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Resource Law Notes: The Newsletter of the Natural  
Resources Law Center (1984-2002)

Getches-Wilkinson Center Newsletters

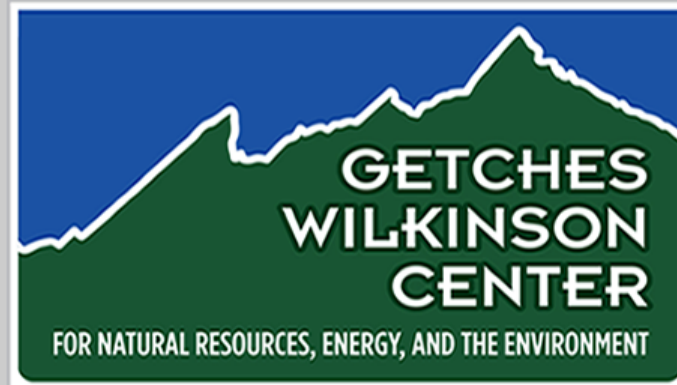
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# Resource Law Notes Newsletter, no. 40, spring issue, Apr. 1997

University of Colorado Boulder. Natural Resources Law Center



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RESOURCE LAW NOTES, no. 40, spring issue, Apr. 1997  
(Natural Res. Law Ctr., Univ. of Colo. Sch. of Law).

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# RESOURCE LAW NOTES

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



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Number 40

Spring Issue, April 1997

## June 1997 Conference: "Dams: Water and Power in the New West"

See conference materials inside

Nearly every western river has been dammed to develop its water and power resources. The Center's 18th annual summer conference, scheduled for June 2-4, will examine the legal and policy issues surrounding these developments. The conference will begin by providing an historical context for the development of western water (**Gilbert White**) and a look at the impact that dams have had on the environment and people of the West (**Dan Luecke**.) **Pam Case** and **Jeanne Whiteing** will follow with a look at demographic and economic changes occurring in the West, as well as new assertions of Tribal rights, which may demand changes in the way western rivers are used and managed. Drawing from these presentations, as well as his extensive experience with western water issues, **Charles Wilkinson** will present the keynote address.

In the sessions that follow, speakers will discuss restructuring of the electric utility industry, FERC relicensing of hydropower facilities, changes in operation of federal facilities, and divestment of federal water and power facilities. Tuesday, June 3rd will focus on integration of new values with old uses of western water projects. The day will include general discussions of the legal and policy issues which haunt the projects as well as a series of case studies

highlighting the Colorado, Missouri, Platte, Snake and Klamath river basins.

The three day program will conclude with a look to the future, starting with an Administration perspective. Following lunch, **Bruce Driver**, **Bennett Raley** and **Dan Tarlock** will provide their visions of the future of western water development. The conference will culminate with a group discussion led by **Betsy Rieke**.

### Traditions and New Events

**Sunday Night Historic Films.** In an attempt to relieve some of the congestion at registration on Monday morning, early registration is scheduled for Sunday from 7:00 to 9:00 p.m. Come by the law school, register, meet new and old friends, and view historic footage of western dam construction. Early registrants can enjoy popcorn, drinks and preview the upcoming PBS special entitled "*An American Nile*" which portrays the development of the Colorado River based on **Marc Reisner's** book *Cadillac Desert*. A video showing the construction of the Grand Coulee Dam in Washington will also be shown.

**Monday Evening Reception.** Instead of scheduling a breakfast this year, we invite friends of the Center, who are unable to attend the conference, to join us at 5:00 p.m. for a reception on the west lawn of the Fleming Law Building following Monday's program. Please RSVP to Perle Bochert or call her with any questions (303) 492-1288.

**Tuesday Cookout on Flagstaff Mountain.** Barring lightning storms or snow, we will again hold our traditional barbeque at the stone shelter on Flagstaff Mountain overlooking Boulder. This year we will have a post-cookout presentation by Gary Holthaus, Director of the

Anderson Center for Interdisciplinary Studies and former Director of the Center of the American West. As usual, busses will transport participants and their families up (and down) the mountain Tuesday evening. Gary's presentation will be at the Flagstaff Amphitheatre, just a few minutes walk from the cookout location.

**Formal/Informal Discussions.** This year's scheduled discussion times as well as break times have been expanded to help assure that the conference audience, as well as speakers, have a full opportunity to contribute to the discussion of issues. Please come prepared to share your experience and ideas with your colleagues.

**Registration Information.** See the center section of the newsletter for a complete agenda and conference registration information. The basic registration fee is \$525, with lower fees for government and full-time employees of non-profit or academic institutions (\$260). All rates go up after May 16. Perle Bochert is the Center's new conference coordinator (see page 2). For additional information on the conference, contact Perle at 303-492-1288 or by e-mail at [Pbochert@spot.colorado.edu](mailto:Pbochert@spot.colorado.edu).

## Hot Topics

On May 2, **Gary Bryner** of Brigham Young University, the Center's 1997 El Paso Energy Corporation Law Fellow, will present his research on development of minerals in federal protected areas. **Charles Wilkinson** will introduce Gary and moderate the discussion.

## Water Success Stories

The Center is nearing completion of its publication highlighting progressive changes in the management and use of western water. The stories presented inside represent just a few of the stories in four topic areas—Restoring the Natural Environment, Urban Conservation, Water Transfers, and Agricultural Conservation—included in the booklet.





# George Vranesh Remembered

One of Colorado's leading authorities on natural resources law died in San Rafael, California, on February 25, 1997. **George Vranesh** was 71 and had been suffering from Alzheimers disease.

The son of Yugoslavian immigrants, Vranesh was born and raised in Carson Lake, Minnesota, a town near Hibbing that was removed to make way for an open-pit mine. He dropped out of high school to join the U.S. Army during World War II and became a paratrooper who fought in the Battle of the Bulge, where he suffered injuries. He spent a year in England recovering from shrapnel in his lungs and arm, and was later transferred to Fitzsimmons Hospital in Aurora, Colorado. After recovering, he moved to Cleveland, Ohio, where his mother lived, to complete high school.

Vranesh returned to Colorado to attend the Colorado School of Mines. He graduated in 1951 with a degree in mining engineering and later worked as a miner and engineer in Utah. He married Etta Jo Cleaver of Golden in 1957, who encouraged him to study law. He graduated from the University of Colorado Law School in 1961 at the age of 36.

Specializing in water and natural resources law at a time when the West was experiencing its earliest stages of rapid

population growth, Vranesh worked first with lawyer Ray Moses and then formed his own firm. Known today as Vranesh and Raisch, it continues to specialize in natural resources and water law. Vranesh was a Water Referee of the State of Colorado and the author of a three-volume book on Colorado Water Law.

He was the father of three children, Rade, Anna, and Perry, and was dedicated to helping them pursue their education and interests in ice hockey and horse riding. He coached with the Boulder Valley Hockey Association, and spent many hours patiently working with his sons to perfect their skills. He encouraged his daughter to ride horses. He taught his children to ski at an early age, having learned himself on skis constructed of barrel staves. He learned to play hockey using frozen cow dropping as pucks, and told tales of playing hooky from school to swim in open pit mines. As a self-made man, he exhibited a confidence that sometimes bordered on fearlessness, particularly when he took his family dirt-bike riding in Utah. Always proud of his roots in Serbia and Croatia, he took his family to a small Croatian village near Zagreb to meet relatives.

For decades he was a familiar figure in Boulder, known for his friendliness and

concern for others. "You couldn't walk down Pearl Street Mall without him stopping to talk to every fourth person. He knew everybody and everybody knew him, so a ten-minute walk would take 45 minutes," recalls his son Rade, a California photographer. "He truly liked people and people truly liked him. He had that essential aura about him. That fine quality remained with him to the end, even after many other abilities left him."

Over the past fifteen years, he endured a series of medical problems. First, heart ailments led him to undergo bypass surgery. Then his health problems were compounded with the onset of Alzheimers Disease in the 1980s. During the last decade of his life, as the disease took hold, Vranesh retired from his law practice and traveled with friends. He moved to San Rafael, California, to be near Rade. He is survived by his three children, Rade Vranesh of Corte Madera, California, Anna Harvey of Skaneateles, New York, and Perry Vranesh of Ann Arbor, Michigan, and two grandchildren, Katherine Vranesh and Maxx Harvey.

## Colorado Water Law Update

George Vranesh's three volume treatise on Colorado water law is currently being updated by **James Corbridge** and **Teresa Rice**. The new treatise, to be published by the University Press of Colorado, will be converted to one volume. Corbridge and Rice anticipate providing annual updates for the treatise.

## Perle Bochert Joins the Center

In February, **Perle Bochert** (rhymes with Rock-ert) joined the Center staff as office manager and conference coordinator. Perle was born and raised in Boulder and graduated from Boulder High School. Her son Phil is an auto mechanic in town and daughter Rea is a medical assistant in Northglenn. She has three granddaughters, Adrienne (15), Roxanne (11), and Rhiannon (3). We don't know Perle very well yet, but reportedly her hobbies include her grandchildren, her dog (a white boxer named Elvis), and working in the yard.

Perle has worked at the University of Colorado since 1978 – employed in the Department of Psychology for about 17 years and the Department of Mathematics for three years. The Center staff is already drawing upon her experience in personnel, grants, editing and conference coordination – as well as on a perpetually stocked candy dish on her desk.

If you stop by, call in for information, or attend the June conference, please introduce yourself and welcome Perle to the Center. She will be happy to help.



Perle Bochert

## Public Lands Reform: A Reluctant Leap into the Abyss

An article by **Michael I. Jeffery, Q.C.**, highlighted in the August 1996 edition of *Resource Law Notes*, has recently appeared in the fall 1996 edition of the *Virginia Environmental Law Journal* 16(1):79-144. The article describes the historical context in which both Canadian and United States public domain came into being. It then explores how land management agencies in the United States and Canada might rationally approach the divisive issue of land disposition. Michael Jeffery can be reached at (303) 541-0746 or by e-mail at 76233.346@compuserve.com.



# Western Water Policy Review Advisory Commission

In March, the Center issued its preliminary report to the Western Water Policy Review Advisory Commission. The report provides a review of the federal role in western "watershed initiatives"—i.e., intergovernmental public-private partnerships for collaborative resource management at the watershed scale. Overall, the report paints a generally optimistic picture of the current watershed movement. Hundreds of agencies and thousands of individuals across the West have chosen to endorse this evolving new model of resource management stressing collaboration, broad participation, and consensus, all within a broader philosophical framework promoting sustainable use of resources in a manner that is responsive to local, as well as national, concerns.

The Center is scheduled to present specific findings and recommendations to Commission members in mid-April, and to prepare a final report by the end of June. Seven preliminary findings have been identified:

- Managing water (and related resources) at a regional scale is an idea with a long history and sound theoretical basis, but it has never been so widely implemented as at the present time.
- The watershed initiatives of the West show tremendous variety in structures and functions, although the successful initiatives tend to exhibit several common qualities.
- A lack of formal authority for the watershed initiative usually does not hinder the functioning of the initiative; to the contrary, a reliance on "moral authority" is generally seen as a key asset.
- Most watershed initiatives are not closely linked to management programs at the larger river basin scale.
- The performance of most watershed initiatives is sufficiently positive to merit guarded optimism, and to justify greater support from all levels of government and the private sector.
- The federal government plays a significant and essential role in the effective functioning of most watershed initiatives.
- Most watershed initiatives are more likely to suffer from a lack of federal support than from specific federal barriers; nonetheless, some barriers do exist.

These findings have led to the identification of several preliminary recommendations targeted at federal policy-makers. They include:

- Systematically address fundamental flaws in the governmental system to the extent practical.
- Allow watershed initiatives to retain flexibility and informality.
- Retain and faithfully exercise necessary federal regulatory authorities.
- Maintain a federal role in regional conflict resolution.
- Maintain the knowledge base necessary for effective resource management.
- Promote flexibility in the allocation and use of federal funds in watershed initiatives.
- Promptly address those specific barriers that impede the formation or functioning of effective watershed initiatives.
- Reauthorize the Clean Water Act and the Endangered Species Act, drawing upon the lessons learned in the watershed movement.
- Maintain or increase federal support of existing watershed initiatives.
- Train agency personnel in the theory and practice of collaborative watershed management.

The findings of the report are primarily based on a review of the following twelve watershed initiatives: the Verde Watershed Association (AZ), Animas River Stakeholder Group (CO), Model Watershed Project (ID), McKenzie Watershed Council (OR), South Platte River Forum (CO), Clear Creek Watershed Forum (CO), Feather River Coordinated Resource Management Group (CA), South Fork Dialogue Group (CA), Lower Truckee River Restoration Steering Committee (NV), Upper Carson River Watershed Management Plan (NV and CA), Rio Puerco Management Committee (NM), and Rio Puerco Watershed Committee (NM). These case studies were chosen to illustrate the diversity of watershed initiatives in the West, and to complement the river basin studies being prepared for the Commission.

**Western Water Policy Review  
Advisory Commission meets  
April 17–19 in Boulder,  
Colorado, to discuss river  
basin studies.**

## 1997 El Paso Energy Corporation Law Fellow

The Center hopes to continue its fellowship program in 1997-98 with the assistance of the El Paso Natural Gas Foundation. Because of the Foundation's schedule for reviewing grant applications and our need to get information on the June conference to our constituents, this newsletter went to press before we heard from the Foundation on our grant application. We hope to hear good news from them very soon.

Since 1988, the El Paso Natural Gas Foundation has annually sponsored a fellowship for research in oil and gas, energy, minerals or related public lands law. The fellowship offers a \$20,000 stipend and other support from the Law School. Emphasis has been on legal research, but applicants from law-related disciplines, such as economics, engineering, or the social sciences, are also consid-

ered. While in residence, the Fellow participates in activities of the Law School and the Center, and has opportunities 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.

Those wishing to apply should contact Kathryn Mutz at (303) 492-1287 or e-mail her at [kathryn.mutz@colorado.edu](mailto:kathryn.mutz@colorado.edu). If the fellowship is funded, applicants will be asked to send a resume and a letter detailing their research and publication plans as well as up to three letters of reference by July 31, 1997. To obtain a brochure containing more detailed information about the El Paso Energy Corporation Law Fellowship, contact the Center at (303) 492-1288.





## Ash Meadows, Nevada

### Devil's Hole Unit of Death Valley National Park

- 1952: Unit added to Death Valley National Monument
- 1962: Park Service begins to monitor water levels
- 1967: Devil's Hole Pupfish listed as endangered
- 1968: Hydrograph begins decline as large capacity wells drilled and pumped for 12,000 acre agricultural development
- 1970: Drastic conservation measures begun
- 1971: Federal court temporary injunction issued to halt pumping
- 1976: U.S. Supreme Court decision in *Cappaert v. U.S.* recognizes prior water right of Devil's Hole vis-à-vis its designation as part of a national monument; permanent injunction limits future pumping.

Ash Meadows National Wildlife Refuge and the Devil's Hole Unit of Death Valley National Park are located approximately 90 miles northwest of Las Vegas, Nevada in the Amargosa Valley. Ash Meadows is the discharge point for a vast underground water system stretching 100 miles to the northeast. Nearly all the water at Ash Meadows is "fossil" water, believed to have entered the ground water system thousands of years ago. Groundwater flows through carbonate rock faults and fractures to the Ash Meadows area where a buried fault acts as a barrier to flow. Waterbearing strata come to the surface in more than 30 seeps and springs, providing a rich and complex variety of habitats.

The wildlife refuge is composed of about 22,000 acres of spring-fed wetlands and alkaline desert uplands. Fifteen major springs on the refuge discharge over 10,000 gallons of water per minute, supporting at least 24 plants and animals endemic to the area. Four of its fishes and one plant species are listed as endangered under the Endangered Species Act.

The Devil's Hole unit of Death Valley National Park consists of 40 acres within the Ash Meadows refuge surrounding Devil's Hole—a water-filled cavern cut into the side of a hill. The cavern, which is over 300 feet deep, provides an environment of constant temperature (92° F) and salinity for the Devil's Hole Pupfish (*Cyprinodon diabolis*).

### Threats to Pupfish Survival

In the 1960s and 1970s, most of the Ash Meadows spring-fed streams were diverted for irrigated agriculture. Groundwater was also pumped for irrigation. Depletion of the springs and seeps, as well as the introduction of crayfish, bullfrogs, bass and tropical fish caused extinction of the Ash Meadow Killifish and the Longstreet Springsnail. The groundwater pumping led to a decline in the water level in Devil's Hole which threatened to expose the hole's critical spawning/feeding rock shelf and precipitated actions to protect the hole and its inhabitants.

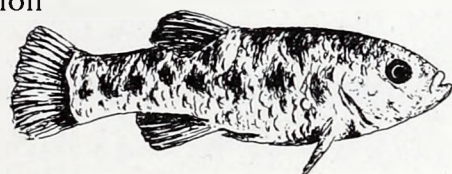


*Big Springs*



In 1976 the U.S. Supreme Court upheld a permanent injunction issued by the District Court for the District of Nevada enjoining any pumping that would lower the water below a certain level necessary to preserve the fish. The Court held that in establishing Devil's Hole as a national monument, the President reserved appurtenant, unappropriated waters necessary to the purpose of the reservation, including preservation of the pool and its fish.

While this action secured the water source for the national park



unit, the remainder of Ash Meadows' water supply was still unprotected, and a land development corporation planned to subdivide the area into 30,000 residential lots. This new threat prompted a proposal in 1981 by California Senator Alan Cranston to establish a national wildlife refuge to protect the desert pupfish. While this effort failed, the U.S. Fish and Wildlife Service (USFWS) emergency-listed as endangered two more of the fish species of Ash Meadows—an action which conferred protection to waters in the area.

Finally, the refuge was established by Congress in 1984 through cooperative efforts of The Nature Conservancy (TNC), the Bureau of Land Management and the USFWS. TNC, a private conservation organization, recognized the need to protect the unique area, purchased 12,613 acres (5106 hectares), and subsequently sold the lands to the USFWS who now manages the area as a wildlife refuge. Along with the surface acreage, the Department of Interior holds rights to about 16,000 acre-feet of water.

### Ongoing Restoration Efforts

Purchase of the land and water rights has protected Ash Meadows from additional destructive development. Recovery of the hydrograph has also led to the reestablishment of some native plant species and recovery of pupfish populations. But work remains to be done to restore the area to pre-pumping condition. With the help of funds from the Bureau of Reclamation, the USFWS is dismantling culverts, returning streams once diverted into concrete irrigation ditches back to their natural water courses, removing nonnative plants and animals which compete with native populations, and planting native vegetation.

### For More Information Contact:

David Ledig  
Ash Meadows National Wildlife Refuge  
P.O. Box 2660  
Pahrump, NV 89041  
Phone: 702-372-5435

Superintendent  
Death Valley National Park  
Death Valley, CA 92328  
Phone: 760-786-2331  
Fax: 760-786-3283

### Other Sources:

Soltz, David L. and Robert J. Naiman. *The Natural History of Native Fishes in the Death Valley System*. Natural History Museum of Los Angeles County, Science Series 30, 1978.

### U.S. Supreme Court Holding in *Cappaert v. U.S.*

"When the United States reserved Devil's Hole, it acquired by reservation water rights in unappropriated appurtenant water sufficient to maintain the level of the underground pool to preserve its scientific value and thereby implement presidential proclamation establishing Devil's Hole as a national monument [now part of a National Park]; that the proclamation expressed an intention to reserve unappropriated water; that the United States could protect its water from subsequent diversion, whether the diversion was of surface water or ground water; [and] that determination of reserved water rights was not governed by state law."



# Los Angeles Department of Water and Power: Ultra Low Flush Toilet Rebate Program, California



## Other factors motivating LADWP to initiate the ULFT Program

- The Board of Commissioners felt that conservation was critical.
- LADWP had nearly saturated the market with efficient showerheads.
- Nearby towns of Goleta and Santa Monica already had implemented ULFT programs.
- Studies by the Metropolitan Water District of Southern California indicated that significant water savings were available from ULFT retrofits.

The Los Angeles Department of Water and Power (LADWP) sells water to retail customers in the City of Los Angeles, California. In order to conserve water and to meet its commitments under a Memorandum of Understanding Regarding Urban Water Conservation, LADWP initiated a program to replace standard toilets, which use 5 to 7 gallons per flush, with ultra low flush models (ULFTs), which use only 1.6 gallons per flush.

## Basic Retrofit Program

The key element of the initial ULFT retrofit program was customers' involvement in the work. Customers would select, buy and install an approved ULFT, and provide the necessary documentation; then LADWP would provide a rebate. The standard program, which began in 1990, offers a rebate to all customers who install an approved model ULFT. Current rebate levels are \$100/ULFT for single-family residential and condominium customers, and \$75/ULFT for all other customers.

- The program goal for the first year was to install 7,500 ULFTs.
- The program actually installed 90,000 ULFTs during that time.
- An extended drought and mandatory water rationing were the primary reasons for the unexpected participation level.
- The current goal is to maximize the number of installed ULFTs, subject to funding limitations.

## Community Based Organization Program

The LADWP initiated a variant of the program in September 1992. The Community-Based Organization (CBO) program offers a ULFT to residents at no cost and provides the CBO with \$25 per installed toilet to cover its program costs. Generally the CBO staff market the program door to door and establish a depot where residents can pick up the ULFT. Some CBOs also offer direct installation for participants or installation by local plumbers at discounted rates. CBOs generally do not have much funding available and would not be able to operate the program if not provided the \$25 subsidy by LADWP.

The CBO program targets low-income customers, who were not responding to the standard rebate offer. The Mothers of East Los Angeles approached LADWP and offered to run a program in their neighborhood. Because many low-income customers do not have the cash to purchase a ULFT, the rebate program was not an effective incentive for them. By offering residents a free toilet, LADWP has been able to achieve a much higher participation rate in low-income areas.

*Story continues following Conference insert*





# Dams: Water and Power in the New West



*Existing dam complex*

## Eighteenth Annual Summer Conference

June 2-4, 1997  
Fleming Law Building  
University of Colorado School of Law  
Boulder, Colorado

## Deconstruction of the Elwha Dam

Computer-generated images by Bonnie Gehrenger,  
Bureau of Reclamation



*Artist's concept of partial removal*



*Artist's concept  
of restored site*



## SUNDAY, JUNE 1, 1997

7-9:00 p.m. Early Registration

Historic Dam Building Videos and Popcorn Party  
Rutledge Lounge, Fleming Law Building

## MONDAY, JUNE 2, 1997

8:00 a.m. Registration and Coffee

8:30 Welcome  
Dean Harold Bruff, University of Colorado School of Law  
Elizabeth Ann Rieke, Natural Resources Law Center  
Introduction to the Conference Agenda  
Kathryn Mutz, Natural Resources Law Center

### SESSION I: Dams and the Development of the West

*Session Moderator:* David H. Getches, University of Colorado School of Law

8:45 Damming the West: Development of Western Water and Power Resources  
Gilbert F. White, University of Colorado, Behavioral Science Institute

9:30 Western Dams: A National Resource? Killer of Rivers? or Both?  
Daniel F. Luecke, Environmental Defense Fund

10:15 Break

### SESSION II: The Changing Western Landscape

*Session Moderator:* David H. Getches, University of Colorado School of Law

10:45 Demographics and Economics of the New West  
Pam Case, U.S. Forest Service, Rocky Mountain Region

11:30 New Demands for Tribal Rights to Federal Water and Power  
Jeanne Whiteing, Whiteing and Smith

12:15 p.m. Questions and Discussion

12:30 Lunch and Keynote Address:  
Coming to Grips with Growth in the West:  
Traditional Communities, Free Rivers, and the New Megalopoli  
Charles F. Wilkinson, University of Colorado School of Law

### SESSION III: Restructuring of the Electric Utility Industry: Impacts on Hydroelectric Facilities

*Session Moderator:* Kathryn Mutz, Natural Resources Law Center

2:00 Restructuring of the Electric Utility Industry: Free Markets and Environmental Protection  
Rick Gilliam, Land and Water Fund of the Rockies  
Respondent: Bill McEwan, Arkansas River Power Authority

3:15 Discussion

3:30 Break

4:00 Northwest Power Planning Council Comprehensive Energy Review: How Comprehensive?  
Angus Duncan, Columbia/Pacific Institute, Portland State University

4:45

Discussion

5:00

End of Afternoon Session  
Reception on West Lawn

## TUESDAY, JUNE 3, 1997

8:00 a.m. Coffee

### SESSION IV: Western Water and Power Projects: Integrating New Values with Old Uses

*Session Coordinator:* Kathryn Mutz, Natural Resources Law Center

*Session Moderator:* Lawrence J. MacDonnell, Lawrence J. MacDonnell, P.C.

8:30 Initiatives and Conflicts in Changing Federal Facility Operation  
Lawrence J. MacDonnell, Lawrence J. MacDonnell, P.C.

9:15 Life Begins at Fifty: FERC Relicensing Under the Federal Power Act  
Thomas Russo, Office of Hydropower Licensing, Federal Energy Regulatory Commission

10:00 Break

10:30 Environmental Benefits of Reoperation, Relicensing, Decommissioning and Recapture  
Richard Roos-Collins, Natural Heritage Institute

11:15 Glen Canyon Dam: Flood Flows and Adaptive Management in the Lower Colorado River Basin  
Edmund D. Andrews, U.S. Geological Survey  
Respondent: Joe Hunter, Colorado River Energy Distributor's Association

12:15 p.m. Lunch on own

1:30 Missouri River Basin: Balancing Upstream and Downstream Uses  
John Thorson, Special Master for Arizona General Stream Adjudication

2:15 Platte River: Dam Relicensing and Endangered Species  
Margot Zallen, Office of Regional Solicitor, Department of the Interior

3:00 Break

3:30 Of Dams and Salmon in the Columbia/Snake Basin: Did You Ever Have to Make Up Your Mind?  
Don B. Miller, Native American Rights Fund

4:15 Klamath Basin: Balancing Instream Flows with Irrigation and Power  
Carl Ullman, Water Adjudication Project for the Klamath Tribes

5:00 Discussion

5:30 End of Afternoon Session

6:00 Barbeque on Flagstaff Mountain  
Readings by Gary Holthaus, Anderson Center for Interdisciplinary Studies



WEDNESDAY, JUNE 4, 1997

8:00 a.m. Coffee

**SESSION V: Old Dams Under New Management: Can Good Business and Good Policy Coexist?**

*Session Moderator:* Douglas Kenney, Natural Resources Law Center

8:30 Perspectives on Divestment of Public Assets  
Michael Block, Goldwater Institute

9:15 Divestment of Federal Water and Power Projects  
A. Jack Garner, Bureau of Reclamation, Eastern Colorado Area Office

10:00 Discussion

10:15 Break

**SESSION VI: How the West Can Win: The Role of Dams in the New West**

*Session Moderator:* Elizabeth Ann Rieke, Natural Resources Law Center

10:45 New Water Developments in the New West:  
What, Why and How Do We Decide?  
John Garamendi, Deputy Secretary, Department of the Interior (invited)

11:30 Discussion

11:45 Catered Lunch at Law School

1:15 p.m. Western Water Development: Visions of the Future  
Bruce Driver, Consulting Attorney  
Bennett Raley, Trout and Raley, P.C.  
A. Dan Tarlock, Chicago-Kent College of Law

2:15 Discussion

3:00 End of Conference

## Conference Enrollment Form

### Dams: Water and Power in the New West June 2-4, 1997

Name \_\_\_\_\_

Affiliation \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

Fees:	Regular	Govt., Acad. & Non-Profit
By May 16	\$525	\$260
After May 16	\$575	\$300

Parking Permit: \$15.

**Cookout Tuesday** (must sign up):

_____ Self (free)	\$ _____
_____ Adult guests @ \$16 (\$20 after 5/16)	\$ _____ 0
_____ Child @ \$10 (\$13 after 5/16)	\$ _____

**Payment:** \$ \_\_\_\_\_ Total amount

\_\_\_\_\_ Check payable to University of Colorado

\_\_\_\_\_ VISA \_\_\_\_\_ MasterCard # \_\_\_\_\_

Exp. Date \_\_\_\_\_ Signature \_\_\_\_\_

Please return this form and payment to:

Natural Resources Law Center  
University of Colorado School of Law  
Campus Box 401  
Boulder, CO 80309-0401

Date rec'd	_____
Paid	_____
Due	_____
Ackn	_____

## Notebook (for non-attendees) and Tape Order Form

**Note:** Registrants get a notebook as part of their fee. Tapes of the conference are available for an additional fee. If you wish to order the materials apart from the conference, please indicate here:

Notebook of speakers' outlines and materials \_\_\_\_\_ x \$75 = \$ \_\_\_\_\_

Audio tapes: three days \_\_\_\_\_ x \$150 = \$ \_\_\_\_\_

Sales tax (within Colorado) 7.26% = \$ \_\_\_\_\_

Postage/handling = \$ 5.00

Total purchase = \$ \_\_\_\_\_

\_\_\_\_\_ Check payable to University of Colorado

\_\_\_\_\_ VISA \_\_\_\_\_ MasterCard

Card # \_\_\_\_\_

Exp. Date \_\_\_\_\_ Signature \_\_\_\_\_

Print Name \_\_\_\_\_



# Dams: Water and Power in the New West

*Natural Resources Law Center • University of Colorado School of Law • Boulder, Colorado*

## General Information

**Cost of Registration:** \$525 if received by May 16, and \$575 thereafter. For registrants employed by any level of government — federal, state, tribal, or local—and for academics or not-for-profit groups the fee is \$260 (\$300 after May 16). To register, return the attached form to the Center, or register by phone (303-492-1288) or Fax (303-492-1297), charging the fee to VISA or MasterCard.

**Refunds:** Refunds, less \$25, will be available through Friday, May 16. Cancellations received May 19-30 will receive a refund, less \$50. There can be no refunds after the conference begins.

**Location:** Sessions will be held in the Fleming Law Building, University of Colorado at Boulder. 3-day parking permits cost \$15. If you need parking, please let us know when you register.

**Transportation:** Cain Travel in Boulder has arranged discount airfare for the conference. To obtain these discounts, please call Irene at Cain Travel at (toll free direct: 1-800-346-4747, ext. 743). Boulder is served by Denver International Airport in Denver, 45 miles from campus. The Boulder Airporter (303-444-0808) leaves hourly from DIA 8:00 a.m. to 11:00 p.m. on level 5 (across from the Hertz counter), and no reservations are necessary. Reservations are necessary for returns from hotels to DIA.

**Hotel/Dorm Accommodations:** Blocks of rooms have been reserved for registrants. Please register directly and mention the conference. Rooms fill quickly. A deposit or credit card number is required to hold a reservation.

Boulder Broker Inn  
555 30th St.  
Boulder, CO 80303  
303-444-3330  
Toll-Free: 1-800-338-5407  
Single \$84/Double \$94  
Must be reserved by May 1st

Courtyard by Marriott  
4710 Pearl East Circle  
Boulder, CO 80301  
303-440-4700  
Toll Free: 1-800-321-2211  
Single \$99/Double \$109  
Must be reserved by May 12th

Holiday Inn  
800 28th St.  
Boulder, CO 80303  
303-443-3322  
Toll Free: 1-800-542-0304  
Single/Double \$74  
Must be reserved by May 3rd

**Continuing Legal Education:** 20 hours of general CLE credits have been applied for with Colorado's Board of Continuing Legal and Judicial Education.

**Notebook and Tapes:** Conference materials will be for sale after the conference: notebook @\$75, audio tapes @ \$150, plus handling and tax as applicable.

Kittredge Dorm  
Located near the Law School  
303-492-5151  
3 nights: Single \$143.49/  
Double \$82.63 per person  
(includes tax)

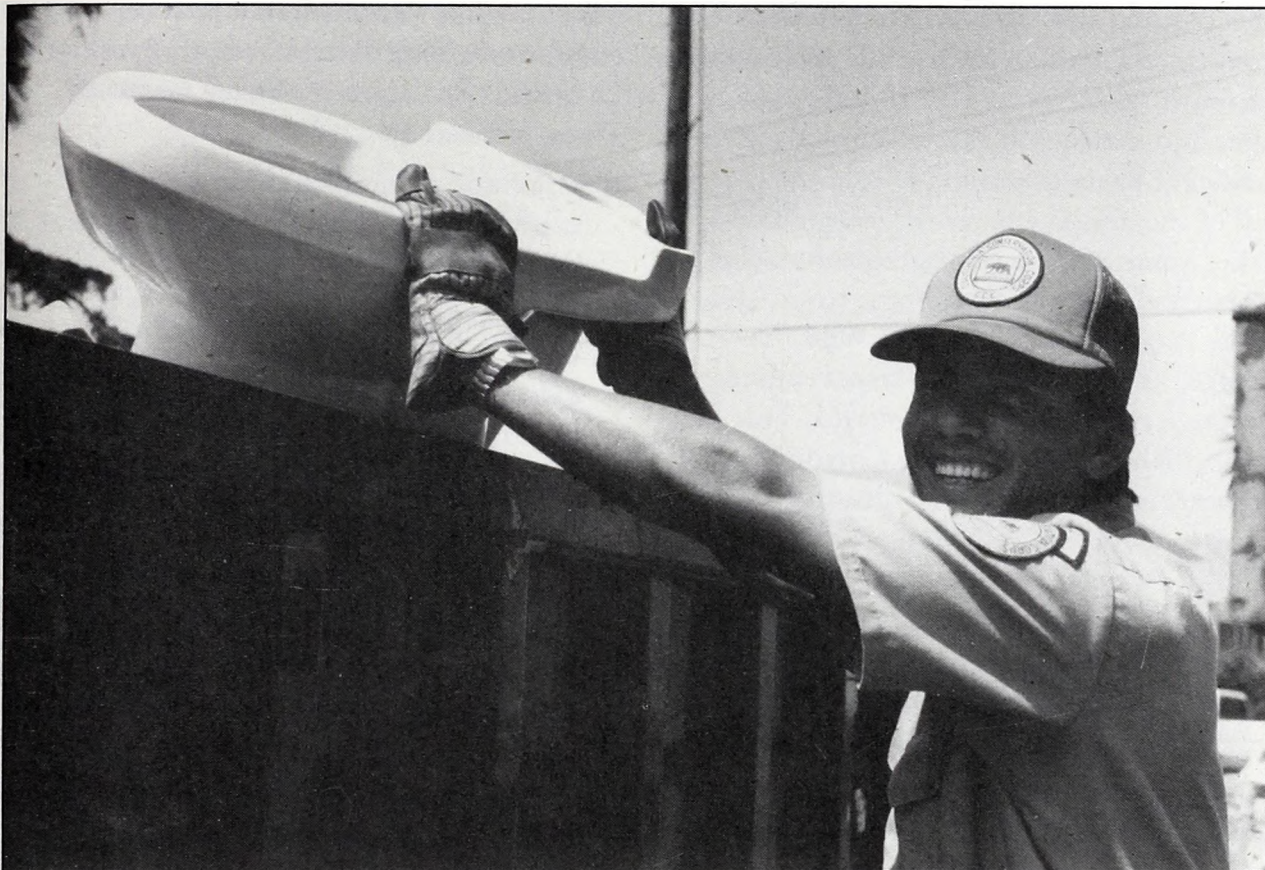
Regal Harvest House  
1345 28th St.  
Boulder, CO 80302  
303-444-3850  
Toll Free: 1-800-545-6285  
Single \$109/Double \$119  
Must be reserved by April 20th

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**Starting in June 1993, LADWP created a separate agreement with The Metropolitan Water District of Southern California (MWD) for the CBO program. LADWP buys some of its water from MWD and MWD has a Conservation Credits Program through which it helps its customers finance conservation programs. In this case, MWD pays the full program costs to the contractor and LADWP reimburses MWD for its share (50%). Recently, the rebate amount increased to \$110 per toilet to cover a \$10 per toilet fee to have the old toilets recycled.**

As with the standard rebate program, LADWP has removed itself from most of the details of administering the CBO program. For the first ten months of the program, LADWP paid \$100 to a subcontractor for each installed ULFT. For this price the subcontractor handled all aspects of the program, including toilet purchase and storage, and the \$25 CBO payment. The subcontractor locates a willing CBO and procures the ULFTs. The subcontractor also trains the CBO members on program operations, such as how to maintain a data base to track participation and how to install the ULFTs.

The CBO component of the ULFT program is increasing. The CBOs distributed 10,000 ULFTs during FY 1992 through 1993. For FY 1993 through 1994, CBOs distributed about 63,000 ULFTs. As of December 1996, CBOs distributed 236,660 ULFTs.

CBOs involved with the program have included:

- Mothers of East Los Angeles
- Korean Youth Community Center
- First African Methodist Episcopal Church
- Keeping the World at Peace
- Iglesia Poder de Dios

Overall, LADWP has retrofit 675,387 toilets since the program's inception, resulting in annual water savings of 24,000 acre-feet.

#### **For More Information Contact:**

Peggy Pollyea  
Los Angeles Department of Water and Power  
111 N. Hope Street, Rm. 1463  
Los Angeles, CA 90012  
Phone: 213-367-0925  
Fax: 213-367-1055





## Lahontan Valley Wetlands, Nevada

### Settlement Act Water Right Transfer Conditions:

- Water rights can only be purchased from willing sellers
- Water rights, lands, and related interests may be acquired by purchase or other means
- Purchases may be targeted to areas deemed most beneficial to the overall program
- Water rights must be transferred consistent with state law, applicable decrees, and regulations
- Concurrent environmental socio-economic review must be performed

The Truckee and Carson Rivers flow east from California's Sierra Nevada mountains into historically-expansive closed-basin lakes and marshes at the western edge of the Great Basin desert in Nevada. At the end of the Truckee River lies Pyramid Lake, home of the endangered cui-ui, the threatened Lahontan cutthroat trout, and, at the Anaho Island National Wildlife Refuge, what was once the largest white pelican rookery in North America. The Carson River ends up in the Carson Sink, supporting at its delta the Stillwater National Wildlife Refuge, the Carson Lake Wildlife Management Area, and other Lahontan Valley wetlands. The wetland ecosystem, an island stepping stone on the Pacific Flyway, is among the most important of the western Great Basin.

Although naturally distinct, the two rivers have been linked since 1905 by the Truckee Canal, which carries significant portions of the Truckee's flow to Lahontan Reservoir near the end of the Carson River. There diversions supplement Carson River supplies for the federal Newlands Project, the first largescale irrigation project initiated following enactment of the federal Reclamation Act in 1902.

As the single largest diverter of water from both river systems, the Newlands Project

has caused or exacerbated a host of environmental problems at both Pyramid Lake and the Lahontan Valley wetlands. These include:

- Dramatic reductions in flow and substantial modification of the natural hydrologic regime
- Significant declines in Pyramid Lake volume and elevation with resulting delta formation that inhibits cui-ui migration.
- Extirpation of the native strain of Lahontan cutthroat trout
- Destruction of the Winnemucca Lake and Fallon National Wildlife Refuges
- Severe water quality deterioration from depleted flows and agricultural drainage
- Extreme loss of shaded riparian, instream, wetland and other Great Basin aquatic habitats.

Ironically, the plight of Pyramid Lake and the Lahontan Valley wetlands was long seen to be rooted in an inherent conflict between the environmental health of the Carson and the Truckee rivers. But the origins of any such conflict can be traced to the advent of the Newlands Project itself. Here, as elsewhere in the arid West, too much water was promised to too many people for pennies on the taxpayers' dollar, and with little if any regard for the needs of, or impacts upon, public environmental resources.

### Forging a Settlement

Tired of being asked to choose between the two rivers and fearful of the ultimate demise of both resources, a handful of local, state and national conservation organizations joined together in 1987 to form the Reno-based Lahontan Valley Wetlands Coalition. Their principal purpose: Promoting the acquisition of water from willing landowners in order to protect the Lahontan Valley wetlands without further impact to Pyramid Lake.

Three years later, in June of 1990 a large and diverse crowd gathered to celebrate the first deliveries of water purchased for



*Canvasback duck club*



the drought-parched Stillwater marsh. Later that year the Fallon Paiute-Shoshone and Truckee-Carson-Pyramid Lake Water Rights Settlement Act became law. Title II of the Settlement Act provides direction and authority for a long-term program to acquire rights sufficient to protect and restore approximately 25,000 acres of wetlands at Stillwater and Carson Lake, including wetlands within the Fallon Indian Reservation.

An Environmental Assessment, completed by the U.S. Fish and Wildlife Service, evaluated the impacts of state and federal purchases of up to 20,000 acre-feet of water. This document helped to ensure that, consistent with the Act, concurrent progress would be made on interim acquisitions while a more comprehensive evaluation of the socio-economic and environmental effects of a long-term acquisition program was completed. By September 1996, 19,700 acre-feet of water rights had been purchased for the wetlands.

As part of these early water rights purchases, the agencies and stakeholders negotiated several interim agreements that helped to inform development of long-term water acquisition strategy. The Record of Decision on the Final Environmental Impact Statement (ROD) for the long-term program, issued in 1996, called for purchase of up to 75,000 acre-feet of Newlands Project water rights.

The ROD further identified a host of supplemental acquisition options that would also be pursued in order to minimize the potential for adverse effects. ROD acquisition options include:

- Purchase of water rights from landowners along the middle and upper Carson River;
- Conservation efforts at the Fallon Naval Air Station;
- Groundwater pumped near the primary wetland areas;
- Conservation agreements with privately-owned wetlands;

- Shared use of acquired rights; and
- Use of good quality irrigation return flows and drainage, treated sewage effluent and spills, when available.

### **An Unfinished Story**

It remains to be seen whether the long-term acquisition strategy will fully meet the Settlement Act's wetland restoration objectives. For example, while water leasing may be a viable supplementary option, it will not be a reliable option without a dedicated, sustained and sufficient source of funds. In fact, most of these options (and many others) were the subject of intense discussion or part of a 1994-95 round of basin-wide settlement negotiations. But they continue to face a variety of implementation hurdles, as well as larger basin-wide uncertainties, due to the largely unsuccessful conclusion of those efforts. Because of these uncertainties, the program includes an elaborate system for monitoring, measurement and reporting, as well as a feedback mechanism for long-term adjustments.

Though not without controversy, the water rights acquisition program is nonetheless a noteworthy success: it has breathed new life into what was a neglected and dying marsh. It has not achieved this result without controversy, but it has done so through an agency-stakeholder partnership that relies on the voluntary participation of willing sellers, that accomplishes its objectives without impact to other environments, and that advances in numerous ways the difficult task of developing and implementing creative, contemporary solutions to the arid West's most complex environmental problems.

**The key to success of the interim acquisition program was the fact that, by decree, Project landowners are understood to own clear title to the property interest in Newlands Project water.**

### **For More Information Contact:**

David Yargas  
Environmental Defense Fund  
5655 College Ave., Suite 304  
Oakland, CA 94618  
Phone: 510-658-8008  
Fax: 510-658-0630



# Northern Colorado Water Conservancy District Irrigation Management Services, Colorado



**Colorado agricultural fields lose 90 million tons of topsoil each year to wind erosion and 52 million tons to rainwater erosion—these figures do not include irrigation-related erosion.**

For over sixteen years, the Northern Colorado Water Conservancy District (NCWCD) has run an irrigation management service to assist area farmers in voluntary efforts to improve water management and conservation practices. The NCWCD's conservation program includes:

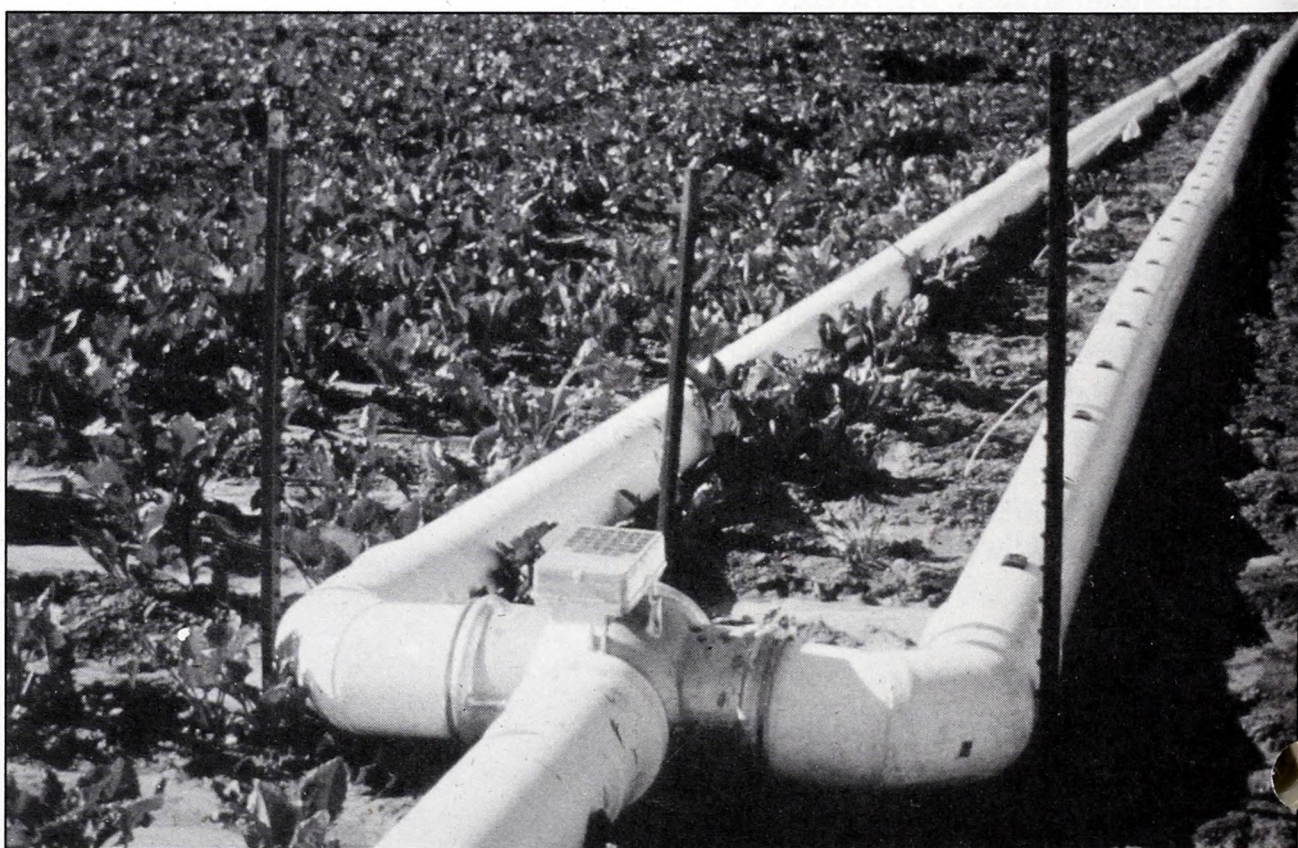
- Irrigation scheduling demonstrations on about 100 fields annually involving about 40 farmers who participate for two to three years each;
- Fourteen automatic weather stations to provide weather and calculated crop water-use data to the NCWCD via cellular phones;
- Non-point source pollution education through demonstration plots of best management practices for irrigation and fertilization of agricultural row crops;
- On-farm demonstrations of surge irrigation methods through the annual loaning of over 30 surge valves to area farmers coupled with technical assistance in setting up and programming the controls; and

- Assistance to farmers in the establishment and monitoring of agricultural water quality standards—focusing on return flows from municipal wastewater treatment plants.

## Surge Valves and Irrigation Scheduling

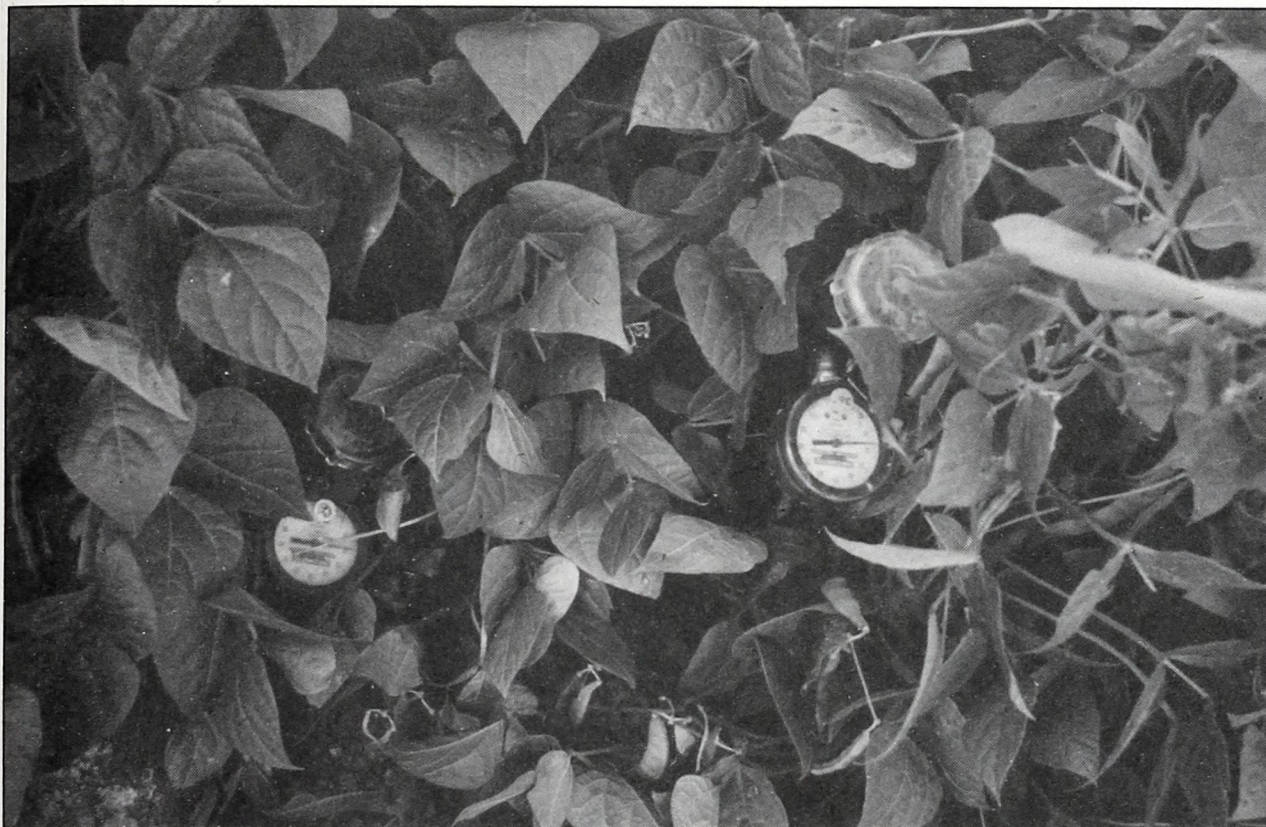
One of the NCWCD's principal conservation efforts combines the use of surge irrigation and root zone water-balance measurements to help farmers achieve optimal irrigation applications. Surge irrigation uses special valves to advance water down the furrows through wetting and drying cycles. The valves put surges of water onto crops, letting the water soak into the soil before the next surge. The NCWCD program loans the valves to farmers to use on their fields for a one-year trial period. The farmers then have an option to buy the valves at a reduced price.

Surge irrigation is used in conjunction with tensiometers, which help schedule the irrigation cycles. The soil moisture measurement devices are installed in fields at different levels in the soil profile. The farmer, with the help of NCWCD person-



*Surge valve on irrigation pipe*





*Tensiometers measuring soil moisture*

nel, keeps track of how much water the crop uses. Then readings of the tensiometer are used to determine how much water remains in the soil profile. The soil profile moisture readings help farmers to prioritize fields for irrigation and can help eliminate unnecessary watering. Chlorophyll meters can also be used to determine when to add fertilizer to the surge irrigations.

#### **For More Information Contact:**

Mark Crookston or Brian Werner  
Northern Colorado Water Conservancy  
District  
P.O. Box 679  
Loveland, CO 80539-0679  
Phone: 970-667-2437  
Fax: 970-663-6907

#### **Other Sources:**

Getches, David H., Lawrence J. MacDonnell, and Teresa A. Rice, *Controlling Water Use: The Unfinished Business of Water Quality Protection*, Natural Resources Law Center, University of Colorado School of Law, 1991.

#### **Advantages of surge irrigation**

- Increases irrigation efficiency 15 to 30 percent over conventional furrow irrigation
- Reduces labor required to manage furrow irrigated ground
- Reduces soil erosion at the top of the field
- Reduces runoff of chemical-laden irrigation water

#### **Tensiometer:**

A tensiometer is a vacuum tube with a gauge that simulates the uptake of water by the crop's root zone.



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Spring Hot Topics:

- May 2: Gary Bryner on Mineral Development in Federal Protected Areas

Summer Conference:

- June 2-4: Dams: Water and Power in the New West

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## The Natural Resources Law Center

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