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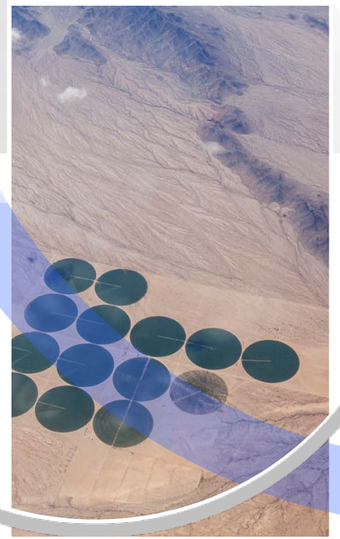
Sustainable Management Criteria



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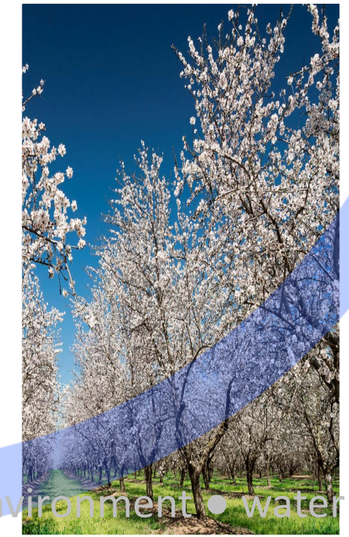


Sustainable Management Criteria

In 2014, California enacted the Sustainable Groundwater Management Act (SGMA). The SGMA allows a local Groundwater Sustainability Agency, or Agencies (GSAs), to sustainably manage groundwater within a basin under the guidance of a Groundwater Sustainability Plan (GSP). Within the SGMA, groundwater sustainability is achieved when the groundwater basin is managed within the sustainable yield of the basin.

For the GSA(s) of each groundwater basin to quantitatively and sustainably manage the groundwater basin, the GSP developed for each groundwater basin will define the following:

1. Minimum thresholds
2. Undesirable results
3. Measureable objectives
4. Sustainability goal

Collectively, these four management criteria are the "Sustainable Management Criteria" (SMC) for the groundwater basin.

Sustainability Indicators

The Department of Water Resources (DWR) had proposed six sustainability indicators that, if allowed to become "significant and unreasonable", could lead to "undesirable results". These indicators include:

1. Chronic lowering of groundwater levels
2. Reduction of groundwater storage
3. Seawater intrusion
4. Degraded water quality
5. Land subsidence
6. Surface water depletions

Minimum Threshold Metrics

The GSP will include quantifiable estimates of the minimum threshold of each sustainability indicator that will not lead to "undesirable results". These metrics include:

1. Groundwater elevation
2. Basin-wide estimate of groundwater that can be extracted from a subbasin
3. Location of chloride iso-contour within the basin
4. Water quality measurements
5. Rate and extent of land subsidence
6. Rate or volume of surface water depletion

Undesirable Results

The GSP is required to include a description for each undesirable result and must be agreed upon by all GSAs within a groundwater basin. The GSP is also required to consider three issues in defining each undesirable result in the event that this condition develops within the basin. These issues include:

1. The cause of the basin conditions leading to the undesirable result
2. The quantitative criteria used to define the minimum threshold metrics to applicable sustainability indicators
3. The possible impact upon beneficial uses and users of groundwater, land uses, and property interests within the basin

Measurable Objectives

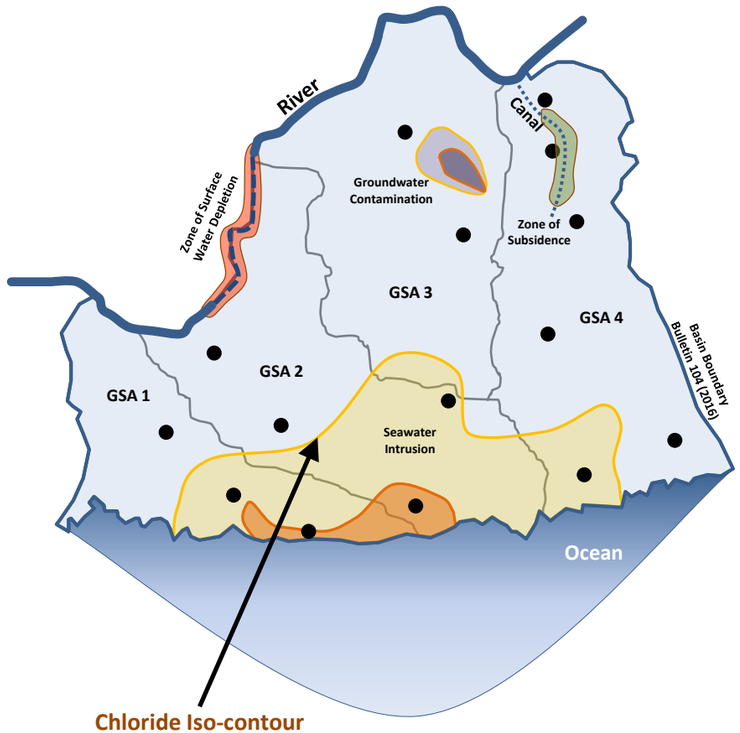
The GSP is required to include these quantitative goals of the sustainability indicators to demonstrate overall basin sustainability within 20 years after GSP implementation. The GSP and its measureable objectives should include:

1. A reasonable margin of operational flexibility and consider the following:
   - Droughts
   - Climate change
   - Conjunctive use operations
   - Groundwater management activities
2. Interim (5-year) milestones

Sustainability Goal

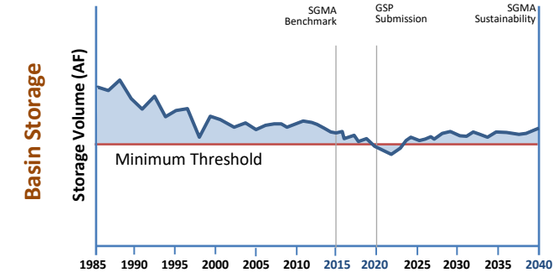
The basin sustainability goal is a qualitative definition of the desired state of the groundwater basin and describes how and why the basin will be managed to achieve that condition within 20 years after the implementation of the GSP(s). The sustainable goal will be supported by:

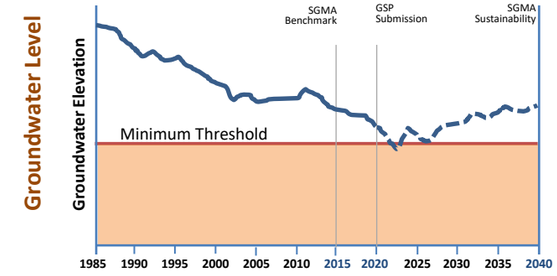
1. The basin GSA(s) developed minimum thresholds
2. The absence of undesirable results within the basin

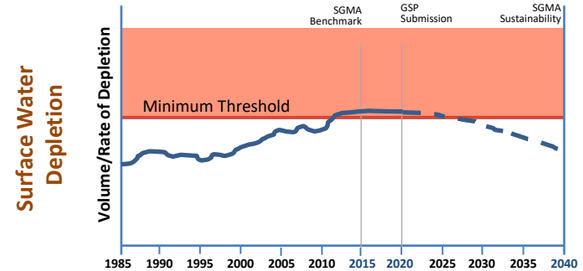


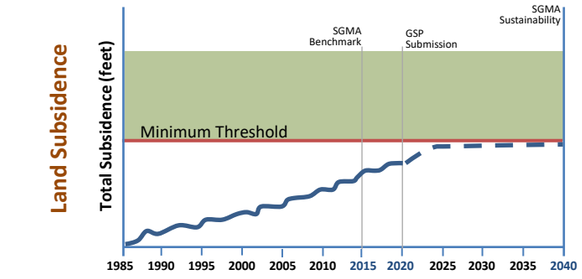
Source: CA DWR. (2017). Draft Best Management Practices for the Sustainable Management of Groundwater. November. Retrieved from: http://www.water.ca.gov/groundwater/sgm/pdfs/BMP_Sustainable_Management_Criteria_2017-11-06.pdf

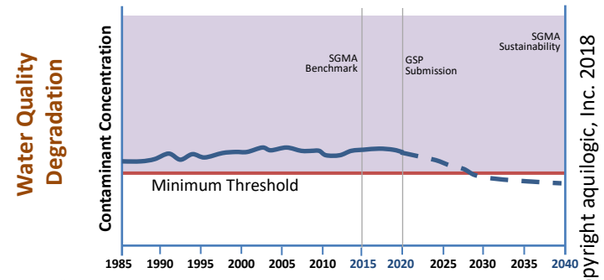
Minimum Thresholds and Metrics











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