

San José State University
College of Social Science
ENVS 129, Water Policy in the Western US

Section 01, Spring, 2017

Course and Contact Information

Instructor:	Patrick T. Ferraro
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Office Hours:	M 1:45 - 2:45 PM
Class Days/Time:	M 3:00 – 5:45 PM
Classroom:	Dudley Moorhead Hall, Rm 162
Prerequisites:	ENVS 001

Course Format

Students are expected to have completed reading assignments prior to class. Lecture will be supplemented with audio-visual media. A portion of each class will be spent as interactive discussion between instructor and students. Experts may be invited to some of the classes to augment the instructor's expertise. Field trips will be scheduled as time permits.

Faculty Web Page and MYSJSU Messaging (This section is optional)

Course materials such as syllabus, handouts, notes, assignments, etc. can be found on a Google site at <https://sites.google.com/site/envs129waterpolicysp2016/home> and on the Canvas learning management system at <http://www.sjsu.instructure.com> You are responsible for regularly checking with the messaging system through [MySJSU](http://my.sjsu.edu) at <http://my.sjsu.edu> (or other communication system as indicated by the instructor) to learn any updates.

Course Description

Water resource development; federal reclamation policy; water law and water rights; interbasin transfers; Colorado River, Central Valley Project and State Water Project; groundwater overdrafting; agricultural water and water pricing

Course Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Comprehend the process of water policy development and the application of such in the management of water resources.
2. To participate in the ongoing process of water policy development

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.

Recommended Texts/Readings

Textbook

With the multitude of topics and levels used to approach these subjects, one suitable textbook covering the entire course outline cannot be specified. Readings from pertinent Internet web sites will be assigned for each class topic. Students will be encouraged to search and review related links to supplement the information provided on the assigned sites and use the information to help generate discussions in the classroom.

The following printed materials are recommended and available for purchase through the Student Bookstore, Amazon.com and for use in the MLK library in the reserve section:

- 1.) **Dam Nation: How Water Shaped The West And Will Determine Its Future**
by **Steven Grace**
First Edition Edition
ISBN-13: 978-0762787623
ISBN-10: 0762787627

<http://www.amazon.com/Dam-Nation-Shaped-Determine-Future/dp/0762787627>

- 2.) **Deadbeat Dams: Why We Should Abolish the U.S. Bureau of Reclamation and Tear Down Glen Canyon Dam** Paperback – March 1, 2015
by [Daniel P. Beard](#) (Author)
ISBN-10: 1555664601
ISBN-13: 978-1555664602

<http://www.amazon.com/Deadbeat-Dams-Should-Abolish-Reclamation/dp/1555664601>

Other Readings

Class Schedule

Topic /Online reading assignments

1. Jan 30 Introduction/ Overview of Class

<http://www.voanews.com/content/los-angeles-san-diego-reshaping-california-drought-strategy/3104927.html>

Thinking Globally: Water Distribution

<http://ga.water.usgs.gov/edu/waterdistribution.html>

<http://ga.water.usgs.gov/edu/watercyclesummary.html>

How Much Water Is There On Earth? Magellan Would Be Shocked

<http://www.npr.org/blogs/krulwich/2011/06/23/137346086/how-much-water-is-there-on-earth-magellan-would-be-shocked>

Water: <http://www.youtube.com/watch?v=73GKLVef90A&NR=1>

GOOD: Water: <http://www.youtube.com/watch?v=HW5eBfZHE4M&feature=related>

Earth in the Balance: 7 Crucial Tipping Points by Jeremy Hsu, 02 March 2011

<http://www.livescience.com/13032-earth-7-tipping-points-climate-change.html>

Partial Text of The Great Thirst: Chapters on Aboriginal California & Spanish Settlement

[http://books.google.com/books?id=7CDVZL_AOBUC&dq=1.\)+The+Great+Thirst:+Californians+and+Water,+1770-1990+Hundley&printsec=frontcover&source=bl&ots=Qm0taQovnz&sig=d1VoMAq84Yc5ShGL2BHE-IpdsYs&hl=en&ei=e0iMSua5GlfSsgOJo6y7CQ&sa=X&oi=book_result&ct=](http://books.google.com/books?id=7CDVZL_AOBUC&dq=1.)+The+Great+Thirst:+Californians+and+Water,+1770-1990+Hundley&printsec=frontcover&source=bl&ots=Qm0taQovnz&sig=d1VoMAq84Yc5ShGL2BHE-IpdsYs&hl=en&ei=e0iMSua5GlfSsgOJo6y7CQ&sa=X&oi=book_result&ct=)

Good Water History Research Site

<http://wrca.library.ucr.edu/>

UC Water Colloquium Video Library:

<http://library.ucr.edu/wrca/about/ccow.html>

List of CA Water Agencies:

<http://library.ucr.edu/wrca/grants/districts.html>

2. Jan 30 Participation in Developing Water Policy

Download

The Citizen's Guide to Working with the California Water Boards (14.9 MB)

<http://www.acwa.com/news/water-news/guide-help-public-participate-water-planning-available>

Making Presentations Before the State Water Resources Control Board

http://www.swrcb.ca.gov/board_info/meetings/board_presentations.shtml

Successes and Failures in California Water Regulation

Gary Wolff, Vice Chair, California State Water Resources Control Board

<http://www.youtube.com/watch?v=tLWPyIrrfJ0&feature=channel>

Environmental Justice Coalition for Water's Work Groups

<http://www.ejcw.org/About/workgroups.htm>

Water Reform in California/Environmental Defense Fund's Water Policy Reform Web Page
<http://www.edf.org/page.cfm?tagID=47523>

3. Feb 6

Water Rights, Ecosystem Rights, Public Trust, Endangered Species Act

Water Rights-California:

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. <http://www.youtube.com/watch?v=ZfPXMlZthlc>

Public Trust Doctrine: <http://www.braypapers.com/PTD.html>

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

Text of TITLE 34 - CENTRAL VALLEY PROJECT IMPROVEMENT ACT
<http://www.fws.gov/stockton/afpr/title34.cfm>

Text of Endangered Species Act
<http://wildlifelaw.unm.edu/fedbook/esa.html>

Endangered Species Act, United States, Encyclopedia of Earth
http://www.eoearth.org/article/Endangered_Species_Act,_United_States

Bad for Species, Bad for People:
What's Wrong with the Endangered Species Act and How to Fix It
<http://www.ncpa.org/pub/st303>

Video: RonRobie @ UC Berkeley Water Colloquium: (1:09:52)
<http://www.youtube.com/watch?v=Ssu47LziUMo&feature=channel>

4. Feb 6

Watershed Protection

What is a Watershed?

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

Watersheds

<http://water.epa.gov/type/watersheds/index.cfm>

Earth Focus Episode 39 - American Rivers: Challenges of the Colorado and Potomac
<http://www.youtube.com/watch?v=ktVVBUJnxaA&feature=related> (27:27/VIDEO)

Federal Law: <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

Federal Law Perspective:

Obstacles to Watershed Protection:

http://findarticles.com/p/articles/mi_hb3153/is_n4_25/ai_n28666039/?tag=content;coll

5. Feb 13

Groundwater Management

What is Ground Water?

<http://pubs.usgs.gov/of/1993/ofr93-643/>

Selected Groundwater Issues

- * Artificial Recharge
- * Freshwater-Saltwater Interactions along the Atlantic Coast
- * Groundwater and Surface-water Interactions
- * Karst
- * Land Subsidence
- * Unsaturated Zone
- * Groundwater Networks
- * Regional Groundwater Studies

<http://water.usgs.gov/ogw/issues.html>

Sustainability of Groundwater Resources

<http://water.usgs.gov/pubs/circ/circ1186/pdf/circ1186.pdf>

Examples of Innovative Approaches that Contribute to Ground-Water Sustainability

<http://water.usgs.gov/pubs/circ/circ1186/html/boxg.htm>

Groundwater Depletion Across Nation

[http://water.usgs.gov/pubs/fs/fs-103-03/JBartolinoFS\(2.13.04\).pdf](http://water.usgs.gov/pubs/fs/fs-103-03/JBartolinoFS(2.13.04).pdf)

Study: San Joaquin aquifers might be in danger. July 24, 2012

http://www.recordnet.com/apps/pbcs.dll/article?AID=/20120724/A_NEWS/207240314/-1/rss02

Water follies: the environmental consequences of groundwater pumping given by Robert Glennon, Morris K. Udall Professor of Law and Public Policy, University of Arizona.

<http://www.youtube.com/watch?v=aU609axRws8&feature=channel>

Managing groundwater resources given by David Todd, President, Todd Engineers and Professor Emeritus, UC Berkeley <http://www.youtube.com/watch?v=vvLxJViHAR4&feature=channel>

6. Feb 13

Surface Water Impoundments

Water Supply Forecasts:

<http://www.wcc.nrcs.usda.gov/wsf/>

US Water Use by category:

<http://water.usgs.gov/pubs/circ/2004/circ1268/htdocs/text-total.html>

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/>

<http://www.youtube.com/watch?v=HPETYHEtJwk&feature=channel>

When myth trumps history: the Reclamation Bureau and the family farm, 1902-1935

given by Donald Pisani, Merrick Professor of History, University of Oklahoma.

<http://www.youtube.com/watch?v=HnplnB5JfkU&feature=channel>

Big Dams of the New Deal Era

http://books.google.com/books?id=XP5LkSQMM5QC&dq=Big+Dams+of+the+New+Deal+Era:+A+Confluence+of+Engineering+And+Politics&printsec=frontcover&source=bl&ots=DN05ukAk-p&sig=YukG6MBQ4pTC9w1hHyC0kVnZkZQ&hl=en&ei=w0h-SpnGDoWlswPT0LHvCg&sa=X&oi=book_resul

Save The Yampa River From Being Dam'd <http://www.youtube.com/watch?v=HNGunnMIlfQ>

Coho salmon benefit from dam removal on San Mateo County coastal creek By Lisa M. Krieger 12/29/2015

http://www.mercurynews.com/science/ci_29322478/coho-salmon-benefit-from-dam-removal-san-mateo

Texas' Thirst for Dams Bucks National Trend, Wendee Holtcamp, Aug. 4, 2011

<http://www.miller-mccune.com/environment/texas-thirst-for-dams-bucks-national-trend-34541/>

Student Video: Failure of Grand Teton Dam: (Grade A)

<http://www.youtube.com/watch?v=kqCkyrin3bk&feature=related>

Student Video: Failure of Grand Teton Dam: (Grade B)

<http://www.youtube.com/watch?v=u2beeXgvQlk&feature=related>

Video of Grand Teton Dam Failure: <http://www.youtube.com/watch?v=KEdM6Ys6spA>

7. Feb 20

Water Quality & Treatment

Chlorine by products:

<http://www.southerndatastream.com/thm/index.html> - Introduction

Restoration - Watershed Initiative Video

Urban Runoff P2: Southern CA marsh protection-20 minute thumb video:

http://www.algalita.org/watershed_mov.html

8. Feb 20

**Urban Water Distribution,
Public vs. Private Systems**

Water Distribution Power Point

http://galileo.phys.virginia.edu/classes/605.ral5q.spring04/lectures/water_distribution.pdf

Gold and Water in Them Thar Hills

<http://neverthirstpatferraro.blogspot.com/2008/09/flow-movie.html>

9. Feb 27

Coastal Protection

California Colloquium on Water: Douglas

Saving the coast: A job that's never done

given by Peter Douglas, Executive Director, California Coastal Commission; Examines desalting plant impacts

<http://www.youtube.com/watch?v=fvFZ5cqH9KM&feature=related>

Coastal Communities and the Blue Planet

Meg Caldwell, Woods Institute for the Environment, Stanford University

<http://www.youtube.com/watch?v=5qffYm46L5U>

10. Feb 27

Urban Stormwater Management

PRINCIPLES OF FLOOD MANAGEMENT AND FLOODPLAIN RESTORATION

<http://www.friendsoftheriver.org/fotr/BeyondFloodControl/no1.html>

<http://www.friendsoftheriver.org/fotr/BeyondFloodControl/no2.html>

<http://www.friendsoftheriver.org/fotr/BeyondFloodControl/no3.html>

<http://www.friendsoftheriver.org/fotr/BeyondFloodControl/no4.html>

CA Dept. of Water Resources Floodplain Management

<http://www.water.ca.gov/floodmgmt/lrafmo/fmb/>

Low Impact Development – Sustainable Storm Water Management

http://www.waterboards.ca.gov/water_issues/programs/low_impact_development/index.shtml

Urban Runoff Pollution Prevention Program/North Santa Clara County:

<http://www.scvurppp-w2k.com/default.htm>

11. Mar 6 **Water for Agriculture, Ag Runoff**

Farmers Try Political Force to Twist Open California's Taps

By [MICHAEL WINES](#) and [JENNIFER MEDINA](#) DEC. 30, 2015

http://www.nytimes.com/2015/12/31/us/farmers-try-political-force-to-twist-open-californias-taps.html?_r=3

Cotton Farming in Tulare Lake: *King of California*

http://books.google.com/books?id=QqIF0o8ZX8C&dq=King+of+California%2BMark+Arax&printsec=frontcover&source=bl&ots=Qhd8iRRjbn&sig=zmdaLEWy6xRMfPrjndeTOqF9eV0&hl=en&ei=KReLSo6iCo7KsQPUyvDJDQ&sa=X&oi=book_result&ct=result&resnum=1#v=onepage&q=&f=false

Ag water use Efficiency: SCVWD web page:

<http://www.valleywater.org/programs/agriculture.aspx>

Opinion: *Why California's drought matters*

Managing agriculture by government fiat puts the nation and world at risk

<http://www.washingtontimes.com/news/2015/dec/17/adam-putnam-why-californias-drought-matters/>

Pollution from agriculture

http://www.naturegrid.org.uk/rivers/gt_stour_case_study_pages/plln_frm.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-dead-zone-in-25367.html>

Pollution from Forestry

Lawmakers aim to overrule court on water runoff,

By STEVE BROWN, Capital Press, August 01, 2011

<http://www.capitalpress.com/oregon/SB-logging-runoff-080511-art>

12. Mar 6 **Water Pricing, Externalizing Costs**

Napa City Council to address water rate hike

http://napavalleyregister.com/news/local/council-to-address-water-rate-hike/article_6a80f8f6-bcb8-11e0-80a3-001cc4c002e0.html

Recycled Water Pricing/San Jose/SBWR: <http://www.sanjoseca.gov/sbwr/rates.htm>

13. Mar 13 **Water Use Efficiency:**

Paying More For Less Water and More Growth

Hi Tech Water Efficiency: <http://www.sanjoseca.gov/esd/PDFs/SVMGfinalreport.pdf>

6 Simple Ways to Bring the Water Revolution Home

http://www.yesmagazine.org/issues/water-solutions/6-simple-ways-to-bring-the-water-revolution-home?utm_source=junjul10&utm_medium=email&utm_content=subs&utm_campaign=6wysHdr

US EPA Water Sense <http://www.epa.gov/watersense>

14. Mar 13 **Sewage Treatment & Water Factories**

Wastewater Treatment: <http://ga.water.usgs.gov/edu/wwvisit.html>

Onsite systems/Austin: <http://www.ci.austin.tx.us/wri/faq.htm>

San Jose-Santa Clara WPCP: <http://www.sanjoseca.gov/esd/wastewater/water-pollution-control-plant.asp>

Treatment Plant Operators: Occupational Outlook Handbook, 2010-11 Edition

<http://www.bls.gov/oco/ocos229.htm>

GHG Emissions from Treatment Plants: Video: Dr. Perry McCarty @UCBerkeley Water

Colloquium: <http://www.youtube.com/watch?v=15S4teA2I-M&feature=channel>

15. Mar 20 **Water Recycling and Reuse**

Video: *Water In an Endless Loop*, Water Reuse Association <http://vimeo.com/9333749> (23:59)

Water Recycling and Reuse: The Environmental Benefits
<http://www.epa.gov/region9/water/recycling/>

US EPA Guidelines for Water Reuse

<http://www.epa.gov/ORD/NRMRL/pubs/625r04108/625r04108chap1.pdf>

Recycled Water Frequently Asked Questions

http://www.pvwma.dst.ca.us/project_operations/recycled_water.shtml#q1

Grey Water: <http://www.oasisdesign.net/greywater/>

16. Mar 20 Desalination and Privatization

Desalination, With a Grain of Salt: A California Perspective

Heather Cooley: Senior Researcher, Pacific Institute. <http://www.youtube.com/watch?v=HFvyxwzADd0>

Desalination issues in the United States; given by Kevin Price, Manager of the Water Treatment Engineering Research and Development Group, U.S. Bureau of Reclamation.

http://www.youtube.com/watch?v=neS_mX9GqJA

Gold and Water in Them Thar Hills

<http://neverthirstpatferraro.blogspot.com/2008/09/flow-movie.html>

Merger agreement: American Water Works will merge with a subsidiary of RWE AG

<http://www.aquamedia.at/templates/index.cfm/id/1461>

17. Apr 3

Water Project Financing, Public Outreach & Participation

MWD Video: Thirst: <http://www.youtube.com/watch?v=6Hc6lDaWako&feature=related>

18. Apr 3

The Sacramento-San Joaquin Delta & The Peripheral Canal

California's Delta Water Blues, January 3, 2011 Miller-McCune

<http://www.miller-mccune.com/science-environment/californias-delta-water-blues-26552/#>

Debating the Delta (56 min. PBS video)

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

Hell and high water in the Delta: The fate of California's water supply hub

http://www.youtube.com/watch?v=0_VJyCHG-iE&feature=channel

Confluence, Confusion, or Catastrophe: Prospects for Ending the Delta Stalemate
<http://www.youtube.com/watch?v=QXhZZwtSrLk>

Sacramento-San Joaquin Delta: An Ecosystem & Water Delivery System in Crisis
California Colloquium on Water - Richard M. Frank
<http://www.youtube.com/watch?v=CkhkSPoF-WU>

VIDEO: Worries about peripheral canal dominate
<http://www.centralvalleybusinesstimes.com/stories/001/?ID=19004>

Pat Ferraro Blog Posts:
<http://neverthirstpatferraro.blogspot.com/2008/06/fixing-sacramentosan-joaquin-delta.html>

<http://neverthirstpatferraro.blogspot.com/2009/05/another-challenge-for-henry-waxman-salt.html>

Saving the West Coast's Largest Estuary/EDF Delta Web Page
<http://www.edf.org/page.cfm?tagID=574>

19. Apr 10 **Colorado and Columbia River Projects**
Drought in the Colorado River Basin

<https://www.doi.gov/water/owdi.cr.drought/en/index.html#WaterSupply>

Grand Coulee Dam 70 Years Later: What can we learn Leonard Ortolano & Katherine Kao Cushing;
2002 Water Resources Development, Vol 18, No. 3, pages 373-390; Reprinted with
permission in EnvS 129 Course Reader
Download reprint from 2011 EnvS 129 web site page Lecture #10: Colorado & Columbia
River Projects: <https://sites.google.com/site/envs1292011waterpolicy/>
or on current Canvas modules, Week 10.

20. Apr 10 **Owens Valley Water Project**
The Owens Valley Land Grab <http://www.usc.edu/libraries/archives/la/scandals/owens.html>

Parts of Cadillac Desert Video Series:
Expansion of L. A. - destruction of Owens River & Valley
<http://www.youtube.com/watch?v=CN1VYCczw9U>

Construction of the Owens Valley Project <http://www.youtube.com/watch?v=QesBtxLwvWY&feature=fvw>

Water & Power, Wm Kahrl, 1982, UC Press, Berkeley
http://books.google.com/books?id=DH_hxwAD_2UC&dq=Water+and+Power+William+Kahrl&printsec=frontcover&source=bn&hl=en&ei=HRaLSsiMCISuswPjnczBDQ&sa=X&oi=book_result&ct=result&resnum=4 -v=onepage&q=&f=false

21. Apr 17

Hetch Hetchy Water Project

Part 1: Rebuilding the Historic Hetch Hetchy Regional Water System

Paul Mazza and Daniel Jaimes — Dec 28, 2011 <http://www.trenchlessonline.com/index/webapp-stories-action/id.2038/title.part-1:-rebuilding-the-historic-hetch-hetchy-regional-water-system>

Temples of Water

<http://neverthirstpatferraro.blogspot.com/2008/08/temple-of-water.html>

Hetch Hetchy Valley: Water and California's Future; given by Sarah Null, Doctoral Student, Geography, UC Davis; Spreck Rosekrans, Economic Analyst, Environmental Defense; and Jay Lund, Professor of Civil and Environmental Engineering, UC Davis.

<http://www.youtube.com/watch?v=8gHjGqzBqdQ&feature=related>

Restore Hetch Hetchy

<http://www.hetchhetchy.org/resources.html#education>

U.S. Supreme Court

UNITED STATES v. CITY AND COUNTY OF SAN FRANCISCO, 310 U.S. 16 (1940)

<http://caselaw.lp.findlaw.com/scripts/getcase.pl?navby=case&court=us&vol=310&page=16>

Supreme Court decision holding the City of San Francisco is violating the Raker Act by selling electrical power from the Hetch Hetchy dam.

Congressman Wants to Raise Hetch Hetchy Rent a Thousandfold

Proposal would increase San Francisco's annual fee to \$34 million from \$30,000

By John Upton, January 5, 2012

<http://www.baycitizen.org/water/story/raise-rent-hetch-hetchy-water/>

22. Apr 17

Central Valley Project and San Felipe Division

Effluent for the Affluent/Inside Poop of San Felipe Aqueduct

<http://neverthirstpatferraro.blogspot.com/2008/06/effluent-for-affluentinside-poop-on-san.html>

23. Apr 24

Central Valley Project Improvement Act

Central Valley Project Improvement Act (CVPIA)

<http://www.usbr.gov/mp/cvpia/>

Text of TITLE 34 - CENTRAL VALLEY PROJECT IMPROVEMENT ACT

<http://www.fws.gov/stockton/afpr/title34.cfm>

2012 Draft CVPIA Annual Workplans

http://www.usbr.gov/mp/cvpia/docs_reports/awp/2012/index.html

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

http://www.youtube.com/watch?v=5Ri2PF_u40I&feature=channel

24. Apr 24 **Water Reuse in SoCal (Irvine, Orange Co, West Basin)
Northern CA & South Bay Water Recycling Projects**

Recycled Water: Conveying the Message to Non-Water Experts

given by Roy Herndon,

Chief Hydrogeologist, Orange County Water District

<http://www.youtube.com/watch?v=gy7m1VZi90U>

Planet LA – Water

http://www.youtube.com/watch?v=Mwppb_zCLJE&feature=related

US Bureau of Reclamation Awards More Than \$2 Million to Fund 13 Title XVI Feasibility Studies in the San Francisco Bay Area, August 01, 2011

<http://www.usbr.gov/newsroom/newsrelease/detail.cfm?RecordID=36943>

South Bay Water Recycling: <http://www.sanjoseca.gov/sbwr/>

Rules and Regulations: <http://www.sanjoseca.gov/sbwr/rulesandregulations.htm>

25. May 1 **Water & Power**

LADWP In Crisis Video; <http://www.youtube.com/watch?v=67UxjCrjeao&feature=related>

SCVWD Failure to Develop Hydro Power: <http://neverthirstpatferraro.blogspot.com/2008/07/water-and-power.html>

26. May 1 **Integrated Water Resources Planning,
Sustainability and Carbon Footprints**

A Clear Blue Future

<http://www.nrdc.org/water/lid/>

Report: Arid West Can Help Meet Its Water Needs While Reducing Energy Use

<http://www.nrdc.org/media/2009/090811.asp>

27. May 8 **International Water Issues & Projects**

The Right to Water

<http://www.gci.ch/en/communication/news/news-of-green-cross-international/33-news/652-the-right-to-water>

Thirsty South Asia's river rifts threaten "water wars"

<http://www.reuters.com/article/2012/07/23/us-water-southasia-idUSBRE86M0C820120723>

The Role of Water Policy in Mexico: Sustainability, Equity, and Economic Growth Considerations

<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/LACEXT/0,,contentMDK:21219224~pagePK:146736~piPK:146830~theSitePK:258554,00.html>

28. May 8 Flood Protection, FEMA and Watershed Stewardship

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

Report: Criticism of FEMA's Katrina response deserved

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

Smart Growth 2 (Flooding)

<http://www.youtube.com/watch?v=uAuGZ615TrM&feature=related>

Smart Growth 3 (Flooding)

<http://www.youtube.com/watch?v=HaPoOO-aWQA&feature=channel>

Smart Growth 4 (Flooding) <http://www.youtube.com/watch?v=hecs9BzwH00&feature=channel>

Course Requirements and Assignments

SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in [University Policy S12-3](http://www.sjsu.edu/senate/docs/S12-3.pdf) at <http://www.sjsu.edu/senate/docs/S12-3.pdf>.

University policy states that there shall be an appropriate final examination or evaluation at the officially scheduled time in every course, unless specifically exempted by the college dean who has curricular responsibility for the course.

[University policy F69-24](http://www.sjsu.edu/senate/docs/F69-24.pdf) at <http://www.sjsu.edu/senate/docs/F69-24.pdf> states, "Students should attend all meetings of their classes, not only because they are responsible for material discussed therein, but because active participation is frequently essential to insure maximum benefit for all members of the class. Attendance per se shall not be used as a criterion for grading."

Grading Policy

- 25% Classroom participation: discussion of internet articles on topics of the week.
 - Daily Water news posted on <http://www.bcwaternews.com/bcwn/California/CA082311.html>
 - Please contact editor at rhellmann@brwncald.com to subscribe free of charge.
- 25% Quizzes- 6 quizzes will be given about two weeks apart. Each quiz will be 5%, but your lowest quiz score will be tossed.
- 25% Policy Development Participation Report - Each students will write up to 5000-word paper **summarizing student's participation in current local water issue**. This IS NOT simply a research project. **You must report on the contact you made to someone in authority or a group that can**

influence water policy. Suggested topics will be offered, but students may select a topic of their own interest.

- [Abstracts of Topics are due on Feb 22;](#)
- [Draft reports are due April 27](#)
- [Final Papers Due May 4](#)
- Reports must follow paper requirements. (See below)
- 25% Final Exam. Take-home, essay style exam will be given two weeks prior to final class meeting and due on day of final scheduled meeting.

97-100 = A+	82-86 = B	70-71 = C-
92-96 = A	80-81 = B-	67-69 = D+
90-91 = A-	77-79 = C+	66-63 = D
87-89 = B+	72-76 = C	62-58 = D-

Note that “All students have the right, within a reasonable time, to know their academic scores, to review their grade-dependent work, and to be provided with explanations for the determination of their course grades.” See [University Policy F13-1](http://www.sjsu.edu/senate/docs/F13-1.pdf) at <http://www.sjsu.edu/senate/docs/F13-1.pdf> for more details.

Classroom Protocol

Students are expected to have completed reading assignments prior to class. Lecture will be supplemented with audio-visual media. A portion of each class will be spent as interactive discussion between instructor and students. Experts may be invited to some of the classes to augment the instructor’s expertise. Field trips will be scheduled as time permits.

University Policies

General Expectations, Rights and Responsibilities of the Student

As members of the academic community, students accept both the rights and responsibilities incumbent upon all members of the institution. Students are encouraged to familiarize themselves with SJSU’s policies and practices pertaining to the procedures to follow if and when questions or concerns about a class arises. To learn important campus information, view [University Policy S90–5](http://www.sjsu.edu/senate/docs/S90-5.pdf) at <http://www.sjsu.edu/senate/docs/S90-5.pdf> and SJSU current semester’s [Policies and Procedures](http://info.sjsu.edu/static/catalog/policies.html), at <http://info.sjsu.edu/static/catalog/policies.html>. In general, it is recommended that students begin by seeking clarification or discussing concerns with their instructor. If such conversation is not possible, or if it does not address the issue, it is recommended that the student contact the Department Chair as the next step.

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Add/drop deadlines can be found on the current academic year calendars document on the [Academic Calendars webpage](http://www.sjsu.edu/provost/services/academic_calendars/) at http://www.sjsu.edu/provost/services/academic_calendars/. The [Late Drop Policy](http://www.sjsu.edu/aars/policies/latedrops/policy/) is available at <http://www.sjsu.edu/aars/policies/latedrops/policy/>. Students should be aware of the current deadlines and penalties for dropping classes.

Information about the latest changes and news is available at the [Advising Hub](http://www.sjsu.edu/advising/) at <http://www.sjsu.edu/advising/>.

Consent for Recording of Class and Public Sharing of Instructor Material

[University Policy S12-7](http://www.sjsu.edu/senate/docs/S12-7.pdf), <http://www.sjsu.edu/senate/docs/S12-7.pdf>, requires students to obtain instructor's permission to record the course and the following items to be included in the syllabus:

- “Common courtesy and professional behavior dictate that you notify someone when you are recording him/her. You must obtain the instructor's permission to make audio or video recordings in this class. Such permission allows the recordings to be used for your private, study purposes only. The recordings are the intellectual property of the instructor; you have not been given any rights to reproduce or distribute the material.”
 - It is suggested that the greensheet include the instructor's process for granting permission, whether in writing or orally and whether 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.
- “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.”

Academic integrity

Your commitment, as a student, to learning is evidenced by your enrollment at San Jose State University. The [University Academic Integrity Policy S07-2](http://www.sjsu.edu/senate/docs/S07-2.pdf) at <http://www.sjsu.edu/senate/docs/S07-2.pdf> requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The [Student Conduct and Ethical Development website](http://www.sjsu.edu/studentconduct/) is available at <http://www.sjsu.edu/studentconduct/>.

Campus Policy in Compliance with the American Disabilities Act

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. [Presidential Directive 97-03](http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf) at http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf requires that students with disabilities requesting accommodations must register with the [Accessible Education Center](http://www.sjsu.edu/aec) (AEC) at <http://www.sjsu.edu/aec> to establish a record of their disability.

Accommodation to Students' Religious Holidays (Optional)

San José State University shall provide accommodation on any graded class work or activities for students wishing to observe religious holidays when such observances require students to be absent from class. It is the responsibility of the student to inform the instructor, in writing, about such holidays before the add deadline at the start of each semester. If such holidays occur before the add deadline, the student must notify the instructor, in writing, at least three days before the date that he/she will be absent. It is the responsibility of the instructor to make every reasonable effort to honor the student request without penalty, and of the student to make up the work missed. See [University Policy S14-7](http://www.sjsu.edu/senate/docs/S14-7.pdf) at <http://www.sjsu.edu/senate/docs/S14-7.pdf>.

Student Technology Resources (Optional)

Computer labs for student use are available in the [Academic Success Center](http://www.sjsu.edu/at/asc/) at <http://www.sjsu.edu/at/asc/> located on the 1st floor of Clark Hall and in the Associated Students Lab on the 2nd floor of the Student Union. Additional computer labs may be available in your department/college. Computers are also available in the

Martin Luther King Library. A wide variety of audio-visual equipment is available for student checkout from Media Services located in IRC 112. These items include DV and HD digital camcorders; digital still cameras; video, slide and overhead projectors; DVD, CD, and audiotape players; sound systems, wireless microphones, projection screens and monitors.

SJSU Peer Connections

Peer Connections' free tutoring and mentoring is designed to assist students in the development of their full academic potential and to inspire them to become independent learners. Peer Connections tutors are trained to provide content-based tutoring in many lower division courses (some upper division) as well as writing and study skills assistance. Small group and individual tutoring are available. Peer Connections mentors are trained to provide support and resources in navigating the college experience. This support includes assistance in learning strategies and techniques on how to be a successful student. Peer Connections has a learning commons, desktop computers, and success workshops on a wide variety of topics. For more information on services, hours, locations, or a list of current workshops, please visit [Peer Connections website](http://peerconnections.sjsu.edu) at <http://peerconnections.sjsu.edu> for more information.

SJSU Writing Center

The SJSU Writing Center is located in Clark Hall, Suite 126. All Writing Specialists have gone through a rigorous hiring process, and they are well trained to assist all students at all levels within all disciplines to become better writers. In addition to one-on-one tutoring services, the Writing Center also offers workshops every semester on a variety of writing topics. To make an appointment or to refer to the numerous online resources offered through the Writing Center, visit the [Writing Center website](http://www.sjsu.edu/writingcenter) at <http://www.sjsu.edu/writingcenter>. For additional resources and updated information, follow the Writing Center on Twitter and become a fan of the SJSU Writing Center on Facebook. (Note: You need to have a QR Reader to scan this code.)



SJSU Counseling and Psychological Services

The SJSU Counseling and Psychological Services is located on the corner of 7th Street and San Carlos in the new Student Wellness Center, Room 300B. Professional psychologists, social workers, and counselors are available to provide confidential consultations on issues of student mental health, campus climate or psychological and academic issues on an individual, couple, or group basis. To schedule an appointment or learn more information, visit [Counseling and Psychological Services website](http://www.sjsu.edu/counseling) at <http://www.sjsu.edu/counseling>.

ENVS 129, Spring Semester 2017

Course Schedule

Week	Date	Topics, Readings, Assignments, Deadlines
1	Jan 30	Introduction/ Overview of Class
1	Jan 30	Participation in the Development of Water Policy
2	Feb 6	Water Rights, Ecosystem Rights, Public Trust and Endangered Species Act
2	Feb 6	Watershed Protection
3	Feb 13	Groundwater Management
3	Feb 13	Surface Water Impoundments Send Quiz #1
4	Feb 20	Water Quality & Treatment - How Clean is Clean?
4	Feb 20	Urban Water Distribution, Public vs. Private Systems
5	Feb 27	Coastal & Marine Protection Quiz #1 Due Send Quiz #2 Topic due for policy Participation Project submitted with 100-word abstract.
5	Feb 27	Urban Stormwater Management
6	Mar 6	Water for Agriculture, Ag Runoff
6	Mar 6	Water Pricing, Externalizing Costs Quiz #2 Due
7	Mar 13	Water Use Efficiency, Paying More For Less Water Send Quiz #3
7	Mar 13	Sewage Treatment & Water Factories
8	Mar 20	Water Recycling and Reuse
8	Mar 20	Desalination and Privatization Quiz #3 Due
9	Apr 3	Water Project Financing, Public Outreach & Participation Send Quiz #4
9	Apr 3	The Sacramento-San Joaquin Delta
10	Apr 10	Colorado and Columbia River Projects
10	Apr 10	Owens Valley Water Project Quiz #4 Due
11	Apr 17	Hetch Hetchy Water Project Send Quiz #5
11	Apr 17	Central Valley Project and San Felipe Division
12	Apr 24	Central Valley Project Improvement Act
12	Apr 24	SoCal & South Bay Water Recycling Projects Draft PP Report Due
13	May 1	Water & Power Quiz #5 Due Send Final Exam
13	May 1	Integrated Water Resources Planning, Sustainability and Carbon Footprints
14	May 8	International Water Issues & Projects

Week	Date	Topics, Readings, Assignments, Deadlines
14	May 8	Flood Protection, FEMA and Watershed Stewardship Final Policy Participation Report Due (late submissions accepted until May15)
15	May 15	Student Presentations Quiz #6 Due
Take-home Final Exam	May 24	Dudley Moorhead Hall, Rm 162 12:15 -2:30 PM Attendance not required. <u>E-mail</u> final assignment, due by 2:30 PM
		Quizzes and Final Exam will be emailed to students and returned, when completed, by email only (No printed material accepted)
		Quizzes will also be posted on Canvas