

CALIFORNIA COLLOQUIUM ON WATER SEMINAR

Course Objectives

This seminar studies California water issues from an interdisciplinary perspective, building upon the established California Colloquium on Water (<http://www.lib.berkeley.edu/WRCA/ccow.html>), to increase understanding and appreciation of water resources and contribute to informed decision-making about water in California. Each semester four distinguished scholars in the fields of humanities, natural sciences, engineering, social sciences, law, and environmental design present lectures to students, faculty, and the general public. Students in the seminar attend the colloquium lectures, complete background readings, and meet between each colloquium to discuss issues raised by the colloquium presentations and related readings.

Class Format

The class will meet at 5.30-7.30 on Feb 21st, April 3rd, April 24th and the schedule for the may class will be determined later. The first meeting will be held at the Water Resources Center Archives Library, 410 O'Brien Hall. Subsequent meetings will be in 315B Wurster. We will meet for approximately ninety minutes each period to discuss readings and speakers, and in the last meeting of the semester students will give brief presentation that integrate the topics discussed throughout the course.

Class Requirements

Each student is required to complete assigned readings, attend all four colloquium sessions, participate in class discussions, write brief critiques of each colloquium speaker, and prepare and deliver a short presentation on the readings and speakers. There is no final exam for this seminar. Note that each colloquium is videotaped and available as streaming video on the WRCA website (<http://www.lib.berkeley.edu/WRCA/ccow.html>) if circumstances force you to miss one of the speakers. Please note that there is approximately a one week delay between the lecture and posting of the videotape on the WRCA website.

Readings

The required text is 'A Laypersons Guide to California Water' obtainable for \$10 from the Water Resources Center Archives Library. Additional references will be placed on reserve in the Water Resources Center Archives (410 O'Brien Hall) as they are made available by the colloquium speakers and identified by the course instructor.

Instructor Information

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Office Hours: Available by appointment (email or phone)

February 12: **Leading the Way: A Look at the Sonoma County North American Climate Initiative**, given by Randy Poole, General Manager/Chief Engineer, Sonoma County Water Agency

Abstract: Why is North America lagging in implementation of climate-protecting technologies and what can be done to actually bring solid, permanent reductions in North American CO2 emissions? Part of the answer is that textbook solutions are at this time unproven. North America needs to prove that technology for energy efficiency, renewable power, biofuels, hybrid drive systems and carbon sequestration can reduce emissions, and that these technologies offer economic benefits and that they will find acceptance, even support, from the public. The North American Climate Initiative, as led by the Sonoma County Water Agency (SCWA), would provide the needed proof of concept by establishing one or more regional demonstration projects with the United States or Canada where the technologies would be tested. The programs would implement technological solutions, identify those that are viable and would monitor and document emissions reductions. Demonstration projects would provide the package of technologies that could be replicated rapidly nationwide, even globally to achieve climate protection goals well ahead of the 2020 targets set before us. Water supply, treatment, distribution and disposal are integral to the program. Water-related activities consume 19% of California's electric power and 30% of its natural gas. Water policy decisions such as recycling, conservation, desalination have direct impacts on carbon emissions. This lecture will provide an overview the program and how, if implemented, it would allow SCWA to supply water produced with zero carbon emissions by 2015.

March 11: **Protecting Watershed Services Through Law, Regulation and Markets**, given by Barton H. Thompson, Jr., Robert E. Paradise Professor of Natural Resources Law and Perry L. McCarty Director, Woods Institute for the Environment, Stanford University

April 8: **Desalination, With a Grain of Salt: A California Perspective**, given by Heather Cooley, Senior Researcher, Pacific Institute

Abstract: Long considered the Holy Grail of water supply, desalination offers the potential of an unlimited source of fresh water purified from the vast oceans of salt water that surround us. The public, politicians, and water managers continue to hope that cost-effective and environmentally safe ocean desalination will come to the rescue of water-short regions.

Interest in desalination has been especially high in California, where rapidly growing populations, inadequate regulation of the water supply/land-use nexus, and ecosystem degradation from existing water supply sources have forced a rethinking of water policies and management. In the past five years, public and private entities have put forward more than 20 proposals for large desalination facilities along the California coast. Project proponents point to statewide water-supply constraints, the reliability advantages of "drought-proof" supply, the water quality improvements offered by desalinated water, and the benefits of local control. Along with the proposals, however, has come a growing public debate about high economic and energy costs, environmental and social impacts, and consequences for coastal development policies. This presentation discusses the advantages and disadvantages of seawater desalination within the context of California.

May 6: **River Migration and the Diversity of Floodplains**, given by Thomas Dunne, Professor, Departments of Earth Science and Geography, UC Santa Barbara Bren School of Environmental Science and Management