



California Project WET Gazette

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Pass the Jug

“By the law of nature these things are common to mankind – the air, running water, the sea, and consequently the shores of the sea.” – Justinian Code, 530 AD

The title of this article is such a simple request that can only be improved upon by adding the word ‘please.’ At this time of year, it brings back memories for me of kids chattering with excitement on hundreds of picnic hikes and hard labor with equally hardened high school students building and improving trails on broiling hot summer days in summers past. It also brings back vivid memories of passing around the jugs of water that was the group water supply with all of those past student groups and how refreshing even warm water can be after losing so much to the elements. However, anyone who has led extended hikes with kids, labored in the yard on a hot summer day – or has been trying to maintain a home landscape or business in this time of drought – knows how ugly things can get as the water supply begins to run out. Determining who gets access to the shrinking supply and in what order becomes of the highest priority, and *everyone* suddenly claims or outright demands a **right** to the available water – and a number will include how they will enforce that right!

Right to water has likely been a source of contention deep in the shadows of our past with our ancestors battling over natural springs, wells and other sources of freshwater, but **water rights** have certainly been an issue with the expansion of permanent settlements and has been raised to a particular art form in the arid western United States – and nowhere more so than in California. We have all heard the accusations that our state does things different and one can just imagine a dusty Old West scene with a couple of steely-eyed individuals in a stare down, the spaghetti western soundtrack wafting through the air, as the smirking Californian of the pair makes his move, stepping aside to reveal something far more devastating than six shooters – his lawyer. A much more modern version of this scenario has been playing out throughout the state this Spring as individuals, large corporate interests and government regulators vie to maintain or control rights to a greatly diminished supply of water. Nowhere has this played out with more drama than in the Central Valley, where hundreds of Delta property owners have just ended a months long stare down with the State Water Resources Control Board challenging the owners’ rights to divert water from the region’s streams. Questions about water rights have also been the most common request for more information on Project WET workshop evaluation forms state since last Fall, so it is high time to take a closer look at this topic.

The Project WET activity *‘Pass the Jug’* (p: 447) is a very good place to start. As the summary of the activity states, *‘Students simulate and analyze different water rights policies to learn how water availability and people’s proximity to the resource influence how water is allocated.’* Yes, asking students to divvy up a bag of candy of limited quantity will definitely start an argument over fairness as intended in the activity Warm-Up, but I personally don’t like to use this option. Engaging students in the activity *‘The Long Haul’* (p: 273) immediately before *‘Pass the Jug’* on a warm day will not only spark their desire for water, but will add another layer of context from the days before indoor home plumbing to understand the origin of water rights. A large jug of water and cups are all you need to replace the candy and begin the discussion on how water should be allocated to the group - students will be more than happy to take as much water from the jug as possible after the physical exertion for Part I of *‘Pass the Jug’* after enduring the physical exertion involved in moving water in *‘The Long Haul’*!

‘Pass the Jug’ begins by passing a jug of water from the ‘source’ – the teacher – at the front of the group back to the students farthest from the source. Students near the source take all the water they need and drinking it to quench their thirst is simulating the use of that water on their property, which is the basis of a **‘riparian water right’** - where a landowner whose property borders a river has a right to use water from that river on his or her land. It is this proximity to the water source – and the caveat the water is to be only used on the owner’s property. Unlike riparian rights that are tied to a property and its

proximity to a water source, **'appropriative water rights'** are based on the prior appropriation doctrine of 'first in time, first in right.' This is simulated in Part II of **'Pass the Jug'** by having students organize themselves by birth date from oldest to youngest to determine who gets access to the water first. As the term **'appropriate'** implies, the water right allows the holder to take physical control of the water and move it wherever the right holder determines it is need – the right is not tied to a property and the right itself can be sold. Part II of **'Pass the Jug'** also assigns the students roles to simulate a water users moving into an area over time and having them analyze the implications the appropriative rights system could have on new businesses needing water, but are last in line for rights. The wrap-up section of the activity indicates it, but I'd suggest making a point of asking students to consider if the riparian system is any different and how it would affect the same scenario.

The activity component of **'Pass the Jug'** includes a number of wonderful Extensions – as well as a Pre-K through 2 Option – and the Background section of the activity as a rich layer of insight to share with your students and answers the questions I'd want to know as a student of History – Where did these rights come from in the first place? Are they the only rights on water? And how have the rights been applied through time? **Riparian water rights** derive from English Common Law and spread west as the United States expanded – they are a direct link back to the original colonies. Riparian rights are generally considered the most senior water right and work well where water is generally abundant. By contrast, **appropriative water rights** derived from mining customs – specifically from the California Gold Rush. When the placer gold ran out, miners began diverting water from their mining claims to process gold-bearing material away from the source streams. Those with the oldest claims were the first in right to divert the water from the water source – setting a precedent or legal tradition that became formalized in the 1914 California Water Commission Act, which centralized appropriative water right records at the state level under what is now the State Water Resources Control Board. Under the act, the state required new appropriators to obtain a permit from the state prior to diverting water. It is the conflict between the State's authority under appropriative rights to transfer water through the Central Valley and Delta and the riparian rights of landowners adjacent to that flow of water that lies at the heart of the current challenge to landowner water rights in the Delta and Central Valley.

Pueblo Rights are not discussed in **'Pass the Jug,'** but a number of California cities that originated as Spanish or Mexican pueblos (settlements) possess this right that gives them a paramount right to the beneficial use of all needed, naturally occurring surface and subsurface water from the entire watershed of the stream flowing through the original pueblo. Water use under a pueblo right must occur within the modern city limits, and excess water may not be sold outside the city. The quantity of water available for use under a pueblo right increases with population and with extensions of city limits by annexation of land not within the original pueblo. The pueblo water right was a key to the development of modern Los Angeles. Founded as a pueblo in 1781, Los Angeles aggressively asserted its pueblo rights to its namesake river and even to groundwater in the San Fernando Valley. The pueblo water right supplied much of Los Angeles' water until completion of the Owens Valley Aqueduct in 1913. Pueblo rights date back to California's transition from Mexican to American territory in 1848. At that time, pueblo rights were the first to receive legal recognition in California. This allowed persons and entities holding land title under Mexican law to preserve their private and public water rights. Because pueblo rights predate other kinds of water rights recognized after statehood, cities that possess pueblo rights have rights that are generally superior, or paramount to riparian and appropriative rights. Most prominently, the cities of Los Angeles and San Diego have pueblo rights recognized by judicial decisions.

Our legal system in California is derived from English Common Law, but includes elements of Civil Law due to our Spanish past. Whereas Civil Law is founded on a codified set of laws, Common Law is based on legal precedents and tradition, where one law can be trumped by another with a longer legal precedent. Thus, after buying up the oldest water rights in the Owens Valley and aggressively asserting the appropriative right to transfer water from the Owens Valley, the City of Los Angeles continued to gain rights to transfer water as far north as the streams feeding Mono Lake. Citizens grew concerned about the drop in Mono Lake water levels, but due to the age of Los Angeles' right to transfer water, not even the laws of the old west could slow the transfer – It took a Roman Emperor to do it. In order to bring order to the legal system, the Byzantine Emperor Justinian the Great ordered the codification of Roman Law in the 6th Century. Among those codified rules is the **public trust doctrine**, which recognizes the public right to many natural resources including *"the air, running water, the sea and its shore."* **Public trust doctrine** requires the sovereign or state to hold in trust designated resources for the benefit of the people. In 1983, the California Supreme Court ruled that reasonable and beneficial uses of water must be interpreted in accordance with public trust needs and ended 40 years of unrestrained water diversions from Mono Lake streams.

The Mono Lake decision was the first case in California where the **public trust doctrine** was applied. The decision also held that the state retains jurisdiction over the water rights and may reconsider the impact on public trust, which in addition to the traditional commerce, navigation and fishing, includes wildlife habitat. The necessity of protecting the public trust was to be determined by balancing the value and cost of in stream water needs against the benefits and costs of diversions, which very blends with language in the **1928 California Constitution, Article 10, § 2** that the caveat that the right to use water must be based on *"reasonable and beneficial use."* Of course, defining 'reasonable and beneficial use' and its use in applying the **Public Trust Doctrine** lay at the center of many California

water rights issues currently in the news– i.e., the Delta tunnels, regulation of senior water rights, tiered water rates, groundwater regulations and the reprioritization of water allocations to various user groups based on the most beneficial use as determined by regulating agencies. I have included links to recent articles in each of these areas in the **'Websites of Interest'** section of this *Gazette* and updates can be found on the Water Education Foundation website, www.watereducation.org.

Water rights are featured in a number of other Project WET activities and the added information above and found in the **'Websites of Interest'** of this *Gazette* can add a rich, local layer to engage students in learning about water rights and allocation in our state. Students analyze the results of a simulation to understand that water is a shared resource in the activity *'Common Water'* (p: 249). Ranking water use helps students define their values on water and its uses – essentially defining *'reasonable and beneficial use'* – in the Guide 1.0 activity *'Choices and Preferences, Water Index'* (Portal), which was the subject of the Spring 2014 *Gazette*. *'Choices and Preferences'* pairs well with *'8-4-1, One For All'* (p: 299), which has students analyzing *'eight water users, four common water needs and one river to serve them all,'* which a number of us extend to have communities of users in each category looking at that activity from the viewpoint of northern California, Delta, San Joaquin and Southern California water users... just think of the potential discussion if knowledge of water rights was added to the discussion! The same can be said for adding a discussion of water rights to *'Get the Groundwater Picture'* (p: 143), an activity featuring a major cone of depression in the aquifer data that opens the door for an extended discussion on the issue of subsidence and the new **groundwater law**. And what about the news of communities in California that have run out of water or are unable to use their water due to the actions of nature or their neighbors – Is the freedom to have clean, ample water an 'inalienable right?' This is the very question posed and studied by students in *'Water Bill of Rights'* (Portal). Of course, we all know many of these conflicts will end up right where the Old West character who took on our Californian did at the start of this article – in *'Water Court'* (Portal), an original Project WET guide activity that takes students through the process of mediation and litigation that are used to resolve water issues. The first two of the generic cases students analyze in the activity are on water rights and riparian ownership of land!

Battling over water rights is a fact of life in the arid west, but nowhere has it achieved the level of complexity as it has in the Mediterranean climate of California – and this *Gazette* article only highlights a number of the primary, overarching rules that govern the right to use water in our state. The Project WET activities above will help jump start student understanding of water rights concepts and investigation of current issues surrounding how the resource is allocated issues with students, but please visit the **'Websites of Interest'** below for additional resources and links to the world of water law in California. Of course, after a busy school year one also needs to take the time to regenerate and you'll find a number of potential **'Events'** to enjoy. Finally, summer is a good time to catch some wonderful trainings and you'll find a full list of upcoming Project WET workshops in the **'Professional Development Opportunities'** listed in this *Gazette* and on this website!

WEBSITES OF INTEREST

Water Education Foundation

<http://www.watereducation.org>

Keep up to date on current water right issues in California news through our Aquaformia news aggregator and learn more about water right terminology <http://www.watereducation.org/aquapedia/helpful-water-rights-terms> and the vocabulary applies in water right issues. Among the water rights terms that are defined include Adjudicate, Appropriative Right, Implied Right, Pueblo Right, Reasonable and Beneficial Use, Riparian, and Vested, to name just several. <http://www.watereducation.org/aquapedia/water-rights-california>

California Water Rights Primer

<http://www.c-win.org/water-rights-primer.html>

Society grants property owners rights to *use* water, not to possess or hoard it. That's because water is both a basic necessity of life and essential to all economic activity. Legal water use also entails specific obligations. Water rights holders must not adversely affect the rights of other legal water users or harm the environment. Water shortages make the obscure issues of water policy and law a public concern. It is an adage among water law attorneys that water rights become social policy during droughts.

The Water Rights Process

http://www.waterboards.ca.gov/waterrights/board_info/water_rights_process.shtml

A water right is a legal entitlement authorizing water to be diverted from a specified source and put to beneficial, non-wasteful use. Water rights are property rights, but their holders do not own the water itself. They possess the right to use it. The exercise of some water rights requires a permit or license from the State Water Resources Control Board (State Water Board), whose objective is to ensure that the State's waters are put to the best possible use, and that the public interest is served. An outline of California water rights in relation to the Public Trust Doctrine can be found at: <http://www.watereducation.org/general-information/pass-jug>

Common Law & Civil Law <https://www.law.berkeley.edu/library/robbins/pdf/CommonLawCivilLawTraditions.pdf>

Most nations today follow one of two major legal traditions: common law or civil law. The common law tradition emerged in England during the Middle Ages and was applied within British colonies across continents. The civil law tradition developed in continental Europe at the same time and was applied in the colonies of European imperial powers such as Spain and Portugal.

California Water Rights

<http://projects-ca.statewater.org/water-rights>

This map is for citizens, journalists, legal professionals, policy analysts, institutional ratepayers, farmers, and water professionals who seek a comprehensive comparison of water usage in our state. This interactive map overlays points of diversion (water rights) from data collected by the State Water Resources Control Board, and daily stream gauge values maintained by the U.S. Geographical Survey. It includes a search feature, multiple map layers, and a basic API for retrieving machine-readable data. We are currently optimizing the interface for mobile devices.

Groundwater Law

<http://www.watereducation.org/aquapedia-background/groundwater-law>

In the past, the guiding principle, in contrast with the centralized state-controlled surface water rights, is that with groundwater, geology is varied and can be complex and location-specific, so decision-making is best left to local officials. Today, against the backdrop of California's overall water supply challenges, debate has begun to focus on groundwater. How it should be managed and whether it becomes part of overarching state regulation is a topic of contention.

Save Our Water

<http://saveourwater.com>

Save Our Water is a statewide program aimed at helping Californians reduce their everyday water use. The program offers ideas and inspiration for permanently reducing water use – regardless of whether California is in a drought. Browse our website to uncover ideas on saving water indoors and out. We can all make a difference in California's water use by making simple changes to our daily habits.

California Foundation for Agriculture in the Classroom

<http://learnaboutag.com>

This year's edition of our student newspaper *What's Growin' On?* is titled *'Let's Look at Water'* and is inspired by this precious resource. Use these pages to learn about the water cycle, how we get our water, how we use it, and its importance to the environment and every aspect of our lives. Activities inspire critical thinking and show how we can all take small steps to conserve water and make the most efficient use of what we have. Visit our website to review the newspaper and to receive *FREE* class sets while supplies last!

USGS California Drought Information Page

<http://www.drought.gov>

The USGS closely monitors the effects of drought through data collection and research, and is studying the current drought in the context of long-term hydrologic, climatic, and environmental changes. These studies support successful planning and science-based decision-making by water managers who must address complex issues and competing interests in times of drought. They also help decision-makers prepare for climate change and possible future drought.

If you would like more information on Project WET please contact Brian Brown, California Project WET Coordinator at: projectwet@watereducation.org or (916) 444-6240.

Check our website www.watereducation.org to review the full Gazette and all linkages to websites in this edition and/or contact us for updates!