California Society of Municipal Finance Officers
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California's Sustainable Groundwater Management Act (SGMA)

—An Overview—

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GEI Consultants

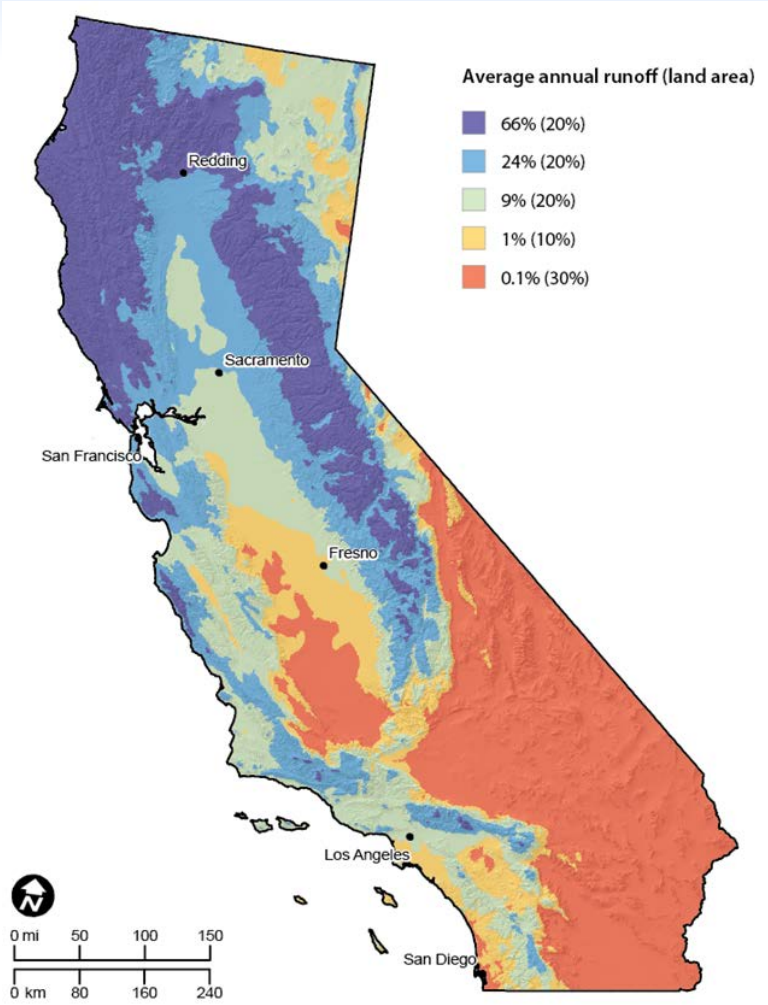
SGMA is not a Sprint, it's a Marathon

SGMA Overview

1. **Why is SGMA Needed?**
2. What is SGMA?
3. Who Does SGMA Impact?
4. How Will SGMA Work?
5. How Should I Prepare for SGMA?

Why Is SGMA Needed?

We have an imbalance between **water supply** and **demand** in California.



Why is SGMA Needed?

In an attempt to overcome the demand vs. supply dilemma, California became a world leader in water resource management by making huge investments in water infrastructure.


California Aqueduct


Folsom Dam

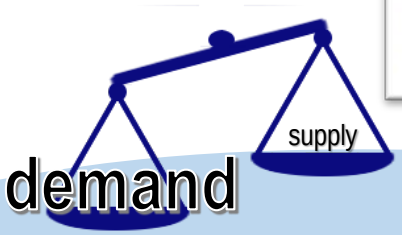


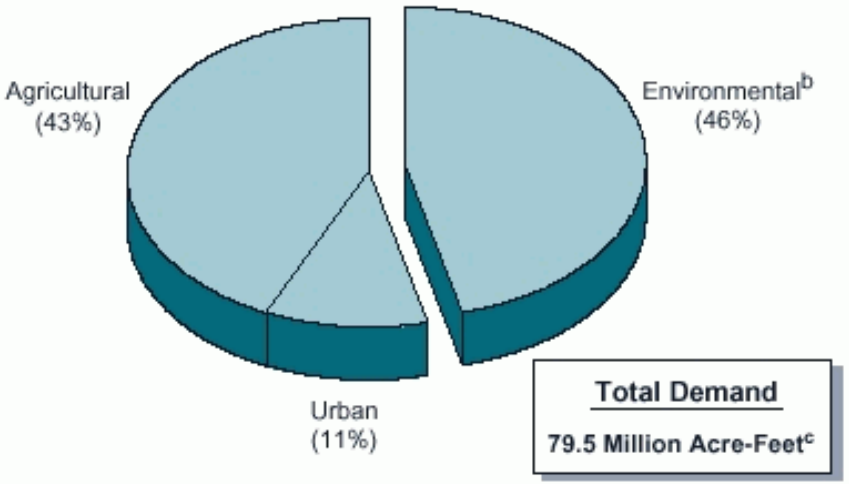
Figure 2-2 California's Major Rivers and Water Storage/Conveyance Facilities

Why is SGMA Needed?

Figure 1

California Water Demands[a]

1995



[a] Data from Department of Water Resources, *California Water Plan* (November 1998), reflecting "average" (nondrought) conditions. This is the most recent data available on a statewide level.

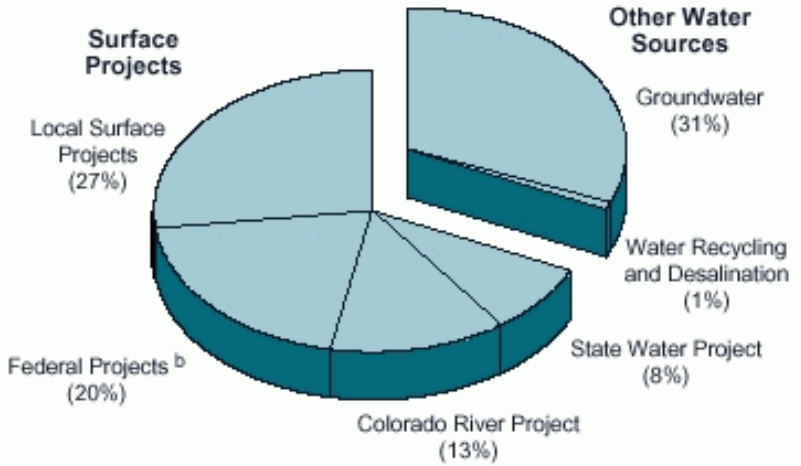
[b] Includes water for wetland habitats, fisheries, and dedicated wild and scenic rivers.

[c] One acre-foot supplies about two three-person households for one year.

Figure 2

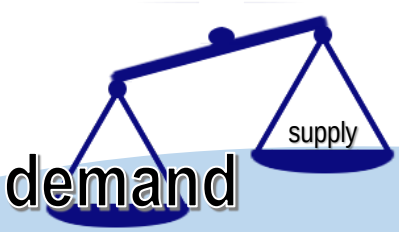
Major Sources of Developed Water[a]

1995



[a] Excludes (1) water flows for environmental purposes, such as undeveloped supplies designated for wild and scenic rivers, and (2) the portion of water demands met by the "reapplication" of surface and groundwater supplies. This is the most recent data available on a statewide level.

[b] Mainly the Central Valley Project.



Why is SGMA Needed?

Groundwater is an important source of water supply to California especially in dry periods.

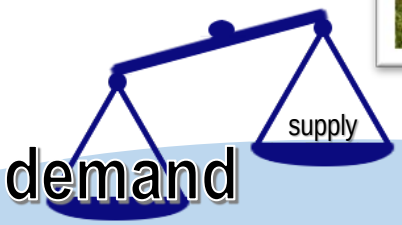


Figure 2-8 California's Statewide Water Supply and Percent Total Supply Met by Groundwater, by Hydrologic Region (2005-2010)

Groundwater comprises 38% of all water used in California, totaling more than 16 million acre-feet.

Total Water Supply[1] in California, 2005-2010 average annual data: 43,000 thousand acre-feet

Use met by Groundwater: 16,461 TAF (38% of total)

Use met by other water sources: 26,400 TAF (62% of total)

Hydrologic Region:
North Coast (2%)
San Francisco Bay (2%)
Central Coast (7%)
South Coast (10%)
Sacramento River (17%)
San Joaquin River (19%)
Tulare Lake (38%)
North Lahontan (1%)
South Lahontan (3%)
Colorado River (2%)

364 1,136 North Coast 32%

166 513 North Lahontan 32%

2,743 9,008 Sacramento River 30%

260 1,250 San Francisco Bay 21%

3,198 8,371 San Joaquin River 38%

1,120 1,295 Central Coast 86%

6,185 11,636 Tulare Lake 53%

441 668 South Lahontan 66%

1,605 4,707 South Coast 34%

380 4,272 Colorado River 9%

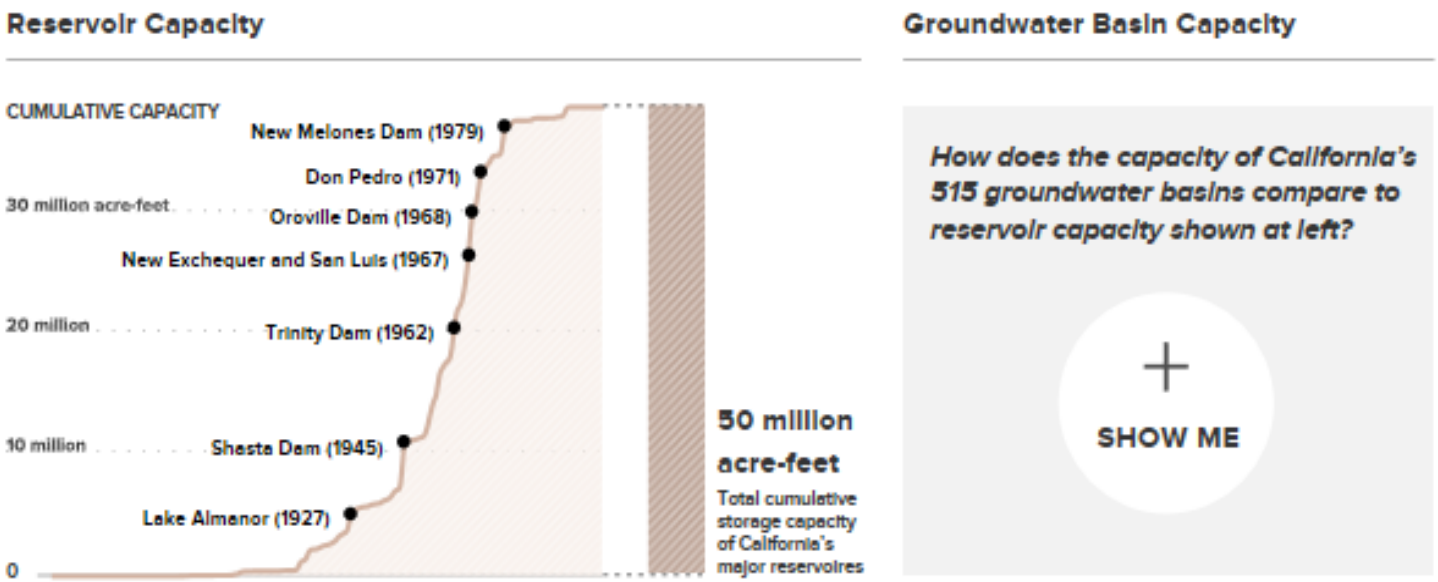
[1] Total water supply represents the sum of surface water and groundwater supplies, and local reuse.

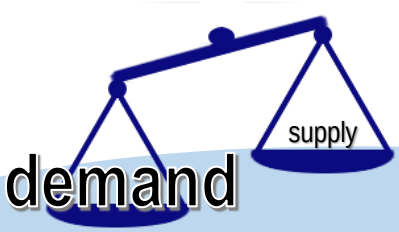
Hydrologic region boundary
Total water use (TAF)
Use met by groundwater
% Percentage met by groundwater

Prepared by California Department of Water Resources for California's Groundwater Update 2013

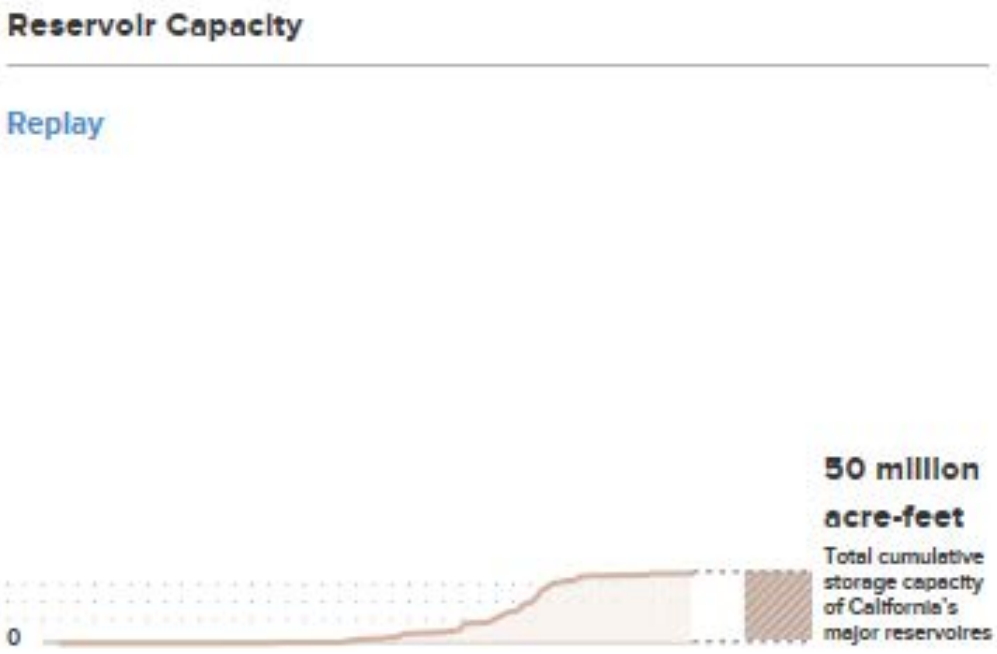
Why is SGMA Needed?

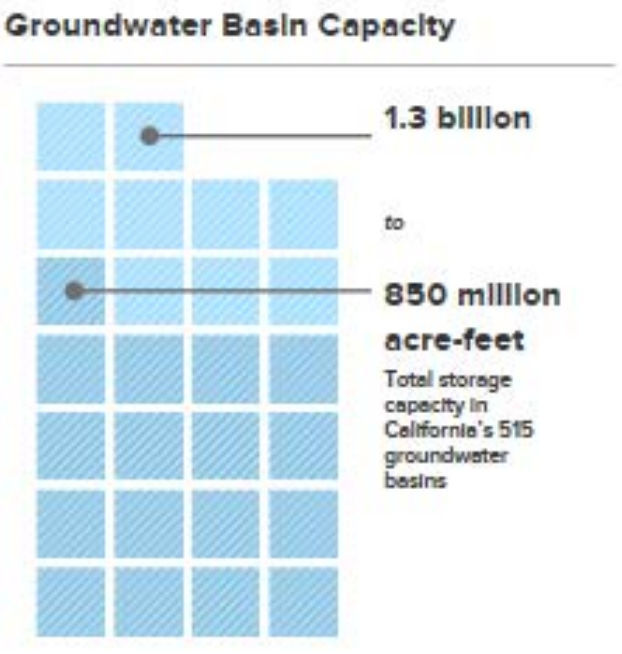
Average Annual Snowpack Storage: 15MAF
Average Annual Reservoir Storage: 42MAF

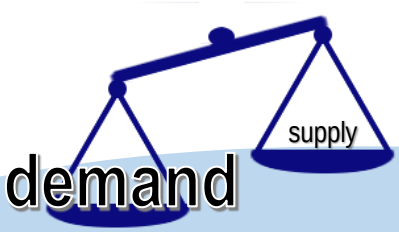




Why is SGMA Needed?







Why is SGMA Needed?

Surface storage has remained the same for decades, but demand for water has increased for:

- **Food production**
- **Population growth**

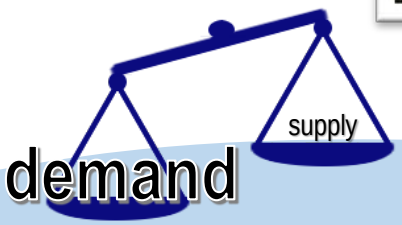
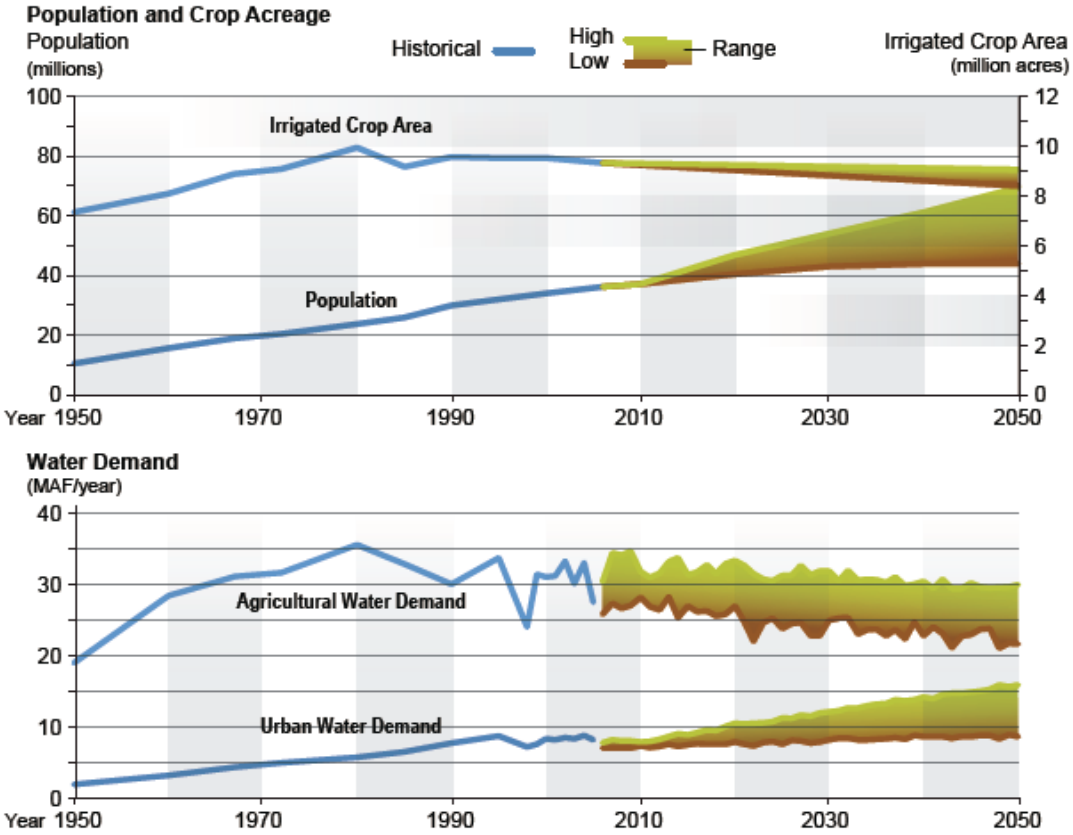
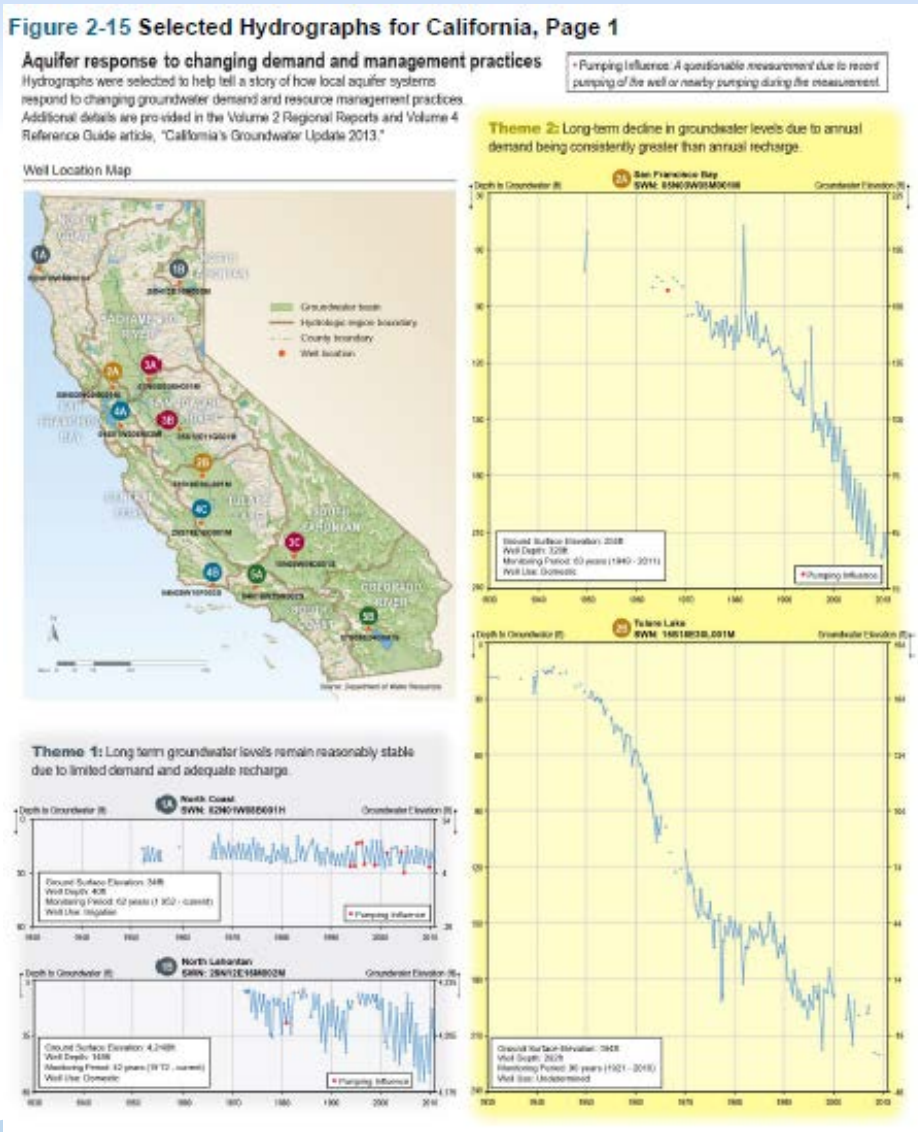
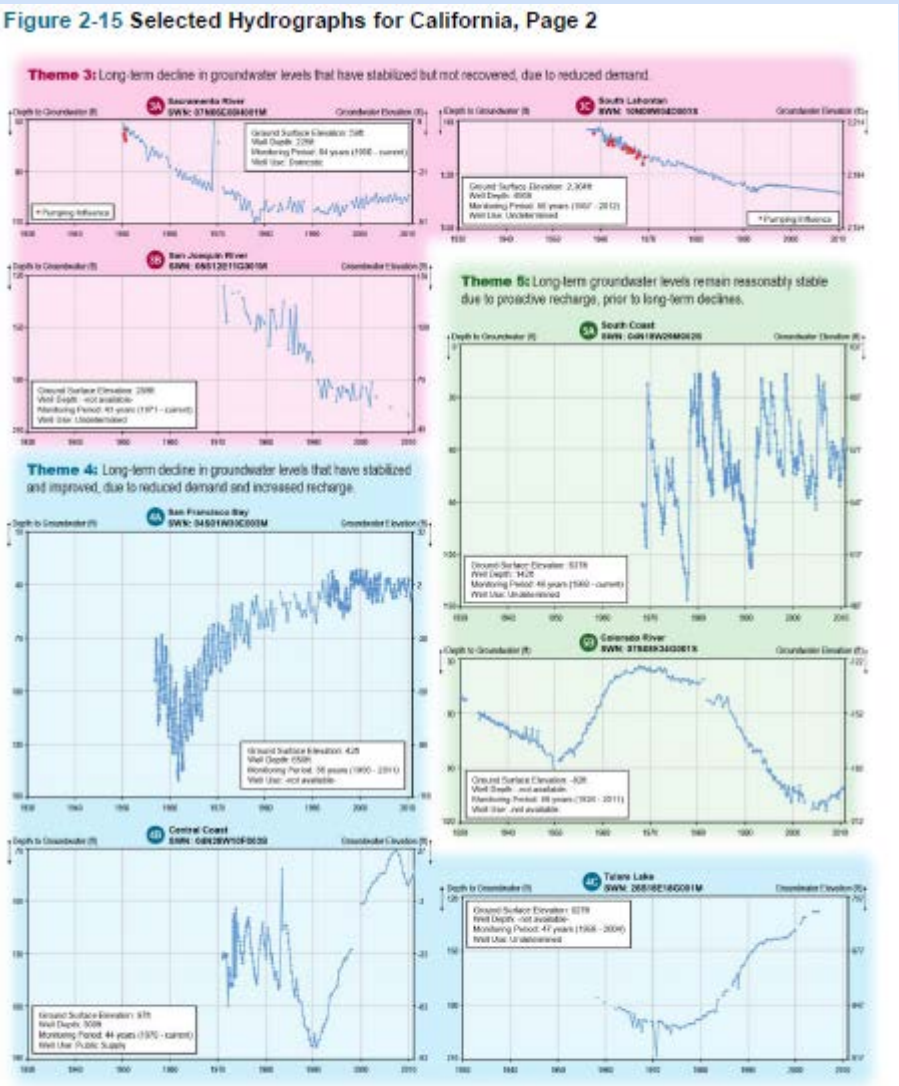


Figure 5-1 Scenario Drivers and Water Demand



Why is SGMA Needed?





SGMA Overview

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2. **What is SGMA?**
3. Who Does SGMA Impact?
4. How Will SGMA Work?
5. How Should I Prepare for SGMA?

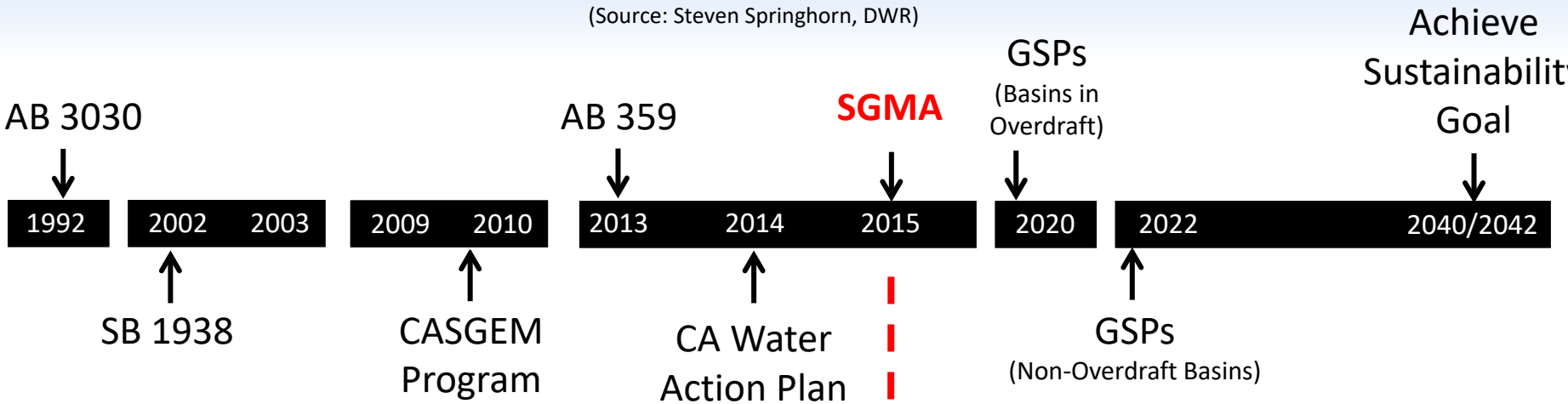
What is SGMA?

- Requires **Groundwater Sustainability Plans** in 127 basins in California
- Authorizes management tools for local agencies
- Creates State “backstop”
- Defines timeframe for accomplishing goals
- Does not apply to adjudicated basins

What is SGMA?

California's Major Groundwater Milestones

(Source: Steven Springhorn, DWR)



Voluntary Groundwater Management

(Non-Regulatory)

- Service Area Planning
- Variable Levels of Implementation
- Variable Authority
- Grant Incentives

Required Groundwater Management

(Regulatory)

- Entire Basin Planning
- Required Implementation
- New GSA Authorities
- State Backstop (SWRCB)

What is SGMA?

Surface Water vs. Groundwater Rights in California

Surface Water:

- Since 1914 State administers appropriative surface water rights
- Appropriative right holders are subordinate to pre-existing riparian right holders

Groundwater:

- Before SGMA, groundwater management was encouraged, but voluntary
- For all practical purposes, land ownership implicitly carried the right to virtually unlimited groundwater pumping
- Historically, when legal conflicts have arisen, each groundwater basin is individually adjudicated to determine water rights, or
- Local solutions are developed for management of groundwater

What is SGMA?

Groundwater Sustainability

under SGMA

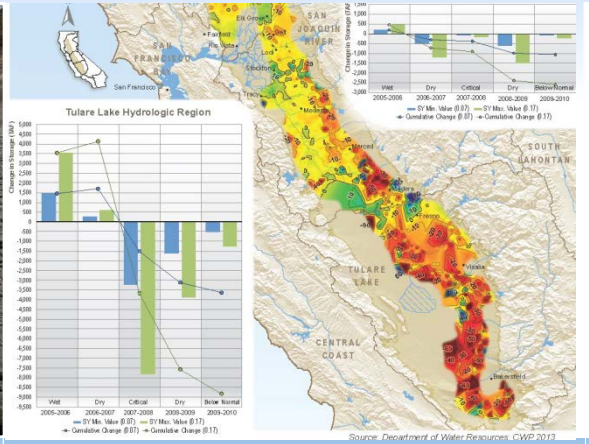
means

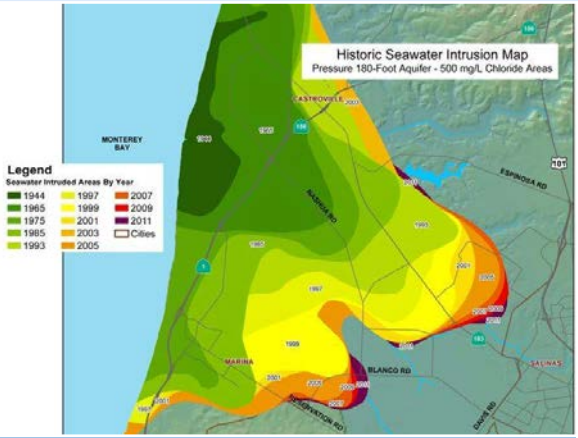
No Undesirable Results

What is SGMA?

Undesirable Results Identified in SGMA

(Source: Steven Springhorn, DWR)

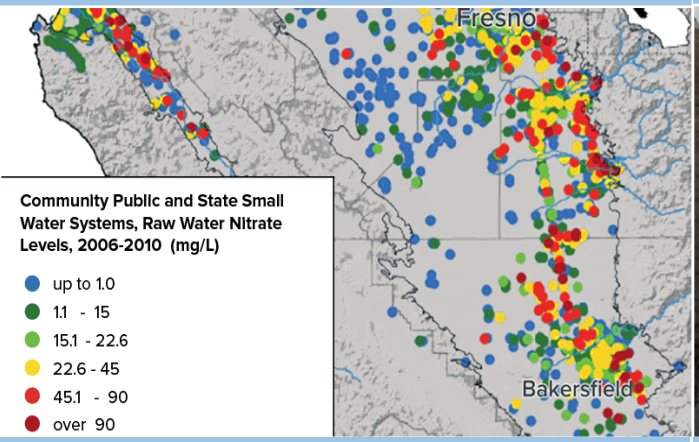




Lowering of GW Levels

Reduction of GW Storage

Seawater Intrusion



Water Quality Degradation

Land Subsidence

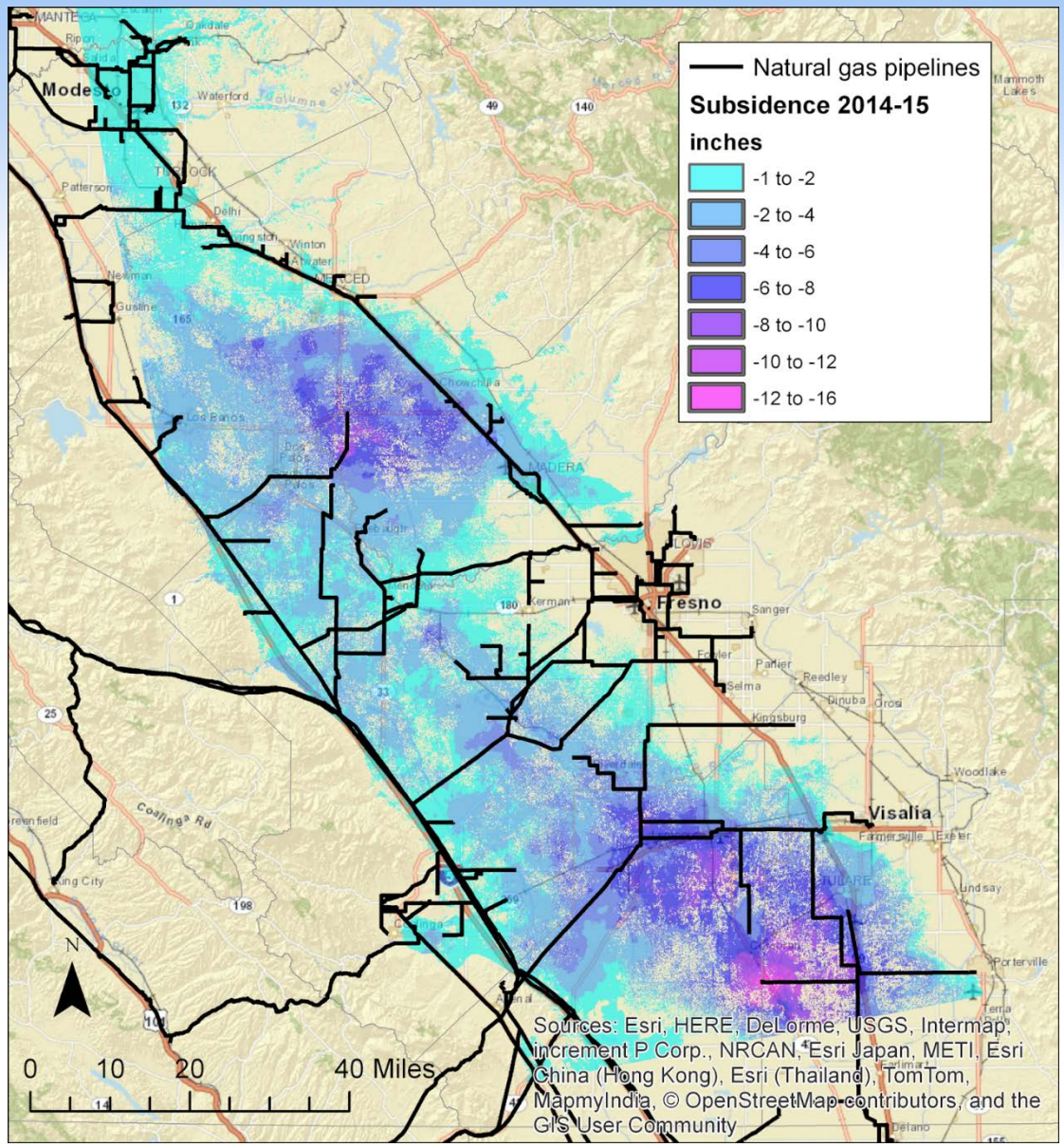
Depletion of Interconnected Streams

What is SGMA?

Sustainability indicators (related to the six **Undesirable Results**) are interconnected.

For example,
Declining Groundwater Levels in the San Joaquin Valley triggered:

- Loss of GW Storage
- Land Surface Subsidence
- Degraded Groundwater Quality



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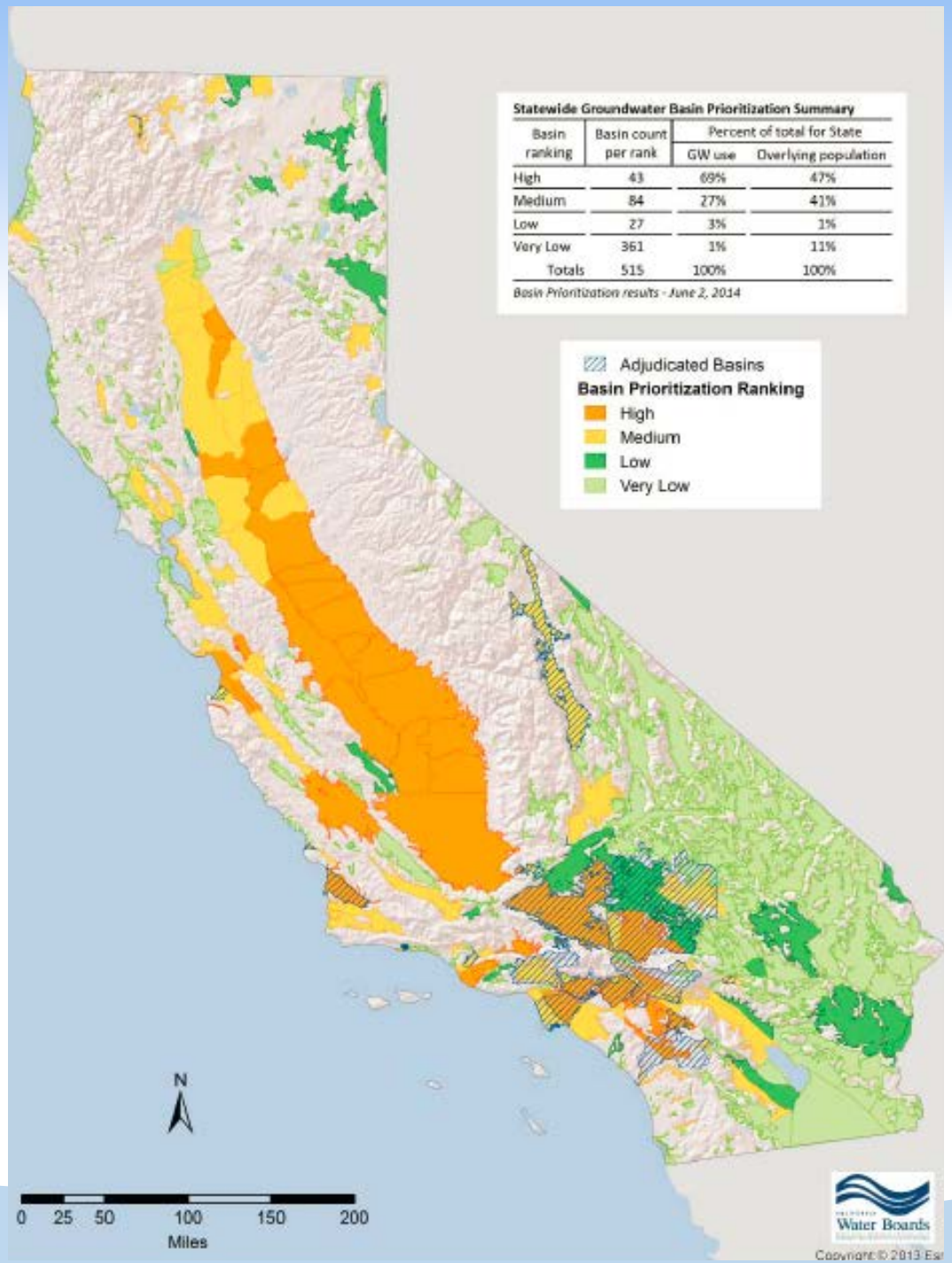
Who Does SGMA Impact?

- Groundwater users in **High** and **Medium** Priority Basins
- Growers
- Municipalities
- Private and public users
- Counties



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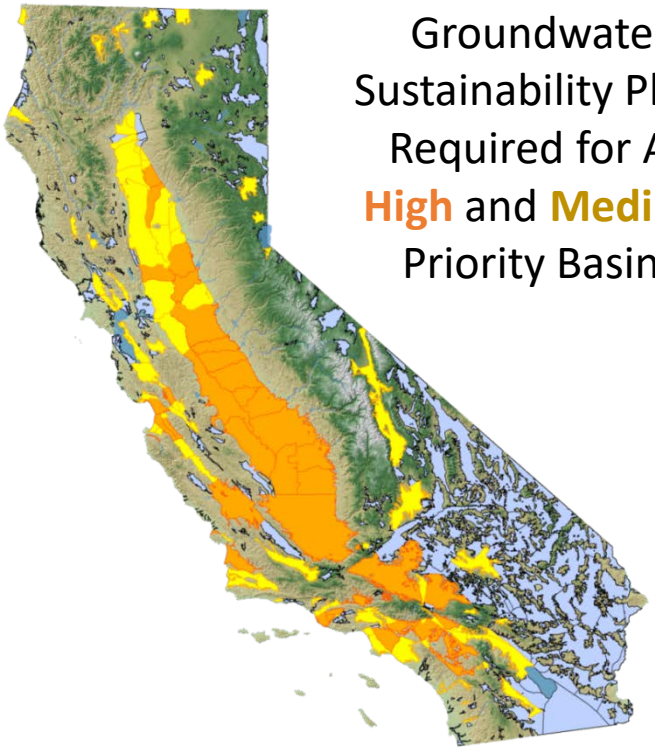
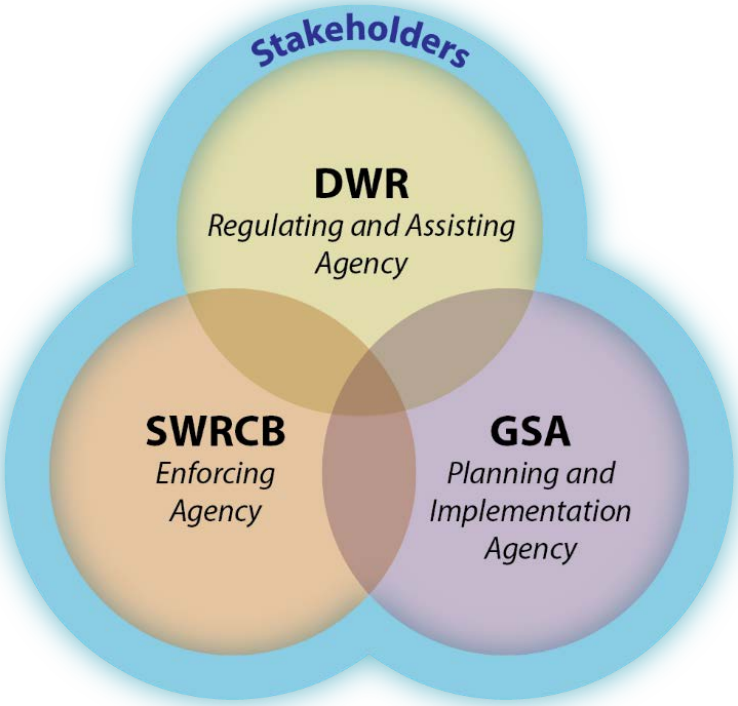
How Will SGMA Work?

Sustainable Groundwater Management
General Roles and Responsibilities

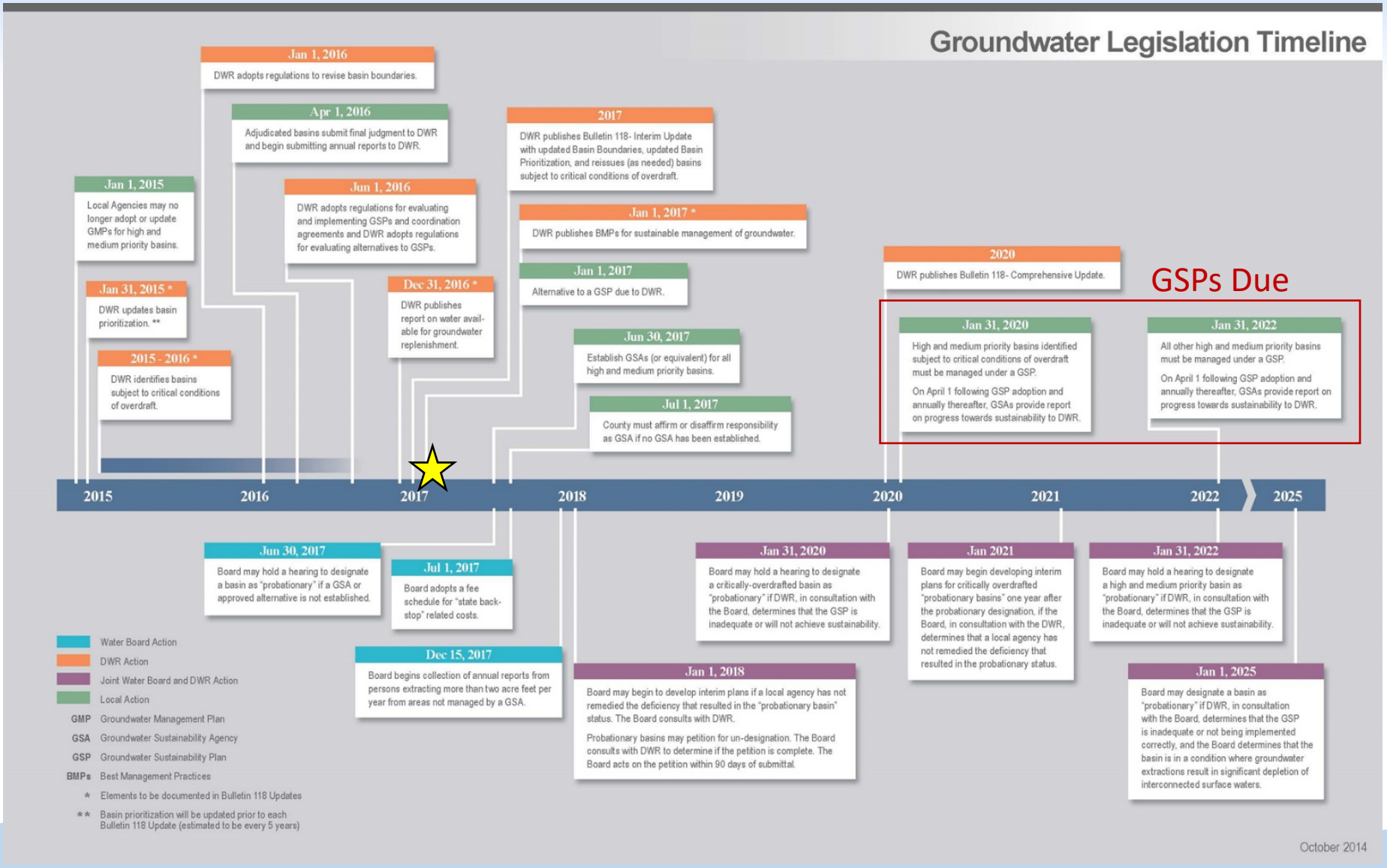
(Source: Steven Springhorn, DWR)



Groundwater Sustainability Plans Required for All **High** and **Medium** Priority Basins

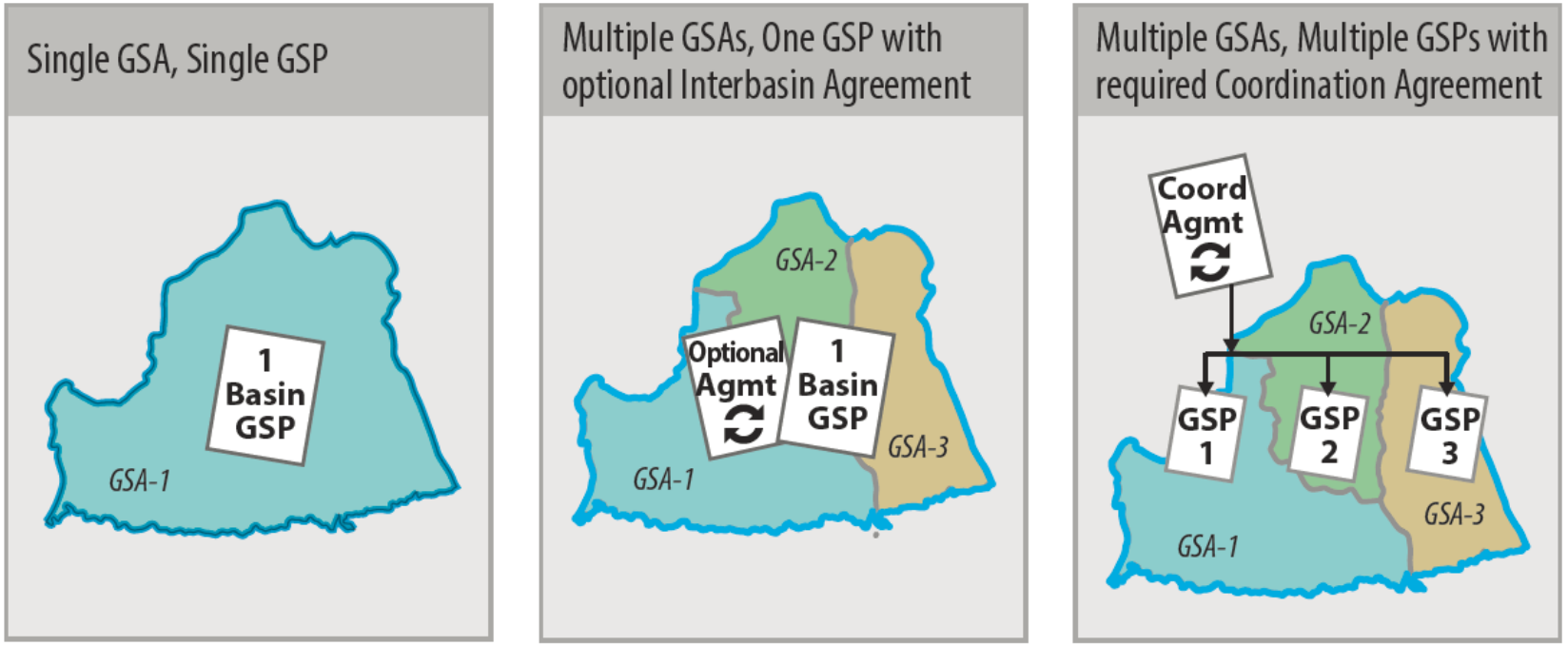


How Will SGMA Work?



How Will SGMA Work?

Options for GSP Submittals



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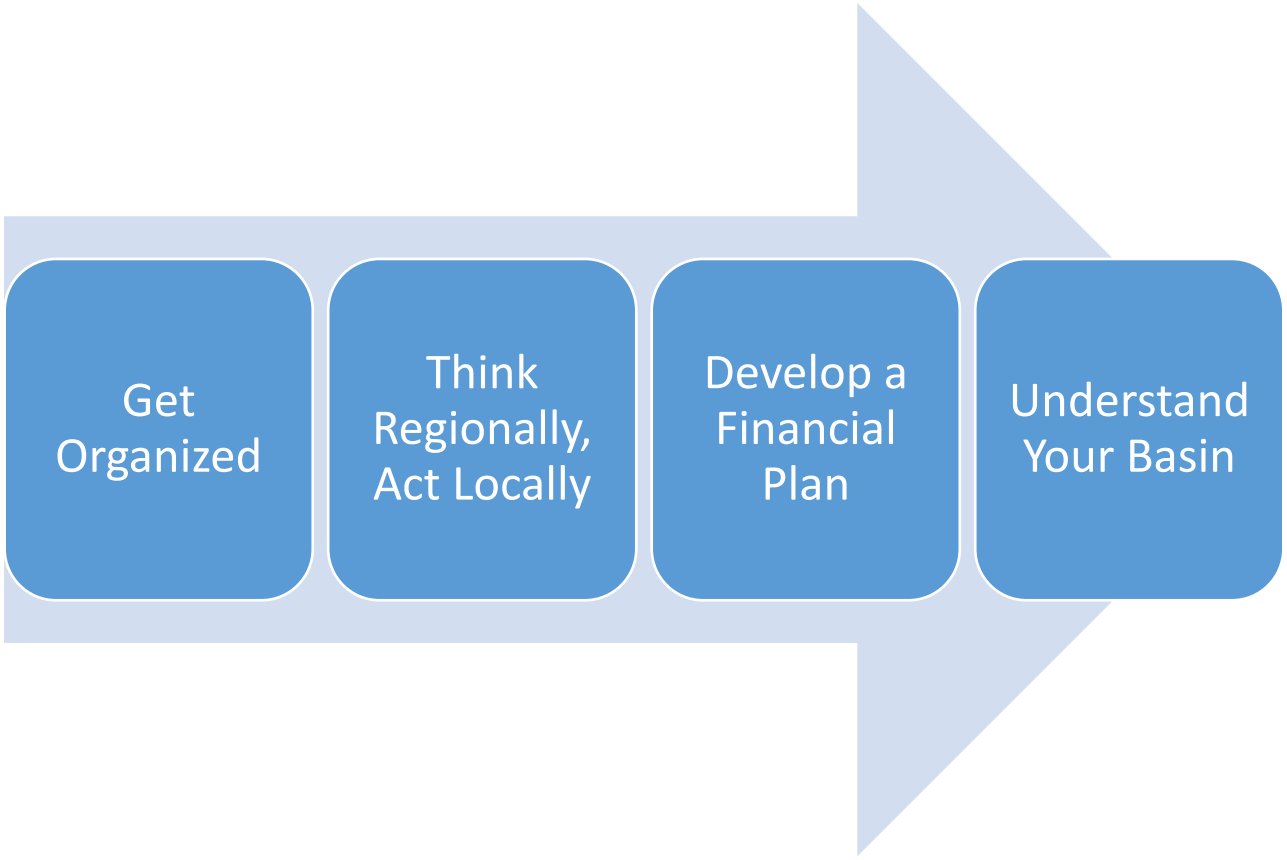
How Should I Prepare for SGMA?



How Should I Prepare for SGMA?

Overall Regulatory Approach

(Source: Steven Springhorn, DWR)

"A central feature of these bills is the recognition that groundwater management in California is best accomplished locally."

Governor Jerry Brown, September 2014

Public and Stakeholder
Engagement

Local Agencies
Plan Development
Plan Implementation

Department of Water Resources
Plan Evaluation
Statewide Minimum Standards
Technical & Financial Assistance

Sustainable Groundwater Management

Questions?

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