AGENDA: Dams: Water and Power in the New West

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Dams: Water and Power in the New West

SUNDAY, JUNE 1, 1997

7:00 - Rutledge Lounge, Fleming Law Building
9:00 pm Early Registration, Historic Dam Building Videos and Popcorn Party

MONDAY, JUNE 2, 1997

8:00 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 of the West: Development of Western Water Resources
Gilbert F. White, University of Colorado, Department of Geography

9:30 Dams: Their Costs and Benefits
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 Patterns of Demographic Change in the Western United States
Pamela Case, U.S. Forest Service, Rocky Mountain Region

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

12:15 Discussion

12:30 Lunch and Keynote Address: Coming to Grips with Growth in the West: Traditional Communities, Free Rivers and the New Megalopolis
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  The Pacific Northwest Governors' Comprehensive Energy Review:  How Comprehensive?
Angus Duncan, Columbia/Pacific Institute, Portland State University

4:45  Discussion

5:00  Reception on West Lawn
Sponsored by Hydrosphere Resource Consultants

TUESDAY, JUNE 3, 1997

8:00  Coffee

SESSION IV:  WESTERN WATER 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 N. Russo, Federal Energy Regulatory Commission, Office of Hydropower Licensing

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
Respondent:  Joe Hunter, Colorado River Energy Distributor's Association
12:15  Lunch on own

1:30  Missouri River Basin: Balancing Upstream and Downstream Uses
      John E. Thorson, Special Master, 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 from “Circling Back” and “Wide Skies: Finding a Home in the West”
      by Gary H. Holthaus, Anderson Center for Interdisciplinary Studies

WEDNESDAY, JUNE 4, 1997

8:00  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  The River Association Approach to Privatization of Federal Hydro Projects
      Michael K. Block, Goldwater Institute

9:15  Divestment of Federal Water 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 W. Keys, III, Bureau of Reclamation, Pacific Northwest Regional Office

11:30 Discussion

11:45 Catered Lunch on West Lawn

1:30 Western Water Development: Visions of the Future
- Greener and More Equitable: A Vision for Dams and Other Western Water Issues
  Bruce C. Driver, Consulting Attorney
- Western Water Development: Visions of the Future
  Bennett W. Raley, Trout & Raley, P.C.
- River Management in the Twenty-First Century: The Vision Thing
  A. Dan Tarlock, Chicago-Kent College of Law

2:45 Discussion

3:15 End of Conference
DAMS: WATER AND POWER IN THE NEW WEST

EIGHTH ANNUAL SUMMER CONFERENCE

sponsored by the
Natural Resources Law Center
University of Colorado School of Law

JUNE 2-4, 1997

CONFERENCE ORGANIZERS

DAVID H. GETCHES is the Raphael J. Moses Professor of Natural Resources Law at the University of Colorado School of Law. He teaches, writes and consults on matters related to water, public lands, environmental and American Indian law. Getches has authored or co-authored ten books and numerous articles and book chapters. His work appears in scholarly and popular sources.

In 1983, Governor Richard D. Lamm appointed Getches Executive Director of the Colorado Department of Natural Resources, a post which he held until 1987. The Department includes ten divisions that deal with land, wildlife, parks, water and minerals. During his tenure on the cabinet, Getches spoke out on the importance of recreation and wildlife to the state’s economy, worked on new approaches to funding parks and fish and wildlife programs, urged expansion of designated wilderness areas, and advocated water conservation and groundwater reform.

Getches was the Founding Executive Director of the Native American Rights Fund (NARF). He developed the staff, funding and program of this national, non-profit law firm, and worked on several significant cases involving water rights, treaty fishing and hunting rights, environmental issues, land claims, education and civil rights on behalf of Native American clients throughout the West.

Currently, Getches chairs the Board of Trustees of the Grand Canyon Trust and the Board of Directors of the Land and Water Fund of the Rockies (LAW Fund) and is a Trustee of the Rocky Mountain Mineral Law Foundation. He also is on advisory boards and committees for several organizations including American Rivers, River Network, the Center for Natural Resources and Environmental Law (CEDARENA) in Costa Rica, the Natural Resources Law Center and the Colorado Journal of International Law and Policy. He is Secretary of Agriculture Dan Glickman’s designee to the Farm Bill Task Force on Water Rights. In the past Getches has

Getches speaks and consults widely with governmental agencies and non-governmental organizations throughout the United States and in several foreign countries.

DOUGLAS S. KENNEY joined the research staff of the Natural Resources Law Center in July of 1996. He has a broad interdisciplinary background in natural resources, beginning with a B.A. in Environmental, Population and Organismic (EPO) Biology from the University of Colorado in 1987, an M.S. in Natural Resources Policy and Administration from the University of Michigan's School of Natural Resources in 1989 and a Ph.D. in Renewable Natural Resources Studies from the University of Arizona's School of Renewable Natural Resources in 1993. Prior to joining the Center he was employed as an independent consultant, primarily working on the Alabama-Coosa-Tallapoosa and Apalachicola-Chattahoochee-Flint (ACT/ACF) River Basin study in the southeastern United States.

KATHRYN M. MUTZ, a native of Colorado, joined the staff of the NRLC in September, 1996 with a background in both law and natural resources management. She holds a B.A. in Geography from the University of Chicago, an M.S. in Biology/Ecology from Utah State University, and a J.D. from the University of Colorado, concentrating in natural resources and environmental law. For the 12 years preceding law school, Mutz worked throughout the West for state and federal government and private industry on scientific and public policy issues related to natural resource development. She is currently on the board of the Colorado Riparian Association and the Colorado Women's Bar Association. As a biologist she specialized in wetlands, endangered species and reclamation of disturbed lands. More recently, her legal research has focused on government regulation of coal and placer mining and oil and gas development. She has authored several publications ranging from government reports on rare plants and riparian communities to a book chapter on state-federal interactions in coal mining program administration and an article on home rule city regulation of oil and gas development.

ELIZABETH ANN (BETSY) RIEKE became Director of the Natural Resources Law Center at the University of Colorado School of Law in August 1995. The Center's work focuses on research and education on western water and land issues. Prior to coming to the Center she served as Assistant Secretary for Water and Science in the U.S. Department of the Interior, where she had supervisory responsibility over the Bureau of Reclamation, the U.S. Geological Survey and the U.S. Bureau of Mines. During her tenure as Assistant Secretary she focused on complex regional water disputes that typically included endangered or threatened species. She is credited with helping water interests in California reach a truce in the battles over the Sacramento-San Joaquin Delta, resulting in the Bay-Delta Accord announced on December 15, 1994. Before her
appointment as Assistant Secretary by President Clinton, she served from 1991-93 as Director of the Arizona Department of Water Resources. From 1987-91 she practiced law, representing a variety of clients on water law and administrative and legislative matters. Her undergraduate degree is from Oberlin College (1965) in Ohio; her law degree with highest distinction, is from the University of Arizona (1981).

**CHARLES F. WILKINSON** (B.A. Denison University; LL.B. Stanford University) is the Moses Lasky Professor of Law at the University of Colorado School of Law. He was formerly Professor of Law at the University of Oregon and staff attorney with the Native American Rights Fund. His books include *Federal Public Land and Resources Law*, (3rd ed. 1993) (with Coggins and Leshy); *Cases and Materials on Federal Indian Law* (3rd ed. 1994) (with Getches and Williams); *Land and Resource Planning in the National Forests* (1987) (with Anderson); *American Indians, Time and the Law - Native Societies in a Constitutional Democracy* (1987), *The Eagle Bird - Mapping A New West* (1992); and *Crossing the Next Meridian - Land, Water and the Future of the West* (1992). He has received teaching awards from students at Colorado, Michigan and Oregon. He received the University of Oregon’s Faculty Excellence Award in 1986 and the University of Colorado’s Overall Faculty Excellence Award in 1988. The National Wildlife Federation awarded him its 1990 National Conservation Achievement Award.

**CONFERENCE SPEAKERS**

**EDMUND D. ANDREWS**, (Ph.D. University of California, Berkeley; M.S. and B.S. Stanford University) currently serves as Chief of the River Mechanics Project, National Research Program for the U.S. Geological Survey (USGS) conducting research on river mechanics, especially river channel change in response to variations in flow and sediment supply. He also serves on the USGS Science Advisory Committee, and as Scientific Advisor on the Upper Colorado Endangered Fish Recovery Program for the U.S. Fish & Wildlife Service. He has testified as an Expert Witness for the U.S. Government in the application for federal reserved water rights for the four National Forests of Colorado, Zion National Park and Grand Canyon National Park. Andrews is a recipient of the Penrose Fellowship, the Department of Justice’s Certificate of Commendation, and the U.S. Forest Service’s Certificate of Merit. He is a member of the Geological Society of America, the American Geophysical Union and the American Alpine Club.

**MICHAEL KENT BLOCK** is president of the Goldwater Institute where he currently heads a study on how to bring competition to the electric utility industry in Arizona. He is co-chairman of the Legislative Rule Working Group of the Arizona Joint Legislative Study Committee on Electric Industry Competition. He also serves as a Senior Fellow at the Progress & Freedom Foundation in Washington, D.C., where he is a contributor to the Competition in Electric Power Project. In
addition, Block is Chairman of the Arizona Constitutional Defense Council and Chairman of the Arizona Juvenile Justice Advisory Council. Block is on leave from his position as professor of economics and law at the University of Arizona. He is a co-author of the Report Card on Crime and Punishment series for the American Legislative Exchange Council. Prior to his present duties, Block was a senior policy advisor to the Governor of Arizona, a consultant for the Executive Office of the President, a member of the Arizona Residential Utility Consumers board; and a consultant for The World Bank’s Regulatory Reform and Privatization division of the Economic Development Institute. From 1985 to 1989, Block served as Commissioner of the U.S. Sentencing Commission in Washington, D.C. He was appointed by President Ronald Reagan and confirmed by the U.S. Senate in October, 1985. He was an author of the Initial Guidelines and he co-chaired the congressionally mandated impact analysis of the Commission’s Initial Guidelines. Block has co-authored several books and published numerous articles in scientific journals; consulted for the Institute for Liberty and Democracy in Lima, Peru; served as co-director of a University of Arizona study of the Arizona Corporation Commission’s rate of return regulation; and was Director for the Center for Econometric Studies of the Justice System at the Hoover Institution at Stanford University, where he was a Senior Research Fellow. Block received his Ph.D. in Economics from Stanford University in 1972, where he previously received his B.A. and M.A., both in Economics.

Pamela Case has been a member of the USDA Forest Service for 16 years, serving in a wide variety of positions. She is a professional forester, with Ph.D’s in Political Science and in Social-Psychology. She served on the faculties of the Oregon State University School of Forestry and the Colorado State College of Natural Resources prior to joining the Forest Service.

Bruce Driver (B.A. Yale University, M.B.A. Columbia University, J.D. University of Michigan) currently provides legal and consulting services on energy, water and environmental issues to governmental agencies, environmental organizations and other clients, and serves as Special Counsel to the Land and Water Fund of the Rockies. As the Scholar-in Residence for the Western Governors’ Association, he authored a westwide water policy study that suggested changes in western water policy to encourage more efficient water use. He served in Washington as Counsel for the Subcommittee on Energy Conservation and Power in the U.S. House of Representatives where he was responsible for legislation and oversight of agencies affecting electric utilities. He has also held various positions in the Office of General Counsel for the Federal Energy Administration and the U.S. Department of Energy, representing the U.S. Department of Energy in proceedings before state public utilities commissions, advocating energy conservation, as well as serving as a Minority Consultant for the Subcommittee on the Environment in the U.S. House of Representatives.
ANGUS DUNCAN is President and Senior Fellow of the Columbia/Pacific Institute for Energy and the Environment. The Institute, which is affiliated with Portland State University, develops and publishes analysis on public policy choices for Pacific Northwest energy and river management, and participates in regional and local efforts to implement Institute recommendations.

Until fall of 1995, Duncan represented Oregon on the Northwest Power Planning Council. In December, 1994, Duncan presided over passage of the Council's far-reaching and controversial regional plan for recovering endangered salmon runs and restoring the health of the Columbia Basin watershed. He was responsible for the Plan's watershed strategy that builds on locally-based watershed councils collaborating with Tribal, State and Federal agencies — a strategy that derived from four years of work with the Grande Ronde Model Watershed in Northeast Oregon.

Duncan earlier served as Director of Energy Policy, U.S. Department of Transportation, in the Carter Administration; and as Assistant for Policy to Mayor Neil Goldschmidt of Portland (1975-79). He represented the City of Portland in the regional energy debates of the 1970s that led to Congressional passage of the Northwest Power Planning and Conservation Act of 1980. He was one of the early authors of language to treat conservation as a regional energy resource, to create a statutory preference for conservation and renewable energy resources, and to establish a Regional Planning Council accountable to the four Northwest states.

Duncan also has ten years experience in private energy development ventures, at home and overseas, that employed the full range of conservation, renewable, thermal and information control technologies.

A. JACK GARNER is a graduate of Colorado State University, College of Forestry and Natural Resources. He started his Federal career during college, working summers for the Bureau of Land Management and the U.S. Forest Service.

In 1972, Garner began his career with the Bureau of Reclamation as a Natural Resource Specialist in the South Platte River Projects Office in Loveland, Colorado. Four years later, he transferred to the Mid-Pacific Regional Office in Sacramento, California as a Outdoor Recreation Planner, later becoming the Director of the Region's Youth Program.

In 1982, Garner transferred to Denver, Colorado to become the Chief of the Lands and Recreation Branch for the Lower Missouri Region. In 1985, he was appointed to be the head of the Pueblo Field Office where he stayed until 1990. He then went to Washington D.C. as a Regional Liaison for the Great Plains Region.
In the fall of 1991, he was selected for his present position as Area Manager for the Eastern Colorado Area Office. As Area Manager, he oversees the Colorado-Big Thompson and the Fryingpan-Arkansas Projects, in addition to the Leadville Mine Drainage Tunnel Treatment Plant and the repayment for the Trinidad Project.

**James F. (Rick) Gilliam** brought a B.S. in electrical engineering from Rensselaer Polytechnic Institute in New York with him to the Federal Energy Regulatory Commission, where he worked for six years as a technical witness in electric utility proceedings. He moved on to serve as the Director of Revenue Requirements for Public Service Company of Colorado for nearly 12 years before joining the Land and Water Fund as its Senior Technical Advisor. The Land and Water Fund is a non-profit environmental law center promoting, among other things, sustainable energy development in a six-state region of the Rocky Mountains and Desert Southwest. Gilliam co-authored a 1996 article on electric utility disaggregation for *The Electricity Journal* and contributed to the Land and Water Fund’s treatise on a sustainable energy future entitled *How the West Can Win*. He is currently completing a Masters degree in Environmental Policy and Management at the University of Denver.

**Gary Holthaus** is the author of two collections of poems: *Unexpected Manna*, from Copper Canyon Press, and *Circling Back* from Gibbs Smith Publishers. A collection of essays, *Wide Skies: Finding a Home in the West*, is coming this summer from the University of Arizona. Holthaus is Director of the Anderson Center for Interdisciplinary Studies in Red Wing, Minnesota, where all the scholars are above average.

**Joe Hunter** currently serves as Executive Director of the Colorado River Energy Distributors Association (CREDA), an organization comprised of entities representing more than one hundred consumer-owned electric systems in Arizona, Colorado, Nevada, New Mexico, Utah and Wyoming. CREDA’s member systems purchase and distribute roughly eighty-five percent of the power produced by the Colorado River Storage Project.

Prior to joining the private sector, he served in the Bush Administration as an appointee in the U.S. Department of the Interior, first as Director of External Affairs for the Bureau of Reclamation, and subsequently, as Deputy Assistant Secretary for Water and Science. In those capacities, Hunter was deeply involved in issues relating to western water resource management.

From 1981 through 1988, he worked on Capitol Hill as a Special Assistant to Congressman Bill Emerson of Missouri. During his tenure as a congressional staff member, he worked extensively on legislation affecting agriculture, mining, flood control and other resource management concerns.
JOHN KEYS was named Regional Director of the Bureau of Reclamation's Pacific Northwest Region in Boise, Idaho, in September 1986, after serving as the Assistant Regional Director for six years. As Regional Director, he oversees the management of water resources in Idaho, Washington, Oregon and parts of Montana and Wyoming.

Keys is a registered professional engineer and a member of the Idaho, Oregon and Washington Water Users' Associations and the National Water Resources Association.

DANIEL F. LUECKE is the Senior Scientist with the Environmental Defense Fund and Director of its Rocky Mountain Regional office. A graduate of Notre Dame, he completed his Ph.D. in Environmental Sciences at Harvard University. He worked as a senior environmental engineer with a Cambridge, Massachusetts environmental firm and taught at Harvard University's Center for Studies in Education and Development. His articles have appeared in numerous publications on resource use, environmental management and mathematical modeling of public policy issues.

Luecke has served on several advisory committees including the following: Colorado Water Resources Research Institute Advisory Committee on Water Policy Research; Denver Metropolitan Water Roundtable; California Department of Water Resources Technical Advisory Committee on Desalination; Advisor to the Food and Agriculture Organization of the United Nations; and EPA Integrated Environmental Management Program Advisory Committee. He currently serves as president of the board of the Colorado Conservation Foundation and of the High Country News Foundation. He is also on the advisory boards of the Colorado Journal of International Environmental Law and Policy and the Colorado State University Environment and Natural Resources Institute, and is the chair of the executive committee of the Colorado Environmental Caucus.

The Environmental Defense Fund is a charitable, non-profit, public membership organization composed of scientists, lawyers, economists, educators and other concerned citizens dedicated to the protection and enhancement of human health and the environment through research and education and through judicial, legislative and administrative action. Organized under the laws of the State of New York, EDF maintains regional offices in Boulder, Colorado; Washington, D.C.; New York City; Oakland, California; Raleigh, North Carolina and Austin, Texas. EDF has over 300,000 active members nationwide.

LAWRENCE J. MADONNELL, is an attorney and consultant in Boulder, Colorado. He has more than 20 years experience working on a wide range of natural resources issues including water, public lands, oil and gas and mining. Much of this work has involved market-based approaches for achieving environmental and resource objectives. Much also has focused on policy analysis related to resources use and protection. He has worked internationally and across the U.S., with
special attention to natural resources issues in the American West. He combines a Ph.D. in mineral economics from the Colorado School of Mines with a J.D. from the University of Denver College of Law. His undergraduate degree is from the University of Michigan.

MacDonnell returned to private practice in 1995 after 11 years as the Director of the Natural Resources Law Center at the University of Colorado School of Law. While Center Director, he taught courses at the law school in water law, public land law, oil and gas law and mining law. As the Center's first director, he shaped and developed its activities to include a variety of conferences and workshops, a visiting scholar's program, and an extensive program of funded research and publication. While at the Center, MacDonnell served as principal investigator for 19 funded research projects, with grants from seven different foundations and six different government agencies.

He has more than 40 publications, including books, law review articles and articles in other journals. He has authored or co-authored 26 research reports and given over 100 invited presentations. Clients in 1996 and 1997 include: the Metropolitan Water District of Southern California, the German Foundation for International Development, the Bureau of Land Management, the San Diego County Water Authority, the Western Water Policy Review Advisory Commission, the U.S. Fish and Wildlife Service, the Southwest Florida Water Management District, the California Business Roundtable and the National Forum on Nonpoint Source Pollution.

BILL MCEWAN is the General Counsel for the Arkansas River Power Authority, headquartered in Lamar, Colorado. The Arkansas River Power Authority is a political subdivision of the state of Colorado whose purpose is to furnish the wholesale electric power needs of its member municipalities — the cities and towns of Holly, Lamar, La Junta, Las Animas, Springfield and Trinidad, Colorado, and the New Mexico city of Raton. ARPA's members provide retail electric service to over 38,000 people and businesses in predominately rural areas of Colorado and northern New Mexico.

McEwan has practiced regulatory law in Colorado for over twenty years. He served as General Counsel to the Colorado Association of Municipal Utilities for over fifteen years and he is a past chairperson of the American Public Power Association's Legal Section.

McEwan graduated Order of the Coif in 1973 from the University of Colorado School of Law. He served as a Captain in the United States Air Force from 1966-1970. He received his undergraduate degree from Gettysburg College, Gettysburg, Pennsylvania.
DON B. MILLER, (B.S., 1969 and J.D., 1972, University of Colorado) is a Senior Staff Attorney for the Native American Rights Fund (NARF) in Boulder, Colorado. Miller has represented tribal clients before the United States Supreme Court, Federal appellate and district courts, the Court of Federal Claims, Congress, federal agencies and state courts and legislatures. His practice consists primarily of litigation and/or settlement of complex federal Indian law cases involving natural resources usually attended by political/economic issues requiring Congressional and state legislative action. He has been lead counsel in a variety of matters, including possessory land claims, Congressional restoration of terminated tribes' trust relationship with the United States, water rights, hunting and fishing rights, voting rights, taxation and FERC re-licensing. In 1993, Congress enacted the Catawaba Indian Tribe of South Carolina Land Claim Settlement Act, resolving that Tribe's claim in ejectment against 63,000 defendants claiming title to a 144,000-acre treaty reservation. Currently, Miller represents the Nez Perce Tribe in Idaho's Snake River Basin Adjudication where the Tribe asserts substantial instream flow water rights as a part of its federal treaty fishing rights.

In 1989, he was selected by Barrister, the magazine of the Young Lawyer Division of the American Bar Association, as one of 20 young attorneys in the nation whose work is charged with excellence and makes a difference in our world. In 1974 Miller served briefly as an attorney advisor in the Interior Solicitor's Office, Division of Indian Affairs, in Washington, D.C. In 1972 he became the first director of the Organization of the Forgotten American, which provided legal, economic, consumer protection and health services to the Klamath Indians in Oregon.

BENNETT W. RALEY is currently a shareholder of Trout & Raley, P.C. His practice focuses on administrative, trial, appellate and legislative issues at the state and federal level relating to natural resources, public lands, water and environmental matters. He received a B.S. in Agricultural Business from Colorado State University in 1979 and a J.D. from the University of Colorado School of Law in 1983. Among his clients are the Northern Colorado Water Conservancy District, the City of Greeley and the City of Boulder. He currently serves as Chair of the Federal Water Rights Task Force established pursuant to the 1996 Farm Bill for the purpose of preparing a Report to Congress on a number of federal and state water issues.

Raley served as Chief Counsel, United States Senate Judiciary Subcommittee on Constitution, Federalism and Property Rights during the opening months of the 104th Congress, where he advised Senator Brown on a wide variety of matters, including the Senate Judiciary Committee hearings on the nomination of Judge Thomas to the Supreme Court, the Foreign Relations Committee hearings on matters related to BCCI, Cable Television reregulation, the negotiation of the 1993 Colorado Wilderness Act and legislation amending the Clean Water Act, Safe Drinking Water Act, Endangered Species Act, 1872 Mining Law and other western resource issues. Prior to his employment with Senator Brown, he was an associate and then a partner at Davis, Graham & Stubbs, Denver, Colorado from 1983 through 1990.
RICHARD ROOS-COLLINS is a senior attorney with the Natural Heritage Institute, a public interest law firm in San Francisco. He represents government agencies and conservation organizations in his practice, specializing in water resources, forestry and energy laws. He is involved in hydropower relicensing proceedings in California, New York and other states, and is a member of the Steering Committee of the Hydropower Reform Coalition. He is a member of the Federal Water Rights Task Force created by the 1996 Farm Act. He previously worked as a Deputy Attorney General for the State of California (1989-1991), prosecuting violations of environmental laws, and as an Attorney-Advisor for the U.S. Environmental Protection Agency Office of General Counsel (1986-1989). He is a graduate of Harvard Law School (J.D. 1986) and Princeton University (B.A. 1975).

THOMAS RUSSO has been with the Federal Energy Regulatory Commission’s Office of Hydropower Licensing since 1978 in a variety of management roles. Since March 1997, he has been serving as a Special Assistant to the Director of the Office of Hydropower Licensing. Russo has a M.B.A. in Management from George Washington University and a M.S. in Biology from the University of Alabama.

A. DAN TARLOCK was born in northern California in 1940 and holds an A.B. (1962) and LL.B. (1965) from Stanford University. He is currently Distinguished Professor of Law at the Chicago-Kent College of Law in Chicago, Illinois. Previously, he was a member of the faculty of Indiana University, Bloomington from 1968 - 1982 and has visited at the universities of Brigham Young, Chicago, Kansas, Michigan and Texas. In 1996, he was a Distinguished Foreign Visitor in Residence at the Queensland University of Technology in Brisbane, Australia. He has practiced law in San Francisco, Omaha and Denver, and is an elected member of the American Law Institute and the legal editor of the journal Rivers.

Tarlock has written extensively and consulted widely both in the United States and abroad in the fields of water law, domestic and international environmental protection and natural resources management. He is a co-author of a basic water law casebook WATER RESOURCE MANAGEMENT (with James Corbridge and David Getches 4th ed. 1993) as well as a water law treatise, LAW OF WATER RIGHTS AND RESOURCES (1988 with annual updates). From 1987 - 1994, he was a member of the Water Sciences and Technology Board of the National Academy of Sciences/National Research Council, and from 1989 - 1992, he chaired the Committee on Western Water Management Change. The Committee’s report, Water Transfers in the West, was published in 1992. His current research focuses on the legal aspects of domestic and international biodiversity protection and drought management. Between 1986 and 1996, he was also a member of a committee that reviewed the Glen Canyon environmental studies, and examined the options to operate Glen Canyon Dam in a more environmentally sensitive manner. From 1990 - 1997, he was a Special Counsel to the California Resources Agency where he assisted in the preparation of innovative landscape-scale multi-species and habitat biodiversity protection programs. He is currently a consultant to the Western Water Policy Advisory Review Commission.
**JOHN E. THORSON** is Special Master for Arizona's general stream adjudications. Appointed by the Arizona Supreme Court in June 1990, Thorson is the chief hearing officer in both the Gila River and Little Colorado River adjudications, which comprise approximately 77,000 water rights claimed by 27,000 parties.

A native of New Mexico, Thorson received his law degree from Boalt Hall, University of California at Berkeley, where he served as Note and Comment Editor of the law review. He received a doctorate in Public Administration from the University of Southern California. He is a member of the Arizona, California, Montana and New Mexico state bars, as well as the bar of the United States Supreme Court. He is also a member of the Lorna Lockwood Inn of Court.

Thorson has served as Regional Counsel for the Western Governors' Conference; Director of the Conference of Western Attorneys General; and as a consultant to the Montana governor, legislature and executive agencies.

Before his appointment as Special Master, Thorson was in private practice in Helena, Montana, where he practiced water and environmental law and represented potentially responsible parties in the Butte-Silver Bow NPL site, the nation's largest Superfund site. Thorson also served as Director of the Northern Lights Institute's Missouri River Management Project, funded by a grant from The Ford Foundation.

Thorson has authored numerous articles on water resources law and policy; has taught environmental and water law; and has served as chair of the American Bar Association's Water Resources Committee. His book, *River of Promise, River of Peril: The Politics of Managing the Missouri River*, was published in 1995 by the University Press of Kansas.

**CARL ULLMAN** is the Director of the Water Adjudication Project for the Klamath Tribes. He represents the Tribes in water rights litigation and negotiation in state and federal forums. He has previously served as the Attorney General for the National Government of the Federated States of Micronesia where his practice emphasized international fisheries agreements. He also served as reservation attorney for the Quinault Indian Nation where he represented the Nation in fisheries, environmental and jurisdictional litigation. Ullman has a J.D. degree from the University of Washington and an LL.M. from Yale University.

**GILBERT WHITE** is a retired professor of geography at the University of Colorado at Boulder who began studying water management as a staff member with the New Deal's Mississippi Valley Committee of the PWA. He subsequently served with the President's Water Resources Policy Commission, the United Nations Panel of Integrated River Development, the Bureau of Budget Task Force on Federal Flood Policy, the UNEP diagnostic study of the Aral Sea Basin, and various National Research Council committees, including currently the joint Israel-Jordan-Palestine-US committee on sustainable water supplies of the Middle East.
**Jeanne S. Whiteing** is partner in a Boulder, Colorado law firm, Whiteing and Smith, which specializes in the representation of Indian tribes. She focuses on issues of taxation, jurisdiction and water resources. Jeanne is an enrolled member of the Blackfeet Tribe in Montana. She received her undergraduate degree from Stanford University in 1972, and her law degree from the University of California, Berkeley, in 1975. Prior to entering private practice, Whiteing was a staff attorney with the Native American Rights Fund from 1975 to 1986, where she also served as Deputy Director for five years.

**Margot Zallen**, a senior attorney in the Denver Solicitor’s Office, has been working on Endangered Species Act (ESA) issues relating to water projects since January 1978 and has been dealing with the Kingsley Dam relicensing since 1979. At present she is extensively involved in ESA/water issues revolving around the Platte and Colorado Rivers. These include participation in the three state/Department of the Interior negotiations for a Platte River Basin-wide Program; the FERC relicensing of Kingsley Dam and related facilities including the Section 7 consultation on the relicensing; the Supreme Court equitable apportionment case for the North Platte River, *Nebraska v. Wyoming*; the Colorado River Recovery Implementation Program and large water right filings by Colorado for instream flows on the Colorado and Yampa Rivers. She has worked on San Juan River issues relating to ESA, and tribal water rights including the Animas La Plata project. She has published articles and lectured on ESA/water development issues, Section 404 and related fish and wildlife problems and was very involved with the Two Forks Section 404 permit process. However her ESA experience is not limited to water issues and she is the lead DOI attorney in many cases relating to grizzly bears and wolves including the reintroduction of wolves to Yellowstone National Park and to Central Idaho.