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Review of *Ogallala Blue: Water and Life on the High Plains* by William Ashworth

Sandra Zellmer

College of Law, University of Nebraska-Lincoln, szellmer2@unl.edu

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BOOK REVIEWS

Ogallala Blue: Water and Life on the High Plains. By William Ashworth. New York: W.W. Norton, 2006. x + 330 pp. Bibliography, index. \$26.95 cloth, \$16.95 paper.

William Ashworth, an environmental historian and prolific writer, grips our attention in lyrical yet urgent terms in *Ogallala Blue: Water and Life on the High Plains*. *Ogallala Blue* stands beside John Opie's *Ogallala: Water for a Dry Land* (1993) and Marc Reisner's *Cadillac Desert: The American West and Its Disappearing Water* (1986) as a "must read" book for anyone who cares about the future of water resources.

Ashworth begins, "Water is life. . . each drop is a benediction." Through a collection of case studies that provide vivid descriptions of local landscapes and the individuals who populate them, he portrays the deep-rooted sense of place of High Plains communities. Their stories are deftly interwoven within the grand scheme of geologic time and scale. As for the vast Ogallala aquifer itself:

It is hard to overestimate the impact that this bounty of buried water has had on American life. If you snack on popcorn or peanuts, you are probably eating Ogallala water; if you dress in cotton clothing, you are probably wearing it. . . . The fourteen million acres of crops spread across its flat surface account for at least one-fifth of the total annual U.S. agricultural harvest. . . . If the aquifer went dry, more than 20 billion worth of food and fiber would disappear immediately from the world's markets.

Ashworth is not spouting hyperbole; far from it. It is quite possible that portions of the aquifer will go dry within our lifetimes. In some areas of Texas and Kansas, in fact, the Ogallala has been so depleted that extracting more water is no longer feasible. We should not be surprised. As Ashworth explains, groundwater mining "is not an accident here; it is a way of life . . . it is also a way of death."

How have we come to such dire circumstances? Although state and local governments have assumed primary responsibility for managing groundwater, private actors, rallying around private property rights, retain great latitude to exploit groundwater well beyond the point of safe yield. Until midway through the 20th century, legislatures and courts stayed out of the realm of groundwater

management, viewing underground aquifers as too "secret, occult and concealed" to be subject to the law. This view rationalized the "rule of capture," which awards the landowner exclusive ownership of water percolating beneath the surface so long as that landowner captures it by pumping. Today, most states have abrogated this rule in favor of groundwater laws based on a concept of reasonable use. These laws are a step forward, but they address groundwater overdraft crudely, at best. Even with modern Geographic Information Systems, groundwater remains a subject of "misinformation, misunderstanding, and mysticism," all of which add up to mismanagement.

Has the federal government been asleep at the wheel? While it generally defers to states on groundwater matters, that does not mean it lacks authority; far from it. On occasion, the United States has exercised power over groundwater pursuant to environmental statutes such as the Endangered Species Act and the Safe Drinking Water Act. Federal laws governing the interstate allocation of water through equitable apportionment and interstate compacts play a role in groundwater management as well, as we've seen in the dispute between Kansas and Nebraska over the Republican River Basin. In *Sporhase v. Nebraska* (1982), the U.S. Supreme Court explicitly stated, "Ground water overdraft is a national problem and Congress has the power to deal with it on that scale." Although the Court took pains to applaud the leadership of the state of Nebraska in water resources management, it left no doubt that federal control of groundwater is constitutionally permissible. If Congress acts, preemption of conflicting state or local laws is sure to follow. This is a key point, albeit one that likely sends shivers down the spines of local governments and their constituents.

For his part, Ashworth embraces local control, preferring "homegrown solutions" to "outside fiats," be they federal or state. Yet the book undermines this stance by depicting how, in case after case, the failure of local governments to ensure efficient, nonharmful uses has resulted in improvident use, surface subsidence, and bone-dry streambeds. As Ashworth explains in meticulous detail, the depletion of the Ogallala is an impending crisis that we ignore at our peril. Given that the aquifer produces around 20% of the U.S. harvest, the ripple effects of its demise could well be cataclysmic, nationally and even internationally.

Rather than fear-mongering, Ashworth concludes on a hopeful note. His closing chapter provides an encouraging look at a range management experiment on the Knife Chief Bison Range, where the Pine Ridge Indian Reservation, through a course offered at the Oglala Lakota College, has curtailed intensive grazing practices by cattle ranchers, torn down fences, and introduced a free-ranging bison herd. Remarkably, within a short time, springs, seeps, and lush prairie grasses appeared in places where they had been absent for decades. Acknowledging that such a conversion is not in the cards for all ranchers, and that it would make little difference in places where overdraft has already occurred, Ashworth nonetheless uses the example to make his point: there is no one-size-fits-all solution, but there *are* solutions. But only if people take notice, plan for the future, and engage in coordinated action. **Sandra Zellmer**, *College of Law, University of Nebraska–Lincoln*.

The Science, Impacts and Monitoring of Drought in Western Canada: Proceedings of the 2004 Prairie Drought Workshop. Edited by Dave Sauchyn, Madhav Khandekar, and E. Ray Garnett. Regina, SK: Canadian Plains Research Center, University of Regina, 2005. viii + 101 pp. Maps, color plates, figures, tables, references, index. \$15.00 paper.

Drought is not an unusual phenomenon on the Canadian prairies or the U.S. Great Plains. There were many short-term droughts in the prairies during the 20th century that generally lasted one to two years (e.g., 1961, 1988). The Canadian prairies multi-year drought event (1999–2003+) has been considered similar in severity to the 1930s drought years.

The 2004 Prairie Drought Workshop resulted in 76 scientists and resource managers gathering in Calgary, Alberta, to share information on drought science, impacts, and monitoring. Presenters examined the impacts on agriculture, stream flow, forests, and ground water, including potential impacts under a changed climate. Though focused on the Canadian prairies, the information presented could be applied to many parts of the U.S. Great Plains.

Bonsal and Stewart's examination of the 2001 and 2002 atmospheric circulation patterns argues that the droughts of 2001 and 2002 were unusual compared to those in the 20th century. Bonsal's research indicates that their atmospheric causes appeared to be related to a northward extension of circulation anomalies from the

U.S. into Canada. This is different from previous severe droughts which could be related to large-scale teleconnections such as El Niño/Southern Oscillation (ENSO). Stewart suggests that the atmospheric circulation processes occurring during the cold season were critical for the 2001 and 2002 droughts.

While the droughts of 2001 and 2002 were extremely severe, they were not anomalous compared to the long-term trends over the last 250 years. Sauchyn's tree ring reconstructions indicate that the 20th century was anomalous because of its lack of sustained drought. The possibility of more severe droughts makes proactive risk management necessary.

Two papers provide material on risk management strategies undertaken by federal and provincial governments, including attempts to get information to the public on climate and hydrologic conditions, thereby helping agricultural producers to make better management decisions. Another paper urges scientists and resource managers to take a proactive drought management approach. Wilhite suggests that policies encouraging self-reliance and sustainable use of natural resources are more effective in the long term, that there is a need to identify and quantify sectors and people most at risk, and that policies, plans, and mitigation programs formulated to address vulnerabilities must be implemented in a systematic manner.

Are atmospheric flow patterns indeed changing? And if so, to what degree and to what effect? If the 20th century was anomalously moist, are governments and individuals ready or able to deal with more severe drought events in the 21st? The proceedings are well worth reading not only for the information they provide but for the significant questions they raise. **Virginia Wittrock**, *Environment and Forestry, Saskatchewan Research Council, Saskatoon*.

Prairie Time: A Blackland Portrait. By Matt White. College Station: Texas A&M University Press, 2006. x + 251 pp. Map, illustrations. \$19.95 cloth.

Nowadays, the Blackland Prairies of north Texas are the kind of landscape most people think of as great for subdivisions and strip malls: generally flat, easily bulldozed, and not too far from Dallas-Fort Worth. *Prairie Time: A Blackland Portrait* traces a similar utilitarian vision of the prairie in 19th-century pioneer descriptions as well: good for plowing, grazing, and—once the buffalo and Native Americans are exterminated—not too far from outposts of commerce. The book serves as an