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Spring 1994

### Resource Law Notes Newsletter, no. 31, spring issue, Apr. 1994

University of Colorado Boulder. Natural Resources Law Center

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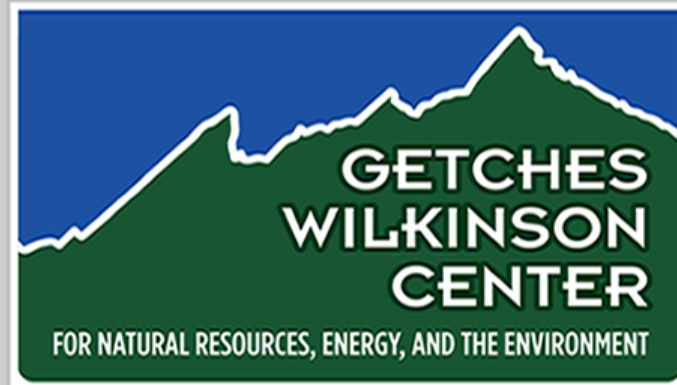
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# RESOURCE LAW NOTES

Natural Resources Law Center • School of Law • University of Colorado at Boulder



Number 31

Spring Issue, April 1994

## Annual June Conference Addresses Takings

“Regulatory Takings and Resources: What Are the Constitutional Limits?” is the topic for the Center’s annual summer conference, to be held June 13-15 at the School of Law in Boulder. The conference is being cosponsored by the law school’s Byron R. White Center for American Constitutional Study.

Governmental regulation for environmental protection and other important public purposes can affect the manner in which land and natural resources are developed and used. The U.S. constitution (and most state constitutions) prohibit the government from “taking” property without payment of compensation. Originally intended to apply to situations where the government physically seized private property for public use, the takings clause of the Fifth Amendment has been applied by courts to situations where the application of government regulation is deemed to have effectively “taken” private property.

In recent years there has been an explosion of litigation asserting that certain regulatory activities by federal, state, and local government constitute such a taking of property. Much of this litigation has arisen in situations involving government regulation for what might be broadly characterized as environmental protection purposes.

This conference examines the federal constitutional law of takings as it has been articulated by the U.S. Supreme Court. It then turns to a detailed consideration of the state of the law as it has developed in relation to environmental control of land



*The U.S. Supreme Court has articulated a federal constitutional law of takings. Copyright, The National Geographic Society, courtesy, The Supreme Court Historical Society.*

and natural resources uses. In particular, speakers will discuss takings cases arising in the context of wetlands use, surface mining, public lands, water, and endangered species.

Speakers include leading constitutional and resource law scholars as well as private practitioners and government attorneys involved in takings litigation. See page 2 for a more complete agenda.

Advance registration costs \$475, with discounts available for government, non-profit groups, and academics. If you do not receive the conference brochure, please call Kathy Taylor at (303) 492-1288. ♦

This publication is a product of the Natural Resources Law Center, a research and public education program at the University of Colorado School of Law. The Center’s primary goal is to promote a sustainable society through improved public understanding of environmental and natural resources issues. While the Center itself maintains a position of neutrality on issues of public policy, it actively supports an uninhibited exchange of ideas as essential to achieve this goal. Interpretations, recommendations, or conclusions in Natural Resources Law Center publications or public education programs should be understood to be solely those of the authors or speakers and should not be attributed to the Center, the University of Colorado, the State of Colorado, or any of the organizations that support Natural Resources Law Center research.



# Regulatory Takings and Resources:

## *What Are the Constitutional Limits?*

*June 13-15, 1994*

**Monday, June 13, 1994**

8:30 a.m.

Welcome and Overview  
Dean Gene R. Nichol, University of Colorado School of Law  
Larry MacDonnell, Natural Resources Law Center

8:40

The Law of Takings: An Introduction  
Professor Carol Rose, Yale College of Law

9:30

Issues in Regulatory Takings  
Professor J. Peter Byrne, Georgetown University Law Center, Washington, DC

10:10

Break

10:30

*City of Tigard* and Takings Law  
Professor Richard Lazarus, Washington University School of Law, St. Louis

11:00

Perspectives on Takings Law: a Panel  
Dean Gene Nichol, Moderator  
Carol Rose  
Peter Byrne  
Richard Lazarus

12:15

Lunch (provided)

1:30

Takings Issues: A Department of Justice Perspective  
Lois Schiffer, Environment & Natural Resources Division, Department of Justice, Washington, DC

2:00

Takings and Retroactivity  
Professor Jan Laitos, University of Denver College of Law

2:45

Break

3:05

Wetlands Regulation and Takings  
Fred Bosselman, Professor of Law, Chicago-Kent Law School  
Respondents:  
Virginia Albrecht, Beveridge & Diamond, Washington, DC  
Jon Kusler, Association of State Wetland Managers, Berne, NY

5:00

End of day

6:00

Cookout on Flagstaff Mountain

**Tuesday, June 14, 1994**

8:30

Mining Regulation and Takings  
Mark Squillace, Professor of Law, University of Wyoming  
Tom Galloway, Galloway and Associates, Washington, DC  
Larry McBride, Freedman, Levy, Kroll & Simonds, Washington, DC

10:05

Break

10:25

Regulation of Public Resources and Takings  
Professor Brian Gray, Associate Dean, U. of California, Hastings College of the Law

Respondents:

Mark Pollot, Keck, Mehin & Cate, San Francisco  
Jerome C. Muys, Will & Muys, Washington, DC

12:00

Lunch (on your own)

1:45

What a Federal Natural Resources Management Agency Can Do to Avoid Takings  
John Leshy, Solicitor, Department of the Interior

2:30

Break

2:50

Endangered Species Act and Takings  
Robert Meltz, Congressional Research Service

Respondents:

Professor Oliver Houck, Tulane School of Law, New Orleans (invited)  
Steven P. Quarles, Crowell & Moring, Washington, DC

5:00

End of Day — Reception

**Wednesday, June 15, 1994**

8:30

Regulation of Water Use and Takings  
David H. Getches, University of Colorado School of Law

Respondents:

Rick Frank, California Attorney General's Office  
Barton H. Thompson, Jr., Professor of Law, Stanford Law School

10:30

Break

10:50

Legislative Approaches to Takings Issues

John Echeverria, National Audubon Society, Washington, DC  
Nancy Marzulla, Defenders of Property Rights, Washington, DC

12:00

Lunch (on your own)

1:15

Management Approaches to Addressing Takings Issues

Jon Kusler, Association of Wetland Managers

I. Michael Heyman, Department of the Interior, Washington, DC

3:00

End of Program ♦

## **Second Annual September Western Lands Conference Scheduled; Symposium Issue Available from 1993 Program**

Following on the enormous success of last fall's conference on "A New Era for the Western Public Lands" the Center has set the dates of September 28-30 for the 1994 western lands program. Tentatively entitled "Balancing National Interests and Local Interests in Public Lands Decision Making," the conference will focus on new initiatives in public lands management such as in grazing and timber

management and the issues that are emerging in the design and implementation. An agenda for the program will be available by August 1st. If you have questions, please call the Center.

The University of Colorado Law Review published a Symposium Issue from A New Era for Western Public Lands, September 1993, cost \$10. To order call (303) 492-6145. ♦

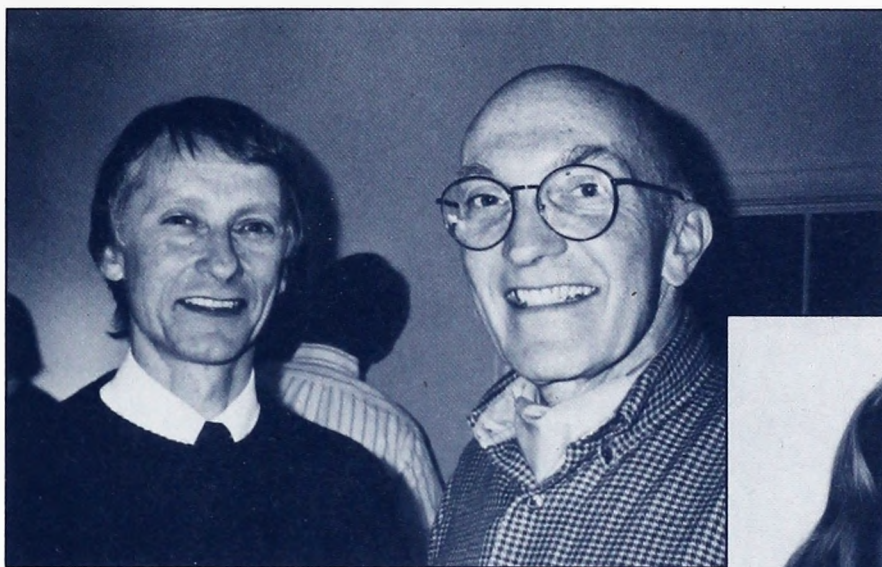


# Spring visitors hail from Virginia and Australia

On February 23, the Center hosted a Dessert Evening to welcome our Spring Visiting Research Fellows, Elizabeth McClanahan and Professor David Farrier, and to introduce them to both Law School faculty and students and also to the wider Boulder-Denver community who may be interested in their work. An invitation to this evening, which is held whenever there are visiting fellows, is one of several perks which the Center enjoys extending to contributors to our Associates Program (see story page).

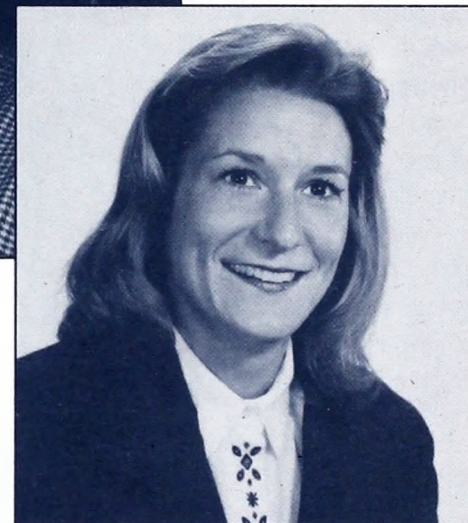
Elizabeth McClanahan, the NRLC's 1993-94 El Paso Natural Gas Law Fellow, specializes in oil, gas, and coal law with the law firm Penn, Stuart, Eskridge & Jones in Abingdon, Virginia. Her research while here concerns issues of coalbed methane ownership, and on April 7, she presented one of the Center's Hot Topics in Natural Resources talks in Denver, on "Coalbed Methane Ownership: Facts, Issues, Opportunities and Solutions." She attended William and Mary for her B.A., and has a J.D. from the University of Dayton School of Law. She serves on the Executive Committee and Board of Trustees for the Eastern Mineral Law Foundation, the Virginia Oil and Gas Association's Legal and Government Affairs Committee, and is admitted to the bar in Virginia, Tennessee, Kentucky, Maryland, West Virginia, and Washington, DC.

Professor David Farrier (LL.B. London School of Economics; Diploma in Criminology, Cambridge University; LL.M. Columbia University) comes to us on sabbatical from the University of Wollongong Faculty of Law in Australia. A native of northern England, Professor Farrier has taught in Australia since 1979, serving occasionally as a Visiting Lecturer in Great Britain and in Nigeria. He has written widely in the fields of natural resources and criminal law, including a criminal law casebook used extensively in Australia, and a treatise on New South Wales Environmental Law. His current research interest is in the design of appropriate policy instruments to promote conservation of biodiversity on privately owned land. To this end he is looking at the implementation of endangered species and wetlands regulation, the issue of compensation for indirect takings of property, conservation easements, and conservation strategies being pursued under the Farm Bill. He is finding evidence of regulatory



*Professor David Farrier, University of Wollongong, Australia (left) visits with Professor Chuck Howe of CU Environment and Behavior program*

failure when it comes to biodiversity conservation. He is currently exploring the viability of a strategy which would combine a regulatory approach with management payments, designed to ensure that the land will be managed on a continuing basis, as distinct from compensation. ♦



*Elizabeth McClanahan*

## Center Seeks Applicants for Spring 1995 El Paso Natural Gas Fellowship

Through the generous support of the El Paso Natural Gas Foundation, the Center is again pleased to invite applications for the El Paso Natural Gas Law Fellowship for spring 1995. This fellowship offers a visiting researcher a stipend of \$20,000, student research assistance, office space and secretarial support for the spring semester.

The El Paso Natural Gas Law Fellow will spend a semester in residence at the School of Law, researching a topic concerned with energy or oil and gas law. Emphasis is on legal research, but applicants from law-related disciplines, such as economics, engineering, or the social sciences, will also be considered. While in residence, the Fellow will participate in activities of the Law School and the Center, and will have an opportunity to exchange ideas with faculty and students in both formal and informal sessions. The Fellow is expected to produce written work suitable for publication in a professional journal.

There is no application form. Those wishing to apply should address a letter detailing their research and publication plans and include a resume and three

reference letters to Professor David H. Getches, University of Colorado, Campus Box 401, Boulder, CO 80309-0401. For additional information on applying for the El Paso Natural Gas Law Fellowship, contact the Center, (303) 492-1288. ♦

### Associates Breakfast on Tuesday, June 16, During June Conference.

The Center extends to those who have contributed to our Associates Program in the past year an invitation to join NRLC staff and June conference speakers for a special breakfast before the conference on the morning of Tuesday, June 14. Please call Kathy Taylor at the Center for additional details.



# Joint NRLC-Boulder Bar Program Feb. 25:

## *David v. Goliath: Local Authority in Land Use, Resource Development and Environmental Protection*

Who's David and who's Goliath? asked Eleanor Towns, Acting Director of Lands, Minerals, Soils & Water with the U.S. Forest Service Region 2, lead-off speaker at the Center's annual joint symposium with the Boulder County Bar Association. In any given environmental or resource situation, Towns argued, the role of the "heavy" could fall to any layer of government, so intergovernmental cooperation is important in these matters.

The program included panels on the roles of governmental entities in the regulation of oil and gas development and in land transfers, and a case study on Local Regulation of Activities of Statewide Interest Under Colorado Land Use Legislation (H.B. 1041).

William Yellowtail, new Administrator of U.S. EPA Region VIII in Denver, introduced himself at a lunch talk to about 80 registrants and speakers. ♦



*Janet Kabili (left) and Lynn Guissing (right), co-chairs of the BCBA's Natural Resources & Environment Section, celebrate the success of the "David v. Goliath" symposium, with Boulder attorney David Eisenstein (second from left) and Barney White, attorney with Brownstein, Hyatt, Farber & Strickland, Denver.*

## Center Welcomes New Associate Director Judith Jacobsen

Judith Jacobsen, who brings a rich background of experience, became the Center's Associate Director on March 15, 1994. Jacobsen holds both a law degree from Marshall-Wythe School of Law of the College of William and Mary (1978), and a Ph.D. in Geography from the University of Colorado (1989).

Jacobsen replaces Sarah Bates, who served as the Center's Associate Director from June 1991-December 1993. In January Bates began work with the Grand Canyon Trust, heading up a new office of the Trust in St. George, Utah. Her contributions to the Center during her two and a half year stay were extremely valuable, including numerous publications (see Publications List page 10, for her prolific output). We wish her the best in her new endeavor.

Jacobsen currently teaches in the Environmental Policy and Management Program at the University of Denver, and was for four years an Assistant Professor at the University of Wyoming, teaching Political Geography, Natural Hazards and Society, Management of Major River Basins, and Indian Water Rights in the American West (1989-93). In 1992-93 with a grant from the Environmental Protection Agency, she developed and taught an interactive video course segment "Introduction to Environmental Management," to Native American students on the Devil's Lake Sioux Indian Reservation in North Dakota.



*Judith Jacobsen*

Other professional experience included serving as a consultant to the U.S. Agency for International Development with the American Embassy in Lagos, Nigeria, in the summers of 1984 and 1985, and as a Senior Researcher with the Worldwatch Institute in Washington, D.C. in 1982-83.

She has published and spoken widely on such subjects as "Population Growth and Environmental Degradation: What are the Connections?" and "The Navajo Indian Irrigation Project and Quantification of Navajo Winters Rights."

The Center is delighted to welcome Judy Jacobsen. ♦



*Mary Larson, Commissioner, Colorado Oil & Gas Conservation Commission, and Larry Hoyt, Boulder County Attorney, on panel on "The Interplay of State and Local Regulation of Oil and Gas Development."*



*New EPA Regional Director William Yellowtails talks with Eleanor Towns, U.S. Forest Service, at "David v. Goliath" Symposium.*



# Hot Topics Lunch Series Concludes Fourth Year

Christine Alvarez, a member of the Colorado Public Utilities Commission, moderated a discussion of the evolving role of the PUC in implementing integrated resource planning at the Hot Topics in Natural Resources CLE lunch on Tuesday, March 8. Speakers included Bruce Driver, Land & Water Fund of the Rockies; Paula Connelly, Gorsuch, Kirgis, Campbell, Walker & Grover; and Bill Martin, Public Service Company of Colorado.

Other programs in the spring 1994 Hot Topics series featured Jonathan Turley, George Washington University Law Professor, director of the Environmental Crimes Project, and attorney for the Rocky Flats Grand Jury, speaking on "Criminal Sanctions for Environmental Violations," and Elizabeth McClanahan, the Center's 1994 El Paso Natural Gas Law Fellow, addressing "Coalbed Methane Ownership: Facts, Issues, Opportunities and Solutions."

The Center is most pleased with the success of the Hot Topics in Natural Resources lunch series, now in its fourth year. Offered in downtown Denver as a service to natural resources and environmental professionals, the series has allowed us to offer programs on a wide range of subject matter from the Brazilian Earth Summit to changes in permitting by the Colorado Air Quality Control Commission.

Some of you may remember that we began in the Old No. One Firehouse on Tremont, which gave rise to the name "Hot Topics." When our numbers outgrew the Firehouse after the first year, we moved for two years to the John D. Hershner Room in the Norwest Bank Center. This year, thanks to the hospitality of the Denver law firm Holland & Hart, we have had use of their very comfortable and excellently equipped conference room.

Even after we left the Firehouse, the Hot Topics name seemed appropriate, because the goal was to treat topics of truly current concern. Some of the more sizzling presentations were those on "Oil



*Christine Alvarez (left), Public Utilities Commission, with Paula Connelly, Gorsuch, Kirgis, Campbell, Walker & Grover*



*Bruce Driver, Land & Water Fund of the Rockies*

& Gas Development: Conflicts Over Surface and Mineral Rights," "Sharing the Colorado River: Proposals for Changing the Way We Do Business," and "Political Oversight of Public Land Management: What Are the Boundaries?"

The Center wishes to extend our sincere thanks to Holland & Hart, who have graciously offered to host again in 1994-95. Brochures for fall 1994 will be sent in early September to those on our mailing list in the Denver metropolitan area. Others wishing to receive more information should call Kathy Taylor, (303) 492-1288. ♦



*Bill Martin, Public Service Company of Colorado*

## Center Co-Hosts An Evening with Karl Hess

Karl Hess, author of the new book *Rocky Times in Rocky Mountain National Park: An Unnatural History*, presented a lecture and slide show at the Law School on February 2 describing what he believes is an ecological crisis in Rocky Mountain National Park. An environmental writer and policy analyst and a former park ecological consultant, Hess is concerned about imbalances created in the park by the lack of natural predators and the overpopulation of elk, which is causing extensive damage to vegetation. The talk was jointly sponsored by the NRLC, CU's Center of the American West, and University Press of Colorado, who published Hess's book and from whom it is available. ♦



# Towards Integrated Environmental Management: A Reconnaissance of State Statutes

by Stephen M. Born\*

Integrated environmental management, or IEM, is an idea whose time has clearly come. Also called ecosystem management, the concept now is widely extolled and holds great currency in academic, professional and political quarters.

The approach is being adopted and tried at every scale of environmental resources management. It is the foundation for international and global environmental management initiatives aimed at more sustainable management, such as the 1992 United Nations Conference on Environment and Development Agenda 21. Numerous nations and their political subdivisions have formally provided for integrated approaches to resource management, including a number of Western European countries, New Zealand, Australia, and Canada.

In the United States, the U.S. Environmental Protection Agency has undertaken several initiatives related to IEM in recent years, and major U.S. resource bureaucracies including the Forest Service and Bureau of Land Management have recently launched "ecosystem management" approaches to carrying out their mandates.

Individual states such as Washington, Wisconsin and Florida have adopted coordinated and ecosystemic resources management institutions — in the form of new organizational arrangements and legislation. The head of one progressive state natural resources superagency, for example, has championed integrated management "because a multi-disciplinary, integrated approach to environmental stewardship may represent the most important scientifically and philosophically based management principle yet developed. Indeed, it may be the master key to our continued effectiveness..." (Besadny 1991).

In some of the most complex, threatened and vulnerable ecosystems in the United States — the Everglades, the Great Lakes, Chesapeake Bay, the Flathead Basin, the Greater Yellowstone region, among others — IEM is being adopted as the operative management strategy.

While the need for an integrated approach to environmental management has been increasingly emphasized in recent years, the approach is certainly not



Stephen M. Born

new. There are precursors and roots in many fields, including:

- comprehensive river basin management and development
- multiple use-sustained yield forest and land resources management
- comprehensive or regional planning and management
- cross-media pollution abatement;
- integrated area development
- organizational and management science
- and ecosystem management.

Although there is not yet a consensus definition of IEM — indeed, there is substantial terminological confusion and ambiguity — the following capture much of the idea:

- coordinated control, direction, or influence of all human activities in a defined environmental system to achieve

\*Professor, Department of Urban and Regional Planning/Environmental Studies, University of Wisconsin-Madison, and Visiting Research Fellow at the University of Colorado School of Law, spring 1993.

and balance the broadest possible range of short- and long-term objectives (Cairns 1991)

- a process of formulating and implementing a course of action involving natural and human resources in an ecosystem, taking into account the social, political, economic, and institutional factors operating within the ecosystem in order to achieve specific societal objectives (modified after Dixon and Easter 1986)
- a more comprehensive or inclusive approach that takes into account the scope and scale of environmental and human issues and their interconnections. A strategic and interactive process is used to identify the key elements or goals at which to direct attention. These critical elements or goals then become the focus of an inter-organizational or coordinated approach to reforming environmental decision-making (Born and Margerum 1993).

IEM is a response to much of traditional natural resources management, which has been largely reactive, narrow in purpose and disjointed. For example, much of water resources management has been limited-purpose, focused on only a portion of a watershed, with management projects implemented incrementally. Programs have typically addressed individual concerns such as fisheries, water allocation, and point source pollution abatement. The relationship of these activities to the larger set of water, land resource and ecologic issues, and related socioeconomic concerns has received inadequate consideration. The demand for a new paradigm has been driven by ineffectual or unsatisfactory, often undesired, management outcomes. With more intensive and conflicting demands on resources and the environment, a more holistic approach to management has become essential. Bartlett (1990) splendidly summarizes the classic dilemma associated with the theoretical ideal of comprehensive, integrated and ecologically responsible environmental management — "what must be done cannot be done."

There are many reasons that it has been difficult to accomplish IEM in practice, in spite of widespread support and enthusiasm for the concept. One of the obstacles has



been the compartmentalized and programmatic structure of organizations, which stems largely from the incremental nature of the political process and the resultant narrowly-focused legislation that then governs agency activities.

The purpose of this article is to report the results of an exploratory reconnaissance of state natural resource, environmental and related statutes in which we searched for statutory bases and encouragement for IEM. Prior to reporting our findings, it seems appropriate to briefly summarize my conception of the key dimensions of IEM, a conceptual framework which has built upon the work of many others, but especially that of Bruce Mitchell (1983; 1986; 1987) and Reg Lang (1986).

## *What Is IEM?*

### *The Conceptual Framework*

The principal dimensions defining IEM are characterized as (a) comprehensive, (b) interconnective, (c) strategic, and (d) interactive/coordinative. Comprehensive is used here in the dictionary sense of "including much or all; of broad scope or extent; inclusive of many things." In the context of IEM, the term implies a greater degree of inclusivity. To be meaningful, we must specify what are the particular elements of our concern for being more inclusive, that is, for expanding and defining the scope and scale of our environmental management activities.

Factors to be considered in the effort to move towards comprehensiveness include:

- natural resource elements or ecosystem components
- substantive resource management functions or resource use sectors
- "stakeholders" or entities with authority to take action

IEM must embrace all the critical biophysical, chemical and human parts of an ecological system; all the significant present and potential uses and objectives for the system; and all the entities — public and private — that affect or can be affected by management. Thus, in considering the array of ecosystem components that affect the quality, stability and diversity of aquatic ecosystems, some would consider the scope insufficiently broad, i.e., not comprehensive enough, if it failed to include factors related to stream channel morphology and energetics. Others would find the scope of an IEM endeavor inadequate if it failed to give proper regard to socio-economic aspects. Multi-objective planning and

management, in the IEM context, means having all the relevant factors in view.

The dimension of comprehensiveness described here does not necessarily address interrelationships among ecosystem components, resource uses and sectors, and the community of involved interests. *Rather, comprehensive relates to the degree of inclusivity.* The interactions and linkages among the included parts are addressed with regard to the interconnective aspects of IEM.

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management.*

---

As employed here, the interconnective dimension of IEM specifically addresses interrelationships — among physical, chemical and biological processes and components; among multiple, cross-cutting and often conflicting resource uses; among the many entities that collectively comprise the community of interest. Analytical tools including systems analysis, geographic information systems and data bases directly address consideration of interrelationships. In practice, interaction among, and coordination of, diverse interests and entities (discussed subsequently) constitutes a means for recognizing and addressing interconnections, thereby moving towards an integrative approach.

A strategic dimension is the third ingredient of the IEM conceptualization. The complexity and difficulty of trying to sustain a pure comprehensive and interconnective approach to IEM — especially at the operational level — indicates the need to pragmatically scale down the effort. The number of variables and interrelationships subjected to further analysis and action must be reduced. IEM planners, managers and affected interests must find ways to identify and focus on key aspects of the IEM problem — to target selectively the critical issues and tasks essential to success.

Fortunately, there are many models that demonstrate how the essential broader perspective can be reconciled with the requisite narrower focus for environmental action and decision-making. As noted wryly by Mitchell (1987), "...it should be possible to obtain the benefits of a comprehensive outlook without becoming so entangled with a complex web of interrelationships that the management exercise literally disappears into a 'black hole', never to re-emerge." The strategic dimension of IEM aims to make integrated environmental planning and management flexible, anticipatory, action-oriented, and responsive to the political decision arena.

An interactive/coordinative component is the final dimension of the conceptual model of IEM and suggests how IEM must be undertaken rather than what our conception of IEM entails. Lang (1986) contends that an IEM approach must be interactive because information is dispersed, substantial interdependence among agencies and the various stakeholders exists (i.e., a shared decision environment), and the interests and values of participants always conflict to some degree.

The degree of comprehensiveness defines the arena for interaction and coordination. Interaction among affected entities helps define the interrelationships of concern for IEM and is a realistic proxy for the ideal of integration. Indeed, one observer conceives IEM as primarily a "social concept that favors joint decision making among groups that have decision-making power and groups that are impacted by decisions..." (Walther 1987). He further notes that IEM is approached in practice by improving communication and applying the concept of cooperative decision-making. Thus, the interactive/coordinative aspect of IEM represents an ongoing search for and exchange of information and a quest for consensus on acceptable solutions among a broad array of interests.



These four dimensions of IEM suggest the framework for an integrated approach to environmental management. The interested reader is referred to the bibliography for further elaboration of the concept.

However, I do want to briefly address one fundamental aspect of IEM — its purpose. In spite of the current fervor about IEM, it should not be presented as an end in itself. *IEM is a planning and management approach to better achieve one or more ends*, including: sustainability or ecologically sustainable management; proactive and anticipatory (vs. reactive) environmental decision-making and management; a more effective and equitable balancing of the interests of environmental resource users and other affected parties; social and economic change.

## *The State Statutory Base for IEM*

Several broad categories of state statutes were surveyed in the search for statutory language that would enable or encourage IEM. We reviewed a variety of general state planning statutes, including enactments dealing with land-use planning, growth management and coastal zone management. We also examined planning statutes or statutes authorizing management programs in numerous functional resource management areas, e.g., forest resources, soil conservation, wild and scenic river protection, and water use. Special or critical area management legislation was also reviewed, including both generic types (e.g., wetlands) and laws tailored for specific geographic regions (e.g., the Flathead River Basin).

State agency reorganization legislation, especially for establishing environmental superagencies, and state environmental quality acts (little NEPAs) were also surveyed, largely in search of broad intent language that might be used to license IEM. This preambulatory or intent language is often the most explicit legislative recognition of the scope and scale of environmental problems, and of the need for inter-organizational coordination and public and interest group interaction. It also tends to contain laudable language about the need for anticipatory and preventive management, often couched with awareness of the concepts of sustainable management and development.

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\*The author is indebted to Steve Kelly, University of Colorado School of Law (1993) for his research efforts in searching for pertinent state statutes.



*The scope and complexity of American ecosystems make Integrated Environmental Management (IEM) a significant challenge. Photo courtesy of the Coconino National Forest, U.S. Forest Service.*

Based on our survey, there is a substantial statutory foundation in a mosaic of statutes that legitimates, in varying degrees, an IEM approach to addressing environmental and natural resource issues and problems. Of course, agencies wishing to pursue this approach may need broad legal interpretations of their governing statutes in order to “license” an IEM undertaking.

*IEM is approached in practice by improving communication and applying the concept of cooperative decision-making.*

General state policy, growth management and planning, and state environmental policy statements typically reflect a broad inclusive scope of concern; recognition of interrelationships among resource components and uses; specific identification of the need for (and provisions for) coordination;

and/or a longer-range “futures” orientation.

Legislation pertaining to narrower resource sectors and uses may contain language identifying the broader context, relationships with other functions or resources, the need for coordination, and provisions for integrated or coordinated plans. Good examples exist in public lands, water, forest, and related conservation statutes and pervade statutes for functional resource management programs.

Language pertinent to IEM is also found in statutes delineating the limits and powers of a particular state agency. This is particularly true of the preamble and introductory sections of organic statutes establishing environmental “superagencies” with consolidated resources protection and management responsibilities.

Broad, organic acts dealing with comprehensive environmental impact assessment and related concerns (“little NEPAs”) may also contain highly relevant IEM language. California’s Environmental Quality Act (CAL. PUB. RES. CODE § 21000 (West 1979)) is a fine example. Some excellent statutory language also appears in legislation for the management of valued specific geographic areas and generic critical areas such as coastal zones. While a particular resource sector or use is often emphasized (e.g., forest management or water use), these statutes tend to include provisions for a management effort that is broad in scope and for coordination of affected entities.



Some statutes specifically provide for one of the requisites of sound IEM — an integrated management plan. Others focus on “integrated management,” but within the narrowest of contexts. This is well illustrated by Colorado’s Undesirable Plant Management Act.

“Integrated management” means the planning and implementation of a coordinated program utilizing a variety of methods for management of undesirable plants, which methods may include but are not limited to education, preventive measures, good stewardship, and control methods  
COLO. REV. STAT. § 35-5.5-103 (1990)).

Some statutes provide explicit instruction and guidance regarding how the critical coordination function should be carried out. Good illustrations include specific provisions for a coordinator in Montana’s Rangeland Resources Act (MONT. CODE ANN. § 76-14-105 (1977)) and detailed structured processes for coordinating water quantity with water quality management in Idaho (IDAHO CODE § 42-1805 (1986)).

## Conclusions

IEM is emerging as the model for planning for our environment and solving natural resources problems in an ecologically responsible way. Because this approach is charting new ground, learning how to implement IEM is a major challenge. We are in a comparatively youthful stage, a period of substantial testing, and the practice of IEM will evolve as we learn by doing.

Because IEM can be construed as a threat to entrenched narrow interests, i.e., to the traditional ways of “doing business” and to parochial professional and disciplinary perspectives, IEM will be vulnerable to attack. This is especially true given the need for experimentation and learning associated with making IEM practicable. Accordingly, a secure and defensible statutory base is essential to foster our “doing what we must do.” Based on this preliminary review, the statutory groundwork exists (or can be interpreted to exist!) if the political and administrative will exists. New laws dealing with the planning and management of complex ecosystems, and the resolution of tough multi-component environmental resource problems, must build on this base by providing clearer and stronger legitimating language and guidance for integrated environmental management.

*Because this approach is charting new ground, learning how to implement IEM is a major challenge.*

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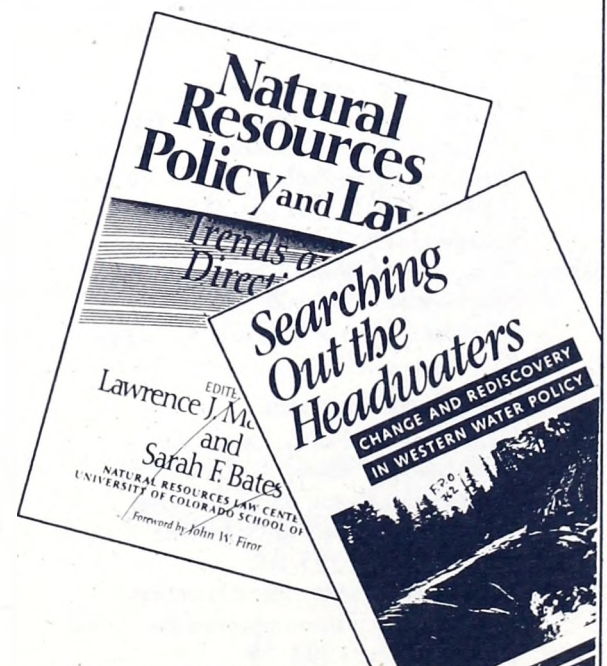
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## Center Books from Island Press

Two Center books have been published by and are available from Island Press, Dept. RLN (1-800-828-1302). Please do not order from the Center.

*Searching Out the Headwaters: Change and Rediscovery in Western Water Policy*, Sarah F. Bates, David H. Getches, Lawrence J. MacDonnell, and Charles F. Wilkinson, 1993

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### Books

- BK06 *Controlling Water Use: The Unfinished Business of Water Quality Protection*, David H. Getches, Lawrence J. MacDonnell, Teresa A. Rice, 1991, \$22.
- BK04 *Proceedings of the Sino-American Conference on Environmental Law, Beijing, 1987*, 1989, \$12.
- BK03 *Water and the American West: Essays in Honor of Raphael J. Moses*, David H. Getches, ed. 1988, \$15.
- BK02 *Tradition, Innovation & Conflict: Perspectives on Colorado Water Law*, MacDonnell, ed. 1987, \$12.

### Research Reports

- RR11 "Agricultural to Urban Water Transfers in Colorado: An Assessment of the Issues and Options," Teresa Rice and Lawrence MacDonnell. 82 pgs. 1993. \$10.
- RR10 "Instream Flow Protection in the West," revised edition, Lawrence J. MacDonnell & Teresa Rice, editors. 1993. \$22.
- RR09 "Recreation Use Limits and Allocation on the Lower Deschutes," Sarah Bates, 76 pgs. 1991. \$8.
- RR08 "Facilitating Voluntary Transfers of Bureau of Reclamation-Supplied Water," Lawrence J. MacDonnell and others, Vol. I, 132 pgs. (\$10) & Vol. II, 346 pgs. (\$15), or both volumes for \$22, 1991.
- RR07 "Wetlands Protection and Water Rights," MacDonnell, Nelson & Bloomquist, a Report to EPA Region VIII, 1990, 50 pgs. \$8.
- RR06 "The Water Transfer Process as a Management Option for Meeting Changing Water Demands," Lawrence J. MacDonnell and others, Vol. I, 70 pgs. (\$10) & Vol. II, 391 pgs. (\$15), or both volumes for \$22, 1990.
- RR6A "Transfers of Water Use in Colorado," MacDonnell, Howe & Rice, 1990 (chapter 3 from Vol. II above) 52 pgs. \$5.

### Western Lands Reports

- WL01 "The Western Public Lands: An Introduction," Bates, 1992. \$8.
- WL02 "Discussion Paper: The Changing Economics of the Public Lands," MacDonnell, 1993. \$8.
- WL03 "Discussion Paper: The Changing Management Philosophies of the Public Lands," Bates, 1993. \$8.

- WL04 "Discussion Paper: Managing for Ecosystems on the Public Lands," Bates, 1993. \$8.
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These materials are certified for Home Study CLE credit by the Colorado Board of Continuing Legal and Judicial Education.

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- CF14 *Water Organizations in a Changing West*, 3-day conf. notebook, June, 1993, \$75; audiotapes \$150
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Resource Law Notes is a free newsletter of the Center, published three times a year — fall, winter, and spring.

## Inside

**Towards Integrated Environmental Management: A Reconnaissance of State Statutes**, by Stephen N. Born, page 6.

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