Resource Law Notes Newsletter, no. 32, fall issue, Aug. 1994

University of Colorado Boulder Natural Resources Law Center
RESOURCE LAW NOTES, no. 32, fall issue, Aug. 1994
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Who Governs the Public Lands: Washington? the West? the Community?

Second Annual Western Lands conference scheduled for September 28-30

Shifting policy objectives and management approaches for the public lands of the West are provoking heated debate about how these decisions should be made and implemented. Are these policy directions a reflection of the "New West" or are they, in fact, a declaration of "war on the West"? Somewhere between these polarities of view, efforts are underway to open dialogue and reach consensus.

This second annual western lands conference will explore federal initiatives including the Colorado Grazing Roundtable and Rangeland '94, Option 9 and the Pacific Northwest forests, bypass flows and Colorado national forests, and wilderness protection in Utah.

Speakers from federal agencies, from states, from groups concerned with the use and protection of the public lands, and from academia will discuss these initiatives and issues that they raise regarding control of the western public lands.

Registration will cost $295 until September 20; $325 late registration thereafter. The fee for any level of government (federal, state, local, tribal) is $225 ($255 late). Academics and representatives of not-for-profit groups may come for $150 ($175 late).

NOTE: Because registration will be limited to 200 people, prepayment or valid organizational Purchase Orders will be required.

Hot Topics Lunch Series Resumes

Implications for developers and for local governments of the U.S. Supreme Court decision in Dolan v. City of Tigard will lead off "Hot Topics in Natural Resources," the Center's popular Continuing Legal Education lunch series in downtown Denver.

On Monday, September 19, CU Law Dean Gene R. Nichol will give an overview of the Dolan decision, with further analysis offered by Tom Strickland, attorney with Brownstein, Hyatt, Farber and Strickland, and by Michael Shultz, Loveland City Attorney.

Hot Topics will again be held in the 32nd floor conference room of the Denver law firm Holland & Hart, our gracious hosts. A registration flyer for the Hot Topic series will be mailed to the Denver-Boulder metro area. If you are outside that area and wish information about Hot Topics, please call Kathy Taylor, (303) 492-1288.

The Hot Topic Friday, October 21, will be on "PUD No. 1 of Jefferson County and City of Tacoma v. Washington Department of Ecology: The U.S.

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Who Governs the Public Lands: Washington? the West? the Community?

Agenda:

Wednesday, Sept. 28, 1994

Decision making and the public lands
Robert Davis, Institute for Behavioral Sciences, University of Colorado

Interest group participation in public land planning and decision making processes
Professor Sally Fairfax, College of Natural Resources, University of California, Berkeley

Constitutional and Congressional requirements directing public lands decision making
Professor Joseph M. Feller, Arizona State University, Tempe

Local and national interests in using public rangeland: The Colorado Grazing Roundtable and Rangeland '94
Moderator and overview: Frank Gregg, Professor Emeritus, Water Resources Research, University of Arizona, Tucson

The Colorado Process: a view from inside
Maggie Fox, Sierra Club Southwest Regional Representative, Boulder
Ken Spann, Y Bar Ranch, Almont, Colorado (invited)

Rangeland '94
Reactions and critique
Cathy Carlson, National Wildlife Federation, Washington, DC
Bill Meyers, National Cattlemen's Association, Washington, DC

Thursday, Sept. 29, 1994

Local and national interests in using public forests
Moderator and overview: Charles Wilkinson, Professor of Law, University of Colorado, Boulder
View from the Forest Service
Lessons from the Pacific Northwest I
Norm Johnson, School of Forestry, Oregon State University

Lessons from the Pacific Northwest II
Margaret Shannon, University of Washington

Local and national interests in using water on public lands
Moderator and overview: David Getches, Professor of Law, University of Colorado

Bypass flows in Colorado national forests
Panel
Doug Robotham, Assistant Director, Water Policy, Colorado Department of Natural Resources
Skip Underwood, Forest Supervisor, Arapahoe and Roosevelt National Forests
David Harrison, Attorney, Moses, Wittmer, Harrison & Woodruff, Boulder
Dan Luecke, Regional Director, Environmental Defense Fund, Boulder

Local and national interests in establishing wilderness areas: the Utah experience
Moderator: Larry MacDonnell, Director, Natural Resources Law Center
Overview:
Jeffrey Appels, Attorney, Salt Lake City
Panel
Michael Matz, Executive Director, Southern Utah Wilderness Alliance
Bill Hedden, Vice-Chair, Grand County Council, Utah

Friday, Sept. 30, 1994

Searching for integration: some models
Moderator: Teresa Rice, Senior Staff Attorney, Natural Resources Law Center

Integrating public land and local community planning objectives: the Rocky Mountain National Park experience

Homer Rouse, Superintendent, Rocky Mountain National Park

The Canyon Country Partnership
Bill Hedden, Chairman, The Canyon Country Partnership, Utah

Community-Public Lands Partnership: The Montezuma County Federal Lands Program
Michael Preston, Federal Lands Coordinator, Montezuma County, Colorado

Putting it together: implications and directions
Moderator: Judy Jacobsen, Associate Director, Natural Resources Law Center
Ed Marston, Publisher, High Country News
Panel
Maggie Fox, Sierra Club Southwest Regional Representative, Boulder
Phil Burgess, Director, Center for the New West, Denver
John Lawrence, Staff Director, House Committee on Interior and Insular Affairs (invited)
Stewart Udall, former Secretary of the Interior

Regulatory Takings and Resources Conference
Draws Overflow Crowd
The Center's annual June conference attracted about 250 registrants and speakers from 31 states, the District of Columbia, and two other countries to consider "Regulatory Takings and Resources: What Are the Constitutional Limits?" Cosponsored by the law school's Byron H. White Center for American Constitutional Study, the conference was very well received. The 488 page notebook of speakers' outlines and materials, and audio-tapes from the 3-day conference are available (see Publications list page 10).
Jo Evans of the Audubon Society (left) with Ruth Wright of the Colorado House of Representatives.

Professor Carol M. Rose, Yale Law School, enjoys the barbeque after delivering the keynote address Monday.

Clyde Martz, attorney with Davis, Graham & Stubbs, Denver, and former Solicitor with the U.S. Dept. of Interior, expounds on a point with speaker Larry McBride of Freedman, Levy, Kroll & Simonds (left).

Speakers Mark Squillace, University of Wyoming College of Law, and Brian Gray, Hastings College of the Law, relax at Flagstaff Mountain cookout.

I. Michael Heyman, Dept. of the Interior, Washington, DC, addresses Management Approaches to Takings Issues.

Water bank experiences in Idaho and Texas Water Bank, and the Fort Lyon examination of key features of water establishing such banks.

Examining water reallocation in the West, perspective. A recommended framework and allocation from an economic perspective. A recommended framework is proposed and then applied against three banks in the proposal or early implementation stage: the Lower Colorado River Interstate Bank, the Texas Water Bank, and the Fort Lyon Canal Bank in Colorado.

Principal investigator for the project, one of the last supported through the United States Geological Survey under the now defunded Water Resources Research Act, was Larry MacDonnell. Other primary authors include Professor Charles Howe, University of Colorado Department of Economics; Kathleen Miller, National Center for Atmospheric Research; Center attorney Teresa Rice, and Sarah Bates, now with the Grand Canyon Trust.

Water Banking in the West is available from the Center for $15.

Another Center of Interest

The Centre for Petroleum and Mineral Law and Policy established in 1977 at the University of Dundee, Scotland is now offering an interdisciplinary and internationally oriented graduate studies program focusing on natural resources, energy and environment. The Centre’s degree programs combining law, policy, economics and finance, include diploma, LL.M, MSc (Energy Studies), MBA (Oil and Gas Management/Mineral Resources Management) and Ph.D.

The degree programs are structured in a very flexible way so as to allow working professionals to participate.

Current research at the Centre focuses on environmental regulation of natural resources/energy; mineral taxation; EC energy law; international investment and finance and legislative and institutional reform in the ex-socialist countries.

The Centre’s Executive Director is Thomas Walde, Professor of Petroleum, Mineral and International Investment Law, formerly the principal UN adviser on natural resources/energy/investment legislation. For more information, please contact the Centre on Tel. no. +44 382 344300 or FAX +44 382 322578.

Summer '94 NRLC Research Assistants

The Center’s active research program depends heavily on the work of law school student research assistants. This summer the Center was fortunate to have five highly qualified student assistants.

Paul Cort came to CU Law School from a position as an environmental consultant in San Francisco. He holds both a bachelors and masters degree in civil engineering.

Before entering law school, Kelly Custer worked in Florida and Wisconsin as an environmental specialist for state environmental regulatory agencies. With degrees in biology and marine ecology, she worked on wetland regulation and mitigation, water quality, and endangered species.

Michael Fife’s interest in natural resources, and particularly water issues, grew from his earlier years in Southern California. With a masters degree in philosophy, he is now interested in environmental issues.

Eric Fisher hales from the New York City banking industry, where he put his economics degree to work. He is hopeful that a career in natural resource law will more closely match his personal interests.

Mary Beth Searles also has an economics degree, but her work experience has been more as a journalist. As a technical assistant for an energy consulting firm, she wrote and edited reports on current energy issues. As Speakers Chair for the student Environmental Law Society, she will no doubt continue to use her journalism skills.

Student research focused primarily on experience to date in watershed initiatives throughout the western states and an analysis of efforts to repair environmental problems caused, in part, by Bureau of Reclamation projects in selected western river basins.

Center Completes Report on Water Banks

In another of its research projects examining water reallocation in the West, the Center has produced a detailed analysis of water banking experience including a recommended framework for establishing such banks. Water Banking in the West provides thorough evaluations of water bank experiences in Idaho and California, the new bank in Texas, and the recharging of aquifers as a means of banking water. It contains an extensive examination of key features of water banks and evaluates matters such as price and allocation from an economic perspective. A recommended framework is proposed and then applied against three banks in the proposal or early implementation stage: the Lower Colorado River Interstate Bank, the Texas Water Bank, and the Fort Lyon Canal Bank in Colorado.

Principal investigator for the project, one of the last supported through the United States Geological Survey under the now defunded Water Resources Research Act, was Larry MacDonnell. Other primary authors include Professor Charles Howe, University of Colorado Department of Economics; Kathleen Miller, National Center for Atmospheric Research; Center attorney Teresa Rice, and Sarah Bates, now with the Grand Canyon Trust.

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Associates Breakfast September 29

Associates who have contributed to the Center in the past year are invited to join NRLC staff and conference speakers for a special breakfast Thursday, September 29. If you wish to donate and be included for the breakfast, please use the form on page 11 or call Kathy Taylor at the Center for additional details.

As always the Center gratefully acknowledges all those who have contributed to our support.

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Conserving Biodiversity on Private Land

David Farrier

The issue of how we go about persuading private landowners to conserve biodiversity is becoming increasingly pressing. The United Nations Convention on Biological Diversity, which entered into force on December 29, 1993, requires parties to "regulate or manage" species, genetic and ecosystem diversity not only within protected areas but outside them as well. The United States is a signatory and Australia has ratified. At the same time the message from conservation biologists is that existing areas of publicly owned land are not adequate when it comes to the conservation of representative ecosystems. Land in both the U.S. and Australia has been reserved or acquired on an ad hoc basis, with political factors playing a significant role, and objectives other than nature conservation (e.g. recreation) frequently determining the precise areas set aside. The fact that unrepresented ecosystems are often located in fragments on privately owned land means that management by a centralized agency will be difficult even if we had the stomach for compulsory purchase.

Where ecosystems have been set aside on public land, there is increasing concern that nature conservation is being compromised by other management objectives, such as recreation and timber production. This is hardly surprising, given the fact that for most public land designations, nature conservation must compete with other objectives.

Where land is ostensibly being managed for purposes of nature conservation, management may still be influenced by competing considerations, as where a "hands off" management regime allows certain species popular with tourists or hunters to thrive in the absence of predators, producing fundamental distortions in ecosystems.

Even if existing areas of publicly owned land along with those to be acquired in the near future, did come to represent the diversity of ecosystems, they would need also to be large enough to retain minimum viable populations of plants and animals. Where ecosystems are represented on public land, the areas protected may not be large enough to maintain in the longer term adequate populations of wide-ranging large carnivores and herbivores.

At a minimum, biodiversity conservation calls for corridors over privately owned land linking areas of protected land together, to allow species to migrate between them. Unless substantial buffers are provided, large protected ecosystems in public ownership will always be vulnerable to edge effects stemming from increased exposure to sunlight and other spillovers from surrounding areas. These buffers will frequently have to be on land in private ownership.

Yet the provision of buffer zones around core areas and wildlife corridors connecting them, may be a futile gesture in the longer term. There is increasing evidence that global warming will have dramatic effects on ecosystem boundaries as the relative speed of temperature shifts in comparison with changes in the past, leaving vegetation with insufficient time to adapt. The implications of global warming are that we can no longer take a segmented approach to biodiversity conservation, with nature conservation ghettoes interspersed within a landscape devoted to commercial production.

My concern is with the policy instruments required to modify the behavior of private landowners. Market forces generally provide private landholders with little incentive to conserve biodiversity, and where market incentives do exist, such as hunting or recreation, they may produce distortions in the way in which ecosystems are managed and end up actually diminishing diversity.

I will consider in turn the use of incentive schemes designed to induce biodiversity conservation under the Farm Bills and private conservation easements; command and control regulation; and the use of management payments as an alternative to compensation in the context of regulation.

Conservation by consensus under the Farm Bills

Governments may operate in the market place themselves, not by purchasing title to land but by purchasing land use restrictions designed to conserve biodiversity. These can take the form either of simple contractual agreements, or conservation easements which will bind all who obtain title to the land in the future.

There are a number of examples of such schemes in the United States. The Environmental Conservation Acreage Reserve Program (ECARP) consists of the conservation reserve program (CRP) and the wetland reserve program (WRP). The CRP is by far the most significant government commitment to environmental programs in terms of resource allocation. Over 36,400 acres were enrolled in the first twelve sign-ups, representing a total financial commitment by the Federal Government of over $19.5 billion, and an annual commitment peaking at $1.9 billion in 1996. In Colorado there are 6,207 contracts covering nearly 2 million acres and involving a total financial commitment of nearly $1 billion. (Kenneth A. Cook, So Long CRP, Environmental Working Group, 1994, 4-5, 18, 22)

The origins of the CRP lie in concerns about the overproduction of certain agricultural commodities and land degradation. Only after 1990, with the expansion of eligible categories of land beyond highly erodible cropland to include croplands to be devoted to permanent wildlife habitat has the program become marginally more sensitive to the demands of biodiversity conservation, in the form of "wildlife" conservation.

The CRP relies primarily on contracts, which are more vulnerable than easements. Moreover, contracts are ordinarily for a period of ten years, although this can be extended to a period of fifteen years where the land is devoted to hardwood trees, shelterbelts, windbreaks, or wildlife corridors. The CRP is essentially a short-term land retirement program, and significant problems are anticipated when the first batches of enrolled land come out of contract in 1995.

Under the terms of the CRP contract, an approved conservation plan must be implemented, and this may include a requirement for the establishment of permanent wildlife habitat. Highly erodible cropland must, for example, be put under "approved vegetative cover, or water cover for the enhancement of wildlife."

The CRP suffers from all the shortcomings of a program which has had tacked on to it a thin veneer of concern with biodiversity, after starting out its life with very different objectives. The Wetlands Reserve Program, on the other hand, is more directly relevant to biodiversity conservation, although its impact is confined to a narrow category of ecosystems.

The WRP is concerned with restoring to their original condition wetlands which have been modified by agricultural activity or completely converted, before December 23, 1985. The likelihood and cost of restoration must be taken into consideration in deciding

David Farrier

1 Professor David Farrier (LL.B. London School of Economics; Diploma in Criminology, Cambridge University; LL.M. Columbia University) is a Visiting Research Fellow with the Natural Resources Law Center, January-October 1994, on sabbatical from the University of Wollongong Faculty of Law, Australia.

This is an edited version of a paper which will eventually be issued as a Center Occasional Paper. Prof. Farrier welcomes requests for his full draft paper for comment.
which areas to enroll. The owner of the land must be prepared to grant a perpetual or 30 year easement, or for the maximum duration allowed by State law. Priority is to be given to easements based on the value which they have for protecting and enhancing habitat for migratory birds and other wildlife.

The focus of the CRP and the WRP is on converting existing intensive land uses to more environmentally sensitive uses by restoring land already in agricultural production, rather than seeking to dissuade landholders from converting land to more intensive uses in the first place. There is a powerful argument that we would do better to concentrate limited resources on conserving relatively undisturbed land rather than attempting to restore degraded or even destroyed ecosystems.

The retention of relatively undisturbed areas is addressed by the Sodbuster and Swampbuster provisions of the Farm Bill. Sodbuster threatens farmers with loss of agricultural program benefits where any agricultural commodity is produced “on a field on which highly erodible land is predominately”, unless this is in accordance with an approved conservation plan. The focus here is squarely on the prevention of land degradation (land conservation) rather than the conservation of biodiversity. The operating assumption is that highly erodible land can be brought into production, with biodiversity substantially destroyed in the process, as long as there is a conservation plan in place, designed to conserve the land base rather than its biodiversity.

Swampbuster also threatens landholders with loss of program benefits, the relevant event here being conversion of a wetland “for the purpose, or to have the effect, of making the production of an agricultural commodity possible”. There is no equivalent to the substantial exemption under the Sodbuster provisions which allows cropping on highly erodible land to go ahead provided that it is in accordance with an approved conservation plan. In spite of this, Swampbuster, has fundamental shortcomings when it comes to biodiversity conservation.

First, it has nothing to say to those converting wetland for purposes other than cropping. Only the command and control provisions of section 404 of the Clean Water Act (see below) stand in the way of the same landholder selling the same land for real estate development, or putting it to pasture and destroying most of its biodiversity value in the process. Secondly, Swampbuster has no hold over landholders who do not grow program crops or are prepared to forego program benefits.

Thirdly, to landholders accustomed to receiving program benefits and dependent upon them, it presents as coercion. If we look beneath Swampbuster’s rhetoric of command and control, we find an entirely voluntary program, offering program benefits on certain conditions. But this is not how landholders perceive it. The result is that Swampbuster has all the disadvantages associated with command and control regulation - landholder hostility and enforcement problems - and none of the advantages possessed by policy instruments which tempt with carrots rather than beat with sticks.

Finally, imposing land use restrictions is only the first step towards biodiversity conservation: particularly where ecosystems comprise fragments, active management is required, especially in relation to external impacts. Swampbuster does not allow for the payment of incentives to landholders for ongoing management of ecosystems.

Management is perhaps even more crucial in relation to restored ecosystems. Both the CRP and the WRP, in addition to offering compensation, provide for cost share in relation to the initial establishment of conservation measures. However, management payments are not contemplated under the CRP, except where land is to be set aside for the production of hardwood trees, windbreaks, shelterbelts or wildlife corridors, when payments for maintenance can be made. Only the WRP require landholders to make long-term commitments in easements to manage restored wetlands in accordance with a conservation plan, and appears to contemplate that they will receive cost-share payments for this.

Conservation through private agreement

Apart from government initiatives to influence land use through agreements with landholders, activities on a growing area of land in the United States are regulated through agreements reached between landholders and private nonprofit organizations, such as the Nature Conservancy and land trusts.

Legal requirements for a valid conservation easement vary from state to state. For present purposes, however, it can be taken as an agreement regarding land use, designed to protect natural resources, binding not only on the original landholder who agrees to the obligations, but also on those who hold title to the land thereafter.

Allowing conservation easements to be held by publicly non-accountable private organizations is alleged to conflict with the policy that landholders should be able to shift land uses according to current market choices. This ignores the fact that development places irreversible dead hand ties on land by substantially confining the uses to which it can be put through physical modification, by degradation and destruction of ecosystems. Those who restrict development through easements actually keep open options for future generations, the reality always being that future law-makers cannot be bound by prior legal arrangements.

On the other hand, the number of land trusts taking conservation easements on an ad hoc basis, with their disparate objectives, creates difficulties for any attempt to produce integrated and coordinated planning in this area. At present the only means by which these arrangements are made publicly accountable is through the tax system, which often provides the incentive to landholders to enter into an easement.

Land management objectives adopted by a particular trust may conflict with desirable land use from a public interest perspective. For example, an easement may be taken over land in order to gain or maintain public access, or even to preserve it as farm land, when the public interest could require restrictions on access, and restoration of ecosystems.

Provision for ongoing management of the land is another crucial issue. There is a danger that particular land trusts may end up focusing on bringing land under conservation
The primary aim of the Conservancy's easements is to protect land from development pressures which will degrade or destroy existing ecosystems; it is particularly concerned to restrict real estate development. While conservation easements reserve a right of entry to the Conservancy to monitor ecosystems and compliance with the terms of the agreement, management arrangements are generally left to be negotiated on an ad hoc basis.

A private organization such as the Conservancy has the unique advantage of being able to negotiate with private landholders against the backdrop of government regulation, while still remaining committed to a philosophy of voluntariness and cooperation. The existence of command and control legislation, such as the Clean Water Act, allows the Corps of Engineers to apply Guidelines developed by the EPA in conjunction with the Conservancy. On top of this, the EPA has a power of veto over the grant of permits.

The direct relevance of the Endangered Species Act to private landholders stems from the fact that section 9 makes it unlawful to "take" a species of fish or wildlife listed as endangered, anywhere in the U.S., unless an incidental take permit has been granted under section 10. It has been held in decisions by the courts, with one recent notable exception, that significant habitat modification or degradation will constitute a taking of a species. This potentially constitutes a significant limitation on private land use. On the other hand, it is only unlawful to damage or destroy plants on private land where this involves a knowing breach of state law.

At first sight, the prohibitive commands of these two pieces of legislation look impressive indeed. Experience teaches us, however, that where the commitment of the community to a legal obligation is equivocal, as here, where land use regulation in the interests of environmental conservation clashes with deeply held values about the sanctity of private property, regulatory hernias will inevitably develop as agencies search for some level of "flexibility" to enable them to survive politically.

What "flexibility" means in practice is allowing projects to go ahead with conditions designed to mitigate environmental impact attached to them, as distinct from simply saying "no". This approach may be acceptable when we seek to prevent land degradation or to protect water quality: for example, the threat of soil erosion can frequently be prevented by requiring land cleared of native vegetation to be immediately sown with pasture. But it frequently will not go far enough where our objective is conservation of biodiversity.

In this context, we may need a paradigm shift, so that the question becomes what level of development is compatible with the conservation of biodiversity, not how can we retain the maximum level of biodiversity consistent with development. The answer in many, cases may be "none". At present the focus of regulatory systems is on how can we manage to allow development to proceed on a particular site, not on whether we should allow...
it to proceed there, or even at all.

Under section 404 of the Clean Water Act, the regulatory net has been drawn wide, but the crucial question is how the permit system operates in practice. At one level, a substantial degree of precaution has been built into it. Under the Guidelines which the Corps of Engineers must apply, a permit must be refused if there is a practicable alternative which would have less adverse impact on the aquatic ecosystem and would not have other significant adverse environmental consequences. Where a project is not water-dependent, the burden of proof is actually reversed, so that it is presumed that practicable alternatives not involving wetlands are available.

Despite this, there are consistent allegations that section 404 is failing to stem the flow of wetland conversion. One prominent device used by the Corps to enhance "flexibility", for example, was the "mitigation-buy-down". This allowed it to grant a permit on the basis of compensatory mitigation - the offer of restored or created wetlands at another site - without first considering the possibility of complete avoidance (e.g. by finding an alternative site) or minimization of environmental impact.

This practice has now been abandoned and the Corps is committed to a sequencing process, whereby compensation of wetland values only becomes an option after potential impacts have been avoided to the maximum extent practicable, and those which cannot be avoided have been minimized.

In spite of this apparent downgrading of mitigation through compensation, the suspicion remains that wetland compensation is going to provide the technological fix and the "flexibility" which will allow development to proceed in most cases. Provided that practicable alternatives in the form of avoidance and minimization have been fully explored, there is a strong suggestion that normally the go-ahead will be given on the basis that loss of wetland values and functions will be compensated.

This suspicion is reinforced by the Clinton Wetlands Plan of August 1993, with its firm endorsement of the use of mitigation banks. The Plan is as much about protecting landholders from regulatory burdens as it is about protecting wetlands from landholders. It is one thing to espouse the restoration of degraded wetlands, or even the creation of new ones, as a means of recovering in some small way the values and functions which have already been lost. It is quite another to advocate restoration and creation as devices to excuse and legitimate the continued destruction of wetlands in relatively undisturbed condition. The science of wetland's mitigation is still in its infancy, and the creation of wetlands substitutes are frequently not successful. Common sense suggests that some functions of wetlands may be more difficult to restore or create than others, and that habitat would be prominent on this list.

The permit system for allowing incidental takes of listed species under the Endangered Species Act is located in section 10. As under section 404 of the Clean Water Act, the provisions are framed in precautionary terms. They include a requirement that the applicant must submit a conservation plan. Before granting a permit, the Secretary of the Interior must be satisfied that the applicant will minimize and mitigate the impacts of the incidental take "to the maximum extent practicable", that adequate funding for the plan will be provided, and that there will be procedures to deal with unforeseen circumstances.

In this case, unlike section 404, the permit system has, in fact, operated quite tightly. Very few conservation plans have been completed and very few incidental take permits have been issued.

However, the legislation has built into it other opportunities for front-end regulatory slippage, in particular the process by which a species gets on to the list in the first place. Even though the prohibition on taking species bites like a pit bull when it does bite, the reality is that its protective bite is very selective. It impacts only a narrow class of species which have been identified after a very cautious, careful and relatively lengthy forward planning exercise.

One of the fundamental problems with the listing process is the way in which it deals with the question of scientific uncertainty. Many species are not listed because of the high degree of scientific proof demanded and the resources needed to gather it. A precautionary approach, on the other hand, requires us to carry out protective action even though the conservation status of a species cannot be proved according to traditional canons of scientific proof. The argument is that it is better to put up with false positives rather than false negatives where we are dealing with irreversible effects. When it comes to facilitating development on wetlands by allowing compensatory mitigation, it is strange that we are much less concerned about the scientific uncertainty associated with wetlands creation and restoration.

Even where a decision has been made that a listing is warranted, its formal processing can still be delayed because other pending listing proposals are seen to be more urgent, although a recent court settlement promises to address this situation.

Ultimately, these problems stem directly from the narrow species focus on which the legislation rests. How can we, for example, expect to produce scientific proof of the conservation status of the many invertebrate species not yet known to science? If the focus was on threatened and endangered ecosystems, it would be very much easier to satisfy even a very demanding burden of scientific proof. In other words, the heart of the problem ultimately lies with the level of the environmental unit on which science is expected to focus rather than the demand that science be allowed to play a role in the decision-making.

**Incentives: compensation or management payments?**

The question which must be asked is whether command and control regulation by itself can hope to address the issue of biodiversity retention and management on privately owned land. A wise policy response would move away from exclusive reliance on a coercive approach and seek to attract greater cooperation from private landholders. At the same time, it is clear from the earlier analysis of strategies based on voluntary agreement between landholders and the public or private sector that parameter-setting command and control regulation cannot be abandoned altogether.

An alternative strategy involves combining regulation with the provision of compensation in those situations where controls actually bite. From one perspective, this is already the
permits. Of the total area for which applica-
tions were made between 1986 and 1989
involving broadacre clearing, about 94% was
protected by outright refusals. This compared
with a figure of 80% approvals under the
previous regulatory system, which relied solely
on command and control.
This suggests that the availability of some
form of recompense may make it easier for
regulatory agencies to say "no" to develop-
ment. The hypothesis is that they are less likely
to search for the "flexibility" which they
manage to find in command and control
regulation when they are in a position to
soften the blow of outright refusal by offering
something in return.
In addition, the availability of some sort of
financial return will inevitably make landhold-
ers less hostile to restrictions on land use and
make enforcement easier. Besides, manage-
ment is required, and disgruntled landholders
make poor managers.
The real issue is not whether landholders
should receive some form of financial payment
in conjunction with command and control
regulation, but what form that payment should
take. By providing compensation for losses, we
allow landholders to externalize the problem
and deny that they have any responsibility for
the conservation of biodiversity. Compensation
is backward-looking and has nothing to
say about the matter of future management of
the land. Instead of landholders being given
some degree of ownership of the issue of
biodiversity conservation and a real stake in
addressing it, we allow them to wash their
hands of it.
Unlike compensation, management or
stewardship payments are forward looking and
are based on work carried out by the land-
holder rather than on the market value of the
land. They are more equitable than compensa-
tion insofar as they constitute payment for
work performed, as opposed to being based on
what are frequently chance factors relating to
the development value of land. A strategy
which offers management payments to
landholders will be particularly appropriate in
situations where the conservation of remnant
vegetation is at stake, and agricultural
landholders want to remain on the land, even
though their existing operations are marginal.
Management must take into account the
singularities of each piece of land in light of
the complexity of ecosystems and the fact that
our current knowledge is very limited. From
this perspective, building on to the knowledge
base of individual landholders, advised and
supported by the expertise of government,
might prove to be a more efficient strategy
than handing over complete management
responsibility for scattered patches to govern-
ment agencies.
Claims for compensation on the grounds
that a "taking" under the Fifth Amendment has
occurred would not likely succeed if govern-
ment was prepared to pay landholders to
manage land for the purposes of biodiversity
conservation, thereby providing an economi-
cally beneficial use.

Paying farmers and pastoralists on marginal
land to manage it for biodiversity conservation
would provide an alternative form of income
support to agricultural price support schemes.
Society is simply supporting the production of
an alternative commodity - biodiversity.

Conclusion
The argument which has been made is that
neither fully voluntary nor command-and-
control programs are likely to achieve
meaningful conservation of biological diversity
on private land. An amalgam of a command-and-control regulatory framework and a far-
reaching program of management payments to
landholders for the production of biodiversity
is proposed.

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
Natural Resources Policy and Law:
Trends and Directions, ed. by
Lawrence J. MacDonnell and Sarah
F. Bates, 1993
Recent Publications

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CF16 Regulatory Takings and Resources: What are the Constitutional Limits? 3-day conf. June 1994, notebook $75; audiotapes $150.
CF14 Water Organizations in a Changing West, 3-day conf. notebook, June, 1993, $75; audiotapes $150.
CF13 Groundwater Law, Hydrology and Policy in the 1990s, 3-day conf. notebook, June, 1992, $75; audiotapes $150. One CLE ethics credit.
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CU Law Students Frank Wilson (left) and Kathryn Mutz had their names engraved on the Colorado Bar Association’s plaque honoring those who have won the CBA’s annual Mineral Law writing competition. At right is John Henderson, chair of the Mineral Law Section. Frank Wilson also received the 1994 Distinguished Natural Resources Law Graduate award at the University of Colorado School of Law.

Hot Topics (continued)
Supreme Court Decision and Implications for Colorado’s §401 Program." Speakers will be Barbara Green, of Hale, Pratt, Midgley, Hackstaff & Goldberg; Marcia Hughes, Denver attorney; and Paul Frohardt, Administrator, Colorado Water Quality Control Commission.

The final program of the fall, scheduled for Tuesday, November 15, will be “What Coloradans Need to Know about Developments in the Lower Colorado River Basin.” Speakers will be Jim Lochhead, Executive Director of the Colorado Department of Natural Resources, and Center Director Larry MacDonnell.

Public Land Law Review Commission Reports Donated to Center
The Center would like to acknowledge the donation by Eleanor Schwartz, Chief, Division of Legislation and Regulatory Management, Bureau of Land Management, of her personal copies of 33 studies prepared for the Public Land Law Review Commission in the early 1970s. These 33 studies provided the basis upon which the Commission made its recommendations to Congress in One Third of the Nation’s Lands. The Center reports will be made available through the University of Colorado Law School library.

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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.

Resource Law Notes is the Center's free newsletter, published three times a year—fall, winter, and spring.

Calendar

**FALL HOT TOPICS CLE LUNCH SERIES:**
- **♦ Mon. Sept. 19:** "Dolan v. City of Tigard: Implications for Developers and for Cities and Counties"
- **♦ Fri. Oct. 21:** "PUD No. 1 of Jefferson Co. and City of Tacoma v. Washington Dept. of Ecology: The U.S. Supreme Court Decision and Implications for Colorado's §401 Program."
- **♦ Tuesday Nov. 15:** "What Coloradans Should Know about Developments in the Lower Colorado River Basin."

**ANNUAL WESTERN LANDS CONFERENCE:**
- **♦ Weds.—Fri., September 28—30, 1994:** "Who Governs the Public Lands: Washington? the West? the Community?"

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