

San Jose State University  
College of Social Science  
Environmental Studies Department  
ENVS 129-01



## Water Policy in the Western US

### ENVS 129 Fall 2020 Syllabus

Patrick T. Ferraro, Instructor

#### What you will learn:

- How water rights are determined in California and other states.
- The processes available for conflict resolution when engineering decisions are in opposition to environmental regulation
- The roles and responsibilities of key state and federal environmental, land use and natural resource management agencies in water resources protection and flood management
- Financing options, common subsidies, and methods used for externalizing costs for water projects and setting water rates.
- Public participation requirements and strategies for successful water project campaigns
- To participate in the ongoing process of water policy development

#### Grading

- 20% Classroom participation: includes written responses to 12 reading assignments and classroom discussion of assigned internet articles on topics of the week.
- 30 % Quizzes 6 quizzes will be given about two weeks apart. Each quiz will

<i>C minus</i>	700 to 729	70 to 72%
<i>D plus</i>	660 to 699	66 to 69%
<i>D</i>	630 to 659	63 to 65%
<i>D minus</i>	600 to 629	60 to 62%

Writing for EnvS 129 and use of other sources

purposes only. The recordings are the intellectual property of the instructor; you have not been given any rights to reproduce or distribute the material.”

- Permission can be obtained in writing or orally, for the whole semester or on a class by class basis.
- In classes, where active participation of students or guests may be on the recording, permission of those students or guests should be obtained as well.

4) S127 “Course material developed by the instructor is the intellectual property of the instructor and cannot be shared publicly without his/her approval. You may not publicly share or upload instructor generated material for this course such as exam questions, lecture notes, or homework solutions without instructor consent.”

ENVS 129 Water Policy in The Western US

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(subject to change with fair notice)

Class Schedule	Topic
1. Aug 19	Introduction/ Overview of Course
2. Aug 24	Participation in the Development of Water Policy
3. Aug 26	Water Rights, Ecosystem Rights, Public Trust & Endangered Species Act





- Sign up for FREE subscription <http://register.bcwaternews.com>

Water Education Foundation: <https://www.watereducation.org>

- [Trending, Aquaforia, Aquapedia, Water Academy](#)

California Institute for Water Resources

<http://ciwr.ucanr.edu>

UC Water Colloquium Video Library:

<https://www.youtube.com/playlist?list=PLCF0A91966F74204D>



<https://www.youtube.com/watch?v=tLWPylrrfJ0>

Environmental Defense Fund (EDF) Recommends Policy Reforms for California Water Market • Reforms can help ecosystems and poor communities weather the drought, report says May 3, 2016

<https://www.edf.org/media/edf-recommends-policy-reforms-california-water-market>

1. Aug 26 Water Rights, Ecosystem Rights, Public Trust, Endangered Species Act

Water Rights-California:

[http://www.waterboards.ca.gov/waterrights/board\\_info/water\\_rights\\_process.shtml](http://www.waterboards.ca.gov/waterrights/board_info/water_rights_process.shtml)

Public Trust: philosophical and legal implications for California's future ; given by Joseph L. Sax, Professor, Boalt School of Law, UC Berkeley.(1:20:16)

[California Colloquium on Water: Sax](#)

Public Trust Doctrine: <https://www.watereducation.org/aquapedia/public-trust-doctrine>

Protecting Natural Capital & Ecosystem Services Using Public Trust Doctrine <http://ssrn.com/abstract=934393>

Text of TITLE 34 - CENTRAL VALLEY PROJECT IMPROVEMENT ACT

[https://www.usbr.gov/mp/cvpia/title\\_34/](https://www.usbr.gov/mp/cvpia/title_34/)

Text of Endangered Species Act

<https://www.fws.gov/ENDANGERED/law/policies/esa.html>

Endangered Species Act, United States, Encyclopedia of Earth

[https://editors.eol.org/eoearth/wiki/Endangered\\_Species\\_Act,\\_United\\_States](https://editors.eol.org/eoearth/wiki/Endangered_Species_Act,_United_States)

Video: Ron Robie@ UC Berkeley Water Colloquium: (1:09:52)

[California Colloquium on Water Robie](#)

1. Aug 31 Watershed Protection

What is a Watershed?

<http://www.kcet.org/social/departures/river/confluence/notes/whats-a-watershed-anyway.html>

Watershed Academy Webcast Archives

<https://www.epa.gov/watershedacademy/watershedacademywebcastarchives>

Earth Focus Episode 39 – American Rivers Challenges of the Colorado and Potomac(27:27/VIDEO)

[Earth Focus Episode 39 American Rivers: Challenges of the Colorado and Potomac](#)

US Dept. of Agriculture, Natural Resources Conservation Service: Landscape Planning and Watershed Programs: <http://www.nrcs.usda.gov/Programs/watershed/>

Watershed Protection and Flood Prevention Act of 1954

[http://en.wikipedia.org/wiki/Watershed\\_Protection\\_and\\_Flood\\_Prevention\\_Act\\_of\\_1954](http://en.wikipedia.org/wiki/Watershed_Protection_and_Flood_Prevention_Act_of_1954)

5. Sep 2 Groundwater Management

What is Ground Water?

<http://pubs.usgs.gov/of/1993/ofr93-13/>

Selected Groundwater Issues

Groundwater, Aquifers, Wells, and Springs

<https://www.usgs.gov/mission-areas/waterresources/science>

Rotten foundations the Reclamation Act and urbanization of the west given by Gray Brechin, noted historian and author of Imperial San Francisco: Urban Power, Earthly Ruin. <http://graybrechin.net/>

[California Colloquium on Water: Brechin](#) (59:34)

<https://www.youtube.com/watch?v=HPETYHEtJwk>

When myth trumps history: the Reclamation Bureau and the family farm, 1902-35 given by Donald Pisani, Merrick Professor of History, University of Oklahoma

[California Colloquium on Water: Pisani](#) (1:31:10)

Big Dams of the New Deal Era

<http://books.google.com/books?id=XP5LkSQMM5QC&dq=Big+Dams+of+the+New+Deal+Era>



<https://www.valleywater.org/savingwater/agriculture/mobile-lab-improve-farm-irrigation-efficiency>

Pollution from agriculture

<http://butane.chem.uiuc.edu/pshapley/Environmental/L33/2.html>

Tropical Storm May Have Kept Gulf 'Dead Zone' in Check

By PAUL QUINLAN of Greenwire, August 1, 2011

<http://www.nytimes.com/gwire/2011/08/01/01greenwire/tropical-storm-may-have-kept-gulf-deadzone-in-25367.html>

Nonpoint Source (NPS) Pollution: Forestry

<https://www.epa.gov/nps/nonpoint-source-forestry>

1. Sep 28 Water Pricing, Externalizing Costs

What are "externalized" costs? <https://www.epa.gov/nps/nonpoint-source-forestry> (Sep 17)

May 28, 2015

<https://www.scientificamerican.com/article/federaldollars-are-financing-the-water-crisis-in-the-west/>

1. Sep 30 Water Use Efficiency:

Paying More For Less Water and More Growth

6 Simple Ways to Bring the Water Revolution Home

<https://www.epa.gov/water-rev/water-revolution-home>

San José Santa Clara Regional Wastewater Facility

Behind the Flush: San José Santa Clara Regional Wastewater Facility

[Behind the Flush: San José Santa Clara Regional Wastewater Facility](#) (8:14)

Water and Wastewater Treatment Plant and System Operators

<https://www.bls.gov/ooh/production/water-and-wastewater-treatment-plant-and-system-operators.htm>

GHG Emissions from Treatment Plants: Video: Dr. Perry McCarty @ UC Berkeley Water Colloquium (1:11:56)

[California Colloquium on Water Perry L. McCarty](#)

<https://www.youtube.com/watch?v=15S4teA28> (1:11:55)

1. Oct 7 Water Recycling and Reuse

Video: Water In an Endless Loop Water Reuse Association

<http://vimeo.com/9333749> (23:59)

Water Reuse and Recycling: Community and Environmental Benefits

<https://www.epa.gov/waterreuse>

<https://www.epa.gov/sites/default> 79229. (nd E2 (e)4 (s)-1 (/)-2021( )Tj ( )Tj (0 Tm (1.)Tj:)-2 (2&TT4 1





1. Oct 12 Desalination and Privatization

Desalination, With a Grain of Salt: A California Perspective

Heather Cooley: Senior Researcher, Pacific Institute

[California Colloquium on Water](#) [Heather Cooley](#)

## WATER FINANCE:

The Imperative for Water Security and Economic Growth

[https://waterinthewest.stanford.edu/sites/default/files/Water\\_Finance\\_Water\\_Security\\_Economic\\_Growth.pdf](https://waterinthewest.stanford.edu/sites/default/files/Water_Finance_Water_Security_Economic_Growth.pdf)

AB-2541 Safe Drinking Water State Revolving Fund: project financing: severely disadvantaged communities.

[https://leginfo.legislature.ca.gov/faces/billHistoryClient.xhtml?bill\\_id=201720180AB2541](https://leginfo.legislature.ca.gov/faces/billHistoryClient.xhtml?bill_id=201720180AB2541)

1. Oct 19 The Sacramento-San Joaquin Delta & The Peripheral Canal/CA WaterFix/EcoRestore

Debating the Delta 56 min. PBS video Aired: 06/21/11

<http://vids.kvie.org/video/2017614881/>

Hell and high water in the Delta: The fate of California's water supply hub [California Colloquium on Water: Mount](#)

[https://www.youtube.com/watch?v=0\\_VJyCH8&feature=channel](https://www.youtube.com/watch?v=0_VJyCH8&feature=channel) (1:12:56)

Confluence, Confusion, or Catastrophe: Prospects for Ending the Delta Stalemate

[California Colloquium on Water: John Ca](#) (1:26:08)

Sacramento-San Joaquin Delta: An Ecosystem & Water Delivery System in Crisis

[California Colloquium on Water Richard M. Frank](#) (1:31:29)

Pat Ferraro Blog Posts:

<http://neverthirstpatferraro.blogspot.com/2008/06/fixingsacramentosajoaquindelta.html>

<http://neverthirstpatferraro.blogspot.com/2009/05/anotherchallengefor-henry-waxmansalt.html>

1. Oct 21 Colorado and Columbia River Projects

Grand Couleed *Dam 70 Years Later: What can we learn* Leonard Ortolano & Katherine Kao Cushing; 2002 Water Resources Development, Vol 18, No. 3, pages 390-7 Reprinted with permission in EnvS 129 Course reader

Download/read reprint from EnvS 129 FA19 Canvas Module #10: Colorado & Columbia River Projects

1. Oct 26 Owens Valley Water Project

Parts of Cadillac Desert Video Series:

Expansion of L. A. -destruction of Owens River & Valley

[Expansion of L. A. Destruction of Owens River & Valley](#)

<https://www.youtube.com/watch?v=CN1VYCczw9U>(3:32)

Construction of the Owens Valley Project

[Construction of the Owens Valley Project](#)

[https://www.youtube.com/watch?v=QesBtxLwvWY&feature=f\(4v11\)](https://www.youtube.com/watch?v=QesBtxLwvWY&feature=f(4v11))

Water & Power Wm Kahrl, 1982, UC Press, Berkeley

[http://books.google.com/books?id=DH\\_hxwAD\\_2UC&dq=Water+and+Power+William+Kahrl&printsh](http://books.google.com/books?id=DH_hxwAD_2UC&dq=Water+and+Power+William+Kahrl&printsh).



Alien invaders, endangered natives, and declining fisheries: a history of fish in the upper San Francisco estuary given by Peter Moyle, Professor of Fish Biology, UC Davis.

[California Colloquium on Water: Moyle](#)

Fear of FEMA Revisited

<http://neverthirstpatferraro.blogspot.com/2009/01/fear-of-fema-revisited.html>

Federal Emergency Management Agency

From Wikipedia

[http://en.wikipedia.org/wiki/Federal\\_Emergency\\_Management\\_Agency](http://en.wikipedia.org/wiki/Federal_Emergency_Management_Agency)

Report: Criticism of FEMA's Katrina response deserved

<http://www.cnn.com/2006/POLITICS/04/14/fema.ig/index.html>

Smart Growth 2 (Flooding)

[FEMA - Smart Growth Part 2](#)

<https://www.youtube.com/watch?v=uAuGZ615TrM&feature=related> (6:40)

Smart Growth 3 (Flooding)

[FEMA - Smart Growth Part 3](#)

<https://www.youtube.com/watch?v=HaPo2WQA&feature=channel> (6:40)

Smart Growth 4 (Flooding)

[FEMA - Smart Growth Part 4](#)

[FEMA - Smart Growth Part 4](#) (6:40)

29. Dec. 2 Class Presentation

30. Dec 7 Class Presentations

31. Dec 9 Final Exam Due 12:00 PM

Final Exam should be submitted by email to [tpferraro5@gmail.com](mailto:tpferraro5@gmail.com) and posted on Canvas as MS Word file with .doc or .docx suffix