

The Natural Resource

ENVIRONMENTAL AND NATURAL RESOURCES LAW & POLICY PROGRAM NEWSLETTER

NaturalResourcesLaw.Stanford.edu

Fall 2002

New Teaching & Research Initiatives Highlight Stanford's Expanding Program

A number of major new teaching and research initiatives highlight the continuing expansion of Stanford's Environmental and Natural Resources Law & Policy Program (ENRLP).

Teaching Initiatives

Over the past ten years, Stanford Law School has taken a totally new approach to teaching environmental law. ENRLP, for example, has pioneered the use of situational case studies – for which it won an award this year from the CPR Institute for Dispute Resolution in New York City. The CPR Institute honored **Professor Buzz Thompson's** use of situational case studies in his intro-

ductory Environmental Law course, calling it an exemplary approach to teaching problem-solving skills.

To further emphasize the importance of innovative problem-solving, ENRLP also created the Robert Minge Brown Lectureship, which it awards to a lawyer, scientist, or policy maker who annually has contributed in new and effective ways to the resolution of environmental issues. The purpose of these lectures is to provide students with valuable insights into solving important problems in a world of scientific uncertainty and political conflict. In 2002, former **Secretary of the Interior Bruce Babbitt** became the most recent Robert Minge Brown Lecturer, contributing his thoughts on the future of land use planning (see the separate article on page 3).

ENRLP also pioneered the interdisciplinary workshop in which environmental scholars from around the world and from multiple disciplines travel to Stanford Law School each year to present their current research to students and faculty. The speakers and papers for Spring term 2002 are listed on page 8 of this newsletter. Last, but certainly not least, ENRLP has partnered with the **Earthjustice Legal Defense Fund** to provide our students with training in large-scale impact litigation. The clinic grew this year with the addition of the first

David "Gypsy" Chain Fellow (see the box on page 5).

The major innovation this year, however, has been the launch of Stanford

University's new **Interdisciplinary Graduate Program in Environment and Resources** (IPER). IPER's goal is to train students to integrate science and social science into effective, truly interdisciplinary solutions to environmental issues. IPER offers both a Ph.D. in environmental science and a joint J.D./M.S. degree for law students interested in spending an additional

year studying environmental science and social science.

The core of IPER's curriculum includes an innovative course in Interdisciplinary Research, taught by Professor Stephen Schneider of Stanford's Institute for International Studies, and a new case-oriented class in Interdisciplinary Problem Solving, taught by Professor Buzz Thompson. Nearly forty faculty members from throughout the University, including the Law School, are teaching in the IPER program. The first cohort of graduate students, who arrived in September of this year, are examining issues ranging from Chinese energy policy to countryside biogeography. More information about IPER is available at iper.stanford.edu.

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Sarah Newkirk, Researcher
Stanford Fisheries Policy Project

Environmental and Natural Resources Law & Policy Program (ENRLP)

Buzz Thompson
Vice Dean, Stanford Law School, and Robert E.
Paradise Professor of Natural Resources Law

John Barton
George E. Osborne Professor of Law

Hank Greely
Professor of Law

Tom Heller
Lewis Talbot and Nadine Hearn Shelton Professor of
International Legal Studies

Robert Rabin
A. Calder Mackay Professor of Law

Meg Caldwell
Director, ENRLP, and Lecturer in Law

Josh Eagle
Coordinator, Stanford Fisheries Policy Project,
and Lecturer in Law

Sarah Newkirk
Researcher, Stanford Fisheries Policy Project

Deborah Sivas
Director, Earthjustice Environmental Law Clinic,
and Lecturer in Law

Michael Lozeau
Staff Attorney, Earthjustice Environmental Law Clinic,
and Lecturer in Law

Cynthia Delacruz
Program Coordinator, ENRLP

Environmental Clinic Prevails in Lawsuit to Protect Priceless Elkhorn Slough

The Environmental Law Clinic has won a major court victory in its effort to protect Elkhorn Slough, a coastal estuary just north of Monterey, California. One of the rarest and most threatened ecosystems is the coastal estuary. In California, where more than 75 percent of historic coastal marshes have been lost to human development, the Elkhorn Slough in Monterey County stands out as one of the last remaining relatively large coastal wetlands. Despite having shrunk to only 10 percent of its original size, the Slough has been termed an “ecological gem” that still supports a great diversity of rare plants and animals, including 400 species of invertebrates, 80 species of fish, 260 species of birds, and several species of marine mam-

als. Among the imperiled species inhabiting the Slough are the endangered snowy plover, the endangered brown pelican and the endangered tide-water goby, as well as the commercially important dungeness crab. The slough ecosystem itself serves as an important nursery and source of nutrients for the Monterey Bay National Marine Sanctuary into which it feeds and for which it functions as a filter for sediment and pollution runoff from surrounding upland uses.

Perhaps the greatest threat facing Elkhorn Slough today is the Moss Landing Power Plant perched on the shore where the Slough opens into adjacent Moss Landing Harbor. Con-

structed in the 1950s and expanded in the 1960s, the plant was partially mothballed in 1995. Since then, one study suggests that there has been a six-fold increase in the local sea otter population. But the facility owner is now proceeding with construction of two new power generating units that will increase the intake of plant cooling water from the Slough and Harbor to 1.224 billion gallons per day. That amounts to approximately 28 percent of the entire volume of water in the Slough and Harbor on a daily, annual, and life-of-the-facility basis. This intake water is filled with millions of floating species that are sucked into the plant’s physical,

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Alumnus Wins EPA Honor

On Tuesday April 17, U.S. EPA Administrator Christine Todd Whitman presented **John Lyons**—a 1987 graduate of Stanford Law School and a regular lecturer at the School today—and his litigation team with a Silver Medal as part of the U.S. EPA National Honor Awards. John and his team were recognized for their work on the Montrose Chemical Superfund case. John has been the lead U.S. EPA lawyer on this matter since he joined the EPA in 1991. The U.S. EPA National Honor Awards are the highest honors awarded by the Agency.



John Lyons

From 1947 until 1982, Montrose Chemical operated a manufacturing plant in Los Angeles, California that produced the pesticide DDT. For many years Montrose was the world’s largest producer of DDT. Until the early 1970s, contaminated wastewater from the Montrose plant was discharged into the sanitary sewers and ultimately released into the Pacific Ocean off the coast of Los Angeles on what is known as the Palos Verdes Shelf.

The U.S. EPA estimates that 100 tons of DDT and some 10 tons of PCBs (from sources other than Montrose) remain in sediments over seventeen square miles of the Palos Verdes Shelf. The Montrose discharge has been identified by the U.S. Department of the Interior (DOI) as the principal cause of the disappearance of the brown pelican from the Los Angeles coast in the 1960s. While the brown pelican population has since rebounded, bald eagles on the nearby Channel Islands are still unable to successfully reproduce without human intervention due to eggshell thinning related to DDT exposure.

According to the EPA, a certain bottom feeding fish in the area, white croaker, has high DDT and PCB tissue concentrations as the result of the sediment contamination. Despite a State ban on commercial catch of these fish, contaminated white croaker has been found in some Asian fish markets in the Los Angeles area. The EPA is also concerned that recreational anglers may be catching and consuming white croaker from this area.

In 1990, the U.S. EPA, DOI, NOAA, and the State of California filed suit against Montrose Chemical and others under the federal Superfund statute seeking cleanup costs and natural resource damages. The case remains one of the largest Superfund natural resource damage cases in history. Based in part on expert work done for DOI and NOAA, the EPA began its investigation of the Palos Verdes Shelf DDT and PCB contamination in 1994, the first time the EPA had employed Superfund authorities to address offshore sediment contamination.

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Babbitt Calls for Ecologically Based Land Use Planning

Former Secretary of the Interior **Bruce Babbitt** delivered the third **Robert Minge Brown** lecture at Stanford Law School on November 29, 2001. The Lectureship recognizes the work of individuals who have made substantial, innovative, and effective contributions to solving environmental problems. It was created in 1998 with funding from the Hewlett Foundation to honor **Robert**



From left to right: Josh Eagle, Bruce Babbitt, Meg Caldwell, Debbie Sivas, Buzz Thompson

Minge Brown, an alumnus of Stanford University and Stanford Law School who served as President of Stanford University's Board of Trustees from 1971 through 1981. Former recipients are **Tim Wirth** and **Sylvia Earle**.

Babbitt focused his remarks on the "ritualized, institutional failure of modern land use planning." According to Babbitt, the current system "fails to maintain the integrity of biological systems in the landscape because we define land use planning in an anthropocentric way," rather than accepting "our ethical obligation to the balance of species" within our landscapes. While Secretary of the Interior, Babbitt promoted the use of consensus processes to develop large-scale and regional Habitat Conservation Plans that would both accommodate development and secure long-term protection of endangered and threatened species habitat. Babbitt now asserts that government's propensity to emphasize procedure rather than substantive protections for species is the chief reason modern land use planning has failed.

Babbitt, a native Californian and two-term governor of Arizona, recognized the headway states like Oregon have

achieved in addressing sprawl and land conservation through state-wide urban growth measures. Babbitt then pointed to the land use "revolution brewing" in California as an elegant and simple tem-

plate — "a new vision" for how humans use land and water resources without mortgaging the future of other species. According to Babbitt,

California's SOAR (Save Open Space and Agricultural Resources) voter initiatives mark a "complete voter rejection of our existing land use planning mechanisms" and place the primary decision-making authority with the electorate rather than with politicians and bureaucrats.

Between 1995 and 2000, two dozen cities and counties in California adopted urban growth boundary (UGB) and SOAR-like initiatives (Solimar Research Group, 2002). Babbitt's primary examples came from Ventura and Napa Counties. Napa County's Measure J was the forerunner of the SOAR initiatives in California and, since passing constitutional scrutiny in *DeVita v. County of Napa*, 9 Cal.4th 763 (1995), has been the primary model for successor initiatives across the state. The core of most SOAR initiatives includes: voter affirmation of existing land use designations and policies within a jurisdiction (county or city); establishment or af-

firmation of an urban growth boundary (UGB) or City Urban Restriction Boundary (CURB) designed to preserve greenbelts between urban areas and keep new development within urbanized areas; a requirement for voter approval before agricultural, open space, or rural land can be converted to urban uses or higher density designations; and certain exceptions to ensure that statewide requirements, such as affordable housing mandates, are met. Frequently, as in the case of Ventura County, cities and the county coordinate SOAR initiatives to ensure cooperative action toward maintaining intercity greenbelts and urban growth limits throughout the county.

The remarkable feature of the SOAR approach, Babbitt argued, is that the need for voter approval forces "developers to come to terms with their generic abuse of the planning process," where piecemeal development approvals prevent biologically driven landscape planning. The next step in creating this new vision is to fully integrate ecologically based planning into the SOAR approach. The foundation for such an approach already exists, according to Babbitt, whose eight years as Secretary of the Interior showed him that there is widespread support across the nation for better stewardship of what he calls "the



Babbitt meets with Stanford law students over lunch.

balance of creation."

For more information about SOAR initiatives, see <http://www.soarusa.org>, and for nationwide efforts to address sprawl, see <http://www.sprawlwatch.org>. For insights on how to integrate ecologically based land use planning into local land use planning systems, see *Ecologically Based Municipal Land Use Planning* by William B. Honachefsky (Lewis, 1999).

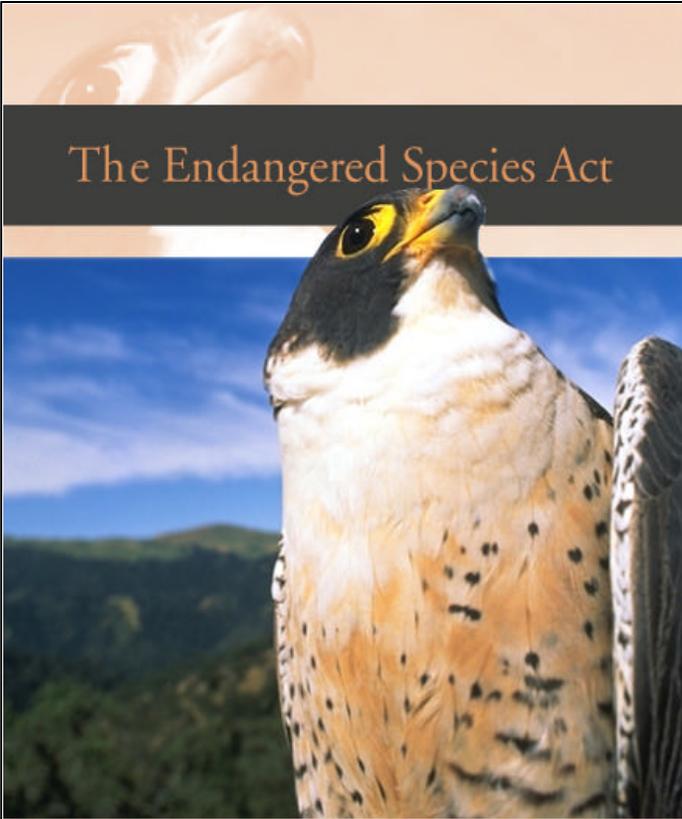
Supreme Court Ruling Helps Shape Stanford's New California Land Use Handbook

Stanford's commitment to stay on the cutting-edge of legal and policy developments extends to the program's new handbook on California land use planning and decision making. Earlier this year, the U.S. Supreme Court held that a short-term development moratorium imposed for the purpose of developing a comprehensive regional land use plan does not constitute a categorical taking of property for which compensation to affected landowners must be made. Writing for the majority in *Tahoe-Sierra Preservation Council, Inc. v. Tahoe Regional Planning Agency*, 122 S. Ct. 1465 (2002), Justice Stevens explained that a 32-month moratorium imposed by the Tahoe Regional Planning Agency (TRPA) in the 1980s on the issuance of building permits for properties whose development TRPA believed posed the greatest threat to Lake Tahoe's clarity was a legitimate use of TRPA's land use and planning authority. "Moratoria," Stevens wrote, "are an essential tool of successful development."

TRPA was established by interstate compact between Nevada and California with congressional ratification in 1969 to guide development around the Lake to preserve the its clarity, water quality, and beauty. The agency imposed development moratoria in the 1980s to "buy itself time," during which it could develop a comprehensive land use plan focused on preserving the lake's unique natural and human environment. Development moratoria have been part of the standard set of planning tools used by local land use decision makers for at least three decades. They serve the important purpose of allowing decision makers a sufficient period of time to carefully analyze land use problems, weigh the merits of alternative solutions, and ultimately adopt land use policies and regulations designed to address the problems.

In the case of Lake Tahoe, where the lake's legendary water clarity is at risk, identifying the properties where development can take place, and the type of building that can be

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The Endangered Species Act

The Stanford Environmental Law Society

"A user-friendly guide to navigate through the ESA's policy and practice. . . . Written in an extremely accessible manner, the book is intended for a wide audience. . . . The best single treatment I have found in communicating the ESA's practical requirements and implications."

Professor James Salzman, Washington College of Law, American University (Conservation Biology, Feb. 2002)

**The Endangered Species Act:
A Stanford Environmental Law
Society Handbook**

July 2001, 312 pages

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paper isbn: 0-8047-3843-2 \$19.95
cloth isbn: 0-8047-3842-4 \$55.00

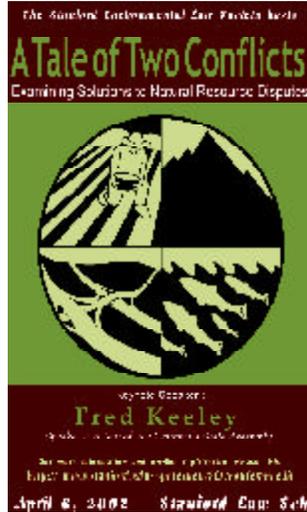
Copies are available for purchase through Stanford University Press at www.sup.org and Amazon.com.

A Tale of Two Conflicts

On Saturday April 6, the **Stanford Environmental Law Society** hosted a conference at Stanford Law School entitled "A Tale of Two Conflicts: Examining Solutions to Natural Resource Disputes." Law students and residents from the greater Bay Area attended. The conference goals included: educating attendees on regional precedent-setting environmental controversies; outlining differing successful approaches to solving environmental conflicts; and building ties with environmental law students from other law schools in the Bay Area.

The first panel highlighted growth management and land use issues in Placer County and the Lake Tahoe Area. One of the fastest growing counties in California, Placer County expects an additional 182,000 inhabitants by 2020, which will nearly double the current population of 230,000. In order to proactively address the impacts of such development, the Sierra Business Council entered into a partnership with Placer County in 1998 to develop and implement the Placer Legacy Open Space and Agricultural Conservation Program (Placer Legacy). Placer Legacy is a comprehensive, science-based plan to protect open space in the county, even as the county accommodates new growth and development. The panel discussion focused on the development and implementation of Placer Legacy as an example of using multi-stakeholder involvement and negotiation to remedy environmental problems. Panel speakers included: Christopher Beale, Resources Law Group; Steve Frisch, Sierra Business Council; Ed Pandolfino, Board of Directors, Sierra Foothills Audubon Society and Audubon Society Conservation Chair for Placer County; Loren Clark, Placer County Planning Department; and Tom Lumbrazo, a developer. Stanford Law's own **Meg Caldwell** moderated the Placer County discussion. To learn more about Placer Legacy, see

<http://www.placer.ca.gov/planning/legacy/legacy.htm>.



The second panel discussion focused on water allocation and endangered species issues in the Klamath River Basin in Oregon and Northern California. In April 2001, the Bureau of Reclamation restricted farmers' access to water in order to protect endangered shortnose sucker fish in Upper Klamath Lake and threatened coho salmon in the Klamath River. Farmers

responded by filing a lawsuit against the federal government, arguing that their irrigation water rights are private 'property' under the Takings clause of

the U.S. Constitution, and demanding roughly \$1 billion in compensation from the government. The Klamath takings litigation has been highly divisive in the community and raises environmental, social, economic, and scientific concerns. Discussion centered on the merits of the Klamath case, and more generally on the Klamath case's broader implications for takings law. Klamath panelists included: John Echeverria, Professor of Law and Director, Georgetown Environmental Law and Policy Institute; David Haddock, Pacific Legal Foundation; Tara Mueller, California Department of Justice; and Zeke Grader, Executive Director of the Pacific Coast Fishermen's Federation Association. Brian Gray, Professor at Hastings School of Law, moderated the discussion.

Following the panel discussions, the conference concluded with a keynote address by the Honorable Fred
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Clinic Hires First Law Fellow

Late last year, the Environmental Law Clinic hired SLS alumnus **Brian Schmidt '99** to be its first **David "Gypsy" Chain Fellow**. Named for a young environmental activist killed by a falling tree during logging protests in Humboldt County, California, the new two-year fellowship was created for the dual purpose of providing public interest training to a young lawyer and increasing legal services available to forestry activists working in Humboldt.

After an extensive nationwide search, we were thrilled to offer the position to Brian, who was a student in the Clinic during the late 1990s and is committed to public service in the environmental law arena, with a special interest in forestry issues. During law school, Brian interned with the San Francisco office of the Natural Resources Defense Council and with the Environmental Planning Project. He then spent

the summer following graduation working with the Quincy Library Group and others on forestry issues in Northern California, before moving on to a two-

year stint practicing public interest environmental law with the San Francisco law firm of Shute, Mihaly & Weinberger.

Supervised by senior Clinic attorneys, the fellowship offers Brian an opportunity to continue developing his lawyering skills while

also serving non-profit environmental clients in an area of the state that lacks adequate legal resources. Although the fellow position currently is funded for only two years, we hope to raise the funds to continue and expand the scope of the position. A permanent, revolving two-year fellowship would allow the Clinic to continue its educational mission by giving recent graduates an opportunity that is often difficult to come by in the non-profit world.



Brian Schmidt

Fisheries Project Looks At How the Law Shapes the Way Salmon Are “Made”

For about 100 years, the wild salmon industry dominated fisheries from California to Alaska. Beginning with the first salmon canneries, established in the 1870s, industrial scale salmon fisheries transformed the coast, attracting people and capital from around the globe.

A high-volume wild salmon industry continues to thrive in Alaska, where the industry is the state’s largest employer. However, in other parts of the Pacific Northwest, commercial fishing for wild salmon is declining. In California, Oregon, and Washington, salmon run have been decimated by overfishing, habitat destruction, and dams.

In British Columbia, once the region’s second largest producer of wild salmon products, and in Washington State, farming has replaced fishing as the leading method of “making salmon.” In 1980, 100 percent of the salmon produced in British Columbia and Washington State came from the wild fisheries. In 2001, 70 percent of salmon in this region came from salmon net-pen farms, in Puget Sound and around Vancouver Island.

Over the past year, **Josh Eagle** of the **Stanford Fisheries Policy Project** and **Dr. Roz Naylor** and **Whitney Smith** of **Stanford’s Center for Environmental Science and Policy** (CESP) have been investigating the ecological, economic, and legal interactions between commercial salmon fishing and salmon farming. The two activities are regulated quite separately, but policy decisions regarding fishing or farming have decided impacts on the competing activity. Thus, the question: How does law shape the way salmon are “made”?



Salmon Farm

Policy and Wild Salmon Fisheries

Governments significantly reduce the actual cost of producing a wild fish through legislation—there are monetary subsidies to fishermen and fish processors, such as fuel tax credits; low or no-interest loans for the purchase of boats, equipment, and licenses; and “disaster relief” when fish populations or prices decline.

Non-monetary subsidies play perhaps an even more important role in fishing operations. Government at all levels supplies the fishing industry with important

free services, including marketing and scientific management.

Finally, governments provide effective subsidies to the fishing industry in the form of lax, sub-optimal environmental regulation. Many coastal waters in Alaska, for example, are impaired by the influx of more than one million tons of untreated waste that is produced each year by fish processing plants.

It should be noted that government policies also artificially increase the cost of producing wild salmon. Although one doesn’t need a boat to catch a salmon (because they can be caught at the mouths of streams and rivers), there are almost 12,000 permitted commercial salmon boats in Alaska.

Policy and Salmon Farming

As seen by the policies above, governments have traditionally provided strong financial and legislative support to the commercial fishing industry. In recent years, however, it appears that this is changing.

There are several hypotheses for this apparent change in government alignment. First, there is a (perhaps erroneous) government perception that aquaculture can supplement food supplies. Second, there is a belief (again possibly false) that aquaculture will take pressure off of depleted wild stocks. Third, U.S. and Canadian governments are concerned about the accelerating “seafood deficits” of their countries, deficits that have been created in large part by rapid increases in aquaculture in developing countries. Fourth, the structure of the aquaculture industry is very different from that of the fishing industry, which tends to be atomized: salmon farming, for example, consists of a handful of large, well-capitalized corporations.

This is a form that may be perceived by governments to impose fewer administrative and regulatory burdens.

U.S. and Canadian governments (federal, state, and provincial) have contributed significantly

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Farmed salmon

Tale of Two Conflicts

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Keeley, Speaker Pro Tem of the California State Assembly. Speaker Keeley addressed last year’s energy crisis in California, explaining why it occurred and offering concrete suggestions about how to improve energy regulation in the state. The speech both highlighted the practices of an industry that often negatively impacts the environment, and provided yet another strategy for solving natural resource disputes.

New Teaching & Research Initiatives

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Research Initiatives

As the academic side of the program has grown, ENRLP also has embarked on a number of new research projects. ENRLP currently runs three “centers” of environmental research. Prior newsletters have discussed two of them. In the Regnet Project, Stanford researchers from the Law School and the School of Engineering are developing a formal, practical infrastructure to enhance access to environmental regulations under a multi-year grant from the National Science Foundation. As an offshoot of the original research, members of the Regnet team are examining how the internet is enhancing and changing citizen involvement in both the implementation and enforcement of environmental laws. The Regnet website, at eil.stanford.edu/regnet, provides additional background on the project and its research team.

The Fisheries Policy Project, supported by a continuing grant from the Packard Foundation, also continues to grow. In early 2002, ENRLP received a grant from the Pew Charitable Trusts to

study the United States fisheries council system, which is at the heart of management efforts under the Magnuson-Stevens Act, and to recommend potential improvements. The report will be released in 2003.

Sarah Newkirk joined the Law School in August 2002 to work on the fisheries council study and other marine research. Sarah recently finished a fellowship at the Natural Resources Defense Council in New York, where she had worked on fisheries issues. Sarah brings to more than a dozen the faculty and researchers now working on research under the umbrella of the Fisheries Policy Project. A separate article on page 6 of this newsletter provides a brief summary of research on salmon aquaculture, which is currently being completed by Josh Eagle of the Law School and Roz Naylor, an economist at Stanford’s Institute for International Studies.

A new research center within the ENRLP program at Stanford will focus on empirical water studies. In the first study, Sandra Postel will join Professor Buzz

Thompson, Dr. Gretchen Daily of the Stanford biology department, and Professor Jim Salzman of American University, in examining protection of international watersheds. The Hewlett Foundation is supporting the study through a larger grant to Stanford to examine international issues of sustainability.

ENRLP hopes to create a final Stanford research center in the near future to study land use in the western United States. In anticipation of the land use center, Meg Caldwell, ENRLP’s director, currently is writing a handbook on California land use policy that will be published as part of the Stanford Law Society’s environmental handbook series (see the related story on page 4). Stanford University Press published the first handbook, which focused on the federal Endangered Species Act, last year (see the box on page 4).

Montrose Litigation Award

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Ten years after the suit was filed and following years of bitterly contested discovery and motion practice, the case went to trial. After four days of trial, a comprehensive settlement was reached. When combined with prior settlements with other parties, EPA, DOI, NOAA, and the State of California received \$150 million to fund future cleanup work and natural resource restoration.

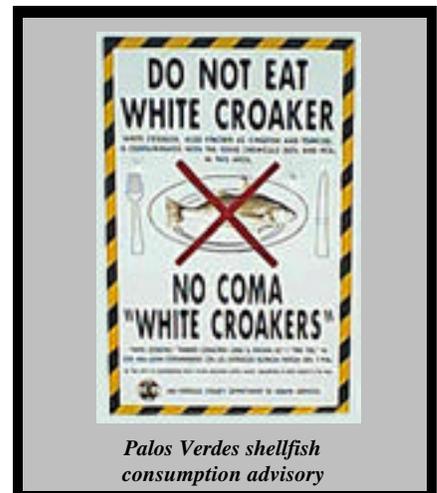
The Montrose litigation remains one of the largest and most significant Superfund cases ever to go to trial. More importantly, the settlements reached in the matter provide critical funds to address continuing threats to human health and the environment presented by the world’s largest DDT contamination site. Recently, the EPA has begun implementing a program to address human consumption of contaminated fish from the Palos Verdes Shelf through education

programs and enforcement of the ban on commercial fishing for white croaker in the area. This program is the first such effort in a Superfund case by the EPA in the country. The EPA is continuing to evaluate long-term measures to isolate the DDT and PCB contamination. At the same time, DOI, NOAA, and the State of California have begun efforts to select and implement specific measures to restore impacted natural resources.

For John Lyons, the Montrose case remains the most challenging and rewarding matter of his EPA career: “It is enormously gratifying to know that all the hard work over all the years will result in cleaning up one of the worst Superfund sites in the country.”

The Environmental and Natural Resources Law and Policy Program congratulates John on his award and his work. The Law School is fortunate to have

someone of his energy and experience teaching Environmental Ethics and sharing his insights with the next generation of Stanford Law School environmental lawyers.



Environmental Workshop Spring 2002 Presenters and Papers

Lee Breckenridge

Northeastern University School of Law
Diversity and Differentiation in Environmental Law

Tony Brenton

Deputy Head of Mission, British Embassy
Climate Change—Where Next?

Fred Cheever

University of Denver College of Law
Property Rights and the Maintenance of Wildlife Habitat: The Case for Conservation Land Transactions

Tim Duane

University of California at Berkeley,
Environmental Planning and Policy
Three Myths in Environmental Planning and Resource Management

Jim Estes

University of California, Santa Cruz, Institute of Marine Sciences
Fisheries, Food Webs, and the Conservation of Marine Mammals in the Bering Sea Ecosystem

Dan Farber

University of Minnesota Law School
Future Generations

David Freyberg

Stanford University, Department of Civil and Environmental Engineering
Managing an Aging Resource: Stanford's Searsville Dam and Lake

Suedeen Kelly

University of New Mexico School of Law
*Which Way Will the Wind Blow?
Current U.S. Policy on Electricity and Its Likely Impact on the Future of Renewable Energy*

John Leshy

Hastings College of the Law
*Conservation of Federal Lands, the Congress, the President, and Controversy:
The Role of the Executive Branch in Shaping the Modern West*

Fiorenza Micheli

Stanford University, Department of Biological Sciences, Hopkins Marine Station
Conservation of Marine Coastal Ecosystems: Lessons from Marine Reserves

Roz Naylor

Stanford University, Institute for International Studies' Center for Environmental Science and Policy
The Economics and Politics of Invasive Species: Lessons from Aquaculture

Jim Salzman

American University Washington College of Law
The Red Queen, Mozart, and Regulatory Accretion in the Administrative State

David Victor and Kal Raustiala

Stanford University, Program on Energy and Sustainable Development; UCLA School of Law
Intellectual Property and Plant Genetic Resources: How the World Shifted from Common Heritage to Patents

Fisheries Project

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through subsidies to the development of aquaculture technologies. Salmon farming technologies, for example, were developed with public funds at the University of Washington.

Although governments do not provide nearly the same level of direct and indirect operating subsidies to salmon farming as they do to the fishing industry, they provide effective subsidies in the form of lax environmental regulation. The salmon farming industry in Washington and British Columbia has been plagued

by public controversy, much of it due to the poor record of controlling escapes from farms. In one event in 1997, for example, more than 300,000 Atlantic salmon—a non-native species—escaped into Puget Sound. These escaped fish create several threats to the environment, including wild fish populations in the form of competition for prey and habitat and as traveling disease vectors.

Under current law, salmon farms are not required to treat the fecal matter and uneaten feed that flow out of the net pens. Some estimate that each

farm annually produces untreated sewage equivalent to that produced by a town of 5,000 people.

Where Does One Go From Here?

These current policies have clearly been a factor in setting the current 2:1 ratio of farmed to wild salmon production in British Columbia and Washington. This raises important questions that the Fisheries Policy Project will be studying: What is the socially optimal mix of wild and farmed salmon? How might we alter current policies in order to achieve that goal?

Environmental Clinic

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thermal, and chemical processes. In other words, much of the lower level biota in the food web – which constitute the basic ecological building blocks for the Slough and the Marine Sanctuary – will be decimated by the expanded facility. The state agencies charged with approving the expansion have conceded that this rate of intake and biological mortality will have “a significant adverse impact” on the watershed.

All of this ecological devastation easily could be avoided with the use of a more modern cooling system, such as closed-cycle wet recirculation, air cooling, or a wet/dry hybrid system. Such alternative cooling technologies are in widespread use throughout the country and would reduce intake water from 95 to 100 percent, thereby effectively eliminating the project’s impacts on aquatic resources.

In a recent rule-making package on cooling water systems, the U.S. Environmental Protection Agency determined that closed-cycle recirculation constitutes the “best technology available” for cooling water intake structures at power plants and is economically practicable. In fact, the EPA found that, in recent years, most new power plants have employed a closed-cycle technology and that almost all new plants expected to come on-line over the next several years will use closed-cycle or a more protective technology.

In the State of California alone, half a dozen new plants have been proposed with wet recirculation or dry cooling. The staff of the California Energy Commission has recently concluded that these more protective technologies should be required for the similar Potrero and Morro Bay power plant expansions, where the applicant also proposed old-fashioned “once-through” cooling, in order to protect the San Francisco and Morro Bay estuaries.

Despite these facts, the California Regional Water Quality Control Board for the Central Coast Region approved the Moss Landing expansion using the 50-year-old once-through technology proposed by the applicant. It did so on the

ground that the cost of a more protective technology would be “wholly disproportionate” to its environmental benefits – despite EPA’s conclusions that the technology is available and economically practicable and despite the Regional Board’s failure to do any economic analy-



Students, attorneys, and clients in front of the Moss Landing Power Plant

sis to support its conclusion. Indeed, the only economic information provided by the applicant, and thus the only information available to the public and agency decision makers, suggests just the opposite conclusion. The applicant claims that an alternative closed-cycle recirculation system, for example, will add \$12-13 million in initial capital costs to the \$475 million expansion project, and \$51-60 million in total capital and operating costs over the many-decade lifespan of the facility. For a facility that will likely generate tens or hundreds of millions of dollars every year in revenue (the applicant has refused to provide its revenue projections to the public), these costs hardly seem unreasonable, let alone wholly disproportionate. And similar or higher costs at other facilities have not been deemed economically impracticable. Given these facts, neither the Regional Board nor the plant owner has provided any reason why Elkhorn Slough deserves a lower level of protection than other coastal estuaries in California.

The Environmental Law Clinic sued the Regional Board, seeking a court order invalidating the permit decision and remanding the matter back to the agency

for further consideration. So far, at least three students have been directly involved in the case, one of whom was certified as a student practitioner and successfully argued in court against the State’s attempt to dismiss the case on jurisdictional grounds.

On behalf of a grassroots conservation organization, the Clinic’s lawsuit is premised on a provision of the federal Clean Water Act that requires cooling water intake structures to use the “best technology available for minimizing adverse environmental impact.” The suit argues that the Regional Board did not consider or require use of the best technology available, improperly considered economic factors in making its decision, and improperly allowed the applicant to substitute an unproven and undocumented environmental enhancement program in lieu of requiring the best technology available – all in violation of the Clean Water Act. Some of these issues may later play out on a larger national stage in a case currently pending before the U.S. Court of Appeals for the Second Circuit, where both industry and environmental groups have challenged the EPA’s new rule interpreting what constitutes “best technology available” under the Clean Water Act.

In early November the Monterey Superior Court issued a writ of mandate compelling the Regional Board to go back and conduct a “thorough and comprehensive” analysis of what constitutes the best technology available for the cooling system at the Moss Landing plant.



Elkhorn Slough

Land Use Issues

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undertaken without further impairing lake clarity, necessarily involves field studies, interdisciplinary analysis, and extensive public interaction—all of which takes time. In 1987, TRPA adopted a comprehensive plan that allows for adaptive management under which development potential can change over time because it is pegged directly to whether individual sub-regions of the Tahoe Basin meet threshold standards.

While the Lake Tahoe moratoria were lifted over a decade ago, TRPA's work continues with ongoing research in partnership with the U.S. EPA, local jurisdictions, the California Air Resources Board, Caltrans, USGS, the U.S. Forest Service, and others to further refine the land use planning tools TRPA uses to guide and control development and resource use in the Basin. Public participation naturally has been central to TRPA's work.

Enhancing the quality of public participation in local land use decision making in California is one of **Meg Caldwell's** expressed goals for the latest in the Stanford Environmental Law Society's handbook series. Following the successful completion of *The Endangered Spe-*

cies Act (Stanford University Press, 2001), Caldwell—who teaches Land Use Law—along with a team of law students and practitioners, has been developing and writing a new handbook on California land use planning and decision making focused on how individuals and community groups can be more effective participants in land use decision making processes. This new handbook will be a pragmatic guidebook covering the following topics: state, regional, and local government structure and actors in the land use arena; local government finance; building and maintaining effective community participation and organizations; preparing for and undertaking litigation; California law regarding planning, zoning, ethics, environmental impact analysis, and public records, including current legal theories and recent court decisions; environmental and constitutional laws relevant to land use planning and decision making; growth management and the environmental effects of urban sprawl; regional land use requirements and strategies designed to curtail sprawl and/or address natural resource protection; initiatives and referenda; and where and how to find more information.

The intended audience for this handbook includes professionals (lawyers, land use consultants, and other practitioners) advising residents, community groups, developers, and local governmental entities; public officials, including elected and appointed officials and local, regional, and state agency personnel, and their staff; and laypersons, including members of community and other non-governmental organizations, who may or may not be working with professionals. Academics will also find the handbook useful as an interface between theory and the real world.

Caldwell expects the manuscript for the land use handbook to be ready for submission to the publisher in early 2003. If you are interested in contributing to the ELS Handbook series fund that helps support ELS handbook research and writing, please contact Rinnie Nardone at 650/725-8115 or Rinnie_Nardone@law.stanford.edu. For more information about the ELS handbook series or the California land use handbook project, please contact Meg Caldwell at 650/723-4057 or megc@stanford.edu. For more information about TRPA, see <http://www.trpa.org>.