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## Community of Drought? Dialogue Between Believer and Skeptic

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Gary Weatherford

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## **Community of Drought?**

Dialogue between Believer and Skeptic

*Justice Gregory Hobbs and Gary Weatherford\**

("B"=Believer; "S"=Skeptic)

- B.** (Hobbs) These Bishop Lodge meetings instill camaraderie — a feeling that the great Colorado River links us together into a large, colorful, and distinct community!
- S.** (Weatherford) Community? Surely you jest! Combatants become soul mates just because they share a battlefield?
- B.** Conflict is only half the history lesson. The other half is how the sometimes harsh and often so-beautiful Plateau and environs continue to attract and shape their residents into a common identity.
- S.** Ah! The hapless romantic! The region bears the marks of conquest more than conciliation. Tribe against tribe, Spain and Mexico against

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\* Hobbs is a Justice of the Colorado Supreme Court and Weatherford is a partner with Weatherford & Taaffe LLP, San Francisco. The concept for this dialog began with Gary's suggestion at the American Bar Association's 25th Anniversary water law conference in February of 2007. As the Bard said, we are but actors on the stage. This dialogue should not be attributed to any client or the court; it is the product of conference brainstorming.

This dialogue was originally produced for the Water Education Foundation's September 19-21, 2007, Colorado River Symposium, which was held at The Bishop's Lodge in Santa Fe, New Mexico. The Foundation is an impartial, nonprofit organization whose mission is to create a better understanding of water issues and help resolve water resource programs through educational programs. More information about the Foundation's Colorado River Project is available at [www.watereducation.org](http://www.watereducation.org).

the Tribes, the United States against Mexico and the Tribes, unbridled developers playing mumbly peg across a unique arid landscape!

- B.** Look upon this gathering. These representatives of sectors of the river community came here not to do combat, nor simply to sample Santa Fe's famed red chile dinners; they came to renew a spirit of collaboration — to hear others in the river community voice their fears and hopes!
- S.** From the lofty roost of a resort it is easy to fantasize. But from here we must return to reality: soon-to-be sixty plus million people in the seven basin states, a rapidly warming Plateau, and a fading snow pack!
- B.** I needn't tell you that drought has always been a defining element of civilization in the western Americans, north, central, and south. So has the spirit of the working and singing waters! You were rhapsodic in 1990 about how river communities can find their identities in "hydrocommons."
- S.** Like Bob Dylan, I was a whole lot younger then . . .
- B.** For all your cracks, I don't see you abandoning the hydrocommons.
- S.** I don't know; the notion of a coherent, self-conscious River community is such a stretch. Twenty-plus million people spread across 244,000 square miles in the drainage area, and who knows how many tens-of-thousands of square miles in service areas outside the drainage, crisscrossed by the political boundaries of two nations, seven states, dozens of tribal reservations, counties and special districts, and corporate entities — all warring with each other over a River that is way over-freighted. And what about you, hasn't your vision been changing? Didn't *Cadillac Desert's* Marc Reisner expose you as Mr. Champion of Prior Appropriation, a mouthpiece for water developers, in a debate at the Gunnison Water Workshop in 1991?
- B.** Whoa! Bless him. He had half a point in that debate. I think I had the other half. Not surprisingly, I find no inherent conflict between first-in-time-first-in-right and the notion of community. A gritty Westerner practices humility, hopes, and practices a true aim, Gary Cooper-like, yes?
- S.** Agreed, we can all strive to be that kind of Westerner. But it could be High Noon time in *Our Town* with drought, climate change, and population explosion. There's got to be more to community than drawing from the holster of prior appropriation.

- B.** How about shared experience and circumstance?
- S.** I sense another "land-of-little-rain" moment coming.
- B.** You're so right. Mary Austin wrote: "The palpable sense of mystery in the desert air breeds fables . . ."! Fables of lost treasure, Fables of death and renewal, Fables of creation —
- S.** Fables of community, I suppose!
- B.** More like chronicles. Communities oriented around water are real, as are the allegories they generate in response to stark landscapes and dry washes. Listen to the ages-old *Navajo Night Chant*:

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House made of dawn.  
House made of evening light.  
House made of the dark cloud.  
House made of male rain.  
House made of dark mist.  
House made of female rain.  
House made of pollen.  
House made of grasshoppers.

Dark cloud is at the door.  
The trail out of it is dark cloud.  
The zigzag lightning stands high upon it.  
An offering I make.  
Restore my feet for me.  
Restore my legs for me.  
Restore my body for me.  
Restore my mind for me.  
Restore my voice for me.  
This very day take out your spell for me.

Happily I recover.  
Happily my interior becomes cool.  
Happily I go forth.

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1. MARY AUSTIN, THE LAND OF LITTLE RAIN 7 (1987).

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With dew about my feet may I walk.  
With beauty may I walk.  
With beauty before me, may I walk.  
With beauty behind me, may I walk.  
With beauty above me, may I walk.  
With beauty below me, may I walk.  
With beauty all around me, may I walk.

Yes, Mr. Skeptic, drought is always with us . . . waiting its turn. So is the restorative power of water and the human spirit.

- S.** Judge, within earshot of that Night Chant the Navajo are still hauling water on their reservation, and the stair step reservoirs of the Colorado River feed Colorado's sprawling Front Range, Las Vegas, Phoenix, and southern California's endless urbanizing expanse. The River disappears into the sand short of the Gulf. The Fathers of the 1922 Compact were all fathers, not a mother among them! No "female rain" there! They billed themselves as experts in comity while deferring Tribal and Mexican rights. Supposedly they represented the best their states and the United States had to offer, yet they apportioned water that wasn't really there, needlessly dividing early settlers and enterprises from later ones under the banner of prior appropriation!
- B.** Your blast on the past surely requires some correction. The work of David Schorr in the *Ecology Law Quarterly*<sup>2</sup> shows that prior appropriation forwarded distributive justice for those who could put the public's water to actual beneficial use, thwarting monopolists who wanted to tie up the available water for speculative profit. When it came to the allocation of interstate streams, equitable water sharing across state boundaries became operative in the form of the 1922 Compact, which was followed by the 1948 Upper Basin Compact and then the 1944 Mexican Water Treaty —
- S.** Which were followed by the Echo Park and Glen Canyon legislative battles —

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2. David Schorr, *Appropriation as Agrarianism: Distributive Justice in the Creation of Property Rights*, 33 *ECOL. L.Q.* 3 (2005); David Schorr, *The First Water Privatization Debate: Colorado Water Corporations in the Gilded Age*, 33 *ECOL. L.Q.* 313 (2006).

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- B.** Which resulted in the 1956 Colorado River Storage Act<sup>3</sup> that made it possible to actually share the waters through cycles of flood and drought —
- S.** And which was followed, of course, by the bloodletting of *Arizona v. California* I . . . II . . . III . . . IV —
- B.** Which were complemented by the 1968 Colorado River Basin Act<sup>4</sup> that brought Arizona and California into an entente of sorts.
- S.** Of sorts, indeed. A permanent subordination of Central Arizona to Southern California — now that's what I call community! Come to think of it, given how the upper basin is subordinated to the lower basin because of the 75 million acre-feet 10-year running average Lee Ferry obligation, I should think Coloradans can't really believe your Delph Carpenter did any long term favors for the great headwaters state you hale from.
- B.** Ah, you remind us that Colorado makes the principal contribution to the virgin flow at Lee's Ferry, 70 percent of it. Carpenter had also studied the lay of the land into the future. He recognized that the entire Colorado River watershed formed a community of interest. Being on the River really helps one appreciate this. A month ago my wife Bobbie and I were rafting the River through the Grand with friends. As we turned the bend out of Marble Canyon at the confluence of the Little Colorado into the big push towards the gut of the Grand, a muddy monsoon pour-off surge swells the River to its aboriginal chocolate color. We pull over to get a closer look at the sacred Hopi salt seeps that drip crystalline white from the redrock canyon walls. Swamper Jim pulls out a fishing net, scoops an object out of the swell, and holds it up. On the face of a child's toy carried on the tide out of the Navajo Nation, Barbie smiles at us!
- S.** You can go from the sublime to the absurd in a heart beat! Apart from bobbling Barbie dolls, the Navajo and the Hopi are still struggling for water. When they present their reserved water rights claims they are viewed as line-buffers without a ticket to the show.
- B.** Surely, throughout the ages, justice has been engaged in a long walk. Kit Carson herded the Navajo to Fort Sumner in the midst of the Civil War after cutting down their peach orchards and slaughtering their

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3. 43 U.S.C. §§ 620-620o (2007).

4. 43 U.S.C. 1501-1556 (2007).

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sheep. Later, by the Treaty of 1868, General Sherman who perfected the Carson tactic in Georgia at the end of the war between the states — acting as military governor of the West and a member of the Peace Commission — sets the Navajo on the western way back to their homeland instead of east to Oklahoma's Indian Territory as the U.S. had previously intended.

- S.** As I said, they're still hauling water. As for the Hopi, aren't they still hoping for a water line from Lake Powell?
- B.** Of course, the ace in the hole for the Tribes continues to be *Winters*.<sup>5</sup> The 1922 Compact Commission didn't ignore tribal water rights. They knew about the 1908 reserved water rights decision of the United States Supreme Court, and they placed a marker in the text of the compact for the exercise of those rights. Article VII of the Compact provides that, "Nothing in this compact shall be construed as affecting the obligations of the United States of America to Indian tribes." The Tribal share comes out of the allocation made to the states. The Tribes, the seven States, and the United States have been involved in ongoing adjudications, settlements and statutes designed to provide water to the Tribes. The Gila River settlement in Arizona and the construction of the Animas-La Plata project in Colorado are recent examples.
- S.** Hail to lawyers wielding the sword — and paying their children's tuition! Your apology for the Compact negotiators omits how they also conveniently forgot to account for the Republic of Mexico's water needs.
- B.** Not so. Throughout the early negotiating sessions, they looked at Mexico's then existing and contemplated future uses, but they didn't have the authority to make a perpetual allocation to a separate Nation. That required U.S./Mexico negotiations at the highest level. So they put in another marker. Article III, section (c), subordinates the allocations of the seven basin states to whatever Mexico's treaty entitlement turned out to be. A remarkable fact of the 1944 Treaty is that Mexico got a sizeable water delivery guarantee, even though the Great Depression drought of the 1930s revealed just how short the river can get.
- S.** Thanks for pointing out another major fallacy of the Compact! It assumes more water than the Colorado can dependably produce. Climate warming will further expose the glib optimism of the negotiators.

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5. *Winters v. United States*, 207 U.S. 564 (1908).

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- B.** Just because the negotiators didn't have the advantage of Connie Woodhouse's tree ring studies<sup>6</sup> doesn't mean they were ignorant of how drought can devastate the River's flow. To the contrary, they had lived through the 1890s drought. The negotiators used actual river measurement data from a gauging station on the Colorado River near Yuma, Arizona above the junction of the Gila and Colorado Rivers. The scientific data available included stream gauge measurements for the period 1899-1920. The lowest year of record was 9,110,000 acre-feet in 1902; the highest was 25,400,000 acre-feet in 1909; the mean for those years was 16,400,000 acre feet. In addition, the annual average discharge of the Gila was 1,070,000 acre-feet. The minutes of the negotiations demonstrate that Delph Carpenter paid particular attention to the low flow data. That's why he successfully resisted Arizona's insistence on a yearly delivery guarantee and finally settled for 50-50 Upper Basin/Lower Basin ten-year running average at Lee's Ferry.
- S.** Yet the 500 year period of the tree ring studies show 8 periods of drought averaging twenty years in duration, and the most recent reconstruction of flows by Woodhouse and her colleagues show the average flow of the River to be in the neighborhood of 14.3 to 14.7 million acre-feet, not 16 million acre-feet.<sup>7</sup>
- B.** The tree ring studies also show an equal number of big flow 20 year-average cycles. The compact negotiators clearly contemplated that major on-stream reservoirs would be needed to offset drought and flood. At the first negotiating session in Washington D.C. in January of 1922, Carpenter had in his hip pocket a map showing a 50 million acre-foot reservoir where Lake Powell now stands and a 31 million acre-foot reservoir where Lake Mead is. Of course, Powell was constrained to its current 26 million acre-feet capacity by a statutory restriction to prevent the inundation of the Rainbow Bridge, sacred to the Navajo.
- S.** Back to the *Night Chant* are we? A singular arch is preserved, while the 1956 Storage Project Act swallows the whole of Glen Canyon and does in the fabled Mexican Delta wetlands!

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6. See, e.g., Connie Woodhouse, *A Tree-ring Reconstruction of Streamflow for the Colorado Front Range*, 37 JOURNAL OF THE AMERICAN WATER RESOURCES ASSOCIATION 561-570 (2001).

7. Connie A. Woodhouse, Stephen T. Gray, and David M. Meko, *Updated Streamflow Reconstructions for the Upper Colorado River Basin*, 42 WATER RESOURCES RESEARCH W05415(2006) available at <http://www.agu.org/pubs/crossref/2006/2005WR004455.shtml>.

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- B.** Swallowed up is a loaded usage. The 21st Century drought and water deliveries to the lower basin have unloaded many of the lost treasures — cathedrals in the desert, pour-off nooks so exquisite Eliot Porter's photographs in *The Place No One Knew* just begin to hint at portraying. Three inundated rapids have returned to the lower end of the Big Drops in Cataract Canyon. Bobbie and I bumped through them during a 2006 raft trip down the Green into the Colorado. These big River reservoirs are intended to fluctuate in fulfillment of the Compact.
- S.** No doubt you saw all that caked-up sediment parched by the desert sun falling back into the River, like a giant scab peeling off the face of the canyon. In his book, *The Colorado*, Frank Waters writes, "in 300 years the whole vast reservoir behind the dam will be filled in solid with sand and silt . . . and the Colorado will resume its way"<sup>8</sup> He was writing that in 1946 before the gates closed on Glen Canyon. Like Jeremiah to a populace that would not hear, he invoked the long view. His point was you could dam the Colorado at every possible point and still the River would follow its own piper. Waters asked, "Which one of us dares assume that one transient race of men in its short span for a few hundred years can do more than retard for a geologic moment the river's immemorial and immeasurable task of transporting bodily the whole vast Colorado Pyramid into the sea?"
- B.** Oh-Ho! While you're at it, why not invoke Aldo Leopold's description of the Colorado River Delta in Mexico before the U.S. and Mexico got to work with their dams and diversion? You've seen La Cienega and how beautiful it is!
- S.** I happen to have Aldo Leopold's lament right here: "(t)he Delta has probably been made safe for cows, and forever dull for adventuring hunters. Freedom from fear has arrived, but a glory has departed from the green lagoons."<sup>9</sup>
- B.** This is getting too lyrical — even for me! Let's talk practicalities about the needs of the peoples who share this watershed. In your hydrocommons writings you say: "Water stakeholders with mutual interests organize to promote and protect those interests. Participants in such associations, from irrigation project contractors to flycasters, come to realize, willingly or not, that their interests are dependent upon drainage-wide, even extra-basin, conditions and events. Their self-

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8. FRANK WATERS, *THE COLORADO* 360-61 (1946).

9. CHARLES F. WILKINSON, *THE EAGLE BIRD*, *MAPPING A NEW WEST* 55 (1992), *citing* ALDO LEOPOLD, *A SAND COUNTY ALMANAC* (1949).

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interest, which first is obvious at the watershed level, typically comes to demand a broader basin-wide or even multiple-basin perspective and political presence . . . What is important to recognize here is the common role of these associations in creating a basin-wide or multiple-basin identity for their causes and followers."<sup>10</sup> I look around the room today and see the reflection of this very community, raucous diversity and all! Differences within the regional community have been faced squarely and solutions posed, all in a spirit of comity. Shared values and beliefs. Well?

- S.** Honestly, you leave me speechless. If you mean a common yearning for gaining and retaining water supplies — and a belief that one's own locality deserves both more and the most — there'll be no argument. Beyond that I'm not sure one can find a credible regional belief system — unless it is a suspicion of anything and everything within a stone's throw of the Potomac!
- B.** Not true. Look at the region-wide belief in water quality — the salinity control program, for example. Or the regional belief in the recovery of endangered species — the upper basin recovery program and the lower basin multiple-species habitat plan. Millions of dollars have been committed —
- S.** Now give me a break! Those are compulsory responses to the reality of the Supremacy Clause. The Feds rule. Yes, the Endangered Species Act,<sup>11</sup> now part of our nation's business, seems to be trumping — at least on this side of the border. Not exactly a mark of voluntary association and initiative. Besides, didn't the enviros walk out of the lower basin multiple-species habitat planning process?
- B.** Membership in the River community doesn't require seeing eye to eye on everything. Robust discord is a sign of health, as in any democratic grouping. Look how the enviros put together the "conservation before storage" proposal considered in the Environmental Impact Report on Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lakes Powell and Mead.
- S.** My money is on the seven-state proposal as reflected in the preferred alternative. What other indicator of community do you want to try out?

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10. *From Basin to 'Hydrocommons': Integrated Water Management Without Regional Governance* (Western Water Policy Project, Natural Resource Law Center, School of Law, U. of Colo., Discussion Series Paper No. 5, 1990).

11. 16 U.S.C. §§ 1531-1544 (2007).

- B.** You've already added to the list of indicators when you referred to the Feds and the Supremacy clause. We share a ruler in common. And we share a common set of rules in the Law of the River.
- S.** Ah yes, we're subservient commoners — mere subjects, subjugated. Not my idea of a community, just another example of subordination, if you ask me.
- B.** Your monarchy metaphor doesn't wash true, my friend. Tell me, how many big decisions on the river have you seen made by either the Secretary or the Congress without consultation with, if not the rough consensus of, the seven basin states? The 1922 Compact contains in Article VI a provision for the States to cooperate with each other in resolving disputes about the operation of the Compact. The Compact has allowed the orderly development of the seven basin states. None of the states could get a better arrangement now by backing out of the compact. The Secretary of Interior has responsibility for the operation of dams and reservoirs that support Compact deliveries. And the United States Supreme Court, as shown by its recent *Kansas v. Colorado*<sup>12</sup> compact enforcement decisions will enforce compacts if the signatory states cannot agree regarding the meaning and operation of compact provisions. I don't think leaving the apportionment of the waters to the equitable apportionment jurisdiction of the Court would have wrought such a collaborative and reasoned accomplishment!
- S.** Sure, the states have acted in concert at important times to influence the flow of federal bucks and authority. And Feds are deferential when and where it makes political sense. You want us to equate "federalism" with "community" I take it.
- B.** Well, it's the constitutional foundation of our national community of States and Tribes.
- S.** That mix hasn't congealed for me yet, I guess. But onward: Have we reached the bottom of your bag of indicators of community?
- B.** Well, the last one I have in mind is the most obvious: sharing a scarce water hole — a common dependence on the same river, that 1400-mile wonder that has brought us once again for a few days to the negotiating rooms of the 1922 Compact, only a stone's throw from the centuries-year-old juniper Willa Cather heralds in *Death Comes For The Archbishop*.

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12. 546 U.S. 1166 (2006).

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- S.** Water hole? Another quaint metaphor! But let's not quibble. Yes, there is a common dependence. And that dependence is shared by more than the seven states and Mexico. The Tribes and the enviros have to be included.
- B.** And all the people who do and will call the spectacular Southwest their home.
- S.** And maybe all those from other states and other lands who feel a strong attachment to the Grand Canyon?
- B.** Of course, once you've seen this great land you are profoundly affected by it.
- S.** Say, we could have part of the tourist dollar go into a hydrocommons management fund, I suppose. Maybe national borders are going to mean less for this community you conjecture about over time? The other day I read an excerpt from a newsletter asking readers to imagine the possibility that an Hispanic majority in the Southwest several decades down the road, combined with global economic realignments, could reverse the Treaty of Guadalupe Hidalgo and lead to secession. This shook me up a bit, but then I began to think that — short of such a radical systemic change — you could have a situation where a regional population readily overlooked the border and identified far more closely with the Colorado River Delta, maybe even the aspirations of the Cucapa people in Baja California?
- B.** Ah hah, the Skeptic might believe in a regional River community after all!
- S.** No, my friend, I believe in expedient shifting alliances and collective adaptive behavior. But, rather than trying to resolve how we label this aggregation of interests — your conscious community, my shifting amalgam — why don't we exchange thoughts on how the aggregation of interests vying for the waters of the Colorado may be shaped by — or for that matter, shape — the region's future?
- B.** What major forces do you see acting upon or arising within regional water management in the future?
- S.** That asks for a lot of speculation. But I'm willing to speculate a bit by extending some of the trend lines that are already testing water management in the region . . . such as:

- a. Demography and urbanization
- b. Climate
- c. Globalization and economic change
- d. International and transboundary equities
- e. Ecological restoration and management

**B.** That's a heady list of categories. Put feathers on those wings.

**S.** All right. Starting with demography and urbanization, picture this trend line. The seven basin states had a combined population of about 7 million to 8 million people before the Compact came into being. In 1990, that combined total was about 41 million, in 2007 about 55 million. The projection for 2025, the marker year of the pending seven-state settlement, is about 68 million. If that projection turns out to be correct, that will mean a 40+ percent population increase in one generation. How's that for a changing water demand variable for your river community!? And this demographic change in water demand in the basin states exceeded that occurring elsewhere. The three fastest rate-of-growth states in the country in the 1990's were all Colorado River basin states — Nevada, Arizona and Colorado. In 2000 the population estimate for Baja California was about 2.5 million, with Mexicali making up 800,000 of that. I don't know the regional or current rate of growth. For Mexico as a whole the rate was 2.8 percent between 1940 and 2000, more than twice U.S.'s of 1.2 percent for that same period.

**B.** Well, you've made it clear that population pressures could bring on stronger potable water demand. But it needn't be a straight-line relationship —

**S.** Granted. As I recall, through conservation, the Metropolitan Water District in Southern California accommodated significant population growth in its service area in the 1990s without increases in supply. Southern Nevada's efforts since 2000 allowed such accommodation as well.

**B.** And I seem to recall that water demand in recent years has dropped dramatically across the board and has absorbed this startling growth thus far. Certainly, you can see why the conservationists press for demand reduction and water sharing scenarios in the first instance. I think your next category of change was the climate. Just what climate scenarios should the community be prepared for?

**S.** The best I can do is repeat some of the informed guesses we've heard from a few experts. For example, Brad Udall, in his May 2007 summary of recent research on Colorado River climate change, concluded that

reductions in runoff range from -11 percent for the year 2100 to -45 percent for 2050. But such figures shouldn't shock you — you've taken a real interest in past droughts in the whole of the western Americas, north, central, and south.

- B.** I have and they are humbling. But I don't believe in automatically flipping past hydrographs into the future, though we'd be in denial if we didn't prepare for the contingency of protracted periods of warmer and wetter winters combined with drier summers. Since dramatic climate change carries uncertainty as to which latitudes will be drier and which wetter, we need to be mentally conditioned and prepared for the full climate spectrum. Certainly there could be significant disparity within the region. It is heartening that six western states have joined with two Canadian Provinces to form the Western Climate Initiative, getting ahead of their federal governments. That kind of regional leadership might provide a model for western water in the 21st century. And we now have the Congressional authorization for the National Drought Information System to be administered by NOAA, with the Colorado River Basin being one of the first pilot efforts. So what were the other contingencies you want to throw into the mix?
- S.** Well, economic development and change, particularly as driven by globalization, could have a lot of impacts. First, the basin states' gross state product (GSP) in 2005 — at mid decade — was far better than most states'. The U.S. growth rate was 3.5 percent in 2005; Arizona, 8.7 percent; California, 4.4 percent; Colorado, 4.2 percent; Nevada, 8.2 percent; New Mexico, 4.6 percent; Utah, 5.8%; and Wyoming, 4.9% —
- B.** Yet in July, three basin states were in the top five nationally for per-household foreclosures: Nevada first, California fourth and Colorado fifth. Maybe the proportionally high economic growth rate for some Western states won't last. The West is no stranger to boom and bust cycles, goodness knows.
- S.** If the exceptional economic growth were to persist, however, it spells more water demand.
- B.** Maybe not in a net sense. I guess that turns on the nature of the growth, on accompanying water-saving technologies and practices, and on what water-using activities are being displaced, if any. But admittedly it belongs among the challenges you're lining up. What about the role of agriculture in the economic picture?
- S.** We all see farmland being converted to suburbs. That doesn't necessarily mean a reduction on the gross output of agriculture because

in some areas higher efficiencies and yields-per-acre more than offset the loss in agricultural acreage. And often the consumptive water use before and after the conversion isn't that different. The enviros point out that the urban areas in the United States are not going to be sustainable at the present rate of disproportionate resource use. Some envision ghost suburbs if gas gets to \$10 a gallon. And global demand for food and fiber may keep irrigated acreage in the western U.S. a very valuable resource for the export market. There is talk of cultivating a drought-resistant biofuel plant from India in our Southwest —

- B.** You mean we could soon have jatropha plants competing with alfalfa, if not with Joshua trees!
- S.** Not that far fetched. Who knows where globalization is taking us. As an aside, if you run into anyone who seriously doubts that global interdependency is here, just remind them that the quagga mussel is a Ukrainian shellfish!
- B.** I guess Delph Carpenter never envisioned the region being invaded by quagga and jatropha?
- S.** One thing looks pretty clear: the Upper and Lower Basin owners of irrigated acreage covered by perfected rights preserved through the Compact are sitting in the cat-bird seat, whether they be public agencies, corporations, individuals or Tribes — thanks again to your prior appropriation law.
- B.** Whatever priorities are brought to future conflicts, in one form or another there will be equitable claims that cross boundaries and must be resolved within the community. I think that was your next point; we've already touched on it and I concede it. Wasn't there a final item on your list of challenges?
- S.** Yes, the last category of change is: ecological restoration and management. I haplessly wrote that essay on the "hydrocommons" in 1990 without really recognizing the power of the new paradigm cast by the Endangered Species Act. The imperative of ecological management is surviving political administrations of all stripes. It appears to be an inescapable correlate of both scarcity and sustainability. We restrain ourselves in terms of development or we risk extinction — I think that, in a nutshell, is the every-growing refrain.
- B.** In California in late August a federal judge ruled in favor of the Delta smelt versus the Delta pumps, perhaps reducing by 35 percent the amount of exports out of the Delta that Californians depend on. The big

ratchet is turning. California must live within its 4.4 million acre-foot allocation while the smelt, crumbling levees, sinking soil and seismically active faults imperil the viability of California's waterworks. The state's goal of cutting back 80 percent on carbon emissions within the Century is certainly a paradigm for what must be done to slow climate change, but what's the limit of water demand reduction in offsetting a substantial ESA-compelled wet water reduction. Is it time for the God Squad? Or the Terminator?

- S.** Under that ungodly scenario and several others, one can speculate about a range of institutional responses that the community you herald may have to support or contend with: First, progressive demand management, extending and deepening the trend of conservation and rationing that is already well underway —
- B.** But hopefully stopping short of squeezing out the remnants of what drought buffer the municipalities have left, whether in some kind of landscape quotient or otherwise.
- S.** Maybe a municipal buffer can be created by regional drought banks shored up by senior perfected rights and dedicated storage — or even the rise of a market in conservation credits?
- B.** You mean if we can use credits to combat acid rain and SO<sub>2</sub>, why not drought?
- S.** It could be possible.
- B.** A public-run conservation credit program would probably be received much better than a private one if I know the River community.
- S.** Continuing the speculation: Second, advanced water management technology bearing upon water utilization, quality, conservation and reuse.
- B.** Things like gulf or coastal desalination, freeing up water inland, once the energy costs are affordable.
- S.** And once bureaucracies in California and Mexico are convinced sea life is not threatened — and are conditioned politically to identify with this broader regional community you posit. Third, voluntary water transfers, leasing, and banking involving both the marketing of priority rights and the mooting of them through shortage sharing.
- B.** Within the bounds of the Law of the River, of course.

- S.** I assume under conditions of a deep prolonged drought those bounds either accommodate, or they break.
- B.** Hmm . . . are you baiting me here. If so, I'm not biting. What's next on the list?
- S.** Fourth, selective new water development, and skyrocketing water acquisition and management costs, posing contentious debates over "who pays" and "how much."
- B.** I'm sorry, but that's old news.
- S.** Yes, but we're talking about matters of degree: Maybe you ain't seen nothin' yet! Fifth, emergency interventions by all levels of government in dire settings and situations.
- B.** The river community is able and willing to accept emergency action. There was the 2003 cooperative arrangement through the International Boundary & Water Commission to aid Tijuana in an emergency —
- S.** That isn't quite what I meant by intervention. How would the River community respond if government started condemning senior water rights?
- B.** Counselor, you've just crossed a line. That is close to being unthinkable in our water culture.
- S.** More unthinkable than a half-century drought? Surely it is the kind of divisive action that would test the mettle and problem-solving capacities of the community you place your faith in.
- B.** Hard cases can make bad law. In the end, the community will adapt. And I'm confident it will be proactive and united enough to avoid the need for the kind of Draconian interventions by government that you allude to.
- S.** So often the unity of the basin states has been derivative — in response to a threat of federal action. Are you foreseeing a shift toward more generative action from within the region?
- B.** Hopefully that will be the case. If not under dire drought conditions, then when?
- S.** Point well taken, your Honor. The final response scenario I'll float is probably more unthinkable than even eminent domain.

- B.** We can hardly wait.
- S.** O.K., response set number six: possible demographic and migratory changes, including dislocations and relocations of populations.
- B.** Surely you don't mean a diaspora away from of the reach of the River and its service areas once the carrying capacity has been reached! Ghost towns? Refugee camps?
- S.** Or fallowed and abandoned fields. Or people not moving into the region. No one would wish it, to be sure. But could it not happen selectively in this century, perhaps on the margins where emergency water supplies might not be politically or economically sustainable over long periods?
- B.** I don't think there's room enough on earth for us to migrate like the ancestral Puebloans were able to do. I'm a believer in humanity's opportunity to get smarter with being larger, out of necessity — which always seems to be the great compeller of change.
- S.** As am I. But severe scarcity could mean that the limits of adaptation will be felt by some and the choice will be to move out or, for some, not to move in.
- B.** I find it paralyzing to dwell on catastrophic prophecies. While I expect that the River Community will be exposed to hardship, there will be the resolve and savvy to preserve the wonder in the region and ourselves.
- S.** Assuming initiative and bold leadership.
- B.** The reality of the community is best proven by its works. Just look at some highlights of the last twenty years. The 35-year Imperial Irrigation District-Metropolitan Water District conservation investment transfer inked in 1988 and the Palo Verde-Met rotation-fallowing deals that followed; the out-of-state banking in Central Arizona in the early 90s, inspiring the now established interstate water banking account for intentionally created unused apportionment in Arizona; the interim surplus program and now the creative notion of intentionally created surplus; the Upper Basin Recovery Program, precursor to the Multi-Species Habitat Plan; the pending conjunctive management and equalization regime for Powell and Mead; also pending, the study of supplemental water options for Nevada; and, of course, the ongoing implementation of the huge and highly complex Quantification Settlement Agreement conservation and transfer transaction. Give the community its due, Mr. Skeptic!

- S.** You're right of course. Under pressure, the amalgam has shown a lot of perseverance and found some creative ways to elasticize the Law of the River. The achievements reflect the importance of leadership and will add a glow to the twilight years of many in this assembly. But what is going to happen after 2025? Those 17 years will rapidly pass. Are we bringing along the young who will have to lead the community beyond 2025? I scan the assembly and see a lot of able but aging water stewards. Are we bringing along the young for the River Community of tomorrow?
- B.** A good and true charge for all assembled here as this dialog ends. Would you believe, I'm going to turn to Charles Wilkinson for a benediction: "We deserve and can achieve more stable, tight-knit communities, communities bound together by the common love of this miraculous land, of this region the likes of which exists nowhere else on earth. We can do much better. We need to develop an ethic of place. It is premised on a sense of place, the recognition that our species thrives on the subtle, intangible, but soul-deep mix of landscape, smells, sounds, history, neighbors, and friends that constitute a place, a homeland."<sup>13</sup>
- S.** Long live the Amalgam!
- B.** Long live the River Community!
- S and B.** And we hope to see you all at the 90th celebration of the Colorado River Compact!

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13. WILKINSON, *supra* note 9, at 137-38.

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