

Water Use Rights, The Allocation of Resources, and the Developing Water Market in the United States



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Summary

- Water Rights in the United States: Riparian and Prior Appropriation
- The Ogallala Aquifer
- Conflict over water rights in the west due to diminishing resources
- Native American Water Rights and the increasing water demand in the west.
- Native American Water Rights in Riparian Jurisdictions
- California's Central Valley Project
- The direction of the water market in the eastern and western states

Riparian Water Rights

- Water law followed in the eastern United States
- “Natural Flow” Doctrine
- “Reasonable Use”
- Shift from Common Riparian Law to Regulated Riparian Law in the east



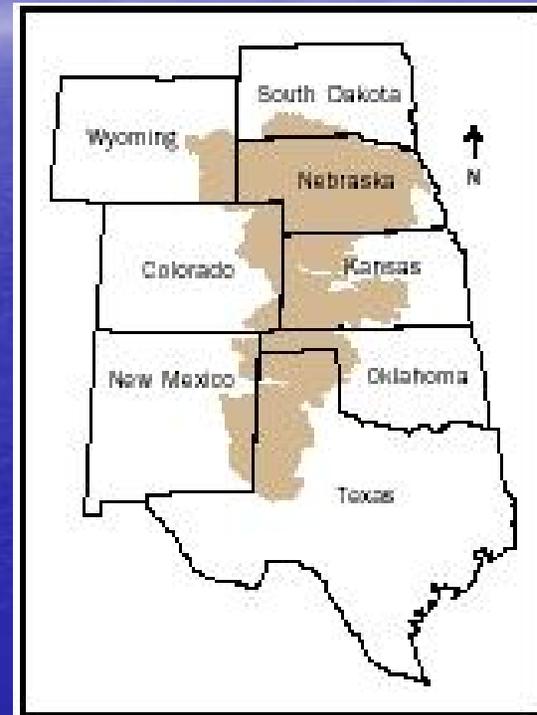
Prior Appropriation Doctrine

- Water law followed by western states
- Developed during the California Gold Rush due to the water need at offshore mines
- Four main elements: Intent, diversion, "*Beneficial Use*", and priority



The Ogallala (High Plains) Aquifer

- Vast aquifer stretches between the Dakotas and Texas
- Accounts for 1/5 of surface water used for irrigation in the United States
- Depleting at 12 billion cubic meters per year-at this rate could dry up by 2032.
- 6 of 8 states follow prior appropriation



Native American Water Rights in the West

- Have held water rights dating back to early treaty obligations, making them the earliest in priority
- Rights today are based off the Supreme Court case of *Winters vs. The United States*

Winters vs. The United States

- 1888, federal government reserved land along Milk River in Montana for Native American tribe
- Government wanted tribe to farm the land



Winters vs. The United States

(cont.)

- 1900 a group of farmers settle upstream and constructed large dams and reservoirs for irrigation under state water laws
- Diminished flows to the reservation.
- Ruling: *Federal government can restrict any dam or construction that prevents water from flowing to an Indian Reservation or other federally reserved land*
- Result: Implementation of water laws for federally reserved land



Amendments to the Winter's Doctrine

- 1952: McCarren Amendment returns some power back to the States
- 1963: Supreme Court Decision of *Arizona vs. California* quantified allocations of water for federally reserved lands - "Practicably irrigated lands"
- 1976: *United States vs. Colorado River Water Conservation*
- 1976: *Cappaert vs. The United States* – Limited quantification to the primary purpose of reservation

Native American Claims Today

- Between 1963-1992, 16 claims have been resolved totaling 4.7 million acre-feet
- Accounts for less than 10-percent of claims
- Native Americans are still fighting to exercise these rights

Native American Rights in the Eastern States

- Regulators have generally overlooked eastern tribes
- Tribes in the east also possess a *reserved* water right, known as a Winter's Right
- No tribe has asserted Winters rights in the East

Conflict in the West: Struggle for scarce resources

- Struggle between Native Americans, municipalities, farmers, and environmentalists
- 76-percent of surface water in West is used for irrigation

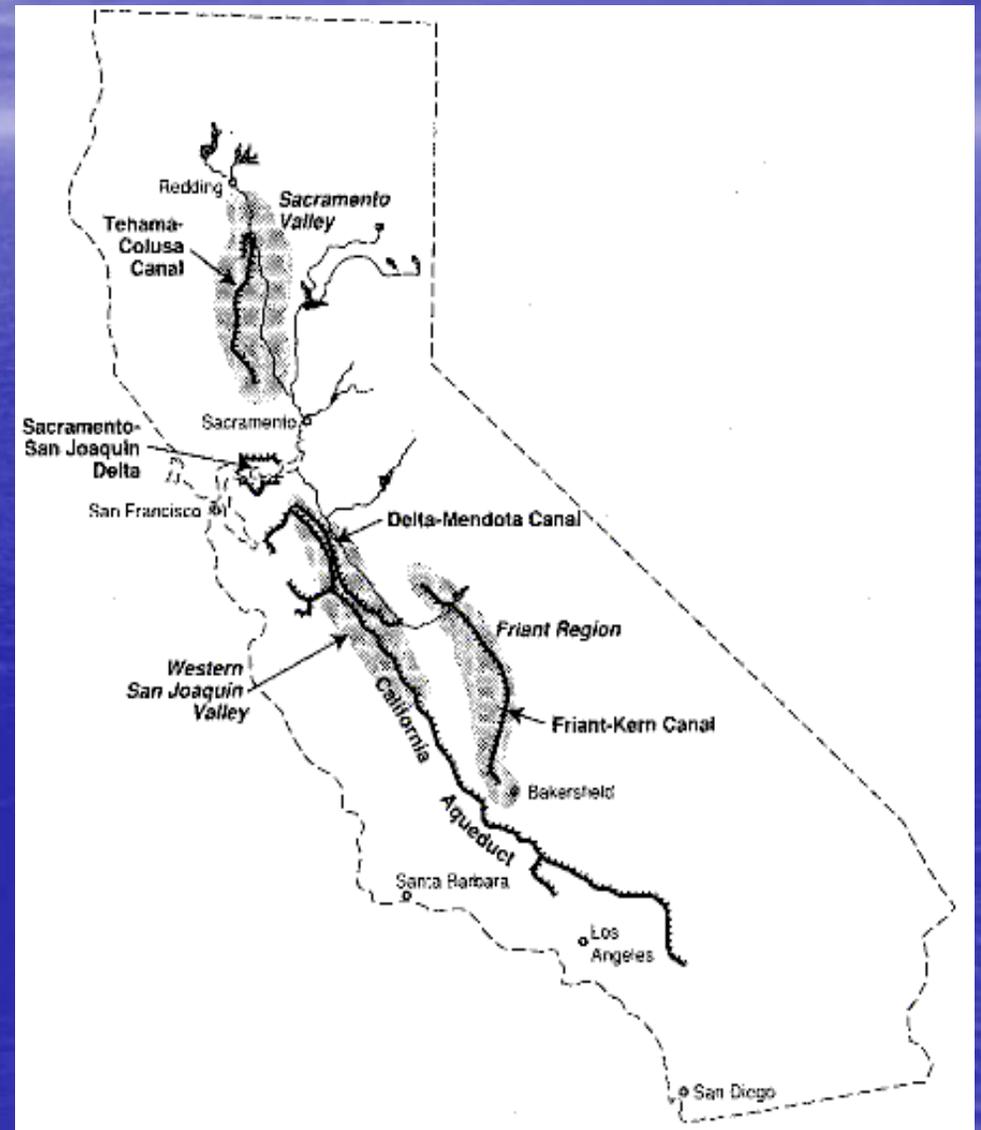
Surface Water Uses in the United States (%)

Use	Eastern States	Western States
Irrigation	24	76
Thermoelectric Power	60	13
Municipal	9	8
Industrial	7	2
Livestock	0	1

Source: United States Congressional Budget Office

Case Study: Central Valley Project

- Undertaken by BOR in 1935
- California's Central Valley supplies nearly 60-percent of the surface water used in California
- 75-percent of surface water consumptive use occurs south of Sacramento, but 75-percent of supply is located north of Sacramento
- 90-percent agricultural supply
- Farmers pay for delivery through 40-year fixed contracts
- Need for policy reform



Municipal Pressures

- Several municipal water uses in California facing water supply capacity and reliability issues
- Major cities have or are in the process of developing capability to receive water from the Central Valley Project



The CVP Improvement Act

- Signed by President Bush in 1992
- Large portions of Valley were originally wetland habitat
- 1906 - 3.7 million acres of wetlands
- 1986 – 319,000 acres of wetlands
- By allowing contractors to participate in water markets, a restoration fund was established



Provisions

- Voluntary Water Markets
- Tiered Water Prices
- Surcharges on Irrigation/Urban Uses
- Result: Fish and Wildlife Restoration Fund

Cost-Benefit: Who Wins?

- Gross Crop Revenues could decline \$105 million annually
- Location, hydrologic conditions, and availability of secondary water sources determine effect
- Some studies estimate environmental benefit could exceed \$100 million annually
- \$11 million to urban consumers annually-\$7 million paid to farmers

Riparian Rights: Economic Effect

- Water allocations are extremely uncertain and indeterminate
- No permanent right to a particular quantity of water
- Water cannot be transferred to a more beneficial use on non-riparian land
- Does not promote conservation
- More favorable for larger landowners
- No mechanism for reallocating rights to more beneficial purposes
- Voluntary transfer markets have failed to develop

Riparian Rights: cont.

- Water still relatively abundant in the east
- Water Quality Issues – Not consumptive issues
- How Land is used

Development of Hybrid System in the East – Regulated Riparianism

- About half of the eastern states have combined features of both riparian law and the prior appropriation doctrine
- Consumers must apply for a “limited-duration, renewable permit”
- Incorporate “beneficial use standard”
- Problem: Agencies favor “existing or grandfathered users”



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Drinking Water Program

BRP WM 03 – Water Management Act Program

Permit Application Form - Instructions

Regulated Riparianism vs. Prior Appropriation

- Nonriparians can obtain permits, but unlike prior appropriation, these permits are non-transferable
- Eastern agencies can terminate or modify permits or issue permits for fixed period of time

Conclusions

We need to improve water use rights throughout the United States to:

- Promote conservation
- Better allocate resources: shift from “reasonable” to “beneficial use”
- Resolve Native American Water Claims