



Getches-Wilkinson Center
for Natural Resources, Energy,
and the Environment

2017 Martz Summer Conference



Fighting Back on the Colorado River: Carving Out Progress on Multiple Fronts

2017 Clyde Martz Summer Conference

University of Colorado School of Law

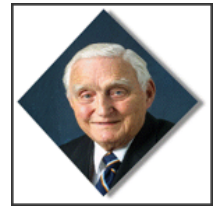
Wolf Law Building, Wittemyer Courtroom

Thursday, June 8th and Friday, June 9th, 2017

*Presented by the Getches-Wilkinson Center for Natural Resources,
Energy, and the Environment*



38th Annual Martz Symposium



Clyde O. Martz was a father of natural resource law in the United States. He was an exemplary teacher, mentor, counselor, advocate, and a professor of natural resources law for 15 years at Colorado Law. Professor Martz was one of the founders of the Rocky Mountain Mineral Law Foundation and of the Law School's Natural Resources Law Center, which later became the Getches-Wilkinson Center for Natural Resources, Energy, and the Environment. In 1951, he assembled and published the first natural resources law casebook, combining the previously discrete subjects of water law, mining law, and oil and gas law.

In 1962, Professor Martz joined the law firm of Davis Graham & Stubbs. During his tenure at Davis, Graham & Stubbs, he took periodic leaves of absence to serve as the Assistant Attorney General of the Lands and Natural Resources Division of the U.S. Department of Justice (1967-69), a Colorado Special Assistant Attorney General (1971-75), and as the Solicitor of the Department of the Interior (1980-81). He retired from the firm in the late 1990s and passed away in 2010 at the age of 89.

The Getches-Wilkinson Center's annual summer conference hosts outstanding faculty, scholars, public officials, and students who gather to discuss the complex and fascinating issues that dominate the field of natural resources law and policy. The GWC will administer the summer program in a way that honors Clyde's singular contributions to the profession.



Conference Introduction

Since the turn of the 21st century, storage on the Colorado River has declined while stress over the region's water future has intensified. The combined impact of overconsumption, drought, and climate change have exposed longstanding problems with the regional water budget, and have focused national attention on the urgency of improving management. Water managers, river advocates, and other concerned stakeholders and decision-makers are responding, increasingly through basin-wide initiatives that go beyond specifying how looming shortages will be distributed to actually trying to head-off the most painful potential impacts. Many of these efforts are at a critical juncture. As they come to fruition, several questions arise: Are we doing the right things? Is it enough? What needs to happen next?

In this public event, we review recent and emerging innovations and evaluate their likely impact on the river system. Topics will include:

- Progress on Upper Basin drought contingency planning, including plans for upstream reservoir reoperations, water banking, and demand management;
- Revised Lake Mead curtailment schedules, and the search for a structural deficit solution;
- Emerging plans for Salton Sea stabilization;
- Minute 32X and the continued fight for Delta recovery and expanded US-Mexico partnerships;
- Efforts to move forward with more flexible use of tribal water resources; and,
- Opportunities and constraints shaping system-wide conservation and augmentation efforts.



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Agenda Day One: Thursday, June 8th

Welcoming Remarks

8:00-8:10

Doug Kenney, Director, Western Water Policy Program, GWC

Morning Session One

8:10-9:30

The Salton Sea

Participants from California and the non-governmental sector discuss ongoing efforts to stabilize and manage a diminished Salton Sea in a way that protects public health, environmental values, and southern California water efficiency programs.

Bruce Wilcox, Assist. Sec. for Salton Sea Policy, California Natural Resources Agency (“California’s interests and obligations regarding a Salton Sea solution”)

Kevin Kelley, General Manager, Imperial Irrigation District (“What does the IID need to see in a Salton Sea solution, and why?”)

Mike Cohen, Pacific Institute (“What’s the environmental end-game look like for the Salton Sea?”)

Morning Networking Break

9:30-10:00

Refreshments provided in Boettcher Hall

Morning Session Two

10:00-12:00

Lower Basin Drought Contingency Planning

Key Lower Basin water managers discuss the complex negotiations to protect storage levels at Lake Mead through a mix of aggressive conservation and curtailment schedules.

Terry Fulp, Director, Lower Colorado River Region, U.S. Bureau of Reclamation (“How does DCP address Lake Mead’s ‘math problem’?”)

Tom Buschatzke, Director, Arizona Department of Water Resources (“Is the DCP good for Arizona?”)

Governor Stephen Roe Lewis, Gila River Indian Community (“Efforts by the GRIC to advance improved Colorado River management in Arizona”)

Jeff Kightlinger, General Manager, Metropolitan Water District of Southern California (“What brings Southern California to the table?”)

John Entsminger, General Manager, Southern Nevada Water Authority (“How does DCP influence the water picture for Southern Nevada?”)

Lunch

12:00-1:00

Lunch provided on site, Schaden Commons 2nd Floor

Afternoon Session One

1:00-2:45

Minute 32X

Building on the widely heralded 319 agreement, representatives from the US and Mexican governments and the non-governmental community discuss the latest push forward to conserve water and environmental resources across an increasingly tense international border.

Jennifer Gimbel, Senior Water Policy Scholar, Colorado State University (former Principal Deputy Assistant Secretary of Interior, Water and Science) (“The evolving international relationship”)

Edward Drusina, Commissioner (USA), International Boundary and Water Commission (“US interests in 32X”)

Roberto Salmón, Commissioner (Mexico), International Boundary and Water Commission (“Mexican interests in 32X”)

Jennifer Pitt, Director, Colorado River Project, Audubon (“What does it mean for ecological resources?”)

Afternoon Networking Break

2:45-3:15

Refreshments provided in Boettcher Hall

Panel Discussion and Q&A

3:15-4:45

The Sum of the Parts: A Blueprint for Lower Basin Sustainability?

The day concludes with a panel discussion focused on how these three elements (Salton Sea, DCP, and 32X) all piece together, and if they collectively constitute a true framework for sustainability. Speakers include:

Larry MacDonnell, Adjunct Professor, University of Colorado

Don Ostler, Executive Director, Upper Colorado River Commission

Karl Flessa, Professor, University of Arizona

Steve Mumme, Professor, Colorado State University

Dennis Lettenmaier, Professor, UCLA

Allison Harvey Turner, Program Director (Environment), S.D. Bechtel Jr. Foundation

Agenda Day Two: Friday, June 9th

Keynote

8:00-8:40

Mike Connor, former Deputy Secretary of the Interior

Morning Session One

8:40-10:00

Activity Upstream

Speakers will address a wide variety of Upper Basin programs, plans, and negotiations that are at a critical juncture.

Taylor Hawes, Colorado River Program Director, The Nature Conservancy
("Moving forward with the System Conservation Program: The challenge of shepherding water downstream")

Amy Haas, Deputy Executive Director and General Counsel, Upper Colorado River Commission ("Opportunities and challenges associated with re-operating federal reservoirs")

Eric Kuhn, General Manager, Colorado River District ("Managing compact compliance in a drought emergency")

Morning Networking Break

10:00-10:30

Refreshments provided in Boettcher Hall

Morning Session Two

10:30-12:00

Additional Concerns and Considerations

Additional issues that might facilitate or impede problem solving in the basin are reviewed.

Brad Udall, Senior Water and Climate Research Scientist, Colorado State University (“Disappearing snowpack in a warming climate”)

Jack Schmidt, Professor, Utah State University (“Rethinking the role of Lake Powell?”)

Mike Chiropolos, Attorney and Counselor, Chiropolos Law (“Can we really achieve sustainability while pursuing new depletions?”)

Darryl Vigil, Chairman, Colorado River Basin Ten Tribes Partnership (“Insights and opportunities from the Tribal Water Study”)

Lunch

12:00-1:00

Lunch provided on site, Schaden Commons 2nd Floor

Afternoon Session One

1:00-3:00

Expanding the Role of Markets

How can market forces be better utilized to address regional water problems?

Brett Bovee, Intermountain Regional Director, WestWater Research (“A snapshot of western water markets”)

Dan Keppen, Executive Director, Family Farm Alliance (“Making water markets work for farmers and rural communities”)

Bonnie Colby, Professor, University of Arizona (“Best examples linking agricultural conservation and markets”)

Mary Kelly, Partner, Culp & Kelly, LLP (“Finding water for environmental objectives”)

Tom Iseman, former Principal Deputy Assistant Secretary of Interior, Water and Science (“What is the federal role in western water markets?”)

Afternoon Networking Break

3:00-3:30

Refreshments provided in Boettcher Hall

Panel Discussion and Q&A

3:30-5:00

Tying it all Together

Following a 30+ year tradition, the conference concludes with our panel of “big thinkers” tasked with assessing how all these efforts fit together, what is (or should be) coming next, what constraints or wildcards loom, and what lessons and principles should guide future action. Speakers include:

Anne Castle, University of Colorado (former Assistant Secretary of the Interior, Water and Science)

Robert Adler, Professor and Dean, University of Utah Law School

John Fleck, Director, University of New Mexico Water Resources Program

David Palumbo, Deputy Commissioner for Operations, Bureau of Reclamation

Speaker Biographies (alphabetical by last name)

Robert Adler



Robert W. Adler is the Jefferson B. and Rita E. Fordham Presidential Dean and Distinguished Professor of Law at the University of Utah, S.J. Quinney College of Law, where he is also affiliated with the Wallace Stegner Center for Land Resources and the Environment. He is the author or co-author of six books on environmental and water law and policy, and a wide range of articles and book chapters in the field of environmental and natural resources policy. He has represented Utah and national environmental groups in *pro bono* litigation, and served on the boards of local and national organizations and advisory groups, including the League of Conservation Voters, FRIENDS of Great Salt Lake, Hawkwatch International, EPA Federal Advisory Committees, and a Taskforce on Unfunded Federal Mandates for the U.S. Advisory Commission on Intergovernmental Relations.

Brett Bovee



Brett Bovee is a Regional Director for WestWater Research and leads the Colorado office in Fort Collins. Brett brings over 12 years of experience conducting a variety of engineering, economic, and water rights studies across the Western states. Many of these projects have been focused on water resources management and water development concepts in the pursuit, protection, and utilization of water rights. Since joining WestWater, Brett has performed dozens of focused water right valuation studies and broader economic and water market analyses. Brett brings a unique perspective to projects, combining a background in water resources engineering with a developed knowledge of water rights and economics. Brett holds B.S. and M.Eng. degrees in biological and environmental engineering from Cornell University, with a focus in water resources. He is a licensed professional civil engineer in five western states, and is also a recognized hydrologist.

Tom Buschatzke



Tom Buschatzke was appointed Director of the Arizona Department of Water Resources in January 2015. Prior to this appointment, he served as the Assistant Director of the Department's Water Planning Division, overseeing the Colorado River Management, Active Management Areas, Planning and Data Management, Assured and Adequate Water Supply and Recharge Permitting, and Statewide Planning programs and Tribal Liaison. He is responsible for multiple planning and policy, regulatory and permitting programs for the management of the state's water supplies.

Mr. Buschatzke serves as Arizona's principal negotiator on matters relating to the Colorado River, is the Chairman of the Arizona Water Banking Authority and Co-Chair of the Drought Inter-Agency Coordinating Council and represents the State in Indian water right negotiations.

Mr. Buschatzke's career in Arizona water resources began with a 1982 Arizona Department of Water Resources internship in the Phoenix Active Management Area and he ultimately became a Program Manager in the Adjudications Division. He holds a Bachelor of Science in Geology from the State University of New York at Cortland.

Anne Castle



Anne Castle is a senior fellow at the Getches-Wilkinson Center for Natural Resources, Energy, and the Environment at the University of Colorado, focusing on western water issues. She has recently authored reports on urgent Colorado River policy issues and recommended infrastructure projects to improve overall sustainability in the Colorado River Basin. From 2009 to 2014, she was Assistant Secretary for Water and Science at the U.S. Department of the Interior where she oversaw water and science policy for the Department and had responsibility for the U.S. Bureau of Reclamation and the U.S. Geological Survey. While at Interior, Castle spearheaded the Department's WaterSMART program, which although not an entirely original name despite best intentions and multiple trademark searches, provides federal leadership on the path toward sustainable water supplies. She was the driving force behind the 2010 federal MOU addressing sustainable hydropower, the largest, least respected, and most vilified form of renewable energy in the country. Castle also provided hands-on leadership on Colorado River issues and was the Chair of the Glen Canyon Dam Adaptive Management Work Group and a champion of Minute 319 between the US and Mexico. The fact that the Colorado River descended further and further into drought during her tenure is generally believed not to be her fault. Castle is a recovering lawyer, having practiced water law for 28 years with the Rocky Mountain law firm of Holland & Hart.

Mike Chiropolos



Mike Chiropolos is an attorney who specializes in natural resources law and policy, energy, environment, and local government affairs. Core practice areas include watershed management, land protection, and citizen democracy. Mike worked as Lands Program Director and Counsel at Western Resource Advocates for 11 years. He practiced federal Indian Law for several years after Law School. He earned degrees at CU Law and Northwestern University.

Michael Cohen



Michael Cohen is a Senior Associate at the Pacific Institute, a non-profit organization based in California, with an office in Boulder. He has been a leading Salton Sea advocate for more than 19 years, developing revitalization proposals, promoting timely intervention, and writing articles, reports, and opinion pieces. Mr. Cohen is the lead author of three Pacific Institute reports on the Salton Sea: *Haven or Hazard: The Ecology and Future of the Salton Sea* (1999), *Hazard: The Future of the Salton Sea With No Restoration Project* (2006), and *Hazard's Toll: The Costs of Inaction at the Salton Sea* (2013). He served on the Natural Resources Agency's Salton Sea Advisory Committee from 2004-2007 and is a member of the Salton Sea Task Force's Agency Stakeholder Committee and several of its workgroups. Mr. Cohen has a Master's degree in Geography, with a concentration in Resources and Environmental Quality, from San Diego State University, and a B.A. in Government from Cornell University.

Bonnie Colby



Dr. Bonnie Colby is a faculty member at the University of Arizona in the Departments of Agricultural and Resource Economics, Hydrology and Atmospheric Sciences and Geography. Her research, teaching, and outreach focus on economic tradeoffs in water and energy management, climate change adaptation, and incentive-based agreements to improve water supply reliability for agricultural, environmental, and urban needs. Dr. Colby's undergraduate degree is from the University of California, Davis and her Ph.D. from the University of Wisconsin.

Colby has provided invited testimony to state legislatures, state and federal courts and the U.S. Congress. She has taught at Harvard University's Executive Training Programs and in professional training programs for judges and water masters, attorneys, engineers, appraisers and conservation leaders. She works with western states, federal agencies, private firms, tribal governments, water districts and NGOs to develop and implement new strategies to improve water and energy supply reliability and cost-effectiveness, and to resolve natural resource conflicts.

Dr. Colby has authored over one hundred journal articles and eight books, including *Risk and Resilience: The Economics of Climate, Water, and Energy in the Arid Southwest*; *Water Markets in Theory and Practice*; and *Braving the Currents: Resolving Conflicts Over the Water of the American West*.

Mike Connor



Mike Connor works with the Walton Family Foundation as an Environment Program Fellow. Prior to joining the Foundation, Connor served in the Obama Administration as the Deputy Secretary of the U.S. Department of the Interior from 2014 to 2017 and the Commissioner of the Bureau of Reclamation from 2009 to 2014.

As Deputy Secretary, Connor was the second highest ranking official at the Interior Department with responsibilities as the Chief Operating Officer of an agency with more than 70,000 employees and an annual budget of approximately \$13 billion. Connor was a key leader in implementing the Administration's priorities for Interior, including water policy and drought response actions, science-based strategies for landscape-level management of public lands, and actions to strengthen and improve the federal government's fulfillment of its trust responsibility to Native Americans. During his time at the Bureau of Reclamation, he led efforts to promote the sustainable use of water to effectively address challenges associated with water supply and power generation in the American West, including several major Indian water rights settlements, strategies to address water conflicts in California, New Mexico, Oregon and other western states, and the completion of two major binational agreements with Mexico on the Colorado River.

Connor has more than two decades of experience in the public sector. Before his time with the Obama Administration, he served as Counsel to the U.S. Senate Energy and Natural Resources Committee from 2001 to 2009. Prior to that time, Connor served at the Interior Department from 1993 to 2001 in the Solicitor's Office, and then as Director of the Secretary's Indian Water Rights Office.

Connor received his J.D. from the University of Colorado Law School and is admitted to the bars of Colorado and New Mexico. A native of New Mexico, he previously received a Bachelor of Science degree in Chemical Engineering from New Mexico State University and worked for GE.

Edward Drusina



Edward Drusina was appointed U.S. Commissioner of the International Boundary and Water Commission, United States and Mexico, in January of 2010. Commissioner Drusina serves on the Good Neighbor Environmental Board, which advises the President and Congress on border environment and infrastructure issues, and he co-chairs the Colorado River Leadership Team working to enhance U.S.-Mexico cooperation on Colorado River water management. In 2009 he was the Area Director of Paragon Project Resources, Inc., a national design and construction management company. From 2004 to 2009, Commissioner Drusina held various principal and executive engineering positions in the private sector. He partnered with Moreno Cardenas, Inc. (MCi) in forming OMNI Construction Services, LLC where he served as President. Prior to this, he was both a Senior Project Engineer and Corporate Associate with MCi, where he served as the construction manager for the off-site infrastructure for the world's largest inland desalination plant in Texas. From 1998 to 2004, he represented the City of El Paso on the Far West Texas Water Planning Group. Commissioner Drusina holds a Bachelor of Science degree in Civil Engineering from the University of Texas at El Paso, is a graduate of the United States Army Management Staff College, and is a Registered Professional Engineer in the State of Texas.

John J. Entsminger



John J. Entsminger oversees the operations of the Las Vegas Valley Water District, which serves more than 380,000 customer accounts, and the Southern Nevada Water Authority, which is responsible for acquiring, treating and delivering water to local agencies that collectively serve 2 million residents and more than 40 million annual visitors. He was appointed general manager by both agencies' Boards of Directors in early 2014, having previously served as director of environmental and water resource law and senior deputy general manager. Entsminger joined the organization in 1999 as an attorney.

Entsminger has spent his career addressing the unique water challenges facing Southern Nevada. He has been instrumental in developing inter basin and international agreements protecting Lake Mead water elevations, including the 2007 Colorado River Interim Guidelines and Minute 319 to the 1944 U.S. - Mexico Water Treaty. In April 2014, he was appointed by Governor Sandoval to serve as Nevada's lead negotiator on Colorado River matters.

On the national front, Entsminger serves on the Boards of Directors of the Association of Metropolitan Water Agencies, the Water Research Foundation, and the Desert Research Institute Foundation Board of Trustees.

Entsminger is a graduate of the University of Northern Colorado and of the University of Colorado School of Law, where he was awarded the Charles N. Woodruff Natural Resources Law Fellowship. He and his family have been in Las Vegas for nearly 20 years.

John Fleck



John Fleck is Professor of Practice in Water Policy and Governance in the University of New Mexico Department of Economics and director of the university's Water Resources Program, where he co-teaches classes in contemporary water policy issues, modeling, and technical communication for water managers. He is the author of the book *Water is for Fighting Over and Other Myths About Water in the West*, an exploration of solutions to the Colorado River Basin's water problems, published by Island Press.

Karl Flessa



Karl Flessa is Professor of Geosciences at the University of Arizona. He and his students have been studying the Colorado River delta since 1992. They have documented the effects of upstream water diversions on the fauna of the river's estuary and estimated flows necessary for their restoration. Flessa directed the NSF-supported Research Coordination Network: Colorado River Delta, the environmental monitoring program for the Ciénega de Santa Clara during the test run of the Yuma Desalting Plant, and is currently the co-Chief Scientist for the Minute 319 Monitoring Program for the Colorado River Delta. He was recently a Distinguished Visiting Scientist at Australia's CSIRO, where he studied river management in the Murray-Darling Basin. He received his undergraduate degree at Lafayette College and his Ph.D. from Brown University.

Terry Fulp



Dr. Terrance (Terry) Fulp is the Regional Director of the Bureau of Reclamation's Lower Colorado Region. Headquartered in Boulder City, Nevada, the Region encompasses the last 700 miles of the Colorado River to the Mexican border, which includes most of Arizona, southern Nevada, and southern California. A Reclamation employee since 1989, Terry is responsible for implementing the Secretary of the Interior's water master functions in the Lower Basin, including water delivery, accounting, and contracting. Terry oversees hydropower operations and maintenance for Regional facilities including Hoover Dam, as well as the implementation of the Lower Colorado River Multi-Species Conservation Program, a multi-agency effort to conserve and work towards the recovery of endangered species and to protect and maintain wildlife habitat on the lower Colorado River.

Terry has been instrumental in the negotiation and execution of several major water policy initiatives in his career. These include the 2007 Interim Guidelines for the coordinated operation of Lake Powell and Lake Mead through 2026 and Minute 319, a binational agreement for Colorado River management pursuant to the 1944 Treaty with Mexico.

Jennifer Gimbel



Jennifer Gimbel is a Senior Water Policy Scholar at the Colorado State University Water Institute. She is currently focused on Colorado River issues, with an emphasis on the Upper Basin. She spent three years in Washington D.C. where she was the Principal Deputy Assistant Secretary for Water & Science at the Department of the Interior, overseeing the U.S. Geological Survey and Bureau of Reclamation. She also was Deputy Commissioner for the Bureau of Reclamation and Counselor to the Assistant Secretary. Jennifer has over 30 years' experience on Colorado River issues. She was the Upper Colorado River Compact Commissioner while working as the Director of the Colorado Water Conservation Board, and participated in the negotiations for Minute 319. She dealt with numerous Colorado River issues working for both the Colorado and Wyoming Attorneys General Offices.

Amy Haas



Amy Haas is the Deputy Executive Director and General Counsel for the Upper Colorado River Commission where she represents the shared interests of the Upper Division States of Colorado, Utah, New Mexico and Wyoming in the Colorado River. Previously, Amy worked as General Counsel for the New Mexico Interstate Stream Commission overseeing legal issues arising from the 8 interstate stream compacts to which New Mexico is a party. From March 2015 through May 2017, Amy served as New Mexico's Upper Colorado River Commissioner and its Colorado River Basin States Representative. Prior to joining New Mexico state government in 2005, Amy was in private practice concentrating in the areas of water and land use law.

Taylor Hawes



Taylor Hawes serves as the Nature Conservancy's Colorado River Program Director. The Program's goal is to conserve the freshwater biodiversity of the Colorado River Basin while also meeting community needs for water. Her responsibilities include coordinating TNC's freshwater conservation efforts across the Colorado River Basin, implanting priority strategies, and working with key stakeholders who are critical to conservation success across the Colorado River Basin. Taylor has worked on Colorado River issues for twenty years. She practiced water, local government, water quality, and land use law on Colorado's Western Slope before joining the Conservancy. Taylor recently served as the co-chair of Reclamation's Basin Study Environmental and Flows Workgroup. She currently serves as a Governor appointee to Colorado's Interbasin Compact Committee and on the Murray-Darling Basin Balanced Water Fund Advisory Board in Australia. Originally from

Atlanta, Georgia, Taylor received a B.A. in political science from University of North Carolina at Chapel Hill and her *Juris Doctorate* degree from Vermont Law School.

Tom Iseman



Tom Iseman is a strategic leader with 20+ years of experience developing and implementing collaborative solutions to complex natural resource issues, with a focus on the Western United States. Most recently, Tom served as the Principal Deputy Assistant Secretary for Water and Science in the U.S. Department of the Interior. In this capacity, Tom provided oversight and acted as the primary policy lead for the U.S. Geological Survey, the nation's premier natural science and information agency, and the Bureau of Reclamation, the largest wholesale water supplier in the country. Tom represented Interior in key water conservation, drought and infrastructure initiatives across the administration, and he directed Interior's WaterSMART initiative.

Prior to joining Interior, Tom worked on water resource issues for the Western Governors' Association and The Nature Conservancy of Colorado. Tom has extensive experience in water resource planning and policy in the Western United States. He has led projects on drought and climate adaptation, water infrastructure, and the energy-water nexus, and he co-authored reports on water markets for Interior and WGA. Tom earned a B.A. in history from Princeton University and an M.S. in freshwater ecosystems from the University of Michigan.

Kevin Kelley



Kevin Kelley is a native of Brawley, California and a lifelong resident of the Imperial Valley. A 1984 graduate of the University of Southern California, where he majored in communications arts and sciences, Kelley's background in media consulting, marketing communications and public affairs is wide-ranging and extensive. He is the former editor and publisher of Valley Grower magazine, an agricultural trade publication that was acquired by the Imperial Valley Press in 2003. As a freelance writer, his work has appeared in most major metropolitan newspapers in the West.

From 2005-2006, he served as editorial page editor of the Imperial Valley Press. Recruited to the Imperial Irrigation District in June 2006 to lead IID's public affairs and communications efforts, Kelley was named general manager in May 2011.

Mary Kelly



Mary Kelly has three decades of experience as an environmental lawyer, having worked in private practice and the not-for-profit sector. She is a founding partner of Culp & Kelly, LLP, launched in June 2016 to provide legal and policy services to help clients respond to critical issues surrounding water and natural resource management in the American West. With broad expertise in water law and policy, natural resources law and policy, and strategic planning and policy engagement, Culp & Kelly serves a diverse client base, including foundations and non-governmental organizations, municipalities, industry, agricultural interests, and investors.

Before co-founding Culp & Kelly, Ms. Kelly ran the consulting firm, Parula, LLC, for 6 years. Her clients there included non-governmental organizations and foundations, with a heavy focus on water in Texas and the Colorado River Basin. From 2002 to 2010, Ms. Kelly served in a variety of roles at the Environmental Defense Fund, including as Vice President for Rivers and Deltas, managing EDF projects to protect and restore habitat, rivers and coastal deltas across the U.S. Ms. Kelly joined EDF after a decade as the Executive Director of the Texas Center for Policy Studies. Previous to that, she practiced law in Texas, representing citizens and local governments in a wide variety of environmental matters. J.D. University of Texas School of Law, 1986; B.S. Chemical Engineering, University of Arizona, 1979.

Doug Kenney



Doug Kenney is Director of the Western Water Policy Program within the University of Colorado Law School in the Getches-Wilkinson Center for Natural Resources, Energy and the Environment. He is also founder and current chair of the Colorado River Research Group. He has written extensively on several water-related issues, including law and policy reform, river basin and watershed-level planning, climate change adaptation, and water resource economics. Dr. Kenney has served as a consultant to a variety of local, state, multi-state, and federal agencies, including several Interior Department agencies, EPA, and the US Forest Service; and national governments and NGOs in Asia and Africa. Additionally, he has made presentations in 20 states (and the District of Columbia), 7 nations, and 4 continents. He has a B.A. in biology from the University of Colorado, a M.S. in Natural Resources

Policy and Administration from the University of Michigan, and a Ph.D. in Renewable Natural Resource Studies from the University of Arizona.

Dan Keppen



Dan Keppen is Executive Director for the Family Farm Alliance, a non-profit association that advocates for family farmers, ranchers, irrigation districts and allied industries in 17 Western States. He has twenty-eight years of experience in water resources engineering and policy matters. Keppen has worked primarily in advocacy positions representing Western irrigators, including executive director of the Klamath Water Users Association, where he was intimately involved with one of the most contentious water crises in the West. In his 12 years at the Alliance, representatives of the organization have been asked to testify before Congressional water, environment and agriculture committee hearings 59 times. He is a registered civil engineer in California. Keppen received his M.S. in Water Resources Engineering from Oregon State University and his B.S. in Petroleum Engineering from the University of Wyoming.

Jeff Kightlinger



Jeffrey Kightlinger is general manager and chief executive officer for The Metropolitan Water District of Southern California. The Metropolitan Water District is the largest municipal water provider in the nation delivering an average of over 2 billion gallons of water a day to 19 million customers across Southern California. Metropolitan serves one out of every two Californians in the six counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura.

Kightlinger was appointed general manager in February 2006. As general manager, he manages the District's \$1.8 billion annual budget and 1,800 employees to ensure the safe and reliable delivery of high quality water every day throughout Southern California. He reports to a board of 37 members representing 26 member agencies.

Kightlinger has an undergraduate degree from the University of California at Berkeley and a law degree from Santa Clara University. He serves on a number of boards including the Coro Foundation, the USC Price School of Public Policy, the UCLA Sustainability Advisory Board, the Climate Action Reserve, the California Foundation on the Environment and the Economy, the Los Angeles Economic Development Council and the Los Angeles Chamber of Commerce, among others.

Eric Kuhn



Eric is the General Manager of the Colorado River District, a position he has held since 1996. He earned his Bachelor's Degree in Engineering from the University of New Mexico and a Master's Degree in Business Administration from Pepperdine University in California.

Prior to working for the Colorado River District, he served as an engineer officer aboard nuclear submarines in the U.S. Navy and worked as start-up engineer for Bechtel Power Corp.

Eric started employment with the Colorado River District in 1981 as Assistant Secretary-Engineer. He has served on the Engineering Advisory Committee of the Upper Colorado River Compact Commission since 1981. From 1994-2001, he served on the Colorado Water Conservation Board representing the Colorado River mainstem. In

2006, Eric was appointed by Governor Owens as an at-large representative on the Colorado Interbasin Compact Committee, a position he continues to hold.

Dennis Lettenmaier



Dennis P. Lettenmaier (Ph.D., University of Washington, 1975) is a Distinguished Professor with interests in hydrologic modeling and prediction, hydrology-climate interactions, and hydrologic change. He is an author or co-author of over 300 journal articles. He was the first Chief Editor of the American Meteorological Society Journal of Hydrometeorology, and is a past President of the Hydrology Section of the American Geophysical Union. He is a Fellow of the American Geophysical Union, the American Meteorological Society, and the American Association for the Advancement of Science, and is a member of the National Academy of Engineering.

Stephen Roe Lewis



Governor Stephen Roe Lewis was raised in Sacaton, "Gu-u-Ki", on the Gila River Indian Community. Governor Lewis graduated from Arizona State University with a Bachelor's of Science and pursued graduate studies at John F. Kennedy School of Government at Harvard University. Governor Lewis has long been an advocate for Native American issues nationally. In the area of Indian Education, Mr. Lewis was selected to serve as a Board member for the National Indian Education Association (NIEA), and Delegate to the White House Conference on Indian Education.

Governor Lewis has served the Community as a Gaming Commissioner for the Gila River Gaming Commission, as a member of the Board of Directors for the Gila River Telecommunications, Inc., and as a member of the Board of Directors for the Gila River Healthcare Corporation.

Governor Lewis was the first Native film curator for the Sundance Film Festival in Park City, Utah and was an Associate Producer for the groundbreaking and critically acclaimed TBS six-part feature documentary, "The Native Americans."

Currently Governor Lewis serves on the Board of Directors for the Native American Rights Fund (NARF), the Executive Board for the National Indian Gaming Association (NIGA) and the Board of Trustee for the Heard Museum of Phoenix.

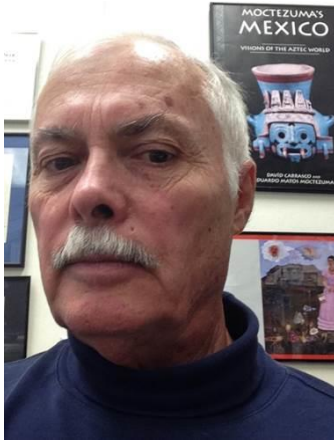
Lawrence MacDonnell



Lawrence J. MacDonnell is an attorney and consultant in Boulder who retired in 2013 as a professor of law at the University of Wyoming College of Law where he taught water law, public land law, and natural resources law. He is also a senior fellow at the Getches-Wilkinson Center, a member of the Colorado River Research Group, and a member of the Colorado River Futures Project. He was the first director of the Natural Resources Law Center at the University of Colorado School of Law, a position he held between 1983 and 1994. Between 1995 and 2009 he worked as an attorney and consultant in Boulder, Colorado. His work focused primarily on water resources and on ways to make natural resource development more environmentally compatible. In addition to his continuing work on Colorado River issues, MacDonnell has worked on implementation of the Colorado Water Plan during recent years. His publications include

numerous books, law review articles, other journal articles, and research reports. He has given over 250 invited presentations. He is married, with three daughters.

Steve Mumme



Steve Mumme is professor of political science at Colorado State University where he specializes in transboundary water and environmental management with an emphasis on the U.S.-Mexican border. The author or coauthor of various monographs and numerous journal articles his most recent study, "Constructing Equity during the Salinity Crisis, 1961-1973: Mexico, the United States, and the Politics of Sharing on the Colorado River," appears in *Journal of the Southwest* this summer (2017).

Don Ostler



Don Ostler is the Executive Director and Secretary for the Upper Colorado River Commission which was created in 1948 and ratified by Federal Compact. The Commission is comprised by governor's representatives from the states of Colorado, New Mexico, Utah and Wyoming and one representative appointed by the President. The Commission is responsible to administer appropriate Federal laws respecting the uses and deliveries of the water of the Upper Basin of the Colorado River. Don has been heavily involved during this time in negotiations with the 7 Basin States of the Colorado River and the country of Mexico to develop a drought management plan including shortage management, improved efficiency of operations and augmentation of the water supply.

Previously, Don served in a politically appointed position as the Director of the Utah Division of Water Quality and Executive Secretary to the Utah Water Quality Board. In this capacity he was responsible for protection of the quality of all surface water and ground water within the state of Utah. He was involved with the legislative branch of government in passing needed water legislation. Under his leadership the first programs to protect ground water quality in Utah were developed. Don worked to improve coordination of water quality and quantity issues on a watershed basis. Don has been involved in many policy issues with many opposing stakeholders where collaboration was the only mechanism to progress.

David Palumbo



David Palumbo is the Bureau of Reclamation's Deputy Commissioner of Operations. He oversees operations in Reclamation's five regions, the Native American and International Affairs Office, and Technical Resources, which includes the Technical Service Center, Hydropower Office, Dam Safety Officer/Design, Estimating, Construction, and Research & Development.

Prior to this appointment in 2015, Palumbo served Reclamation's Lower Colorado Region, where he became the Deputy Regional Director in 2012. In this position, he oversaw complex water and power programs in the region, including Hoover Dam operations. He also managed and led Native American activities, including those related to negotiating and implementing Indian water rights settlements. He has built strong, collaborative relationships with customers and stakeholders throughout the Colorado River basin, including those with Tribal nations and the country of Mexico.

He joined Reclamation in 2005 as a project manager where he led the construction project of the Brock Reservoir Project in Southern California's Imperial Valley. This \$172 million project was completed ahead of schedule and under budget. The facility provides enhanced storage capacity to improve management and conservation of Colorado River water.

Palumbo holds a Bachelor of Science degree in Civil and Environmental Engineering from the University of Nevada, Las Vegas and a Bachelor of Arts degree in English Literature from Notre Dame. He also has Masters degrees in both Civil Engineering and Engineering Mechanics from Columbia University and in English Literature from the University of Nevada, Las Vegas. He is a licensed civil engineer in California and a certified project manager.

Jennifer Pitt



Jennifer Pitt is the Colorado River Program Director for the National Audubon Society, where she focuses efforts to protect and restore freshwater and riparian habitats and reform water policy in the Colorado River Basin. She works with water users throughout the Colorado Basin to develop practical programs to restore river habitats and to dedicate water to critical environmental resources. Her expertise includes U.S.-Mexico border environmental issues, the legal and policy framework for Colorado River management, water markets, and the science of river restoration. Jennifer studied at Harvard College for her A.B. and Yale University for her M.E.S.

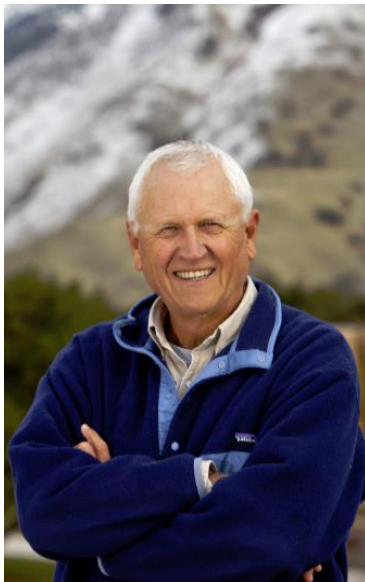
Roberto Salmon



candidate for a doctoral degree there.

Roberto Salmón Castelo, Mexican Commissioner, for the International Boundary and Water Commission (Comisión Internacional de Límites y Aguas, CILA), has a wide range of experience in hydraulic projects. He was Northwest Regional Manager of the National Water Commission (CONAGUA) from 2002 to 2006 and from then until 2008 he served as General Manager of the Northwest Basin Unit based in Hermosillo, Sonora. Additionally, Mr. Salmón Castelo was Planning and Special Projects Director for the Sonora Center for Research and Development in Natural Resources and has remained a partner in a variety of companies that carry out basin management projects and environmental studies. He has a Bachelor of Science degree from the University of Arizona, where he also received a Master of Science degree. Additionally, he is doing advanced studies in Water Resource Administration at the University of Arizona and is currently a

Jack Schmidt



Jack Schmidt is Professor of Watershed Sciences and Director of the Center for Colorado River Studies at Utah State University. For more than 30 years, he and his graduate students have studied the geomorphic processes and conditions of the Colorado River, especially in Grand Canyon and in the national parks of the Green River. Jack served as Chief of the USGS/Grand Canyon Monitoring and Research Center between 2011 and 2014.

Allison Harvey Turner



Allison Harvey Turner joined the S.D. Bechtel Jr. Foundation in 2003, and she oversees the Foundation's Environment Program. Allison directs strategy, and manages program staff and grantmaking to advance water management and land stewardship in California. In this role, she develops efforts to support effective programs, build strong partnerships, and develop organizational capacity. Before moving into the role of Program Director, Allison led the development and implementation of the Foundation's water and migratory bird strategies. Allison serves on the Board for Audubon California and the Advisory Board for Sustainable Conservation. She received a Bachelor of Science degree in Chemical Engineering from the University of California, Los Angeles.

Brad Udall



Brad Udall is a Senior Water and Climate Research Scientist/Scholar at Colorado State University's Colorado Water Institute. Brad's expertise includes climate change, hydrology and related policy issues of the American West. He is a contributing author to the 4th National Climate Assessment due out in 2018. He was a contributing author to the 2014 Intergovernmental Panel on Climate Change assessment report, and the lead author of the water sector chapter of the 2009 Global Climate Change Impacts in the United States. He has provided congressional testimony, input to several National Academy of Science panels, and has given hundreds of talks on climate change impacts to water resources, water law, and water policy. He is a co-investigator with the Department of Interior Southwest Climate Science Center and a collaborator with the new USDA Northern Plains Climate Hub. Brad was formerly the

Director of the Getches-Wilkinson Center for Natural Resources, Energy and Environment at the University of Colorado Law School and Director of the University of Colorado - NOAA Western Water Assessment.

Darryl Vigil



Darryl Vigil is the water administrator for the Jicarilla Apache Nation, and is the Chairman of the Colorado River Ten Tribes Partnership. Member tribes of the Ten Tribes Partnership are the Chemehuevi Indian Tribe, the Cocopah Indian Community, the Colorado River Indian Tribes, the Fort Mojave Indian Tribe, the Jicarilla Apache Tribe, the Navajo Nation, the Northern Ute Tribe, the Quechan Indian Tribe, the Southern Ute Indian Tribe and the Ute Mountain Ute Indian Tribe. In 2014, the Partnership and the Bureau of Reclamation began work on a tribally focused water supply and demand study (Tribal Water Study), following on the 2012 Basin Study.

Bruce Wilcox



Bruce Wilcox is the California Assistant Secretary for Salton Sea Policy, where he manages the development and implementation of the State's Salton Sea Management program. In that role he works closely with the Salton Sea Authority, the water districts, counties and other Salton Sea stakeholders to develop a management strategy for the Salton Sea.

Wilcox has a Bachelor's of Science degree in reclamation ecology and has worked on numerous large scale mitigation or restoration programs over the last 25 years. He managed the development of IID and Imperial County's Salton Sea Restoration and Renewable Energy Initiative framework program and is a member of the Salton Sea Authority's Ad Hoc Project development Committee.

Prior to his appointment as Assistant Secretary by Governor Brown he was the Manager of Environmental and Salton Sea programs for the Imperial Irrigation District. There he managed the development and implementation of the QSA water transfer mitigation program and the development of Salton Sea programs.

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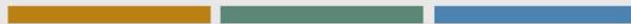
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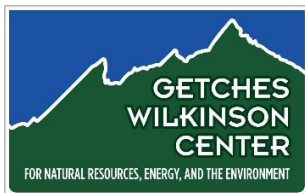
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University of Colorado Law School



Established in 1892, the University of Colorado Law School is one of the top public law schools in the United States. Colorado Law School's diverse student body is selected from among the statistically best applicants from every corner of the nation representing over 100 undergraduate institutions, and its highly published faculty is dedicated to interacting with students both inside and outside the classroom. The school's state-of-the-art green building is located at the base of the Rocky Mountains in beautiful Boulder, Colorado. With about 500 students and a low student to faculty ratio, Colorado Law School is a thriving academic community where the study of law is embraced to create leaders who recognize the civic responsibilities essential to the legal profession.

Getches-Wilkinson Center for Natural Resources, Energy, and the Environment



The Getches-Wilkinson Center for Natural Resources, Energy and the Environment continues the long-standing work of Colorado Law's Natural Resources Law Center. The newly renamed Center endeavors to serve the people of the American West, the nation, and the world through creative, interdisciplinary research, bold, inclusive teaching and innovative problem solving in order to further true sustainability for our use of the lands, waters, and environment. Major programs and initiatives focus on natural resources, water and public lands issues in Colorado and the West; energy and environmental security in the developing world; electricity regulation and energy policy; climate change law and policy; and native communities and environmental justice. The name comes from the contributions of two iconic figures in the law school's environmental law history, David Getches and Charles Wilkinson.

Upcoming Events

[GWC Distinguished Lecture](#)

**Mary Wood, Philip H. Knight Professor, University of Oregon School of Law
Faculty Director, Environmental and Natural Resources Law Center**

Wednesday, September 20th

5:30 p.m.

University of Colorado Law School, Wittemyer Courtroom

More information coming soon.