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# Utton Center Report

VOL. 2, NO. 1  
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## Message from the Director

Marilyn C. O'Leary

We are pleased to report to our readers the great success of the Utton Center's first national conference, *Interstate Waters: Crossing Boundaries for Sustainable Solutions*. This innovative conference was made possible because of the generous funds Senator Pete Domenici obtained to begin the work of the Utton Center. We at the UNM School of Law and the Utton Center are grateful for Senator Domenici's support as we continue our work to reduce conflict over interstate waters and use preventive diplomacy to forge sustainable water management plans.

In October seventy invited experts in law, science and the judiciary gathered in Snowbird, Utah to share their expertise in addressing conflicts over interstate waters. We organized the program to take advantage of the wealth of knowledge and expertise of the participants. John Thorson, Em Hall, Jerry Muys,

and Gary Weatherford, all legal experts on interstate water compacts and water allocation, gave presentations on the legal forms of interstate water allocation, the role of compacts, when compacts fail, and a vision for sustainable water allocation agreements. Each of the first two days was highlighted by presentations by the scientific disciplines and legal interests represented. The panelists addressed the contributions, limitations and values of their particular discipline. These presenters included: David L. Galat on fisheries ecology; Barbara Morehouse on social science; Michael McDonald on hydrology; John Redlinger on engineering; Kevin Gover on tribal rights; Bonnie G. Colby on economics; Linda Mearns on climatology; Richard Marzolf on ecology; Denise Fort on environmental concerns; and John Utton on law.

A detailed hypothetical interstate water case study was created and

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The  
Utton  
Center

TRANSBOUNDARY RESOURCES

presented by Dr. Michele Minnis of UNM's Water Resources Program and Dr. Chris Garcia of the New Mexico Water Dialogue. The afternoon sessions consisted of small working groups in which participants tried to resolve the complex issues raised by the hypothetical. Each group was carefully selected to be multidisciplinary, and each person had the opportunity to explain how he or she approached the problem. The discussions were thoughtful and stimulating and provided the experience of multidisciplinary collaboration to find solutions for complex problems.

The third day of the conference each small group reported its conclusions and recommendations. Participants unanimously agreed that they had learned a great deal during the presentations and discussions, that they had seen in action how the other disciplines approached problems and could better understand how to work

together more effectively. They presented ideas of how the Utton Center can continue to foster multidisciplinary collaboration on transboundary water issues. Comments made by participants at the conclusion of the conference make it clear that they gained insight into how better to utilize the contributions of other disciplines in their work on water issues. In accordance with the mission of the Utton Center to bring together scientists, lawyers, and policy makers, and to use preventive diplomacy to create fact-based, sustainable, resource management plans we certainly fulfilled our mission. A summary compilation of the proceedings is in the works and will be made available through the Utton Center. Also, look for articles by our speakers in upcoming editions of the *Natural Resource Journal*.

This conference is the first step in a long-range program by the Utton Center to research and

work on aspects of interstate waters that will result in a draft model interstate ground water and surface water compact. The Utton Center Report will keep readers updated on our related activities.

This issue of the *Utton Center Report* highlights an article of the most timely interest by Professor Stephen P. Mumme – *Strengthening Binational Drought Management*. The intense drought being experienced in the U.S.-Mexico border region has increased border tensions and demands innovative solutions. Professor Mumme's analysis and recommendations provide great insight into how these problems might be resolved.

We also begin in this edition to present a selected bibliography of recent journal articles on transboundary issues. This bibliography was prepared with the assistance of the UNM School of Law Library.

## Strengthening Binational Drought Management

*Stephen P. Mumme*  
Professor of Political Science  
Colorado State University

The specter of drought haunts the border. From Brownsville to Brawley, border water managers are running scared, confronted with what may well go in the record as the worst regional water shortage in nearly a century. This year and last, for the first time in thirty years—the previous instance being the Salinity Crisis—border water has topped the bilateral executive agenda.

Plagued by upstream shortages on the Conchos, Mexico has failed for nearly a decade to deliver its minimum annual allotment of 350,000 acre feet of Rio Grande water to the U.S. as required by treaty, shorting Texas irrigators and provoking a steady string of censure and rebuke from Austin to the Beltway. Bilaterally, this hue and cry by U.S. interests has produced two high level agreements, but little water and much misunderstanding. The most to be said of this state of affairs is that it has provided the U.S. and Mexico their best opportunity in half a century to address lacunae in the treaty regime governing water allocation between the two countries in times of drought.

### **The Trouble with the Treaties**

As the late Professor Albert Utton often observed, drought is the Achilles heel of the U.S.-Mexico treaty regime that governs the allocation of water on the Rio Grande and Colorado rivers. The 1906 Convention dealing with the upper Rio Grande and the 1944 U.S.-Mexican Water Treaty for the Rio Grande and Colorado did a fine job stipulating national entitlements and a poor job stipulating adjustments to periods of acute water scarcity. Taken as a set, these treaties, quite sensibly, do not adopt a one size fits all approach to drought mitigation, providing, in effect, separate protocols for drought mitigation, two for the Rio Grande, and one for

*(continued on page 4)*

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...the severity and duration of the recent drought on the Rio Grande tells us our present system for managing water shortages on our international rivers is quite insufficient for rationing current and projected future needs in a cooperative manner.

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## In Memoriam — John D. Wirth

John D. Wirth, a scholar and historian of Latin American affairs died on June 20, 2002 in Toronto. John was born in Dawson, N.M., the son of Virginia and Cecil Wirth, headmaster of the Los Alamos Ranch School. A graduate of Harvard and Stanford, John Wirth founded the North American Institute in 1988 to focus on the three nations of mainland North America. His interests often paralleled those of the late Al Utton and they collaborated on a number of projects. Shortly before his death he retired as Gildred Professor of Latin American Studies at Stanford. He is survived by his wife, Nancy Meem Wirth and three sons and their families. John was a member of the Utton Center's Advisory Board and we will miss him.

the Colorado. In the event of “extraordinary drought” on the upper Rio Grande, the 1906 Convention calls for proportional reductions to each nation’s water allocation. For the middle and lower Rio Grande, the 1944 Treaty provides for water sharing in the event of “extraordinary drought” where one country has an acute shortage while the other is blessed with abundance. With reference to Mexico’s 350,000 annual acre feet obligation to the U.S., the Treaty allows Mexico to incur a debt in a given year providing the debt is repaid as soon as possible. If such debt remains at the end of a given five-year-cycle it may be repaid in the next five-year-cycle. The debt is considered paid when Mexico furnishes the owed amount within one five-year-cycle or the next, or when the U.S. conservation capacity in two of the several international dams, to include the uppermost dam (Amistad dam), is filled, whichever occurs first. On the Colorado River the stipulated response to “extraordinary drought or serious accident to the irrigation system in the United States” is simply proportional reduction of each nation’s allotted water supply, mirroring the situation on the upper Rio Grande.

The problems associated with these provisions, as Professor Utton rightly noted, are largely errors of omission. Neither treaty defines the term “extraordinary

drought” found in Article 2 of the 1906 Convention and Articles 4 and 9 of the 1944 Treaty for the Rio Grande, and Article 10 for the Colorado, effectively leaving the determination in the hands of the upstream party when negotiators for the two countries are unable to agree. In the case of the Rio Grande, where five-year accounting cycles are provided, the 1944 Treaty fails to consider the possibility of a drought that prolongs beyond a two-cycle accounting interval (10 years or more).

While the two countries managed to avoid seriously disputing these terms for most of the life of these treaties, an issue arose in 1994 when Mexico desperately needed water for municipal needs downstream of Amistad dam. The U.S., then too suffering from drought, reluctantly agreed to provide the water, averting a serious crisis. This stay of conflict was short-lived. The treaty shortcomings were drawn into sharp relief last year when Mexico found itself unable to meet its formal obligations on the Rio Grande. Mexico took the position that an “extraordinary drought” prevailed, citing low precipitation and substantial cutbacks in irrigation over preceding years on the Conchos. The U.S. challenged this interpretation, arguing that Mexican water in storage was sufficient to help meet all or part of its treaty obligation and demanded repayment. Two

agreements were struck, the first postponing Mexico’s obligation quite literally in hope of rain, the second, when mother nature failed to cooperate, providing very modest temporary relief to the U.S. in summer, 2002. In neither case did the two countries manage to resolve the ambiguities of treaty language, though some progress was made in other areas.

Other treaty omissions stressing drought management are seen in the implementing provisions embedded in the 1944 Treaty. The Treaty, in Articles 2 and 24, establishes the International Boundary and Water Commission (IBWC), comprised of two national sections, and invests it with authority for treaty interpretation subject to the concurrence of the governments. While the treaty provides some criteria for the composition of the Commission and its procedural functioning, it is silent on the specific role the Commission should play in interpreting the hydrological data it collects bearing on the availability of water in binational streams and rivers. In effect, the IBWC is to operate as a binational accounting agency, monitoring inflows and outflows, assigning credits and debits against each nation’s stipulated entitlement, and sharing this information with the member governments. Responsibility for determining what those credits and debits mean for purposes of

prognostication and strategic planning does not clearly pertain to the Commission. Whether it be by intention or default, that task rests with the governments. The IBWC’s potential as a watchdog and monitor of shortages in our binational rivers is thus circumscribed.

And there are further omissions. The treaties’ failure to address groundwater problems and, by extension, the problem of conjunctive utilization of transboundary streams and aquifers is legendary. This was certainly one of Professor Utton’s abiding concerns and continues to factor in criticisms of the treaty water regime. Some, including this writer, would argue that the 1944 Treaty’s Article 3 provisions stipulating priorities for use of boundary waters is flawed by today’s standards, providing inadequate protection for ecological values that could be adversely affected by rationing in times of drought. Treaty silence on questions of public voice and participation in binational negotiations on drought responses might also be fingered as problems.

#### **Treaty Based Progress: Minutes 293, 307, and 308**

Three drought related minutes have been struck by the IBWC since 1995. None were needed in the preceding 20 years, or in the past 40 years if we exclude Mexico’s shortage on the Tijuana River in 1972. This fact reflects a social as well as hydrological reality. While it

is true the current drought may be more severe and regionally diffused than previous events in the past century, it is also true that demand has risen substantially since the last period of region-wide drought in the 1950’s.

The good news is that since 1995 binational cooperation on drought in the Rio Grande basin has been strengthened. The bad news is that no real progress has been made in addressing the treaty-based problems mentioned above or in broadening drought mitigation efforts borderwide for binational streams and rivers. This is evident in a review of the three IBWC Minutes of recent vintage, Minute 293, Minute 307, and Minute 308.

The first of these initiatives, Minute 293, signed in 1995, provided a U.S. loan of 81,000 acre feet of water to Mexico to alleviate acute municipal water shortages in Mexican communities downstream of Amistad dam. Its main features include careful delimitation of the terms of the loan, an emphasis on rapid recovery of the loaned water, heightened binational attention to data sharing on water availability and management practices on middle Rio Grande, and a modest commitment by Texas of technical assistance for improving water conservation in Mexico. There is little in the Minute that suggests it was meant to be precedent setting or address broader structural problems beyond resolving the immediate problem at hand.

Minutes 307 and 308 address the more recent dilemma arising from diminished Mexican flows to the Rio Grande, principally those from the Rio Conchos. Minute 307, signed March 16, 2001, responds to U.S. demand for at least partial repayment of Mexico’s treaty deficit of tributary water, estimated then at 1.4 million acre feet since 1992. It stipulates that Mexico will provide 600,000 acre feet by July 31, 2001 and, failing that, receive an extension through September 2001 or adopt other measures to meet its obligation. It further commits the governments to “work jointly to identify measures of cooperation on drought management and sustainable management of this basin.”

When Mexico, in fact, failed to meet its commitment under Minute 307, the two nations struck Minute 308. Signed June 28, 2002, Minute 308 commits Mexico to provide a contingency assignment of 90,000 acre feet to the U.S. with the proviso that should Mexican inflows by October 26, 2002 fail to replace the water released, the U.S. would repay the difference up to 90,000 acre feet. Beyond this, the two governments agreed to ask international funding agencies, to which they are party, to consider financing conservation projects in Mexico to better enable Mexico to meet its downstream commitments and to increase data exchange on water management in both countries. Such an agreement

would enable the IBWC to “adopt principles and understandings” that would contribute to each nation’s ability to meet its treaty obligations. Informally, the two nations also agreed A) that Mexico’s National Water Commission would present the IBWC with “a progress report on its studies concerning drought management planning to support the Commission as a forum under which the proper authorities in each country may coordinate their respective management plans,” and B) “to convene a binational summit of experts and water users from each country for the purpose of providing the proper authorities and stakeholders information concerning sustainable management of the Rio Grande.”

The progression seen in these three minutes is substantial (see table). Though the focus is strictly on the Rio Grande basin, the two countries in a span of seven years have moved to embrace the sustainable management of the Rio Grande basin based on a recognized need to support and enhance conservation by various means to include international financial assistance, and to intensify their sharing of data on water management. They also have moved to recognize and strengthen the role of the IBWC in developing principles and procedures that improve binational cooperation in Rio Grande water management as well as its ability to function as a forum for binational cooperation in basin-wide water management.

**The Binational Challenge**

While recent agreements, particularly Minute 308, are promising, much remains to be done if the two countries are to move forward in better anticipating and planning for sustained drought. Of central importance in the minds of many stakeholders are treaty-consistent modifications to the binational water management framework that ensure the sustainable development of transboundary water resources. Some of these reforms require little in the way of new formal arrangements between the two countries and are best accomplished through domestic institutions. Improvements in forecasting, the development of federal-state and intra-state drought management protocols, and improved conservation in the national reach of our transboundary river basins fall largely in this category.

At the binational level other drought management enhancements have and will continue to be achieved by utilizing a mix of bilateral non-treaty (non-1944 Treaty) mechanisms. The La Paz Agreement on border environmental cooperation with its recently updated cooperative mechanism, Border 2012, provides a vehicle for sustainable development by facilitating binational dialogue on a range of water conservation questions in the border region. The La Paz Agreement’s annex process can be used for binational cooperation on water quality to

protect existing supplies. The Border Environment Cooperation Commission and North American Development Bank, with their newly expanded 300 kilometer reach into Mexico, continue to serve conservation ends by vetting approvals of urban and rural water projects with their sustainable development criteria and facilitating the financing of certified projects.

Still, when all is said and done, crucial improvements in binational drought management must be linked to the Treaty regime. Moving beyond Minute 308 to protect against drought will almost certainly require reinforcing the treaty-linked language presently found in the IBWC’s minutes that endorse the principle of sustainable management of transboundary watercourses. Formulating a strategic vision of basin-wide needs on the Rio Grande, the Colorado, and the Tijuana requires the creation of advisory and consultative mechanisms for each basin that are truly binational and given standing within the terms of the treaty. A number of suggestions have been put forward in this vein, ranging from broadening existing national river basin councils to incorporate both governments and non-governmental stakeholders on a binational basis to developing sub-basin watershed advisory groups and technical-scientific advisory bodies that consult with the IBWC on the conjunctive management of

transboundary water and the management of drought.

Most difficult of all, yet vital, are further interpretations of the 1944 Treaty related to drought. These interpretations should better define the parameters under which drought claims and preventive actions may be made and broaden the basis for implementing binational responses to prolonged shortages of water within the several transboundary watersheds. It would be wise to move beyond the defacto unilateralism presently associated with national determinations of what is or is not “extraordinary” in relation to diminished precipitation or critical disruptions of national irrigation systems affecting obligations to the other country. The present system of five year accounting cycles should be carefully reviewed for its utility and flexibility as a system of water sharing and rationing in light of improvements in hydrological science and knowledge of global and regional climatic conditions. The two countries should strengthen the IBWC’s role in coordinating drought responses in each of the binational river basins and move towards a system that provides a better articulation of drought responses amongst levels of government in each nation when drought emergencies are identified. New Treaty-based agreements strengthening our binational commitment to managing

transboundary groundwater and shared ecological resources will also facilitate the setting of conservation priorities and implementation of binational drought approaches.

None of this is easily done as Professor Utton would have told us. But Al was by spirit an optimist. What he would say, I think, is that the severity and duration of the recent drought on the Rio Grande tells us our present system for managing water shortages on our international rivers is quite insufficient for rationing current and projected future needs in a cooperative manner. Yet the crisis itself is an opportunity if the two countries choose to treat it as such. Professor Utton would be pleased that recent efforts to address the drought challenge frame it in terms of sustainable management of the basin and need to improve national conservation practices. He would tell us this same principle should inform next year’s border water summit and guide binational thinking on each of the transboundary river basins as the U.S. and Mexico look to the future.

Recent Binational Progress on Rio Grande/ Rio Bravo Drought as Reflected in IBWC Minutes			
Action Category	Minute 293 1995	Minute 307 2001	Minute 308 2002
Water allocation	yes	yes	yes
Data sharing	yes	yes	yes
Technical Assistance	yes		yes
Reference to need for sustainable water mgt		yes	yes
Support for conservation finance			yes
Support for IBWC as binational forum			yes
Binational summit on Rio Grande basin water mgt.			yes