

Managing the Soquel/Aptos Groundwater Basin

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Sustainable Groundwater Management Act of 2014

- Fundamentally changes groundwater
- Provides local/regional agencies with authority to sustainably manage groundwater basins within their jurisdiction
 - Groundwater sustainability agencies
 - Groundwater sustainability plans
- Act composed of three bills: SB 1168, AB 1319, AB 1739

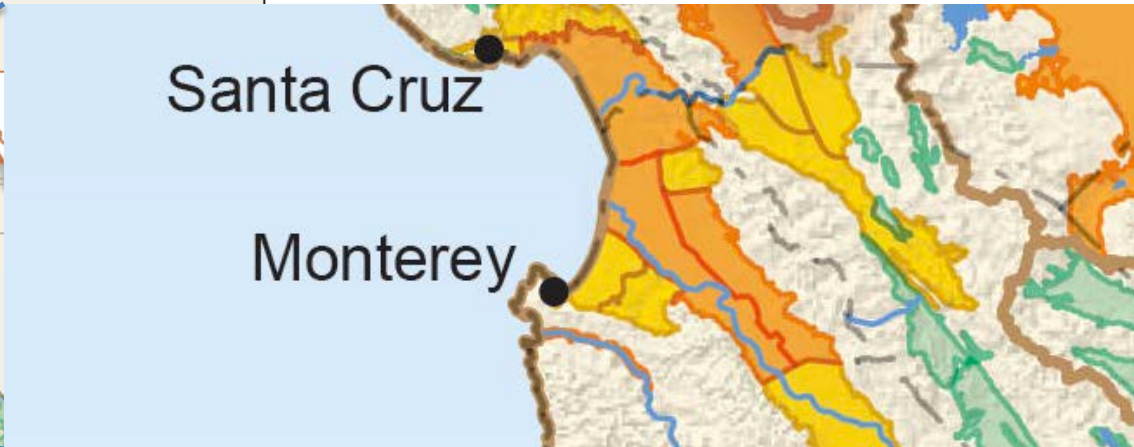
Fundamental Objective: Avoid “Undesirable Results”

- (1) Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply
- (2) Significant and unreasonable reduction of groundwater storage.
- (3) Significant and unreasonable seawater intrusion.
- (4) Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies.
- (5) Significant and unreasonable land subsidence that substantially interferes with surface land uses.
- (6) Surface water depletions that have significant and unreasonable adverse impacts on beneficial uses of the surface

Application

- DWR Bulletin 118 basins/subbasins designated as medium- and high-priority by DWR
- Prioritization factors (same as under CASGEM)
- Low, very-low priority and adjudicated basins exempt
- Can petition DWR to change Bulletin 118 boundaries
 - DWR to adopt regulations by January 1, 2016

Applicable Basins



CASGEM BASIN SUMMARY

Hydrologic Region: Central Coast
 South Central Region Office (SCRO)
 Basin Area: 2515 acres (3.9 miles)
 2010 Population: 18634

Basin: SOQUEL VALLEY
 Sub_Basin: N/A
 Basin Number: 3-1
 Date: 5/30/2014

DATA COMPONENT RANKING VALUE TABLE

Data Component	Ranking Range (x)	Units	Ranking Value	Confidence Adjustment	Average of Components	Adjusted Ranking Values
1. Population	$x \geq 4000$	persons/sq-mi	5			5
2. Population Growth	$6 \leq x < 15$	percent	2			2
3. Public Supply Wells	$x \geq 1.0$	wells/sq-mi	5			5
4. Total Wells	$x \geq 20$	wells/sq-mi	5	3.75		3.75
5. Irrigated Acreage	$1 \leq x < 25$	acres/sq-mi	1			1
6. GW Reliance	GW Use	$x \geq 0.75$	acre-foot/acre	5		4.5
	% of Total Supply	$60 \leq x < 80$	percent	4		
7. Impacts*	--	--	1			1
8. Other Information**	--	--	0			0
Overall Basin Ranking Score	$x \geq 21.08$	--				22.3

Overall Basin Priority: High

Very Low Ranking Range	Low Ranking Range	Medium Ranking Range	High Ranking Range
Range < 5.75	$5.75 \geq \text{Range} < 13.42$	$13.43 \geq \text{Range} < 21.08$	Range ≥ 21.08

Groundwater Sustainability Agency (GWSA)

- **June 30, 2017:** Deadline for designation of GWSA for medium- and high-priority basins
- GWSAs may be joint powers authority (JPA) (more later)
- Inclusion of other stakeholders through memorandum of agreement (MOA)
- Several GWMPs may be adopted by different GWSAs and implemented through coordination agreement

Agency Authority

- Significantly expanded authority:
 - Adopt rules, regulations, ordinances, resolutions
 - Conduct investigations of water rights
 - Require well registration
 - Require well-operators to report extractions and storage diversions
 - Acquire property and water rights
 - Reclaim water
 - Impose fees
 - Undertake enforcement actions for noncompliance
- Counties maintain well permitting authority, unless delegated 8

Groundwater Sustainability Plan (GWSP)

DEADLINES

- **January 31, 2020:** Deadline to adopt plan for medium- and high-priority basins subject to critical overdraft conditions
- **January 31, 2022:** Deadline to adopt plan for all other medium- and high-priority basins

GWSP Requirements

- Sustainability goal (20-year timeline)
- Measurable objectives (5-year timeline)
- Coordination between local planning agencies
- Additional requirements (similar to AB 3030 GWMP components)
- DWR review
- Post-adoption: Agency must file annual groundwater data/reports with DWR

Limited State Intervention

- Probationary basins
 - **Medium- and high-priority basins subject to critical conditions of overdraft** if (1) no local agency designated as groundwater sustainability agency by June 30, 2017; or (2) designated agency fails to prepare and adopt adequate Plan by January 31, 2020
 - **All other medium- and high-priority basins** if (1) no local agency designated as groundwater sustainability agency by June 30, 2017; or (2) designated agency fails to prepare and adopt adequate Plan by January 31, 2022; or (3) the plan is inadequate and the basin is either in a condition of long-term overdraft or groundwater extractions are resulting in a significant depletion of interconnected surface waters
- Interim plans

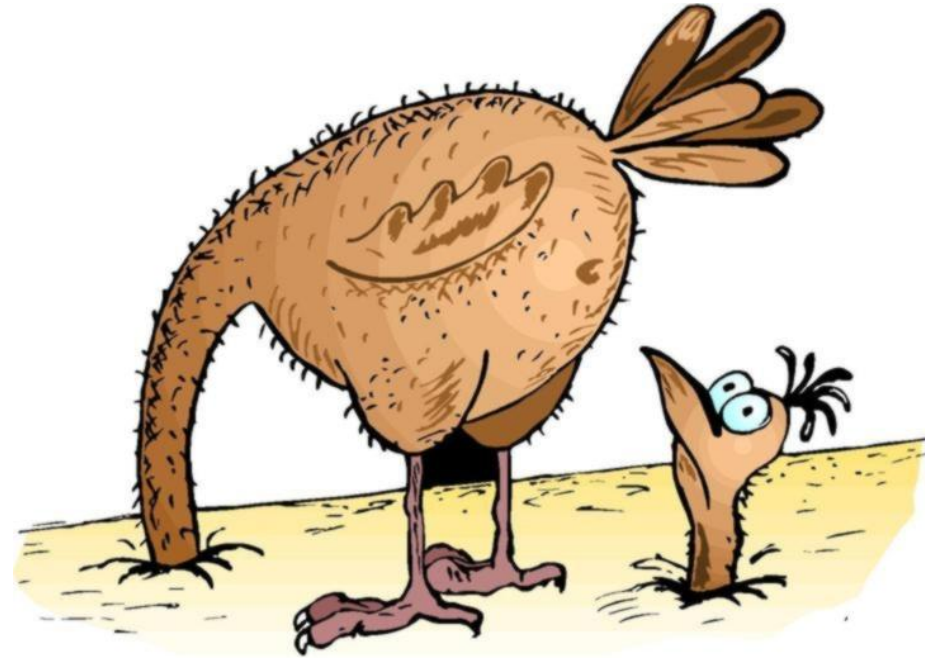
Where the Rubber Meets the Road: The Practical Application

Digesting the ELEPHANT

- Who governs?
- How much can I pump?
- Conditions, restrictions, and opportunities (e.g., transfer?)?
- How much do I have to pay?

Back to the Basics: California Water Law

- Riparian Rights are First Priority Rights
- Appropriative Rights are Second Priority Rights
- Surface Water Regulated by the State
- Percolating Groundwater Regulated by Local/Judicial Management (New SGMA)



Overdraft...

- The Rules Change . . . Maybe
- Adverse Basin Impacts (e.g., Seawater Intrusion/Subsidence)
- Ramp-Down
- Prescriptive Rights

What is Overdraft?

- Groundwater extractions in excess of safe yield
- Safe Yield is generally calculated as net inflows less subsurface and surface outflows.
- Safe yield defined as “the maximum quantity of water which can be withdrawn annually from a groundwater supply under a given set of conditions without causing an undesirable result.”
- “Undesirable results” – e.g., water quality degradation, seawater intrusion, land subsidence, or uneconomic use of groundwater. Same term used in the SGMA (see above)

“Undesirable Results”

- Substantial Depletion of Supply/Storage
- Subsidence
- Seawater Intrusion
- Impaired water quality
- Significant and unreasonable impairment of surface water supplies
- etc.



What is the Effect of Overdraft on Groundwater Rights?

- Overlying Owners Entitled to Enjoin Appropriators (Junior Appropriators Reduced/Eliminated First)
- Adversity Commenced for Purposes of Prescriptive Rights
- Prescriptive Rights
 - Four Elements (Actual, Open and Notorious, Adverse, Exclusive and Continuous for Five Years)

Figure 6-3
Rights to Groundwater In a Basin That Is Not In Overdraft

Figure courtesy of DWR, 2003; modified in 2004.

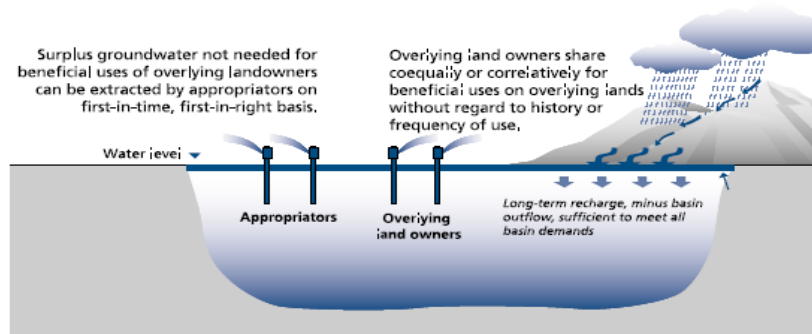
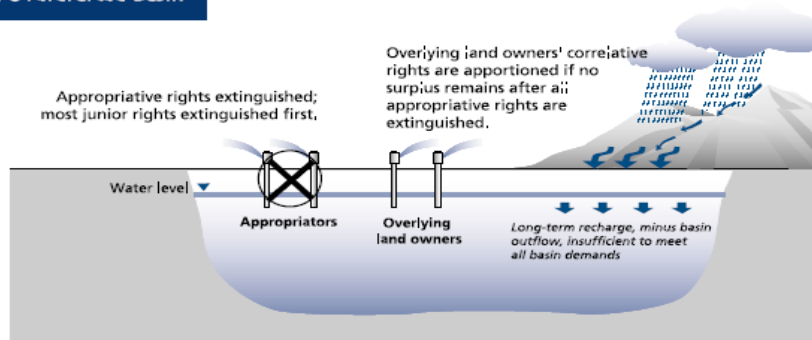


Figure 6-4
Rights to Groundwater In an Overdrafted Basin

Figure courtesy of DWR, 2003; modified in 2004.



Prescriptive rights may develop to allow the former appropriator to continue producing some groundwater if overlying land owners do not bring a lawsuit to diminish/extinguish appropriative extractions within five years of the commencement of overdraft. If prescriptive rights develop, the overlying land owners may be forced to reduce some production to accommodate extractions by prescriptive right holders.

General Adjudication

- General adjudication evaluates claims of all landowners and water users taking water from a common supply
 - (1) Quantifies the available supply
 - (2) Apportions the water among the competing claimants
 - (3) Imposes a management plan that seeks to maximize the reasonable and beneficial use of water without harm (“physical solution”)

Litigation

- Basin Adjudication. The primary advantage of an adjudication is the final resolution of all claims. It converts a claim to a quantified rights.
- Expensive. A groundwater adjudication can involve 100's if not thousands of potential parties and would result in a cumulative expense in excess of \$__,000,000.
- Lengthy. Typically a contested adjudication will take 10+ years to complete. Some have taken substantially longer.

Negotiated Solution

- Create durable stakeholder group/governance structure (e.g., JPA)
- Important to establish “fair” and participatory governance structure
- Agree on groundwater challenges/issues, technical data, and goals
- Compromise on extreme positions (not capitulation)
- Develop plan
- Make plan durable

Benefits of Management by Negotiation

- Flexibility. Broad flexibility to design custom-tailored management plan to address local conditions, including creative extraction parameters, governance, financing, replenishment, transferability, groundwater storage/conjunctive use, etc.
- Durability. The terms of the agreement are generally perpetual. This protects the rights of the parties and facilitates future investments.
- Efficiency. Reduce (not necessarily eliminate) conflict to reduce costs and expedite implementation of management/solution.

Governance Options

- Sustainable Groundwater Management Agency (JPA/MOA)
- Advisory Committees
- Court/Watermaster (broad options available)

Resolving Water Rights Claims

- Practical application—How much pumped, by who, at what cost, and under what terms?
- Possible claims—overlying/landowner priority, prescription, intervening public use, subordination of dormant landowner rights, beneficial use arguments, etc.
- Prudent course = respect reasonable water right priorities while compromising extreme positions
 - Example: Provide landowners with reasonable, cost-effective allocations to supply historical demands while simultaneously ensuring sufficient supply for municipal purveyors at reasonable expense

Practical Production Allocations & Fee Assessments

- Different classes of production rights
- Gradual ramp-down
- Management fees
- Replenishment assessments (various options)
- Transferability and market solutions
- Other restrictions and opportunities tailored to local conditions and desires

Ensuring Plan Durability

- Validating a GWSP
- General groundwater adjudication
 - Comprehensive resolution of water rights
 - Tailored management plan/physical solution (including governance by Watermaster)
 - Efficient future dispute resolution
- Streamlined adjudication process? (TBD)
- “Friendly” adjudication

Timeline

- History reflects that management by negotiation can be accomplished within 1-3 years
- The greater the consensus the greater the likelihood of judicial approval.

Examples of Stipulated Management Agreements

- Seaside Adjudication
 - Two classes of groundwater rights that “roughly” parallel common law groundwater rights and attendant benefits and burdens
- Santa Paula
 - Recognizes superiority of landowner rights with some concessions to municipal appropriator
 - Santa Paula Basin Pumpers Association – Manager and trustee for landowner pumpers
- Beaumont
- Six Basins