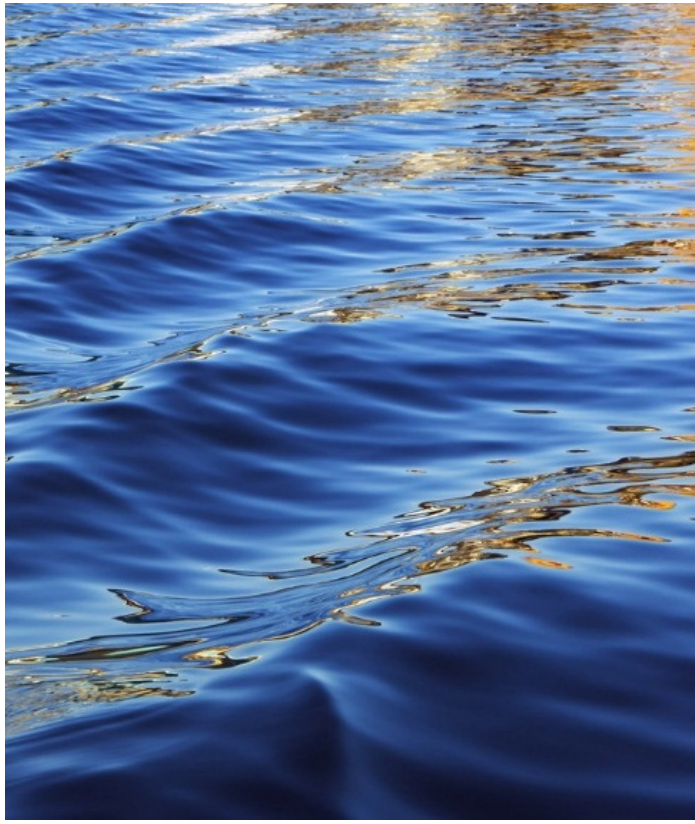
Significant & Unreasonable Degraded Groundwater Quality

Georgina King, Montgomery & Associates



Degraded Water Quality in SGMA

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- Degraded water quality is a **"do no harm"** indicator of sustainability
  - ➔Management of groundwater conditions in the basin and any other action taken by the SMGWA must not significantly and unreasonably degrade water quality

- SMGWA is not required to address existing groundwater quality issues but it could if it wanted to
  - ➔SMGWA has the discretion to set measurable objectives to address undesirable results from water quality degradation that has already occurred – but must have a means to achieving those objectives

- Water Quality Oversight programs already in place

- SMGWA's authority over water quality cannot limit or supersede the authorities of the State Water Resources Control Board, the Regional Water Quality Control Boards, the California Department of Public Health, or county or city governments

Impacts of Degraded Groundwater Quality

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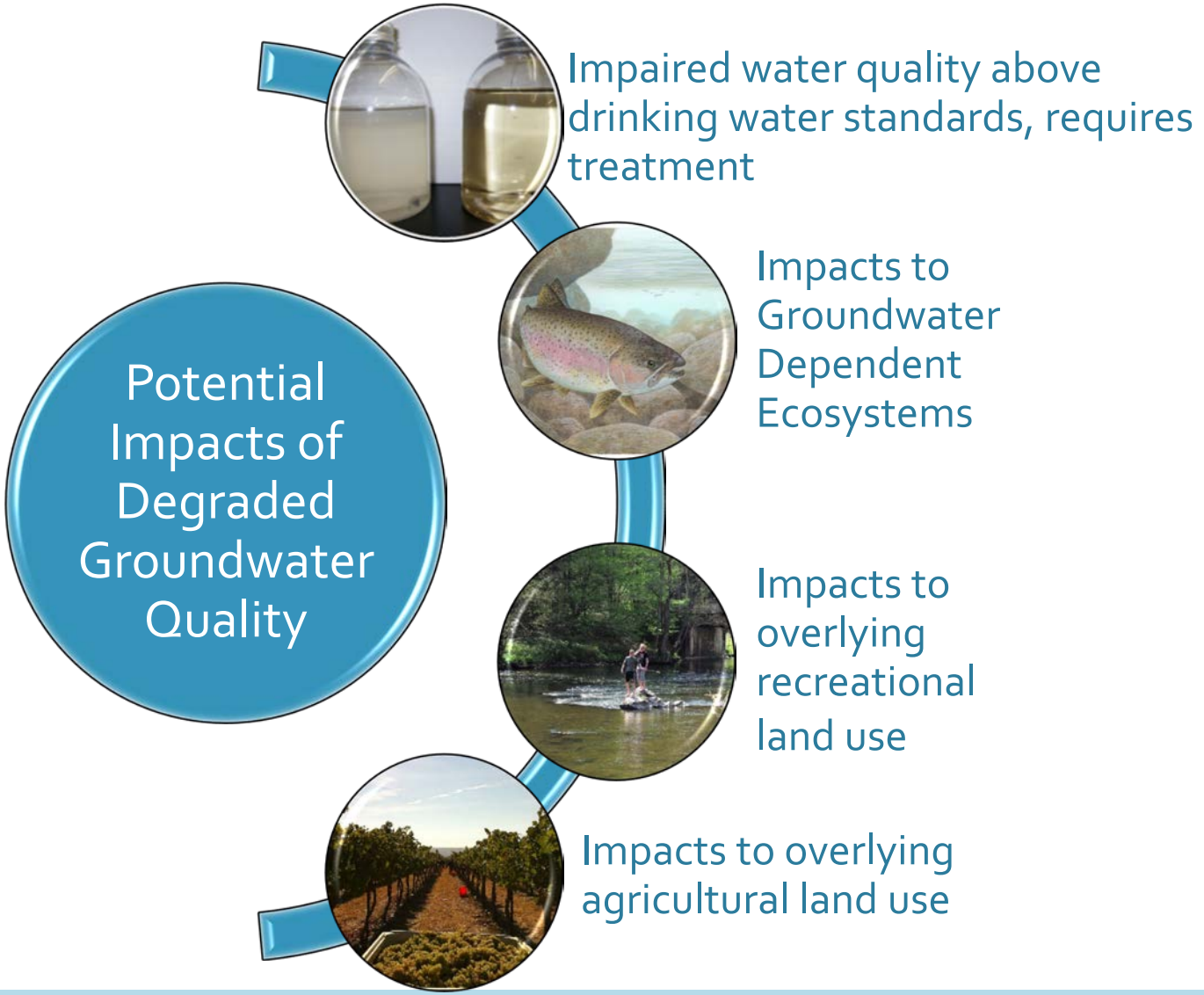

Example of How a GSP Can Change Water Quality

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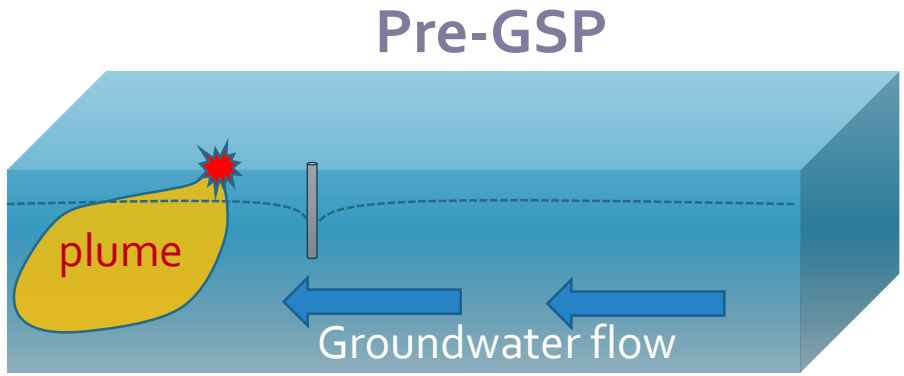
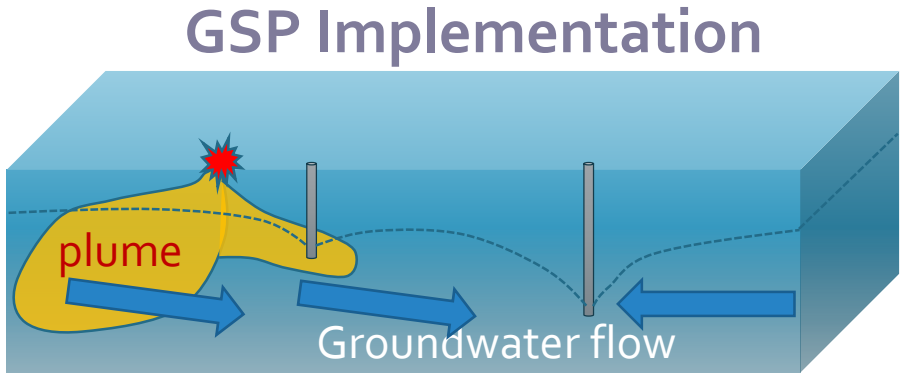
- Project implemented to achieve sustainability causes the migration of contaminant plumes that increase the footprint of impaired water supplies





What are We Protecting?

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- Basin groundwater is generally of good quality and does not regularly exceed primary drinking water standards

Constituents of concern

	Naturally Occurring Constituents	Anthropogenic Constituents
treated	Iron (Fe)	Nitrate (NO_3)
treated	Manganese (Mn)	Volatile Organic Compounds (VOCs)
treated	Arsenic (As)	Methyl tert-butyl ether (MTBE)
	Total Dissolved Solids (TDS)	

What are We Protecting Groundwater Quality From?

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Existing Known Contamination

- Nitrate from septic tanks
- VOCs from Watkins Johnson
- VOCs from dry cleaners

Potential Sources

- Water used to recharge the Basin (strict standards for this)
- Future chemical spills or leaks

Naturally Elevated Quality

- Salinity in deeper portions of the Monterey Formation – could migrate upwards by upwelling
- Arsenic in Lompico aquifer
- Iron & manganese in Santa Margarita and Lompico aquifers – commonly found

What Would be Significant & Unreasonable Degraded Groundwater Quality?

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Things to consider when determining what would be significant and unreasonable groundwater quality degradation

- What level of degradation?
- What constituents?
- Who or what does the degradation impact?
- How long it lasts?

Examples of Other GSP Statements of Significant & Unreasonable

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Kern Basin

Water management actions that affect the reasonable and beneficial use of, and access to, groundwater by overlying users

Cuyama Basin

…is a result stemming from a causal nexus between SGMA-related groundwater quantity management activities and groundwater quality that causes significant and unreasonable reduction in the long-term viability of domestic, agricultural, municipal, or environmental uses over the planning and implementation horizon of this GSP

Pleasant Valley Basin

Degraded water quality resulting in a significant and unreasonable depletion of supply

Examples of Other GSP Statements of Significant & Unreasonable

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Kaweah Basin

Unreasonable long-term changes of water quality concentrations from baseline conditions to significantly impact users of groundwater

Salinas 180/400 ft Basin

Results in groundwater concentrations in a public supply well above an established MCL or SMCL, or leads to reduced crop production

Santa Cruz Mid-County Basin

Groundwater quality, attributable to groundwater pumping or managed aquifer recharge, that fails to meet state drinking water standards

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Discussion and Crafting of a Statement of Significant & Unreasonable Groundwater Quality Degradation for the Santa Margarita Basin