundary modification that does not conform to the categories specified in this article may be considered by the Department based on information the Department deems adequate to evaluate the modification in accordance with Section 10722.2 of the Water Code.

ARTICLE 4. Procedures For Modification Request and Public Input

343. Introduction to Procedures

This Article describes procedural requirements related to boundary modification requests and public input to those requests.

343.2. Eligibility to Request Boundary Modification

A request for boundary modification may be initiated by a local agency whose jurisdictional area lies within or borders the existing or proposed basin or subbasin for which boundary modification is sought.

343.4. Forms and Instructions

The Department shall make the forms and instructions for boundary modification requests available on its Internet Web site prior to basin boundary submission periods.

343.6. Combination of Requests

Requesting agencies shall, to the greatest extent practicable, combine all boundary modification requests that affect the same basin or subbasin and coordinate with other affected agencies and affected systems, as necessary, to present the information as a single request. The Department may require the combination of boundary modification requests to avoid duplicative or conflicting requests, and may consider and adopt all or any proposals contained in a combined boundary modification request.

343.8. Submission Periods

Prior to updating or revising Bulletin 118, and at other times, as needed, the Department shall establish submission periods during which boundary modification requests will be accepted. The initial submission period shall start January 1, 2016, and remain open at least 90 days. The Department

shall announce the start of each subsequent submission period on its Internet Web site at least 60 days before the period begins, and the period will remain open at least 60 days. However, the submission periods described in this Section shall not apply to any request made pursuant to Section 841 of the Code of Civil Procedure.

343.9. Initial Notification

(a) Within 15 days of a local agency's decision to explore boundary modification, the relevant local agency shall notify the Department by written notice of its interest in exploring a boundary modification and make general information about its process publicly available by posting relevant information to the local agency's Internet Web site or by other suitable means. The initial notification shall include a brief description and preliminary map of the proposed boundary modification.

(b) The Department shall post the initial notification required by this Section on the Department's Internet Web site within ten (10) working days of receipt.

343.10. Status of Request

(a) The Department shall acknowledge the receipt of all boundary modification requests by written notice and shall post all materials received on the Department's Internet Web site within ten (10) working days of receipt.

(b) The Department shall determine whether the boundary modification request is complete and provide written notice to the requesting agency of its determination or of the need for additional information.

(1) A boundary modification request will be deemed complete if it substantially complies with the requirements of this Subchapter. Substantial compliance means that the requesting agency has attempted to comply with these regulations and the legislative intent of the Act in good faith, and the supporting information submitted and the form of submission are sufficiently detailed and necessary, as determined by the Department, to evaluate the boundary modification request.

(2) The Department will not evaluate a boundary modification request until the request has been deemed complete and the requesting agency has provided any other information specifically requested by the Department. However, the Department may begin its evaluation before evidence of support as described in Section 344.8(d) has been made

available if the requesting agency affirms that the required support is likely forthcoming.

(c) When the Department determines that a request for boundary modification is complete, the Department shall update information posted to the Department's Internet Web site to reflect that the Department is prepared to evaluate the request on its merits and to receive public input to the request pursuant to Section 343.12.

(d) The requesting agency shall, upon receiving notice that the request is complete, within five (5) working days notify all local agencies and public water systems in the affected basins and any other person or entity who has made a written request for notification of the proposed modification to the requesting agency. The notice from the requesting agency shall describe the procedural requirements to provide public input to a request pursuant to Section 343.12, including the deadlines to submit public input, the form in which public input must be submitted, and the address to which public input must be submitted.

343.12. Public Input

(a) Any person may provide information to support or oppose a proposed boundary modification request as follows:

(1) Public input must be submitted by written notice to the Department within 30 days after the Department posts a notice that the request is complete pursuant to Section 343.10(c), and provide the requesting agency a duplicate copy of that information the same day.

(2) Public input must include the name, address, and electronic mail address of the person or entity providing that input.

(3) Public input must include a clear statement of the basis for the support of or opposition to the proposed boundary modification.

(4) The level of detail provided by public input need not be as comprehensive as that contained in the request, but must rely on similar scientific and technical information as the particular boundary modification request to which it is addressed, and will be evaluated by the Department using the same criteria.

(b) The Department shall post all public input on the Department's Internet Web site.

(c) The Department is not required to respond to comments received through public input, but will consider such comments as part of its evaluation of a boundary modification request.

(d) The Department shall give the requesting agency a reasonable opportunity to respond to public input, including the opportunity to modify the boundary modification request.

343.14. Withdrawal of Request

The requesting agency may withdraw a boundary modification request at any time before the request is finalized by providing written notice to the Department.

ARTICLE 5. Supporting Information

344. Introduction to Supporting Information

This Article describes the type of information provided by a requesting agency to support a boundary modification request.

344.2. Requesting Agency Information

Each request for boundary modification shall include the following information:

(a) The name and mailing address of the requesting agency.

(b) A copy of the statutory or other legal authority under which the requesting agency was created with specific citations to the provisions setting forth the duties and responsibilities of the agency.

(c) A copy of the resolution adopted by the requesting agency formally initiating the boundary modification request.

(d) The name and contact information, including phone number, mailing address and electronic mail address, of the request manager.

344.4. Notice and Consultation

Each request for boundary modification shall include information demonstrating that the requesting agency consulted with affected agencies and affected systems including, but not limited to, the following:

(a) A list of all local agencies and public water systems in the affected basins with the subset of affected agencies and affected systems specifically identified.

(b) An explanation of the methods used to identify affected agencies and affected systems. Information regarding the nature of consultation, including copies of correspondence with affected agencies and affected systems and any other persons or entities consulted, as appropriate.

(c) A summary of all public meetings at which the proposed boundary modification was discussed or considered by the requesting agency,

including copies of any meeting agendas or minutes, if prepared, and any notices published.

(d) A copy of all comments regarding the proposed boundary modification received by the requesting agency and a summary of any responses made by the requesting agency.

344.6. Description of Proposed Boundary Modification

(a) Each request for boundary modification shall include a concise description of the proposed modification, including an overview of the request and a description or explanation of the following:

(1) The category of boundary modification proposed.

(2) The identification of all affected basins or subbasins, including Bulletin 118 basin or subbasin names and numbers.

(3) A proposed name for each new subbasin or consolidated basin, if applicable.

(b) Each request for a jurisdictional boundary modification pursuant to Section 342.4 shall also include the following:

(1) An explanation of how the proposed boundary modification would promote sustainable groundwater management in the proposed basin or subbasin.

(2) An explanation of how the proposed boundary modification would affect the ability of adjacent basins or subbasins to sustainably manage groundwater in those basins or subbasins.

(3) A historical summary of groundwater management in the proposed basin or subbasin.

(4) An explanation of how the proposed boundary modification may affect state programs, including, but not limited to the California Statewide Groundwater Elevation Monitoring (Water Code Section 10920 et seq.), Groundwater Management Plans developed pursuant to AB 3030 (Water Code Section 10750 et seq.), Groundwater Sustainability Plans or alternatives developed pursuant to the Sustainable Groundwater Management Act (Water Code Section 10720 et seq.), any applicable state or regional board plans, and other water management and land use programs.

(c) Any other information deemed appropriate by the requesting agency, including but not limited to, an explanation of opportunities that would arise from or obstacles that would be overcome by the boundary modification request.

344.8. Local Agency Input

(a) Each request for boundary modification shall include the following:

(1) Evidence that the requesting agency provided information to affected agencies and affected systems regarding the proposed boundary modification as required by Section 344.4 and provided those affected agencies and affected systems an opportunity to comment in support or opposition.

(2) Copies of all comments and documents from affected agencies and affected systems in support of or opposition to the proposed modification.

(3) Any evidence the requesting agency believes will rebut any opposition to the proposed boundary modification or otherwise assist the Department in its evaluation.

(b) Any affected agency or affected system that elects to support or oppose the proposed boundary modification shall provide the requesting agency with one of the following:

(1) A copy of a resolution formally adopted by the decision-making body of the affected agency or affected system.

(2) A letter signed by an executive officer or other official with appropriate delegated authority who represents the affected agency or affected system.

(c) The level of detail provided by an affected agency or affected system in support or opposition to a proposed boundary modification need not be as comprehensive as that contained in the request, but the support or opposition must rely on similar scientific and technical information as the particular boundary modification request to which it is addressed, and will be evaluated by the Department using the same criteria.

(d) A request that involves basin subdivision pursuant to Section 342.4(c) shall provide information demonstrating that the proposed boundary modification is supported by at least three-fourths of the local agencies and public water systems in the affected basins.

344.10. General Information

Each request for boundary modification shall include the following information:

(a) A description of the lateral boundaries and definable bottom of the proposed basin or subbasin that is in clear and definite terms, based on authoritative sources, and of sufficient detail to allow a map of the

proposed lateral basin or subbasin boundaries to be plotted from that description.

(b) A graphical map of adequate scale and GIS files showing the proposed basin or subbasin boundary in relation to the existing Bulletin 118 basin or subbasin boundary and the affected agencies and affected systems that are within or bordering the existing and proposed basin or subbasin.

344.12. Hydrogeologic Conceptual Model

(a) Each request for boundary modification shall include a clearly defined hydrogeologic conceptual model demonstrating the following for the proposed basin or subbasin:

(1) Principal aquifers.

(2) Lateral boundaries, including:

(A) Geologic features that significantly impede or impact groundwater flow.

(B) Aquifer characteristics that significantly impede or impact groundwater flow.

(C) Significant geologic and hydrologic features and conditions of the principal aquifers, as appropriate, including information regarding the confined or unconfined nature of the aquifers, facies changes, truncation of units, the presence of faults or folds that impede groundwater flow, or other groundwater flow restricting features.

(D) Key surface water bodies, groundwater divides and significant recharge sources.

(3) Recharge and discharge areas within or adjacent to the basin or subbasin.

(4) Definable bottom of the basin or subbasin.

(b) The Department may waive the requirement of this section for an internal boundary modification pursuant to Section 342.4(a) if the requesting agency is able to demonstrate that the proposed boundary modification is unlikely to affect sustainable groundwater management.

344.14. Technical Information for Scientific Modifications

(a) Each request for a scientific modification pursuant to Section 342.2 shall include information that demonstrates the extent of the aquifers, including the following:

(1) A qualified map that depicts the lateral boundaries of the aquifers that define the basin or subbasin.

(2) A technical study that provides subsurface data demonstrating the vertical thickness and relevant physical properties of the aquifers, such as hydrogeologic cross section(s), if available.

(b) In addition to the information required in Section 344.14(a), each request for scientific modification involving a hydrogeologic barrier pursuant to Section 342.2(b) shall demonstrate the presence or absence of impediments to subsurface groundwater flow, such as impermeable material, a fault, or groundwater divide, based on the following information:

(1) A qualified map depicting geologic structures or features that could significantly impact or impede groundwater flow.

(2) A technical study that provides geologic and hydrologic evidence of groundwater conditions including, as appropriate:

(A) Historical and current potentiometric surface maps, groundwater levels, groundwater recharge and discharge areas of the aquifers within the vicinity of proposed boundary modification.

(B) Aquifer testing results demonstrating boundary condition response.

(C) Water quality information of the aquifers including but not limited to general water quality parameters and isotopic analysis.

(D) Geophysical investigations and supporting data.

(E) Other information that the requesting agency considers relevant to the boundary modification request.

(c) Other technical information required by the Department that is necessary to evaluate a boundary modification request made pursuant to Section 342.2.

(d) A request for a scientific modification to an external boundary pursuant to Section 342.2(a) may utilize any of the information in Section 344.14(b) if the requesting agency believes it may assist the Department in its evaluation.

344.16. Technical Information for Jurisdictional Modifications

(a) Each request for a boundary modification that involves a jurisdictional modification pursuant to Section 342.4 shall include the following:

(1) A water management plan that covers all or a portion of the proposed basin or subbasin and contributes to meeting the requirements of Water Code Sections 10753.7(a) or 10727, including any of the following:

(A) An adopted groundwater management plan, a basin wide management plan, or other integrated regional water management program or plan that meets the requirements of Water Code Section 10753.7(a).

(B) Management pursuant to an adjudication action.

(C) One or more technical studies that cover the relevant portion of a basin or subbasin.

(D) A valid Groundwater Sustainability Plan adopted pursuant to the Act or an alternative approved by the Department in accordance with Water Code 10733.6.

(2) A Statement of the existing and planned coordination of sustainable groundwater management activities and responsibilities where required by the Act.

(b) Each request for a boundary modification that involves a basin subdivision pursuant to Section 342.4(c) shall provide, where applicable, a description and supporting documentation of historical and current conditions and coordination within the existing and proposed basin or subbasin related to the following:

(1) Groundwater level monitoring programs, historical and current groundwater level trends, and areas of significant groundwater level declines.

(2) Groundwater quality issues that may impact the supply and beneficial uses of groundwater, including a map of known impacted sites and areas, mitigation measures planned or in place, and a description of impact to water budget.

(3) Inelastic land surface subsidence including a map of known land subsidence areas, historical trends within known land subsidence areas, and a description of impacts to the water budget.

(4) Groundwater-surface water interactions, which may be demonstrated by a map identifying significant surface water bodies, and a groundwater elevation contour map or detailed written description of the direction of groundwater movement relative to the water bodies, the location and nature of seeps and springs, and known water quality issues within the basin

or subbasin and in hydraulically connected adjacent basins or subbasins.

(5) A map identifying the recharge areas.

344.18. CEQA Compliance

The requesting agency shall satisfy requirements of the California Environmental Quality Act (Public Resources Code Sections 21000 et seq.), including, if necessary, information to enable the Department to satisfy the requirements of a responsible agency.

ARTICLE 6. Methodology and Criteria For Evaluation

345. Introduction to Methodology and Criteria for Evaluation

This Article establishes the methodology and criteria for the evaluation of proposed boundary modifications.

345.2. Basis for Denial of Request for Boundary Modification

The Department will evaluate boundary modification requests to determine whether the request has the overall effect of promoting sustainable groundwater management. A request may be denied if one or more factors that could limit substantial compliance with the Act are identified, including the following:

(a) The proposed boundary modification may limit the opportunity or likelihood of any of the following:

(1) Sustainable groundwater management in the proposed basin or subbasin.

(2) Sustainable groundwater management in other basins or subbasins.

(3) Groundwater storage or recharge in the proposed or adjacent basins or subbasins.

(4) Coordination of management activities and the sharing of data and information across basin or subbasin boundaries.

(b) The requesting agency is unable to provide information that would allow the Department to assess whether there is a history of sustainable management of groundwater levels in the existing or proposed basin or subbasin.

(c) For scientific modifications, if the Department does not consider that the available scientific evidence supports the addition, deletion, or relocation of a basin or subbasin boundary.

(d) The requesting agency has failed to provide all required information or information deemed necessary by the Department or has failed to substantially comply with the requirements of this Subchapter.

(e) The proposed boundary modification could result in the isolation of areas with known groundwater management problems, or of areas, including disadvantaged communities, that may lack the institutional infrastructure or economic resources to form an effective groundwater sustainability agency or develop an implementable groundwater sustainability plan or alternative, or any other groundwater management plan.

(f) The proposed boundary modification could result in the creation of unmanaged areas.

(g) An objection to a jurisdictional boundary modification has been raised by any of the following:

(1) An agency created by statute to manage groundwater.

(2) The Watermaster or other manager of an adjudicated groundwater basin or portion of a groundwater basin.

(3) An exclusive local agency for compliance with the Act within their statutory boundaries.

(4) A county in which the proposed boundary modification would occur.

(h) Where the Department finds that the requested boundary modification would be inconsistent with the objectives of the Act.

345.4. Criteria for Evaluating Supporting Information

The Department shall apply the following criteria to assess whether the proposed basin or subbasin can be sustainably managed or would limit the sustainable management of adjacent basins or subbasins, and whether there is a history of sustainable management of groundwater levels in the proposed basin or subbasin.

(a) For scientific modifications pursuant to Section 342.2, the Department will consider the adequacy of hydrogeologic conceptual models and technical studies based on their demonstration of scientific support for the boundary modification. The models and technical studies will be evaluated according to the following:

(1) Hydrogeologic conceptual models will be evaluated to determine the degree to which they apply technical information to describe the geologic framework, the direction and movement of groundwater flow, the water budget for the

basin or subbasin, and any other feature as required by Section 344.12.

(2) Qualified maps of surficial geology, structural geology, or geophysical investigations, supporting subsurface interpretations, and any other feature as required by Section 344.14, will be evaluated to assess the presence or absence of a groundwater flow boundary.

(3) Potentiometric surface maps, groundwater levels, groundwater recharge and discharge areas, aquifer testing results, water quality data, and any other feature as required by Section 344.14 will be evaluated to assess the presence or absence of a groundwater flow boundary.

(b) For jurisdictional modifications pursuant to Section 342.4, the Department shall review evidence from existing water management plans that cover all or a portion of the proposed basin or subbasin. The Department shall evaluate the likelihood that the proposed basin or subbasin can be sustainably managed, the groundwater management practices in place within the basin or subbasin, and the historical and existing aquifer response to these management practices. The water management plan will also serve to provide additional information should it be necessary to clarify questions regarding management activities or supporting technical information.

(c) For jurisdictional modifications of basin consolidation or county basin consolidation or basin subdivision pursuant to Section 342.4(b) and (c), the Department will evaluate the adequacy of hydrogeologic conceptual models. The evaluation will assess the degree to which the models apply technical information to describe the geologic framework, the direction and movement of groundwater flow, the components of the water budget for the basin or subbasin, and any other feature as required by Section 344.12.

(d) For jurisdictional modifications of basin subdivision pursuant to Section 342.4(c), the Department will evaluate, where applicable, the adequacy of the description and supporting documentation of historical and current conditions and coordination in the existing and proposed basin or subbasin of the following:

(1) Current and historical groundwater levels from a groundwater monitoring well network that satisfies the following criteria:

(A) A sufficient density of monitoring wells to evaluate and implement sustainable groundwater management as determined by the Department.

(B) Wells with perforated intervals in all principal aquifers.

(C) The density and distribution of wells is adequate to characterize the potentiometric surface for each of the principal aquifers.

(D) The methods of data collection follow best management practices and data are collected at similar intervals and frequency.

(E) Groundwater level data demonstrate that the principal aquifers have not experienced long-term declines in groundwater levels.

(2) Water quality data, including data showing that areas with known water quality impacts would not be more isolated or concentrated.

(3) Current and historical land subsidence data demonstrating that no significant inelastic land subsidence is occurring.

(4) Technical information related to groundwater—surface water interactions showing that surface water is not adversely affected by groundwater extractions.

(5) Technical information related to recharge areas showing that recharge is not adversely affected by the proposed boundary modification.

(6) Evidence of coordination between local agencies and public water systems pertaining to water budgets, data collection, and other agreements designed to promote sustainable groundwater management, as appropriate.

(e) For any boundary modification request, the Department may consider any other scientific or technical information that relates to the ability of a proposed basin or subbasin to achieve sustainable groundwater management.

ARTICLE 7. Adoption of Boundary Modification

346. Introduction to Department Procedures

This Article describes the procedure for the adoption of boundary modifications by the Department.

346.2. Presentation of Draft Boundary Modifications

(a) If the Department determines that a boundary modification is supported by adequate technical information and meets the requirements of this Subchapter, the Department shall post the draft revised basin and subbasin boundaries on the Department's Internet

Web site and hold at least one public meeting to solicit comments on the draft boundaries prior to submitting them to the Commission.

(b) The Department shall present a copy of the draft revised basin and subbasin boundaries to the Commission to hear and comment on the draft revisions pursuant to Section 10722.2(e).

(c) The Department may finalize the revised basin and subbasin boundaries 60 days after the draft revisions have been presented to the Commission or 30 days after the Commission has met to hear and comment on the draft revisions, whichever comes earlier, if no substantial changes are required.

(d) If the Department makes substantial changes to a proposed boundary modification after presentation to the Commission, the Department shall notify the requesting agency and resubmit the proposed changes to the Commission for further review consistent with the Act.

346.4. Record of Boundary Modifications

After revising the boundaries of a basin or subbasin, or establishing a new subbasin, the Department shall record that information on the Department's Internet Web site and incorporate the revised basin and subbasin boundaries in subsequent updates to Bulletin 118.

346.6. Subsequent Modifications by Department.

If, after revising the boundaries of a basin or subbasin, or establishing a new subbasin, the Department determines, based on substantial evidence, that assumptions regarding the sustainable management of the new basin or subbasins were incorrect, and that as a result the boundary modification should not have been adopted, the Department may, after consultation with the requesting agency, either restore the boundaries that existed before the boundary modification or revise the boundaries consistent with this Subchapter.

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Title 23. Waters
Division 2. Department of Water Resources
Chapter 1.5. Groundwater Management
Subchapter 2. Groundwater Sustainability Plans

ARTICLE 1. Introductory Provisions

350. Authority and Purpose

These regulations specify the components of groundwater sustainability plans, alternatives to groundwater sustainability plans, and coordination agreements prepared pursuant to the Sustainable Groundwater Management Act (Part 2.74 of Division 6 of the Water Code, beginning with Section 10720), and the methods and criteria used by the Department to evaluate those plans, alternatives, and coordination agreements, and information required by the Department to facilitate that evaluation.

350.2. Applicability

(a) The process and standards for an Agency to develop and submit a Plan for evaluation by the Department, and for Department evaluation of that Plan and its implementation, as described in these regulations, are also applicable to multiple Agencies developing multiple Plans, as described in Article 8, and to entities submitting Alternatives, as described in Article 9.

(b) Unless as otherwise noted, section references in these regulations refer to this Subchapter.

350.4. General Principles

Consistent with the State's interest in groundwater sustainability through local management, the following general principles shall guide the Department in the implementation of these regulations.

(a) Groundwater conditions must be adequately defined and monitored to demonstrate that a Plan is achieving the sustainability goal for the basin, and the Department will evaluate the level of detail provided considering the basin setting.

(b) To comply with the Department's statutory mandate to evaluate Plans, Plan implementation, and the effect on Plan implementation on adjacent basins, Plan content information must be sufficiently detailed and readily comparable.

(c) The Department shall evaluate the adequacy of all Plans, including subsequent modifications to Plans, and reports and periodic evaluations based on a substantial compliance standard as described in Article 6, provided that the objectives of the Act are satisfied.

(d) Sustainable management criteria and projects and management actions shall be commensurate with the level of understanding of the basin setting, based on the level of uncertainty and data gaps, as reflected in the Plan.

(e) An Agency shall have the responsibility for adopting a Plan that defines the basin setting and establishes criteria that will maintain or achieve sustainable groundwater management, and the Department shall have the ongoing responsibility to evaluate the adequacy of that Plan and the success of its implementation.

(f) A Plan will be evaluated, and its implementation assessed, consistent with the objective that a basin be sustainably managed within 20 years of Plan implementation without adversely affecting the ability of an adjacent basin to implement its Plan or achieve and maintain its sustainability goal over the planning and implementation horizon.

(g) The Department shall consider the state policy regarding the human right to water when implementing these regulations.

ARTICLE 2. Definitions

351. Definitions

The definitions in the Sustainable Groundwater Management Act, Bulletin 118, and Subchapter 1 of this Chapter, shall apply to these regulations. In the event of conflicting definitions, the definitions in the Act govern the meanings in this Subchapter. In addition, the following terms used in this Subchapter have the following meanings:

(a) "Agency" refers to a groundwater sustainability agency as defined in the Act.

(b) "Agricultural water management plan" refers to a plan adopted pursuant to the Agricultural Water Management Planning Act as described in Part 2.8 of Division 6 of the Water Code, commencing with Section 10800 et seq.

(c) "Alternative" refers to an alternative to a Plan described in Water Code Section 10733.6.

(d) "Annual report" refers to the report required by Water Code Section 10728.

(e) "Baseline" or "baseline conditions" refer to historic information used to project future conditions for hydrology, water demand, and availability of surface water and to evaluate potential sustainable management practices of a basin.

(f) "Basin" means a groundwater basin or subbasin identified and defined in Bulletin 118 or as modified pursuant to Water Code 10722 et seq.

(g) "Basin setting" refers to the information about the physical setting, characteristics, and current conditions of the basin as described by the Agency in the hydrogeologic conceptual model, the groundwater conditions, and the water budget, pursuant to Subarticle 2 of Article 5.

(h) "Best available science" refers to the use of sufficient and credible information and data, specific to the decision being made and the time frame available for making that decision, that is consistent with scientific and engineering professional standards of practice.

(i) "Best management practice" refers to a practice, or combination of practices, that are designed to achieve sustainable groundwater management and have been determined to be technologically and economically effective, practicable, and based on best available science.

(j) "Board" refers to the State Water Resources Control Board.

(k) "CASGEM" refers to the California Statewide Groundwater Elevation Monitoring Program developed by the Department pursuant to Water Code Section 10920 et seq., or as amended.

(l) "Data gap" refers to a lack of information that significantly affects the understanding of the basin setting or evaluation of the efficacy of Plan implementation, and could limit the ability to assess whether a basin is being sustainably managed.

(m) "Groundwater dependent ecosystem" refers to ecological communities or species that depend on groundwater emerging from aquifers or on groundwater occurring near the ground surface.

(n) "Groundwater flow" refers to the volume and direction of groundwater movement into, out of, or throughout a basin.

(o) "Interconnected surface water" refers to surface water that is hydraulically connected at any point by a continuous saturated zone to the underlying aquifer and the overlying surface water is not completely depleted.

(p) "Interested parties" refers to persons and entities on the list of interested persons established by the Agency pursuant to Water Code Section 10723.4.

(q) "Interim milestone" refers to a target value representing measurable groundwater conditions, in increments of five years, set by an Agency as part of a Plan.

(r) "Management area" refers to an area within a basin for which the Plan may identify different minimum thresholds, measurable objectives, monitoring, or projects and management actions based on differences in water use sector, water source type, geology, aquifer characteristics, or other factors.

(s) "Measurable objectives" refer to specific, quantifiable goals for the maintenance or improvement of specified groundwater conditions that have been included in an adopted Plan to achieve the sustainability goal for the basin.

(t) "Minimum threshold" refers to a numeric value for each sustainability indicator used to define undesirable results.

(u) "NAD83" refers to the North American Datum of 1983 computed by the National Geodetic Survey, or as modified.

(v) "NAVD88" refers to the North American Vertical Datum of 1988 computed by the National Geodetic Survey, or as modified.

(w) "Plain language" means language that the intended audience can readily understand and use because that language is concise, well-organized, uses simple vocabulary, avoids excessive acronyms and technical language, and follows other best practices of plain language writing.

(x) "Plan" refers to a groundwater sustainability plan as defined in the Act.

(y) "Plan implementation" refers to an Agency's exercise of the powers and authorities described in the Act, which commences after an Agency adopts and submits a Plan or Alternative to the Department and begins exercising such powers and authorities.

(z) "Plan manager" is an employee or authorized representative of an Agency, or Agencies, appointed through a coordination agreement or other agreement, who has been delegated management authority for submitting the Plan and serving as the point of contact between the Agency and the Department.

(aa) "Principal aquifers" refer to aquifers or aquifer systems that store, transmit, and yield significant or economic quantities of groundwater to wells, springs, or surface water systems.

(bb) "Reference point" refers to a permanent, stationary and readily identifiable mark or point on a well, such as the top of casing, from which groundwater level measurements are taken, or other monitoring site.

(cc) "Representative monitoring" refers to a monitoring site within a broader network of sites that typifies one or more conditions within the basin or an area of the basin.

(dd) "Seasonal high" refers to the highest annual static groundwater elevation that is typically measured in the Spring and associated with stable aquifer conditions following a period of lowest annual groundwater demand.

(ee) "Seasonal low" refers to the lowest annual static groundwater elevation that is typically measured in the Summer or Fall, and associated with a period of stable aquifer conditions following a period of highest annual groundwater demand.

(ff) "Seawater intrusion" refers to the advancement of seawater into a groundwater supply that results in degradation of water quality in the basin, and includes seawater from any source.

(gg) "Statutory deadline" refers to the date by which an Agency must be managing a basin pursuant to an adopted Plan, as described in Water Code Sections 10720.7 or 10722.4.

(hh) "Sustainability indicator" refers to any of the effects caused by groundwater conditions occurring throughout the basin that, when significant and unreasonable, cause undesirable results, as described in Water Code Section 10721(x).

(ii) "Uncertainty" refers to a lack of understanding of the basin setting that significantly affects an Agency's ability to develop sustainable management criteria and appropriate projects and management actions in a Plan, or to evaluate the efficacy of Plan implementation, and therefore may limit the ability to assess whether a basin is being sustainably managed.

(jj) "Urban water management plan" refers to a plan adopted pursuant to the Urban Water Management Planning Act as described in Part 2.6 of Division 6 of the Water Code, commencing with Section 10610 et seq.

(kk) "Water source type" represents the source from which water is derived to meet the applied beneficial uses, including groundwater, recycled water, reused water, and surface water sources identified as Central Valley Project, the State Water Project, the Colorado River Project, local supplies, and local imported supplies.

(ll) "Water use sector" refers to categories of water demand based on the general land uses to which the water is applied, including urban, industrial, agricultural, managed wetlands, managed recharge, and native vegetation.

(mm) "Water year" refers to the period from October 1 through the following September 30, inclusive, as defined in the Act.

(nn) "Water year type" refers to the classification provided by the Department to assess the amount of annual precipitation in a basin.

ARTICLE 3. Technical and Reporting Standards

352. Introduction to Technical and Reporting Standards

This Article describes the monitoring protocols, standards for monitoring sites, and other technical elements related to the development or implementation of a Plan.

352.2. Monitoring Protocols

Each Plan shall include monitoring protocols adopted by the Agency for data collection and management, as follows:

(a) Monitoring protocols shall be developed according to best management practices.

(b) The Agency may rely on monitoring protocols included as part of the best management practices developed by the Department, or may adopt similar monitoring protocols that will yield comparable data.

(c) Monitoring protocols shall be reviewed at least every five years as part of the periodic evaluation of the Plan, and modified as necessary.

352.4. Data and Reporting Standards

(a) The following reporting standards apply to all categories of information required of a Plan, unless otherwise indicated:

(1) Water volumes shall be reported in acre-feet.

(2) Surface water flow shall be reported in cubic feet per second and groundwater flow shall be reported in acre-feet per year.

(3) Field measurements of elevations of groundwater, surface water, and land surface shall be measured and reported in feet to an accuracy of at least 0.1 feet relative to NAVD88, or another national standard that is convertible to NAVD88, and the method of measurement described.

(4) Reference point elevations shall be measured and reported in feet to an accuracy of at least 0.5 feet, or the best available information, relative to NAVD88, or another national standard that is convertible to NAVD88, and the method of measurement described.

(5) Geographic locations shall be reported in GPS coordinates by latitude and longitude in decimal degree to five decimal places, to a minimum accuracy of 30 feet, relative to NAD83, or another national standard that is convertible to NAD83.

(b) Monitoring sites shall include the following information:

(1) A unique site identification number and narrative description of the site location.

(2) A description of the type of monitoring, type of measurement taken, and monitoring frequency.

(3) Location, elevation of the ground surface, and identification and description of the reference point.

(4) A description of the standards used to install the monitoring site. Sites that do not conform to best management practices shall be identified and the nature of the divergence from best management practices described.

(c) The following standards apply to wells:

(1) Wells used to monitor groundwater conditions shall be constructed according to applicable construction standards, and shall provide the following information in both tabular and geodatabase-compatible shapefile form:

(A) CASGEM well identification number. If a CASGEM well identification number has not been issued, appropriate well information shall be entered on forms made available by the Department, as described in Section 353.2.

(B) Well location, elevation of the ground surface and reference point, including a description of the reference point.

(C) A description of the well use, such as public supply, irrigation, domestic, monitoring, or other type of well, whether the well is active or inactive, and whether the well is a single, clustered, nested, or other type of well.

(D) Casing perforations, borehole depth, and total well depth.

(E) Well completion reports, if available, from which the names of private owners have been redacted.

(F) Geophysical logs, well construction diagrams, or other relevant information, if available.

(G) Identification of principal aquifers monitored.

(H) Other relevant well construction information, such as well capacity, casing diameter, or casing modifications, as available.

(2) If an Agency relies on wells that lack casing perforations, borehole depth, or total well depth information to monitor groundwater conditions as part of a Plan, the Agency shall describe a schedule for acquiring monitoring wells with the necessary information, or demonstrate to the Department that such information is not necessary to understand and manage groundwater in the basin.

(3) Well information used to develop the basin setting shall be maintained in the Agency's data management system.

(d) Maps submitted to the Department shall meet the following requirements:

(1) Data layers, shapefiles, geodatabases, and other information provided with each map, shall be submitted electronically to the Department in accordance with the procedures described in Article 4.

(2) Maps shall be clearly labeled and contain a level of detail to ensure that the map is informative and useful.

(3) The datum shall be clearly identified on the maps or in an associated legend.

(e) Hydrographs submitted to the Department shall meet the following requirements:

(1) Hydrographs shall be submitted electronically to the Department in accordance with the procedures described in Article 4.

(2) Hydrographs shall include a unique site identification number and the ground surface elevation for each site.

(3) Hydrographs shall use the same datum and scaling to the greatest extent practical.

(f) Groundwater and surface water models used for a Plan shall meet the following standards:

(1) The model shall include publicly available supporting documentation.

(2) The model shall be based on field or laboratory measurements, or equivalent methods that justify the selected values, and calibrated against site-specific field data.

(3) Groundwater and surface water models developed in support of a Plan after the effective date of these regulations shall consist of public domain open-source software.

(g) The Department may request data input and output files used by the Agency, as necessary. The Department may independently evaluate the appropriateness of model results relied upon by the Agency, and use that evaluation in the Department's assessment of the Plan.

352.6. Data Management System

Each Agency shall develop and maintain a data management system that is capable of storing and reporting information relevant to the development or implementation of the Plan and monitoring of the basin.

ARTICLE 4. Procedures

353. Introduction to Procedures

This Article describes various procedural issues related to the submission of Plans and public comment to those Plans.

353.2. Information Provided by the Department

(a) The Department shall make forms and instructions for submitting Plans, reports, and other information available on its website.

(b) The Department shall provide information, to the extent available, to assist Agencies in the preparation and implementation of Plans, which shall be posted on the Department's website.

353.4. Reporting Provisions

Information required by the Act or this Subchapter, including Plans, Plan amendments, annual reports, and five-year assessments, shall be submitted by each Agency to the Department as follows:

(a) Materials shall be submitted electronically to the Department through an online reporting system, in a format provided by the Department as described in Section 353.2.

(b) Submitted materials shall be accompanied by a transmittal letter signed by the plan manager or other duly authorized person.

353.6. Initial Notification

(a) Each Agency shall notify the Department, in writing, prior to initiating development of a Plan. The notification shall provide general information about the Agency's process for developing the Plan,

including the manner in which interested parties may contact the Agency and participate in the development and implementation of the Plan. The Agency shall make the information publicly available by posting relevant information on the Agency's website.

(b) The Department shall post the initial notification required by this Section, including Agency contact information, on the Department's website within 20 days of receipt.

(c) Upon request, prior to adoption of a Plan, the Department shall provide assistance to an Agency regarding the elements of a Plan required by the Act and this Subchapter, however, the Agency is solely responsible for the development, adoption, and implementation of a Plan that satisfies the requirements of the Act and this Subchapter.

353.8. Comments

(a) Any person may provide comments to the Department regarding a proposed or adopted Plan.

(b) Pursuant to Water Code Section 10733.4, the Department shall establish a comment period of no less than 60 days for an adopted Plan that has been accepted by the Department for evaluation pursuant to Section 355.2.

(c) In addition to the comment period required by Water Code Section 10733.4, the Department shall accept comments on an Agency's decision to develop a Plan as described in Section 353.6, including comments on elements of a proposed Plan under consideration by the Agency.

(d) Comments shall be submitted to the Department by written notice, with a duplicate copy of the comment provided to the Agency. Organizations or government entities providing comments shall include the name, address, and electronic mail address, if available, of the person or entity providing the comments and information.

(e) Comments received by the Department shall be posted on the Department's website.

(f) The Department is not required to respond to comments, but shall consider comments as part of its evaluation of a Plan.

353.10. Withdrawal or Amendment of Plan

An Agency may withdraw a Plan at any time by providing written notice to the Department, and may amend a Plan at any time pursuant to the requirements of Section 355.10.

ARTICLE 5. Plan Contents

354. Introduction to Plan Contents

This Article describes the required contents of Plans submitted to the Department for evaluation, including administrative information, a description of the basin setting, sustainable management criteria, description of the monitoring network, and projects and management actions.

SUBARTICLE 1. Administrative Information

354.2. Introduction to Administrative Information

This Subarticle describes information in the Plan relating to administrative and other general information about the Agency that has adopted the Plan and the area covered by the Plan.

354.4. General Information

Each Plan shall include the following general information:

(a) An executive summary written in plain language that provides an overview of the Plan and description of groundwater conditions in the basin.

(b) A list of references and technical studies relied upon by the Agency in developing the Plan. Each Agency shall provide to the Department electronic copies of reports and other documents and materials cited as references that are not generally available to the public.

354.6. Agency Information

When submitting an adopted Plan to the Department, the Agency shall include a copy of the information provided pursuant to Water Code Section 10723.8, with any updates, if necessary, along with the following information:

(a) The name and mailing address of the Agency.

(b) The organization and management structure of the Agency, identifying persons with management authority for implementation of the Plan.

(c) The name and contact information, including the phone number, mailing address and electronic mail address, of the plan manager.

(d) The legal authority of the Agency, with specific reference to citations setting forth the duties, powers, and responsibilities of the Agency, demonstrating that the Agency has the legal authority to implement the Plan.

(e) An estimate of the cost of implementing the Plan and a general description of how the Agency plans to meet those costs.

354.8. Description of Plan Area

Each Plan shall include a description of the geographic areas covered, including the following information:

(a) One or more maps of the basin that depict the following, as applicable:

(1) The area covered by the Plan, delineating areas managed by the Agency as an exclusive Agency and any areas for which the Agency is not an exclusive Agency, and the name and location of any adjacent basins.

(2) Adjudicated areas, other Agencies within the basin, and areas covered by an Alternative.

(3) Jurisdictional boundaries of federal or state land (including the identity of the agency with jurisdiction over that land), tribal land, cities, counties, agencies with water management responsibilities, and areas covered by relevant general plans.

(4) Existing land use designations and the identification of water use sector and water source type.

(5) The density of wells per square mile, by dasymetric or similar mapping techniques, showing the general distribution of agricultural, industrial, and domestic water supply wells in the basin, including de minimis extractors, and the location and extent of communities dependent upon groundwater, utilizing data provided by the Department, as specified in Section 353.2, or the best available information.

(b) A written description of the Plan area, including a summary of the jurisdictional areas and other features depicted on the map.

(c) Identification of existing water resource monitoring and management programs, and description of any such programs the Agency plans to incorporate in its monitoring network or in development of its Plan. The Agency may coordinate with existing water resource monitoring and management programs to incorporate and adopt that program as part of the Plan.

(d) A description of how existing water resource monitoring or management programs may limit operational flexibility in the basin, and how the Plan has been developed to adapt to those limits.

(e) A description of conjunctive use programs in the basin.

(f) A plain language description of the land use elements or topic categories of applicable general plans that includes the following:

(1) A summary of general plans and other land use plans governing the basin.

(2) A general description of how implementation of existing land use plans may change water demands within the basin or affect the ability of the Agency to achieve sustainable groundwater management over the planning and implementation horizon, and how the Plan addresses those potential effects.

(3) A general description of how implementation of the Plan may affect the water supply assumptions of relevant land use plans over the planning and implementation horizon.

(4) A summary of the process for permitting new or replacement wells in the basin, including adopted standards in local well ordinances, zoning codes, and policies contained in adopted land use plans.

(5) To the extent known, the Agency may include information regarding the implementation of land use plans outside the basin that could affect the ability of the Agency to achieve sustainable groundwater management.

(g) A description of any of the additional Plan elements included in Water Code Section 10727.4 that the Agency determines to be appropriate.

354.10. Notice and Communication

Each Plan shall include a summary of information relating to notification and communication by the Agency with other agencies and interested parties including the following:

(a) A description of the beneficial uses and users of groundwater in the basin, including the land uses and property interests potentially affected by the use of groundwater in the basin, the types of parties representing those interests, and the nature of consultation with those parties.

(b) A list of public meetings at which the Plan was discussed or considered by the Agency.

(c) Comments regarding the Plan received by the Agency and a summary of any responses by the Agency.

(d) A communication section of the Plan that includes the following:

(1) An explanation of the Agency's decision-making process.

(2) Identification of opportunities for public engagement and a discussion of how public input and response will be used.

(3) A description of how the Agency encourages the active involvement of diverse social, cultural, and economic elements of the population within the basin.

(4) The method the Agency shall follow to inform the public about progress implementing the Plan, including the status of projects and actions.

SUBARTICLE 2. Basin Setting

354.12. Introduction to Basin Setting

This Subarticle describes the information about the physical setting and characteristics of the basin and current conditions of the basin that shall be part of each Plan, including the identification of data gaps and levels of uncertainty, which comprise the basin setting that serves as the basis for defining and assessing reasonable sustainable management criteria and projects and management actions. Information provided pursuant to this Subarticle shall be prepared by or under the direction of a professional geologist or professional engineer.

354.14. Hydrogeologic Conceptual Model

(a) Each Plan shall include a descriptive hydrogeologic conceptual model of the basin based on technical studies and qualified maps that characterizes the physical components and interaction of the surface water and groundwater systems in the basin.

(b) The hydrogeologic conceptual model shall be summarized in a written description that includes the following:

(1) The regional geologic and structural setting of the basin including the immediate surrounding area, as necessary for geologic consistency.

(2) Lateral basin boundaries, including major geologic features that significantly affect groundwater flow.

(3) The definable bottom of the basin.

(4) Principal aquifers and aquitards, including the following information:

(A) Formation names, if defined.

(B) Physical properties of aquifers and aquitards, including the vertical and lateral extent, hydraulic conductivity, and storativity, which may be based on existing technical studies or other best available information.

(C) Structural properties of the basin that restrict groundwater flow within the principal aquifers, including information regarding stratigraphic changes, truncation of units, or other features.

(D) General water quality of the principal aquifers, which may be based on information derived from existing technical studies or regulatory programs.

(E) Identification of the primary use or uses of each aquifer, such as domestic, irrigation, or municipal water supply.

(5) Identification of data gaps and uncertainty within the hydrogeologic conceptual model

(c) The hydrogeologic conceptual model shall be represented graphically by at least two scaled cross-sections that display the information required by this section and are sufficient to depict major stratigraphic and structural features in the basin.

(d) Physical characteristics of the basin shall be represented on one or more maps that depict the following:

(1) Topographic information derived from the U.S. Geological Survey or another reliable source.

(2) Surficial geology derived from a qualified map including the locations of cross-sections required by this Section.

(3) Soil characteristics as described by the appropriate Natural Resources Conservation Service soil survey or other applicable studies.

(4) Delineation of existing recharge areas that substantially contribute to the replenishment of the basin, potential recharge areas, and discharge areas, including significant active springs, seeps, and wetlands within or adjacent to the basin.

(5) Surface water bodies that are significant to the management of the basin.

(6) The source and point of delivery for imported water supplies.

354.16. Groundwater Conditions

Each Plan shall provide a description of current and historical groundwater conditions in the basin, including data from January 1, 2015, to current conditions, based on the best available information that includes the following:

(a) Groundwater elevation data demonstrating flow directions, lateral and vertical gradients, and regional pumping patterns, including:

(1) Groundwater elevation contour maps depicting the groundwater table or potentiometric surface associated with the current seasonal high and seasonal low for each principal aquifer within the basin.

(2) Hydrographs depicting long-term groundwater elevations, historical highs and lows, and hydraulic gradients between principal aquifers.

(b) A graph depicting estimates of the change in groundwater in storage, based on data, demonstrating the annual and cumulative change in the volume of groundwater in storage between seasonal high groundwater conditions, including the annual groundwater use and water year type.

(c) Seawater intrusion conditions in the basin, including maps and cross-sections of the seawater intrusion front for each principal aquifer.

(d) Groundwater quality issues that may affect the supply and beneficial uses of groundwater, including a description and map of the location of known groundwater contamination sites and plumes.

(e) The extent, cumulative total, and annual rate of land subsidence, including maps depicting total subsidence, utilizing data available from the Department, as specified in Section 353.2, or the best available information.

(f) Identification of interconnected surface water systems within the basin and an estimate of the quantity and timing of depletions of those systems, utilizing data available from the Department, as specified in Section 353.2, or the best available information.

(g) Identification of groundwater dependent ecosystems within the basin, utilizing data available from the Department, as specified in Section 353.2, or the best available information.

354.18. Water Budget

(a) Each Plan shall include a water budget for the basin that provides an accounting and assessment of the total annual volume of groundwater and surface water entering and leaving the basin, including historical, current and projected water budget conditions, and the change in the volume of water stored. Water budget information shall be reported in tabular and graphical form.

(b) The water budget shall quantify the following, either through direct measurements or estimates based on data:

(1) Total surface water entering and leaving a basin by water source type.

(2) Inflow to the groundwater system by water source type, including subsurface groundwater inflow and infiltration of precipitation, applied water, and surface water systems, such as lakes, streams, rivers, canals, springs and conveyance systems.

(3) Outflows from the groundwater system by water use sector, including evapotranspiration, groundwater extraction, groundwater discharge to surface water sources, and subsurface groundwater outflow.

(4) The change in the annual volume of groundwater in storage between seasonal high conditions.

(5) If overdraft conditions occur, as defined in Bulletin 118, the water budget shall include a quantification of overdraft over a period of years during which water year and water supply conditions approximate average conditions.

(6) The water year type associated with the annual supply, demand, and change in groundwater stored.

(7) An estimate of sustainable yield for the basin.

(c) Each Plan shall quantify the current, historical, and projected water budget for the basin as follows:

(1) Current water budget information shall quantify current inflows and outflows for the basin using the most recent hydrology, water supply, water demand, and land use information.

(2) Historical water budget information shall be used to evaluate availability or reliability of past surface water supply deliveries and aquifer response to water supply and demand trends relative to water year type. The historical water budget shall include the following:

(A) A quantitative evaluation of the availability or reliability of historical surface water supply deliveries as a function of the historical planned versus actual annual surface water deliveries, by surface water source and water year type, and based on the most recent ten years of surface water supply information.

(B) A quantitative assessment of the historical water budget, starting with the most recently available information and extending back a minimum of 10

years, or as is sufficient to calibrate and reduce the uncertainty of the tools and methods used to estimate and project future water budget information and future aquifer response to proposed sustainable groundwater management practices over the planning and implementation horizon.

(C) A description of how historical conditions concerning hydrology, water demand, and surface water supply availability or reliability have impacted the ability of the Agency to operate the basin within sustainable yield. Basin hydrology may be characterized and evaluated using water year type.

(3) Projected water budgets shall be used to estimate future baseline conditions of supply, demand, and aquifer response to Plan implementation, and to identify the uncertainties of these projected water budget components. The projected water budget shall utilize the following methodologies and assumptions to estimate future baseline conditions concerning hydrology, water demand and surface water supply availability or reliability over the planning and implementation horizon:

(A) Projected hydrology shall utilize 50 years of historical precipitation, evapotranspiration, and streamflow information as the baseline condition for estimating future hydrology. The projected hydrology information shall also be applied as the baseline condition used to evaluate future scenarios of hydrologic uncertainty associated with projections of climate change and sea level rise.

(B) Projected water demand shall utilize the most recent land use, evapotranspiration, and crop coefficient information as the baseline condition for estimating future water demand. The projected water demand information shall also be applied as the baseline condition used to evaluate future scenarios of water demand uncertainty associated with projected changes in local land use planning, population growth, and climate.

(C) Projected surface water supply shall utilize the most recent water supply information as the baseline condition for estimating future surface water supply. The projected surface water supply shall also be applied as the baseline condition used to evaluate

future scenarios of surface water supply availability and reliability as a function of the historical surface water supply identified in Section 354.18(c)(2)(A), and the projected changes in local land use planning, population growth, and climate.

(d) The Agency shall utilize the following information provided, as available, by the Department pursuant to Section 353.2, or other data of comparable quality, to develop the water budget:

(1) Historical water budget information for mean annual temperature, mean annual precipitation, water year type, and land use.

(2) Current water budget information for temperature, water year type, evapotranspiration, and land use.

(3) Projected water budget information for population, population growth, climate change, and sea level rise.

(e) Each Plan shall rely on the best available information and best available science to quantify the water budget for the basin in order to provide an understanding of historical and projected hydrology, water demand, water supply, land use, population, climate change, sea level rise, groundwater and surface water interaction, and subsurface groundwater flow. If a numerical groundwater and surface water model is not used to quantify and evaluate the projected water budget conditions and the potential impacts to beneficial uses and users of groundwater, the Plan shall identify and describe an equally effective method, tool, or analytical model to evaluate projected water budget conditions.

(f) The Department shall provide the California Central Valley Groundwater-Surface Water Simulation Model (C2VSIM) and the Integrated Water Flow Model (IWFM) for use by Agencies in developing the water budget. Each Agency may choose to use a different groundwater and surface water model, pursuant to Section 352.4.

354.20. Management Areas

(a) Each Agency may define one or more management areas within a basin if the Agency has determined that creation of management areas will facilitate implementation of the Plan. Management areas may define different minimum thresholds and be operated to different measurable objectives than the basin at large, provided that undesirable results are defined consistently throughout the basin.

(b) A basin that includes one or more management areas shall describe the following in the Plan:

(1) The reason for the creation of each management area.

(2) The minimum thresholds and measurable objectives established for each management area, and an explanation of the rationale for selecting those values, if different from the basin at large.

(3) The level of monitoring and analysis appropriate for each management area.

(c) An explanation of how the management area can operate under different minimum thresholds and measurable objectives without causing undesirable results outside the management area, if applicable.

(d) If a Plan includes one or more management areas, the Plan shall include descriptions, maps, and other information required by this Subarticle sufficient to describe conditions in those areas.

SUBARTICLE 3. Sustainable Management Criteria

354.22. Introduction to Sustainable Management Criteria

This Subarticle describes criteria by which an Agency defines conditions in its Plan that constitute sustainable groundwater management for the basin, including the process by which the Agency shall characterize undesirable results, and establish minimum thresholds and measurable objectives for each applicable sustainability indicator.

354.24 Sustainability Goal

Each Agency shall establish in its Plan a sustainability goal for the basin that culminates in the absence of undesirable results within 20 years of the applicable statutory deadline. The Plan shall include a description of the sustainability goal, including information from the basin setting used to establish the sustainability goal, a discussion of the measures that will be implemented to ensure that the basin will be operated within its sustainable yield, and an explanation of how the sustainability goal is likely to be achieved within 20 years of Plan implementation and is likely to be maintained through the planning and implementation horizon.

354.26. Undesirable Results

(a) Each Agency shall describe in its Plan the processes and criteria relied upon to define undesirable results applicable to the basin. Undesirable results occur when significant and unreasonable effects for any of the sustainability indicators are caused by groundwater conditions occurring throughout the basin.

(b) The description of undesirable results shall include the following:

(1) The cause of groundwater conditions occurring throughout the basin that would lead to or has led to undesirable results based on information described in the basin setting, and other data or models as appropriate.

(2) The criteria used to define when and where the effects of the groundwater conditions cause undesirable results for each applicable sustainability indicator. The criteria shall be based on a quantitative description of the combination of minimum threshold exceedances that cause significant and unreasonable effects in the basin.

(3) Potential effects on the beneficial uses and users of groundwater, on land uses and property interests, and other potential effects that may occur or are occurring from undesirable results.

(c) The Agency may need to evaluate multiple minimum thresholds to determine whether an undesirable result is occurring in the basin. The determination that undesirable results are occurring may depend upon measurements from multiple monitoring sites, rather than a single monitoring site.

(d) An Agency that is able to demonstrate that undesirable results related to one or more sustainability indicators are not present and are not likely to occur in a basin shall not be required to establish criteria for undesirable results related to those sustainability indicators.

354.28. Minimum Thresholds

(a) Each Agency in its Plan shall establish minimum thresholds that quantify groundwater conditions for each applicable sustainability indicator at each monitoring site or representative monitoring site established pursuant to Section 354.36. The numeric value used to define minimum thresholds shall represent a point in the basin that, if exceeded, may cause undesirable results as described in Section 354.26.

(b) The description of minimum thresholds shall include the following:

(1) The information and criteria relied upon to establish and justify the minimum thresholds for each sustainability indicator. The justification for the minimum threshold shall be supported by information provided in the basin setting, and other data or models as appropriate, and qualified by uncertainty in the understanding of the basin setting.

(2) The relationship between the minimum thresholds for each sustainability indicator, including an explanation of how the Agency has determined that basin conditions at each

minimum threshold will avoid undesirable results for each of the sustainability indicators.

(3) How minimum thresholds have been selected to avoid causing undesirable results in adjacent basins or affecting the ability of adjacent basins to achieve sustainability goals.

(4) How minimum thresholds may affect the interests of beneficial uses and users of groundwater or land uses and property interests.

(5) How state, federal, or local standards relate to the relevant sustainability indicator. If the minimum threshold differs from other regulatory standards, the Agency shall explain the nature of and basis for the difference.

(6) How each minimum threshold will be quantitatively measured, consistent with the monitoring network requirements described in Subarticle 4.

(c) Minimum thresholds for each sustainability indicator shall be defined as follows:

(1) Chronic Lowering of Groundwater Levels. The minimum threshold for chronic lowering of groundwater levels shall be the groundwater elevation indicating a depletion of supply at a given location that may lead to undesirable results. Minimum thresholds for chronic lowering of groundwater levels shall be supported by the following:

(A) The rate of groundwater elevation decline based on historical trends, water year type, and projected water use in the basin.

(B) Potential effects on other sustainability indicators.

(2) Reduction of Groundwater Storage. The minimum threshold for reduction of groundwater storage shall be a total volume of groundwater that can be withdrawn from the basin without causing conditions that may lead to undesirable results. Minimum thresholds for reduction of groundwater storage shall be supported by the sustainable yield of the basin, calculated based on historical trends, water year type, and projected water use in the basin.

(3) Seawater Intrusion. The minimum threshold for seawater intrusion shall be defined by a chloride concentration isocontour for each principal aquifer where seawater intrusion may lead to undesirable results. Minimum thresholds for seawater intrusion shall be supported by the following:

(A) Maps and cross-sections of the chloride concentration isocontour that defines the minimum threshold and measurable objective for each principal aquifer.

(B) A description of how the seawater intrusion minimum threshold considers the effects of current and projected sea levels.

(4) Degraded Water Quality. The minimum threshold for degraded water quality shall be the degradation of water quality, including the migration of contaminant plumes that impair water supplies or other indicator of water quality as determined by the Agency that may lead to undesirable results. The minimum threshold shall be based on the number of supply wells, a volume of water, or a location of an isocontour that exceeds concentrations of constituents determined by the Agency to be of concern for the basin. In setting minimum thresholds for degraded water quality, the Agency shall consider local, state, and federal water quality standards applicable to the basin.

(5) Land Subsidence. The minimum threshold for land subsidence shall be the rate and extent of subsidence that substantially interferes with surface land uses and may lead to undesirable results. Minimum thresholds for land subsidence shall be supported by the following:

(A) Identification of land uses and property interests that have been affected or are likely to be affected by land subsidence in the basin, including an explanation of how the Agency has determined and considered those uses and interests, and the Agency's rationale for establishing minimum thresholds in light of those effects.

(B) Maps and graphs showing the extent and rate of land subsidence in the basin that defines the minimum threshold and measurable objectives.

(6) Depletions of Interconnected Surface Water. The minimum threshold for depletions of interconnected surface water shall be the rate or volume of surface water depletions caused by groundwater use that has adverse impacts on beneficial uses of the surface water and may lead to undesirable results. The minimum threshold established for depletions of interconnected surface water shall be supported by the following:

(A) The location, quantity, and timing of depletions of interconnected surface water.

(B) A description of the groundwater and surface water model used to quantify surface water depletion. If a numerical groundwater and surface water model is not used to quantify surface water depletion, the Plan shall identify and describe an equally effective method, tool, or analytical model to accomplish the requirements of this Paragraph.

(d) An Agency may establish a representative minimum threshold for groundwater elevation to serve as the value for multiple sustainability indicators, where the Agency can demonstrate that the representative value is a reasonable proxy for multiple individual minimum thresholds as supported by adequate evidence.

(e) An Agency that has demonstrated that undesirable results related to one or more sustainability indicators are not present and are not likely to occur in a basin, as described in Section 354.26, shall not be required to establish minimum thresholds related to those sustainability indicators.

354.30. Measurable Objectives

(a) Each Agency shall establish measurable objectives, including interim milestones in increments of five years, to achieve the sustainability goal for the basin within 20 years of Plan implementation and to continue to sustainably manage the groundwater basin over the planning and implementation horizon.

(b) Measurable objectives shall be established for each sustainability indicator, based on quantitative values using the same metrics and monitoring sites as are used to define the minimum thresholds.

(c) Measurable objectives shall provide a reasonable margin of operational flexibility under adverse conditions which shall take into consideration components such as historical water budgets, seasonal and long-term trends, and periods of drought, and be commensurate with levels of uncertainty.

(d) An Agency may establish a representative measurable objective for groundwater elevation to serve as the value for multiple sustainability indicators where the Agency can demonstrate that the representative value is a reasonable proxy for multiple individual measurable objectives as supported by adequate evidence.

(e) Each Plan shall describe a reasonable path to achieve the sustainability goal for the basin within 20 years of Plan implementation, including a description of interim milestones for each

relevant sustainability indicator, using the same metric as the measurable objective, in increments of five years. The description shall explain how the Plan is likely to maintain sustainable groundwater management over the planning and implementation horizon.

(f) Each Plan may include measurable objectives and interim milestones for additional Plan elements described in Water Code Section 10727.4 where the Agency determines such measures are appropriate for sustainable groundwater management in the basin.

(g) An Agency may establish measurable objectives that exceed the reasonable margin of operational flexibility for the purpose of improving overall conditions in the basin, but failure to achieve those objectives shall not be grounds for a finding of inadequacy of the Plan.

SUBARTICLE 4. Monitoring Networks

354.32. Introduction to Monitoring Networks

This Subarticle describes the monitoring network that shall be developed for each basin, including monitoring objectives, monitoring protocols, and data reporting requirements. The monitoring network shall promote the collection of data of sufficient quality, frequency, and distribution to characterize groundwater and related surface water conditions in the basin and evaluate changing conditions that occur through implementation of the Plan.

354.34. Monitoring Network

(a) Each Agency shall develop a monitoring network capable of collecting sufficient data to demonstrate short-term, seasonal, and long-term trends in groundwater and related surface conditions, and yield representative information about groundwater conditions as necessary -to evaluate Plan implementation.

(b) Each Plan shall include a description of the monitoring network objectives for the basin, including an explanation of how the network will be developed and implemented to monitor groundwater and related surface conditions, and the interconnection of surface water and groundwater, with sufficient temporal frequency and spatial density to evaluate the affects and effectiveness of Plan implementation. The monitoring network objectives shall be implemented to accomplish the following:

(1) Demonstrate progress toward achieving measurable objectives described in the Plan.

(2) Monitor impacts to the beneficial uses or users of groundwater.

(3) Monitor changes in groundwater conditions relative to measurable objectives and minimum thresholds.

(4) Quantify annual changes in water budget components.

(c) (c) Each monitoring network shall be designed to accomplish the following for each sustainability indicator:

(1) Chronic Lowering of Groundwater Levels. Demonstrate groundwater occurrence, flow directions, and hydraulic gradients between principal aquifers and surface water features by the following methods:

(A) A sufficient density of monitoring wells to collect representative measurements through depth-discrete perforated intervals to characterize the groundwater table or potentiometric surface for each principal aquifer.

(B) Static groundwater elevation measurements shall be collected at least two times per year, to represent seasonal low and seasonal high groundwater conditions.

(2) Reduction of Groundwater Storage. Provide an estimate of the change in annual groundwater in storage.

(3) Seawater Intrusion. Monitor seawater intrusion using chloride concentrations, or other measurements convertible to chloride concentrations, so that the current and projected rate and extent of seawater intrusion for each applicable principal aquifer may be calculated.

(4) Degraded Water Quality. Collect sufficient spatial and temporal data from each applicable principal aquifer to determine groundwater quality trends for water quality indicators, as determined by the Agency, to address known water quality issues.

(5) Land Subsidence. Identify the rate and extent of land subsidence, which may be measured by extensometers, surveying, remote sensing technology, or other appropriate method.

(6) Depletions of Interconnected Surface Water. Monitor surface water and groundwater, where interconnected surface water conditions exist, to characterize the spatial and temporal exchanges between surface water and groundwater, and to calibrate and apply the tools and methods necessary to calculate depletions of surface water caused by groundwater

extractions. The monitoring network shall be able to characterize the following:

(A) Flow conditions including surface water discharge, surface water head, and baseflow contribution.

(B) Identifying the approximate date and location where ephemeral or intermittent flowing streams and rivers cease to flow, if applicable.

(C) Temporal change in conditions due to variations in stream discharge and regional groundwater extraction.

(D) Other factors that may be necessary to identify adverse impacts on beneficial uses of the surface water.

(d) The monitoring network shall be designed to ensure adequate coverage of sustainability indicators. If management areas are established, the quantity and density of monitoring sites in those areas shall be sufficient to evaluate conditions of the basin setting and sustainable management criteria specific to that area.

(e) A Plan may utilize site information and monitoring data from existing sources as part of the monitoring network.

(f) The Agency shall determine the density of monitoring sites and frequency of measurements required to demonstrate short-term, seasonal, and long-term trends based upon the following factors:

(1) Amount of current and projected groundwater use.

(2) Aquifer characteristics, including confined or unconfined aquifer conditions, or other physical characteristics that affect groundwater flow.

(3) Impacts to beneficial uses and users of groundwater and land uses and property interests affected by groundwater production, and adjacent basins that could affect the ability of that basin to meet the sustainability goal.

(4) Whether the Agency has adequate long-term existing monitoring results or other technical information to demonstrate an understanding of aquifer response.

(g) Each Plan shall describe the following information about the monitoring network:

(1) Scientific rationale for the monitoring site selection process.

(2) Consistency with data and reporting standards described in Section 352.4. If a site is not consistent with those standards, the Plan shall explain the necessity of the site to the monitoring network, and how any variation from the standards will not affect the usefulness of the results obtained.

(3) For each sustainability indicator, the quantitative values for the minimum threshold, measurable objective, and interim milestones that will be measured at each monitoring site or representative monitoring sites established pursuant to Section 354.36.

(h) The location and type of each monitoring site within the basin displayed on a map, and reported in tabular format, including information regarding the monitoring site type, frequency of measurement, and the purposes for which the monitoring site is being used.

(i) The monitoring protocols developed by each Agency shall include a description of technical standards, data collection methods, and other procedures or protocols pursuant to Water Code Section 10727.2(f) for monitoring sites or other data collection facilities to ensure that the monitoring network utilizes comparable data and methodologies.

(j) An Agency that has demonstrated that undesirable results related to one or more sustainability indicators are not present and are not likely to occur in a basin, as described in Section 354.26, shall not be required to establish a monitoring network related to those sustainability indicators.

354.36. Representative Monitoring

Each Agency may designate a subset of monitoring sites as representative of conditions in the basin or an area of the basin, as follows:

(a) Representative monitoring sites may be designated by the Agency as the point at which sustainability indicators are monitored, and for which quantitative values for minimum thresholds, measurable objectives, and interim milestones are defined.

(b) Groundwater elevations may be used as a proxy for monitoring other sustainability indicators if the Agency demonstrates the following:

(1) Significant correlation exists between groundwater elevations and the sustainability indicators for which groundwater elevation measurements serve as a proxy.

(2) Measurable objectives established for groundwater elevation shall include a reasonable margin of operational flexibility taking into consideration the basin setting to avoid

undesirable results for the sustainability indicators for which groundwater elevation measurements serve as a proxy.

(c) The designation of a representative monitoring site shall be supported by adequate evidence demonstrating that the site reflects general conditions in the area.

354.38. Assessment and Improvement of Monitoring Network

(a) Each Agency shall review the monitoring network and include an evaluation in the Plan and each five-year assessment, including a determination of uncertainty and whether there are data gaps that could affect the ability of the Plan to achieve the sustainability goal for the basin.

(b) Each Agency shall identify data gaps wherever the basin does not contain a sufficient number of monitoring sites, does not monitor sites at a sufficient frequency, or utilizes monitoring sites that are unreliable, including those that do not satisfy minimum standards of the monitoring network adopted by the Agency.

(c) If the monitoring network contains data gaps, the Plan shall include a description of the following:

(1) The location and reason for data gaps in the monitoring network.

(2) Local issues and circumstances that limit or prevent monitoring.

(d) Each Agency shall describe steps that will be taken to fill data gaps before the next five-year assessment, including the location and purpose of newly added or installed monitoring sites.

(e) Each Agency shall adjust the monitoring frequency and density of monitoring sites to provide an adequate level of detail about site-specific surface water and groundwater conditions and to assess the effectiveness of management actions under circumstances that include the following:

(1) Minimum threshold exceedances.

(2) Highly variable spatial or temporal conditions.

(3) Adverse impacts to beneficial uses and users of groundwater.

(4) The potential to adversely affect the ability of an adjacent basin to implement its Plan or impede achievement of sustainability goals in an adjacent basin.

354.40. Reporting Monitoring Data to the Department

Monitoring data shall be stored in the data management system developed pursuant to Section 352.6. A copy of the monitoring data shall be included in the Annual Report and submitted electronically on forms provided by the Department.

SUBARTICLE 5. Projects and Management Actions

354.42. Introduction to Projects and Management Actions

This Subarticle describes the criteria for projects and management actions to be included in a Plan to meet the sustainability goal for the basin in a manner that can be maintained over the planning and implementation horizon.

354.44. Projects and Management Actions

(a) Each Plan shall include a description of the projects and management actions the Agency has determined will achieve the sustainability goal for the basin, including projects and management actions to respond to changing conditions in the basin.

(b) Each Plan shall include a description of the projects and management actions that include the following:

(1) A list of projects and management actions proposed in the Plan with a description of the measurable objective that is expected to benefit from the project or management action. The list shall include projects and management actions that may be utilized to meet interim milestones, the exceedance of minimum thresholds, or where undesirable results have occurred or are imminent. The Plan shall include the following:

(A) A description of the circumstances under which projects or management actions shall be implemented, the criteria that would trigger implementation and termination of projects or management actions, and the process by which the Agency shall determine that conditions requiring the implementation of particular projects or management actions have occurred.

(B) The process by which the Agency shall provide notice to the public and other agencies that the implementation of projects or management actions is being considered or has been implemented, including a description of the actions to be taken.

(2) If overdraft conditions are identified through the analysis required by Section 354.18, the Plan shall describe projects

or management actions, including a quantification of demand reduction or other methods, for the mitigation of overdraft.

(3) A summary of the permitting and regulatory process required for each project and management action.

(4) The status of each project and management action, including a time-table for expected initiation and completion, and the accrual of expected benefits.

(5) An explanation of the benefits that are expected to be realized from the project or management action, and how those benefits will be evaluated.

(6) An explanation of how the project or management action will be accomplished. If the projects or management actions rely on water from outside the jurisdiction of the Agency, an explanation of the source and reliability of that water shall be included.

(7) A description of the legal authority required for each project and management action, and the basis for that authority within the Agency.

(8) A description of the estimated cost for each project and management action and a description of how the Agency plans to meet those costs.

(9) A description of the management of groundwater extractions and recharge to ensure that chronic lowering of groundwater levels or depletion of supply during periods of drought is offset by increases in groundwater levels or storage during other periods.

(c) Projects and management actions shall be supported by best available information and best available science.

(d) An Agency shall take into account the level of uncertainty associated with the basin setting when developing projects or management actions.

ARTICLE 6. Department Evaluation and Assessment

355. Introduction to Department Evaluation and Assessment

This Article describes the methodology and criteria used by the Department to evaluate and assess a Plan, periodically evaluate and assess the implementation of a Plan, or evaluate and assess amendments to a Plan.

355.2. Department Review of Adopted Plan

(a) The Agency shall submit a copy of the adopted Plan to the Department for evaluation and the Department shall assign a submittal date to the Plan based on the day the Plan is received.

(b) The Department shall post the adopted Plan, submittal date, and materials submitted by the Agency on the Department's website within 20 days of receipt.

(c) The Department shall establish a period of no less than 60 days to receive public comments on the adopted Plan, as described in Section 353.8.

(d) If the Board has jurisdiction over the basin or a portion of the basin pursuant to Water Code Section 10735.2, the Department, after consultation with the Board, may proceed with an evaluation of a Plan.

(e) The Department shall evaluate a Plan within two years of its submittal date and issue a written assessment of the Plan, which shall be posted on the Department's website. The assessment shall include a determination of the status of the Plan, as follows:

(1) Approved. The Department shall approve a Plan that satisfies the requirements of the Act and is in substantial compliance with this Subchapter, based on the criteria described in Section 355.4.

(2) Incomplete. The Department has determined that the Plan has one or more deficiencies that preclude approval, but which may be capable of being corrected by the Agency in a timely manner. An incomplete Plan may be completed and resubmitted to the Department for evaluation as follows:

(A) A Plan that is determined to be incomplete prior to the statutory deadline may be revised and resubmitted to the Department prior to the applicable deadline.

(B) A Plan that is determined to be incomplete after the statutory deadline, or less than 180 days prior to the statutory deadline, may be revised and resubmitted to the Department if the Department has determined that the Plan has minor deficiencies that could be addressed by the Agency in a timely manner through corrective actions, which may be recommended by the Department.

i. The Department may consult with the Agency to determine the amount of time needed by

the Agency to address any deficiencies, not to exceed 180 days from the date the Department issues the assessment.

ii. No time limit shall apply to address deficiencies to Plans submitted for low or very low priority basins.

(3) Inadequate. The Department shall disapprove a Plan if the Department, after consultation with the board, determines that a Plan is inadequate based on any of the following:

(A) The Plan does not satisfy the requirements of Section 355.4(a), and any deficiencies have not been corrected prior to the statutory deadline.

(B) The Plan contains significant deficiencies based on one or more criteria identified in Section 355.4(b), and any deficiencies have not been corrected prior to the statutory deadline.

(C) The Plan was determined to be incomplete, and the Agency has not taken sufficient actions to correct any deficiencies identified by the Department.

355.4. Criteria for Plan Evaluation

The basin shall be sustainably managed within 20 years of the applicable statutory deadline consistent with the objectives of the Act. The Department shall evaluate an adopted Plan for compliance with this requirement as follows:

(a) An adopted Plan must satisfy all of the following conditions:

(1) The Plan was submitted within the statutory deadline, as applicable.

(2) The Plan is complete and includes the information required by the Act and this Subchapter, including a coordination agreement, if required.

(3) The Plan, either on its own or in coordination with other Plans, covers the entire basin.

(4) The Agency has taken corrective actions, within the period described in Section 355.2, to address any deficiencies in the Plan identified by the Department.

(b) The Department shall evaluate a Plan that satisfies the requirements of Subsection (a) to determine whether the Plan, either individually or in coordination with other Plans, complies with the Act and substantially complies with the requirements of this Subchapter.

Substantial compliance means that the supporting information is sufficiently detailed and the analyses sufficiently thorough and reasonable, in the judgment of the Department, to evaluate the Plan, and the Department determines that any discrepancy would not materially affect the ability of the Agency to achieve the sustainability goal for the basin, or the ability of the Department to evaluate the likelihood of the Plan to attain that goal. When evaluating whether a Plan is likely to achieve the sustainability goal for the basin, the Department shall consider the following:

(1) Whether the assumptions, criteria, findings, and objectives, including the sustainability goal, undesirable results, minimum thresholds, measurable objectives, and interim milestones are reasonable and supported by the best available information and best available science.

(2) Whether the Plan identifies reasonable measures and schedules to eliminate data gaps.

(3) Whether sustainable management criteria and projects and management actions are commensurate with the level of understanding of the basin setting, based on the level of uncertainty, as reflected in the Plan.

(4) Whether the interests of the beneficial uses and users of groundwater in the basin, and the land uses and property interests potentially affected by the use of groundwater in the basin, have been considered.

(5) Whether the projects and management actions are feasible and likely to prevent undesirable results and ensure that the basin is operated within its sustainable yield.

(6) Whether the Plan includes a reasonable assessment of overdraft conditions and includes reasonable means to mitigate overdraft, if present.

(7) Whether the Plan will adversely affect the ability of an adjacent basin to implement its Plan or impede achievement of its sustainability goal.

(8) Whether coordination agreements, if required, have been adopted by all relevant parties, and satisfy the requirements of the Act and this Subchapter.

(9) Whether the Agency has the legal authority and financial resources necessary to implement the Plan.

(10) Whether the Agency has adequately responded to comments that raise credible technical or policy issues with the Plan.

355.6. Periodic Review of Plan by Department

(a) The Department shall periodically review an approved Plan to ensure the Plan, as implemented, remains consistent with the Act and in substantial compliance with this Subchapter, and is being implemented in a manner that will likely achieve the sustainability goal for the basin.

(b) The Department shall evaluate approved Plans and issue an assessment at least every five years. The Department review shall be based on information provided in the annual reports and the periodic evaluation of the Plan prepared and submitted by the Agency.

(c) The Department shall consider the following in determining whether a Plan and its implementation remain consistent with the Act:

(1) Whether the exceedances of any minimum thresholds or failure to meet any interim milestones are likely to affect the ability of the Agency to achieve the sustainability goal for the basin

(2) Whether the Agency is implementing projects and management actions consistent with the Plan, or that the Agency has demonstrated that actions described in the Plan have been rendered unnecessary based on changing basin conditions or an improved understanding of basin conditions.

(3) Whether the Agency is addressing data gaps and reducing the levels of uncertainty identified in the Plan.

(4) Whether the Plan continues to satisfy the criteria described in Section 355.4.

(d) The Department shall issue a written assessment of the review of the Plan, which shall be posted on the Department's website. The assessment shall include a determination of the status of the Plan, as follows:

(1) Approved. The Department shall approve the implementation of a Plan that remains in conformance with the requirements of the Act and is in substantial compliance with this Subchapter, based on the criteria described in this Section.

(2) Incomplete. The Department has determined that the Plan as implemented has one or more deficiencies that preclude approval, but which may be capable of being corrected by the Agency in a timely manner. An incomplete Plan may be completed and resubmitted to the Department for evaluation as follows:

(A) The Department shall identify deficiencies in the Plan as implemented, and may recommend corrective actions to address those deficiencies.

(B) The Department may consult with the Agency to determine the amount of time needed by the Agency to propose projects or management actions to address any deficiencies, not to exceed 180 days from the date the Department issues its assessment.

(3) Inadequate. The Department shall disapprove the implementation of a Plan if the Department, after consultation with the board, determines that a Plan is inadequate in accordance with Section 355.2.

(e) The Department may request from the Agency any information the Department deems necessary to evaluate the progress toward achieving the sustainability goal and the potential for adverse effects on adjacent basins.

(f) The Department may evaluate the implementation of a Plan at any time to determine whether the Plan is consistent with the objectives of the Act and in substantial compliance with this Subchapter.

355.8. Department Review of Annual Reports

The Department shall review annual reports as follows:

(a) The Department shall acknowledge the receipt of annual reports by written notice and post the report and related materials on the Department's website within 20 days of receipt.

(b) The Department shall provide written notice to the Agency if additional information is required.

(c) The Department shall review information contained in the annual report to determine whether the Plan is being implemented in a manner that will likely achieve the sustainability goal for the basin, pursuant to Section 355.6.

355.10. Plan Amendments

(a) Any amendment to a Plan shall be evaluated by the Department for consistency with the requirements of the Act and of this Subchapter.

(b) An Agency may amend a Plan at any time, and submit the amended Plan to the Department for evaluation pursuant to the requirements of this Subchapter.

(c) The Department shall evaluate the amended portions of the Plan and any new information that is relevant to the amendments or other Plan elements. Portions of the Plan that have not been amended will not

be evaluated unless the Department determines the proposed amendment may result in changed conditions to other areas or to other aspects of the Plan.

(d) An amendment to a Plan shall be evaluated by the Department as follows:

(1) An amended Plan that has been submitted, but not yet approved by the Department, shall be evaluated during the initial evaluation period, in accordance with Sections 355.2 and 355.4.

(2) An amended Plan that has been approved by the Department, but determined to be incomplete or inadequate as a result of a periodic assessment pursuant to Section 355.6, shall be evaluated in accordance with Sections 355.2 and 355.4.

(3) An amendment to a Plan that has been approved by the Department shall be evaluated in accordance with Section 355.6, except that if the Department does not approve the amendment, the Agency may revise and resubmit another amendment at any time, provided that the status of the Plan remains unchanged.

ARTICLE 7. Annual Reports and Periodic Evaluations by the Agency

356. Introduction to Annual Reports and Periodic Evaluations by the Agency

This Article describes the procedural and substantive requirements for the annual reports and periodic evaluation of Plans prepared by an Agency.

356.2. Annual Reports

Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:

(a) General information, including an executive summary and a location map depicting the basin covered by the report.

(b) A detailed description and graphical representation of the following conditions of the basin managed in the Plan:

(1) Groundwater elevation data from monitoring wells identified in the monitoring network shall be analyzed and displayed as follows:

(A) Groundwater elevation contour maps for each principal aquifer in the basin illustrating, at a

minimum, the seasonal high and seasonal low groundwater conditions.

(B) Hydrographs of groundwater elevations and water year type using historical data to the greatest extent available, including from January 1, 2015, to current reporting year.

(2) Groundwater extraction for the preceding water year. Data shall be collected using the best available measurement methods and shall be presented in a table that summarizes groundwater extractions by water use sector, and identifies the method of measurement (direct or estimate) and accuracy of measurements, and a map that illustrates the general location and volume of groundwater extractions.

(3) Surface water supply used or available for use, for groundwater recharge or in-lieu use shall be reported based on quantitative data that describes the annual volume and sources for the preceding water year.

(4) Total water use shall be collected using the best available measurement methods and shall be reported in a table that summarizes total water use by water use sector, water source type, and identifies the method of measurement (direct or estimate) and accuracy of measurements. Existing water use data from the most recent Urban Water Management Plans or Agricultural Water Management Plans within the basin may be used, as long as the data are reported by water year.

(5) Change in groundwater in storage shall include the following:

(A) Change in groundwater in storage maps for each principal aquifer in the basin.

(B) A graph depicting water year type, groundwater use, the annual change in groundwater in storage, and the cumulative change in groundwater in storage for the basin based on historical data to the greatest extent available, including from January 1, 2015, to the current reporting year.

(c) A description of progress towards implementing the Plan, including achieving interim milestones, and implementation of projects or management actions since the previous annual report.

356.4. Periodic Evaluation by Agency

Each Agency shall evaluate its Plan at least every five years and whenever the Plan is amended, and provide a written assessment to the Department.

The assessment shall describe whether the Plan implementation, including implementation of projects and management actions, are meeting the sustainability goal in the basin, and shall include the following:

(a) A description of current groundwater conditions for each applicable sustainability indicator relative to measurable objectives, interim milestones and minimum thresholds.

(b) A description of the implementation of any projects or management actions, and the effect on groundwater conditions resulting from those projects or management actions.

(c) Elements of the Plan, including the basin setting, management areas, or the identification of undesirable results and the setting of minimum thresholds and measurable objectives, shall be reconsidered and revisions proposed, if necessary.

(d) An evaluation of the basin setting in light of significant new information or changes in water use, and an explanation of any significant changes. If the Agency's evaluation shows that the basin is experiencing overdraft conditions, the Agency shall include an assessment of measures to mitigate that overdraft.

(e) A description of the monitoring network within the basin, including whether data gaps exist, or any areas within the basin are represented by data that does not satisfy the requirements of Sections 352.4 and 354.34(c). The description shall include the following:

    (1) An assessment of monitoring network function with an analysis of data collected to date, identification of data gaps, and the actions necessary to improve the monitoring network, consistent with the requirements of Section 354.38.

    (2) If the Agency identifies data gaps, the Plan shall describe a program for the acquisition of additional data sources, including an estimate of the timing of that acquisition, and for incorporation of newly obtained information into the Plan.

    (3) The Plan shall prioritize the installation of new data collection facilities and analysis of new data based on the needs of the basin.

(f) A description of significant new information that has been made available since Plan adoption or amendment, or the last five-year assessment. The description shall also include whether new information warrants changes to any aspect of the Plan, including the evaluation of the basin setting, measurable objectives, minimum thresholds, or the criteria defining undesirable results.

(g) A description of relevant actions taken by the Agency, including a summary of regulations or ordinances related to the Plan.

(h) Information describing any enforcement or legal actions taken by the Agency in furtherance of the sustainability goal for the basin.

(i) A description of completed or proposed Plan amendments.

(j) Where appropriate, a summary of coordination that occurred between multiple Agencies in a single basin, Agencies in hydrologically connected basins, and land use agencies.

(k) Other information the Agency deems appropriate, along with any information required by the Department to conduct a periodic review as required by Water Code Section 10733.

ARTICLE 8. Interagency Agreements

357. Introduction to Interagency Agreements

This Article describes the requirements for coordination agreements between Agencies within a basin developed pursuant to Water Code Section 10727.6, and voluntary interbasin agreements.

357.2. Interbasin Agreements

Two or more Agencies may enter into an agreement to establish compatible sustainability goals and understanding regarding fundamental elements of the Plans of each Agency as they relate to sustainable groundwater management. Interbasin agreements may be included in the Plan to support a finding that implementation of the Plan will not adversely affect an adjacent basin's ability to implement its Plan or impede the ability to achieve its sustainability goal. Interbasin agreements should facilitate the exchange of technical information between Agencies and include a process to resolve disputes concerning the interpretation of that information. Interbasin agreements may include any information the participating Agencies deem appropriate, such as the following:

(a) General information:

(1) Identity of each basin participating in and covered by the terms of the agreement.

(2) A list of the Agencies or other public agencies or other entities with groundwater management responsibilities in each basin.

(3) A list of the Plans, Alternatives, or adjudicated areas in each basin.

(b) Technical information:

(1) An estimate of groundwater flow across basin boundaries, including consistent and coordinated data, methods and assumptions.

(2) An estimate of stream-aquifer interactions at boundaries.

(3) A common understanding of the geology and hydrology of the basins and the hydraulic connectivity as it applies to the Agency's determination of groundwater flow across basin boundaries and description of the different assumptions utilized by different Plans and how the Agencies reconciled those differences.

(4) Sustainable management criteria and a monitoring network that would confirm that no adverse impacts result from the implementation of the Plans of any party to the agreement. If minimum thresholds or measurable objectives differ substantially between basins, the agreement should specify how the Agencies will reconcile those differences and manage the basins to avoid undesirable results. The Agreement should identify the differences that the parties consider significant and include a plan and schedule to reduce uncertainties to collectively resolve those uncertainties and differences.

(c) A description of the process for identifying and resolving conflicts between Agencies that are parties to the agreement.

(d) Interbasin agreements submitted to the Department shall be posted on the Department's website.

357.4. Coordination Agreements

(a) Agencies intending to develop and implement multiple Plans pursuant to Water Code Section 10727(b)(3) shall enter into a coordination agreement to ensure that the Plans are developed and implemented utilizing the same data and methodologies, and that elements of the Plans necessary to achieve the sustainability goal for the basin are based upon consistent interpretations of the basin setting.

(b) Coordination agreements shall describe the following:

(1) A point of contact with the Department.

(2) The responsibilities of each Agency for meeting the terms of the agreement, the procedures for the timely exchange of information between Agencies, and procedures for resolving conflicts between Agencies.

(3) How the Agencies have used the same data and methodologies for assumptions described in Water Code

Section 10727.6 to prepare coordinated Plans, including the following:

(A) Groundwater elevation data, supported by the quality, frequency, and spatial distribution of data in the monitoring network and the monitoring objectives as described in Subarticle 4 of Article 5.

(B) A coordinated water budget for the basin, as described in Section 354.18, including groundwater extraction data, surface water supply, total water use, and change in groundwater in storage.

(C) Sustainable yield for the basin, supported by a description of the undesirable results for the basin, and an explanation of how the minimum thresholds and measureable objectives defined by each Plan relate to those undesirable results, based on information described in the basin setting.

(c) The coordination agreement shall explain how the Plans implemented together, satisfy the requirements of the Act and are in substantial compliance with this Subchapter

(d) The coordination agreement shall describe a process for submitting all Plans, Plan amendments, supporting information, all monitoring data and other pertinent information, along with annual reports and periodic evaluations.

(e) The coordination agreement shall describe a coordinated data management system for the basin, as described in Section 352.6.

(f) Coordination agreements shall identify adjudicated areas within the basin, and any local agencies that have adopted an Alternative that has been accepted by the Department. If an Agency forms in a basin managed by an Alternative, the Agency shall evaluate the agreement with the Alternative prepared pursuant to Section 358.4 and determine whether it satisfies the requirements of this Section.

(g) The coordination agreement shall be submitted to the Department together with the Plans for the basin and, if approved, shall become part of the Plan for each participating Agency.

(h) The Department shall evaluate a coordination agreement for compliance with the procedural and technical requirements of this Section, to ensure that the agreement is binding on all parties, and that provisions of the agreement are sufficient to address any disputes between or among parties to the agreement.

(i) Coordination agreements shall be reviewed as part of the five-year assessment, revised as necessary, dated, and signed by all parties.

ARTICLE 9. Adjudicated Areas and Alternatives

358. Introduction to Alternatives

This Article describes the methodology and criteria for the submission and evaluation of Alternatives.

358.2. Alternatives to Groundwater Sustainability Plans

(a) The entity that submits an Alternative shall demonstrate that the Alternative applies to the entire basin and satisfies the requirements of Water Code Section 10733.6.

(b) An Alternative shall be submitted to the Department by January 1, 2017, and every five years thereafter. A local agency or party directed by a court that submits an Alternative based on an adjudication action described in Water Code Section 10737.4 may submit the adjudication action to the Department for evaluation after January 1, 2017.

(c) An Alternative submitted to the Department shall include the following information:

(1) An Alternative submitted pursuant to Water Code Section 10733.6(b)(1) shall include a copy of the groundwater management plan.

(2) An Alternative submitted pursuant to Water Code Section 10733.6(b)(2) that is not an adjudicated area described in Water Code Section 10720.8 shall include the following:

(A) Information demonstrating that the adjudication submitted to the Department as an Alternative is a comprehensive adjudication as defined by Chapter 7 of Title 10 of Part 2 of the Code of Civil Procedure (commencing with Section 830).

(B) A copy of the proposed stipulated judgment.

(3) An Alternative submitted pursuant to Water Code Section 10733.6(b)(3) shall provide information that demonstrates the basin has operated within its sustainable yield over a period of at least 10 years. Data submitted in support of this Alternative shall include continuous data from the end of that 10-year period to current conditions.

(d) The entity submitting an Alternative shall explain how the elements of the Alternative are functionally equivalent to the elements of a Plan required by Articles 5 and 7 of this Subchapter and are sufficient to

demonstrate the ability of the Alternative to achieve the objectives of the Act.

(e) After an Alternative has been approved by the Department, if one or more Plans are adopted within the basin, the Alternative shall be revised, as necessary, to reflect any changes that may have resulted from adoption of the Plan, and the local agency responsible for the Alternative and Agency responsible for the Plan shall enter into an agreement that satisfies the requirements of Section 357.4.

(f) Any person may provide comments to the Department regarding an Alternative in a manner consistent with Section 353.8

358.6. Department Evaluation of Alternatives

The Department shall evaluate an Alternative submitted in lieu of a Plan as follows:

(a) An Alternative must satisfy all of the following conditions:

(1) The Alternative was submitted within the statutory period established by Water Code Section 10733.6, if applicable.

(2) The Alternative is within a basin that is in compliance with Part 2.11 of Water Code (commencing with Section 10920), or as amended.

(3) The Alternative is complete and includes the information required by the Act and this Subchapter.

(4) The Alternative covers the entire basin.

(b) The Department shall evaluate an Alternative that satisfies the requirements of Subsection (a) in accordance with Sections 355.2, 355.4(b), and Section 355.6, as applicable, to determine whether the Alternative complies with the objectives of the Act.

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CODE OF CIVIL PROCEDURE

Article 1. General Provisions

830. Application and Interpretation of Chapter

(a) This chapter establishes methods and procedures for a comprehensive adjudication.

(b) This chapter shall be applied and interpreted consistently with all of the following:

(1) Protecting water rights consistent with Section 2 of Article X of the California Constitution.

(2) Conducting a comprehensive adjudication in a manner that promotes efficiency, reduces unnecessary delays, and provides due process.

(3) Encouraging the compromise and settlement of comprehensive adjudications.

(4) Conducting a comprehensive adjudication in a manner that is consistent with the achievement of groundwater sustainability within the timeframes of the Sustainable Groundwater Management Act.

(5) Establishing procedures by which courts may conduct comprehensive determinations of all rights and priorities to groundwater in a basin.

(6) Providing for the conduct of a comprehensive adjudication consistent with Winters v. United States (1908) 207 U.S. 564, the McCarran Amendment (codified at 43 U.S.C. Sec. 666), and any other federal laws regarding the determination of federal or tribal water rights, as applicable.

(7) Providing notice and due process sufficient to enable a court in a comprehensive adjudication conducted pursuant to this chapter to determine and establish the priority for unexercised water rights. The court may consider applying the principles established in In re Waters of Long Valley Creek Stream System (1979) 25 Ca1.3d 339. Except as provided in this paragraph, this chapter shall not alter groundwater rights or the law concerning groundwater rights.

(c) The other provisions of this code apply to procedures in a comprehensive adjudication to the extent they do not conflict with the provisions of this chapter.

831. Applicability of Government Code Title 8, Chapter 2, Article 6

Article 6 (commencing with Section 68630) of Chapter 2 of Title 8 of the Government Code applies to a comprehensive adjudication conducted pursuant to this chapter.

832. Definitions

For purposes of this chapter, the following definitions apply:

(a) "Basin" has the same meaning as defined in Section 10721 of the Water Code.

(b) "Complaint" means a complaint filed in superior court to determine rights to extract groundwater and includes any cross-complaint that initiates a comprehensive adjudication in response to a plaintiff's complaint or other cross-complaint.

(c) "Comprehensive adjudication" means an action filed in superior court to comprehensively determine rights to extract groundwater in a basin.

(d) "Condition of long-term overdraft" means the condition of a groundwater basin where the average annual amount of water extracted for a long-term period, generally 10 years or more, exceeds the long-term average annual supply of water to the basin, plus any temporary surplus. Overdraft during a period of drought is not sufficient to establish a condition of long-term overdraft 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.

(e) "Department" means the Department of Water Resources.

(f) "Expert witness" means a witness qualified pursuant to Section 720 of the Evidence Code.

(g) "Groundwater" means water 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.

(h) "Groundwater extraction facility" means a device or method for extracting groundwater from within a basin.

(i) "Groundwater recharge" means the augmentation of groundwater, by natural or artificial means.

(j) "Person" includes, but is not limited to, counties, local agencies, state agencies, federal agencies, tribes, business entities, and individuals.

(k) "Plaintiff" means the person filing the complaint initiating a comprehensive adjudication and includes a cross-complainant who initiates a comprehensive adjudication by cross-complaint.

(l) "Public water system" has the same meaning as defined in Section 116275 of the Health and Safety Code.

(m) "State small water system" has the same meaning as defined in Section 116275 of the Health and Safety Code.

(n) "Sustainable Groundwater Management Act" means the provisions of Part 2.74 (commencing with Section 10720) of Division 6 of the Water Code.

Article 2. Scope of Action

833. Applicability of Chapter

(a) Except as provided in subdivision (b), this chapter applies to actions that would comprehensively determine rights to extract groundwater in a basin, whether based on appropriation, overlying right, or other basis of right.

(b) This chapter does not apply to any of the following:

(1) An action that concerns only allegations that a groundwater extraction facility, or group of facilities, is interfering with another groundwater extraction facility or facilities and does not involve a comprehensive allocation of the basin's groundwater supply.

(2) An action that concerns only claims to extract, or to prevent interference with extractions of, a specific source of groundwater recharge and does not involve a comprehensive allocation of the basin's groundwater supply.

(3) An action that can be resolved among a limited number of parties and does not involve a comprehensive determination of rights to extract groundwater within the basin.

(4) An adjudicated area described in subdivisions (a) to (d), inclusive, of Section 10720.8 of the Water Code, unless a court with jurisdiction over a proposed expansion of the adjudicated area orders that the proceeding be conducted in accordance with this chapter.

(c) If the court finds that including an interconnected surface water body or subterranean stream flowing through known and definite channels is necessary for the fair and effective determination of the groundwater rights in a basin, the court may require the joinder of persons who claim rights to divert and use water from that surface

water body or subterranean stream in a comprehensive adjudication conducted pursuant to this chapter.

(d) If the court finds that claims of right to extract or divert only minor quantities of water, not to exceed five acre-feet of water per year, would not have a material effect on the groundwater rights of other parties, the court may exempt those claimants with respect to those claims for only minor quantities of water, but a person who is exempted may elect to continue as a party to the comprehensive adjudication.

834. Determination of Rights by Court

(a) In a comprehensive adjudication conducted pursuant to this chapter, the court may determine all groundwater rights of a basin, whether based on appropriation, overlying right, or other basis of right, and use of storage space in the basin.

(b) The court's final judgment in a comprehensive adjudication, for the groundwater rights of each party, may declare the priority, amount, purposes of use, extraction location, place of use of the water, and use of storage space in the basin, together with appropriate injunctive relief, subject to terms adopted by the court to implement a physical solution in the comprehensive adjudication.

Article 3. Notice and Service of Complaint

835. Provision of Notice by Plaintiff

(a) The plaintiff shall provide notice of the comprehensive adjudication to all of the following:

(1) A groundwater sustainability agency that overlies the basin or a portion of the basin.

(2) A city, county, or city and county that overlies the basin or a portion of the basin.

(3) A district with authority to manage or replenish groundwater resources of the basin in whole or in part.

(4) The operator of a public water system or state small water system that uses groundwater from the basin to supply water service.

(5) A California Native American tribe that is on the contact list maintained by the Native American Heritage Commission.

(6) The Attorney General, the State Water Resources Control Board, the department, and the Department of Fish and Wildlife.

(7) A federal department or agency that manages a federal reservation that overlies the basin or a portion of the basin.

(8) A person identified under Section 836.5 who is not a party to the comprehensive adjudication.

(9) A person who is on a list, maintained by a groundwater management agency, of interested parties that have requested notice under the Sustainable Groundwater Management Act.

(b) The plaintiff may provide notice under this section by first class mail or electronic mail.

(c) (1) Except as provided in paragraph (2), the plaintiff shall provide notice under this section as follows:

(A) To any person entitled to notice under paragraphs (1) to (7), inclusive, of subdivision (a) within 15 days of the filing of the complaint.

(B) To any person entitled to notice under paragraphs (8) and (9) of subdivision (a) within 30 days of receipt of the name and address of the person entitled to notice.

(2) The plaintiff may take additional time as is reasonably necessary before providing notice under this section if the plaintiff determines that additional time is necessary to identify a person entitled to notice under this section, confirm the accuracy of the names or addresses of a person, or to determine if the conditions requiring notice have been satisfied.

(d) The plaintiff is not required to provide notice under this section to a person who has already been served or intervened in the action.

836. Other Notices to Be Lodged with Court with Complaint

(a) When the plaintiff files the complaint, the plaintiff shall also lodge with the court both of the following:

(1) (A) A draft notice titled "NOTICE OF COMMENCEMENT OF GROUNDWATER BASIN ADJUDICATION" in no less than 20-point font and the following text printed immediately below the draft notice title in no less than 14-point font:

"THIS NOTICE IS IMPORTANT. ANY RIGHTS YOU CLAIM TO PUMP OR STORE IN THIS NOTICE MAY BE AFFECTED BY A LAWSUIT INITIATED BY THE COMPLAINT SUMMARIZED BELOW.

A copy of the complaint may be obtained by contacting the plaintiff or the plaintiff's attorney identified in this notice. If you claim rights to pump or store

groundwater within the basin, either now or in the future, you may become a party to this lawsuit by filing an answer to the lawsuit on or before the deadline specified in this notice. You may file an answer by completing the attached form answer, filing it with the court indicated in this notice, and sending a copy of the form answer to the plaintiff or the plaintiff's attorney.

Failing to participate in this lawsuit could have a significant adverse effect on any right to pump or store groundwater that you may have. You may seek the advice of an attorney in relation to this lawsuit. Such attorney should be consulted promptly. A case management conference in this groundwater basin adjudication proceeding shall occur on the date specified in this notice. If you intend to participate in the groundwater adjudication proceeding to which this notice applies, you are advised to attend the initial case management conference in person or have an attorney represent you at the initial case management conference.

Participation requires the production of all information regarding your groundwater use. You must provide this information by the date identified in this notice.

A form answer is provided for your convenience. You may fill out the form answer and file it with the court. Should you choose to file the form answer, it will serve as an answer to all complaints and cross-complaints filed in this case."

(B) The following information shall be provided immediately following the text described in subparagraph (A):

i. The name of the basin that is the subject of the comprehensive adjudication and a link to the Internet Web site address where the department has posted a map of the basin.

ii. A space to be completed with the case number assigned to the comprehensive adjudication, and the name and address of the court and department to which the action is assigned.

iii. The name, address, telephone number, and email address of the plaintiff, or plaintiff's attorney, from whom the complaint may be obtained and to whom a copy of the form answer should be sent.

iv. A summary of the causes of action alleged in the complaint and the relief sought. The summary shall not exceed 25 lines.

v. A date by which persons receiving the notice must appear in the comprehensive adjudication.

(2) (A) A draft form answer titled "ANSWER TO ADJUDICATION COMPLAINT" in no less than 20-point font and the following text printed immediately below the draft form answer title in no less than 14-point font:

"The undersigned denies all material allegations in the complaint or cross-complaint in this action that seeks to adjudicate rights in the groundwater basin and asserts all applicable affirmative defenses to that complaint."

(B) Notwithstanding any other law, the filing of an answer in the form described in subparagraph (A) in a comprehensive adjudication is sufficient to put at issue all material allegations and applicable affirmative defenses to the complaint in the comprehensive adjudication. If a party intends to seek adjustment of the basin's boundaries, it shall disclose that intention in the form answer described in subparagraph (A).

(b) Within 30 days of the assignment of a judge by the Chairperson of the Judicial Council, the plaintiff shall file a motion for approval of the draft notice and draft form answer filed pursuant to subdivision (a). The plaintiff's motion shall include a copy of the draft notice and draft form answer filed pursuant to subdivision (a).

(c) Once the court approves the draft notice, service of that notice in accordance with this section shall substitute for the summons otherwise provided for in civil actions pursuant to Section 412.20.

(d) (1) Following a court order approving the notice and form answer and authorizing service of landowners pursuant to this section, the plaintiff shall do all of the following:

(A) Identify the assessor parcel numbers and physical addresses of all real property in the basin and the names and addresses of all holders of fee title to real property in the basin using the records of the assessor or assessors of the county or counties in which the basin to be adjudicated lies. The plaintiff shall provide the court and all parties with notice of its acquisition of, or sufficient access to, this information.

(B) Mail, by registered mail or certified mail, return receipt requested, the notice, complaint, and form answer to all holders of fee title to real property in the basin. If the physical address of the real property differs from the address of the holder of fee title, the notice,

complaint, and form answer shall be mailed by registered or certified mail, return receipt requested, to the physical address of the real property and the address of the holder of fee title.

(C) If return receipt is not received for a parcel of real property, the plaintiff shall post a copy of the notice, complaint, and form answer in a conspicuous place on the real property.

(D) Within 20 days of the court order, publish the notice at least once per week for four consecutive weeks in one or more newspapers of general circulation in each county overlying the basin in whole or in part.

(2) Service pursuant to this subdivision is not required if the real property is owned by a person in a class of water users that are otherwise noticed in accordance with this chapter. If the owner is part of a class of water users proposed for certification, service is not required until the court acts on the proposal for certification.

(e) After completing the mailing pursuant to subdivision (d), the plaintiff shall file with the court a notice of the completion of the mailing.

(f) A property owner who has received notice of the comprehensive adjudication and transfers property during the pendency of the comprehensive adjudication shall disclose, on the Real Estate Transfer Disclosure Statement, that the property is subject to a comprehensive adjudication and shall attach the court-approved notice to the Real Estate Transfer Disclosure Statement.

(g) Following a court order authorizing service of landowners pursuant to this section, the plaintiff shall serve any known person that pumps groundwater who would not otherwise be served pursuant to subdivision (d) of this section, except those who have been exempted by the court pursuant to subdivision (d) of Section 833 or those who are part of a class certified pursuant to paragraph (2) of subdivision (d) of this section. Service pursuant to this subdivision shall be by personal delivery or by mail in the manner prescribed by Article 3 (commencing with Section 415.10) of Chapter 4 of Title 5.

(h) Service on the United States shall be made in accordance with Section 666 of Title 43 of the United States Code.

(i) The court may authorize any other procedures it finds appropriate and necessary to provide notice to persons who may hold groundwater rights in the basin.

(j) Compliance with the service and notice provisions of this chapter shall be deemed effective service of process of the complaint and

notice on all interested parties of the comprehensive adjudication for purposes of establishing in rem jurisdiction and the comprehensive effect of the comprehensive adjudication.

(k) Whenever proceedings are instituted under this chapter, it shall be the duty of all claimants interested in the proceedings and having notice of the proceedings pursuant to this chapter to appear in the proceedings and to submit proof of their claims at the time, and in the manner, required by this chapter.

(l) The court may require notice to be made available in languages other than English.

(m) Within 15 days of the court order approving the notice and form answer, the plaintiff shall provide the notice and form answer to the department and each county and groundwater sustainability agency that overlies the basin or a portion of the basin. The department, and each county and groundwater sustainability agency that overlies the basin or a portion of the basin and has an Internet Web site shall do all of the following:

(1) Within 15 days of receiving the notice and form answer, post those documents on its Internet Web site.

(2) Provide a link to the notice and form answer on the home page of its Internet Web site.

(3) Maintain the posting and link described in paragraphs (1) and (2) for the entire time the comprehensive adjudication is pending. The plaintiff shall notify the department and each county and groundwater sustainability agency when the comprehensive adjudication is no longer pending.

836.5. Information to be Requested by Plaintiff

(a) Within 15 days of the court order approving the notice and form answer under Section 836, the plaintiff shall request from the following entities the names and addresses of persons reporting extractions within the basin under the Sustainable Groundwater Management Act, or Part 5 (commencing with Section 4999) or Part 5.2 (commencing with Section 5200) of Division 2 of the Water Code:

(1) The State Water Resources Control Board.

(2) A local agency designated under Section 5009 of the Water Code as the local agency for a board-designated local area that includes the basin or a portion of the basin.

(3) A groundwater sustainability agency for the basin or a portion of the basin.

(b) The entities described in paragraphs (1) to (3), inclusive, of subdivision (a) shall provide the plaintiff with the names, mailing addresses, and email addresses, if available, within 45 days of the plaintiff's request. The State Water Resources Control Board shall also provide the mailing address and email addresses, if available, of any person known to the board who holds a permit or license authorizing underground storage in the basin or who claims a right to divert water for underground storage in the basin.

(c) Upon request, the plaintiff shall reimburse the reasonable costs incurred under this section by an entity described in paragraphs (1) to (3), inclusive, of subdivision (a).

(d) An entity shall not be held civilly liable for complying with this section.

Article 4. Intervention

837. Intervention of Groundwater Sustainability Agency

(a) A groundwater sustainability agency for the basin or a portion of the basin may intervene in a comprehensive adjudication conducted pursuant to this chapter.

(b) A city, county, or city and county that overlies the basin or a portion of the basin may intervene in a comprehensive adjudication conducted pursuant to this chapter.

(c) The court shall allow any person to intervene in a comprehensive adjudication conducted pursuant to this chapter upon an ex parte application that demonstrates that the person holds fee simple ownership in a parcel in the basin, or extracts or stores water in the basin. A person filing an ex parte application pursuant to this subdivision shall give notice to the plaintiff consistent with the California Rules of Court.

(d) A person may apply to intervene in a comprehensive adjudication conducted pursuant to this chapter pursuant to Section 387.

837.5. State Intervention in Comprehensive Adjudication

(a) The state may intervene in a comprehensive adjudication conducted pursuant to this chapter.

(b) This section does not affect substantive law.

Article 5. Judge

838. Disqualification of Judge of Superior Court of County that Overlies Basin

(a) (1) In a comprehensive adjudication conducted pursuant to this chapter, a judge of a superior court of a county that overlies the basin

or any portion of the basin shall be disqualified. The Chairperson of the Judicial Council shall assign a judge to preside in all proceedings in the comprehensive adjudication.

(2) A judge of the superior court in which an action is filed may, on the court's own motion or the motion of a party, determine if the action is a comprehensive adjudication under Section 833. A motion for a determination pursuant to this paragraph shall receive calendar preference within the action and shall be resolved before other procedural or dispositive motions.

(b) A comprehensive adjudication is presumed to be a complex action under Rule 3.400 of the California Rules of Court.

(c) Sections 170.6 and 394 shall not apply in a comprehensive adjudication.

(d) Notwithstanding subdivision (b) of Section 10726.6 of the Water Code, an action against a groundwater sustainability agency that is located in a basin that is being adjudicated pursuant to this chapter shall be subject to transfer, coordination, and consolidation with the comprehensive adjudication, as appropriate, if the action concerns the adoption, substance, or implementation of a groundwater sustainability plan, or the groundwater sustainability agency's compliance with the timelines in the Sustainable Groundwater Management Act.

(e) The judge assigned by the Chairperson of the Judicial Council pursuant to subdivision (a) shall determine if transfer, coordination, or consolidation is appropriate.

Article 6. Electronic Service

839. Pleadings and Papers

Service of pleadings and papers in a comprehensive adjudication, other than the complaint initiating a comprehensive adjudication, shall occur electronically to the greatest extent possible. The court may provide, or authorize the use of, an electronic service system. If an electronic service system is not provided or authorized by the court, the court and the parties shall serve documents by email or other equivalent electronic means to the greatest extent possible. To enable electronic service of pleadings and papers, the attorneys of record or parties representing themselves shall include an email address for service in the captions of all pleadings they file in the comprehensive adjudication.

Article 7. Case Management

840. Case Management Conference

(a) (a) In managing a comprehensive adjudication, the court shall convene a case management conference as provided by the California Rules of Court.

(b) (b) In an initial case management conference, or as soon as practicable, the court may consider the following in addition to other matters:

(1) Determining whether to seek adjustment of the basin boundaries pursuant to Section 841.

(2) Staying the action pursuant to Section 848.

(3) Appointing a special master pursuant to Section 845.

(4) Scheduling a hearing on a preliminary injunction pursuant to Section 847.

(5) Dividing the case into phases to resolve legal and factual issues.

(6) Issuing orders to ensure that issues resolved in one phase are not relitigated in another phase.

(7) Limiting discovery to correspond to the phases.

(8) Scheduling early resolution of claims to prescriptive rights.

(9) Forming a class or classes of overlying groundwater rights holders pursuant to the criteria specified in Section 382.

Article 8. Basin Boundaries

841. Boundaries Consistent with Basin

(a) Except as otherwise provided in this section, the boundaries of the area subject to a comprehensive adjudication shall be consistent with the boundaries of a basin.

(b) If the department revises the boundaries of a basin pursuant to Section 10722.2, or subdivision (b) of Section 12924, of the Water Code after a comprehensive adjudication has been initiated, the court may revise the boundaries of the area subject to the comprehensive adjudication as the interests of justice and the objectives of this chapter require.

(c) Upon a showing that a revision of the basin boundaries would further a fair and effective determination of water rights, the court may direct any of the following to submit a request to the department pursuant to Section 10722.2 of the Water Code to revise the basin boundaries:

(1) A party to the comprehensive adjudication.

(2) The State Water Resources Control Board, if the court has made a reference pursuant to Part 3 (commencing with Section 2000) of Division 2 of the Water Code.

(3) A special master, if one has been appointed.

(d) A determination of the department on a submission made pursuant to subdivision (c) is subject to judicial review pursuant to Section 1085. Venue shall be in the court with jurisdiction over the comprehensive adjudication and the case shall be coordinated with the comprehensive adjudication.

Article 9. Initial Disclosures

842. Service of Disclosure; Parties; Time

(a) Except as otherwise stipulated by the parties or ordered by the court, within six 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.

(b) The Judicial Council may develop a form for initial disclosures made pursuant to subdivision (a) to facilitate the consistent, independent, impartial, and accessible administration of comprehensive adjudications. The Judicial Council may coordinate with the department in developing the form.

(c) A party shall make its initial disclosures based on the information then reasonably available to it. A party is not excused from making its initial disclosures because it has not fully investigated the case, because it challenges the sufficiency of another party's disclosures, or because another party has not made its disclosures.

(d) A party that has made its initial disclosures, as described in subdivision (a), or that has responded to another party's discovery request, shall supplement or correct a disclosure or response in all of the following situations:

(1) In a timely manner if the party learns that in some material respect the disclosure or response is incomplete or incorrect and the additional or corrective information has not otherwise been made known to the other parties during the disclosure or discovery process.

(2) If the party extracts groundwater from the basin after the complaint is filed. A supplement filed pursuant to this paragraph shall report the quantity of water extracted and be filed within 90 days after the end of the calendar year.

(3) As ordered by the court.

(e) To the greatest extent possible, a party shall serve his or her initial disclosures electronically. If it is not possible for the party to serve his or her disclosures electronically, he or she shall serve the disclosures

in an electronic format saved on a portable storage media device such as a compact disc or flash drive.

(f) A party's obligations under this section may be enforced by a court on its own motion or the motion of a party to compel disclosure.

(g) A party's disclosures under this section shall be verified under penalty of perjury as being true and correct to the best of the party's knowledge.

Article 10. Expert Witnesses

843. Disclosure of Identity of Experts

(a) In addition to all other disclosures required by this chapter, a party shall disclose to the other parties the identity of any expert witness it may use at trial to present evidence.

(b) Unless otherwise stipulated by the parties or ordered by the court, the disclosure made pursuant to subdivision (a) shall be accompanied by a written report prepared and signed by the expert witness if the witness is retained or specially employed by the party offering the expert witness to testify as an expert in the action, or if the expert witness's duties as the party's employee regularly involves giving expert testimony. The report shall include all of the following:

(1) A complete statement of all opinions the witness will express and the basis and reasons for those opinions.

(2) The facts or data considered by the witness in forming his or her opinions.

(3) Any exhibits the witness will use to summarize or support his or her opinions.

(4) The witness's qualifications, including a list of all publications authored by the witness in the previous 10 years.

(5) A list of all other cases in which the witness testified as an expert at trial or by deposition in the last five years.

(6) A statement of the compensation to be paid for the witness's work and testimony in the comprehensive adjudication.

(c) If subdivision (b) does not apply to an expert witness because of a stipulation by the parties or an order of the court, the witness's disclosure shall include both of the following:

(1) The subject matter on which the witness is expected to present evidence.

(2) A summary of the witness's opinions, and the facts or data considered by the witness in forming his or her opinions.

(d) Unless otherwise stipulated by the parties, a party shall make the disclosures of any expert witness it intends to present at trial, except for an expert witness presented solely for purposes of impeachment or rebuttal, at the times and in the sequence ordered by the court. If there is no stipulation or court order, the disclosures of an expert witness shall be made as follows:

(1) At least 30 days after the court's entry of an order establishing the scope of the relevant phase of the comprehensive adjudication.

(2) Except for a supplemental expert witness described in paragraph (3), at least 60 days before the date set for trial of the relevant phase of the comprehensive adjudication.

(3) For a supplemental expert witness who will express an opinion on a subject to be covered by another expert witness designated by an adverse party that was not among the subjects covered by an expert witness initially disclosed by the party offering the supplemental expert witness, no more than 20 days after the initial expert witness disclosure date.

(e) The court may modify the disclosure requirements of subdivisions (b) to (d), inclusive, for expert witnesses presented solely for purposes of impeachment or rebuttal. In modifying the disclosure requirements, the court shall adopt disclosure requirements that expedite the court's consideration of the issues presented and shall ensure that expert testimony presented solely for purposes of impeachment or rebuttal is strictly limited to the scope of the testimony that it intends to impeach or rebut.

(f) (1) A party whose expert witness has made a disclosure pursuant to this section shall promptly supplement or correct the expert witness's disclosure in either of the following instances:

(A) In a timely manner if the party learns that in some material respect the disclosure is incomplete or incorrect, if the additional or corrective information has not otherwise been made known to the other parties during the disclosure or discovery process.

(B) As ordered by the court.

(2) A party's duty to supplement or correct its expert witness's disclosure includes the information included in the report and the information given during the expert witness's deposition. Unless otherwise stipulated by the parties or ordered by the court, any supplementation or correction shall occur at least

14 days before trial of the applicable phase of the comprehensive adjudication.

(3) The court may authorize a supplemental deposition of an expert witness based on a supplemental disclosure made pursuant to this subdivision. The court shall appropriately condition the authorization of a supplemental deposition of an expert witness to ensure the expeditious completion of the applicable phase of the comprehensive adjudication. The court may require the party whose expert makes the supplemental disclosure to pay some or all of the costs associated with the supplemental deposition.

(g) To the greatest extent possible, the parties shall serve expert witness disclosures electronically through an electronic service system, an electronic document repository, email, or another method of electronic transmission. If it is not possible for the party to serve his or her expert witness disclosures electronically, he or she shall serve the expert witness disclosures in an electronic format saved on a portable storage media device such as a compact disc or flash drive.

Article 11. Written Testimony

844. Required Submission

(a) A court may require the parties in a comprehensive adjudication to submit written testimony of relevant witnesses in the forms of affidavits or declarations under penalty of perjury in lieu of presenting live testimony. The required written testimony may include, but is not limited to, expert witness opinions and testimony that authenticates documentary evidence. The court may order that the written testimony constitutes the entirety of the witness's direct testimony, require the written testimony to include any exhibits offered in support of the written testimony, and, in the case of written testimony of an expert witness, require a statement of the witness's qualifications.

(b) If the court requires the submission of written testimony pursuant to subdivision (a), a complete copy of the direct testimony shall be served at least 21 days before trial. A complete copy of any rebuttal testimony shall be served no later than the first day of trial.

(c) If the contents of the written testimony would have been admissible if the witness testified orally, the written testimony shall be received by the court as a documentary exhibit if the witness whose written testimony is being offered is made available for cross-examination by all parties.

Article 12. Special Master

845. Appointment; Duties

(a) The court may appoint one or more special masters whose duties may include the following:

(1) Investigating technical and legal issues, as directed by the court. The special master shall compile a report of findings in accordance with Section 846.

(2) Conducting joint fact finding with the parties, their designees, or both.

(3) Investigating the need for, and developing a proposal for, a preliminary injunction pursuant to Article 13 (commencing with Section 847).

(4) Performing other tasks the court may deem appropriate.

(b) The court shall fix the special master's compensation on the basis and terms stated in the appointing order, and the court may set a new basis and new terms after giving the parties notice and an opportunity to be heard. The court shall allocate payment of the special master's compensation among the parties in an amount and a manner that the court deems equitable. The court may waive a party's obligations to pay the special master's compensation upon a showing of good cause.

(c) The court may request the State Water Resources Control Board or the department to recommend candidates for appointment as a special master or to review the qualifications of candidates.

(d) This section does not limit the authority of the court to make a reference pursuant to Chapter 1 (commencing with Section 2000) of Part 3 of Division 2 of the Water Code.

(e) This section does not limit the authority to appoint a watermaster pursuant to Chapter 3 (commencing with Section 4050) of Part 4 of Division 2 of the Water Code or any other law.

846. Draft Report of Special Master

(a) The special master shall make a draft report available to the parties and provide at least 60 days for the parties to submit written objections to the draft report.

(b) An objection to the draft report shall identify the specific grounds and evidence on which the objection is based.

(c) The special master may notice and hold hearings, as he or she deems appropriate, to gather information or address issues raised in the objections to the draft report.

(d) The special master shall consider the objections to the draft report and develop a final report that shall be filed with the court, together with supporting evidence.

Article 13. Preliminary Injunction

847. Showing of Long-Term Overdraft

(a) Upon a showing that the basin is in a condition of long-term overdraft, the court may, upon notice and hearing, issue a preliminary injunction.

(b) Bulletins and other reports of the department, and a report of a special master indicating that a condition of long-term overdraft exists in the basin, shall be admissible as evidence of a condition of long-term overdraft. This subdivision does not limit the admissibility of other relevant evidence.

(c) The preliminary injunction may include any of the following terms:

(1) A moratorium on new or increased appropriations of water.

(2) A limitation on, or reduction in, the diversion or extraction of water.

(3) An allocation among the parties establishing amounts of extraction allowed during the pendency of the comprehensive adjudication.

(4) Procedures for voluntary transfers.

(d) The court shall issue a preliminary injunction upon determining all of the following:

(1) The basin is in a condition of long-term overdraft.

(2) The basin has been designated as a probationary basin or the planning deadlines in subdivision (a) of Section 10720.7 of the Water Code are not being complied with.

(3) There is no interim plan in effect under Section 10735.8 of the Water Code.

(e) The court may provide a schedule for further reductions in extractions over a period of years if it finds that doing so appears reasonably necessary to achieve groundwater sustainability within the timelines provided in subdivision (b) of Section 10727.2 of the Water Code.

(f) The terms of a preliminary injunction shall not determine the rights in a final judgment of the comprehensive adjudication.

(g) A bond or undertaking shall not be required for the issuance of a preliminary injunction pursuant to this section.

(h) The court may appoint a watermaster to oversee enforcement of the preliminary injunction.

Article 14. Stay

848. Stay for Up to One Year; Motion; Renewal

(a) Upon the court's own motion or the motion of any party to a comprehensive adjudication, a court may stay a comprehensive adjudication for a period of up to one year, subject to renewal in the court's discretion upon a showing of good cause, in order to facilitate any of the following:

(1) Adoption of a groundwater sustainability plan that provides for a physical solution or otherwise addresses issues in the comprehensive adjudication.

(2) The development of technical studies that may be useful to the parties in the comprehensive adjudication.

(3) Voluntary mediation or participation in a settlement conference on all, or a portion of, the subject matters or legal questions identified in the comprehensive adjudication.

(4) Compromise and settlement of the comprehensive adjudication or issues in the comprehensive adjudication.

(b) Before renewing a stay granted pursuant to subdivision (a), the parties shall report on the progress being made on the issues that were identified as the reasons for the stay.

(c) A stay pursuant to this section shall not stay, or otherwise delay, the parties' obligations to provide initial disclosures pursuant to Section 842 unless the court determines the initial disclosures will not benefit resolution of the comprehensive adjudication.

Article 15. Physical Solution

849. Imposition by Court

(a) The court shall have the authority and the duty to impose a physical solution on the parties in a comprehensive adjudication where necessary and consistent with Article 2 of Section X of the California Constitution.

(b) Before adopting a physical solution, the court shall consider any existing groundwater sustainability plan or program.

Article 16. Judgment

850. Court May Enter Judgment; Criteria

(a) The court may enter a judgment if the court finds that the judgment meets all of the following criteria:

(1) It is consistent with Section 2 of Article X of the California Constitution.

(2) It is consistent with the water right priorities of all non-stipulating parties and any persons who have claims that are exempted pursuant to Section 833 in the basin.

(3) It treats all objecting parties and any persons who have claims that are exempted pursuant to Section 833 equitably as compared to the stipulating parties.

(b) If a party or group of parties submits a proposed stipulated judgment that is supported by more than 50 percent of all parties who are groundwater extractors in the basin or use the basin for groundwater storage and is supported by groundwater extractors responsible for at least 75 percent of the groundwater extracted in the basin during the five calendar years before the filing of the complaint, the court may adopt the proposed stipulated judgment, as applied to the stipulating parties, if the proposed stipulated judgment meets the criteria described in subdivision (a). A party objecting to a proposed stipulated judgment shall demonstrate, by a preponderance of evidence, that the proposed stipulated judgment does not satisfy one or more criteria described in subdivision (a) or that it substantially violates the water rights of the objecting party. If the objecting party is unable to make this showing, the court may impose the proposed stipulated judgment on the objecting party. An objecting party may be subject to a preliminary injunction issued pursuant to Section 847 while his or her objections are being resolved.

Article 17. Judgment Binding on Successors

851. Included Parties

The judgment in a comprehensive adjudication conducted pursuant to this chapter shall be binding on the parties to the action and all their successors in interest, including, but not limited to, heirs, executors, administrators, assigns, lessees, licensees, the agents and employees of the parties to the action and all their successors in interest, and all landowners or other persons claiming rights to extract groundwater from the basin whose claims have not been exempted and are covered by the notice provided in the comprehensive adjudication.

Article 18. Continuing Jurisdiction

852. Modification of Amendment

The court shall have continuing jurisdiction to modify or amend a final judgment in a comprehensive adjudication in response to new information, changed circumstances, the interests of justice, or to ensure that the criteria of subdivision (a) of Section 850 are met. When feasible, the judge who heard the original action shall preside over actions or motions to modify or amend the judgment.

NOTES

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SUPPORTING DOCUMENT

Excerpt from the 2018 Napa Valley Subbasin Basin Analysis Report (Alternative GSP) Amendment. Luhdorff & Scalmanini Consulting Engineers. Prepared for Napa County. adopted 3/20/2018

NAPA VALLEY GROUNDWATER SUSTAINABILITY

Northeast Napa Management Area:

An Amendment to the 2016 Basin Analysis Report for the Napa Valley Subbasin

Prepared by

LUHDORFF & SCALMANINI CONSULTING ENGINEERS

January 2018

Table of Contents

3.0 NAPA VALLEY SUBBASIN SUSTAINABILITY GOAL

The 2016 Basin Analysis Report for the Napa Valley Subbasin includes the following SGMA Sustainability Goal for the Napa Valley Subbasin:

To protect and enhance groundwater quantity and quality for all the people who live and work in Napa County, regardless of the source of their water supply. The County and everyone living and working in the county will integrate stewardship principles and measures in groundwater development, use, and management to protect economic, environmental, and social benefits and maintain groundwater sustainability indefinitely without causing undesirable results, including unacceptable economic, environmental, or social consequences.

As a part of the Napa Valley Subbasin, the sustainable management criteria presented below for the Northeast Napa Management Area have been developed to ensure that the Subbasin can continue to be managed sustainably without experiencing undesirable results.

3.1 Sustainability Indicators and Undesirable Results

The Sustainable Groundwater Management Act (SGMA) establishes six sustainability indicators to be used for determining whether undesirable results occur in a groundwater basin or subbasin. The 2016 Basin Analysis Report documents that the Napa Valley Subbasin has not experienced significant and unreasonable effects due to groundwater conditions occurring throughout the Subbasin that would constitute an undesirable result.

This Amendment to the 2016 Basin Analysis Report provides additional descriptions of significant and unreasonable effects that would constitute undesirable results. The undesirable results described below are used to guide the establishment of minimum thresholds and measurable objectives for the Northeast Napa Management Area described in the following sections.

As required by Section 354.20(a) of the GSP Regulations, the undesirable results described below are consistent for the Napa Valley Subbasin and for the Northeast Napa Management Area. In addition, it is acknowledged that, due to differences in geology and aquifer characteristics, the Management Area may, in the future, experience effects due to groundwater conditions that lead to undesirable results within the Northeast Napa Management Area that do not also occur throughout the Napa Valley Subbasin. Both Management Area-specific undesirable results and the broader, Subbasin-wide undesirable results are described below.

3.1.1 Depletions of Interconnected Surface Water

Depletions of interconnected surface water would become significant and unreasonable if, as a result of groundwater extraction and use in the Subbasin:

1. the timing and duration of direct hydraulic connections between groundwater and surface water along the Napa River or its tributaries overlying the Subbasin are reduced relative to the extent of historical conditions or,
2. if the volume of surface water flowing into the groundwater system as a result of groundwater extraction and use in the Subbasin exceeds both flows that have occurred historically and flows that would otherwise occur due to climate change-related shifts in precipitation, temperature, evapotranspiration, and soil moisture in the future.

Consistent with specifications contained in the GSP Regulations, significant and unreasonable depletions of interconnected surface water are determined based on effects resulting from groundwater extraction and use in the Subbasin. The GSP Regulations define the minimum thresholds for depletions of interconnected surface water as follows:

> "The minimum threshold for depletions of interconnected surface water shall be the rate or volume of surface water depletions caused by groundwater use that has adverse impacts on beneficial uses of the surface water and may lead to undesirable results." (GSP Regulations Section 354.28(c)(6)).

3.1.2 Degraded Water Quality

Degraded water quality would become significant and unreasonable if groundwater conditions and land uses in the Subbasin result in increased concentrations of groundwater quality constituents contributed as a result of land use activities at a majority of the representative wells in the Napa Valley Subbasin such that water quality no longer meets state or federal standards for the intended beneficial uses of the well.

3.1.3 Seawater Intrusion

Seawater intrusion would become significant and unreasonable if groundwater conditions in the Subbasin increase the flow of seawater into the Napa Valley Subbasin such that chloride concentrations measured in representative wells reach levels that would result in groundwater being unsuitable for beneficial uses in portions of the following Napa County groundwater subareas that overly the Napa Valley Subbasin: Napa Valley Floor-Napa Subarea, Napa Valley Floor-Milliken-Sarco-Tulucay Subarea, or the Carneros Subarea

3.1.4 Chronic Lowering of Groundwater Levels

Chronic lowering of groundwater levels would become significant and unreasonable if groundwater conditions in the Napa Valley Subbasin result in prolonged, year-to-year reductions in groundwater levels below levels recorded historically at a majority of the representative wells in the Subbasin, excluding groundwater level declines that may occur

during drought conditions[14] unless groundwater level declines observed during periods of drought result in reduced groundwater levels over a long-term period that is at least 10 years in length, not ending in drought conditions, and including a balance of above average and below average water years.

Due to the limited thickness of alluvial aquifer materials and the more restrictive hydraulic properties of the Tertiary sedimentary and Sonoma Volcanics formations, the potential exists for chronic lowering of groundwater levels in the Tertiary sedimentary and Sonoma Volcanics formations within the Management Area that do not propagate to other parts of the Napa Valley Subbasin. Nevertheless, chronic lowering of groundwater levels in the Tertiary sedimentary and Sonoma Volcanics formations due to groundwater conditions in the Management Area would also be considered significant and unreasonable, excluding groundwater level declines that may occur during drought conditions unless declines during drought conditions are not ameliorated after at least two subsequent non-drought water years.

3.1.5 Reductions of Groundwater Storage

Reductions in groundwater storage would become significant and unreasonable if groundwater conditions in the Napa Valley Subbasin result in reductions in groundwater storage that exceed the Subbasin sustainable yield, excluding groundwater level declines that may occur during drought conditions unless groundwater storage declines observed during periods of drought result in reduced groundwater storage over a long-term period that is at least 10 years in length, not ending in drought conditions, and including a balance of above average and below average water years.

3.1.6 Land Subsidence

Land subsidence would become significant and unreasonable if groundwater conditions in the Napa Valley Subbasin result in permanent, inelastic subsidence to a degree that disrupts or causes accelerated damage to important public or private infrastructure (such as: roadways, railways, bridges, and water supply infrastructure).

Best available information, as presented in the Special Study Report (**Appendix A**), demonstrates that undesirable results for the six sustainability indicators described above have

[14] The Sustainable Groundwater Management Act defines the undesirable result of chronic lowering of groundwater levels as "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 groundwater 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" (10721(x)(1)).

not occurred and are not occurring in the Northeast Napa Management Area as a result of groundwater conditions and groundwater use in the Napa Valley Subbasin.

3.2 Northeast Napa Management Area Representative Monitoring Sites

Napa County currently monitors groundwater levels in five production wells within the Northeast Napa Management Area. The County also monitors groundwater levels (GWL) and groundwater quality (GWQ) at two surface water/groundwater monitoring sites, located on the Napa River near the upstream and downstream extents of the Management Area (**Figure 3-1**). Surface water monitoring currently occurs at three locations on the Napa River adjacent to the Management Area (**Figure 3-2**). River stage data are collected at all three surface water monitoring sites; however, only the USGS gage (Station Name: Napa River near Napa) records stream discharge.

Figures 3-3, 3-4, and **3-5** depict relative exposure to the three primary aquifer zones for currently and formerly monitored wells, along with other wells whose construction information was recorded for the northeast Napa Study. Thin alluvial deposits east of the Napa River, in the Management Area, result in limited exposures to the alluvial aquifer zone, which wells west of the River commonly have a majority of their screened interval in the alluvium (**Figure 3-3**). Two Napa County surface water/groundwater monitoring facilities (SWGW1 and SWGW3) provide the best opportunities for monitoring the alluvial aquifer zone near to the Management Area.

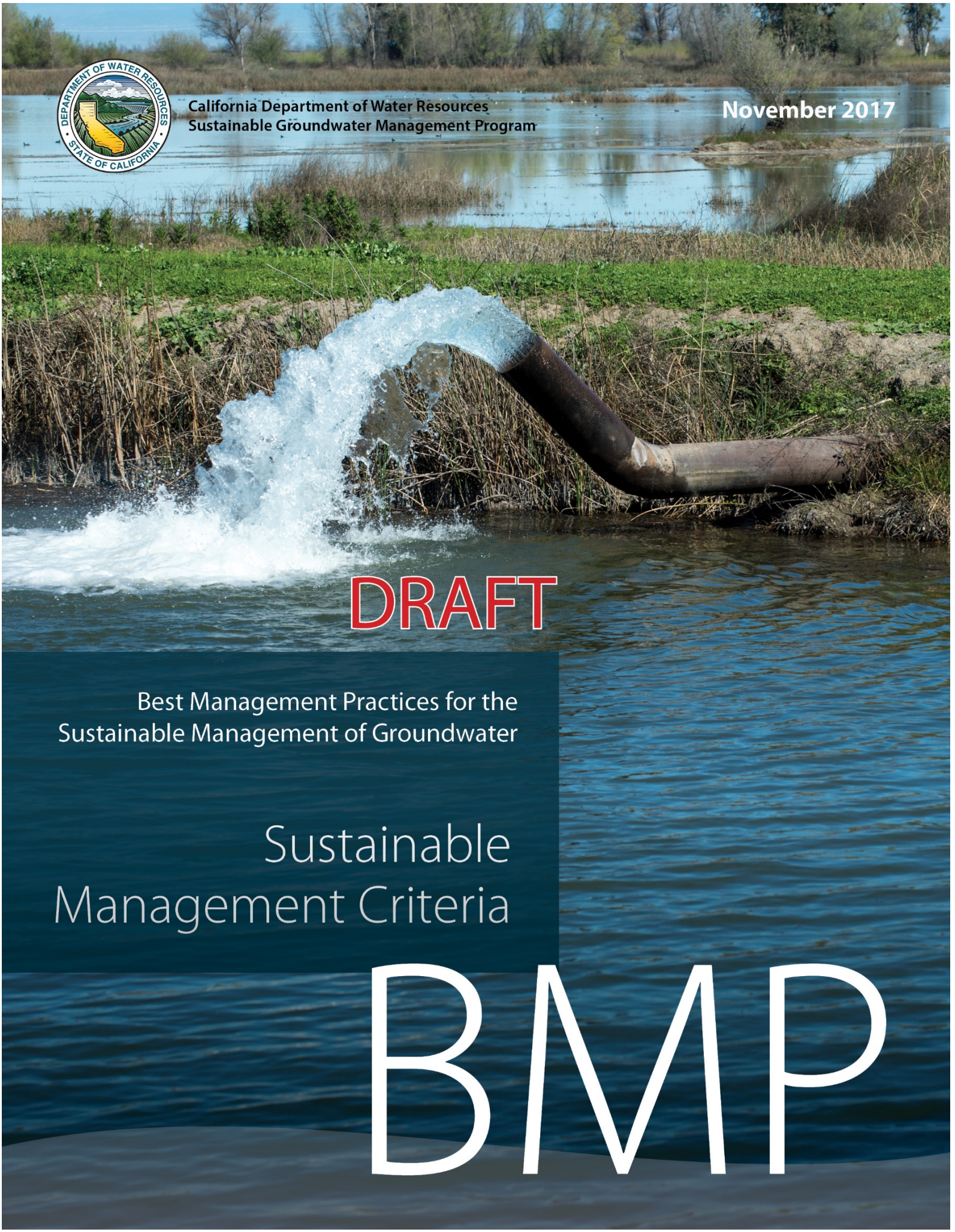
Wells throughout much of the Management Area are screened in the Tertiary sedimentary formation that underlies the thin alluvium (**Figure 3-4**). Two wells monitored by Napa County (Wells 122 and 229) have over 95% of their perforated interval within the Tertiary aquifer zone. Well 229 is located is an area of more concentrated production wells. Well 122 is located near the eastern border of the Subbasin across which the northeast Napa Area study found the influence of cones of depression in the MST Subarea have propagated.

Exposure to the Sonoma Volcanics aquifer zone is greater in the northern half of the Management Area (**Figure 3-5**). Well 76, also monitored by Napa County, is located in that part of the Management Area and is also located between most of the wells in the Management Area with similar exposure to the Sonoma Volcanics and the adjacent MST Subarea.

Representative monitoring sites selected for the Management Area include seven wells that are currently monitored by Napa County (**Table 3-1**). Six of the wells have over 95% of their perforated intervals within the aquifer zone that they are intended to represent. The exception, NapaCounty-76, has 75% of its well screens within the Sonoma Volcanics aquifer zone that it is selected to represent. Four of the wells were previously selected to serve as representative sites for the Napa Valley Subbasin (LSCE, 2016b). These four are nested observation wells constructed as dedicated surface water/groundwater monitoring facilities at two sites on the Napa River that bookend the Management Area, at First Street in Napa and along Oak Knoll Avenue (**Figure 3-6**).

SUPPORTING DOCUMENT

Draft Best Management Practices for the Sustainable Management of Groundwater – Sustainable Management Criteria. California Department of Water Resources. November 2017



California Department of Water Resources
Sustainable Groundwater Management Program

November 2017

DRAFT

Best Management Practices for the Sustainable Management of Groundwater

Sustainable Management Criteria

BMP

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Sustainable Management Criteria
Best Management Practice

1. OBJECTIVE

The Department of Water Resources (the Department) developed this Best Management Practice (BMP) document to describe activities, practices, and procedures for defining the sustainable management criteria required by the Groundwater Sustainability Plan Regulations (GSP Regulations).[1] This BMP characterizes the relationship between the different sustainable management criteria – the *sustainability goal*, *undesirable results*, *minimum thresholds*, and *measurable objectives* – and describes best management practices for developing these criteria as part of a Groundwater Sustainability Plan (GSP).

The Sustainable Groundwater Management Act (SGMA)[2] and GSP Regulations specify the requirements of a GSP. This BMP does not impose new requirements, but describes best management practices for satisfying the requirements of SGMA and the GSP Regulations. A Groundwater Sustainability Agency (GSA) is not required to follow this BMP when developing a GSP, but whatever methodology is adopted by a GSA must be reasonable and supported by the best available information and best available science.[3] While this document describes methods by which a GSA may approach the task of establishing sustainable management criteria recommended as best management practices by the Department, adopting the methods recommended in this BMP does not guarantee approval of the resulting GSP by the Department.

Examples provided in this BMP are intentionally simplified and are intended only to illustrate concepts. GSAs should not consider the level of detail in any of these simplified examples (e.g., the number of minimum thresholds defined in a hypothetical basin, the number of minimum thresholds that constitute an undesirable result, etc.) to be appropriate for their GSP.

2. INTRODUCTION

SGMA defines *sustainable groundwater management* as the management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results.[4] The avoidance of undesirable results is thus critical to the success of a GSP.

GSP Regulations collect together several requirements of a GSP under the heading of "Sustainable Management Criteria" in Subarticle 3 of Article 5.[5] Sustainable management criteria include:

- **Sustainability Goal**

- **Undesirable Results**
- **Minimum Thresholds**
- **Measurable Objectives**

The development of these criteria relies upon information about the basin developed in the *hydrogeologic conceptual model*, the description of current and historical groundwater conditions, and the *water budget*.

Key terms are *italicized* the first time they are presented, indicating that a definition for the term is provided in the Key Definitions section located at the end of this document.

SGMA REQUIREMENT TO QUANTIFY SUSTAINABILITY

The enactment of SGMA in 2014 was a landmark effort to manage California's groundwater in a sustainable manner. The SGMA legislation established definitions of undesirable results, introduced the statutory framework and timelines for achieving sustainability, and identified requirements that local agencies (i.e. GSAs) must follow to engage the beneficial uses and users of groundwater within a basin, among many other important topics. The GSP Regulations developed by the Department specify the documentation and evaluation of groundwater conditions within a basin and the requirements for the development and implementation of plans to achieve or maintain sustainability required by SGMA.

As described in SGMA, sustainable conditions within a basin are achieved when GSAs meet their sustainability goal and demonstrate the basin is being operated within its *sustainable yield*. Sustainable yield can only be reached if the basin is not experiencing undesirable results. The GSP Regulations focus the development of GSPs on locally-defined, quantitative criteria, including undesirable results, minimum thresholds, and measurable objectives. Undesirable results must be eliminated through the implementation of projects and management actions, and progress toward their elimination will be demonstrated with empirical data (e.g., measurements of groundwater levels or subsidence). Quantitative sustainable management criteria allow GSAs to clearly demonstrate sustainability and allow the public and the Department to readily assess progress.

Properly documenting the requirements identified in Subarticle 3, Introduction to Sustainable Management Criteria, in Article 5 of the GSP Regulations, is imperative to maintaining an outcome-based approach to SGMA implementation and must be completed for the Department to consider the approval of a GSP.

3. PRELIMINARY ACTIVITIES

A GSA will need to understand the basin's physical condition, the overlying management and legal structures, and the basin's water supplies and demands prior to developing sustainable management criteria. As a result, before a GSA begins the process of developing sustainable management criteria, the following activities should be completed:

Understand the Basin Setting

A thorough understanding of the historical and current state of the basin is necessary before sustainable management criteria can be set. Much of this understanding is gained in the development of a hydrogeologic conceptual model, water budget, and description of groundwater conditions. For more information, see the Hydrogeologic Conceptual Model BMP, Water Budget BMP, and Modeling BMP.

Inventory Existing Monitoring Programs

Minimum thresholds and measurable objectives are set at individual representative monitoring sites. GSAs should compile information from existing monitoring programs (e.g., number of wells and their construction details, which aquifers they monitor). As sustainable management criteria are set, monitoring networks may need to be expanded and updated beyond those used for existing, pre-SGMA monitoring programs. Additional information on monitoring networks is included in the Monitoring Networks and Identification of Data Gaps BMP.

Engage Interested Parties within the Basin

When setting sustainable management criteria, GSAs must consider the beneficial uses and users of groundwater in their basin. Consideration of the potential effects on beneficial uses and users underpin the minimum thresholds. GSAs must explain their decision-making processes and how public input was used in the development of their GSPs. There are specific SGMA requirements for GSAs to engage with interested parties within a basin. For more information about requirements of engagement, refer to the Stakeholder Communication and Engagement Guidance Document.

4. SETTING SUSTAINABLE MANAGEMENT CRITERIA

This section describes the development of sustainable management criteria. The section is organized as follows:

- Assessment of *sustainability indicators*, significant and unreasonable conditions, *management areas*, and representative monitoring sites
- Minimum thresholds
- Undesirable results
- Measurable objectives
- Sustainability goal

This organization follows a chronological ordering that GSAs can use as they plan for sustainable management criteria development, although they do not have to proceed in that order. Furthermore, setting sustainable management criteria will likely be an iterative process. Initial criteria may need to be adjusted to address potential effects on the beneficial uses and users of groundwater, land uses, and property interests. The GSA should evaluate whether the sustainable management criteria, as a whole, adequately characterize how and when significant and unreasonable conditions occur, and define a path toward sustainable groundwater management in the basin.

ASSESSMENT OF SUSTAINABILITY INDICATORS, SIGNIFICANT AND UNREASONABLE CONDITIONS, MANAGEMENT AREAS, AND REPRESENTATIVE MONITORING SITES

Sustainability Indicators

Sustainability indicators are the effects caused by groundwater conditions occurring throughout the basin that, when significant and unreasonable, become undesirable results.[6] Undesirable results are one or more of the following effects:


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 groundwater 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 seawater intrusion


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
- Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water

The significant and unreasonable occurrence of any of the six sustainability indicators constitutes an undesirable result.

The default position for GSAs should be that all six sustainability indicators apply to their basin. If a GSA believes a sustainability indicator is not applicable for their basin, they must provide evidence that the indicator does not exist and could not occur. For example, GSAs in basins not adjacent to the Pacific Ocean, bays, deltas, or inlets may determine that seawater intrusion is not an applicable sustainability indicator, because seawater intrusion does not exist and could not occur. In contrast, simply demonstrating that groundwater levels have been stable in recent years is not sufficient to determine that land subsidence is not an applicable sustainability indicator. As part of the GSP evaluation process, the Department will evaluate the GSA's determination that a sustainability indicator does not apply for reasonableness.

Sustainability Indicators in the Context of SGMA versus the California Water Plan

The term "sustainability indicator" is used in GSP regulations to refer to "any of the effects caused by groundwater conditions occurring throughout the basin that, when significant and unreasonable, cause undesirable results, as described in Water Code Section 10721(x)." It is important to note that the term 'sustainability indicator' is not unique to SGMA. The California Water Plan Update 2013 includes a California Water Sustainability Indicators Framework that uses the term 'sustainability indicator' in a way that differs from SGMA. Sustainability indicators in the context of the California Water Plan inform users about the relationship of water system conditions to ecosystems, social systems, and economic systems.

Water managers and users should not confuse sustainability indicators in the context of SGMA with sustainability indicators associated with the California Water Plan or with any other water management programs.

Significant and Unreasonable Conditions

GSAs must consider and document the conditions at which each of the six sustainability indicators become significant and unreasonable in their basin, including the reasons for justifying each particular threshold selected. A GSA may decide, for example, that localized inelastic land subsidence near critical infrastructure (e.g., a canal) and basinwide loss of domestic well pumping capacity due to lowering of groundwater levels are both significant and unreasonable conditions. These general descriptions of significant and unreasonable conditions are later translated into quantitative undesirable results, as described in this document. The evaluation of significant and unreasonable conditions should identify the geographic area over which the conditions need to be evaluated so the GSA can choose appropriate representative monitoring sites.

Use of Management Areas

A GSA may wish to define *management areas* for portions of its basin to facilitate groundwater management and monitoring. Management areas may be defined by natural or jurisdictional boundaries, and may be based on differences in water use sector, water source type, geology, or aquifer characteristics. Management areas may have different minimum thresholds and measurable objectives than the basin at large and may be monitored to a different level. However, GSAs in the basin must provide descriptions of why those differences are appropriate for the management area, relative to the rest of the basin.

Using the land subsidence example from the preceding subsection, GSAs in the hypothetical basin may decide that a management area in the vicinity of the canal is appropriate because the level of monitoring must be higher in that area, relative to the rest of the basin. GSAs may also desire to set more restrictive minimum thresholds in that area relative to the rest of the basin.

While management areas can be used to define different minimum thresholds and measurable objectives, other portions of the GSP (e.g., hydrogeologic conceptual model, water budget, notice and communication) must be consistent for the entire GSP area.

Representative Monitoring Sites

Representative monitoring sites are a subset of a basin's complete monitoring network, where minimum thresholds, measurable objectives, and *interim milestones* are set. Representative monitoring sites can be used for one sustainability indicator or multiple sustainability indicators. **Figure 1** shows how different combinations of representative monitoring sites can be used to assess seawater intrusion and lowering of groundwater levels in a hypothetical groundwater basin.

GSAs can only select representative monitoring sites after determining what constitutes significant and unreasonable conditions in a basin. Using the example discussed in the preceding subsections, the GSA would use a different combination of representative monitoring sites for localized inelastic land subsidence than it would for basinwide groundwater level decline. The GSA must explain how the combination of representative monitoring sites selected for each sustainability indicator can assess the significant and unreasonable groundwater condition.

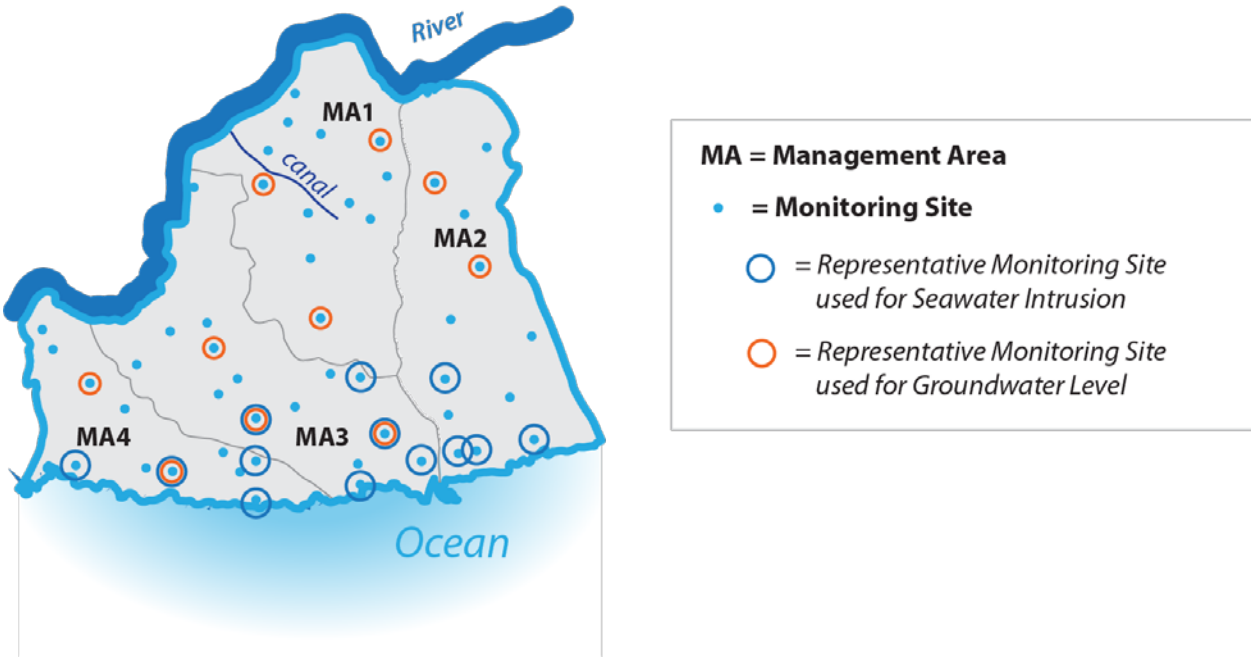


Figure 1. Example Monitoring Network and Representative Monitoring Sites

MINIMUM THRESHOLDS

A minimum threshold is the 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 the basin. GSAs will need to set minimum thresholds at representative monitoring sites for each applicable sustainability indicator after considering the interests of beneficial uses and users of groundwater, land uses, and property interests in the basin. Minimum thresholds should be set at levels that do not impede adjacent basins from meeting their minimum thresholds or sustainability goals.

Required Components for all Minimum Thresholds

GSP Regulations require six components of information to be documented for each minimum threshold.[7] The six components (in italicized text) and considerations for how they should be addressed are as follows:

1. *The information and criteria relied upon to establish and justify the minimum thresholds for each sustainability indicator. The justification for the minimum threshold shall be supported by information provided in the basin setting, and other data or models as appropriate, and qualified by uncertainty in the understanding of the basin setting.*

   The GSP must include an analysis and written interpretation of the information, data, and rationale used to set the minimum threshold. For instance, if a groundwater level minimum threshold is set to protect shallow domestic supply wells, the GSA should investigate information such as the depth ranges of domestic wells near the representative monitoring site, aquifer dimensions, groundwater conditions, and any other pertinent information.

2. *The relationship between the minimum thresholds for each sustainability indicator, including an explanation of how the Agency has determined that basin conditions at each minimum threshold will avoid undesirable results for each of the sustainability indicators.*

   The GSP must describe the relationship between each sustainability indicator's minimum threshold (e.g., describe why or how a water level minimum threshold set at a particular representative monitoring site is similar to or different to water level thresholds in nearby representative monitoring sites). The GSP also must describe the relationship between the selected minimum threshold and minimum thresholds for other sustainability indicators (e.g., describe how a water level minimum threshold would not trigger an undesirable result for land subsidence).

3. *How minimum thresholds have been selected to avoid causing undesirable results in adjacent basins or affecting the ability of adjacent basins to achieve sustainability goals.*

   The GSP must describe how the minimum threshold has been set to avoid impacts to adjacent basins. This can be supported by information such as an interbasin agreement, documentation of coordination with GSAs in adjacent basins, and general descriptions of how the minimum threshold is consistent with sustainable management criteria in adjacent basins. Information provided for this component will likely be enhanced beyond the initial GSP in future annual reports and five-year updates. It may be important to inform GSAs in adjacent basins where minimum thresholds are planned and their quantitative values.

4. *How minimum thresholds may affect the interests of beneficial uses and users of groundwater or land uses and property interests.*

   The GSP must discuss how groundwater conditions at a selected minimum threshold could affect beneficial uses and users. This information should be supported by a description of the beneficial uses groundwater and identification of beneficial uses, which should be developed through communication, outreach, and/or engagement with parties representing those beneficial uses and users, along with any additional information the GSA used when developing the minimum threshold.

5. *How state, federal, or local standards relate to the relevant sustainability indicator. If the minimum threshold differs from other regulatory standards, the Agency shall explain the nature of and basis for the difference.*

   The GSP must discuss relevant standards that pertain to the sustainability indicator and justify any differences between the selected minimum threshold and those standards. For instance, the GSP will need to justify why a different level was used if a water quality minimum threshold is set at a different level than a state or federal maximum contaminant level (MCL).

6. *How each minimum threshold will be quantitatively measured, consistent with the monitoring network requirements described in Subarticle 4.*

   Subarticle 4 of the GSP Regulations addresses monitoring networks. The GSP must document the metrics that will be monitored (e.g., groundwater level, groundwater quality) as well as the frequency and timing of measurement (e.g., twice per year in the spring and fall).

Descriptions for these six components are required for all minimum thresholds. However, descriptions for individual components can be shared for multiple minimum thresholds, where appropriate (e.g., in some instances a single description could be provided to describe how a group of minimum thresholds were selected to avoid causing undesirable results in an adjacent basin).

Required Minimum Threshold Metrics for Each Sustainability Indicator

In addition to the six components described above that apply to all minimum thresholds, the GSP Regulations contain specific requirements and metrics for each sustainability indicator.[8] The purpose of the specific requirements is to ensure consistency within groundwater basins and between adjacent groundwater basins.

Specific requirements for the metrics used to quantify each sustainability indicator are listed below and shown in **Figure 2**:

- The minimum threshold metric for the **chronic lowering of groundwater levels** sustainability indicator shall be a groundwater elevation measured at the representative monitoring site.
- The minimum threshold for **reduction of groundwater storage** is a volume of groundwater that can be withdrawn from a basin or management area, based on measurements from multiple representative monitoring sites, without leading to undesirable results. Contrary to the general rule for setting minimum thresholds, the reduction of groundwater storage minimum threshold is not set at individual monitoring sites. Rather, the minimum threshold is set for a basin or management area.
- The minimum threshold metric for **seawater intrusion** shall be the location of a chloride isocontour. Contrary to the general rule for setting minimum thresholds, the seawater intrusion minimum threshold is not set at individual monitoring sites. Rather, the minimum threshold is set along an isocontour line in a basin or management area.
- The minimum threshold metric for **degraded water quality** shall be water quality measurements that indicate degradation at the monitoring site. This can be based on migration of contaminant plumes, number of supply wells, volume of groundwater, or the location of a water quality isocontour within the basin. Depending on how the GSA defines the degraded water quality minimum threshold, it can be defined at a site, along the isocontour line, or as a calculated volume.
- The minimum threshold metric for **land subsidence** shall be a rate and the extent of land subsidence.
- The minimum threshold metric for **depletion of interconnected surface waters** shall be a rate or volume of surface water depletion.

Sustainability Indicators	Lowering GW Levels	Reduction of Storage	Seawater Intrusion	Degraded Quality	Land Subsidence	Surface Water Depletion
Metric(s) Defined in GSP Regulations	• Groundwater Elevation	• Total Volume	• Chloride concentration isocontour	• Migration of Plumes • Number of supply wells • Volume • Location of isocontour	• Rate and Extent of Land Subsidence	• Volume or rate of surface water depletion

Figure 2. Minimum Threshold Metrics

Examples and Considerations for Minimum Thresholds

The following provides graphical examples and considerations for use by GSAs when setting minimum thresholds. The following subsections are organized by sustainability indicator and are illustrative examples only, as GSAs may have other considerations when setting minimum thresholds.

Chronic Lowering of Groundwater Levels Minimum Threshold

Figure 3 illustrates a hypothetical groundwater level hydrograph and associated minimum threshold at a representative monitoring site. In this hypothetical example, the GSA set the minimum threshold at some level below conditions at the time of GSP submission. Note that this and many subsequent examples in this document use 2020 as the hypothetical GSP submission date. The actual GSP submission date required by SGMA varies. GSPs must be submitted by January 31, 2020 for high- and medium-priority basins determined by the Department to be critically overdrafted. All other high- and medium-priority basins must submit GSPs by January 31, 2022.

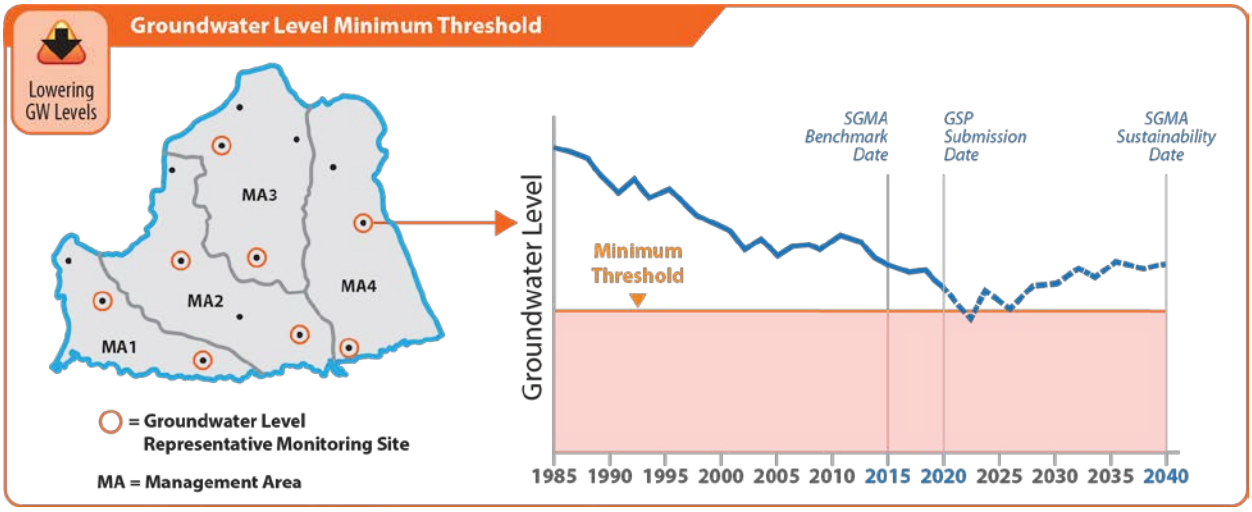


Figure 3. Example Groundwater Level Minimum Threshold Established at a Representative Monitoring Site

Considerations when establishing minimum thresholds for groundwater levels at a given representative monitoring site may include, but are not limited to:

- What are the historical groundwater conditions in the basin?
- What are the average, minimum, and maximum depths of municipal, agricultural, and domestic wells?
- What are the screen intervals of the wells?
- What impacts do water levels have on pumping costs (e.g., energy cost to lift water)?
- What are the adjacent basin's minimum thresholds for groundwater elevations?
- What are the potential impacts of changing groundwater levels on groundwater dependent ecosystems?
- Which principal aquifer, or aquifers, is the representative monitoring site evaluating?

Reduction in Groundwater Storage Minimum Threshold

Figure 4 illustrates a hypothetical graph depicting the volume of groundwater available in storage through time, and the associated minimum threshold for the basin.

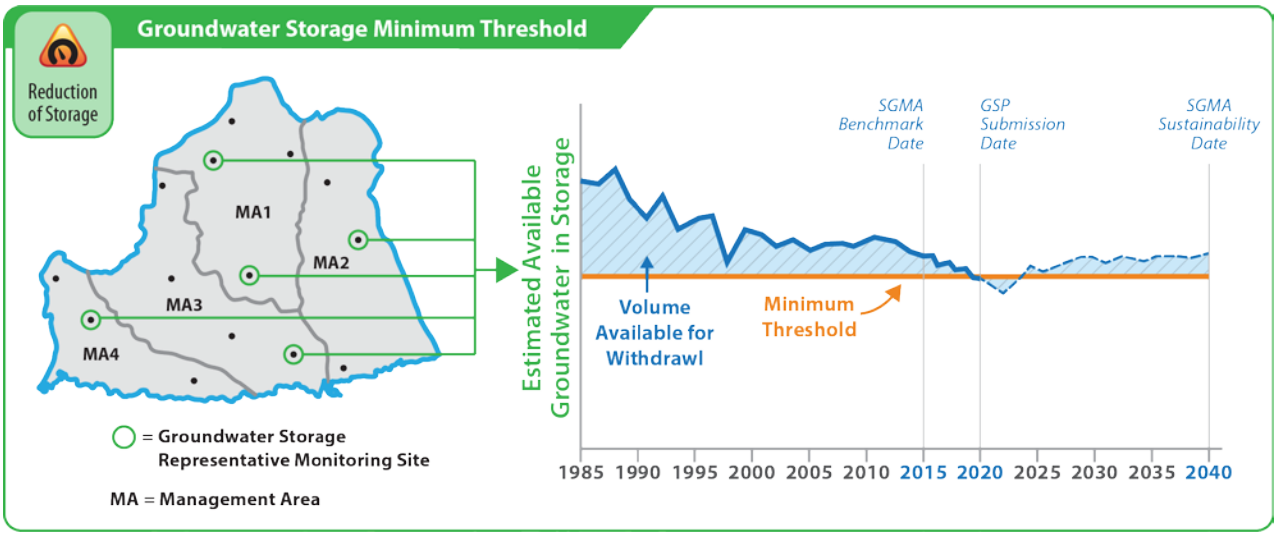


Figure 4. Example Groundwater Storage Minimum Threshold Established at the Basin Scale

Considerations when establishing the minimum threshold for groundwater storage may include, but are not limited to:

- What are the historical trends, water year types, and projected water use in the basin?
- What groundwater reserves are needed to withstand future droughts?
- Have production wells ever gone dry?
- What is the effective storage of the basin? This may include understanding of the:
  - Average, minimum, and maximum depth of municipal, agricultural, and domestic wells.
  - Impacts on pumping costs (i.e., energy cost to lift water).
- What are the adjacent basin's minimum thresholds?

Seawater Intrusion Minimum Threshold

Figure 5 illustrates hypothetical chloride isoconcentration contours for two aquifers in a coastal basin. The isoconcentration contours are used as minimum thresholds for seawater intrusion.

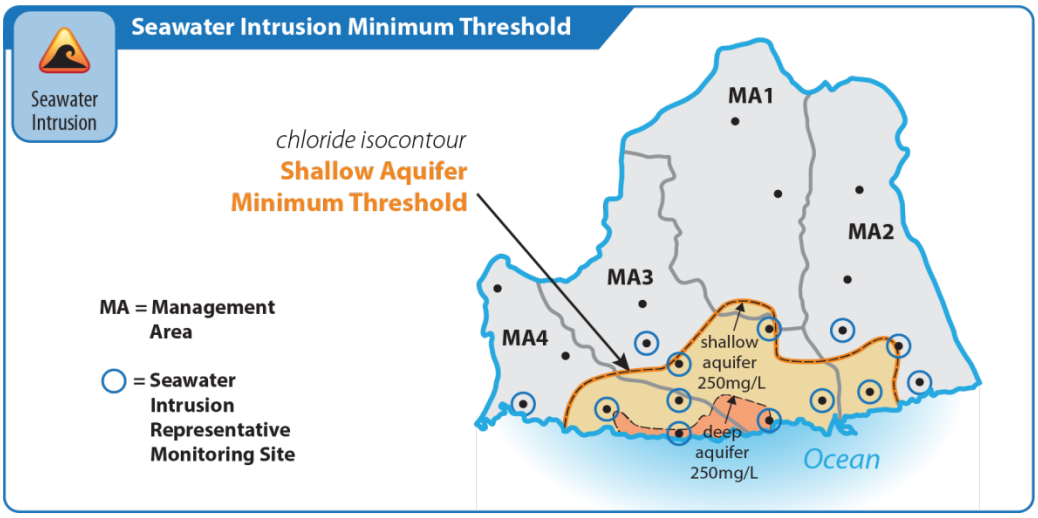


Figure 5. Example Seawater Intrusion Minimum Threshold Established at the Chloride Isocontour

Considerations when establishing minimum thresholds for seawater intrusion at a given isocontour location may include, but are not limited to:

- What is the historical rate and extent of seawater intrusion in affected principal aquifers?
- How are land uses in the basin sensitive to seawater intrusion?
- What are the financial impacts of seawater intrusion on agricultural, municipal, and domestic wells?
- What are the Regional Water Quality Control Board Basin Plan objectives?
- What are the adjacent basin's minimum thresholds?

Degraded Groundwater Quality Minimum Threshold

Figure 6 illustrates two hypothetical minimum thresholds for groundwater quality in a basin. The minimum threshold depicted on the top graph is associated with point source contamination (e.g., PCE released from a dry cleaner) and the minimum threshold depicted on the lower graph is associated with nonpoint source contamination (e.g., nitrate in groundwater from regional land use practices).

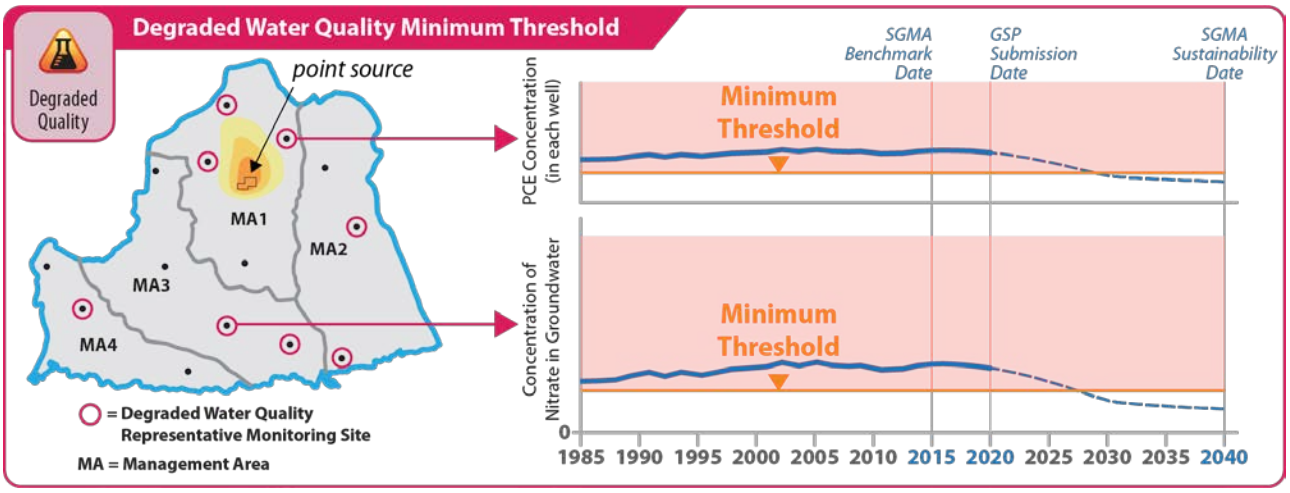


Figure 6. Example Degraded Water Quality Minimum Threshold Established for Point and Nonpoint Source Pollutants

Considerations when establishing minimum thresholds for water quality may include, but are not limited to:

- What are the historical and spatial water quality trends in the basin?
- What is the number of impacted supply wells?
- What aquifers are primarily used for providing water supply?
- What is the estimated volume of contaminated water in the basin?
- What are the spatial and vertical extents of major contaminant plumes in the basin, and how could plume migration be affected by regional pumping patterns?
- What are the applicable local, State, and federal water quality standards?
- What are the major sources of point and nonpoint source pollution in the basin, and what are their chemical constituents?
- What regulatory projects and actions are currently established to address water quality degradation in the basin (e.g., an existing groundwater pump and treat system), and how could they be impacted by future groundwater management actions?
- What are the adjacent basin's minimum thresholds?

Land Subsidence Minimum Threshold

Figure 7 illustrates a hypothetical minimum threshold for land subsidence in a basin. The minimum threshold depicts a cumulative amount of subsidence at a given point.

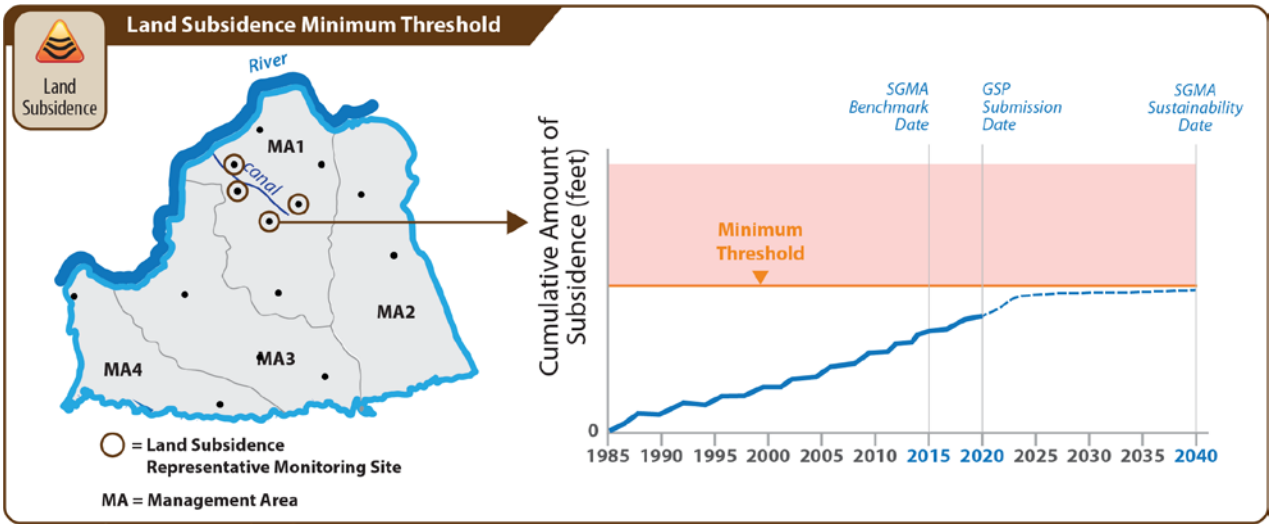


Figure 7. Example Land Subsidence Minimum Threshold

Considerations when establishing minimum thresholds for land subsidence at a given representative monitoring site may include, but are not limited to:

- Do principle aquifers in the basin contain aquifer material susceptible to subsidence?
- What are the historical, current, and projected groundwater levels, particularly the historical lows?
- What is the historical rate and extent of subsidence?
- What are the land uses and property interests in areas susceptible to subsidence?
- What is the location of infrastructure and facilities susceptible to subsidence (e.g., canals, levees, pipelines, major transportation corridors)?
- What are the adjacent basin's minimum thresholds?

Depletion of Interconnected Surface Water Minimum Threshold

Figure 8 shows a hypothetical minimum threshold for depletion of interconnected surface waters. This example presents the potential stream depletion rate (or volume) due to groundwater pumping simulated by the basin's integrated hydrologic model. Other approaches for demonstrating stream depletion, instead of the use of a numerical model, may be valid.

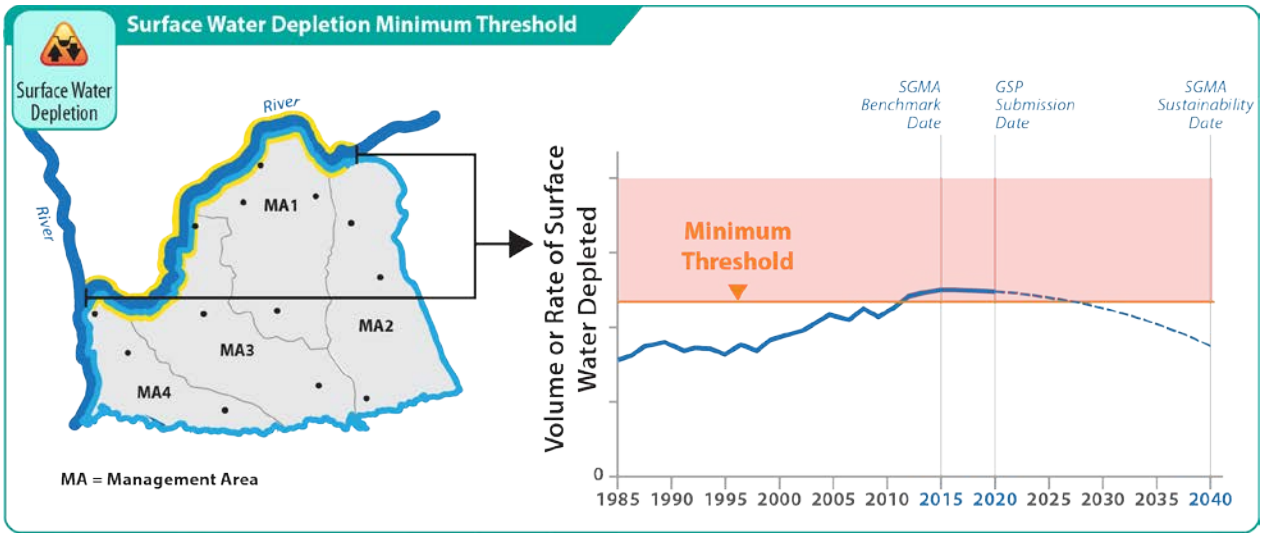


Figure 8. Example of Depletion of Interconnected Surface Water Minimum Threshold

Considerations when establishing minimum thresholds for depletions of interconnected surface water may include, but are not limited to:

- What are the historical rates of stream depletion for different water year types?
- What is the uncertainty in streamflow depletion estimates from analytical and numerical tools?
- What is the proximity of pumping to streams?
- Where are groundwater dependent ecosystems in the basin?
- What are the agricultural and municipal surface water needs in the basin?
- What are the applicable State or federally mandated flow requirements?

Using Groundwater Elevations as a Proxy

GSP Regulations allow GSAs to use groundwater elevation as a proxy metric for any (or potentially all) of the sustainability indicators when setting minimum thresholds[9] and measurable objectives[10], provided the GSP demonstrates that there is a significant correlation between groundwater levels and the other metrics.[11]

Two possible approaches for using groundwater elevation as a proxy metric for the definition of sustainable management criteria are:

(1) Demonstrate that the minimum thresholds and measurable objectives for chronic declines of groundwater levels are sufficiently protective to ensure significant and unreasonable occurrences of other sustainability indicators will be prevented. In other words, demonstrate that setting a groundwater level minimum threshold satisfies the minimum threshold requirements for not only

chronic lowering of groundwater levels but other sustainability indicators at a given site.

(2) Identify representative groundwater elevation monitoring sites where minimum thresholds and measurable objectives based on groundwater levels are developed for a specific sustainability indicator. In other words, the use of a groundwater level minimum threshold is not intended to satisfy the minimum threshold requirements for chronic lowering of groundwater but is intended solely for establishing a threshold for another sustainability indicator.

Subsidence as an Example

As described below, either approach could be applied to subsidence.

- **Approach 1** – Groundwater level minimum thresholds are above historical low groundwater levels. The GSA determines and documents that avoidance of the minimum thresholds for groundwater levels will also ensure that subsidence will be avoided. In this approach, the GSA would be applying the same numeric definition to two undesirable results – chronic lowering of groundwater and subsidence (**Figure 9**).
- **Approach 2** – The GSA has determined that specific areas are prone to subsidence, knows what the historical low groundwater levels are for those areas, and has demonstrated that no additional inelastic land subsidence will occur as long as groundwater levels remain above historical lows. The GSA develops minimum thresholds for land subsidence based on groundwater levels for the areas prone to subsidence (**Figure 9**). These land subsidence representative monitoring sites are not necessarily included as representative monitoring sites for groundwater level decline.

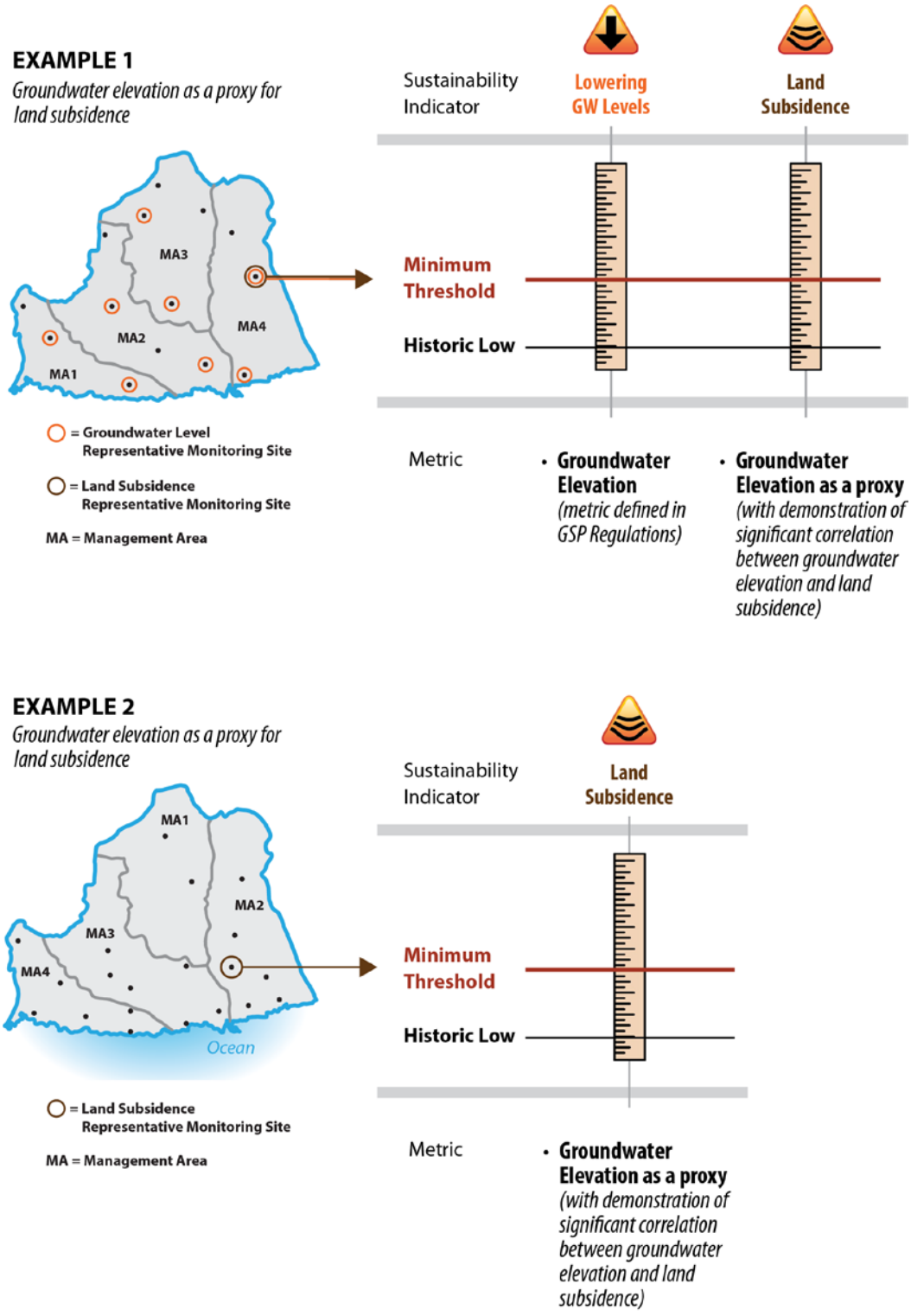


Figure 9. Example of Using Groundwater Elevation as a Proxy for Subsidence Monitoring

UNDESIRABLE RESULTS

Undesirable results occur when conditions related to any of the six sustainability indicators become significant and unreasonable. Undesirable results will be used by the Department to determine whether the sustainability goal has been achieved within the basin.

All undesirable results will be based on minimum thresholds exceedances. Undesirable results will be defined by minimum threshold exceedances at a single monitoring site, multiple monitoring sites, a portion of a basin, a management area, or an entire basin. Exceeding a minimum threshold at a single monitoring site is not necessarily an undesirable result, but it could signal the need for modifying one or more management actions, or implementing a project to benefit an area before the issue becomes more widespread throughout the basin. However, the GSP must define when an undesirable result is triggered.

The GSP must include a description for each undesirable result. Undesirable results must be agreed upon by all GSAs within a basin. If there is more than one GSP in the basin, a single undesirable result description must be agreed upon and documented in the coordination agreement.

GSP Regulations require three components for each undesirable result.[12] The three components (in italicized text) and considerations for how they should be addressed are as follows:

1. *The cause of groundwater conditions occurring throughout the basin that would lead to or has led to undesirable results based on information described in the basin setting, and other data or models as appropriate.*[13]
   The GSP document the factors that may lead to, or have led to, undesirable results. These factors may be localized or basinwide. An example of a localized cause for undesirable results is a group of active wells that are inducing significant and unreasonable land subsidence in a nearby canal. An example of a basinwide cause is general overpumping of groundwater that leads to a significant and unreasonable reduction of groundwater storage. There will often be multiple causes for groundwater conditions becoming significant and unreasonable, and GSAs must investigate each. Even if a basin does not currently have undesirable results, the GSP Regulations require GSAs to consider the causes that would lead to undesirable results and define undesirable results using minimum thresholds.
2. *The criteria used to define when and where the effects of the groundwater conditions cause undesirable results for each applicable sustainability indicator. The criteria*

shall be based on a quantitative description of the combination of minimum threshold exceedances that cause significant and unreasonable effects in the basin.[14]

The GSP Regulations require undesirable results to be quantified by minimum threshold exceedances. GSAs have significant flexibility in defining the combinations of minimum threshold exceedances that constitute an undesirable result GSAs should evaluate multiple spatial scales when setting the criteria for undesirable results. Consider an example of two basins. In the first basin, 50 percent of wells have water levels below their assigned minimum threshold. In the second basin, all wells have water levels above their minimum thresholds except for one well where water levels are 800 feet below the minimum threshold. Both basins likely have an undesirable result. GSAs should define their undesirable results to be protective of both scenarios.

3. *The potential effects of the undesirable result on beneficial uses and users of groundwater, land uses, and property interests.*[15]

   The GSA, having acquired information regarding beneficial uses and users of groundwater in the basin, land uses, and property interests tied to groundwater, should describe the effects of each of the potential undesirable results for the basin. The description should make clear how potential effects on beneficial uses and users were considered in the establishment of the undesirable results.

Experiencing Undesirable Results

Avoidance of the defined undesirable results must be achieved within 20 years of GSP implementation (20-year period). Some basins may experience undesirable results within the 20-year period, particularly if the basin has existing undesirable results as of January 1, 2015. The occurrence of one or more undesirable results within the initial 20-year period does not, by itself, necessarily indicate that a basin is not being managed sustainably, or that it will not achieve sustainability within the 20-year period. However, GSPs must clearly define a planned pathway to reach sustainability in the form of interim milestones, and show actual progress in annual reporting.

Failing to eliminate undesirable results within 20 years, or failing to implement a GSP to achieve the sustainability goal established for a basin, will result in the Department deeming the GSP inadequate and could result in State Water Resources Control Board intervention. Failing to meet interim milestones could indicate that the GSA is unlikely to achieve the sustainability goal in the basin.

Example of Undesirable Results

This section provides a simplified example to illustrate the relationship between certain sustainable management criteria. The example is for one sustainability indicator

(lowering groundwater levels, using the metric of groundwater elevation. The concepts in the example could be extended to other sustainability indicators using other metrics.

In the example, a hypothetical basin has set minimum thresholds, interim milestones, and measurable objectives for groundwater levels (**Figure 10**) at a network of eight representative monitoring points; to simplify this example, the criteria are assumed to be the same at each well. After considering the conditions at which lowering of groundwater levels would become significant and unreasonable, the GSA has determined that minimum threshold exceedances (i.e., groundwater levels dropping below the minimum threshold) at three or more representative monitoring sites would constitute an undesirable result.

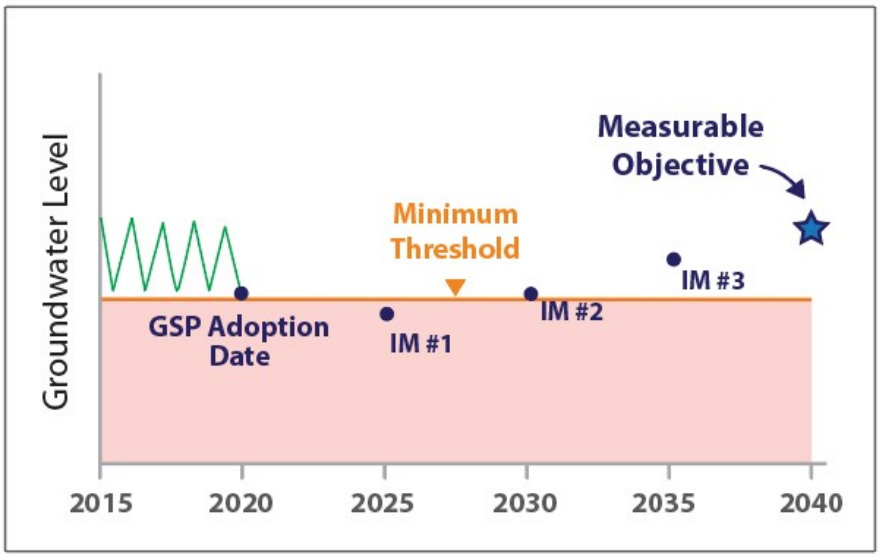


Figure 10. Example Minimum Threshold, Interim Milestones (IM), and Measurable Objective

In each of the following scenarios, the GSA monitors groundwater levels at the representative monitoring sites for the 20-year period following GSP submission.

Scenario 1 – Minimum Threshold Exceedances without an Undesirable Result

In this scenario (**Figure 11**), one of the eight representative monitoring wells has periodic minimum threshold exceedances over a several-year period after submission of the GSP. After this period, groundwater levels at the representative monitoring site increase and remain above the minimum threshold. Groundwater levels at all other representative monitoring sites remain above the minimum threshold for the entire 20-year period following GSP submission. Groundwater levels at all sites are at or above the measurable objective at the end of the 20-year period. Despite periodic minimum threshold exceedances at one representative monitoring well, the basin never

experienced an undesirable result for this sustainability indicator. The original GSP submission foresaw potential minimum threshold exceedances as shown by the first five-year interim milestone set below the minimum threshold.

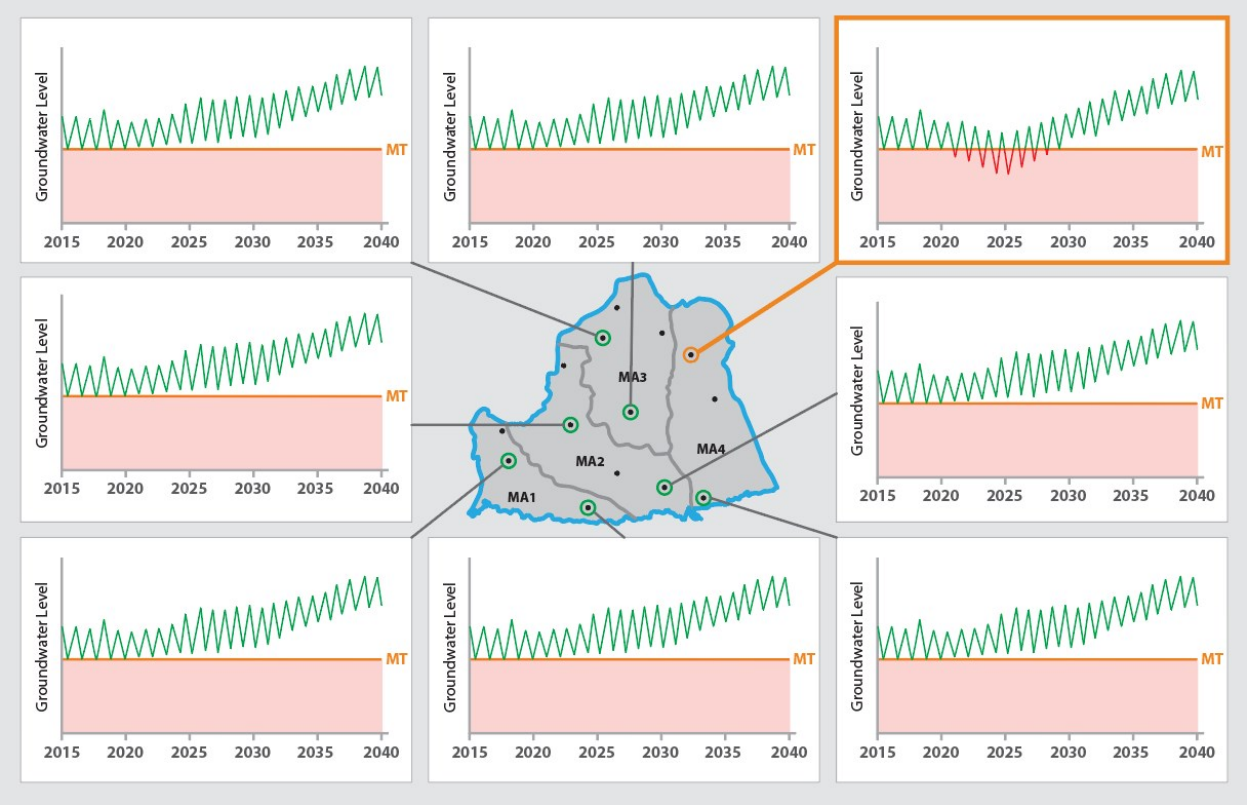


Figure 11. Example Groundwater Level Representative Monitoring Sites – Scenario 1

Scenario 2 – Minimum Threshold Exceedances with Undesirable Results Eliminated Within 20 Years

In this scenario (**Figure 12**), three of the eight representative monitoring wells have periodic minimum threshold exceedances over a several-year period after submission of the GSP. After this period, groundwater levels at the three representative monitoring sites increase and remain above their respective minimum thresholds. Groundwater levels at all other representative monitoring sites remain above the minimum threshold for the entire 20-year period following GSP submission. Groundwater levels at all sites are at or above the measurable objective at the end of the 20-year period.

As opposed to Scenario 1, this basin did experience an undesirable result during the period of minimum threshold exceedance at the three representative monitoring wells. However, the basin was sustainably managed because the GSA planned for a period of minimum threshold exceedances via their interim milestones, and because the GSA implemented necessary projects and management actions to eliminate the undesirable result and achieve the measurable objective.

Note that if the GSAs in this hypothetical basin had not planned for continued groundwater level decline via appropriate interim milestones, or had not implemented the necessary projects and management actions to eliminate the undesirable result, the Department could have determined that the GSA was not likely to achieve the sustainability goal for the basin within the 20-year period.

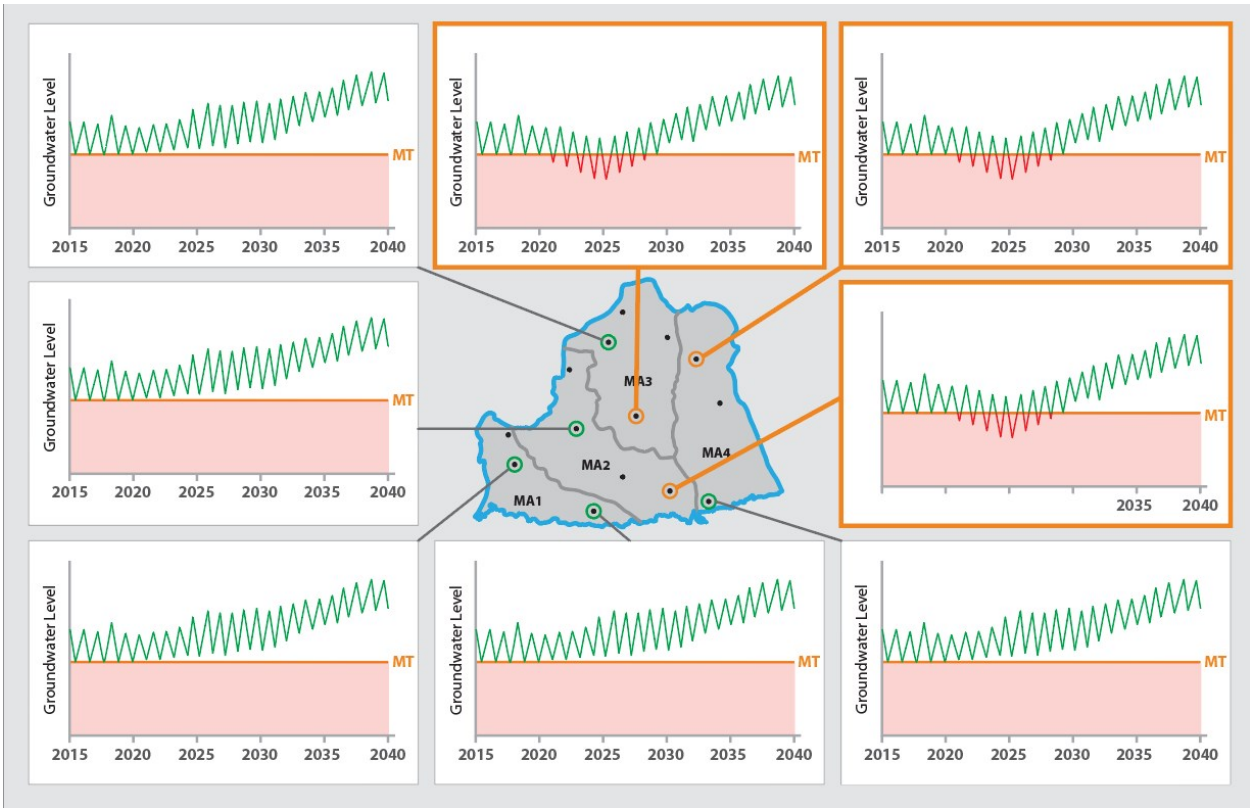


Figure 12. Example Groundwater Level Representative Monitoring Sites – Scenario 2

Scenario 3 – Minimum Threshold Exceedances with Undesirable Results Not Eliminated Within 20 Years

In this scenario (**Figure 13**), three of the eight representative monitoring wells have minimum threshold exceedances beginning approximately five years after submission of the GSP. Unlike Scenario 2, groundwater levels continue to decline at the three representative monitoring sites throughout the 20-year period following GSP submission, and are well below both their minimum thresholds and interim milestones. The basin experiences an undesirable result when the three wells begin exceeding their minimum thresholds, and the undesirable result persists throughout the 20-year period. Sustainable groundwater management was not achieved in the basin for this scenario.

Although this example shows undesirable results persisting for the 20-year period, in a real situation the Department would likely determine that the GSA was unlikely to achieve the sustainability goal at one of the interim milestones, thereby triggering State

intervention much earlier in the 20-year period. It is beyond the scope of this example or this document to discuss details of State intervention, but it is important to note that State intervention can occur within the 20-year period following GSP submittal.

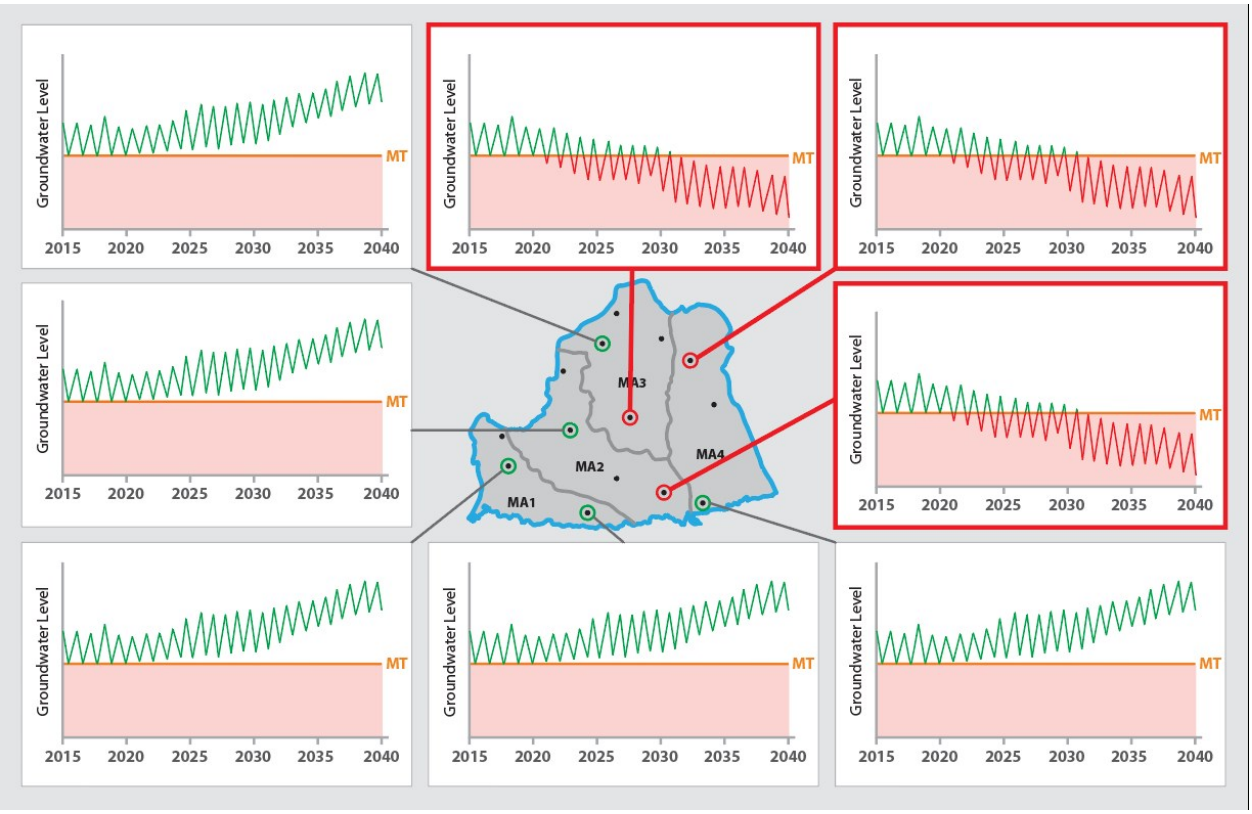


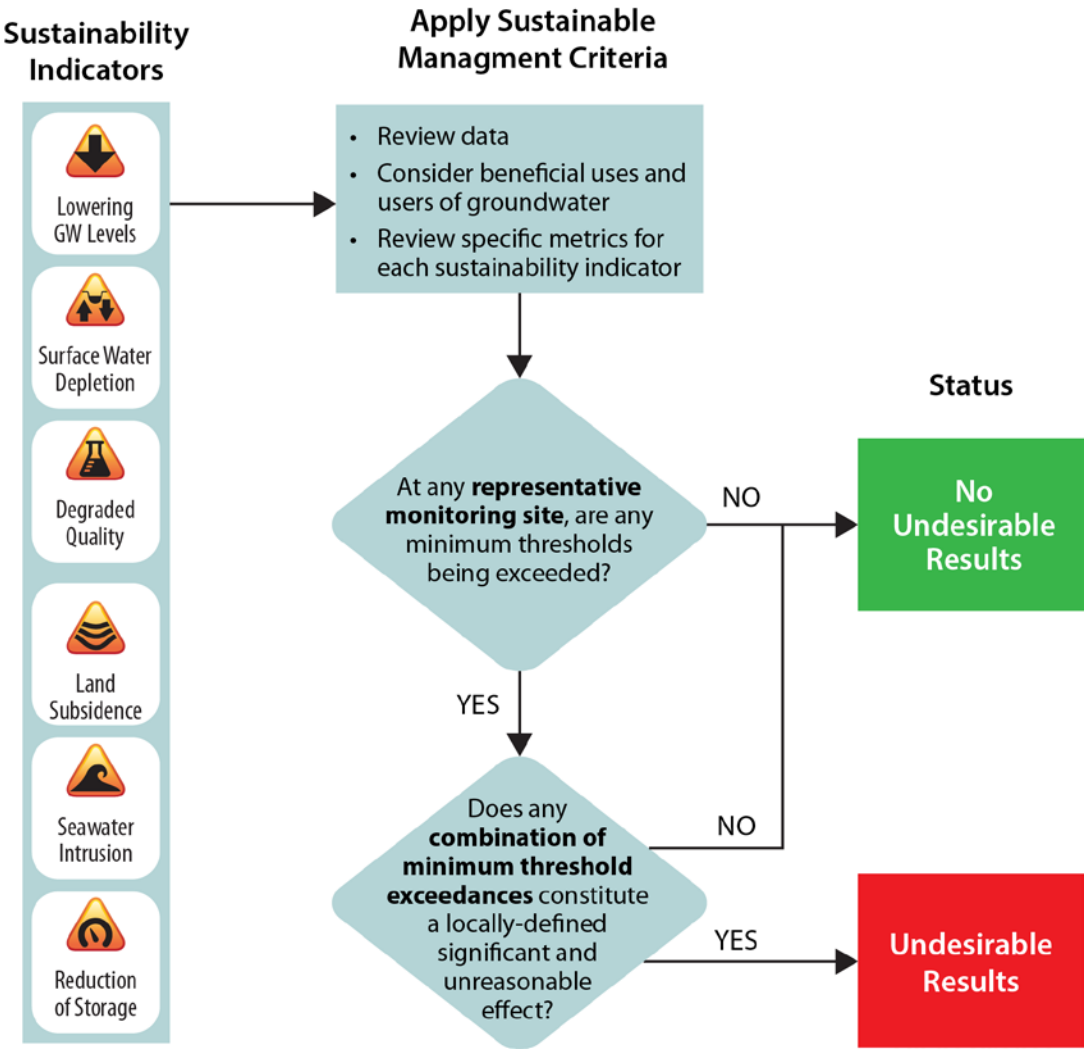
Figure 13. Example Groundwater Level Representative Monitoring Sites – Scenario 3

Relationship between Sustainability Indicators, Minimum Thresholds, and Undesirable Results

Sustainability indicators are the six effects caused by groundwater conditions occurring throughout the basin that, when significant and unreasonable, are undesirable results. For example, surface water depletion due to groundwater pumping is a sustainability indicator because it is an effect that must be monitored to determine whether it has become significant and unreasonable.

Sustainability indicators become undesirable results when a GSA-defined combination of minimum thresholds is exceeded. Those combinations of minimum threshold exceedances define when a basin condition becomes significant and unreasonable.

The relationship between sustainability indicators, minimum thresholds, and undesirable results is shown in the illustration below.



MEASURABLE OBJECTIVES

Measurable objectives are quantitative goals that reflect the basin's desired groundwater conditions and allow the GSA to achieve the sustainability goal within 20 years. Measurable objectives are set for each sustainability indicator at the same representative monitoring sites and using the same metrics as minimum thresholds. Measurable objectives should be set such that there is a reasonable margin of operational flexibility (**Figure 14**) between the minimum threshold and measurable objective that will accommodate droughts, climate change, conjunctive use operations, or other groundwater management activities. There are exceptions to this general rule. For example, if the minimum threshold for land subsidence is zero, the measurable objective may also be zero. Projects and management actions included in GSPs should be designed to meet the measurable objectives, with specific descriptions of how those projects and management actions will achieve their desired goals.

In addition to the measurable objective, interim milestones must be defined in five-year increments[16] at each representative monitoring site using the same metrics as the measurable objective, as illustrated in **Figure 14**. These interim milestones are used by GSAs and the Department to track progress toward meeting the basin's sustainability goal. Interim milestones must be coordinated with projects and management actions proposed by the GSA to achieve the sustainability goal. The schedule for implementing projects and management actions will influence how rapidly the interim milestones approach the measurable objectives (i.e., the path to sustainable groundwater management).

The Department will periodically (at least every five years) review GSPs to determine, among other items, whether failure to meet interim milestones is likely to affect the ability of the GSA(s) in a basin to achieve the sustainability goal.[17]

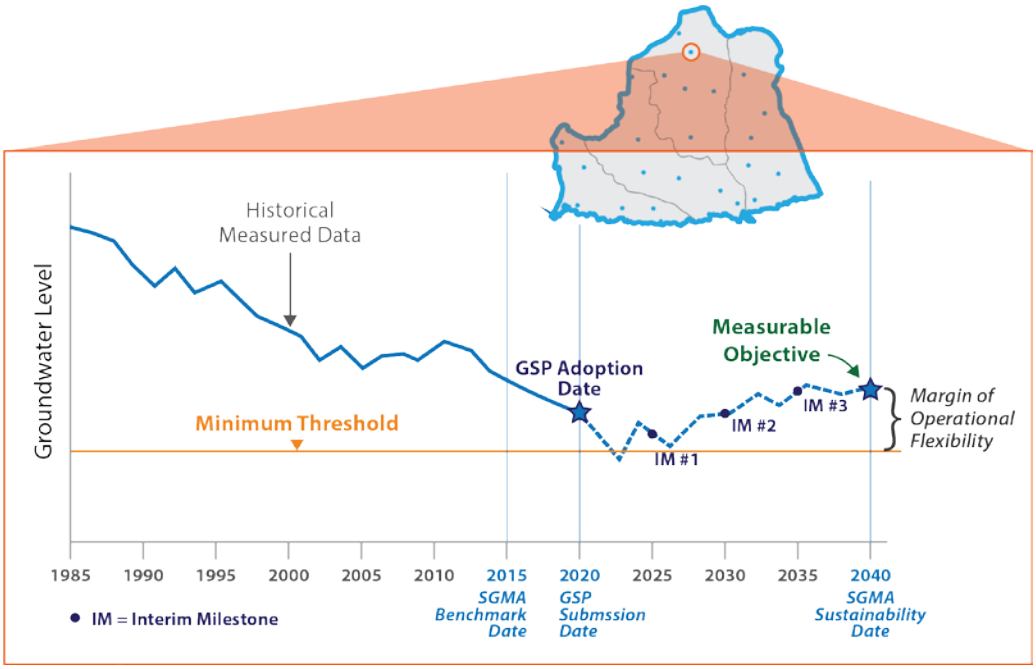


Figure 14. Relationship between Minimum Thresholds, Measurable Objectives, Interim Milestones (IM), and Margin of Operational Flexibility for a Representative Monitoring Site

The Path to Sustainable Groundwater Management

There will be many paths to sustainable groundwater management based on groundwater conditions and locally-defined values. **Figure 14** shows the relationship between minimum thresholds, measurable objectives, interim milestones, and margin of operational flexibility for a hypothetical basin. In the example used for **Figure 14**, groundwater levels are predicted to initially decline for the first five years after GSP adoption, and then rise over the subsequent 15 years to meet the measurable objective. At five-year increments, there are interim milestones to check the basin's progress towards the measurable objective. In **Figure 14**, the measured data never drops below the minimum threshold. This is just one example of a path towards reaching sustainability. The Department recognizes that there are different sustainability paths based on basin conditions, future supply and demand forecasts, and implementation of groundwater improvement projects. Three additional potential paths to sustainability are illustrated in **Figure 15**.

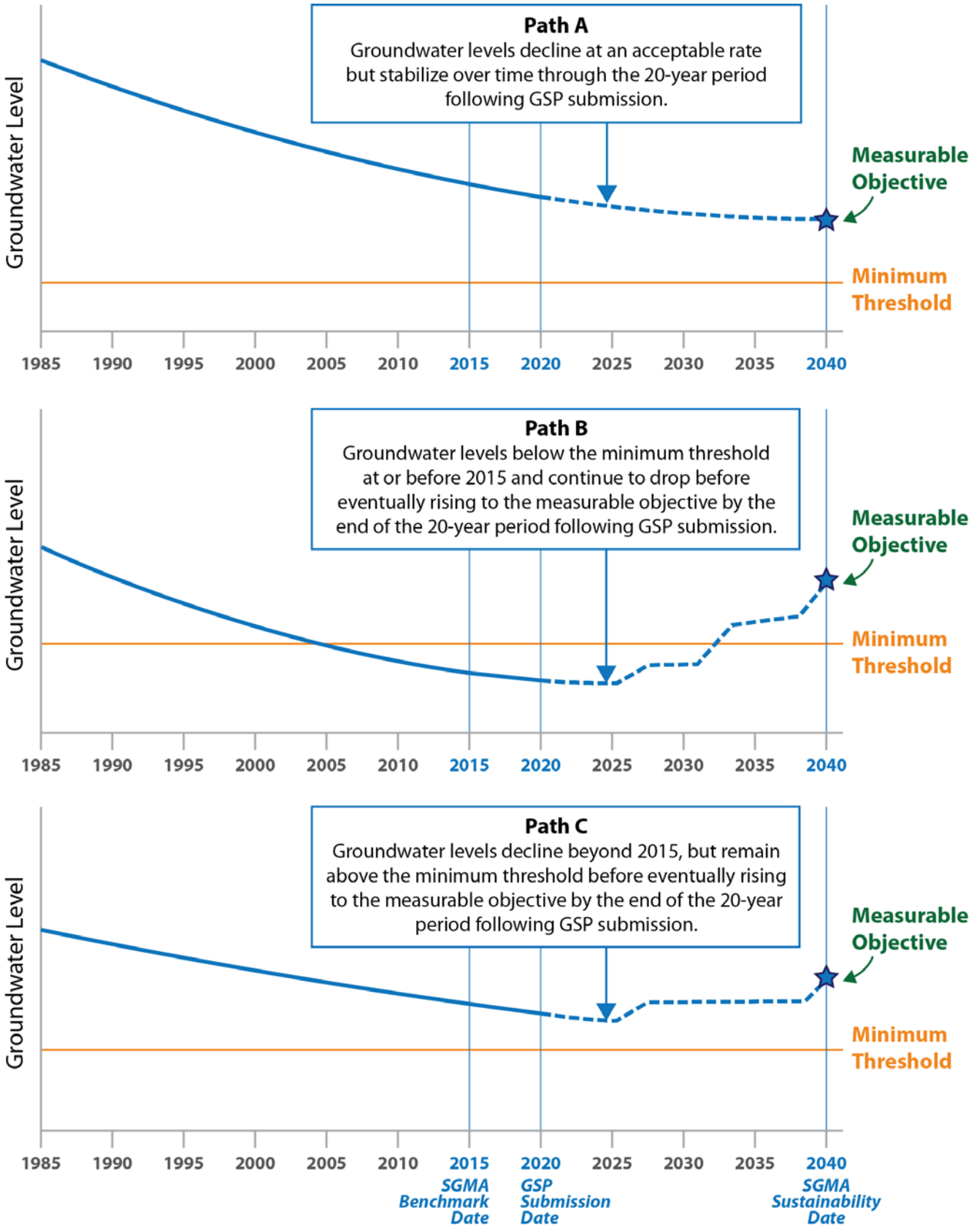


Figure 15. Potential Paths to Sustainability

Measurable Objectives when an Undesirable Result Occurred before January 1, 2015

SGMA states that a GSP "may, but is not required to, address undesirable results that occurred before, and have not been corrected by, January 1, 2015." Once minimum thresholds have been developed and an undesirable result numerically defined, the GSA may evaluate whether that undesirable result was present prior to January 1, 2015. This evaluation is not possible until the GSA has defined what constitutes a significant and unreasonable condition (an undesirable result).

If the evaluation indicates that an undesirable result occurred prior to January 1, 2015, the GSA must set measurable objectives to either maintain or improve upon the conditions that were occurring in 2015. The GSA must plan a pathway, indicated by appropriate interim milestones, to reach and maintain the 2015 conditions within the 20-year implementation timeline.

SUSTAINABILITY GOAL

GSAs must develop a sustainability goal that is applicable to the entire basin. If multiple GSPs are developed for a single basin, then the sustainability goal must be presented in the basinwide *coordination agreement*.

The sustainability goal should succinctly state the GSA's objectives and desired conditions of the groundwater basin, how the basin will get to that desired condition, and why the measures planned will lead to success.

Unlike the other sustainable management criteria, the sustainability goal is not quantitative. Rather, it is supported by the locally-defined minimum thresholds and undesirable results. Demonstration of the absence of undesirable results supports a determination that basin is operating within its sustainable yield and, thus, that the sustainability goal has been achieved.

GSA's should consider the following when developing their sustainability goal:

- **Goal description**. The goal description should qualitatively state the GSA's objective or mission statement for the basin. The goal description should summarize the overall purpose for sustainably managing groundwater resources and reflect local economic, social, and environmental values within the basin.
- **Discussion of measures**. The sustainability goal should succinctly summarize the measures that will be implemented. This description of measures should be consistent with, but may be less detailed than, the description of projects and management actions proposed in the GSP. Examples of measures a GSA could implement include demand reduction and development of groundwater recharge projects. The goal should affirm that these measures will lead to operation of the basin within its sustainable yield.
- **Explanation of how the goal will be achieved in 20 years**. The sustainability goal should describe how implementation of the measures will result in sustainability. For example, if the measures include demand reduction and implementation of groundwater recharge projects, then the goal would explain how those measures will lead to sustainability (e.g., they will raise groundwater levels above some threshold values and eliminate or reduce future land subsidence).

Note that most of the sustainability goal can only be finalized after minimum thresholds and undesirable results have been defined, projects and management actions have been identified, and the projected impact of those projects and management actions on groundwater conditions have been evaluated. Therefore, completion of the sustainability goal will likely be one of the final components of GSP development.

Role of Sustainable Yield Estimates in SGMA

In general, the sustainable yield of a basin is the amount of groundwater that can be withdrawn annually without causing undesirable results. Sustainable yield is referenced in SGMA as part of the estimated basinwide water budget and as the outcome of avoiding undesirable results.

Sustainable yield estimates are part of SGMA's required basinwide water budget. Section 354.18(b)(7) of the GSP Regulations requires that an estimate of the basin's sustainable yield be provided in the GSP (or in the coordination agreement for basins with multiple GSPs). A single value of sustainable yield must be calculated basinwide. This sustainable yield estimate can be helpful for estimating the projects and programs needed to achieve sustainability.

SGMA does not incorporate sustainable yield estimates directly into sustainable management criteria. Basinwide pumping within the sustainable yield estimate is neither a measure of, nor proof of, sustainability. Sustainability under SGMA is only demonstrated by avoiding undesirable results for the six sustainability indicators.

CONCLUSIONS

The key to demonstrating a basin is meeting its sustainability goal is by avoiding undesirable results. Sustainable management criteria are critical elements of the GSP that define sustainability in the basin.

Before setting sustainable management criteria, the GSA should understand the basin setting by establishing a hydrogeological conceptual model, engage stakeholders, and define management areas as applicable. This document addresses best management practices for developing sustainable management criteria, including minimum thresholds, undesirable results, measurable objectives, and the sustainability goal.

Setting sustainable management criteria can be a complex, time consuming, and iterative process depending on the complexity of the basin and its stakeholders. GSAs should allow sufficient time for criteria development during the GSP development process. The public should be engaged early in the process so their perspectives can be considered during sustainable management criteria development. To ensure timely stakeholder participation, it may be useful for GSAs to set a timeline for development of the sustainable management criteria.

5. KEY DEFINITIONS

The key definitions related to sustainable management criteria development outlined in applicable SGMA code and regulations are provided below for reference.

SGMA Definitions (California Water Code 10721)

(d) "Coordination agreement" means a legal agreement adopted between two or more groundwater sustainability agencies that provides the basis for coordinating multiple agencies or groundwater sustainability plans within a basin pursuant to this part.

(r) "Planning and implementation horizon" means a 50-year period over which a groundwater sustainability agency determines that plans and measures will be implemented in a basin to ensure that the basin is operated within its sustainable yield.

(u) "Sustainability goal" means the existence and implementation of one or more groundwater sustainability plans that achieve sustainable groundwater management by identifying and causing the implementation of measures targeted to ensure that the applicable basin is operated within its sustainable yield.

(v) "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) "Sustainable yield" means the maximum quantity of water, calculated over a base period representative of long-term conditions in the basin and including any temporary surplus, that can be withdrawn annually from a groundwater supply without causing an undesirable result.

(x) "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 groundwater 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.

Groundwater Sustainability Plan Regulations (California Code of Regulations 351)

(g) "Basin setting" refers to the information about the physical setting, characteristics, and current conditions of the basin as described by the Agency in the hydrogeologic conceptual model, the groundwater conditions, and the water budget, pursuant to Subarticle 2 of Article 5.

(h) "Sustainability indicator" refers to any of the effects caused by groundwater conditions occurring throughout the basin that, when significant and unreasonable, cause undesirable results, as described in Water Code Section 10721(x).

(q) "Interim milestone" refers to a target value representing measurable groundwater conditions, in increments of five years, set by an Agency as part of a Plan.

(r) "Management area" refers to an area within a basin for which the Plan may identify different minimum thresholds, measurable objectives, monitoring, or projects and management actions based on differences in water use sector, water source type, geology, aquifer characteristics, or other factors.

(s) "Measurable objectives" refer to specific, quantifiable goals for the maintenance or improvement of specified groundwater conditions that have been included in an adopted Plan to achieve the sustainability goal for the basin.

(t) "Minimum threshold" refers to a numeric value for each sustainability indicator used to define undesirable results.

(x) "Plan" refers to a groundwater sustainability plan as defined in the Act.

(y) "Plan implementation" refers to an Agency's exercise of the powers and authorities described in the Act, which commences after an Agency adopts and submits a Plan or Alternative to the Department and begins exercising such powers and authorities.

(ag) "Statutory deadline" refers to the date by which an Agency must be managing a basin pursuant to an adopted Plan, as described in Water Code Sections 10720.7 or 10722.4.

NOTES

[1] See 23 CCR § 350 *et seq*.

[2] See Water Code § 10720 *et seq*.

[3] See 23 CCR § 355.4(b)(1)

[4] See Water Code § 10721(v)

[5] See 23 CCR § 354.22 *et seq.*

[6] See 23 CCR § 351(ah); *see also* Water Code § 10721(x).

[7] See 23 CCR § 354.28(b)

[8] See 23 CCR § 354.28(c)

[9] See 23 CCR § 354.28(d)

[10] See 23 CCR § 354.30(d)

[11] See 23 CCR § 354.36(b)

[12] See 23 CCR § 354.26(b)

[13] See 23 CCR 354.26(b)(1)

[14] See 23 CCR 354.26(b)(2)

[15] See 23 CCR 354.26(b)(3)

[16] See 23 CCR § 354.30(e)

[17] See 23 CCR § 355.6(c)(1)

SUPPORTING DOCUMENT

***Napa County Comments on Draft Sustainable Management Criteria BMP*. Steve Lederer, Director of Public Works. 1/4/2018**

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Steven E. Lederer

A Tradition of Stewardship
A Commitment to Service

January 4, 2018

California Department of Water Resources
P.O. Box 942836
Sacramento, CA
94236-0001
Attn: Lauren Hersh, Rm 201
Transmitted by email to: sgmps@water.ca.gov

SUBJECT: Comments on Draft Sustainable Management Criteria BMP

Dear Ms. Hersh:

Napa County appreciates the California Department of Water Resources (DWR) staffs' efforts to prepare guidance documents to facilitate the utilization of approaches and practices to satisfy the requirements of the Sustainable Groundwater Management Act (SGMA). As DWR staff are aware, Napa County submitted an Alternative to a Groundwater Sustainability Plan (GSP), "*Napa Valley Groundwater Sustainability: A Basin Analysis Report for the Napa Valley Subbasin*", on December 31, 2016 (Napa Valley Subbasin BAR). At that time, Napa County relied upon the language in SGMA and the GSP regulations to prepare a functionally equivalent GSP. Napa County has been very proactive in past management of groundwater in the Napa Valley Subbasin and continues to conduct SGMA-related activities, including ongoing monitoring and analysis of groundwater conditions and public outreach and communication.

For purposes of SGMA work currently being performed by Napa County, the County has reviewed the draft document "*Best Management Practices for the Sustainable Management of Groundwater, Sustainable Management Criteria, BMP*" (November 2017) (draft BMP). Some of the examples presented in the draft BMP are helpful in illustrating and communicating concepts, particularly to public audiences. This letter outlines some suggested revisions to the draft BMP to clarify the relationship between the GSP regulations and the draft BMP guidance document. A brief outline of global comments followed by specific comments and recommendations are provided below.

Global Comments

The draft BMP document provides helpful illustrations and general guidance for implementing SGMA as it relates to sustainable management criteria. As described in our specific comments below, we recommend that DWR more closely follow the GSP regulations for the organization of the sustainable management criteria presented in the draft BMP.

There are numerous references in the draft BMP to clearly required GSP elements versus other information that is presented as guidance for successful implementation of the GSP regulations. We recommend that a clearer distinction be provided between regulatory language and

illustrative information or guidance. Citations and explicit language from the GSP regulations followed by explanatory language to aid implementation of the regulations would be helpful to differentiate SGMA and GSP requirements versus suggested BMPs.

Specific Comments

The specific comments below include excerpts from the draft BMP followed by recommended clarification and/or suggested revisions.

Page 3, Paragraph (Para) 3:

> ***Inventory Existing Monitoring Programs***
>
> Minimum thresholds and measurable objectives are set at individual representative monitoring sites. GSAs should compile information from existing monitoring programs (e.g., number of wells and their construction details, which aquifers they monitor). .....

The highlighted sentence describes information that would typically not yet exist in "existing monitoring programs". We suggest that this sentence be either deleted or moved to the end of this paragraph and additional context provided for the future selection of representative monitoring sites.

Page 3, Para 4:

> ***Engage Interested Parties within the Basin***
>
> When setting sustainable management criteria, GSAs must consider the beneficial uses and users of groundwater in their basin. Consideration of the potential effects on beneficial uses and users underpin the ~~minimum thresholds~~ description of undesirable results, including minimum thresholds. GSAs must explain their decision-making processes and how public input was used in the development of their GSPs. There are specific SGMA requirements for GSAs to engage with interested parties within a basin. For more information about requirements of engagement, refer to the Stakeholder Communication and Engagement Guidance Document.

According to GSP regulations Section 354.26 (b)(3), "the description of undesirable results shall include the following: ..... (3) Potential effects on the beneficial uses and users of groundwater, on land uses and property interests, and other potential effects that may occur or are occurring from undesirable results." With respect to minimum thresholds, the regulations specify a description that indicates "how minimum thresholds may affect the interests of beneficial uses and users of groundwater or land uses and property interests." (Section 354.28(b)(4)). It is recommended that the above BMP section be edited as indicated by the strikeout and redline additional text.

Page 4, Para 1:

> This section describes the development of sustainable management criteria. The section is organized as follows:
>
> - Assessment of *sustainability indicators*, significant and unreasonable conditions, *management areas*, and representative monitoring sites
> - Minimum thresholds
> - Undesirable results
> - Measurable objectives
> - Sustainability goal
>
> This organization follows a chronological ordering that GSAs can use as they plan for sustainable management criteria development, although they do not have to proceed in that order.

The above introductory statements in "Section 4: Setting Sustainable Management Criteria" do not follow the order of the sustainable management criteria in the GSP regulations. Albeit, minimum thresholds are closely interrelated with the "criteria used to define when and where the effects of the groundwater conditions cause undesirable results for each sustainability indicator…(Section 354.26(b)(2)). It seems more logical to follow the organization of the GSP regulations and first define what constitutes the undesirable results that would "occur when significant and unreasonable effects for any of the sustainability indicators are caused by groundwater conditions occurring throughout the basin" (Section 354.24 and its subparts). Beneficial users of groundwater, and the users' understanding of groundwater conditions on their land uses and property interests, will likely be grounded in an understanding of the *potential effects* and the linkage with described undesirable results rather than the numeric value of the minimum threshold. The minimum threshold (in conjunction with the hydrogeologic conceptual model, groundwater conditions, and tools to analyze cause and effect relationships) is an important science-based determination of the "when and the where" of the effects to be measured to avoid undesirable results, once such undesirable results are identified and described.

We recommend that the discussion of BMPs for the sustainability goal precede the discussion of other sustainability criteria and that BMPs describing undesirable results be moved to follow the discussion of the sustainability goal (i.e., the discussion of the sustainability criteria in the BMP document would be well-served by following the same order as discussed in the GSP regulations).

Page 6, Para 1:

> ***Significant and Unreasonable Conditions***
>
> GSAs must consider and document the conditions at which each of the six sustainability indicators become significant and unreasonable in their basin, including the reasons for justifying each particular threshold selected. ….. These general descriptions of significant and unreasonable conditions are later translated into quantitative undesirable results, as

described in this document. .....

As indicated in the comment above, beneficial users of groundwater, and the users' understanding of groundwater conditions on their land uses and property interests, will likely be grounded in an understanding of the *potential effects* and the linkage with the described undesirable results rather than the numeric value of the minimum threshold. As noted in the GSP regulations, the description of undesirable results is to include the "criteria used to define when and where the effects of the groundwater conditions cause undesirable results for each applicable sustainability indicator. The criteria shall be based on a quantitative description of the combination of minimum threshold exceedances that cause significant and unreasonable effects in the basin" (Section 354.26(b)(2). Recognizing that these concepts and descriptions are interrelated, it is important to receive input from beneficial users of groundwater on what represents significant and unreasonable effects constituting undesirable results *before* determining the science-based minimum thresholds for avoiding undesirable results. The wording of the highlighted sentence above should be reordered.

Page 7, Para 2:

Representative Monitoring Sites

GSAs can only select representative monitoring sites after determining what constitutes significant and unreasonable conditions in a basin. .....

The County agrees with the above sentence. However, discussion of representative sites in the BMP document should occur *after* describing undesirable results, including the undesirable results that "occur when significant and unreasonable effects for any of the sustainability indicators are caused by groundwater conditions occurring throughout the basin" ((Section 354.26(a)).

Page 10, Para 2, 6th bullet:

Required Minimum Threshold Metrics for Each Sustainability Indicator

- The minimum threshold metric for **depletion of interconnected surface waters** shall be a rate or volume of surface water depletion.

All bullets in this draft BMP section should be reviewed for accuracy relative to the GSP regulations. It would be helpful for the BMP document to provide the exact language of the GSP regulations along with supplemental text for BMP guidance purposes. Napa County is providing comments on just one of the bullets in this section as an example. The above bullet intended to define the minimum threshold for depletion of interconnected surface waters is incomplete. The GSP regulations define the minimum threshold for this sustainability indicator as follows:

"(6) Depletions of Interconnected Surface Water. The minimum threshold for depletions of interconnected surface water shall be the rate or volume of surface water depletions caused by groundwater use that has adverse impacts on beneficial uses of the surface water and may lead to undesirable results.

(A) The location, quantity, and timing of depletions of interconnected surface water.

(B) A description of the groundwater and surface water model used to quantify surface water depletion. If a numerical groundwater and surface water model is not used to quantify surface water depletion, the Plan shall identify and describe an equally effective method, tool, or analytical model to accomplish the requirements of this Paragraph."

Importantly, the clarification needed relates to the *cause* of depletions of interconnected surface water, i.e., *depletions caused by groundwater use* (see Attachment with excerpts of regulatory language from SGMA and the GSP regulations that emphasize the causative factors groundwater extraction and use).

Page 17, Para 1:

Considerations when establishing minimum thresholds for conditions where groundwater extraction results in significant and unreasonable depletion of surface water ~~depletions of interconnected surface water~~; these may include, but are not limited to:

- What are the historical rates of stream depletion for different water year types?
- What is the historical interconnection of surface water and groundwater in the basin during the base period of analysis (i.e., spatial and temporal interconnectivity based on best available data)?
- What is the uncertainty in streamflow depletion estimates from analytical and numerical tools?
- What is the proximity of pumping to streams?
- Where are groundwater dependent ecosystems in the basin?
- What are the agricultural and municipal surface water needs in the basin?
- What volume and/or rate of surface water depletion is due to groundwater extraction or other factors such as climate change?
- Is depletion of interconnected surface water due to groundwater extraction a local consideration or a basin wide consideration?
- What are the applicable State or federally mandated flow requirements?

Similar to the above comment, it is recommended that the description for the minimum threshold for this sustainability indicator be clarified. Recommended revisions are shown as redline edits. The effects of both groundwater extraction and climate change will be important for GSAs to consider, with groundwater extraction being more explicitly regulated under SGMA. Nevertheless, influences from climate are certainly a critical factor that will affect basin water budgets, sustainable yield, and overall sustainability.

Page 20, Para 1:

> **UNDESIRABLE RESULTS**
>
> Undesirable results occur when conditions related to any of the six sustainability indicators become significant and unreasonable. Undesirable results will be used by the Department to determine whether the sustainability goal has been achieved within the basin.

As stated above, the section on undesirable results should occur earlier in the BMP guidance document. It is further recommended that the above section be revised to more directly state what is required and what specifically DWR will be evaluating. For example, the above text could be clarified as follows to align it with the regulations:

> GSPs must "include a description of the sustainability goal, including information from the basin setting used to establish the sustainability goal, a discussion of the measures that will be implemented to ensure that the basin will be operated within its sustainable yield, and an explanation of how the sustainability goal is likely to be achieved within 20 years of Plan implementation and is likely to be maintained through the planning and implementation horizon." (354.24) "Sustainable yield means the maximum quantity of water, calculated over a base period representative of long-term conditions in the basin and including any temporary surplus, that can be withdrawn annually from a groundwater supply without causing an undesirable result." (10721 (v)) Undesirable results occur when conditions related to any of the six sustainability indicators become significant and unreasonable. Therefore, the Department will be evaluating GSPs to determine whether sustainable management criteria have been described to avoid undesirable results and, if applicable, management measures have been identified to address undesirable results within 20 years of GSP implementation.

Page 20, Para 2:

> All undesirable results will be based on minimum thresholds exceedances. Undesirable results will be defined by minimum threshold exceedances at a single monitoring site, multiple monitoring sites, a portion of a basin, a management area, or an entire basin.

Minimum thresholds are the "criteria used to define when and where the effects of the groundwater conditions cause undesirable results for each applicable sustainability indicator." (354.26(b)(2)). Minimum thresholds that quantify groundwater conditions for each applicable sustainability indicator at each monitoring site or representative monitoring site are established pursuant to Section 354.36. "The numeric value used to define minimum thresholds shall represent a point in the basin that, if exceeded, may cause undesirable results as described in Section 354.26." (354.28). The draft BMP language highlighted above confuses what is actually stated in the GSP regulations. We recommend that the BMP text be revised to more correctly

represent the GSP regulations. The sustainability criteria define spatially and/or temporally the effects of the groundwater condition that may cause the undesirable results.

Page 20, Para 4, Item 1:

> Even if a basin does not currently have undesirable results, the GSP Regulations require GSAs to consider the causes that would lead to undesirable results and define undesirable results using minimum thresholds.

Similar comment to above. We recommend that the highlighted sentence be revised to more correctly represent the GSP regulations. The sustainability criteria (e.g., minimum thresholds) are used to spatially and/or temporally define the effects of the groundwater condition that may cause the undesirable results.

Page 21, Para 1, Item 2 (continued):

> The GSP Regulations require undesirable results to be quantified by minimum threshold exceedances.

Similar comment to above. The above sentence should be revised to more correctly represent the GSP regulations. The sustainability criteria (e.g., minimum thresholds) are used to spatially and/or temporally define the effects of the groundwater condition that may cause the undesirable results.

Page 2, Para 2:

> In the example, a hypothetical basin has set minimum thresholds, interim milestones, and measurable objectives for groundwater levels (**Figure 10**) at a network of eight representative monitoring points; to simplify this example, the criteria are assumed to be the same at each well. After considering the conditions at which lowering of groundwater levels would become significant and unreasonable, the GSA has determined that minimum threshold exceedances (i.e., groundwater levels dropping below the minimum threshold) at three or more representative monitoring sites would constitute an undesirable result.

Although the draft BMP guidance document presents the provided examples as simple and hypothetical, this is a poor hypothetical situation for demonstrating the sustainability indicator for *chronic* lowering of groundwater levels. Although the term "chronic" is not mentioned in the example, it should be to illustrate one of the six key sustainability indicators. Also, there is no hypothetical temporal component in this example to illustrate this concept and *how this affects the groundwater condition that would hypothetically cause an undesirable result.* Scenarios presented later better describe a temporal component to the analysis.

Page 26, Para 2 and chart:

> Sustainability indicators become undesirable results when a GSA-defined combination of minimum thresholds is exceeded. Those combinations of minimum threshold exceedances define when a basin condition becomes significant and unreasonable.

Similar comment to above. The above sentence should be revised to more correctly represent the GSP regulations. The explanation of GSA-defined combination of minimum thresholds is confusing. Overall, the chart is lacking key components, including:

- Determination of the spatial and/or temporal effects of the groundwater condition(s) that may cause undesirable results, with consideration of beneficial users and uses of groundwater.
- Determining what constitutes significant and unreasonable effects caused by groundwater conditions occurring throughout the basin that represent undesirable results.

Essentially, the description of undesirable results that are *applicable to the basin* should be determined earlier in the flow chart. The described understanding of undesirable results would be used in concert with the minimum thresholds derived to assess when and where significant and unreasonable *effects caused by groundwater conditions* would occur at a basin scale and cause such undesirable results.

Page 30, Para 1:

> ***Measurable Objectives when an Undesirable Result Occurred before January 1, 2015***
>
> SGMA states that a GSP "may, but is not required to, address undesirable results that occurred before, and have not been corrected by, January 1, 2015." Once minimum thresholds have been developed and an undesirable result numerically defined, the GSA may evaluate whether that undesirable result was present prior to January 1, 2015. This evaluation is not possible until the GSA has defined what constitutes a significant and unreasonable condition (an undesirable result).

See above comments. The highlighted sentence seems backwards to the sequence in which the relationship between an undesirable result would be developed with input from beneficial users of groundwater, defined per Section 354.26, including when and where significant and unreasonable *effects caused by groundwater conditions* would occur at a basin scale and lead to undesirable results. Once the GSA has defined undesirable results, then the GSA could evaluate whether that undesirable result was present prior to January 1, 2015. And, if the undesirable result was present prior to January 1, 2015, the GSA would need to determine the minimum threshold(s) needed to maintain or improve groundwater conditions.

Page 31, Para 3:

> Unlike the other sustainable management criteria, the sustainability goal is not quantitative. ~~Rather, it is supported by the locally-defined minimum thresholds and undesirable results.~~ However, to achieve the sustainability goal, there must be a demonstration that the basin is operating within the sustainable yield, which means the maximum quantity of water, calculated over a base period representative of long-term conditions in the basin and including any temporary surplus, that can be withdrawn annually from a groundwater supply without causing an undesirable result.
>
> ~~Demonstration of the absence of undesirable results supports a determination that basin is operating within its sustainable yield and, thus, that the sustainability goal has been achieved.~~

We suggest the above BMP language be clarified by directly relating the sustainability goal to the definition of sustainable yield. See example text provided as redline edits above.

Page 31, Para 5:

> Note that most of the sustainability goal can only be finalized after minimum thresholds and undesirable results have been defined, projects and management actions have been identified, and the projected impact of those projects and management actions on groundwater conditions have been evaluated. Therefore, completion of the sustainability goal will likely be one of the final components of GSP development.

The GSP regulations present Section 354.24 on the sustainability goal prior to sections describing the development of sustainable management criteria; such a sequence makes sense recognizing the meaning of a "goal" (i.e., the result or achievement toward which effort is directed). Formulating a goal at the end of all other GSP development-related work does not make sense. As described in the draft BMP, the sustainability goal is not quantitative, but instead the goal represents the desired achievement (i.e., operating the basin within the sustainable yield within 20 years of GSP implementation). The GSP regulations do not require that all projects and management actions be exactly defined and evaluated, rather the GSP regulations specify:

> "The Plan shall include a description of the sustainability goal, including information from the basin setting used to establish the sustainability goal, a discussion of the measures that will be implemented to ensure that the basin will be operated within its sustainable yield, and an explanation of how the sustainability goal is likely to be achieved within 20 years of Plan implementation and is likely to be maintained through the planning and implementation horizon." (354.24)

We recommend that the BMP language be reviewed and revised to maintain the intent of the GSP regulations to establish *a sustainability goal* for the basin.

Page 33, Para 2:

> This document addresses best management practices for developing sustainable management criteria, including minimum thresholds, undesirable results, measurable objectives, and the sustainability goal.

As commented above, we recommend that the order of items discussed in the BMP document mimic the order in which the sustainable management criteria are presented in the GSP regulations.

We appreciate the opportunity to provide comments on the draft BMPs and appreciate your consideration of these comments. Please contact Patrick Lowe at (707) 259-5937, patrick.lowe@countyofnapa.org if you have questions related to these comments.

Sincerely,

Steve Lederer
Director of Public Works

Attachment: Excerpts of Regulatory Language

Excerpts of Regulatory Language

2014 Sustainable Groundwater Management Act

10721. DEFINITIONS

Unless the context otherwise requires, the following definitions govern the construction of this part:

.....

(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.

10735.2. DESIGNATION OF PROBATIONARY BASINS BY STATE WATER BOARD

(a) The board, after notice and a public hearing, may designate a basin as a probationary basin, if the board finds one or more of the following applies to the basin:

.....

(5) The basin is subject to paragraph (2) of subdivision (a) of Section 10720.7, and either of the following have occurred:

(A) After January 31, 2022, both of the following have occurred:

(i) The department, in consultation with the board, determines that a groundwater sustainability plan is inadequate or that the groundwater sustainability plan is not being implemented in a manner that will likely achieve the sustainability goal.

(ii) The board determines that the basin is in a condition of long-term overdraft.

(B) After January 31, 2025, both of the following have occurred:

(i) The department, in consultation with the board, determines that a groundwater sustainability plan is inadequate or that the groundwater sustainability plan is not being implemented in a manner that will likely achieve the sustainability goal.

(ii) The board determines that the basin is in a condition where groundwater extractions result in significant depletions of interconnected surface waters.

10735.8. INTERIM PLANS

.....

(b) The interim plan shall include all of the following:

(1) Identification of the actions that are necessary to correct a condition of long-term overdraft or a condition where groundwater extractions result in significant depletions of interconnected surface waters, including recommendations for appropriate action by any person.
(2) A time schedule for the actions to be taken.

(3) A description of the monitoring to be undertaken to determine effectiveness of the plan.

.....

(g) (1) After the board adopts an interim plan under this section, the board shall determine if a groundwater sustainability plan or an adjudication action is adequate to eliminate the condition of long-term overdraft or condition where groundwater extractions result in significant depletions of interconnected surface waters, upon petition of either of the following:

(A) A groundwater sustainability agency that has adopted a groundwater sustainability plan for the probationary basin or a portion thereof.
(B) A person authorized to file the petition by a judicial order or decree entered in an adjudication action in the probationary basin.

.....

(h) Before January 1, 2025, the state board shall not establish an interim plan under this section to remedy a condition where the groundwater extractions result in significant depletions of interconnected surface waters.

Groundwater Sustainability Plan Emergency Regulations

354.28 Minimum Thresholds

(a) Each Agency in its Plan shall establish minimum thresholds that quantify groundwater conditions for each applicable sustainability indicator at each monitoring site or representative monitoring site established pursuant to Section 354.36. The numeric value used to define minimum thresholds shall represent a point in the basin that, if exceeded, may cause undesirable results as described in Section 354.26.

.....

(c) Minimum thresholds for each sustainability indicator shall be defined as follows:

.....

(6) Depletions of Interconnected Surface Water. The minimum threshold for depletions of interconnected surface water shall be the rate or volume of surface water depletions caused by groundwater use that has adverse impacts on beneficial uses of the surface water and may lead to undesirable results. The minimum threshold established for depletions of interconnected surface water shall be supported by the following:

(A) The location, quantity, and timing of depletions of interconnected surface water.

(B) A description of the groundwater and surface water model used to quantify surface water depletion. If a numerical groundwater and surface water model is not used to quantify surface water depletion, the Plan shall identify and describe an equally effective method, tool, or analytical model to accomplish the requirements of this Paragraph.

354.34. Monitoring Network

.....

(c) Each monitoring network shall be designed to accomplish the following for each sustainability indicator:

.....

(6) Depletions of Interconnected Surface Water. Monitor surface water and groundwater, where interconnected surface water conditions exist, to characterize the spatial and temporal exchanges between surface water and groundwater, and to calibrate and apply the tools and methods necessary to calculate depletions of surface water caused by groundwater extractions. The monitoring network shall be able to characterize the following:

(A) Flow conditions including surface water discharge, surface water head, and baseflow contribution.

(B) Identifying the approximate date and location where ephemeral or intermittent flowing streams and rivers cease to flow, if applicable.

(C) Temporal change in conditions due to variations in stream discharge and regional groundwater extraction.

(D) Other factors that may be necessary to identify adverse impacts on beneficial uses of the surface water.