

# Drought: The Law, Science, and Reformation of Water Policy in California

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Department: Environmental Science, Policy, and Management

Location: TBA

Time: TBA (2 Hours/Week)

Office Hours: 1-3 PM Monday and by appointment

Unit Value: Pass/Not Pass, 2 Units

It is no secret that California has water problems. The current drought, which began in 2012, has led to a 500-year record low snowpack, a 200-year record for drought conditions, and, overall, may be a 10,000 year event. Due to the intensifying impacts of climate change, hotter summers from La Niña, and decreasing Sierra snowpack, weaknesses in California's policy and natural environment are being exposed and exploited. These recent developments only underscore the institutional problems in California's system of water management.

This class aims to develop knowledge of the history, political economy, and policy that regulates California water policy today. Topics from hydraulic mining in the 1800s to groundwater usage rights to hydraulic fracturing to the Sacramento River Delta will be discussed. Each class will consist of an overview of one system relevant to California Water Policy. Problems will be identified, and solutions will be proposed, discussed, and debated in class. The knowledge gained in this class will lead to an environmental communications project at the end of the course.

The key outcomes of this course are as follows: to understand the institutions that govern the distribution of water in California, to understand the stakeholders in California water policy, and to communicate current political and ecological issues confronting California's water.

# Class Policies

## Grade Breakdown

40% Attendance  
20% Reading Responses  
20% Final Project  
15% Participation  
5% Local Water Issue Presentation

## Attendance

You can miss up to two classes due to absences. Any more than two absences will lead to an automatic NP. If you have made plans to be sick this semester, or plan on doing any other activity this semester, this buffer should cover you. If you expect to be gone for more than two class periods this semester, please contact me.

## Reading Responses

Most of the readings in this class are academic, and I understand they are likely to be challenging for a first-read through. So read them twice. Then, each week, bring two discussion/clarification questions to class, based on your responses to and questions about the readings. These will be graded on completion, but that is no excuse not to be the thoughtful Berkeley students we both know you are!

## Final Project

One of the important learning outcomes of this course is the ability to communicate issues surrounding California's ongoing water crisis. The final project will test your abilities to communicate effectively to people who have not had the opportunity to engage themselves in water policy in the same way you will. The final project will be done in teams of 3-4. Each group will select a reform to California's water system and create a persuasive, effective, and accessible argument for that policy. More information about this process will be revealed later in the semester. Possibilities for collaboration with on-campus institutions will be announced later in the semester.

## Participation

As you may or may not be aware, it requires a fair bit of narcissism to teach a DeCal. To avoid structurally reinforcing a teacher/student model, discussion will be an integral part of this course. When the two hours end, I am still a student. I am not oblivious to the fact that not every student showcases their intelligence, worth, and innovativeness in discussion. The alternative, however, is ~40 minutes of prepared lecture, and 60 minutes of improvised lecture (read: I will not be ending class early due to a lack of discussion, so it is in your interest, academically and intellectually, to contribute). If you have trouble participating in discussion, the participation portion of your grade can be made up iff you attend office hours.

## Local Issue Presentation

I find that many students' interests in environmental studies are due to heavily localized experiences, typically an environmental issue in your hometown. I, for example, am passionate about wildfire (google the Cerro Grande and Las Conchas fires). Every week, 1-2 students will be asked to present an issue about an issue in the area of water policy that affects an area you call home. "Home" here is loosely defined, it can be Berkeley, a mailing address, or any other area to which you can stake a claim. You will provide a 5-minute presentation at the beginning of your assigned class. Please bring an article (newspaper, magazine, etc) with you that describes the issue.

## Enrollment Information

Please attend the first day of class to receive enrollment information. Currently, the class is first-come, first-serve. If there are more interested students than the capacity of the class, an application process will be announced when such interest arises.

## Field Trip

There will be a field trip to the Sacramento River Delta during the class. This will provide an opportunity to explore first-hand the issues discussed in class. If class participants are unable to attend the field trip, class participants will complete an optional 4-page double-spaced paper discussing an aspect of the history of the Sacramento River Delta.

## Potpourri

In the interest of limiting paper waste, you may use laptops during class to view the readings during discussion. In the interest of class discussion, you may **only** use laptops during class to view the readings during discussion. If you are using your laptop for any other purpose, you will be marked absent for that period.

All readings will be made available online, possibly through bCourses.

## Resources

TBA

# Class Schedule

## 1. Introduction

An overview of the class and its policies. Assignments and educational objectives will be discussed.

## 2. California Water Infrastructure

An overview of the systems that govern California water policy, the Central Valley Project, varying legal authorities, and other essential knowledge. In addition, the history and origin of these systems will be discussed.

Reisner, Marc. "A Semidesert with a Desert Heat." *Cadillac Desert: The American West and Its Disappearing Water*. New York, NY, U.S.A.: Viking, 1986. 1-14. Print.

Austin, Chris "Maven" "California's Water Systems." *Maven's Notebook*. N.p., 5 July 2015. Web. 02 Nov. 2015. <<http://mavensnotebook.com/the-notebook-file-cabinet/californias-water-systems/>>.

## 3. Water Rights: Surface Water

A discussion regarding the origin of Surface Water Rights will be discussed. The history and implications of this system will be discussed.

Haneman, Michael, Caitlin Dyckman, and Damian Park. "California's Flawed Surface Water Rights." *Sustainable Water: Challenges and Solutions from California*. Ed. Allison Lassiter. N.p.: n.p., n.d. 52-82. Print.

## 4. Water Rights: Reasonable Use and Groundwater

This class will be an introduction to the reasonable use doctrine in California, as well as an introduction to groundwater management in California.

Wendell, Daniel, and Maurice Hall. "The Challenge of Sustainable Groundwater Management in California." *Sustainable Water: Challenges and Solutions from California*. Ed. Allison Lassiter. Oakland: U of California, 2015. 178-200. Print.

## 5. Political Economy

Political economy is the study of the relationship of business and trade to politics and law. In order to understand California's water system, policies must be examined in light of the major economic players. These include agriculture, energy, and urban consumers.

Bittman, Mark. "Fear of Almonds." *The New York Times*. N.p., 3 June 2015. Web. 2 Nov. 2015. <<http://www.nytimes.com/2015/06/03/opinion/mark-bittman-fear-of-almonds.html>>.

Ketcham, Christopher. "Big Cattle, Big Gulp." *The New Republic*. N.p., 4 Feb. 2015. Web. 2 Nov. 2015.  
<<http://www.newrepublic.com/article/120915/american-west-drought-being-worsened-livestock-industry>>.

## 6. Water Justice

Environmental justice aims to connect environmentalism with a fair distribution of environmental benefits and burdens. This class will attempt to bridge concepts of environmental justice, including access, equity, racism, and human rights, to the water issues discussed in class.

Balazas, Carolina, and Isha Ray. "Water Justice in California's Central Valley." *Sustainable Water: Challenges and Solutions from California*. Ed. Allison Lassiter. Oakland: U of California, 2015. 244-68. Print.

## 7. Tribal Water Rights and the Winters Doctrine

This class will aim to discuss the water rights guaranteed to tribes in California. Relevant case law, particularly from the *Winters* case and the *Boldt* decision will be discussed.

Sylvester, Terray. "A Plague on the Klamath River." *High Country News*. N.p., 27 Apr. 2015. Web. 2 Nov. 2015. <<https://www.hcn.org/issues/47.7/a-plague-on-the-klamath-river>>.

Deitch, Matthew J., and G. Mathias Kondolf. "The Incendiary Mix of Salmon and Water in Mediterranean-Climate California." *Sustainable Water: Challenges and Solutions from California*. Ed. Allison Lassiter. Oakland: U of California, 2015. 269-91. Print.

## 8. Movie Screening: "Chinatown"

To prime the discussion of the Colorado River, the class will watch the classic film *Chinatown*.

*Chinatown*. Dir. Roman Polanski. Prod. Robert Evans. By Robert Towne. Perf. Roman Polanski, Jack Nicholson, Faye Dunaway, and John Huston. Paramount, 1974.

## 9. The Colorado River

The Colorado River serves the water needs of much of Southern California. It's storied background provides an ideal case study to examine many of the issues discussed thus far.

Reisner, Marc. "An American Nile: I + II." *Cadillac Desert: The American West and Its Disappearing Water*. New York, NY, U.S.A.: Viking, 1986. P.120-144. P.255-305.

"Life along the Colorado River." - *High Country News*. N.p., 22 Dec. 2009. Web. 02 Nov. 2015. <<http://www.hcn.org/issues/41.22/life-along-the-colorado-river>>.

## 10. Urban Water Management

California's population is primarily urban, with some of the largest metropolitan areas in the country. There is a push and pull between urban communities' desires for water and rural communities' water rights. In addition, urban communities face unique issues in water management, flooding, distribution, and pricing, among others.

Price, Jenny. "Remaking American Environmentalism: On the Banks of the L.A. River." *The Believer*. N.p., 01 Apr. 2006. Web. 02 Nov. 2015. <[http://www.believermag.com/issues/200604/?read=article\\_price](http://www.believermag.com/issues/200604/?read=article_price)>.

Christian-Smith, Juliet, and Matthew Heberger. "Urban Water Demand and Pricing in a Changing Climate." *Sustainable Water: Challenges and Solutions from California*. Ed. Allison Lassiter. Oakland: U of California, 2015. 108-31. Print.

## 11. Water and Disasters/Water-Energy Nexus

Water plays an integral role in disaster management in California. The presence of water impacts wildfire risk, flooding, and mudslide risk.

Water is inextricably linked to both energy use and production. Understanding the major systems of transportation and generation in California is essential to understanding the usage system of California Water Policy.

Wilkinson, Robert. "The Water-Energy-Climate Nexus in California." *Sustainable Water: Challenges and Solutions from California*. Ed. Allison Lassiter. Oakland: U of California, 2015. 32-51. Print.

Pick one of the following two to read!

Foster, Howard, and John Radke. "Coping with Delta Floods and Protecting California's Water Supply in a Regional Flood Management System." *Sustainable Water: Challenges and Solutions from California*. Ed. Allison Lassiter. Oakland: U of California, 2015. 132-50. Print.

DeBuys, William. "Mogollon Plateau: Fires Present and Future." *A Great Aridness: Climate Change and the Future of the American Southwest*. New York: Oxford UP, 2011. 236-67. Print.

## 12. Sacramento River Delta

The Sacramento River Delta serves as another important case study in California Water Policy. Heavily impacted by agriculture and historic dredging, the Sacramento Delta continues to face important political issues today. Learn about the “tunnels,” known officially as the Peripheral Canal as part of the Bay Delta Conservation Plan.

Madrigal, Alexis. "American Aqueduct: The Great California Water Saga." *The Atlantic*. N.p., 24 Feb. 2014. Web. 2 Nov. 2015.  
<<http://www.theatlantic.com/technology/archive/2014/02/american-aqueduct-the-great-california-water-saga/284009/>>.

Zakin, Susan. "Delta Blues." *High Country News*. N.p., 30 Sept. 2002. Web. 02 Nov. 2015. <<https://www.hcn.org/issues/235/13399>>.

Miller, Jeremy. "The Future of the Sacramento Delta Hangs in the Balance." *High Country News*. N.p., 02 Apr. 2014. Web. 02 Nov. 2015.  
<<http://www.hcn.org/articles/are-plans-for-the-sacramento-san-joaquin-delta-a-water-grab>>.

## 13. Guest Speaker

The class will host a guest speaker to discuss their firsthand experience in California Water Policy

## 14. Conclusion

This last lecture, distinct from the final project presentation day, will be an overview and discussion of California water policy in the next 100 years. Does it need to change its water policy philosophy from a diversionary focus? Should policy focus on usage or transport?

Reisner, Marc. "Epilogue- A Civilization, If You Can Keep It." *Cadillac Desert: The American West and Its Disappearing Water*. New York, NY, U.S.A.: Viking, 1986. N. pag. Print.

## 15. Final Projects

The class will present their final projects.