

Sustainable Groundwater Management Act and Groundwater Sustainability Plan for the Napa Valley Subbasin

Sustainability Framework

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Outline



1. Key Definitions and State Guidance
2. Review Undesirable Results Previously Adopted by Napa County
3. Discussion Questions
4. Next Steps





SGMA Term

- Sustainability Goal
- Sustainability Indicators
- Undesirable Result
 - Significant and Unreasonable
- Measurable Objective
- Minimum Threshold

Health Analogy

- Staying healthy and fit
- Weight, Blood Pressure, etc.
- Healthy limit is surpassed
 - Urgent care needed
- Doctor's recommendations
- Healthy limit

Sustainable Groundwater Management

*“The management and use of groundwater in a manner that can be maintained during the planning and implementation horizon **without causing undesirable results**” - Water Code Section 10721(v)*



Key Definitions



Undesirable Result

"One or more of the following effects caused by groundwater conditions occurring throughout the basin:" - Water Code Section 10721(x))

Significant and Unreasonable ...

Chronic Lowering
of GW Levels



Reduction of GW
Storage



Seawater
Intrusion



Water Quality
Degradation



Land
Subsidence



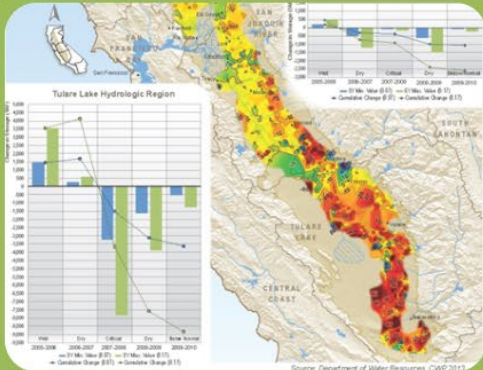
Depletion of
Surface Water



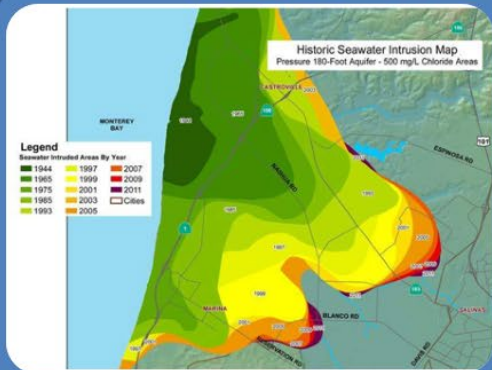
Sustainability Indicator Examples



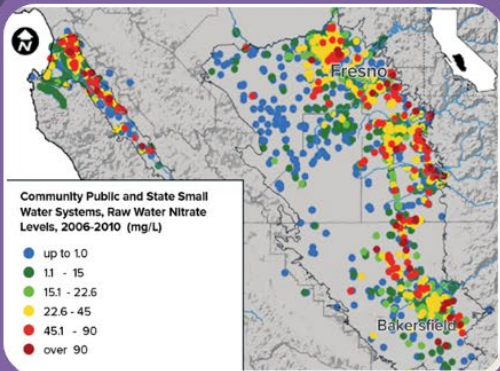
Lowering of GW Levels



Reduction of GW Storage



Seawater Intrusion



Degraded Water Quality



Land Subsidence



Depletion of Inter-connected Streams

Source: DWR

Undesirable Result

Land Subsidence



Existing definition for the Napa Valley Subbasin:

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)

Undesirable Result

Degraded Water Quality



Existing definition for the Napa Valley Subbasin:

Degraded water quality would become significant and unreasonable if:

- water quality no longer meets state or federal standards for the intended beneficial uses at a majority of the representative monitoring wells due groundwater conditions or land use

Undesirable Result Seawater Intrusion



Existing definition for the Napa Valley Subbasin:

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

Undesirable Result

Depletions of Interconnected Surface Water



Existing definition for the Napa Valley Subbasin:

Depletions become significant and unreasonable if, as a result of groundwater extraction:

1. the timing and duration of direct hydraulic connections between groundwater and surface water 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.

Undesirable Result

Chronic Lower of Groundwater Levels



Existing definition for the Napa Valley Subbasin:

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 drought conditions

Undesirable Result

Reductions of Groundwater Storage



Existing definition for the Napa Valley Subbasin:

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

Discussion Questions



1. What groundwater conditions occurring throughout the Subbasin would constitute a significant and unreasonable effect on each SGMA sustainability indicator?
 - a. Land Subsidence
 - b. Groundwater Quality Degradation
 - c. Seawater Intrusion
 - d. Depletions of Interconnected Surface Water
 - e. Chronic Lowering of Groundwater Levels
 - f. Reductions of Groundwater in Storage



Discussion Questions



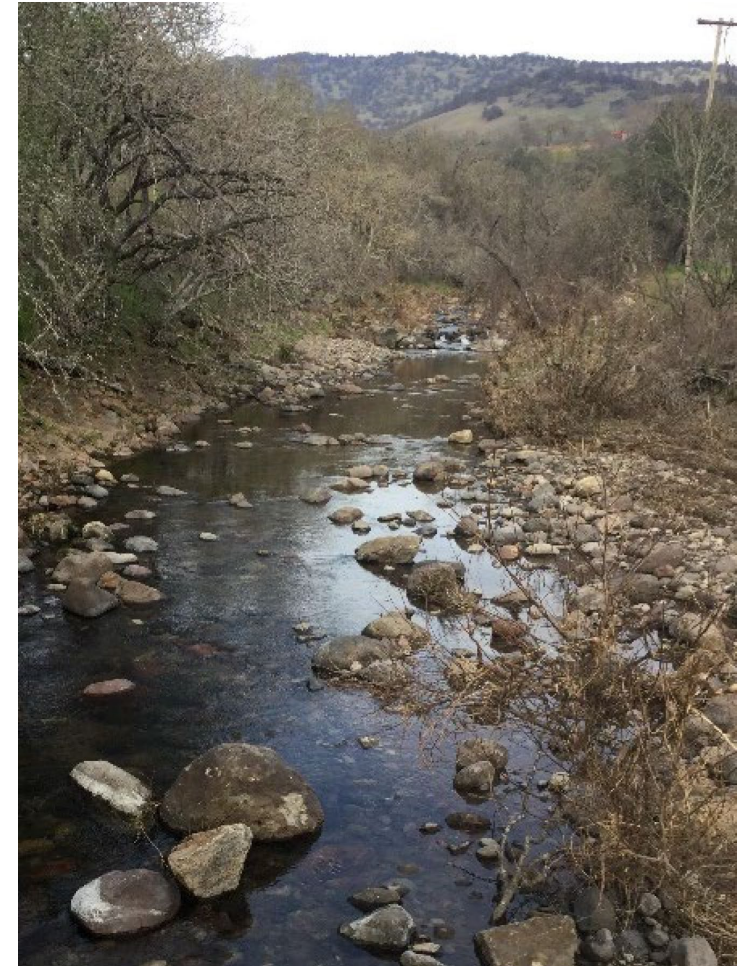
2. In what ways would significant and unreasonable effects vary for different respective beneficial uses and users of groundwater?
 - a. Overlying Groundwater Right Holders
 - i. Self-Supplied Domestic users
 - ii. Agricultural users
 - b. Correlative Groundwater Right Holders
 - i. Municipalities
 - c. Environmental Users of Groundwater
 - d. Interconnected Surface Water Right Holders



Next Steps



1. March – Continued discussion of undesirable results with GSPAC
2. Summer – Technical team proposes quantitative metrics that reflect calibrated model and future water budget projections



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Thank You

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