Earth Science Extras (ESE2): Telling Stories of Humans and the Earth Water and Water Issues

Water Rights in Economics and Politics—Discussion Prompts

by Russ Colson

The following prompts are intended to guide you in examining complex questions involving water rights. Especially in arid and semi-arid regions, the rights to water that can be used for agriculture, drinking, cooking, bathing, lawn-watering, power generation, and all other uses can be highly controversial, becoming more intense as water runs short.

We are going to examine three particular questions. Do some reading online to familiarize yourself with the issues, the conflicts involved, and the science, politics, and related pros and cons of various possible courses of action. <u>Take thorough notes of your reading for possible informal submission</u>. If possible, find someone to discuss these with prior to our group discussion.

Question 1: Ground Water.

The Ogallala Aquifer is the largest aquifer in North America, providing groundwater for multiple states through the center of the US. However, intense drawdown on this aquifer for irrigation on the semi-arid high plains has sharply depleted what once seemed like an almost unlimited reservoir of fresh water.

In preparation for discussion, read at least several articles that deal with the politics, law, and science of the rights to the water from the Ogallala aquifer. To find articles of interest, you might search on Ogallala aquifer and agriculture, Ogallala aquifer and legal issues, Ogallala aquifer running dry. As you get more relevant articles, new search terms might occur to you.

A few articles as of this writing include the following:

https://www.nationalgeographic.com/magazine/article/vanishing-midwest-ogallalaaquifer-drought

https://theconversation.com/farmers-are-depleting-the-ogallala-aquifer-because-thegovernment-pays-them-to-do-it-145501 https://www.cjonline.com/story/news/2021/05/06/parts-ogallala-aquifer-running-dryfarmers-debate-how-save-western-kansas-agriculture/4970028001/

https://www.circleofblue.org/cpx/ogallala-aquifer/in-sign-of-the-times-a-water-pipeline-innebraska-taps-the-ogallala-to-serve-thirsty-kansas/

https://wyofile.com/new-law-protects-groundwater-rights-in-the-wake-of-ogallalafight%EF%BF%BC/

https://lawreview.colorado.edu/printed/volume91/dustbowl-waters-doctrinal-andlegislative-solutions-to-save-the-ogallala-aquifer-before-both-time-and-water-run-out/

You might even check out a student report about the Ogallala!

https://environment.geog.ubc.ca/a-drying-shame-the-ogallala-aquifer/

Question 2: Surface Water

As of this writing, the drought in the Southwest US has been in the news for years and the dire situation due to the declining water supply from the Colorado River and the large reservoirs along it have been the subject of news articles, legal wrangling, and a lot of angst. Regardless of the progress of the drought, the Colorado River will continue to be an important water and energy source for much of the southwest US and legal and political struggles over the rights to this water will continue.

In preparation for discussion, read at least several articles that deal with the politics, law, and science of the rights to the water from the Colorado River and its reservoirs. To find articles of interest, you might search on Colorado River running dry, Lake Mead Water Rights, Colorado River water rights, etc.

Presently, articles about water issues in the southwest are abundant. Here are a few as of this writing.

https://www.grid.news/story/climate/2022/07/25/the-colorado-river-drought-is-the-firstclimate-disaster-the-us-legally-has-to-dealwith/#:~:text=The%20Colorado%20River%20is%20dying,the%20country%20literally%2 Ocannot%20ignore.

https://medium.com/climate-conscious/lake-mead-water-rights-and-the-aridification-ofthe-west-f635cc4db1e4

https://calmatters.org/environment/2022/08/colorado-river-water-california/

Question 3: Minnesota Water Issues

Minnesota, the land of 10000 lakes, has water everywhere, and much more abundant than in the southwest US. However, water quality, water access, and potential contamination of water are still significant issues. Who gets to use the water and for what purposes? What economic benefits might justify putting the water quality at risk? Does risk to water quality affect all people equally or are there some disadvantaged groups who bear a greater portion of the risk? How are questions of water use decided? Do all stake holders have an equal voice, or are some voices preferred or sidelined?

In preparation for this question, first do a search on things like "threats to Minnesota water quality," "Minnesota water rights", or "Minnesota water usage issues" similar to the searches above and read some articles to get a feel for some issues.

Then, do a different search to perhaps get a new and different perspective on the issues: If you searched on "Minnesota water rights" before, try searching on "Native American views on Minnesota water rights" or "Anishinaabe perspectives on Minnesota water rights" and see if you get a different perspective. What aspects of what you read are different and which are the same?

An academic reading in water rights, climate change, and indigenous people

After your online searches for issues in the news, you might read the article below (See URL), or the short excerpts that I provide, for deeper insight into the history and politics of water rights in the SW United States and indigenous perspectives on climate and water rights there.

CLIMATE CHANGE AND ITS EFFECT ON INDIGENOUS PEOPLES OF THE SOUTHWEST Author(s): Josh Merrill Source: American Indian Law Review , 2013-2014, Vol. 38, No. 1 (2013-2014), pp. 225-259 Published by: University of Oklahoma College of Law

Stable URL: https://www.jstor.org/stable/24367736

Excerpts:

Climate Change and Its Consequences

Introduction:

Climate change is a polarizing issue across the United States due to the politicization of the topic. One side either downplays its very presence by discrediting the science or instead ignores our responsibility to adapt and mitigate. The other views climate change as a real problem that requires real, overwhelmingly expensive solutions. Regardless, the reality is that climate change is here, and its consequences are here to stay. What that means and what actions should be taken may be up for debate, but the science points to the need for imminent, proactive measures.

The Impact on Southwestern Native American Tribes

Introduction

The Southwest "is home to over 70 federally recognized Native American tribes "⁶⁰ The climate in the Southwest is extremely diverse. For research purposes, the Environmental Protection Agency ("EPA") has classified the Southwest region as stretching from the western Great Plains through Colorado, Arizona, and New Mexico and into Southern California.⁶² This variability allows a broad study of climate change within a specific region. The availability of water is the biggest concern related to climate change facing the tribes in the Southwest. Water in the Southwest is a problem because the seasonal shifts are so great that there can be a surplus one season followed by a severe drought and shortage just a month later.

Climate Change and the Water

The Colorado River Basin provides water for much of the Southwest, including up to seven states.⁶⁷ Unfortunately, climate change is having a dramatic effect on this river system. The Colorado River Basin is fed primarily by runoff from the snowpack in the mountains.⁶⁸ Snowpack has been one of the victims of the warming trend that climate change has produced.⁶⁹ This means that the flow through the river system is ultimately taking a hit as a result of the reduction of snowpack. Given the large number of people relying on this source of surface water for their daily needs, climate change greatly impacts this region.

The reduced stream flow presents not only quantity problems, but also quality problems.⁷⁰ Any decrease in stream flow threatens water quality.7 Water borne diseases are projected to rise.72 Another impact on water quality relates to oxygen content because

[a]s water warms, it holds less oxygen, putting stress on coldwater fish such as trout. Rivers and streams in Western Colorado approached the low 70s many days [in the summer of 2012]-almost 20 degrees above normal-prompting rangers to ask that anglers voluntarily suspend[] fishing in some areas.⁷³

Tribal Water Problem

Water is the source of all life. This phrase is dangerously true for the southwestern tribes. These tribes are closely tied to "their reservation land and resources."⁷⁷ One can imagine the agricultural impact that a water problem would have for a culture that has traditionally relied on growing crops, raising livestock, and drawing natural resources from the water.⁷⁸ The national agricultural industry is already struggling in the weak economy.⁷⁹ The situation is no different for the tribes of the Southwest. Many tribes, particularly in Arizona, rely heavily on their agricultural production in order to produce income.⁸⁰

Legislative, Judicial, and Executive Action

Introduction

In order to have meaningful commentary on climate change and its impact on western and southwestern tribes, a discussion of the legal framework for water rights is necessary. That discussion must begin where water allocation in the West began, with the doctrine of "Prior Appropriation." This doctrine has governed water allocation in the western United States for over a century.¹³⁷ The basis of the Prior Appropriation Doctrine is that a person who puts water to a "beneficial use" acquires the "right to use enough water to serve that purpose."¹³⁸ The earliest users avail themselves of the strongest rights.¹³⁹ As the western states experienced a population boom in the early twentieth century, water was quickly "fully appropriated," and thus new uses for water were extremely limited due to possessing only junior rights.¹⁴⁰ The mandatory authority of Prior Appropriation has wilted away with pressures from federal law requirements, tribal demands, environmental considerations, and state judicial decisions.¹⁴¹ Despite the move away from the doctrine, Prior Appropriation remains an underlying theme in the development of modem, western water law.¹⁴² The obvious problems with this outdated doctrine as well as solutions to these challenges will be discussed below.

The federal government began to shape tribal water rights in 1908 when the Supreme Court decided *Winters v. United States.*¹⁴³ The Supreme Court specified exactly which implied water rights accompanied the expressed right of the tribes to occupy the land.¹⁴⁴ A proper understanding of the *Winters* case and its far reaching implications is essential to any discussion of climate change and its effect on tribal water rights.

The Water: Winters v. United States

"Water rights ... are held 'in common for the public good."¹⁴⁵ Water itself cannot be owned by individuals; rather, there is a right to use water.¹⁴⁶ The *Winters* decision was a landmark case for tribal water rights. The opinion, written by Justice McKenna, is the basis and foundation of modern Indian water law.¹⁴⁷ The case resolved claims by the Indians on the Fort Belknap reservation to the waters of the Milk River in Montana.¹⁴⁸ The reservation was comprised primarily of land suitable for ranching and agricultural activities for which the Milk River was essential.¹⁴⁹. The defendants built dams upstream from the Fort Belknap reservation and thus diverted water away from the reservation.¹⁵⁰ The Native American plaintiffs sued to enjoin the defendants from further construction and operation of the dams as the reservation's reservoir had been severely affected.¹⁵¹ The defendants argued that while the federal government had set aside land for the Fort Belknap reservation, no such overture was made for the water rights to the Milk River.¹⁵² This would leave the defendants to use the water located upstream as they saw fit regardless of its necessary effect on the reservation.¹⁵³

The Justices found the argument advanced by the defendants unpersuasive. The Court ultimately decided the idea that the Indians accepted a small plot of land with the stated intentions of agriculture and grazing, yet knowingly relinquished the right to the very resource that makes these activities viable, was preposterous.¹⁵⁴ Justice McKenna summarized the Court's position:

The power of the government to reserve the waters and exempt them from appropriation under the state laws is not denied, and could not be. That the government did reserve them we have decided, and for a use which would be necessarily continued through years. This was done May 1, 1888, and it would be extreme to believe that within a year Congress destroyed the reservation and took from the Indians the consideration of their grant, leaving them a barren waste-took from the means of continuing their old habits, yet did not leave them the power to change to new ones.¹⁵⁵

In laying the groundwork for all future water law, the Court found that there was an implied reservation of water rights to the Milk River, despite the lack of such an expressed declaration.¹⁵⁶

Winters essentially worked to invalidate the Prior Appropriation Doctrine as it pertains to Indian reservations. Thus, it was unnecessary for the tribe to have put the water to a "beneficial use" in order to have senior rights in it; the reservation merely must have been established

While *Winters* lays out a bright-line federal rule, the water "in excess of the right" granted by this doctrine "is subject to state water law."¹⁶⁹ Far from following a bright-line rule, state courts are charged with the "task of determining the purpose of the reservation" in order to quantify its need for water.¹⁷⁰ This complicated process leaves plenty of room for the type of grey area and controversy that courts prefer to avoid. The judge's determination can significantly impact a tribe's future. For example, some courts narrowly interpret the purpose of Indian reservations, and thus only allot enough water for agriculture, while others allow for several different purposes, thus providing an abundance of water to the tribe.¹⁷¹

These excerpts are intended as a 'teaser' to a very complex legal issue. There is a great deal more complexity, expansion of ideas, and nuance of exploring those ideas in the full article, available at the link given above.

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Last updated Nov 15, 2022. Text property of Russ Colson.
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