Water politics is a function of two variables: supply and demand. Supply is determined by climate. Demand is determined by population size and the thirst of that population. Of these variables, demographers forecast increased global population growth and use of water, while meteorologists forecast, in many parts of the world, drought.

The western U.S., particularly the southwest, is the fastest growing region of the nation (Roberts and Dougherty). The region is also in the throes of an extended multiyear drought which scientists caution may be the norm rather than the exception. For example, the current drought pales in comparison to the drought of 900-1300 CE, suggesting cycles of aridity are normal feature of the region’s climate (Cook et. al. 2004). Convergence of climate models indicate that the transition to a more arid climate, reminiscence of the Dust Bowl of the 1930s, is already taking place and will become the new climatology for the west within a matter of years or decades (Seager et al. 2007).

These conditions stand in stark contrast to the relatively wet twentieth century, when water policy was set. For example, the Colorado River Compact of 1922, which adjudicates allotment of the 7 basin states (Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming), was negotiated on data from unusually wet years dating back to the 1890s. The faulty assumptions of the compact consequently make it inherently problematic (Dean). The year the compact was signed, American ecologist Aldo Leopold canoed through the Colorado River delta estuary with his brother and discovered a lush oasis teeming with life:

A verdant wall of mesquite and willow separated the channel from the thorny desert beyond. At each bend we saw egrets standing in the pools ahead, each white statue matched by its white reflection. Fleets of cormorants drove their black prows in quest of skittering mullets; avocets, willets, and yellow-legs dozed one-legged on the bars; mallards, widgeons, and teal sprang skyward in alarm. As the birds took the air, they accumulated in a small cloud ahead, there to settle, or to break back to our rear. When a troop of egrets settled on a far
green willow, they looked like a premature snowstorm. All this wealth of fowl and fish was not for our delectation alone. Often we came upon a bobcat, flattened to some half-immersed driftwood log, paw poised for mullet. Families of raccoons waded the shallows, munching water beetles. Coyotes watched us from inland knolls, waiting to resume their breakfasts of mesquite beans, varied, I suppose, by an occasional crippled shorebird, duck, or quail. At every shallow ford were tracks of burro dear. We always examined there deer trials, hoping to find signs of the despot of the Delta, the great jaguar, el tigre (1960, pp. 142-43).

Now the Colorado flowing into the Gulf of California is nothing more than a briny trickle (Alexander), and the ecosystem that astonished Leopold is decimated. The Rio Grande has met the same fate; the river once described as “mighty” has become so weak it peters out even before reaching the Gulf of Mexico (Yardley).

Ecologically, the estuaries of the Colorado and Grande have been obliterated. In Big Bend National Park, the loss of instream flows from the Rio Conchos, the largest tributary of the Rio Grande, has threatened floral and faunal populations (United States Geological Survey). The research of Randy Blankinship, a Texas wildlife biologist, has shown that innumerable species, including white shrimp and mullet, have been deleteriously affected by the reduced outflow of the Rio Grande. Water hyacinth and hydrilla, which would normally be flushed away by current, have choked some sections of the river (Yardley).

The Colorado River and Rio Grande symbolize the complex ecological and economic codependence of the U.S. and Mexico. Economically, the future of agriculture in the Imperial and Rio Grande valleys depends upon the future supply of water, as does the growing industrial centers spawned by the North American Free Trade Agreement (NAFTA) which dot the length of the international border.

Water policy between the two neighbors was set in 1944 by the Treaty Regarding Utilization of the Waters of the Colorado and Tijuana Rivers and of the Rio Grande, known colloquially as the U.S.-Mexican 1944 Water Treaty (Senate of the United States America). The treaty stipulates that the U.S. allow 1.5 million acre feet of Colorado River water (about 486 billion gallons) to flow from the U.S. into Mexico, and that Mexico allow 350,000 acre feet (about 114 billion gallons) of Rio Conchos water to flow from Mexico into the Rio Grande at the U.S. border. The treaty releases Mexico from meeting its
obligations in case of “extraordinary drought or serious accident to the
hydraulic systems on the measure Mexican tributaries” (op. cit., p. 11).

The California side of the Imperial Valley relies on water from the Colorado
River, which produces $1 billion in food annually. Much of this water is
delivered through the 82-mile All American Canal running just north of the
border, which leaks so much water that Mexican farmers have been pumping
aquifers and using it for irrigation since the 1940s. A proposal to line the
canal and prevent leakage has triggered Mexicans to protest loudly, claiming
that it will end farming in the Mexican side of the border (Rohter). “How can
they take away the farmers’ water after all these years? asked a Mexicali
merchant. “Americans always want more, but we are used to
this” (Archibold). Mexicans warn that the proposal will force farmers to cross
the border, illegally if need be, to find work on the American side (idem).
Environmentalists have argued that if desertification occurs through the
deterioration of Mexican farmlands and wetlands, air pollution would result
and endangered species of birds and lizards be threatened (idem).
Americans point out that lining the earthen canal with concrete is not
forbidden by the 1944 treaty, and that Mexico already gets its allocation of
water as promised (Kravets).

In Texas, border tension over water is no less acute than in California. The
politics of water are much more pointed and pressing today than in 1944
when the Rio Grande Valley had only 1% of the current population (Weiner).
By 2002 Mexico had fallen 456 billion gallons in arrears on its treaty
obligations (idem). Drought exempted Mexico from delivering the water by
the terms of the treaty, Mexican authorities claimed. “No water treaty can
demand a country to deliver water that doesn’t exist,” one official said
(Yardley).

Texans have not been so sure, their suspicions heightened by the dire
consequences of drought on both sides of the border. Rumors circulated
about satellite imagery showing water in Mexican reservoirs (Yardley). U.S.
farmers contended that Mexican crops thrived while U.S. crops withered
(Montgomery). During the 12 years that Mexico owed the U.S. water, an
estimated 100,000 acres of farmland was permanently lost when farmers
sold land they were unable to irrigate (Vindell). Culinary water became so
expensive in some places that poorer Texans could not pay water bills and
had their service shut off (Stroud).

Oddly, Texas water woes have not necessarily encourage conservation, as
officials were not eager to prove that Mexican water could be done without.
In the words of one top Texas water manager, “Do you plan for water that
you should have during a drought of record based on full implementation of the treaty? Or do you throw in the towel and plan for a supply of something less than what the treaty says—and thus admit that you can get by without that water?” (Stroud).

The dispute has abated, in part due to forgiveness by the U.S. of 154,846 acre feet of water (Montgomery). The main factor, however, was not diplomacy but weather: several years of heavy rainfall have replenished water supplies which allowed Mexico to send more water down the Rio Conchos (Kraul).

One thing is clear: in the politics of water, ripples flow upstream. In a drought of the, the city of Brownsville, Texas, sued farmers when water never made it down the Rio Grande (Stroud). In Texas and the Mexican state of Tamaulipas, farmers downstream blame farmers upstream in Chihuahua of hoarding water (Weiner).

In the equation of water politics, demand will assuredly increase and supply will possibly decrease due to global climate change. Some have looked to divine intervention or luck to increase supply. One Mexican sorghum farmer prays to San Isidro, a patron saint, for rain (Weiner). Some doubt that prayer is the best solution, however. “For the longest period of time, the Rio Grande Valley has had a water policy in which we hope and pray for a moderate-sized hurricane every 8 to 10 years that would bypass the Valley, land in the watershed and dump in the reservoir,” the highest elected official of Cameron County, Texas, said. “That isn’t a water policy” (Yardley).

Most public policy planners feel solutions will have to be political and involve conservation. Part of the problem will be mitigated by lower use per capita as land is converted to residential from agricultural use. The 2007 Texas State Water Plan predicts that while the population of the eight-county Rio Grande Valley region will triple by 2060, water use will increase only 13 percent (Stroud). Yet officials concede there will still not be enough water. Referring to residents of the Rio Grande Valley, one San Antonio water consultant said, “They can convert all the irrigation water rights down there and they still won’t have enough” (idem). While conservation can help slake the thirst of burgeoning populations, politicians—and the constituents they represent—may come to the harsh realization that in naturally arid areas there may be limits to growth.

Rivers disrespect political boundaries. They will continue to flow from one political jurisdiction to another, straining relations between neighbors. As the
governor of the state of Coahuila speculated after the fin de siècle, “I think the struggle for water will be the gravest problem of this century” (Weiner).

As thirst grows worldwide, more squabbles—and war—over water are certain to erupt. As such, how should water fights be addressed? Should upstream users take as much water as they need independently of the concerns of downstream users, or must concession and compromise be the key-log of unjamming water disputes?

References


