

"Who Owns the Water?"
(Caution, it's a trick question):
Understanding the
Fundamentals of Water
Management Law



**Brownstein Hyatt
Farber Schreck**

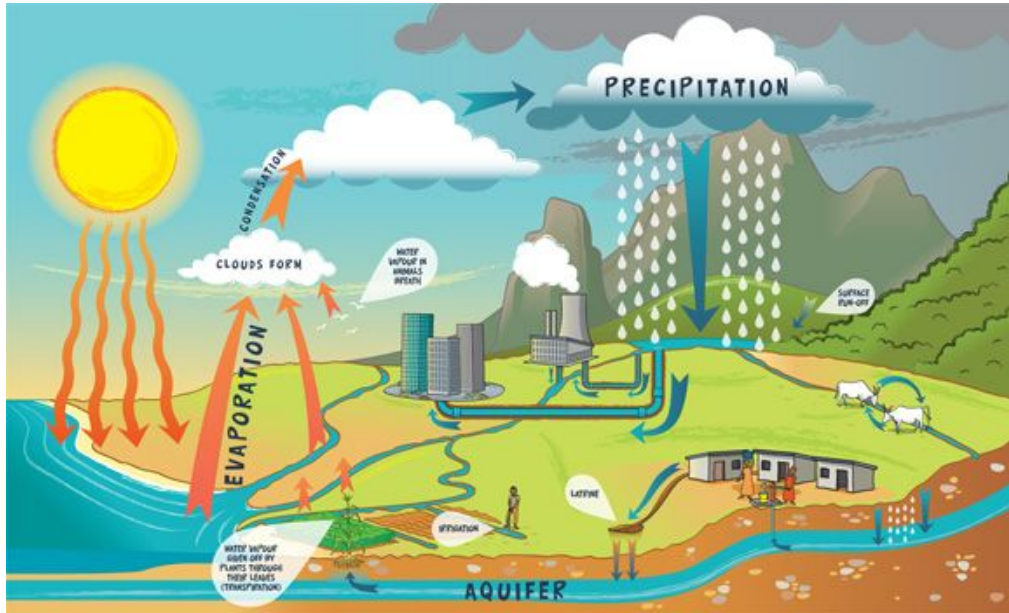
Jason Resnick
Western Growers

Kenneth Khachigian, Bradley Herrema,
Russell McGlothlin
Brownstein Hyatt Farber Schreck

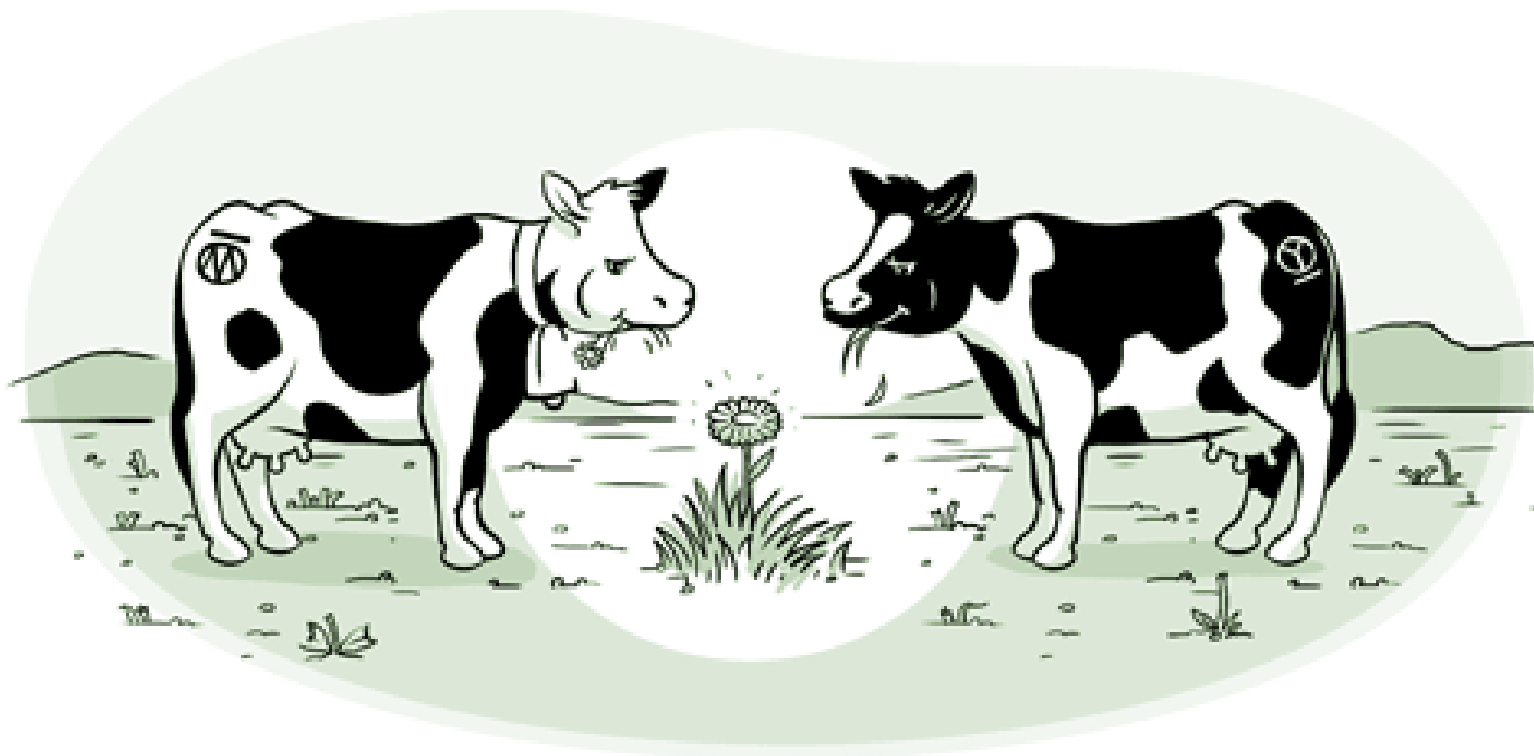
***“Things should be as simple
as possible, but not simpler.”***

~ **Albert Einstein**

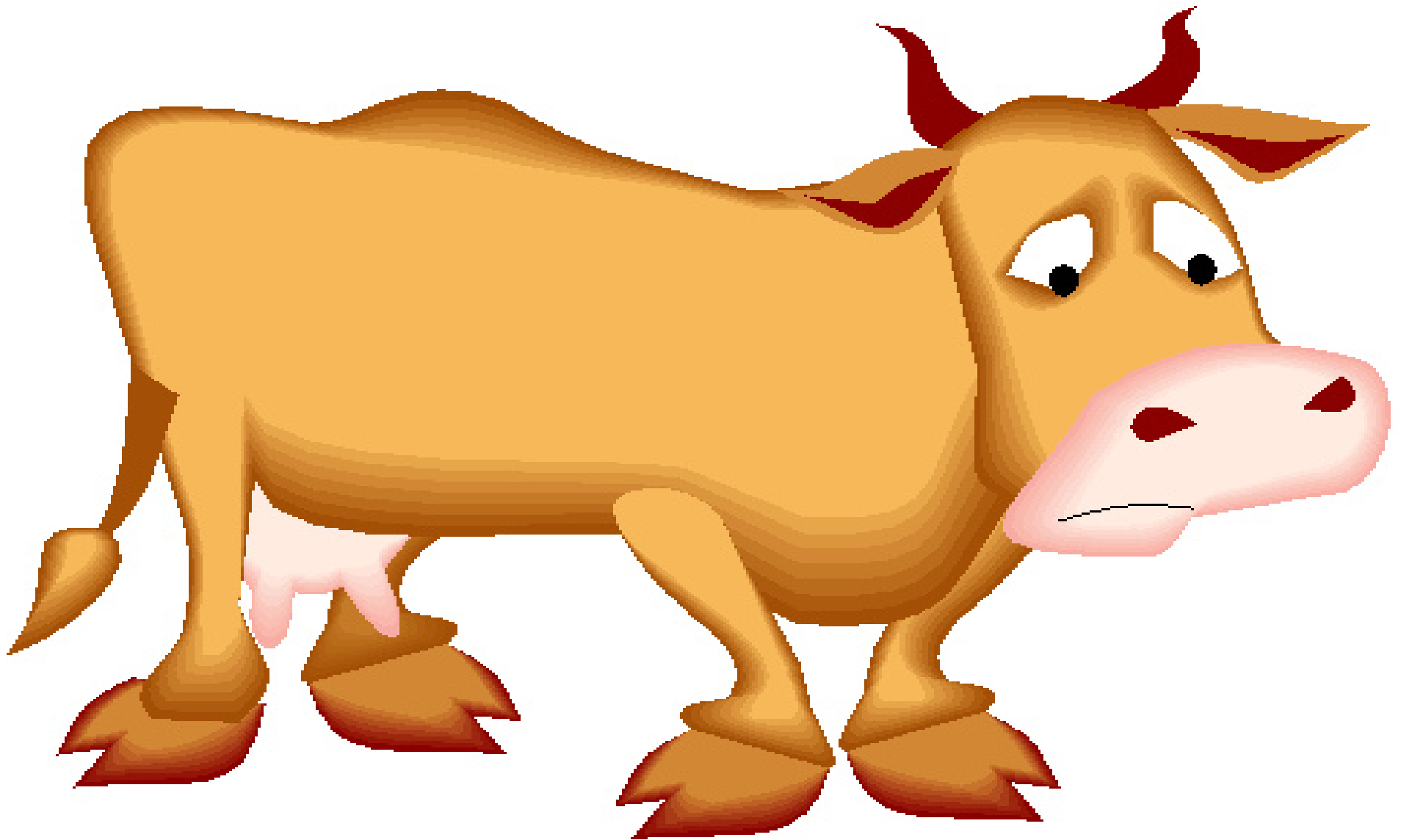
Water is a Unique Resource Because it is Shared and Transient



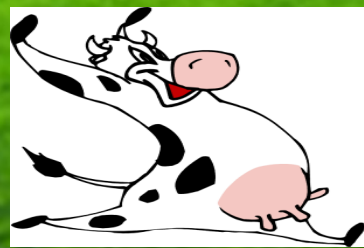
Tragedy of the Commons



Too Many Cows = Sad Cows



Solution: Internalize All Costs on Each User



Are Water Rights Property?



Public v. Private

- Right to Use = **PROPERTY RIGHT** Subject to **SUBSTANTIAL** Regulatory Regime
- Duality of Public Control Combined With Private Rights to Use
- State's Right is Not Proprietary, But Rather Regulatory
- Debate Over Where to Draw the Line? Regulatory Takings, etc.

Complex and Countervailing Objectives

- Reasonable Public Interests v. Private Interests
- Consumptive Demands v. Instream Water Demands
- Appropriate Degree of Legal Certainty and Adaptable Management





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Beneficial and Reasonable Use Limitation

Virtually All States
Apply Some Form
of Beneficial and
Reasonable Use
Limitation



What is Unreasonable / Non-Beneficial?

- Speculation? Non-Use = Unreasonable?
- Reasonable Efficiency or Optimal Use? (Alfalfa, Golf Courses, Artificial Lakes in the Desert?)
- Harm to Environmental and Other Public Interest Considerations?
- Is Good Public Policy Served by Allowing Courts/Legislature to Determine “Optimal” Use?
- Alternatives?

CA Examples of Unreasonable Methods of Use and Non-Beneficial Purposes of Use

- Use of Full Flow of Stream to Maintain Accretion (Sediment Buildup) to Downstream Riparian Land
- Flooding of Fields to Kill Gophers



Three Approaches to Water Law: the Old, the New, and the Ugly

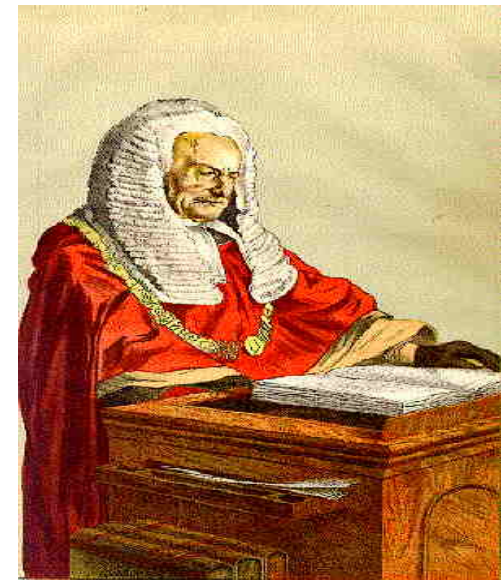
- Riparianism (The Old)
- Prior Appropriation (The New)
- Hybrid (The Ugly): Riparianism and Prior Appropriation



Riparianism

Origins in English Common Law

- Riparian Right - the Right to Divert Water from a Water Body Adjoining Land for Use on Adjoining Land
- Incident of the Rights to the Land (i.e., Part of the “Bundle” of Rights)



Riparian Rights

- Appurtenant to Land; Right to Use Water from Adjoining Water Body
- Traditionally Must be on Riparian Land (Exceptions Apply)
- Reasonable Use
- Rights May be Correlative (i.e., Riparians Share the Supply)
- Right May be Inchoate (i.e., Dormant) - Not Dependent on Historical Use

Prior Appropriation

- Developed in Western Mining Camps Because Riparianism Was Not Well-Suited for Miners (Miners Were Largely Trespassers on Public Lands)
- Perfection of Right Through Posting Notice at Place of Diversion and Commencing Diversion
- Water Disputes Rapidly Escalate



Appropriative Rights

- May Apply to Use Off of Riparian Tract
- Defined by Historical Quantity of Use
- Land Ownership is Irrelevant
- Priority Based Upon First-In-Time, First-in-Right
- May be Forfeited (i.e., Lost) by Non-Use
- May Require State Permit

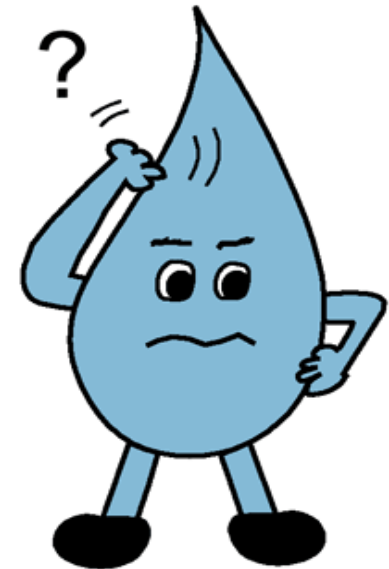
Riparianism v. Prior Appropriation in CA

- Conflict Between Miners (Appropriators) and Landowners Who Possessed Land Under Mexican Land Grants (Riparians)
- California Supreme Court Addresses the Conflict in *Lux v. Haggin* (1886)



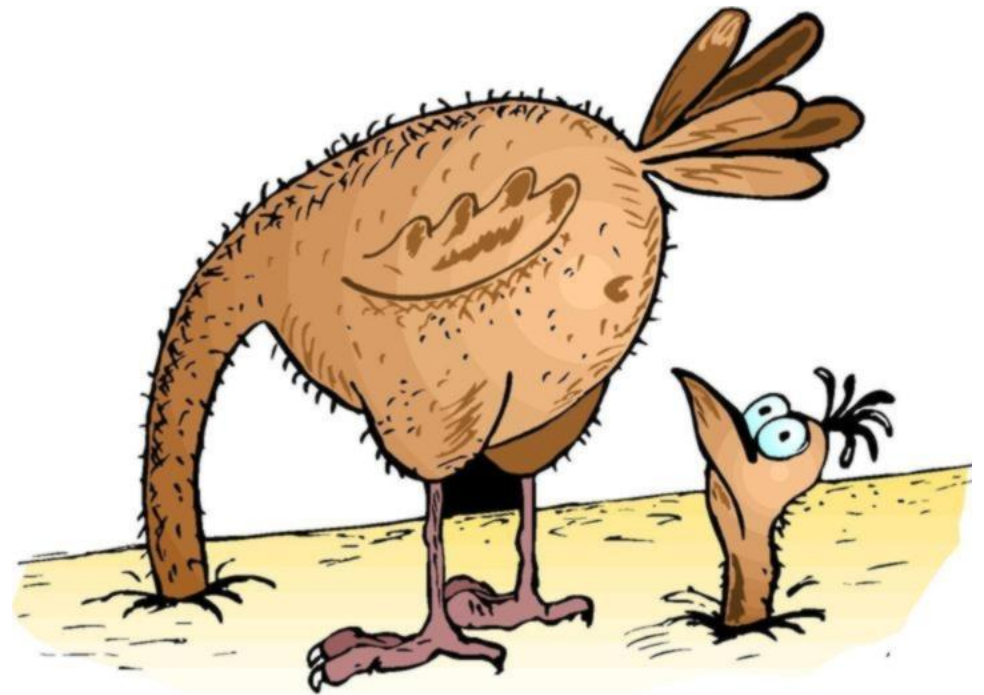
And the Winner Is ... We Choose Both!!

- Court Reasons that California's Adoption of the English Common Law Included Adoption of the Riparian Doctrine
- However, Court also Acknowledges Prior Appropriation, but Renders Appropriative Rights "Junior" in Priority to Riparian Rights



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, if Regulated





- Eastern US – Riparianism (Reasonable Use/Permitting)
- Western US – Largely Prior Appropriation/Permitting (With Notable Exceptions – E.g. CA)

What About Groundwater?

Similar but Separate
Law Applies

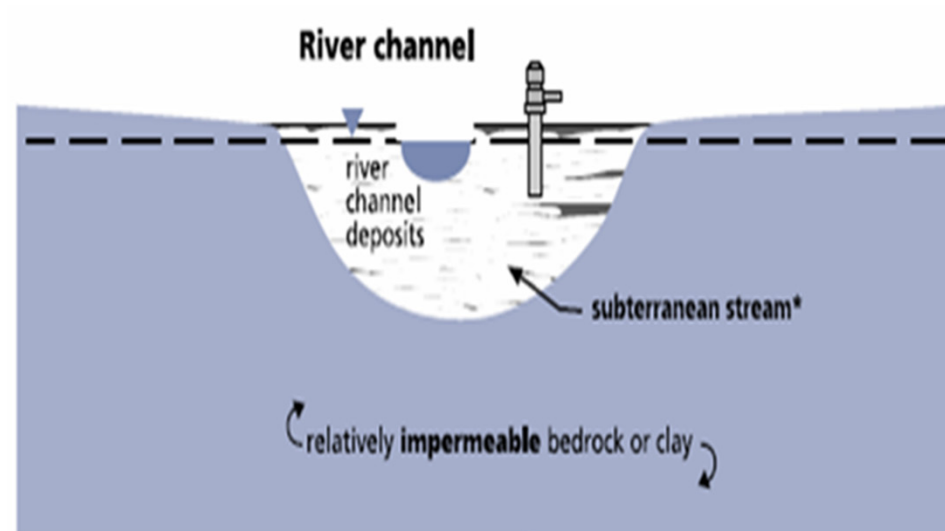
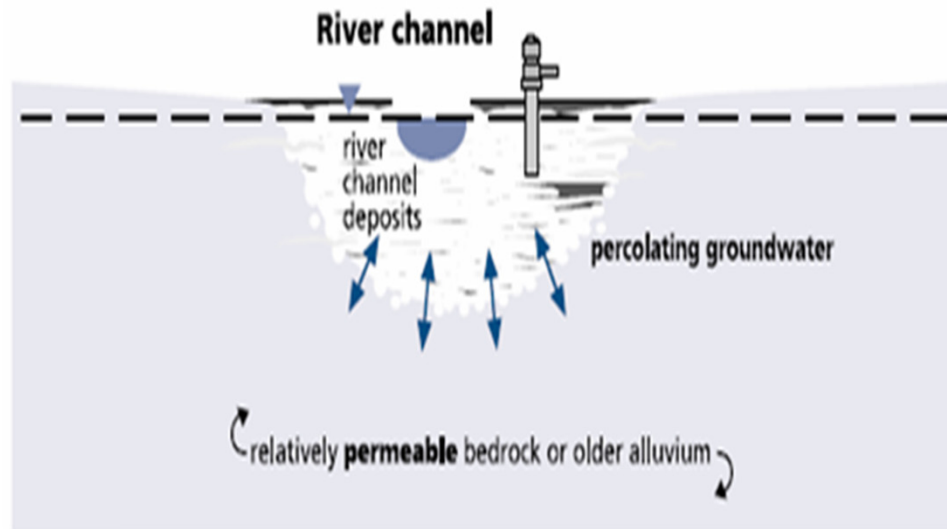


What is “Groundwater”?

- What’s the Issue? The Demarcating Line Between “Independent” Groundwater and Groundwater That is Surface Water “Dependent” (Feeds or is Fed by Surface Watercourse)
- Other Terms - Percolating Groundwater vs. Subterranean Stream; Surface Water Underflow; Groundwater Flowing within Relatively Impermeable Beds and Banks (Known and Defined Channel)
- What is at Stake? Who Regulates? Can I Get a Permit? Can I Be Sued or Sue? Other Legal Implications

California Percolating Groundwater v. Subterranean Stream

- Percolating Groundwater: Vagrant, Wandering Drops Moving By Gravity in Any and Every Direction Along the Path of Least Resistance – *City of Los Angeles v. Hunter* (1909)
- Subterranean Stream (“Groundwater Flowing in Known and Definite Channel”)
 - Subsurface Channel Present;
 - Channel Possess Relatively Impermeable Beds and Banks
 - Course of Channel Capable of Being Known with Reasonable Inference; and
 - Groundwater is Flowing in the Channel



California Overlying Groundwater Rights: Similar to Riparian Rights

- Overlying Rights to a Groundwater Aquifer Are Analogous to Riparian Rights to a Surface Water Body
- Same Legal Characteristics Apply:
 - Tied to Land Ownership
 - Not Affected by Historical Use
 - Can Only Use on Overlying Land



Appropriative Rights to Groundwater

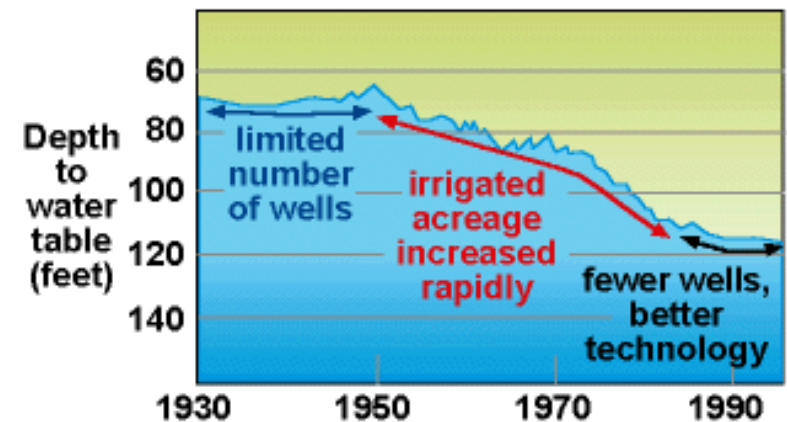
- Like Appropriative Rights to Surface Water:
 - Defined by Historical Quantity of Use
 - Priority Based Upon First-In-Time, First-in-Right
 - Can Use Off of Overlying Land

California: The Water Rights Table

Source → Type of Right ↓	Surface Water/ Subterranean Stream	Percolating Groundwater
Riparian/ Overlying Owner	?	?
Appropriator	?	?

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

“Undesirable Results”

- Substantial Depletion of Supply
- Subsidence
- Seawater Intrusion
- Uneconomic Pump Lifts
- 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 May be Obtained After Satisfaction of the Four Elements of Prescription (Actual, Open and Notorious, Adverse, Exclusive and Continuous for Five Years)
- Nuances Apply

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

Figure courtesy of DWR, 2003; modified in 2004.

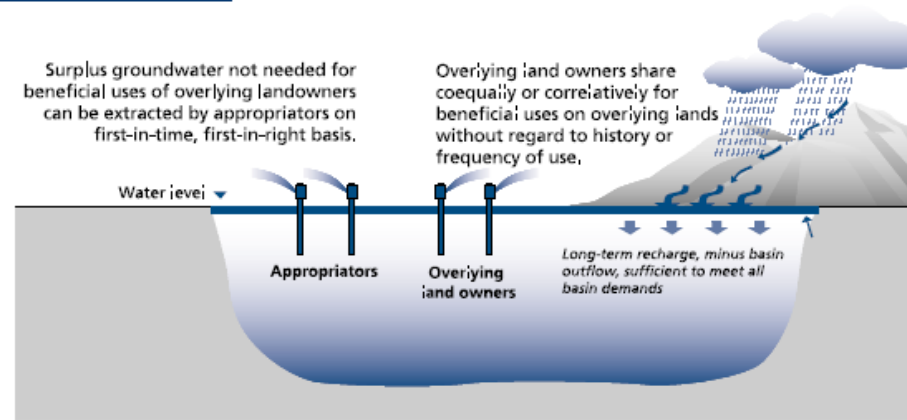
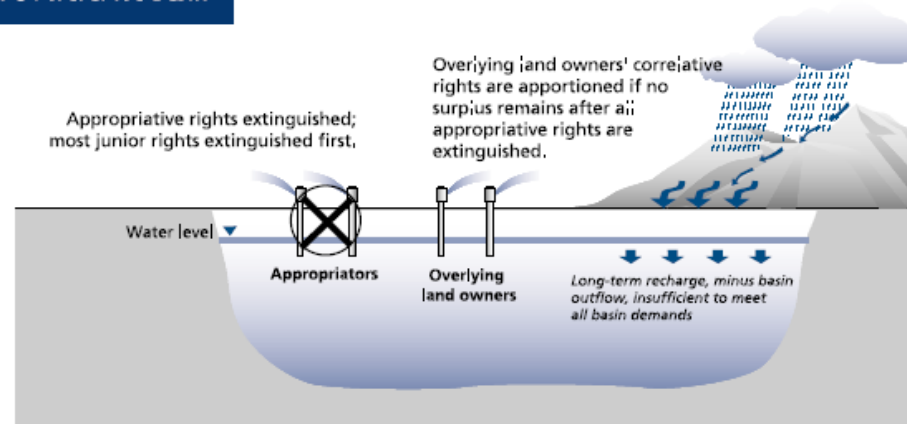


Figure 6-4
Rights to Groundwater In an Overdrafted Basin

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.

Legal Rights to Store Water Underground

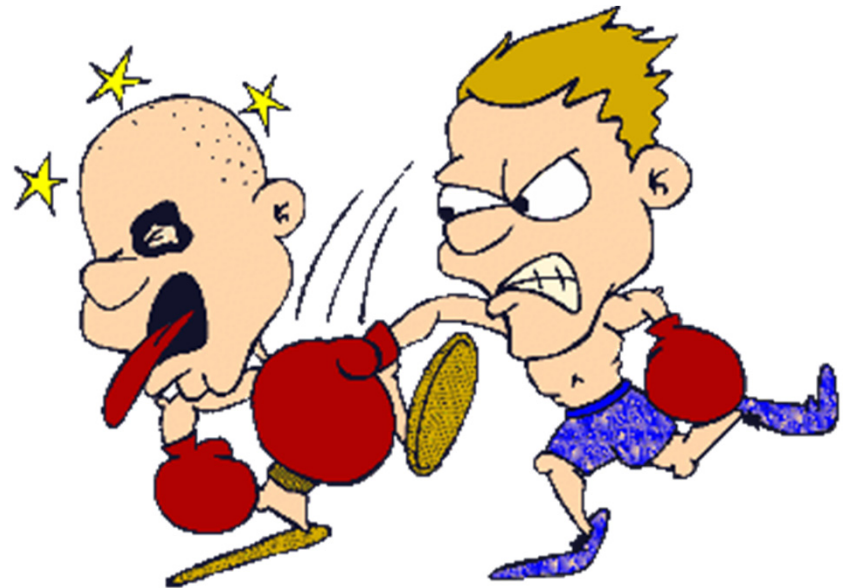
- Right to Recapture Stored Groundwater – *Los Angeles v. Glendale* (1943) and *Los Angeles v. San Fernando* (1975)
- Overlying Landowners Likely Cannot Exclude Harmless Storage (*County v. Park County Sportsmen's Ranch* (Colorado 2002))
- Uncertainty Over Who Has Prior Right to Store and Restore (Central Basin/West Basin Storage Conflict)

Who Manages?

- State (State Water Resources Control Board)
- Courts, Adjudications, and Watermasters
- Local Public Agency (County or City)
- Special Water District
- Joint Powers Agency
- Voluntary Coalitions (AB 3030)
- Groundwater Management Evolving – Often Starts with Reporting and Monitoring

Adjudication

- Declare How Much Total Withdrawals
- Declare and Define Individual Rights
- Establish Basin Management Rules and Regulations
- Establish Governance Structure



Post Adjudication

- Typically Well-Structured Rules
- Watermaster – Often Composed of Stakeholders Board
- Subject to Court's Retained Jurisdiction
- Clearly Defined Water Rights
- Rights Typically Transferable



Adjudication Challenges

- Can be 100's or even 1000's of Parties
- Can take decades
- Can cost \$\$ millions
- Could we legislate a more efficient process?



Regulatory Restrictions

- What Constitutes Reasonableness/Beneficial Use?
- In-Stream Flow Requirements
- Public Trust Doctrine
- Amendment of State-Issued Permits?
- Public Interest Changes to Water Rights (Takings or Inherent Aspect of the Right)
- Debate Continues . . .

Water Transfers

- Transfer of a Water Right from One Entity/ Location/Purpose to Another
- The Good:
 - Market Reallocation to Higher Valued Uses
 - Demonstrates the “True Price” of Water
 - Incentivizes Conservation
 - Means to Maximize Benefit from Limited Supply
- The Bad:
 - Potential Harm to Other Water User, the Environment, Socio-Economic Interests
 - Water Flows to \$\$\$



Arizona



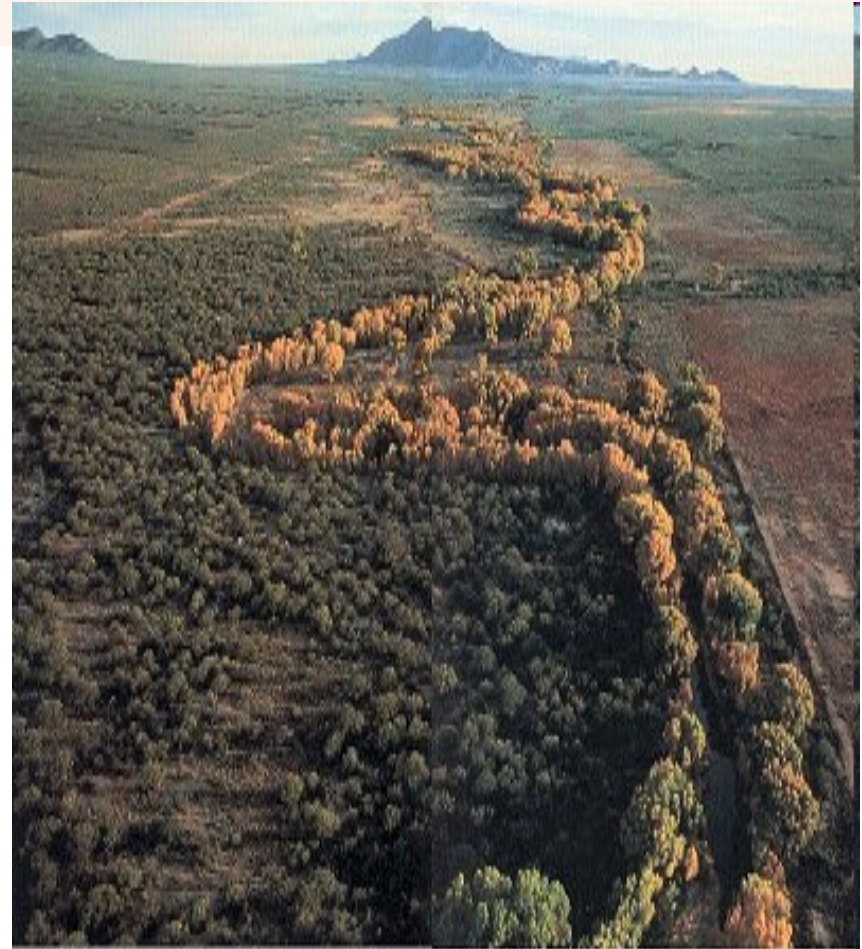
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Arizona: Surface Water

- All water belongs to the public and is subject to appropriation and beneficial use. A.R.S. § 45-141.
- Water rights are considered to be property rights. *Paloma Investment Limited Partnership v. Jenkins* (1998) 978 P.2d 110, 115.

Arizona: Surface Water (it exists!!!)



Arizona: Surface Water

- Major reservoir storage systems located on Salt, Verde, Gil and Agua Fria rivers
- Colorado River Water (2.8 MAF)
- 1919 Surface Water Code, *Arizona Revised Statutes (“A.R.S.”) § 45-141 through § 45-206*

Arizona: Surface Water

- Prior appropriation is the law of the land since before statehood (Howell Court, 1864)
- Upheld by Territorial Supreme Court in 1888:
“The common law doctrine of riparian rights shall not obtain or be of force or effect in the State.”
(*Clough v. Wing*)

1919 Surface Water Code, *A.R.S. § 45-141 through § 45-201*

- Includes “waters of all sources, flowing in streams, canyons, ravines or other natural channels, or in *definite underground channels . . .*”
A.R.S § 45-101
- Prior to June 12, 1919, a person appropriated surface water right simply by applying the water to a beneficial use and posting, recording or filing notice. These appropriations are now registered with the Arizona Department of Water Resources (“ADWR”) per A.R.S. § 45-181 to § 45-190.
- June 12, 1919 and after, an appropriator files an *Application* with ADWR, obtains a *Permit* and then once the water is put to beneficial use, is issued a *Certificate of [Surface] Water Right*.

Arizona's General Stream Adjudication Process, A.R.S. § 45-251 through § 45-264

- A "general adjudication" is an action for the judicial determination or establishment of the extent and priority of the rights of all persons to use water in *a river system and source*. *A.R.S. § 45-251*.
- "River system and source" means: (1) *all water appropriable* under [Arizona state law]; and (2) *all water subject to claims based upon federal law*. *A.R.S. § 45-251*.
- Comprehensive: Includes water rights and claims held by private entities, federal and state entities, and Indian tribes (i.e., includes Federal reserved rights to water).

Arizona: Groundwater

- Groundwater sources account for 43% of state's water use
- A split regulation system based on location:
 - Initially, Arizona followed a “reasonable use” system
 - 1980 Groundwater Management Act (“GMA”), *A.R.S. § 45-401 through § 45-704*, introduced strenuous regulation in certain areas

Surface Water versus Percolating Groundwater

- In 1904, the Arizona Supreme Court stated that *percolating water* (i.e., groundwater) as distinguished from water in an underground stream or surface water, belonged to the owner of the soil and was not subject to appropriation by another. *Howard v. Perrin*, 76 Pac. 460 (1904), aff'd 200 U. S. 71 (1906).
- In 1931, the Arizona Supreme Court in *Maricopa County Municipal Water Conservation District No. 1 et al. v. Southwest Cotton Co. et al.*, 4 P.2d 369 (1931):
 - “*Subflow*”: “those waters which slowly find their way through the sand and gravel constituting the bed of the stream, or the lands under or immediately adjacent to the stream, and are themselves a part of the surface stream.”
 - Test of appropriability of the subflow: “does drawing off the subsurface water tend to diminish appreciably and directly the flow to the surface stream?” If so, the water is appropriable “subflow.”

1980 Groundwater Management Act (“GMA”), *A.R.S. § 45-401 through § 45-704*

- Under the 1980 GMA, ADWR aggressively manages the state’s finite groundwater resources to “support the growing economy”: a water allocation system.
- Five areas that relied extensively on mined groundwater were identified and designated as Active Management Areas (“AMAs”). Also created Irrigation Non-Expansion Areas (“INAs”)
- Existing groundwater uses within the AMAs were grandfathered in— for example, an irrigator who used groundwater received a “Certificate of Irrigation Grandfathered Groundwater Right”

1980 Groundwater Management Act (“GMA”), *A.R.S. § 45-401 through § 45-704*

- New uses of groundwater may be allowed if the use receives a groundwater withdrawal permit.
- Each AMA carries out conservation programs to reach groundwater management goals such as reaching “safe yield” by 2025, or preventing “local water tables from experiencing long-term declines.”
- Outside the AMAs, the “old” rule of reasonable use continues to apply, with minimal regulation by the Arizona Department of Water Resources.

Arizona AMAs



Active Management Areas

What the 1980 Groundwater Management Act Didn't Do:

- While groundwater rights are extensively regulated within the Active Management Areas, management is not based on prior appropriation.
- The 1980 Groundwater Management Act did not resolve how to integrate Arizona's bifurcated management of surface water and groundwater rights.

When Systems Collide



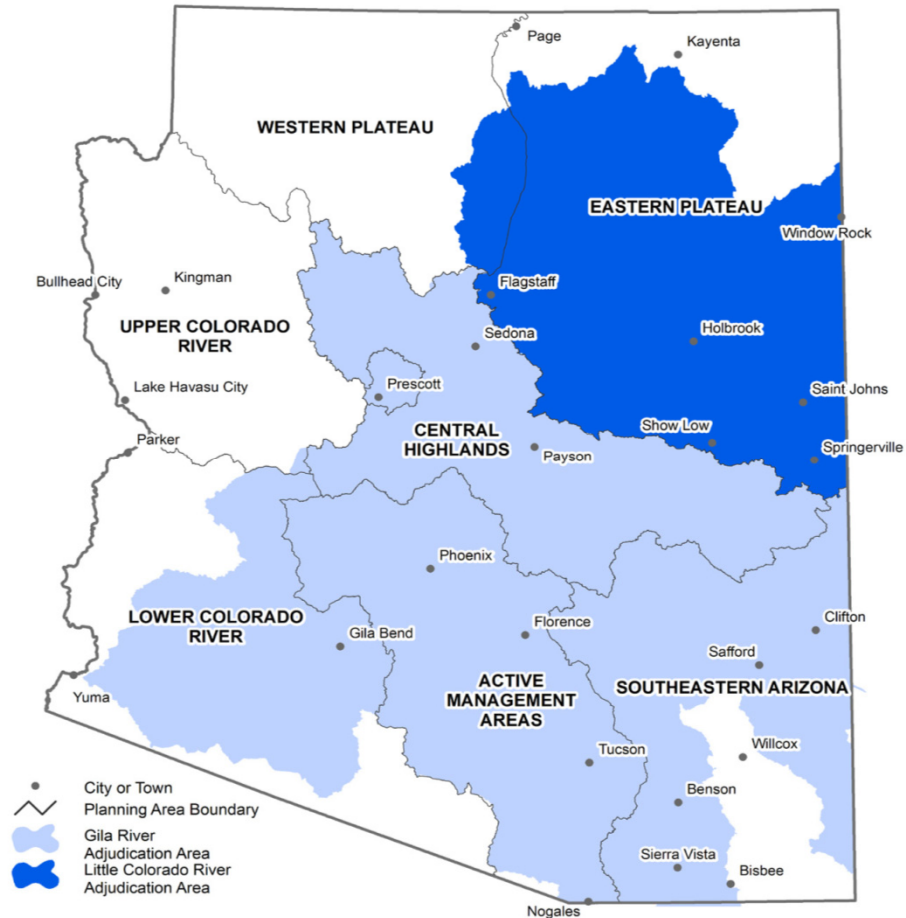
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Gila and Little Colorado River Watersheds:

The five AMAs are within the Gila River Watershed, and thus may be subject to the Gila River Stream Adjudication.

From: *Arizona Water Atlas*, Vol. 1, Appendix H, page 174 (ADWR, Sept. 2010).



Prior Appropriation vs. Reasonable Use

Appropriation (surface water)

“First in Time is First in Right.” In times of shortage, the one with priority has a first right to the water.

Junior water uses can be curtailed or limited through adjudications, enforcement of decrees, etc.

Appropriator acquires a legal right to a definite quantity of surface water.

Water rights can be severed from the place of use and transferred to other lands.

A water allocation system: because the rights are limited in volume and priority, increased demands on the system are limited.

Reasonable Use (groundwater)

Right to pump does not depend on when the use is initiated. If your well runs dry, you must drill deeper and pump from greater depths.

The right to any given quantity of water is NOT protected when other users pump from the common aquifer.

No fixed cap or floor—right to pump is only limited by the quantity of water that can be reasonably used on the land from which the water is withdrawn.

No severance and transfer process—one simply drills new wells on other property.

This results in an expanding number of users from the common supply—no system of allocation.

Efforts to Determine the Subflow Zone

- Since 1985, the Superior Court hearing the adjudication has struggled to define the scope of waters that are subject to its jurisdiction, either because:
 - The waters are subject to claims based on federal law (for example, Indian tribes—See, Arizona v. San Carlos Apache Tribe, 463 U.S. 545, 103 S.Ct. 3201 (1983); United States v. Superior Court, 144 Ariz. 265, 697 P.2d 658 (1985)), or
 - The waters are appropriable under state law. *Appropriable water presumably includes subflow.*

Efforts to Determine the Subflow Zone

- Why is this determination important?
 - *If water is withdrawn from the area that contains subflow, or if it is withdrawn from a well that impacts a subflow zone, then that well is withdrawing surface water rather than percolating groundwater.*
 - *Arguably, under such circumstances, the well owner must have a surface water right.*

Arizona Court Subflow Decisions

- Three times, subflow decisions of the Superior Court have been appealed to the Arizona Supreme Court. See *Gila River II*, 175 Ariz. 382, 857 P.2d 1236 (1993); *Gila River III*, 195 Ariz. 411, 989 P.2d 739 (1999); *Gila River IV*, 198 Ariz. 330, 9 P.3d 1069 (2000).
- Each time, the Superior Court has ruled, and the Arizona Supreme Court has affirmed, that water from wells that was once considered “percolating groundwater” could be included in an adjudication as “surface water” if it was “subflow.”

Gila River IV-Saturated Holocene Alluvium

- Under Gila River IV, subflow now includes most underground water found in the saturated younger or “Holocene” alluvium of a floodplain. Holocene alluvium is relatively younger alluvium deposited along stream channels within the past 10,000 years or so.
- The subflow zone is confined to the saturated Holocene alluvium adjacent to and beneath flowing streams in Arizona.
- In June of 2009, ADWR released a report delineating what it believes are the locations of the saturated portion of the floodplain Holocene alluvium along the San Pedro River that contain subflow.

Current Status

- Parties in the Adjudication had 180 days to object or comment on ADWR's subflow delineation report.
- Yet another hearing was held in late January of 2012, the Superior Court held a hearing on the objections to ADWR's report.
- In October of 2012, Superior Court Judge ruled that ADWR's delineation was not broad enough. He then decided to become a federal bankruptcy court judge.
- The new Superior Court Judge ordered ADWR to revise its report by April 1, 2014.
- A well located outside of the subflow zone might still be subject to the Adjudication if it abstracts subflow from the saturated Holocene alluvium or the subflow zone (it is not clear that the two are always the same).