

THE STATE WATER BOARD'S NEED FOR GROUNDWATER MODELS IN THE SGMA REGULATORY SETTING



Stanford Water in the West
Groundwater Modeling Workshop
November 16th, 2015

Erik Ekdahl, State Water Resources Control Board

Intervention Triggers

After	Intervention Trigger
June 30, 2017	No Groundwater Sustainability Agency formed.
Jan. 31, 2020	In basins in a condition of critical overdraft: 1) No sustainability plan has been adopted, or 2) The Department of Water Resources (DWR), in consultation with the State Water Board, finds that the sustainability plan or its implementation is inadequate.
Jan. 31, 2022	In other high- or medium-priority basins: 1) No sustainability plan has been adopted, or 2) DWR, in consultation with the State Water Board, finds the sustainability plan or its implementation is inadequate, and the State Water Board finds that the basin is in a condition of long-term overdraft.
Jan. 31, 2025	DWR, in consultation with the State Water Board, finds that the sustainability plan is inadequate or the plan is not being implemented in a manner that is likely to achieve the sustainability goal, and the State Water Board finds there are significant depletions of interconnected surface waters.

Modeling Needs Vary by Type of Intervention

2017

No GSA

2020/22

No GSP

2020/22

Inadequate
plan &
overdraft

2025

Inadequate
plan & GW/
SW
interaction

No GSA (Unmanaged Area)

- *(10735.2(a)): The board, after notice and public hearing, may designate **a basin** as a probationary basin, if one or more of the following applies to the basin:*
 - *After June 30, 2017, none of the following have occurred:*
 - *A local agency has elected to be a GSA that intends to develop a GSP **for the entire basin***
 - *A collection of local agencies has formed a GSA or prepared agreements to develop one or more GSPs that will collectively serve as a groundwater sustainability plan **for the entire basin***
 - *A local agency has submitted an alternative...*
- **A single unmanaged area can cause the entire basin to be placed in probationary status**

Regulatory Need for GW Models in Unmanaged Areas Depends On:

- Size and nature of the unmanaged area
- Data (reported to the Board & from other sources)
 - Data reporting occurs prior to probationary designation
- Whether local efforts occur after GSA deadline
- Local efforts in surrounding managed areas (with GSAs)
- Unmanaged areas, prior to additional Board intervention actions, represent least likely need for Board to require or develop a GW model. The size and extraction volumes in the unmanaged area are important factors. Subsequent regulatory actions may benefit from a model.

No Sustainability Plan (2020/22)

- *(10735.2(a)(2)&(4)): 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:*
 - *A GSA has adopted a groundwater sustainability plan **for the entire basin***
 - *A collection of local agencies has adopted groundwater sustainability plans that collectively serve as a GSP **for the entire basin***
 - *The department has approved an alternative plan*
- **A missing sustainability plan for all or part of a basin can cause probationary status for the entire basin**

Regulatory Need for GW Model When A Basin Lacks a GSP Depends On:

- Whether the entire basin lacks a GSP, or only a portion?
- What kind of data are available?
 - Probationary reporting requirements, other GSAs/GSPs
- Whether other portions of the basin have or are developing models of their own
- Need for model is partly driven by the governance of the basin: if multi-GSA/GSP, then need for model in part depends on what other GSAs are doing. If entire basin lacks a GSP, then greater likelihood that some type of model will be needed

Inadequate Plan (2020/22/25)

- *The basin is in a critical condition of overdraft 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 (10735.2(a)(3)).*
 - *In 2022 for all other high/medium priority basins, if the board also makes a determination that the basin is in a condition of long-term overdraft*
 - *In 2025 for all other high/medium priority basins, if the board also makes a determination that the basin is in a condition where groundwater extractions result in significant depletions of interconnected surface waters.*
- **Inadequate plans can cause a basin to fall into intervention... even if the finding of inadequacy is only applied to a portion of the basin.**

Regulatory Need for GW Model When Plan is Inadequate Depends On:

- Why the plan was found inadequate (includes implementation)
- If basin has a model:
 - Less need to develop model as part of an interim plan
 - Greater need for review (by Board, DWR, or 3rd party)
- If there's no model in the basin:
 - Greater likelihood to develop model as part of an interim plan
 - But with acknowledgement that some basins may not need a numerical simulation model
- 10735.2(e): The board shall exclude from probationary status any portion of a basin for which a GSA demonstrates compliance with the sustainability goal.

Potential Needs in Board-Regulated Basins

- 3rd Party Review
 - Board at this point doesn't anticipate generating GW models internally
 - But will need them in some cases – contract out (private, public, interagency)
 - Does intend to have staff for technical review
- GW/SW interaction
 - Most (all) basins with connected GW/SW will need a numeric model?
- Land Use & Water Budgets
 - METRIC