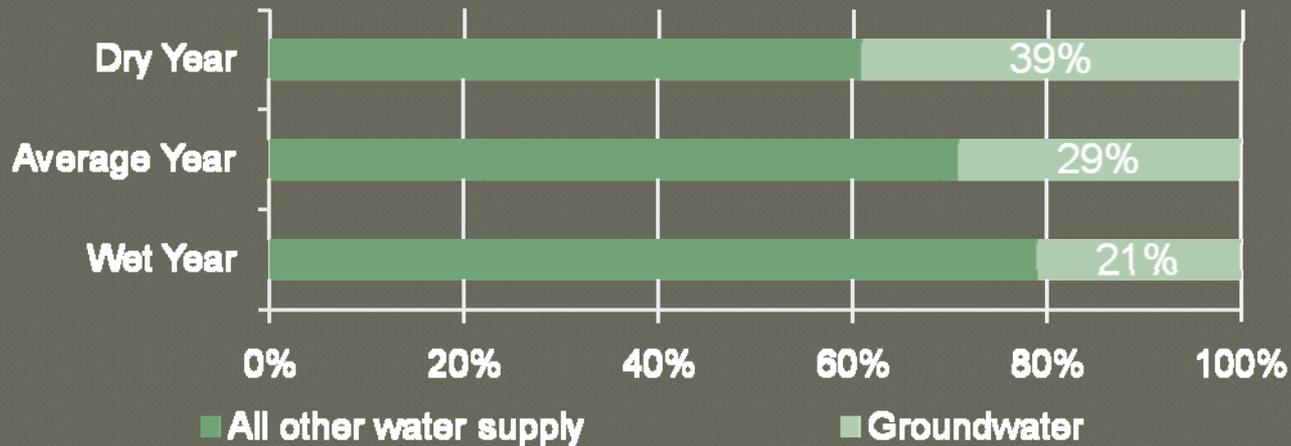


Groundwater Strategic Workplan

WQCC – September 27, 2011

Groundwater Strategic Workplan

State Water Board priority project



Being developed through a collaborative State and Regional Water Board process

Purpose

Spell out the actions that the Water Boards will take to protect and manage groundwater by:

1. applying water quality and water right authorities to address the problems that have the greatest potential to impact beneficial uses of groundwater;
2. focusing resources on the most important groundwater problems;
3. identifying new strategies that can be used; and
4. encouraging local efforts to manage groundwater.

Groundwater SWP Concept Paper

Human activities adversely affect groundwater quality, supply, and availability:

- ⊙ Discharged pollutants degrade quality
 - Nitrates/Salts
 - Industrial Chemicals
- ⊙ Over-pumping depletes supply and entrains poor quality water
- ⊙ Land use practices reduce recharge

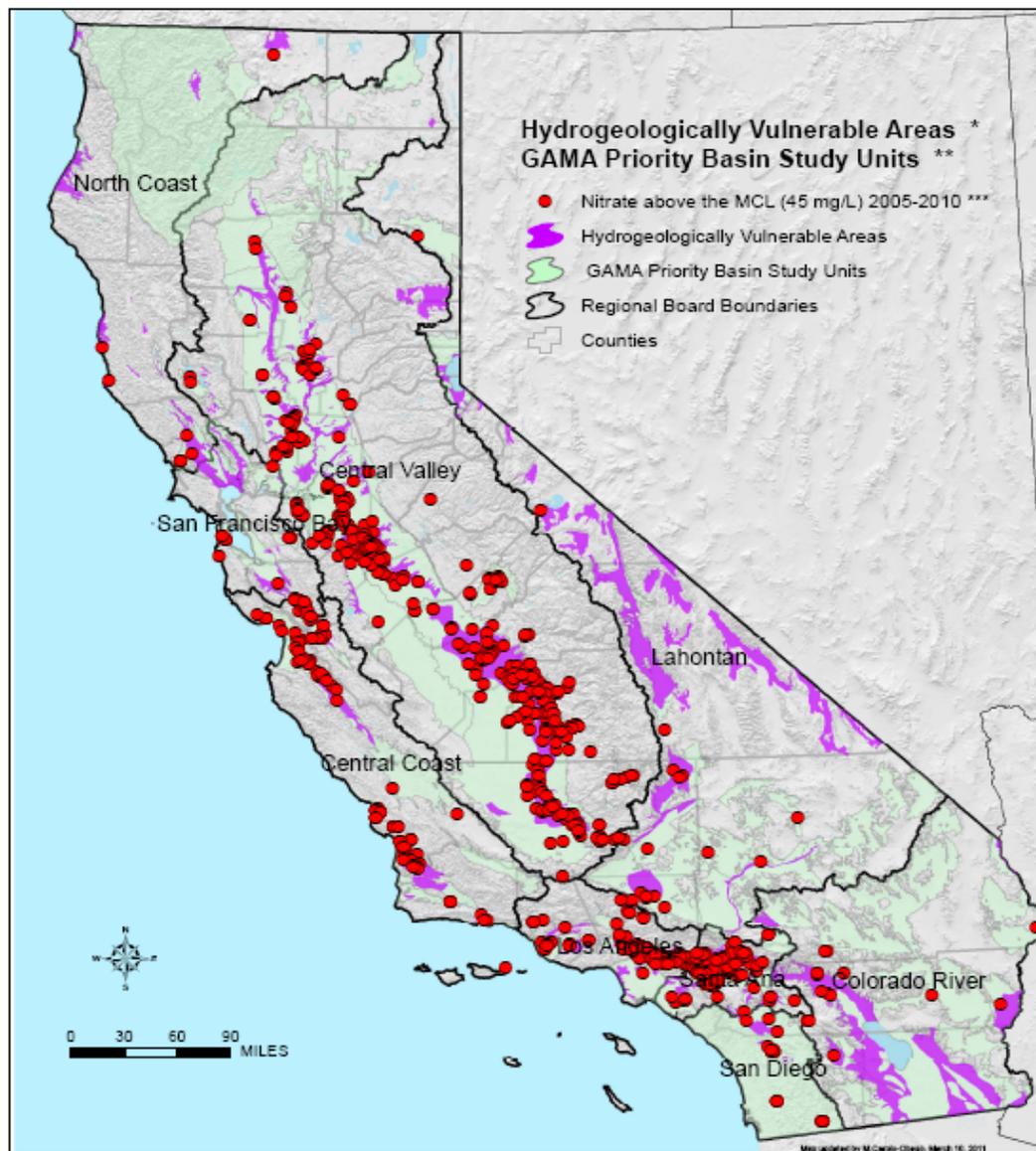
Pollution: nitrates/salts

Accumulation of nitrate and other salts in groundwater, primarily from agriculture and human waste:

- *Is a widespread problem*
- *Has created unsafe or unsuitable drinking water for domestic well users in some parts of the State*
- *Is inherent to the habitation of arid regions of California*
- *Must be better managed*

Hydrogeologically Vulnerable Areas

Nitrate above MCL in public water supply wells



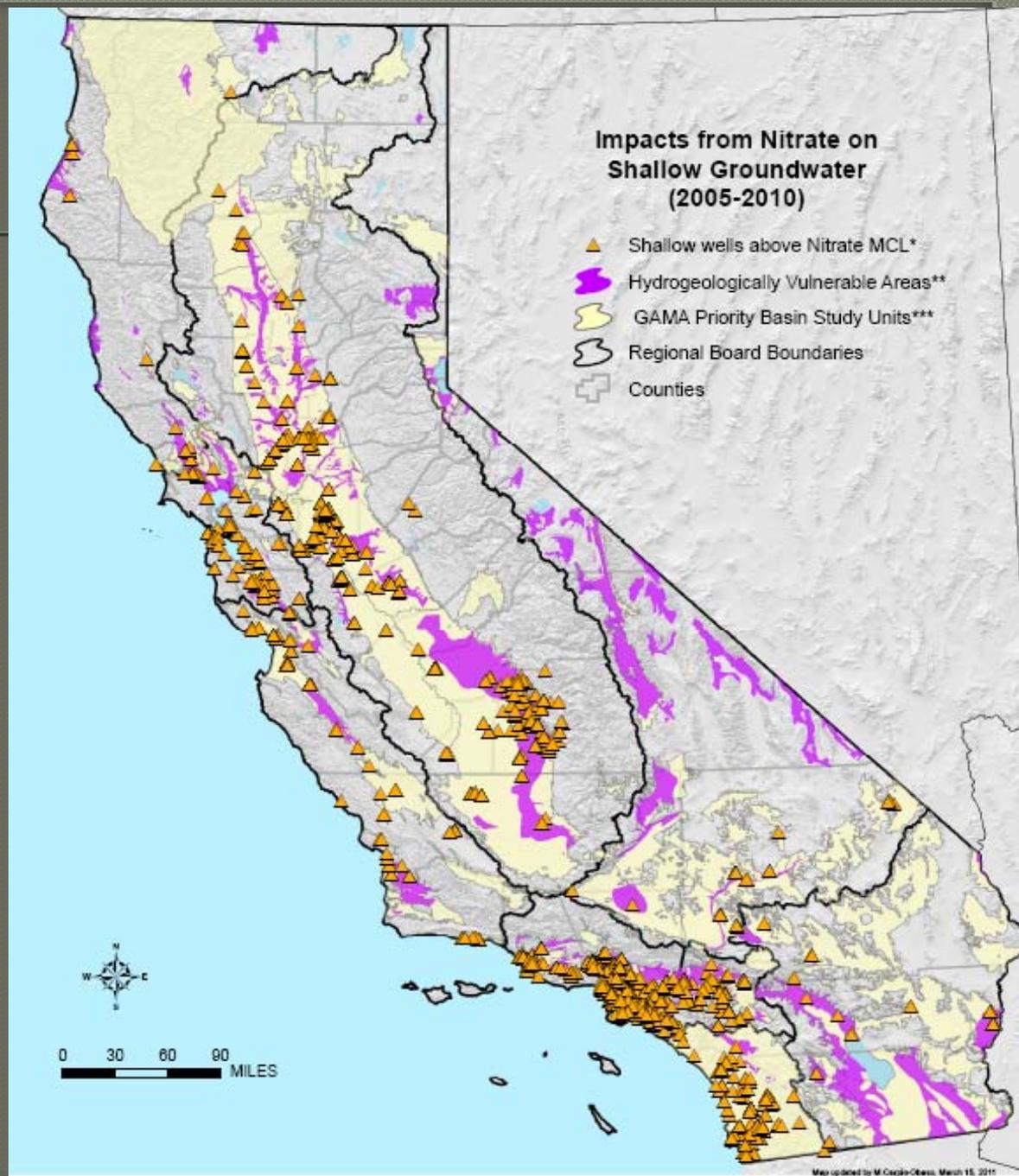
* Hydrogeologically Vulnerable Areas are where published studies show geologic conditions are more likely to allow surface contaminants to move to groundwater through percolation; for example, areas without an aquitard. Vulnerable areas not mapped, due to their extensiveness, are fractured rock where contaminants can move directly to water.

** GAMA - Groundwater Ambient Monitoring and Assessment Priority Basins: Water Code Section 10780 requires prioritization of groundwater basins for statewide water quality monitoring and assessment by the GAMA Program. The 116 groundwater basins, mapped in light green, account for over 90 percent of all groundwater used in California. These high use priority basins have been grouped into 36 groundwater basins "study units".

*** Public supply wells regulated by California Department of Public Health, with one or more detections above the drinking water standard of 45 mg/L (2005-2010)

Hydrogeologically Vulnerable Areas

Nitrate above MCL in Shallow Wells



Pollution: Industrial Chemicals

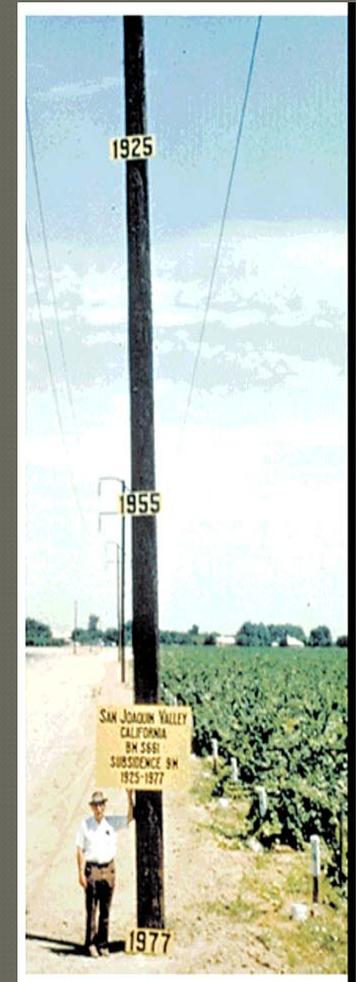
Groundwater degradation from discharges of industrial chemicals is:

- ***Preventable***
- ***Should be addressed through prevention and cleanup actions***
- ***Localized-manufacturing sites, leaking underground storage tanks, and chemical spills located***

Pumping

Unmanaged and unsustainable pumping can result in:

- *Depletion of groundwater resources*
- *Land subsidence and permanent loss of storage capacity*
- *Seawater intrusion/mobilization of contaminants*
- *Reduced surface water flows*



Increased impervious surfaces and channelization have reduced groundwater recharge

- *Mindset is often that treated runoff is a waste, not a resource that naturally occurred and recharged groundwater*
- *Mechanisms exists to infiltrate stormwater, but water quality is a consideration.*
- *Impacts not well quantified*

Proposed Next Steps

Input From WQCC	September 2011
Finalize Concept Paper	November 2011
Publicly Circulate Concept Paper	December 2011
Draft Strategic Work Plan	January-March 2012
Public Review	April 2012
Finalize	June 2012

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