JOHN D. WIENER, J.D., Ph.D.

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EDUCATION

Ph.D., Geography, University of Colorado, 1990 Dissertation entitled, "A Social Science Basis for Prescription of Land Tenure for Alaska Natives." Juris Doctor, New York University School of Law, 1977. (Member, Wyoming Bar, 1977-2007.) A.B., Kenyon College, *cum laude*, 1970-1973.

ACADEMIC/LEGAL RESEARCH EXPERIENCE

1993 - Present: Research Associate/Research Faculty, Program on Environment and Society, Institute of Behavioral Science, University of Colorado; Applications of climate information in agricultural water management, human dimensions of global change, resource management, natural hazards. 2012 research proposals to USDA, Climate-Responsive Irrigation Workshop, and National Science Foundation, Socio-Ecological Systems Applications to Agricultural Water and Land Resilience in the Western U.S.; declined. 2013 research proposal to USDA, Collaborative Agricultural Planning for Western Irrigation Sustainability, declined. 2014 research proposal to USDA, Ditch Company Planning for Sustainability., declined. 2015 research proposal to USDA, with Brett Bovee, P.E., Intermountain Director, WestWater Research Inc., and John McKenzie, Executive Director of the Ditch and Reservoir Company Alliance, Western Irrigation Water Sharing: Building Capacity in the Agricultural Sector.

2008- 2013: Visitor, Research Applications Laboratory, National Center For Atmospheric Research, Boulder, CO. Work with Dr. David Yates, two NOAA-funded projects I proposed, preparation of a large NSF proposal in 2010 with several RAL scientists.

2008-2011: Co-P.I., "Decision Support for Climate-Responsive Urban and Agricultural Water Supply and Demand", with Dr. David Yates, Research Applications Program, National Center for Atmospheric Research, Boulder, CO.

2005-2008: Co-P.I., "Research Support for Climate-Responsive Western Water Management: the Case of Agricultural Water Transfers"; Principal Investigator: Dr. David Yates, Research Applications Program, National Center for Atmospheric Research, Boulder, CO.

2003-2007: Co-P.I., "Climate-Informed Water Bank", funding from NOAA Office of Global Programs. Dr. Charles W. Howe, P.I., University of Colorado.

1998-2004: Co-P.I., "An Exploratory Assessment of the Potential for Improved Management of Water Resources through Increased use of Climate Information in Three Western States", Dr. Charles Howe, P.I., University of Colorado.

1997-1998: Course developer, "Globalization and Rural Sustainability", organization and development of multi-disciplinary team-taught course proposal from Program on Environment and Behavior, funded by Program on Global Change and Environmental Quality and Institute of Behavioral Science.

1996: Research Contractor, and drafter, <u>Colorado Strategic Multi-Hazard Mitigation Plan</u>, for Department of Local Affairs, Office of Emergency Management, State of Colorado, for submission to Federal Emergency Management Agency (Sec. 409 Plan).

1994: Research Contractor, literature review and interpretation of socioeconomic factors in flood management policy, for <u>Scientific Assessment and Strategy Team</u>, U.S. Federal Interagency Flood Management Review Team ("Galloway Report").

1992-1989: teaching, Visiting Assistant Professor, University of Wyoming; University of Colorado at Boulder Summer Session, Geography Department, University of Colorado at Colorado Springs, University of Colorado Continuing Education.

1986 <u>Research Contractor</u> for "Digest of Colorado Laws Related to Drainage and Flood Control," (statutory interpretation) for Colorado Water Conservation Board.

(Graduate study at University of Wyoming, regional planning and geography, 1982-1983; switched from program there to doctoral program, University of Colorado, geography, 1984).

1980 <u>Research Contractor</u> for background paper for U.S. Congressional Office of Technology Assessment, and Member, Advisory Panel on production potential of federal coal leases.

1978-1983 <u>Private Practice</u> of law in Laramie, Wyoming (environmental and social impacts of development of natural resources concentration).

1978-1982 <u>Consultant and Analyst</u> specializing in coal leasing and mining issues, energy policy, state and federal natural resource statutes and regulations, and environmental impact analysis. Clients and collaborators included Natural Resources Defense Council, Northern Great Plains Offices of Friends of the Earth and Sierra Club, and local groups.

1978-1980 <u>Technical Staff and subsequently Panel Member</u>, Environmental Caucus, National Coal Policy Project (Center for Strategic and International Studies, Georgetown University), specialized in research and writing of position statements and responses, and negotiation.

PUBLICATIONS

2016: Wiener, John D., Roger S. Pulwarty, and David Ware, Bite Without Bark: How the Socioeconomic Context of 1950s Drought Modified U.S. Responses to a Multi-year Extreme Climate Event. Weather and Climate Extremes 11 (2016): 80-94.

In press: Charles W. Howe and John D. Wiener, Reconciling Water Law and Economic Efficiency in Western Water Administration; forthcoming in <u>University of Denver Water Law Review</u> Vol. 19 No. 2, 2016.

2015: The Soil Degradation Paradox: Compromising our Resources When We Need them the Most. DeLong, Catherine, Richard Cruse, and John Wiener. <u>Sustainability</u> 2015, 7, 866-879; doi:10.3390/su7010866.

2015: Extended Abstract for US Committee on Irrigation and Drainage accepted with presentation, but medical prevention of attendance and hence not published.

2014: Invited review: Climate Change and Indigenous Peoples: The Search for Legal Remedies, Edited by Randall S. Abate and Elizabeth Ann Kronk, 2013, ISBN: 978-1-78100-179-0. 616 pp. \$46.60 (soft cover). Edward Elgar. Natural Hazards Observer May 2014 vol. XXXVIII (5): 10-14. http://www.colorado.edu/hazards/o/archives/pastobservers.html

2013: Letter to the Editor, on social creation of vulnerability and potential responses; <u>Natural Hazards Observer</u> XXXVIII (1): 2-3. (September 2013). http://www.colorado.edu/hazards/o/archives/pastobservers.html>.

2012: Conference Proceedings Paper, Wiener, J.D. and G.F. Sassenrath, Landscaping the Long-term: Water System and Irrigation Re-Visions for Sustainability. American Water Resources Association, Riparian Issues Conference, Denver, CO, June 25-29, Denver, CO.

2012 : From Fatalism to Resilience: Reducing Disaster Impacts With Systematic Investments, Hill, H., J.D. Wiener and K. Warner, <u>Disasters</u> 36(2): 175-194. (Economic model for resilience investing, Wiener focus on "translation", qualitative data applications of logic).

2011: Book Chapter, Achieving Effective Landscape Conservation: Evolving Demands, Adaptive Metrics. Sassenrath, G.F., J.D. Wiener, J. Hendrickson, J. Schneider, and D. Archer in Nowak, P. and M. Schnepf, Eds., <u>Managing Agricultural Lands for Environmental Quality II</u>; Soil and Water Conservation Society, Ankeny, Iowa.

2010: Invited article, "Improving Agriculture-to-Urban Water Transfers". Jan/Feb Issue, <u>Colorado Water</u> 27(1), (widely distributed in Colorado; publication of the Colorado Water Institute). (available at: http://www.cwi.colostate.edu/newsletters/2010/ColoradoWater_27_1.pdf).

2009: With J.M. Schneider (USDA ARS), first author, "Progress toward filling the weather and climate forecast needs of agricultural and natural resource management". <u>Journal of Soil and Water Conservation</u> 64(3), May; available: http://www.jswconline.org/content/64/3/100A.full.pdf+html>.

2009: Extended Abstract and Presentation, "Agency Problems in Irrigation Water Transfer: Who Works for What?", Universities Council on Water Resources, Annual Meeting, Chicago, 06-09 July 2009 (extended abstract in proceedings).

2009: Extended Abstract and Presentation, "Keeping it Together in Destabilized Times: Looking Past the Near Term", U.S. Committee on Irrigation and Drainage, Conference on Sustainability of Irrigation Districts, Reno, NV: 03-06 Jun, 2009; extended abstract published by USCID in Conference Proceedings.

2008: Riparian Ecosystem Consequences of Water Distribution Along the Colorado Front Range, first author, with K.A. Dwire, S.K. Skagen, R. Crifasi, and D. Yates, American Water Resources Association Water Resources Impact 10 (3): 18-22.

2008: Extended Abstract, Presentation, US Committee on Irrigation and Drainage Urbanization and Irrigation Conference, Towards Better Water Transfers in Colorado and Cumulative Cost Avoidance, May, Phoenix. Extended Abstract (15 pp) published in proceedings and available; presentation posted at: <www.colorado.edu/ibs/eb/wiener/>.

2007: Guide to Weather and Climate Information, in Ditch and Reservoir Company Alliance <u>Handbook</u> <u>for Ditch Companies</u>.

2007: "Water, Adaptation and Property Rights on the Snake and Klamath Rivers", Slaughter, Richard (Idaho State Economist) and John D. Wiener, <u>Journal of the American Water Resources Association</u>, 43(1): 1-14.

2004 Extended Abstract, "Water Banking in Colorado: An Experiment in Trouble?", U.S. Committee on Irrigation and Drainage, 2004 proceedings, <u>Water Rights and Related Water Supply Issues</u>, pp. 515-525.

2004 Extended Abstract and Presentation at American Meteorological Society Annual Meeting, "Small agriculture needs and desires for weather and climate information in a case study in Colorado", Seattle. (Extended abstract available electronically and from AMS.)

2004 "Can You Use Your Ditch to Win Friends, Get Benefits and Shift Risks?", <u>DARCA News</u>, 3(2), Ditch and Reservoir Company Alliance.

2004, with Tracey Bouvette and Sasha Charney, Perceptions of Drought and Drought Impacts, chapter in Bouvette, Ed., <u>Colorado Drought and Water Supply Assessment</u>, Colorado Water Conservation Board, Denver, CO;

http://www.cwcb.state.co.us/Conservation/Drought/Drought Water/index DWSA.html

1999: Peer reviewed article-length section, "Property, Agency, Time, Culture, Spirit", in Posey, Darrell, Ed., <u>Cultural and Spiritual Values of Biodiversity</u>, United Nations Environment Programme, and Intermediate Technology. London.

1998: Article. "Reframing Disaster Policy: The Global Evolution of Vulnerable Communities." <u>Environmental Hazards</u> Vol.1 (1): 39-44. (with Louise Comfort, Susan Cutter, Maureen Fordham, Kenneth Hewitt, Anthony Oliver-Smith, Walter Peacock, Roger Pulwarty, Ben Wisner and Arthur Krimgold).

1998, Monograph, "GIS Volkswagens", Disaster Preparedness and Emergency Response Association Monograph Series; (distributed by the Association; P.O. Box 280795, Denver, CO 80228).

1996: Topical Bibliography: <u>Selected Bibliography on Socioeconomic Issues in U.S. Flood Policy</u>, Natural Hazards Research Applications and Information Center, Boulder, CO. (Paper and internet publication)

1996: Article, Research Opportunities in Search of Federal Flood Policy, Policy Sciences 29 (4): 321-344.

1995: Peer-reviewed book chapter, Common Property Resource Management and Northern Protected Areas Under Climate Change, in <u>Human Ecology and Climate Change: People and Resources in the North</u>, D. Johnson and D. Peterson, Eds. (Taylor and Francis, 1995).

1994: Book review, <u>Coyotes and Town Dogs</u> (history of Earth First!), by Susan Zakin, in <u>Environmental History Review</u> Winter 1994.

1979: Article, Wyoming's Local Governments and the Quality of Growth -- A Preliminary Discussion, 14 Land and Water Law Review 491.

ACADEMIC PRESENTATIONS

2015: Presentation for Ditch and Reservoir Company Alliance, two workshops in December, in set with panel co-organized with John McKenzie, Executive Director of the Ditch and Reservoir Company Alliance.

2015: The Landscape Imperative and the Research Agenda. Extended Abstract and Presentation for the 2015 Universities Council on Water Resources/National Institute of Water Resources/Consortium of Universities for the Advancement of Hydrologic Sciences, Inc. annual meeting, June 16-18, Las Vegas, NV.

2015: Between Here and More Sustainable Farming. Poster for US Geological Survey North-Central Science Center Open Science Meeting, May 21-14, Fort Collins, CO.

2015: Transformational Change in Agriculture and Land Use: Old Tribes, New Tribes... Some Speculations on the Social Roots of Sustainability. Presentation for Second National Adaptation Forum, May 15-18, St. Louis, MO (and organizer for two panels at Forum, and service on program committee for Forum and proposal reviewer).

2015: Presentation at Colorado River Basin Forum, Grand Junction, October, delivered by a colleague due to medical prevention of attendance; presentation at Climate Prediction Applications Science Workshop accepted but withdrawn due to inability to attend, and presentation for Ditch and Reservoir Company Alliance annual convention withdrawn due to inability to attend.

2014: Webinar, for National Adaptation Forum, archived through Climate Adaptation Knowledge Exchange, 20 November 2014, "Out of Town, Not Out of Trouble: Becoming Unconventional: Adaptation Issues for Small Agriculture." Archived in Climate Adaptation Knowledge Exchange, National Adaptation Forum Webinar series (heavily referenced).

- 2014: An Outsider's View of Holes to Fill for Transition to Landscape Scales: Diversified Enterprise Budgets, Transition from Conventional, Voluntary Organizational Support, Etc.... Presentation to and posting by Soil and Water Conservation Society, annual meeting, 28-31 July, Lombard, IL.
- 2014: Presentations at 4 Workshops held by the Ditch and Reservoir Company Alliance, Durango, Brighton, Grand Junction and Pueblo, CO, July. Part of larger project on Ditch Company Planning Wants and Activities, and Ditch and Reservoir Company Alliance Comments and Input to Colorado Water Conservation Board, and others, on Colorado State Water Plan (throughout 2014). Also, co-author of report on findings from the Planning Workshops and subsequent discussions.
- 2014: Increasing Water Supplier Leverage on Land Use. Presentation to Universities Council on Water Resources, 19 June, Boston, MA.
- 2013: Thanks! And Think Big! [A Way Forward for Irrigated Agriculture]. Presentation to Arkansas Basin Roundtable [Arkansas Basin statutory group for HB05-1177 Colorado Water for the 21st Century Act; Basin group for Interstate Basin Compact process], 09 October, Pueblo, CO.
- 2013: Seeking Scenarios for Climate Resilience in Agriculture: What's the Problem? Climate Prediction Applications Science Workshop, 23-25 April, Logan, UT. Also modified for circulation to Rising Voices: Indigenous Perspectives on Climate Information and Climate Adaptation meeting, NCAR, Boulder, CO, 01-02 July.
- 2013: Symposium Organizer and Speaker, Adaptation for Landscaping Diversity in Farming and Habitat, with Dr. Richard Cruse, Iowa State and Director, Iowa Water Research Center; Dr. Reagan Waskom, Colorado State and Director, Colorado Water Institute, John McKenzie, J.D., Director, Ditch and Reservoir Company Alliance; and William Burnidge, M.S., M.B.A., Director, Eastern Colorado Programs, Grasslands Programs, The Nature Conservancy; National Adaptation Forum, April 2-4, Denver, CO. (Presentation posted; www.colorado.edu/ibs/eb/wiener/. And forthcoming by National Adaptation Forum, through Climate Adaptation Knowledge Exchange.)
- 2013: Landscaping the Long Term: Water-Focused Integrated Resource Management, with Dr. Gretchen Sassenrath, USDA ARS, and Dr. David Yates, National Center for Atmospheric Research; American Water Resources Association Agricultural Hydrology II, March 24-28, St. Louis, MO.
- 2013: The Photo Project (visual tools for common goal identification), Ditch and Reservoir Company Alliance, February 26-28, Grand Junction, CO.
- 2012: Cultural Issues vs. Voluntary Adaptation for Half of U.S. Farmland. Culture, Politics, and Climate Change Conference, September 10-13, Boulder, Co.
- 2012: Landscaping the Long-term: Water System and Irrigation Re-Visions for Sustainability. American Water Resources Association, Riparian Issues Conference, Denver, CO, June 25-29, Denver, CO. Conference Proceedings Paper available after meeting (because second author is Federal, not AWRA copyright).
- 2012: Landscaping, Scaling Up, and the "Hidden Half" of Farming: Self-Organization as Self-Defense. U.S. Department of Agriculture NIFA National Water Quality Program, May 24-27, Portland, OR.

- 2012: National Security is Dirt and Knowledge. Climate Prediction Applications Science Workshop, Climate Services for National Security Challenges. Miami, FL, 13 March 2012. (Also posted on www.colorado.edu/ibs/eb/wiener/ -- Presentations tab
- 2011: Civil Defense for U.S. Western and Plains Agricultural Regions, Universities Council on Water Research, Annual Meeting, Boulder, CO, 13 July 2011.
- 2011: Colorado Agriculture: the BIG picture, the long view, and the alternative (or at least one...) Invited presentation to Ditch and Reservoir Company Alliance (DARCA) Annual Meeting, Loveland, CO, 17 February 2011. This was for a non-science, agricultural group; available on request.
- 2011: Climate Information Applications for Resilience: Opening Wedge or Just Plain Sledge? Presentation to Climate Prediction Applications Science Workshop, Des Moines, Iowa, 02 March 2011. (Presentation posted to <www.colorado.edu/ibs/eb./wiener/> -- Presentations tab.)
- 2011: Puzzling the Pieces: Achieving Effective Conservation *in and of* Agricultural Productivity: Climate Responsiveness is Necessary But Not Sufficient. Poster for Climate Prediction Applications Science Workshop, Des Moines, Iowa, 01-04 March 2011, based in part on Sassenrath, G.F., USDA Agricultural Research Service, J.D. Wiener, J.E. Schneider, J. Hendrickson, and D. Archer, all USDA Agricultural Research Service, "Achieving Effective Landscape Conservation: Evolving Demands, Adaptive Metrics," in Managing Agricultural Lands for Environmental Quality II, 2011, Soil and Water Conservation Society, Ankeny, IA.
- 2011: Hand-outs, or hand-outs and Poster: Ditch and Reservoir Company Alliance, and Central Plains Irrigation Association, Arkansas River Basin Water Forum (February and April).
- 2010: "Always Not Yet: Obstacles to Better Agricultural-Urban Water Management," Universities Council on Water Resources, July 13-15, Seattle.
- 2010: (second author; invited Theme Presentation) "Measuring Conservation Effectiveness Across Agricultural Landscapes", Senior Author Dr. Gretchen Sassenrath, Managing Agricultural Lands II Conference, USDA and Soil and Water Conservation Society, Conservation Indices for Agricultural Landscapes (focus on framing of questions as well as technical issues in indicators); April 27-30.
- 2009: Presentation, "Agency Problems in Irrigation Water Transfer: Who Works for What?", Universities Council on Water Resources, Annual Meeting, Chicago, 06-09 July 2009 (extended abstract in proceedings).
- 2009: Presentation, "Keeping it Together in Destabilized Times: Looking Past the Near Term", U.S. Committee on Irrigation and Drainage, Conference on Sustainability of Irrigation Districts, Reno, NV: 03-06 Jun, 2009; extended abstract published by USCID in Conference Proceedings.
- 2009: Presentation, "Saving all the Pieces, Staying Grounded (Climate, Water, Soil, Cities) A Policy Argument with News", American Water Resources Association Specialty Conference, Climate Change and Water Management, Anchorage, AK, May 2009. (Also posted on www.colorado.edu/ibs/eb/wiener -- Presentations tab).
- 2009: Invited Presentation, "Coulda, Woulda, Shoulda: What We'll Wish We'd Done with Boulder's Ditches in Twenty Years", to Boulder Sesquicentennial Ditch Project Symposium, May 2009. Posted.

2009: Presentation, "Suppose a Long View: A Framework for Sustainability Using Climate Information Applications", Seventh Climate Prediction Applications Science Workshop, March 2009, Norman, OK: posted: http://climate.ok.gov/cpasw/presentations.php for powerpoints;.

2009: Invited presentation, "Transfer Mechanisms for Alternatives to Buy and Dry – More than Just Water", Ditch and Reservoir Company Alliance, Annual Meeting, March 2009, Pueblo CO. (Extended and Posted at <www.colorado.edu/ibs/eb/wiener/> - Presentations tab.)

2009: Organizer, moderator, Session on Climate Information and Applications at the Intersection of Agriculture and Water, National Water Program Meeting, Cooperative State Research Education and Extension Services, U.S. Department of Agriculture, St. Louis, Mo. 20-24 Feb 09.

2008 Presentation, Universities Council on Water Resources, Taking Water from the Farm: A Framework for Considering Transfers From Irrigation, July, Durham, NC. (Presentation posted: www.colorado.edu/ibs/eb/wiener/ -- Presentations tab).

2008 Presentation, American Water Resources Association Riparian Conference, Moving Water in the Urbanizing West: Riparian Issues in Agricultural Areas in Colorado, June, Virginia Beach, VA, in session organized with K.A. Dwire. (Presentation posted: <www.colorado.edu/ibs/eb/wiener/> -Presentations tab.)

2008 Presentation, Climate Prediction Applications Science Workshop, Ten Years After... User-centricity in a Messy Situation, March, Durham, NC. Posted at: http://sercc.com/cpasw_abstracts.htm (accessed 06 May 2008).

2008 Presentation, USDA CSREES National Water Meeting, Changing Colorado Agricultural Water Management: Reflections on a Failure of Adaptation, February, Sparks, NV. Posted at: http://www.usawaterquality.org/conferences/2008/abstract index.html#W>

2008 Presentation, Moving Towards Climate-Responsive Water Management, Colorado Water Congress, January, Denver, with two posters. (Posters also to be used for Ditch and Reservoir Company Alliance meeting, February and Central Plains Irrigation Association meeting, February, with handouts.)

2007 Poster, Biological Issues in Water Transfers, Tamarisk Coalition, October, Grand Junction, CO.

2007 Presentation to Universities Council on Water Resources, "Drought, Climate Change, and Colorado's Policy Discussion: Participation or Procrastination?", Boise, July. Extended Abstract and Presentation available.

2007 Presentation to Climate Prediction Applications Science Workshop, "Adaptation or Hazard Response? Concern with Narrow Applications in Water Management", Seattle, March. Posted: http://www.cses.washington.edu/cig/outreach/workshopfiles/cpasw07/agenda.shtml

2007 Presentation to USDA CSREES National Water Program Meeting, "The Climate of Insecurity for Colorado's Agricultural Water – Management Responses and Coordination of Objectives", Savannah, January 2007. Posted: http://www.usawaterquality.org/conferences/2007/abstract_index.html

2007 Presentation to Colorado Water Congress, "Moving Toward Climate Responsive Water Management", Denver, January 2007. (Available).

2007 Poster and Detailed hand-outs: Ditch and Reservoir Company Alliance Annual Meeting, Sterling, CO, February 2007. (Available.)

2007 Poster and Detailed hand-outs: Central Plains Irrigation Association Annual Meeting, Kearney, NE, February 2007 ((Available), and informal report to Board meeting).

2007 Poster and Detailed hand-outs: Arkansas River Basin Water Forum, April, 2007, Salida, CO.

2006 Presentation to US Committee on Irrigation and Drainage, and Proceedings, "Looking for Trouble: Anticipating Impacts of Changing Allocation of Irrigation Water", Boise, October. Extended abstract in Proceedings, available from USCID or author.

2006 Presentation, with Charles W. Howe, to Universities Council on Water Resources, "Moving Towards More Efficient Water Markets: Institutional Barriers and Innovations." Santa Fe, July.

2006 Presentation to Society for Conservation Biology, "Looking for Trouble: Unpredictability of Effects of Water Transfers away from Irrigation in the Western U.S." San Jose, June. (Available.)

2006 Presentation to American Society of Civil Engineers, Environment and Water Resources Institute, and Proceedings, "Responding to Concerns about Flexibility in Agricultural Water Management in the Western U.S.: A Climate of Uncertainty". Omaha, May. (Available.)

2006 Presentation to Climate Prediction Applications Science Workshop, and proceedings, "Be Careful of What You Wish For... Climate-Responsive Water Management from the Ground Up Goes Big-Time?" Tucson, AZ, March. http://cals.arizona.edu/climate/CPASW2006/proc/

2006, Organization, Presentation of Context and Issues, Reporting of Workshop on Farm-Management Issues in Water Transfer Reform, with David Yates, in association with Central Plains Irrigation Association, Colby, February.

2005: Presentation, Drowning in the Rapids? First Runs in the Arkansas River Basin Water Bank Pilot Program, American Water Resources Association Annual Meeting, Seattle, WA, November.

2005 Presentation, "Adopters, Constituents, or Customers? Suggestions from the Colorado Water Bank Experiment for Climate Prediction Applications Promotion", 3rd Climate Prediction Applications Science Workshop, International Research Institute, Palisade, NY, March. http://iri.columbia.edu/outreach/meeting/CPASW2005/Presentation/JWiener.pdf

2004 Presentation and paper, "Water Banking in Colorado: An Experiment in Trouble?", at U.S. Committee on Irrigation and Drainage Annual Meeting, Salt Lake City, UT., October; proceedings volume, Water Rights and Related Water Supply Issues, pp. 515-525.

2004 Presentation, "Small Agriculture Needs and Desires for Weather and Climate Information in a Case Study in Colorado" (John D. Wiener, presenting work by Wiener, Charles Howe, and others), NOAA National Weather Service Central Region Sub-Regional Climate Services Meeting, Boulder, CO (central region website posting).

- 2004 Moderator, co-organizer, Slow-Onset Hazards panel, Natural Hazards Research Applications and Information Center Annual Workshop, Boulder, CO.
- 2004 Organizer, moderator, reporter of Roundtable Discussion, "Learning From and About Cooperative Extension Services", Climate Prediction Applications Science Workshop, Tallahassee. (Report posted with 2005 Presentation, "Adopters, Constituents or Customers?" at 2005 CPASW, above.)
- 2004 Presentation at American Meteorological Society Annual Meeting, "Small agriculture needs and desires for weather and climate information in a case study in Colorado", Seattle. (Extended abstract available electronically and from AMS.)
- 2004 Poster presentation, at American Meteorological Society Annual Meeting, "Moving Water from Theory and Farms: The Colorado Water Bank Experiment", Seattle. (Extended abstract available electronically and from AMS.)
- 2003 Presentation, "Drought and Resilience", Natural Hazards Research Applications and Information Center Annual Workshop, Boulder, CO.
- 2003 Presentation "Water Bank and Ditch Interests", to Grand Valley Irrigation Company Board of Directors, Grand Junction, CO.
- 2003 Presentation at Colorado Section, American Water Resources Association, Annual Meeting, "Moving Water in Drought and the Arkansas Water Bank Pilot Program So Far Observations from an Outsider", Golden, CO
- 2003 Presentation and panel organization, "Water Banking and Interruptible Supply Contracts", Arkansas River Basin Water Forum, Pueblo, CO
- 2003 Presentation at Ditch and Reservoir Company Alliance First Annual Convention, Durango, CO, "The Colorado Experiment in Water Banking: Informal Review for DARCA" (available electronically and from DARCA website)
- 2003 Presentation at American Meteorological Society Annual Meeting, "Water banking as adaptation to climate variability: the Colorado experiment". Long Beach (Extended abstract available electronically and from AMS.)
- 2002 Presentation at Climate Prediction Assessments Workshop, Alexandria, VA: "If this is so simple, why is it such a mess? Climate Forecast Applications, Irrigation and Water Banking in Colorado" (Extended abstract available electronically)
- 2002 Presentation and panel moderator at Principal Investigators' Meeting, Office of Global Programs Economics and Human Dimensions Program, Seabrook SC, "Constraints and stumbling blocks in use of climate information" (abstract available electronically)
- 2002 Presentation at Natural Resources Law Center, U. of Colorado, Conference on Allocating Water for a Sustainable Future: Lessons from Around the World, "Destroying (by not integrating) Culture and Environment The Legal Implications of the Common Property Movement And some Notes on the Ditches of Colorado" (available electronically and from Natural Resources Law Center).

2002 Presentation at American Meteorological Society et al. Mississippi River Climate and Hydrology Conference, New Orleans, May, "Moving Water: Water Banks, Forecasts, and Obstacles." (Extended abstract available electronically on request).

2002 Presentation at American Meteorological Society Annual Meeting, Orlando, January, "A Simple Approach to Increasing Usefulness of Forecasts". Orlando. (Extended abstract available electronically and from AMS.)

2001 Poster at American Meteorological Society Annual Meeting, Albuquerque, January. (With Ray and Webb, see Western Water Assessment website, cires.colorado.edu/wwa/)

2000 Wiener, J.D., C.W. Howe, D.S. Brookshire, C. Nunn Garcia, D. McCool, and G. Smoak, 2000, Preliminary Results from Colorado for An Exploratory Assessment of the Potential for Improved Water Resources Management by Increased Use of Climate Information in Three Western States and Selected Tribes, Pp 231-234 in Proceedings, Twenty-Fifth Annual Climate Diagnostics and Prediction Workshop, Palisades, NY, 23-27 October 2000, Silver Spring, MD: NOAA.

2000 Presentation to Institute of Behavioral Science, reporting on "Three States" project, and use of climate information in agriculture in Arkansas Valley, Colorado.

2000 Presentation to "Research Round-up" add-on conference of researchers at Natural Hazards Research Applications and Information Center's Annual Workshop, on evolution of "vulnerability" concept in Hazards Workshop, World Bank World Development Report, and World Watch Institute State of the World, over 15 years.

1998 Paper at International Association for Study of Common Property Annual Meeting, "Property, Agency, Time, and the Management of Resources", June 11, Vancouver.

1998 Paper at Institute for Arctic and Alpine Research Annual Conference, "The Dimensions of Humans in Human Dimensions Research -- Go North!", Boulder, March 14.

1997 Paper at Association of American Geographers Annual Meeting, "Epistemological Antecedents of Human Dimensions of Global Change Studies," Fort Worth, April 3.

1997 Presentation, "Looking Askance: Human Dimensions of Global Change Studies", Institute of Behavioral Science, U. of Colorado, March 31.

1996 Paper at American Meteorological Society Meeting, "Research Opportunities in Federal Flood Policy", and panelist, "What do we and should we mean by environmental applications?", Atlanta, January 29.

1995 Presentation, "Post-modern Microeconomics: Implications for Cultural and Political Ecology", Institute of Behavioral Science, U. of Colorado, April 10.

1994 Paper at Association of American Geographers Annual Meeting, "You Are What You Do: Native Cultures and Property Rights," San Francisco, April 1.

- 1993 Paper at Association of American Geographers Rocky Mountain Great Plains Regional Meeting, "Conventional Social Science is Not Obsolete! Global Schmobal...", Boulder, September 19.
- 1992 Paper at Third Annual Meeting, International Association for the Study of Common Property, "The Intellectual Commonality of Common Property," Washington, September 17.
- 1992 Paper at Association of American Geographers Annual Meeting, "Closing in on Geography: Convergence in the Social Sciences," San Diego, April 19. Discussant, session on New Research in Indian Water Rights and Resource Management.
- 1991 Poster at Second Annual Meeting, International Association for the Study of Common Property, "Generic Resource User-Manager Project," Winnipeg, September 27.
- 1991 Paper at Association of American Geographers Rocky Mountain Great Plains Regional Meeting (with Dr. R.H. Brown, Emeritus Professor of Geography, U. of Wyoming), "Vintage Wine in Shiny New Bottles: The Resurgence of Regional Geography," Laramie, September 5.
- 1991 Presentation to Institute of Behavioral Science, Environment and Behavior Program, "Convergence in the Social Sciences: Toward a New Paradigm," Boulder, April 29.
- 1991 Paper presented at Western Regional Science Association meeting, "The Optimal Co-Management Regime," Monterey, February.
- 1990 Paper at Association of American Geographers Rocky Mountain-Great Plains Regional Meeting, "Adaptation to Place: Notes on the Cultural Ecology of Alaska Natives," Kearney, October 11.
- 1990 Paper at First Annual Meeting, International Association for the Study of Common Property, "The State versus Subsistence in Alaska," Duke University, September 28.
- 1990 Paper at American Political Science Association Annual Meeting, co-author with Professor Gary Anders (Arizona State University), "Native American Resource Use and Property Rights," San Francisco, August 30.
- 1990 Organizer of session at Association of American Geographers Annual Meeting, "Sharing without Melting: Can Encapsulated Societies Survive?" (sponsored by Native Americans and Cultural Ecology Specialty Groups) and paper, "The Academics of Encapsulation: Toward a Prescriptive Paradigm," Toronto, April.
- 1989 Paper at Association of American Geographers Annual Meeting, "Cultural Ecology, Cultural Diversity, and the Return of Regional Geography: The Preservation Prescription for Local Adaptation," (cultural ecology), Baltimore, April 21.
- 1988 Paper at Association of American Geographers Rocky Mountain-Great Plains Regional Meeting, "The Tragedy of the Tragedy of the Commons," (resource management), Colorado Springs, September 9.
- 1988 Presentation, CU Geography Department Colloquium, "Ground Rules for Land Tenure for Alaska Natives"; 1988 Presentation, CU Anthropology Noon Seminar Series, "The Tragedy of the Tragedy of the Commons"; 1987: Presentation to Environment and Behavior Program, Institute of Behavioral Science, CU, "Problems with the Hardin Model".

1987 Paper at Association of American Geographers Rocky Mountain-Great Plains Regional Meeting, "Regional Geography and World Systems," (political geography), Regina, September 19.

1986 Paper at Association of American Geographers Rocky Mountain-Great Plains Regional Meeting, "Toward a Typology of Values in the Environment," (cultural geography), Omaha, September 18. (Student prize).

1985 Paper at Association of American Geographers Rocky Mountain-Great Plains Regional Meeting, "Positive Discount--Negative Effect," (economics of soil erosion), Bozeman, October 11. (Student prize).

POSTINGS: REPORTS, PRESENTATIONS, AND GRAY LITERATURE

Recent reports and analysis have included work in 2013, 2014, and continuing in 2015 on the Colorado State Water Plan, and discussions with committees of the Ditch and Reservoir Company Alliance, of Colorado, concerning policy issues in land conservation, water conservation and ditch company capacity to plan for the future.

Additional work involved participation in meetings and follow-up reporting from Rising Voices, and Rising Voices II; invitational meetings hosted by the National Center for Atmospheric Research for a group addressing climate change and climate impacts on Native Americans and Indigenous Peoples. A research proposal was developed by Wiener and others following Rising Voices, for a long-term approach to some issues in Native adaptation. The proposal awaits an independent institutional base, for reasons relating to copyright law and funding of institutions.

The website <www.colorado.edu/ibs/eb/wiener/> includes a wide variety of presentations and reports from the author, for different audiences and includes extensive documentation in "speaker's notes" sections of the powerpoint TM slides from most of the presentations. The website also includes "Re-Vision of a Western Irrigated Area..." 2011, available in present form; this is a lengthy report of a case study of the Bessemer Irrigation Ditch, east of Pueblo, CO, with discussion of the agricultural situation, the case study, the water transfers issues, and recommendations which are being modeled using the Water Evaluation and Planning (WEAP) tool, by research partner David Yates. This is a good representation of my aspirations to provide meaningful assistance for agriculture for what the National Research Council calls the transition toward sustainability.

Many presentations are also posted; the most comprehensive statement is the 2011 presentation to the Climate Prediction Applications Science Workshop, in Des Moines, IA, with special focus on agriculture; "Climate Information Applications for Resilience: Opening Wedge of Just Plain Sledge?" New materials are posted occasionally.

Other postings include an argument about property rights, short summaries of research findings, and the major part of the research applying a Decision Calendar for the Arkansas Valley for applications of improved weather and climate information, "Who wants to know what and when?" That extended field work and interaction with the agricultural and water community changed my research direction and interests.

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Miscellaneous Gray literature: Paper in Natural Resources Law Center June 2002 International Water Law conference contributed papers collection; Extended Abstracts in Proceedings, 25th Annual Climate Diagnostics Workshop, Pre-Prints, American Meteorological Society 2002, 2003, 2004 (2 items) Meetings, other presentations also available electronically (most listed below).

Advisor, Water Transfers Committee, Arkansas Basin Roundtable under HB05-1177. Arkansas Basin Roundtable, 2008, **Considerations for Agriculture to Urban Water Transfers**. Report of the Water Transfers Guidelines Committee; adopted Roundtable and forwarded to Colorado Interbasin Compact Committee, Roundtables, and Colorado Water Conservation Board. (accessed 14 Jan 2014); [MaryLou Smith facilitated this 2-year project; there were two advisors: Dr. Ken Weber and Dr. John Wiener, who had been involved with the basin roundtables and districts for many years].

http://cwcb.state.co.us/public-information/publications/Pages/StudiesReports.aspx

Technical comment and participant, writer of research-based comments for Colorado Statewide Water Supply Initiative study, Arkansas and South Platte Basins, Phase 1; Technical Roundtables in Phase 2 (public records posted); on-going involvement by comment, e.g. on Environmental Impact Statements (e.g. Platte River Management for ESA compliance); comment on Arkansas Valley issues and participation in assorted meetings and discussions by invitation; formal correspondence as well as consultation with Office of the State Engineer and others. This has resulted in substantial memoranda which are available, on a wide variety of issues in water transfers and impacts, ranging from "One-pagers" on several issues to lengthy compilations, annotated bibliographies, syntheses and literature reviews as well as argument.

Reports for Ditch and Reservoir Company Alliance and grant funders: "Ditch and Reservoir Company Planning" (24 pp), final 2015, and "DARCA ATMs (Alternative Water Transfer Mechanisms) Workshops: Dominant Themes in Responses to the Survey" (15 pp, and shorter abstracts for other uses).