



Spring 2015

Introduction

Dan A. Tarlock

Recommended Citation

Dan A. Tarlock, *Introduction*, 55 Nat. Resources J. vii (2015).
Available at: <https://digitalrepository.unm.edu/nrj/vol55/iss2/2>

This Front Matter is brought to you for free and open access by the Law Journals at UNM Digital Repository. It has been accepted for inclusion in Natural Resources Journal by an authorized editor of UNM Digital Repository. For more information, please contact amywinter@unm.edu, lsloane@salud.unm.edu, sarahrk@unm.edu.

INTRODUCTION

A. DAN TARLOCK¹

In much of the world, including the Southwestern United States, the long term availability of water for consumptive and non-consumptive uses is under stress. The virtually uniform consensus that global climate change will decrease available water supplies in arid areas adds to the stress of the demands on its variable supply affected by population growth.² Many scenarios regarding the impact of climate change on the state's water supplies and landscape portray a less enchanting New Mexico.³ Outside of North America, countries are adapting to water stress using two complementary risk management paradigms: water security and the energy-food-water nexus. These paradigms are not yet in widespread use in the United States because they are primarily focused on the developing world, but the articles in this issue fit within these two frameworks.

Water security is a framework that addresses the two dimensions of water stress, bad hydrology and institutional capacity to adapt. Water security seeks to ensure that individuals, countries and regions have sufficient water for "clean, healthy, and productive life."⁴ It has three dimensions. The economic dimension focuses on increasing water productivity and conservation; the social dimension focuses on providing widespread access through "robust policies and legal frameworks;"⁵ and the environmental dimension focuses on restoring ecosystem services in degraded basins.

The Southwest scores high on bad hydrology, as Professor Frisvold's article, *Water, Agriculture, and Drought in the West Under Changing Climate and Policy Regimes*, reminds us. The United States also scores high on institutional capacity to adapt. But, as students of western water law know, the West is still in the early stages of adapting to the very real threat of a long term decline in available supplies in an era of decreasing investment in water infrastructure and a growing recognition of the dollar value of the services provided by aquatic ecosystems. Taken together,

1. Professor of Law, Chicago-Kent College of Law. A.B., 1962, LL.B. 1965 Stanford University.

2. New Mexico grew from 1,821,204 to 2,059,179 in 2010. UNITED STATES CENSUS BUREAU, NEW MEXICO: 2010 9 (2012).

3. ROBERT REPETTO, NEW MEXICO'S RISING ECONOMIC RISKS FROM CLIMATE CHANGE, available at <http://www.demos.org/sites/default/files/publications/UpdatedNMFullReport.pdf>.

4. GLOBAL WATER PARTNERSHIP TECHNICAL COMMITTEE, TEC BACKGROUND PAPER NO. 20, WATER SECURITY: PUTTING THE CONCEPT INTO PRACTICE 12 (2014).

5. *Id.* at 13.

this article and others in this issue address some of the important issues raised by the economic, social and environmental dimensions of water security.

The economic dimension is captured by Gabe Collin's article, *Blue Gold: Commoditize Groundwater and Use Correlative Management to Balance City, Farm, and Frac Water Use in Texas*. In 2012, the Texas Supreme Court turned takings law on its head by holding that regulation that curtailed the future use of groundwater was a taking. *Edwards Aquifer Authority v. Day* departed from almost all other courts who have considered the issue by holding the Fifth Amendment protects future but not past investment backed expectations. However, the article rejects the widespread criticism of the decision. Instead, Collins argues that the decision opens the door to market solutions to manage the state's over-used groundwater supplies.

Equitable access to water is a the second component of water security, and Danielle Dolan and Beth Rose Middleton's article *Improving Tribal Collaboration in California's Integrated Water Management Program*, address Native American access. California's collection of small Tribes and Bands has benefitted from the federal Indian reserved rights doctrine, but Tribes and Bands have been often excluded from participating in the formulation of natural resources policy. The article examines an important state effort, Integrated Regional Water Management [IRWM], to include Tribes and local governments in that the process. The IRWM process has the potential to improve water management to better adapt to climate change. The article further suggests ways to make the process more inclusive and less adversarial for Tribes.

Sharon Wirth's article, *Jump in Before It's Too Late: Protecting and Increasing Streamflows in New Mexico*, addresses the third component of water security, aquatic ecosystem protection. Flowing rivers are an integral part of New Mexico's 5.5 billion tourism industry⁶ and are an essential element of biodiversity conservation. As the article points out, the state has lagged behind other western states in protection of conservation flows, due to the opposition of the Office of the State Engineer. The article argues that greater use of transfers of consumptive water rights and temporary leases of irrigation rights would enhance stream flow protection during drought years.

Two articles examine the water-energy-food nexus through the increasing water use in hydraulic fracturing. Hydraulic fracturing's water use has raised considerable concern, but as both articles point out, the use is relatively minor compared agricultural and urban consumption. *Texas Exempt Wells: Where Does Fracking Fit?*, by Tiffany Dowell Lashmet and Amber Miller, addresses an increasingly important question for drought ridden Texas: whether wells drilled for use in hydraulic fracturing are exempt from certain local groundwater conservation district re-

6. REPETTO, *supra* note 3.

quirements pursuant to the Texas Water Code. Xochitl Torres Small's article, *Water Use and Recycling in Hydraulic Fracturing: Creating a Regulatory Pilot for Smarter Water Use in the West*, argues New Mexico's relatively weak regulatory program should be broadened to address a broad range of stakeholder concerns by "incentivizing" continuous technology development and water conservation.

Although Jesse J. Richardson, Jr.'s article, *Agricultural Preferences in Eastern Water Allocation Statutes* inspects the statutory regime of Eastern states, it examines the region's statutes in light of increasing scarcity within the region against the backdrop of water allocation regimes in the West. The article describes the preferences of water use in each state and highlights the important balance between reasonable use and prevention of waste.

The staff of the Natural Resources Journal would like to thank Professor Tarlock, one of the preeminent water law scholars in the United States, for introducing this issue. We hope that this body of work contributes to the important and apt conversation of water in the West.