

# Sustainable Development, Ecosystems and Climate Change Committee Newsletter

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April 2004

## WELCOME NOTE FROM THE CHAIR

**Ira Feldman**

Welcome to the first of three newsletters to be produced by the Sustainable Development, Ecosystems and Climate Change Committee this year. This issue focuses on ecosystems; subsequent issues will provide in-depth coverage of climate change and sustainable development. Our fearless newsletter editor, Amy Royden, will be working closely with the vice-chairs in each substantive area to produce timely, informative material on each thematic topic, along with an update section in each issue.

As many Committee members are aware, with the 2003-04 ABA year we have effectively implemented a new Committee structure. We have added ecosystems to the mix and, as a result, we have embarked upon a year of experimentation for the former Climate Change and Sustainable Development Committee. Our three member cadres are presently at different stages of programmatic sophistication and membership recruitment – the climate change component is mature and has a well-established leadership core; the sustainable development component is newly-energized and leading a Section-wide initiative; and ecosystems, the newest component, is taking its first baby steps with newly-recruited vice-chairs. Recognizing this,

the Committee functions with three subsets of vice-chairs organized by substantive area (*i.e.*, sustainable development, ecosystems and climate change).

The scope of the Sustainable Development, Ecosystems and Climate Change Committee covers three interrelated topics of increasing importance at the both the domestic and international level.

- The Committee is long-established as the leading forum for those engaged in the regulatory and legal aspects of climate change – this is our anchor and we will continue to grow our climate change capability.
- Following the ABA's participation in the World Summit on Sustainable Development in Johannesburg, the Committee is leading the Section-wide effort to raise awareness of sustainability concepts and to integrate sustainability thinking across all environmental practice areas.
- The newest component of the Committee's membership seeks to explore ecosystem-based approaches to environmental protection and regulation.

One aspect common to each of our subject matter areas is that lawyers have not been especially visible in discussions of sustainable development, ecosystems and climate

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Tom Kerr and Amy Royden, Editors**

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change, but are now playing increasingly important roles vis-à-vis other policymakers and scientists. We have concluded that an important role for our Committee will be to raise awareness of the role of environmental lawyers by providing an interface with the non-legal policy and scientific communities through affiliate membership outreach, joint programs and liaison relationships.

In our new ecosystems area, we are especially fortunate to have an eclectic team of vice-chairs: Karen Hopfl-Harris, Jim Salzman, Shelly Hall, Marcela Kwitko and Kilaparti Ramakrishna. This group brings both substantial experience and a range of perspectives to our Committee’s pioneering consideration of ecosystems. Their role in this first year is, simply stated, to compare notes and begin to draw the lines on the playing field. Is there an aspect of ecosystems that ought to be the focus of attention for environmental lawyers? Is there an “ecosystems approach” to policy, regulation and management that is clearly divergent from traditional methods and regimes? We are asking our vice-chairs to begin this consideration.

In the coming months, we will share the preliminary views of our ecosystems leadership group. We will call for a roundtable discussion within the Section on ecosystem-based issues. We will seek to engage thought leaders on ecosystems approaches to environmental regulation from the legal, policy and scientific communities. And, later this year, our Committee proposes to team with the U.S. Business Council for Sustainable Development and present a conference on “Ecosystem Services.”

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## THE IMPORTANCE OF AN ECOYSTEMS PERSPECTIVE IN ENVIRONMENTAL LAW

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Jim Salzman

By most measures, modern American environmental law has been a great success. With few exceptions our air is cleaner, our water purer, than in 1970. (EPA, "National Air Pollutant Emission Trends," 1900-1994 (1995).) Despite these achievements, however, the last decade has witnessed repeated calls for a significant shift in regulatory emphasis. EPA's top managers and scientific advisors have consistently declared that maintenance of productive natural systems demands more attention and should, in fact, become one of the agency's highest priorities. (EPA, "Unfinished Business," (1987); EPA, "Edgewater Consensus," (1994); EPA, "Ecological Research Strategy," (1998).) In recommending that reduced ecological risk become a primary focus of EPA, its scientists and managers have revealed the single greatest failing of modern environmental law and its greatest challenge today – the inadequate protection of ecosystems and the services they provide. Consider the blunt conclusion of EPA's senior managers in a statement known as "The Edgewater Consensus." They declared that:

because EPA has concentrated on issuing permits, establishing pollutant limits, and setting national standards, *the Agency has not paid enough attention to the overall environmental health of specific ecosystems. In short, EPA has been 'program-driven' rather than 'place-driven.'* Recently, we have realized that, even if we had perfect compliance with all our authorities, we could not assure the reversal of disturbing environmental trends (emphasis added).

## The Value of Ecosystems Services

Largely taken for granted, healthy ecosystems provide a variety of critical services. Created by the interactions of living organisms with their environment, these "ecosystem services" provide both the conditions and processes that sustain human life – purifying air and water, detoxifying and decomposing waste, renewing soil fertility, regulating climate, mitigating droughts and floods, controlling pests and pollinating vegetation. Although awareness of ecosystem services dates back to Plato, only recently have ecologists, economists and lawyers begun systematically examining the extent and implications of these services' valuable contributions to social welfare. Not surprisingly, recent research has demonstrated the extremely high costs to replace many of these services were they to fail, on the order of many billions of dollars in the United States for water purification alone. In 1997, EPA estimated that \$34.4 billion was currently needed to replace and build infrastructure necessary to continue to provide water to consumers that meets all regulatory standards, with \$138 billion needed through 2015. In 1998, the American Water Works Association estimated capital needs at \$355 billion through 2015. (American Water Works Association, "Infrastructure Needs for the Public Water Supply Sector" (1998).) Such estimates are inherently uncertain, but the extraordinary costs required to substitute for many important services by artificial means are beyond dispute. (See, e.g., David Pearce, *Auditing the Earth*, 40 ENVIRONMENT 23 (1998); G. Allen-Wardell et al., *The potential consequences of pollinator declines on the conservation of biodiversity and stability of food crop yields*, 12 CONSERVATION BIOLOGY 8 (1998); C. Kremen and T. Ricketts, *Global perspectives on pollination disruptions*, 14 CONSERVATION BIOLOGY 1226 (2000).)

Our unthinking reliance on ecosystem services is due in part, no doubt, to society's

dissociation between desks, disks and diapers on the one hand and biodiversity, nutrient cycling, and pollination on the other. It is perhaps not surprising that many children, when asked where milk comes from, reply without hesitation – “from the grocery store.” (Linda C. Puig, *The udder side of education*, The San Diego Union Tribune, Oct. 18, 1985 at B1.) Given their obvious importance, one might expect that ecosystem services would be prized by markets and explicitly protected by the law. With few exceptions, however, neither has been the case.

Despite their obvious importance to our well-being, perhaps surprisingly, ecosystem services have largely been ignored by environmental law and policy. Provision of services is only rarely considered in cost-benefit analyses, preparation of environmental impact statements, wetlands mitigation banking, Superfund remediations and oil spill clean-ups. (James Salzman, *Valuing Ecosystem Services*, 24 *ECOLOGY L. Q.* 887 (1997).) Nor have significant markets arisen that capitalize on the commercial value of these services. We have no shortage of markets for ecosystem goods (such as clean water and apples), but the services underpinning these goods (such as water purification and pollination) are free. The services themselves literally have no market value for the simple reason that no markets exist in which they can be exchanged. As a result, there are no direct price mechanisms to signal the scarcity or degradation of these public goods, until they fail. Partly as a result, ecosystems are degraded.

An explicit ecosystem services perspective provides two obvious benefits. The first is *political*. Understanding the role of ecosystem services powerfully justifies why habitat and biodiversity conservation are vital, though often overlooked, policy objectives. While a wetland surely provides to some people existence and option values (values from

knowing that wetlands exist today and will be there tomorrow), the universal benefits provided by the wetland’s nutrient retention and flood protection services are undeniable. Tastes may differ over beauty, but they are in firm accord over the costs of polluted water and flooded homes.

The second benefit is *instrumental*. Efforts to capture the value of ecosystem services may spur institutional designs and market mechanisms that effectively promote environmental protection at the local, regional, national and international levels. To realize this potential, however, will require the creation of market mechanisms and institutions that can capture and maximize service values. If given the opportunity, natural systems can, in many cases, quite literally “pay their way.” The key question is how to make this happen.

### **How Environmental Law Can Create a Market in Ecosystems Services**

So how can environmental law promote our understanding of ecosystem services? First and foremost, it can do so through the creation of information markets that drive scientific research. Our understanding of groundwater chemistry and hydrology has increased tremendously in recent years, due primarily to markets created for this information as a result of actions under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Potentially responsible parties require a sophisticated understanding of local groundwater conditions to design the most efficient remediation strategies, and now-wealthy consulting businesses have arisen to meet these needs. Indeed, the role of regulation in creating secondary information markets is an important pillar of economics of information theory. (See, e.g., Howard Latin, *Environmental Regulation and Consumer Decisionmaking Under Uncertainty*, 6 *HARV.*

ENVTL. L. REV. 187 (1982); Mary L. Lyndon, *Information Economics and Chemical Toxicity: Designing Laws to Produce and Use Data*, 87 MICH. L. REV. 1795 (1989).) Ecosystem services have real value, yet they are not understood well enough to be valued monetarily. Could current regulations spur the creation of secondary information markets without the liability hammer of CERCLA? To a large extent, current wetlands regulations have already created information markets for wetlands vegetation and hydrology data. A great deal more is known today than just ten years ago, largely because the assessment models used to comply with wetlands regulations have focused on biophysical characteristics. But an emphasis on biophysical characteristics is misplaced if ecosystem services are as valuable as current research indicates. In addition, using biophysical indicators such as vegetation type, rather than using service indicators, has proven inadequate in ensuring that mitigation projects result in real restoration. As Professor Flournoy has observed in regard to the use of indicators in mitigation projects, "Whether on- or off-site, mitigation requirements may only require the developer to undertake certain excavation work and assure a certain percentage cover of designated species of vegetation over a five-year period. This focus on endpoints rather than processes may not produce functioning wetlands." (Alyson Flournoy, *Preserving Dynamic Systems: Wetlands, Ecology and Law*, 7 DUKE ENV. L. & POL'Y 105, 127 (1996).)

If government officials explicitly required significant data on ecosystem services for natural resource damage assessments and environmental impact statements, then a secondary information market likely would develop. Some regulations have begun to make these demands in the areas of groundwater hydrology and wetlands vegetation. Current regulations implementing the Oil Pollution Act, CERCLA, the Clean Water Act and the National Environmental

Policy Act (NEPA) already provide sufficient authority to spur just such a secondary information market. The 1996 implementing regulations of the Oil Pollution Act specifically require that damage to "natural resources and natural resource services" be considered in determining lost value. (Final Rule of Natural Resource Damage Assessments, 61 Fed. Reg. 440 (1996).) CERCLA provides for assessment of damages to natural resources resulting from the release of a hazardous substance. (43 C.F.R. 11.10 (1997).) The implementing regulations treat loss of "services" as a natural resource damage. Services are defined as "the physical and biological functions performed by the resource including the human uses of those functions." (43 C.F.R. 11.14(nn) (1997).) The damages cover, in part, the costs to replace and restore the injured natural service so that it "provides the same or substantially similar services" as before. (43 C.F.R. 11.14(ii) (1997).) This cost can only be determined from an assessment of the baseline services provided. The Clean Water Act provides for assessment of damages to natural resources resulting from the discharge of oil, and the C.F.R. sections cited in the preceding note apply also to Clean Water Act natural resource damages actions. (43 C.F.R. 11.10 (1997).) NEPA's implementing regulations require the scientific basis for comparison of alternatives to include "the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity." (40 C.F.R. 1502.16 (1997).) Also, where information is "essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant," the regulations require that such information be included in the statement. This provision could serve as a basis for considering ecosystem services as valuation methodologies improve. (40 C.F.R. 1502.22(a) (1997).) If ecosystem services are significantly undervalued, and such

***continued on p. 7...***

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undervaluation therefore leads to misallocation of resources, then the use of regulations to create a profitable secondary market in ecosystem service data and indicators could prove an efficient intervention for improved management of resources.

### **The Benefit of Ecosystems Services Research to Environmental Law**

What does ecosystem service research offer in return to environmental law? There are several intriguing possibilities. The first is specificity of indicators. For some services, benefits are too diffuse and monetary valuation is no more than a guess. Here, the law can use indicators of ecosystem services as a surrogate for economic value. While ecosystem management has become a catchword in government, a recent study by Prof. Oliver Houck indicates serious shortcomings. He makes a strong case that, despite the trumpeting of an ecosystem approach to conservation, “ecosystem management, as currently promoted, is politics with a strong flavor of law-avoidance.” (Harold Mooney and Paul Ehrlich, *Ecosystem Services: A Fragmentary History*, in Gretchen Daily, ed., *NATURE’S SERVICES* 16 (1997). He argues that the only effective legal standards to ensure protection of an ecosystem rely on assessments of keystone or indicator species:

“Why is it that indicator species work? Granted, they are by no means perfect surrogates for ecosystems and, granted again, the proof of their requirements can be complex and demanding for scientists operating at the far edge of data and predictability and trained to conclude nothing until all possible alternative hypotheses, however remote, have been disproved. Nonetheless, indicators work because, in the end, they produce specifics.” (*Id.* at 15.)

Robust, quantified indicators of ecosystem services could serve a similar role, providing an additional legal standard on which to base ecosystem management strategies. Much as the National Forest Management Act currently requires conservation of indicator species as a surrogate measure for ecosystem health, one could imagine a legal standard requiring maintenance of a specified, measurable level of local ecosystem services. Thus indicators assessing water flow into and out of a wetland might, for example, include dynamic measures of water retention, nutrient trapping or water quality. These indicators, at least on the local level, could mandate management of ecosystems based on functional standards – *i.e.*, maintaining the provision of baseline levels of services. Moreover, the direct benefit to humans of such conservation actions would be more obvious than the current focus on indicator species.

The second possible influence of ecosystem service research on environmental law is through specificity of causation. Defenders of Wildlife (Defenders), in its Supreme Court brief in *Lujan v. Defenders of Wildlife*, proposed a theory of standing known as the “ecosystem nexus.” Under this theory, Defenders claimed that its members were injured by a federal agency action located some distance away but within the same ecosystem as the members’ activities. Specifically, Defenders contended that the challenged action would reduce the species population of a contiguous rain forest, in turn reducing the size of the gene pool and making it more vulnerable to catastrophic events. This harmed the work of a Defenders of Wildlife member studying rare marmosets and jaguars in an area of the rainforest several hundred miles from the project.

Justice Scalia, writing for the majority, criticized the term “ecosystem nexus” as being “inelegantly styled” and rejected the theory. Scalia’s opinion stated that to establish standing parties must “use the area affected

by the challenged activity and not an area roughly 'in the vicinity of it'. . . To say that the Act protects ecosystems is not to say that the Act creates (if it were possible) rights of action in persons who have not been injured in fact, that is, persons who use portions of an ecosystem not perceptibly affected by the unlawful action in question." (*Lujan v. Defenders of Wildlife*, 504 U.S. 555, 565 (1992) (emphasis added).)

The dissent, however, argued that geographic proximity to the harm was not necessary for certain types of environmental actions (e.g., whale watching cruises affected by Japanese whaling activities thousands of miles away). As Justice Blackmun stated, "As I understand it, environmental plaintiffs are under no special constitutional standing disabilities. Like other plaintiffs, they need show only that the action they challenge has injured them, without necessarily showing they happened to be physically near the location of the alleged wrong." *Id.* at 594. Justices Kennedy and Souter, in a concurring opinion, were "not willing to foreclose the possibility, however, that in different circumstances a nexus theory similar to those proffered here might support a claim to standing." *Id.* at 579. Thus, four justices challenged Scalia's outright rejection of an ecosystem nexus basis for standing.

The geographic requirement does seem inapt for certain types of harm, leaving Scalia's requirement of a perceptible injury the primary hurdle to establish standing. As our understanding of ecological services develops, however, it well may be possible with a degree of certainty to establish connections between identifiable injuries and specific harms to services such as pollination or water retention. Indeed, such scientific understanding seems a likely outcome if increased research driven by secondary markets focuses on the production and delivery of ecosystem services.

Increased understanding of ecosystem services would not only justify an ecosystem

nexus theory of standing, but it could also support a defense of federal environmental laws against Commerce Clause challenges based on the "substantial connection" requirements articulated by the Supreme Court in *United States v. Lopez*. Even more importantly, it could provide the proximate causation link currently lacking in tort. Indeed, the popular tale of toxic tort litigation, recounted well in the bestseller *A CIVIL ACTION* serves as an important reminder that increased scientific understanding of hydrology and toxicology has permitted legal actions that would have had little or no chance of success just twenty years ago. It is too early to assess whether ecosystem services research will follow the same path, opening the door to legal challenges against environmentally harmful actions now immune through lack of proximate causation. The similarities seem striking.

Perhaps the greatest value that increased understanding of ecosystem services offers to environmental law and policy, however, is its persuasive argument that biodiversity and habitat protection provide important benefits in ways not normally considered. Wheeling out the rosy periwinkle and charismatic megafauna every time the Endangered Species Act or wetlands protections come under threat goes only so far. An ecosystem services perspective takes a different, potentially more effective tack, calling for explicit recognition of services precisely because of the direct, tangible benefits they provide. Such recognition could provide a more integrated and compelling basis for action than those suggested by a focus on single-species or biodiversity protection for the simple reason that the impacts of these services on humans are more immediate and undeniably important. Indeed, a focus on ecosystem services has the potential to unify disparate parts of environmental law, linking the conservation goals in laws such as the Endangered Species Act and National Forest Management Act more closely with the human

health goals in seemingly unconnected laws such as the Clean Air Act and Safe Drinking Water Act.

## Conclusion

These developments in environmental law are at once speculative and foreseeable consequences of future research on the production and delivery of ecosystem services. The study of ecosystem services is a new and very promising area of interdisciplinary research with the potential to create a significant shift in how we address environmental protection. Just as the perspective of ecosystem services provides a valuable bridge linking ecologists and economists to policymakers, so, too, is it important for environmental lawyers to engage themselves in this research effort, both to explore the role ecosystem services should play in the law's development and to influence the direction of research so that the services provided by nature may be accorded their proper value.

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## A COMPREHENSIVE APPROACH TO ECOSYSTEM RESTORATION: STATUS OF THE CALFED BAY-DELTA PROGRAM

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Chris Stevens  
Rhonda Reed

### The CALFED Bay-Delta Program in Its Fourth Year

The ambitious state-federal-stakeholder collaborative effort, known as the CALFED Bay-Delta Program, is now in its fourth year of a 30-year implementation plan to “fix” the hub of California’s water system – the San Francisco Bay/Sacramento-San Joaquin Delta.

The Bay-Delta (consisting of 700 square miles of tributaries, sloughs and islands in five counties) is the largest estuary in the western United States. It supports over 750 plant and animal species (including 80 percent of the California’s commercial salmon fisheries and nearly 50 percent of the waterfowl and shorebirds along the Pacific Flyway), and supplies drinking water for two-thirds of the state’s residents and irrigation water for over 7 million acres of productive farmland. It is also the centerpiece of the state’s two largest water distribution systems – the Central Valley Project (run by the U.S. Bureau of Reclamation) and the State Water Project (run by the California Department of Water Resources).

Decades of conflict, litigation, drought and uncoordinated regulation and management by state and federal agencies of the Bay-Delta had resulted by the mid-1990s in significant declines in fish and wildlife resources, deterioration of water quality and severe restrictions on water operations and exports. Urban, industrial, agricultural, municipal and environmental interests throughout the state were adversely affected by this “broken” water

management system, and projected increases in California's population and corresponding water needs in the near term only heightened the need for resolution. The CALFED Bay-Delta Program was born of this conflict and crisis (for more background on the origins of the Program, see Patrick Wright, *Fixing the Delta: The CALFED Bay-Delta Program and Water Policy Under the Davis Administration*, 31 GOLDEN GATE UNIV. L. REV. 331 (Spring 2001)).

The CALFED Bay-Delta Program was described in the document finalizing its programmatic environmental review process as “the largest, most comprehensive water management program in the world,” and “the most complex and extensive ecosystem restoration project ever proposed.” (See, the CALFED Bay-Delta Programmatic Record of Decision (Aug. 28, 2000), accessible at [www.calwater.ca.gov](http://www.calwater.ca.gov)). Its mission: to develop a long-term comprehensive plan that will be used as a roadmap, or framework, by state and federal agencies to coordinate their existing and planned future efforts to restore ecological health and improve water management for beneficial uses of the Bay-Delta system.

The CALFED Bay-Delta Program was developed through, and continues to involve, the efforts of over 20 state and federal agencies regularly meeting, coordinating, and collaborating with a multitude of stakeholders, including agricultural, urban, environmental, fishery, tribal and rural county representatives, to concurrently address four co-equal programmatic objectives: ecosystem quality, water quality, water supply reliability, and levee system integrity in the Bay-Delta. A gargantuan undertaking, but one made a bit more manageable thanks to the recent establishment of a governance entity to oversee the program.

On Jan. 1, 2003, the California Bay-Delta Authority (Authority) was established by state

law to oversee the coordinated and balanced implementation of the CALFED Bay-Delta Program by state and federal agencies, ensure the use of sound science across all program elements, promote the development and implementation of regional programs to advance program elements, and, perhaps most importantly, provide accountability to the California Legislature, Congress and interested parties for program performance (see, Ca. Water Code sec. 79400 *et seq.*). The Authority membership is comprised of 24 high-level state, federal and public representatives. The federal representatives are currently participating as non-voting members until federal legislation is enacted authorizing their full participation on the Authority.

In addition to the creation of this new governance structure, the first three years of implementation saw the collective investment by CALFED agencies of nearly \$2 billion in ecosystem restoration, water supply and water quality programs. This resulted in, among other things, notable improvement in fish populations, more reliability in water supplies, investment in several significant water quality projects and preservation of 700 miles of Delta levees.

### **Comprehensive Ecosystem Restoration: An Evolving Paradigm**

The Ecosystem Restoration program element (ERP), in particular, has overseen to date the investment of \$476 million in over 400 projects. The ERP, like the CALFED Bay-Delta Program as a whole, has taken a comprehensive approach to its mission of improving aquatic and terrestrial habitats and natural processes through a scientific adaptive management process.

A founding paradigm of the ERP is that its program plan will serve as a “single blueprint,” or framework, to guide existing and planned

future restoration actions in the system that are implemented both through the CALFED Bay-Delta Program and by CALFED participating agencies acting in their independent capacities. This ensures that restoration actions serve common, agreed-upon objectives, and are complementary to one another. It also reduces the risk of redundancy, conflicting projects and third-party impacts. The collaborative atmosphere has opened the door to restoration projects of a scope never before attempted. Significant to this success has been the willingness of California voters to support through bond measures ecosystem funding initiatives, but the key to the effective use of such funding is having a publicly accepted and coordinated scientifically sound plan of action.

The concept of using “good science” to guide decisions is not new, and in fact, is often cited in legislative debate and incorporated into law. However, in practice, the definition of “good science” can be subjective or unclear. The role of science in the ERP is not limited to using state-of-the-art information and techniques. The value of science is the objectivity and repeatability of results – to create a more certain understanding of what result will occur if a particular action is done. The challenge is that natural systems are complex and the variables are difficult, if not impossible, to control. The resulting uncertainty of outcomes was used in the past to bolster supporting arguments and opposing positions, alike, based on comparable science. From the CALFED perspective, the first step toward actually implementing a scientific approach was acknowledging that uncertainties exist, and identifying them in program documents.

Rather than focusing solely on the presence or absence of information, the ERP piloted the approach of incorporating scientific processes that ensure objectivity in order to improve the state of knowledge. Planning documents,

project proposals and, more recently, suites of related projects that have been implemented, have all been subject to internal and independent external peer review. Projects are selected through a competitive process that involves multiple levels of technical review, as well as sociological review considerations. Prospective applicants are instructed that successful proposals are hypothesis-driven and include effective monitoring so that the success or failure of actions can be evaluated objectively and future actions will build on lessons learned from earlier projects. This approach has proven successful not only with what one might traditionally think of as ecosystem restoration actions, involving scientifically-trained biologists, but also with traditionally non-scientific projects, such as environmental education and community capacity building projects. The key is clearly identifying well-considered, expected outcomes and building in effective monitoring so that the project may be evaluated for the expected outcome.

The ERP’s scientific adaptive management process is perhaps best illustrated by how the approach to salmon restoration, and, indeed, river restoration as a whole, has changed. Chinook salmon populations in California’s Central Valley have been in serious decline for several decades. The recent and possible future Endangered Species Act listings of salmon runs in California seriously constrain the ability to distribute water as desired for urban, agricultural and other uses. Consequently, salmon are a high profile species for restoration in the state.

In the late 1980’s, salmon restoration was typically focused on single species benefits and on small-scale projects that provided local, immediate responses. Salmon need gravel of a particular size in moving water for spawning. Biologists noted that the spawning-sized gravel below dams tended to wash away. The logical approach was to add

gravel, but although this action created spawning area immediately, over time the gravel washed away again. Clearly this approach was not easily sustainable and it led to a change in perspective from focusing on a single scientific discipline, biology, to engaging other scientific disciplines, such as hydrology and fluvial geomorphology, to look at physical processes of rivers and how they interface with instream habitat for salmon. Ultimately this line of thinking leads to the conclusion often attributed to John Muir: if you try to pick out one piece of the ecosystem, you find it is connected to everything else.

This evolution of thought led to paradigm shift in scale. The ERP began to look at reaches of rivers that had been degraded by past land and water uses that were perceived as socially beneficial when initiated, but that had the unintended consequence of degrading other highly-valued resources, such as salmon fisheries. With comprehensive planning in place and significant funding available, the ERP has begun to rebuild reaches of rivers, from a half-mile to two miles and more at a time. This rebuilding blends engineering, social science and ecological scientific considerations. The reaches are not rebuilt to their former states, but rather the restored channels are designed as scaled-down versions of the originals because of the changed flow patterns resulting from upstream dams. These rebuilt reaches contain shapes and features that restore natural channel and floodplain processes on a more self-sustaining basis.

The scientific adaptive management process for these channel reconstruction projects is ongoing, however, as the ERP fully recognizes that natural systems are notoriously contrary and there is often disparity between theory and real world application. A collaborative peer review process was recently conducted by a multidisciplinary panel convened by the ERP to evaluate and compare a suite of large-scale channel and riverine habitat restoration

projects in three different watersheds. The evaluation concluded that, while the technical and scientific premises of the projects were well founded, the projects' novelty offered significant learning opportunities not previously recognized. As a result of this review, the ERP and the CALFED Science Program are now working to institute an investigative team to take advantage of these opportunities.

While the ERP's adaptive management approach has led to implementation of comprehensive projects that restore salmon spawning habitat, as well as multiple habitat and river values, the long-term effectiveness of these projects needs to be assessed – not only from a scientific perspective, but also in the context of an ever-evolving legal, regulatory and sociological landscape. For example, changes in instream flows brought about through legal and regulatory actions, such as water rights adjudications, Federal Energy Regulatory Commission licensure requirements (relating to hydroelectric facilities) and water quality mandates, can significantly affect the performance of restoration projects designed to fit particular flow conditions.

The challenges of regulatory permitting and licensing can also play a role in project success. As the scale of restoration projects increases, so too does the complexity of required permitting from multiple state and federal regulatory entities – many with conflicting mandates. So much so, that a key objective of the CALFED Bay-Delta Program is to develop a formal system of permit streamlining to assist project implementers.

Socioeconomic considerations are also important to long-term effectiveness. If projects affect agricultural land, for instance, efforts must be made to work with farmers, ranchers and other local partners to minimize or avoid impacts on, and enhance, existing agricultural land uses.

## Conclusion

The CALFED Bay-Delta Program enters its fourth year of implementation with a new governance structure and having made significant progress in meeting each of its four co-equal, interrelated resource management objectives – water supply reliability, water quality, ecosystem quality and levee system integrity. Challenges for continued, long-term progress are many, including most notably, the lack of reliable state and federal funding and lack of federal authorization for full participation in the Program. Despite these challenges, this ongoing state-federal collaborative effort is notable for its comprehensive nature and the unique, science-based approach it has taken to concurrently addressing a multitude of interrelated ecosystem and water management problems in the San Francisco Bay/San Joaquin Delta.

The Ecosystem Restoration program element, in particular, has implemented restoration projects of unique scale and complexity. Its success has been built on a collaboratively developed framework for coordinating existing and planned future efforts for system-wide restoration, an adaptive management approach that continually integrates good science derived from objective scientific processes and other important non-scientific variables, and the availability of funding. Projects selected to date will do the following: 1) protect over 100,000 acres of habitat, including 48,000 acres for wildlife-friendly agriculture; 2) fund 44,000 acres of habitat for restoration, including 9,500 acres of shallow water tidal and marsh habitat; 3) protect or restore 102 miles of stream corridor; and 4) build fish screens to protect fish from 63 diversions in the Bay-Delta region. These and any potential future restoration actions will be implemented as part of a balanced CALFED Bay-Delta Program to enhance environmental conditions to allow greater flexibility and security for California's water future.

*Chris Stevens is chief counsel of the California Bay Delta Authority. He can be reached at [ChrisS@calwater.ca.gov](mailto:ChrisS@calwater.ca.gov). Rhonda Reed is deputy program manager of the Ecosystem Restoration Program of the Authority. She can be reached at [rreed@calwater.ca.gov](mailto:rreed@calwater.ca.gov).*

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## ECOSYSTEM MANAGEMENT AND THE ROLE OF WATER RESOURCES

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**Adell L. Amos**

Water is a component of every ecosystem and a necessary piece in the protection of ecological integrity. Often the focus in land conservation is on the physical metes and bounds of a particular parcel of land without adequate consideration for other components necessary for land protection. Without water, the conservation goals associated with land set aside by federal or state governments, non-governmental entities or private individuals cannot be achieved. The need to address water resources as part of ecosystem protection is more pronounced in the face of ever-increasing water shortages, familiar in the western United States and quickly moving east.

Water law has traditionally focused on the role of water rights, or entitlements to consumptively use water, in the context of prior appropriation in the western United States. Land-managing entities have often devoted the majority of their resources to securing water rights. As a result, various other tools for protecting water resources can be overlooked. While securing water rights is a necessary first step, land managers may also want to explore additional state and federal tools beyond the boundaries of traditional water rights to protect water quantity and quality in an ecosystem. This article offers a brief overview of some of the state and federal authorities that may be

available and proposes that the protection of water resources be an essential component of conservation planning for land-managing entities.

### **Water As Part of the Larger Ecosystem**

The importance of understanding the role water plays in preserving the integrity of an ecosystem cannot be underestimated. The addition or removal of water can make an enormous difference in the integrity of a system. Any particular parcel of land or larger ecosystem can include streams, rivers, lakes, ponds, wetlands, pools, springs or groundwater resources. The hydrological relationship of the components can be complex and often not recognized by the legal system. The law's failure to recognize complex hydrological relationships is demonstrated in the majority of states, where surface and ground water are regulated separately.

Understanding the relationship of water to the larger ecosystem should not be confined to legal frameworks. Scientists, land managers, biologists, hydrologists, and other water resources professionals best understand the role water plays in any particular ecosystem. Thus, it is critical to have an interdisciplinary approach that bridges the gap between science and law. The challenge then becomes using the available legal tools to protect the right quantity and quality of water as an essential component of the larger ecosystem.

### **Tools Available Under State Law**

Any discussion of the legal tools available to address water begins with the basics of how rights to use water are allocated. In the United States there are two primary systems for the allocation of surface water and groundwater.

In the eastern United States, where water has traditionally been plentiful, the doctrine of

riparian rights governs the relative rights of individuals to use water. In riparian jurisdictions, landowners bordering waterways have the right to reasonable use of the adjacent water body. In times of shortage all riparian owners share the burden equally. Most legal disputes in riparian states center around what constitutes "a reasonable use." A new trend, called "regulated riparianism" by some, is emerging in many eastern states. See, Kenneth R. Wright, et al., *WATER RIGHTS OF THE EASTERN UNITED STATES* (1998). These states have developed administrative permit systems to address water allocation particularly in times of shortage and these permit systems often give priority to historic users or certain classes of users. See generally, Joseph W. Dellapenna, *The Law of Water Allocation in the Southeastern States at the Opening of the Twenty-First Century*, 2 U. ARK. LITTLE ROCK L. REV. 9 (2002).

In the western United States, where shortage is common, the doctrine of prior appropriation governs the allocation of water rights. In prior appropriation jurisdictions, water rights are based on the first in time to put the water to "beneficial use" as defined by state law. Individuals must have established, recognized rights or permits, as opposed to owning land along a watercourse in riparian jurisdictions, to use water. Disputes in prior appropriation states often center on priority dates, whether water is being put to beneficial use and whether there is water available for appropriation by new users. In contrast to riparian rights jurisdictions, the prior appropriation system was designed specifically to deal with the allocation of shortage. The emergence of "regulated riparianism" is a function of the pure riparian rights doctrine being difficult to use in allocating shortage as water shortage becomes a problem in the east.

Several states have hybrid systems that combine principles from riparianism and prior

appropriation. Often these states recognized riparian rights early in their histories and later adopted prior appropriation without compromising established riparian rights. In addition to hybrid systems, two states have very unique water law. Louisiana has a civil code on water adapted from the French civil code and most closely resembles a riparian system. Hawaii has a system of appurtenant water rights based on laws from the ancient Hawaiian kingdom and recently enacted statutes. See, David Getches, *WATER LAW IN A NUTSHELL* 206 (1997).

Beyond pure allocation of water rights, states, particularly those in the west, have developed other mechanisms to protect water for ecological needs. Nearly all western states have expanded the definition of “beneficial use” to include broad categories of water use that include, among others, fish and wildlife, wetland maintenance, instream flow and recreation. By defining “beneficial use” broadly under state law, the state allows governmental entities and sometimes private individuals to hold protected water rights for these purposes.

Some states also have legal authorities to use administrative measures within the existing prior appropriation system to protect water resources. For example, several western states include criteria for evaluating new appropriations that take into account “public interest” factors. Public interest is often defined to include consideration of the value of maintaining rivers and lakes at certain minimum levels. Other states have recognized minimum stream flows, sometimes referred to as instream reservations. New appropriations cannot result in reductions in these minimum flow or volume levels. See *generally*, David M. Gillilan & Thomas C. Brown, *INSTREAM FLOW PROTECTION: SEEKING BALANCE IN WESTERN WATER USE* 138-145 (1997).

Under most prior appropriation systems, a water right is limited to the amount of water that is being put to beneficial use. If a water right holder is not using the full amount of the water right, that right may be subject to forfeiture or abandonment proceedings. If those proceedings are successful, more water is then available for new appropriations. The risk associated with non-use can create a disincentive for water rights holders to conserve water and use it more efficiently for fear of losing the entitlement to receive water. In response, several western states have adopted programs that allow an individual to retain the full extent of their water right and devote quantities saved through efficiencies to instream flow or other conservation purposes. Because the water rights are retained, the water savings is not available for new appropriations.

Similar to the federal statutes discussed below, states have also enacted legislation that promotes the protection of water resources. These programs include state endangered species acts and state wild and scenic rivers programs. Under the federal Clean Water Act, states also play a key role in setting standards for water quality and quantity. Protection of water resources, either through water quality standards and minimum water quantity requirements, is integral to compliance.

Finally, in a few states, the public trust doctrine or related concepts have been invoked to protect water resources. The public trust doctrine provides that a state holds submerged lands in trust for the people of the state for public use in navigation, fishing and recreation. Under this doctrine, the state bears the responsibility of preserving and protecting the public’s interest in these types of waterways and waterbodies. The state of California has led the way in using the public trust doctrine to protect water flows from the east side of the Sierra Nevada Mountains to

Mono Lake. *National Audubon Society v. Superior Court of Alpine County*, 33 Cal.3d 419; 658 P.2d 709 (S. Ct. Cal. 1983).

### **Tools Available Under Federal Law**

As the above discussion indicates, water resources are primarily governed by state law. The federal government, however, has the authority to make laws and set policies affecting water based on the commerce, property and supremacy clauses of the U.S. Constitution. The federal government also enters into international and tribal treaties that govern the allocation of water between sovereigns. Lastly, the federal government, through the U.S. Supreme Court and Congress, plays an important role in water allocation among the states by deciding disputes between various states regarding entitlement to specific water quantities when rivers flow across state boundaries.

In terms of water rights, state and federal land-managing agencies can assert water rights under state law where state law allows, both in terms of who can hold the right and whether beneficial use is defined broadly enough to meet the purposes for which water is needed. Federal land-managing agencies can also assert water rights under the federal reserved water rights doctrine. When the United States reserves land, or acquires it in some instances, it expressly or impliedly reserves the quantity of unappropriated water necessary to accomplish the primary purposes of the reservation. *Winters v. United States*, 207 U.S. 564 (1908); *Arizona v. California*, 373 U.S. 546 (1963); *Cappaert v. United States*, 426 U.S. 128 (1976); *United States v. New Mexico*, 438 U.S. 696 (1978).

Although securing water rights under state or federal law is an essential component of ecosystem protection, it can often take many years and involve extensive litigation, particularly in water-short areas where water is

over-allocated. There are other potential tools for protecting water resources available under federal statutes that govern management and regulatory activities. These tools may not be obvious ways of protecting water resources because they do not usually create water rights, but rather affect how water rights are exercised. See generally, J.B. Ruhl, *Equitable Apportionment of Ecosystem Services: New Water Law for a New Water Age*, 19 J. OF LAND USE & ENVTL. L. 47, 55 (2003).

The federal government plays an enormous role in the management of water in the United States through water projects operated primarily by the U.S. Bureau of Reclamation and the Army Corps of Engineers. Each of these agencies has management authorities and regulatory obligations that can implicate water availability and allocation. For example, the Bureau of Reclamation frequently has authority or is required to mitigate the impacts of its water development projects on fish and wildlife habitat. In addition, both the Bureau of Reclamation and the Army Corps of Engineers have obligations to comply with other regulatory standards, such as the Endangered Species Act, which may result in the development of measures that address water resources. For non-federal hydropower projects, the Federal Power Act provides authority for resource agencies to make recommendations and prescribe conditions for hydro power licenses issued by the Federal Energy Regulatory Commission. These recommendations and conditions are designed to offset the environmental impacts of the proposed development.

The National Environmental Policy Act (NEPA) provides a procedural framework and planning process for federal agency decision-making. Through the NEPA process and other particular planning authorities like the National Forest Management Act, the Federal Land Policy and Management Act, the Refuge Administration Act and the National Park

Service Organic Act, land managers can address water resource issues associated with the ecological unit at issue. To the extent that a federal action results in changes to the hydrology of an ecosystem, the impacts of that action should be considered in the NEPA analysis. As a planning tool, particularly when coupled with an agency's broader planning authority, land managers can define what water resources are present and begin to set forth a strategy for protecting those resources into the future.

The Clean Water Act (CWA) is perhaps the most significant and direct piece of federal legislation that impacts the water resources of the United States. Its stated goal is to restore and maintain the chemical, physical, and biological integrity of the waters of the United States. Both through effluent standards that limit the quantity of pollutants being discharged and ambient water quality standards set by the states, regulatory action under the CWA can have significant effect on water resource protection. Land-managing entities are subject to the CWA themselves, but can also use its provisions to address problems occurring outside their boundaries that affect water within their boundaries.

The Wild and Scenic Rivers Act may be equally significant in terms of federal legislation because it deals directly with water resources. The act allows the governor of a state, along with the Secretary of Interior, or Congress to designate segments of a river as wild and scenic. Once a river segment is designated, there are significant substantive protections in effect. In addition to the substantive protections, Congress can reserve flows of water for designated waterways. Though reservation of water flows for designated river segments have been rare, the Wild and Scenic Rivers Act remains an important tool for protecting water resources and the ecological integrity of water systems.

Finally, the Endangered Species Act (ESA) can also have an important effect on the protection of water resources. While the statute was not enacted specifically to address water issues, many listed species rely on water for survival. Federal agencies are required to ensure that their actions do not jeopardize listed species. This determination is made through the consultation process under ESA's Section 7. The consultation process most often results in the issuance of a biological opinion that provides measures or alternatives to ensure that a listed species is not jeopardized. For private parties, the ESA prohibits the take of listed species without an incidental take permit. A party can obtain an incidental take permit by developing a habitat conservation plan. If the species at issue relies on water, either the biological opinion or the habitat conservation plan will likely include measures to address water resources.

While the above discussion is not exhaustive, it does provide examples of potential tools under state and federal law that land-managing entities can use to protect the water resources associated with the larger ecosystems they are trying to protect.

*Adell L. Amos is an attorney with the Office of the Solicitor at the U.S. Department of Interior. The opinions and views in this article are those of the author and do not necessarily represent those of the Office of the Solicitor, the Department of the Interior, or the United States. Adell can be reached at [adellamos@earthlink.net](mailto:adellamos@earthlink.net).*

Sustainable Development, Ecosystems  
and Climate Change Committee

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## **EASTERN WATER RESOURCES: LAW, POLICY AND TECHNOLOGY**

**MAY 6-7, 2004**

### **WESTIN DIPLOMAT RESORT AND SPA HOLLYWOOD, FLORIDA**

Given the myriad issues evolving in eastern water law, the Section has developed a new program – Eastern Water Resources: Law, Policy and Technology – to provide practitioners with the most current information and perspectives. It will be one of the first major conferences to focus solely on water resources issues in the eastern United States.

Plenary sessions will include:

- an introduction to eastern water law issues highlighting current laws affecting water allocation in the East and recent trends among eastern states to modify their laws;
- a panel featuring the latest precedent-setting cases, including the recent U.S. Supreme Court decision in the water rights fight between Maryland and Virginia and key cases being litigated in a number of lower courts;
- a session on lessons to be learned from the western states;
- a session focusing on the increasing interplay between water quantity/water quality/endangered species issues featuring the recent Missouri River controversy; and
- a panel on the problems/permitting issues involved in trans-basin movement of water focusing on the litigation in the *Miccosukee* case currently before the Supreme Court and the *Trout Unlimited* case that has the potential to severely impact the provision of water to New York City.

There will also be a luncheon presentation on the everglades restoration project, one of the largest public works projects ever undertaken by the Army Corps.

Break-out sessions topics will include:

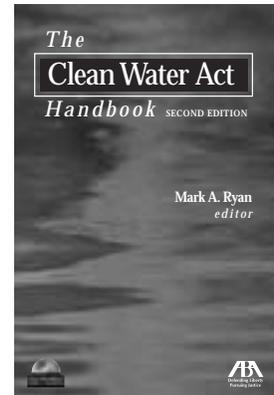
- legal issues involved in the everglades project;
- privatization of water supplies;
- watershed management;
- eastern compacts and interstate agreements; and
- ethics.

*For more information about this program, please visit our Section Web site:  
<http://www.abanet.org/environ/> or contact the Section at 312/988-5724 or  
[environ-registrar@abanet.org](mailto:environ-registrar@abanet.org)*

# New from ABA Publishing and The Section of Environment, Energy, and Resources

## **The Clean Water Act Handbook, Second Edition** **Mark A. Ryan, editor**

This updated guide is the definitive resource to the provisions and complexities of the federal Clean Water Act and how it continues to evolve. Recent court rulings and the change of administration have resulted in significant changes that dramatically affect practitioners working in the area. This new edition provides detailed explanations of these changes and considers the impact of recent court decisions, including the Supreme Court's decision in *SWANCC* and the Court of Appeals decisions in *American Mining Assoc.*, *Talent Irrigation*, and *Forsgren*, among others.



Beginning with an overview of the law's provisions and pertinent regulation and enforcement issues, the subsequent chapters address specific issues, such as:

- NPDES permits
- Control of publicly owned treatment works
- Requirements applicable to indirect discharges
- The regulation of wetlands and the impact of recent judicial decisions
- Oil and hazardous substance spills
- Enforcement options under Section 309
- Judicial review

Chapters begin with a section on applicability and scope. Within each fully annotated chapter, clear explanations of specific statutory and regulatory provisions and court decisions applicable to the issue are presented in the order needed for full and accurate analysis – a virtual checklist of requirements and considerations. Making this new edition more useful than ever, the authors reference URL addresses for quick, up-to-the-minute information on government documents that are often difficult to locate.

2003 6 x 9 336 pages

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Price: Section of Environment, Energy, and Resources members \$79.95; Regular \$95.00

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## CLIMATE NEWS UPDATE

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**Tom Kerr**  
**Amy Royden**

In keeping with the Committee's reporting on the variety of activities at the state, federal, international and voluntary corporate levels, a summary of recent developments in each area follows.

### **States**

Washington enacted a law that establishes carbon dioxide (CO<sub>2</sub>) mitigation requirements for fossil fueled power plants of greater than 25 megawatts. These plants must provide mitigation for 20 percent of the CO<sub>2</sub> emissions produced by the plant over a period of 30 years. This requirement applies to new power plants seeking site certification or an order of approval after July 1, 2004, and existing plants that increase the production of CO<sub>2</sub> emissions by 15 percent or more. Plants can satisfy the requirement either by making a payment to an independent qualified organization (at a rate of \$1.60 per ton), or by direct investment in CO<sub>2</sub> mitigation projects. Connecticut governor John Rowland accepted a climate change steering committee's 38 recommendations for reducing greenhouse gas (GHG) emissions. The recommendations include: 1) a program allowing Connecticut ratepayers to choose to pay for electricity derived from clean energy; 2) new emission standards for cars which could begin as early as model year 2007 (expected to be acted on by the General Assembly this year); 3) planned use of energy efficient materials and design concepts in the construction of new state buildings; and 4) benchmarking of state facilities to identify which properties can be made more efficient users of electricity. West Virginia governor Bob Wise's legislative agenda for 2004 includes passing legislation that would authorize the establishment of a mandatory GHG emissions registry for sources that emit more than a de minimis amount of GHG

emissions and a voluntary registry for GHG emission reductions.

### **International**

Russia continues to fuel speculation on both sides on whether it will ratify the Kyoto Protocol. In the meantime, the European Union (EU) continues to prepare for its January 2005 GHG emissions trading experiment. The EU emission allowance trading scheme (EU EATS) is expected to eventually cover twenty-eight European countries, and will require each member state to impose binding caps on emissions of CO<sub>2</sub> from energy-intensive sectors like energy, cement manufacture, and pulp and paper, among others. Only five of the current 15 EU nations met the March 31, 2004 deadline for submitting national allocation plans for emissions allowances. Japan continues to explore mechanisms that ease industry's path toward GHG reductions, and is urging targeted high-emitting companies to voluntarily perform GHG inventories, and then set GHG reduction targets that take into account their industry sector's expected growth.

In another international development, the International Organization for Standardization (ISO) continued its process to develop a new GHG accounting standard that would apply to projects, entity-wide reporting, and monitoring and verification of GHG reports. In early March, ISO experts met to resolve differences and agreed that the project module, also known as "Part 2" of the standard, would need significant additional work to become an international standard. Experts also agreed to have an additional round of review before balloting the standard, which may delay its targeted early 2005 date for finalization of the standard.

### **Federal**

In January, the Department of Energy's voluntary "1605-b" GHG reporting registry held

its latest public meeting to receive final comments on its revised general reporting guidelines. The Department of Energy expects to release more detailed technical guidelines sometime this spring, and will finalize the guidelines by the fall, with the expectation that companies will be able to register 2004 emissions reductions in the revised system sometime early next year.

## **Corporate**

Major electric utilities, including Cinergy and American Electric Power (AEP), announced in February that they will disclose what they are doing to prepare for a carbon-constrained future, including estimates of how future regulations could hit the companies' bottom lines. This comes after repeated shareholder resolutions have been filed with the two companies on the climate change issue. Also in February, five U.S. power companies joined the World Wildlife Fund's PowerSwitch! program, which calls for binding limits on national CO<sub>2</sub> emissions. The five utilities are Austin Energy, Burlington Electric Department, FPL Group, Inc., Sacramento Municipal Utility District (SMUD), and Waverly Light and Power. In January, several major companies joined EPA's voluntary Climate Leaders initiative, and others – including 3M, Advanced MicroDevices and International Paper – announced new forward-looking GHG reduction goals.

## **Upcoming Climate Change Events of Note**

April 13-15, 2004  
Washington, DC  
*Earth Technologies Forum*  
<http://www.earthforum.com/>

April 19-21, 2004  
Raleigh, NC  
*Workshop on North Carolina Clean Smokestacks Act Mercury and Carbon Dioxide Requirements and Information Gathering*  
<http://www.dcs.ncsu.edu/opd/ourse.cfm?cid=496&sid=1141>

May 5-7, 2004  
San Diego, CA  
*GHG Registries, Climate Policy and the Bottom Line*  
[www.climateregistry.org/EVENTS/Conference](http://www.climateregistry.org/EVENTS/Conference)

June 16-25, 2004  
Bonn, Germany  
*Twentieth Session of the Subsidiary Bodies to the UNFCCC*  
<http://unfccc.int/sessions/sb20/index.html>

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## **SUSTAINABLE DEVELOPMENT NEWS UPDATE**

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**Ira Feldman**

### **Section-wide Sustainable Development (SD) Initiative**

Marking a significant milestone in the ABA Section of Environment, Energy, and Resources' Section-wide SD Initiative, sustainable development was showcased at the 33rd Annual Conference on Environmental Law in Keystone, Colorado (March 14-18, 2004) through the opening keynote presentation and an afternoon workshop.

The keynote speaker at Keystone was Hunter Lovins, the co-founder of the Rocky Mountain Institute. Trained as an attorney, Ms. Lovins is now co-chair of the Natural Capitalism Group in Longmont, Colorado. She is a proponent of sustainable business practices; her remarks outlined the Natural Capitalism approach – adopting measures to increase resource efficiency, shifting to biologically inspired production models and investing in restorative practices. The goal: to move society towards no net loss of natural or social capital. The keynote was engaging and thought-provoking, and the remarks will appear in the forthcoming issue of *Natural Resources & Environment*, which will be dedicated to sustainability issues.

Building on several months of Committee-level activities, including the preparation of an issue identification spreadsheet, the Section's Alternative Dispute Resolution Committee convened a facilitated dialogue on sustainability at Keystone. This sustainability dialogue was designed to be a core component of the Section's SD Initiative, and it proved to be an enormous success. Over 80 conference attendees opted to participate in the facilitated dialogue, a three-hour event which included both expert remarks and informal breakout sessions. John Dernbach of Pennsylvania DEP, Andrew Savitz of PriceWaterhouseCoopers and Brad Raffle of Baker & Botts provided insightful comments and concrete examples of sustainability in practice. A summary report of the plenary and the break-out discussions is under preparation and will be distributed; other materials from the sustainability dialogue will be posted on the Committee Web page.

### **Johannesburg WSSD Follow-on Activities**

The interest in voluntary, multi-stakeholder partnership initiatives gained momentum at the Johannesburg World Summit on Sustainable Development (WSSD) with the inclusion of so-called Type II partnership outcomes in addition to consensus or Type I outcomes. Type II agreements are those negotiated not by the governmental delegations, but by those partners – governments, intergovernmental bodies, businesses, NGO's and other stakeholders – committed to implementation of the specific initiative. The goal of such voluntary partnerships is to advance implementation of the commitments contained in both Agenda 21 from the Rio Earth Summit and the Johannesburg Plan of Implementation. For further detail, a useful recent review of these partnerships from a legal perspective is presented in *Type II Partnerships, International Law and the Commons*, by ELI attorneys Carl Bruch and John Pendergrass.

The article appeared at 15 GEO. INT'L L. REV. 809 (2003).

The Type II partnership approach for sustainability programs is here to stay. The U.N. Web site detailing the more than 200 voluntary partnerships announced during and since the WSSD can be accessed at [www.un.org/esa/sustdev/partnerships/partnerships.htm](http://www.un.org/esa/sustdev/partnerships/partnerships.htm). The mechanism was institutionalized in the Johannesburg Plan of Implementation (JPOI) and the outcome of the 11th session of the UN Commission on Sustainable Development (CSD) in 2003. In May 2003 the CSD reaffirmed that these partnerships contribute to the implementation of intergovernmental commitments, recognizing that partnerships are a complement to, not a substitute for, intergovernmental commitments.

The United States is involved in several such partnerships; the State Department recently launched its own Web site to track the progress of these and other "sustainable development partnerships." As noted on the Web site, which can be accessed at [www.sdp.gov/sdp](http://www.sdp.gov/sdp), "the U.S. Government has joined with foreign governments, international organizations, non-governmental organizations, academia, and the private sector to plan and implement voluntary partnerships that promote economic growth, social development and environmental stewardship . . . at the World Summit on Sustainable Development . . . the United States established and/or joined more than 20 partnerships to advance sustainable development." The Web site also includes a section detailing U.S. domestic efforts on sustainability through partnership efforts.

Most recently, as an input to ongoing work in this area of voluntary partnerships, the government of Italy, in cooperation with the United Nations, convened an "International Forum on Partnerships for Sustainable

Development” which was held from March 4-6, 2004, in Rome, Italy. See [www.unep.or.jp/ietc/New-Events/Issue-70.asp](http://www.unep.or.jp/ietc/New-Events/Issue-70.asp). The forum was intended to enhance the contribution of partnerships towards the implementation of sustainable development goals and objectives, particularly those related to the JPOI and other international agreements related to sustainable development. The outcome of the forum will be presented during the 12th Session of the Commission on Sustainable Development (CSD-12) in New York, April 19-30, 2004.

Water, sanitation and human settlements were selected as the themes for the upcoming CSD-12 proceedings. With this session, the CSD begins a new pattern of 2-year implementation cycles; “review sessions” (considering progress in focus areas towards sustainable development goals) will alternate with “policy sessions” (to identify measures to encourage implementation and remove barriers). This new format is intended to allow for increased participation of stakeholder groups in CSD sessions. Unlike previous CSD sessions, the agenda calls for capacity building sessions and a partnerships fair. Additional information on CSD-12 can be found at [www.un.org/esa/sustdev/csd/](http://www.un.org/esa/sustdev/csd/).

### **Upcoming Sustainable Development Events of Note**

April 19-30, 2004  
New York, NY  
*12th Session of the Commission on Sustainable Development (CSD-12)*  
[www.un.org/esa/sustdev/csd/](http://www.un.org/esa/sustdev/csd/)

May 10-12, 2004  
Harrisburg, PA  
*Goddard Forum: Developing Sustainable Communities*  
<http://Goddard.cas.psu.edu/forum4.htm>

June 9-11, 2004  
New York, NY  
*Conference Board: Business and Sustainability*  
[www.conference-board.org/sustainability.htm](http://www.conference-board.org/sustainability.htm)

## **SUSTAINABLE DEVELOPMENT, ECOSYSTEMS AND CLIMATE CHANGE COMMITTEE NEWSLETTER**

### **LIKE TO WRITE?**

The Sustainable Development, Ecosystems and Climate Change Committee welcomes the participation of members who are interested in preparing this Newsletter.

If you would like to lend a hand by writing, editing, identifying authors, or identifying issues please contact one of the editors:

Tom Kerr at [kerr.tom@epa.gov](mailto:kerr.tom@epa.gov)

Amy Royden at  
[aroyden@4cleanair.org](mailto:aroyden@4cleanair.org).

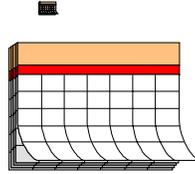
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<http://www.abanet.org/environ/pubs/commnews.html>

**AMERICAN BAR ASSOCIATION  
SECTION OF ENVIRONMENT, ENERGY, AND RESOURCES**

***Calendar of Section Events***



**Sixth Annual Dispute Resolution Conference**

April 15-17, 2004

New York

(Co-sponsored with the ABA Section of Dispute Resolution, for information call 202/662-1690.)

**Eastern Water Resources: Law, Policy and Technology**

May 6-7, 2004

Hollywood, Florida

**Wetlands Law and Regulation**

May 19-21, 2004

Washington, DC

(Cosponsored with ALI-ABA and ELI, for information call 800/253-6397.)

**ABA Annual Meeting**

August 5-11, 2004

Atlanta, Georgia

**12th Section Fall Meeting**

October 6-10, 2004

San Antonio, Texas

**23rd Annual Water Law Conference**

Feb. 24-25, 2005

San Diego, California

**34th Annual Conference on Environmental Law**

March 10-13, 2005

Keystone, Colorado

***For more information, see the Section Web site at  
<http://www.abanet.org/environ> or contact the Section  
at 312/988-5724.***

