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The Color of Water: Observations of a Brown Buffalo in Ten Stanzas

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The Color of Water: Observations of a Brown Buffalo on Water Law & Policy in Ten Stanzas·

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"I speak as a historian, a recorder of events with a sour stomach. I have no love for memories of the past."

- Oscar Zeta Acosta, The Autobiography of a Brown Buffalo

"Once recognized as the fiercest beasts roaming the wild open wetlands of Asia, water buffalos earned their reputation as aggressive warriors able to travel long distances and engage in dangerous stampedes. Still stampeding, the modern Water Buffalo . . . [is] still hunting for water, but these days the search for supply is typically sought through legislation and state regulations."

- Jennifer Findley, BC Water News

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·· Associate Professor of Law, University of Denver Sturm College of Law and Affiliate Faculty, Department of History University of Denver. This ideas presented in this article arose out of my participation as a Plenary Panel Participant at the Fifteenth Annual Conference of Latino Critical Theory ("LatCrit") held in Denver, Colorado in October 2010. I also want to acknowledge the critical insight given to me by participants at the Critical Race Theory workshop at the U.C.L.A. Law School, where I presented a much earlier version of some of the ideas in this article. The arguments I make benefitted tremendously from the feedback I received from as well as the continued conversations I have had with my colleagues at DU Law, including Federico Cheever, Patience Crowder, Nancy Ehrenreich,, Eric Franklin, Rashmi Goel, Jose "Beto" Juarez, Christopher Lash, George "Rock" Pring, Catherine Smith, and Robin Walker Sterling. As always, Laurie Blumberg-Romero read this with a close and critical eye. I want to especially thank Benjamin Glick and Jessica Lee for outstanding research assistance in this project. Finally, I want to acknowledge the outstanding work of the members of the Water Law Review in the publication of this article, making the final product stronger at every point.

"For many years the members of the Water Law Section of the Colorado Bar Association have honored individuals who made special contributions to the area of water rights. These individuals – be they lawyers, engineers, geologists, politicians, or others who work or have special interest in this field – are inducted into the *Ancient and Honorable Order of the Water Buffalo*"

-Colorado Bar Association

I. PROLOGUE: THE BROWN BUFFALO AWAKENS

I can often tell where a person was raised or his or her socio-economic class by how he or she washes dishes. Those who come from an arid or semi-arid environment, such as the intermountain West or desert Southwest, or those who do not have ready or consistent access to water, are likely to fill their wash basin with water, plug it up, and then proceed to wash dishes in the suds filled sink before finally turning the faucet on to rinse the all of the soapy dishes.

In contrast, I have noticed the tendency for those who grew up in areas where water was not so scarce is to turn on the faucet and let the water freely flow until one had completed the labor intensive process of rinsing, then scrubbing, and rinsing again every plate, glass, and utensil. Once this is done, it is not uncommon to then put those same dishes into the dishwasher that itself uses approximately six gallons of water, per cycle. It was not until I lived in different parts of the United States and the rest of the world that I even noticed this distinction.

Like countless others growing up as the child of baby-boomers in the metropolitan United States, I took for granted the centrality of water in organizing the constructed social and political landscape in which I lived. My parents, who themselves grew up relatively poor, conserved water by plugging the kitchen sink. During the hot and dry summer months, I learned to only use water on certain days of the week. Though I was concerned about when I could use my slip-n-slide, the underlying issue was whether I would be playing on dry and increasingly brown Kentucky bluegrass or upon a fertile and lush lawn.

Perhaps as a divergence from my generational peers, I did not learn how to swim in either the community recreational center nor in the increasingly ubiquitous personal backyard pools that emerged in housing tracts throughout the sunbelt the typified my youth. Rather, I learned to float, paddle, and eventually swim in the irrigation ditches that serviced my grandparent's farm located in the harsh and dry high plains of Western Colorado. Given the amount of pesticides that likely

filled those ditches, it is a wonder that I do not glow in the dark.

My two weeks spent on the farm every summer reminded me of the desperate and symbiotic relationship humans historically have had to water. My maternal grandparents, originally migrant farm laborers from Mexico, spent each day of their lives worrying about water. It was only when their children and their grandchildren moved far away from the farm that we had the choice to plug the sink, water our lawns, take long showers, and wash our cars. I did not have to think twice about how to acquire the fresh, crystal clear, "Rocky Mountain" liquid that magically poured from the multiple faucets of our prototypical American home. My parents, like I do now, merely paid our water bill to the local water utility.

Many years later, I worked at a law firm where the most powerful, most respected, and most sought after (not to mention most expensive) lawyers were those whose practice involved representing or battling those same water utilities. As I quickly discovered, that same Rocky Mountain snow runoff that was used to wash my dishes, water the grass upon which I played, or keep us hydrated every day in the semi-arid climate had been captured through a "diversion," "appropriated" by judicial decree, and ultimately, put to "beneficial" use to quench the literal and home-owning thirst of a parched nation.[1]

Nothing symbolized for me the power of water more than the man-made reservoirs that filled Colorado's mountain valleys. At one time home to multiracial and multiethnic mining communities, many of these valleys had been drowned when municipal water works had acquired rights to store water that each had legally appropriated.[2] When needed, the water was delivered through massive pipes that were bored beneath the continental divide. The water then found its way through an intricate and constantly growing network of pumps and pipes in the service of the metropolitan archipelagos that littered the parched Front

1. *See* COLO. CONST. art. 16, § 6.

2. *See, e.g.*, SANDRA F. PRITCHARD, DILLON - DENVER, AND THE DAM (1994); MARY ELLEN GILLILAND, SUMMIT: A GOLD RUSH HISTORY OF SUMMIT COUNTY, COLORADO 79-91 (1980); and PATRICIA LIMERICK, A DITCH IN TIME: THE CITY, THE WEST, AND WATER 144-145 (forthcoming Sept. 2012) (unpublished manuscript on file with author); CLYDE KING, THE HISTORY OF GOVERNMENT IN DENVER WITH SPECIAL REFERENCE TO ITS RELATIONS WITH PUBLIC SERVICE CORPORATIONS 83 (1911). On the multiracial and multiethnic of Colorado's original mining towns, see Tom I. Romero, II *Uncertain Waters and Contested Lands, Excavating the Layers of Colorado's Legal Past*, 73 U. COLO. L. REV. 521, 557-59 (2002).

Range.[3]

As I sat across from a water lawyer one day, he asked me to recall the film *Chinatown*. "Son," he said, "you remember the line in that film, 'Either you bring the water to L.A. or you bring L.A. to the water'? You see, that is what I do. I deal in water. I help to buy it. I help to sell it. I insure that we have water for the future growth and enterprise. In cities like Los Angeles and Denver, that is the future. Water, you see, is the true gold of our modern times." He then pointed to a white porcelain buffalo that sat on his book case. "We, son, are the true heritage of the American West and those who control water, like those who once controlled the buffalo that used to roam the plains, are king." Variations of that same story occurred as I met and at times worked or interacted with other Water Buffaloes throughout Colorado.[4] A distinguished and powerful group, the Water Buffaloes of our modern age in not only the American West, but throughout the world, are zealously protecting their lineage and the subsequent heritage they claim as rightfully theirs: control of water, and by implication, all those multiracial peoples who are impacted by not having certain nor consistent access to its distribution and use.

This article accordingly invokes a buffalo of a different sort. Inspired by Chicano Movement lawyer, Oscar "Zeta" Acosta, and his literary persona of the "Brown Buffalo,"[5] I bring the perspective of LatCrit Theory into exploring and understanding the rights, remedies,

3. A. Dan Tarlock & Sarah B. Van de Wetering, *Growth Management and Western Water Law: From Urban Oases to Archipelagos*, 14 HASTINGS W.-N.W. J. ENVTL. L. & POL'Y 983, 984, 1013 (2008).

4. *See In and Around the Bar News re 2008 Water Law Conference*, 37 COLO. LAW. 9 (October 2008) (discussing that the Water Law Section of the Colorado Bar Association inducted water lawyers, policy makers, and engineers into an "ancient and honorable Water Buffalo order.") *See also* Jennifer Findley, *Road Warriors: Water Pros Kick Start "Buffaloes" Motorcycle Gang*. http://www.ridewithpurpose.org/water_buffalos.pdf (last accessed March 29, 2012) (showing another group of water professionals in Arizona assembled themselves into a motor-cycle riding "water policy gang.")

5. Acosta's literary works such as THE AUTOBIOGRAPHY OF A BROWN BUFFALO (1972) highlight a coherent attempt to bring a distinctly Latino racial critique to law and society. According to Acosta, "I propose we call ourselves the Brown Buffalo people…No, it's not an Indian name…The buffalo, see? Yes, the animal that everyone slaughtered….and, because we have roots in our Mexican past, our Aztec ancestry, that's where we get the *brown* from." OSCAR ZETA ACOSTA, AUTOBIOGRAPHY OF A BROWN BUFFALO 198 (1972).

and policies associated with water resource management.[6] Perhaps owning to water's scarcity, humans have developed complex and sophisticated legal regimes surrounding the use, acquisition, and distribution of water as a resource. Accordingly, this article is meant to draw attention to some of the ways that law has directly contributed to an unequal and inequitable distribution of water problems; including access to domestic water supplies, maintenance of water and sewage infrastructure, contamination of drinking water, and safe levels of floodplain occupancy.[7] Although such problems have been associated with developing countries and their subordinated racialized communities in Africa, Asia, and Latin America,[8] they are present as well among cer-

6. LatCrit builds upon the work of Critical Race Theory ("CRT"). The methodology founded by CRT scholars has three foundational pillars. First, CRT operates from the premise that racial inequality is a salient feature in American society and law. As such, CRT challenges the assertion that rules and laws that seek to create formal equality are sufficient to address the racism that people of color confront in profound and subtle ways everyday in their homes, neighborhoods, work, and social spaces. Second, CRT scholars assert that race is culturally and socially contingent. Starting from the premise that social reality is structured in ways that promote inequality, CRT seeks to challenge legal rules, as well as academic and social practices, that impose privileged norms of behavior and status on racialized groups and individuals. CRT scholars have forged new ways and new methodologies in which to study, teach, and apply the law in ways that make explicit law's ability to create and reinforce the conditions of inequality and social exclusion. Third, CRT posits that racial justice in the law occurs largely when the interests of Whites convene with those of People of Color. While some CRT scholars question whether such interest-convergence benefits White self-interest to the detriment of non-Whites, others see it as a powerful tool to use to examine the conditions upon which racial justice can be achieved in a multi-racial society. The challenge CRT poses is for legal actors not to be color-blind, but to be color-consciousness of the many ways that law can and should be used to promote principles of anti-subordination. *See* Keith Aoki and Kevin R. Johnson, *An Assessment of LatCrit Theory Ten Years After*, 83 IND. L. J. 1151, 1154 (2008); Francisco Valdez, *Foreword – Under Construction—LatCrit Consciousness, Community, and Theory*, 85 CAL. L. REV. 1087, 1134-37 (1997). Perhaps most importantly, LatCrit uses the experiences of Latina/os to "elucidate and disseminate suppressed knowledge that can help to facilitate... social justice action." Margaret E. Montoya & Francisco Valdes, *Latina/os and the Politics of Knowledge Production: LatCrit Scholarship and the Academic Activism as Social Justice Action*, 83 IND. L. J. 1197, 1198 (2008).

7. The UNITED NATIONS WATER, A SHARED RESPONSIBILITY - THE UNITED NATIONS WORLD WATER DEVELOPMENT REPORT 2 (2006) provides a concise overview of the extent of these and related issues worldwide.

8. *See, e.g., id.* at 18-19. For a broad ranging discussion the role of race and inequality in the developing world, *see generally* KAMARI MAXINE CLARK AND DEBORAH THOMAS, EDS., GLOBALIZATION AND RACE: TRANSFORMATIONS IN THE CULTURAL PRODUCTION OF BLACKNESS (2006).

tain communities of color in the United States.[9] Yet, outside of a very narrow range of exceptions—namely environmental justice[10] and the water rights of political and cultural minorities such as American Indians[11] or Hispanos in New Mexico[12]—legal scholars or policy makers of the United States who think about, study, and write about race or water law rarely if ever address the racial intractability of these problems.

Put simply, I posit that water organizations and legal institutions are too often color-blind in their legal and policy orientation.[13] Accordingly, this article is a series of observations meant to begin addressing this phenomenon by putting race at the center of the analysis. I have organized my observations in five parts; each introduced by stanza or stanzas of an original poem, *El Grito de la Agua*, I penned in preparation for my plenary remarks at the Fifteenth Annual LatCrit Symposium held in Denver, Colorado in October 2010.[14] Part I of the article identifies the basic fact of water inequality as it exists throughout the world. Although this section focuses primarily on the inequitable nature of the hydrologic cycle in vastly different environments, it identifies some of the ways that humans have exacerbated the problems of water scarcity, access, and quality. Part II of the article turns to the role of law governing the capture, use, and distribution of water. Focusing

9. *Id.*, See *also* F. LEE BROWN AND HELEN INGRAM, WATER AND POVERTY IN THE SOUTHWEST 42-45 (1987).

10. *See generally* ROBERT D. BULLARD, DUMPING IN DIXIE: RACE, CLASS AND ENVIRONMENTAL QUALITY (1994).

11. *See, e.g.*, DAN MCCOOL, COMMAND OF THE WATERS: IRON TRIANGLES, FEDERAL WATER DEVELOPMENT AND INDIAN WATER 5-6, 12-13 (1987).

12. *See, e.g.*, JOSE A. RIVERA, ACEQUIA CULTURE: WATER, LAND AND COMMUNITY IN THE SOUTHWEST xix-xx, 161 (1998); LAURA PULIDO, ENVIRONMENTALISM AND ECONOMIC JUSTICE: TWO CHICANO STRUGGLES IN THE SOUTHWEST 125, 134-35 (1998).

13. I don't make any representation in this regard as to whether people of color are well-represented in water law and policy organizations. This is an empirical matter left for another day. Instead, I argue that water lawyers, policy makers, activists, and engineers, rarely if ever think about systemic racial inequity in their everyday decision making matrix.

14. The form of this article in ten stanzas is inspired by the poetry of water lawyer and current Colorado Supreme Court Justice, Gregory Hobbs. One of the guests to my water law class this past semester noted that he, like Justice Hobbs, believed that water law was poetry. Justice Hobbs is a prolific and well-published poet who thoughts about poetry and water law are well documented. *See* JUSTICE GREGORY J. HOBBS, IN PRAISE OF FAIR COLORADO: THE PRACTICE OF POETRY, HISTORY AND JUDGING (2004).

primarily on the Doctrine of Prior of Appropriation as it developed in the American West, the article details law's central role in creating the color lines in the region's urban archipelagos.

Part III of the article examines the lack of water infrastructure in the Colonias of the American borderlands. Fueled by the absence of legal regulation, the article indicates how Latinos living in the United States' Colonias share similar water experiences with many poor, non-White communities throughout the developing world. Part IV of the article turns its analysis upon municipal water supplies and its associated legal regime. In contrast to the Colonias, this section notes how even where an existing water infrastructure exists, law has worked to bypass its pipes through, around, and beyond many communities of color. Finally, Part V of the article looks at the commodification of water in context of the recent global financial crisis. Though the section redeploys the often used phrase that "water is the oil of the 21st century," it indicates some of the ways that the resulting "wars" will be unequally borne by communities of color.

The article is not meant to be exhaustive, but merely suggestive of the many insidious ways that water law and policy creates, reinforces, and reproduces the Brown, Black, White, Red, and Yellow color lines that have become so salient a feature of social inequality in the modern world[15] It highlights, as well, the across-the-board neglect about the racial impact of water rights and administration by not only main stream policymakers and academics, but by progressives and the LatCrit project in particular. By invoking the Brown Buffalo in order to "walk in the night rain,"[16] I hope to begin a lasting conversation about water, race, and the role of water lawyers and policy makers in an ever thirsty world.

15. I use the terms "color" and "color lines" throughout this article to describe legally enforced boundaries between Whiteness and non-Whiteness. I have explored in other places how race and color are used in contemporary nomenclature to distinguish between Whites, Latinos, Asians, American Indians, and Blacks. Tom I. Romero, II, *¿La Raza Latina?: Multiracial Ambivalence, Color Denial and the Emergence of a Tri-Ethnic Jurisprudence at the End of the Twentieth Century*, 37 N.M. L. REV. 245, 249–55 (2007).

16. ACOSTA, AUTOBIOGRAPHY OF A BROWN BUFFALO, *supra* note 5, at 198.

II. CLEAR AND CRISP
SO BROWN AND DRY
RAIN AND SNOW
TRICKLE PUTRESCENCE BY

Water is everywhere and nowhere. Although most of the earth's surface is covered with water, only about one percent of the water supply in the hydrological cycle is available for use and consumption.[17] Virtually all of the remaining one percent of water fresh water that humans can use or consume comes from rain and snow.[18] Though the world's total supply of water remains fairly static, its distribution is inherently unequal.[19] On one level, this is a matter of climate and geography as sometimes-extreme differences in precipitation, humidity, and seasonal fluctuations create greater reserves of freshwater in one place and not another. In Colorado, for instance, eighty percent of the water supply is on the Western Slope of the Continental Divide, while most of the state's population lives in urban archipelagos on the Eastern Front Range.[20] World-wide, just six countries—Brazil, Russia, Canada, Indonesia, China, and Colombia—contain half of the world's renewable freshwater supply.[21] Yet, some of the greatest demand for water comes from the populations in arid countries, such as Egypt, Mexico, Pakistan, Israel, and Iran.[22] The comparison of where most available water exists to where people live., is often a "temporal and geographic mismatch of supply and demand."[22] For example, the "vast and wet Amazon basin with 15 percent of the world's water runoff, has just 0.4

17. 97% of the world's water is tied up in oceans while 2% remains trapped in glaciers and ice caps. A. DAN TARLOCK, ET AL., EDS. WATER RESOURCE MANAGEMENT: A CASEBOOK IN LAW & PUBLIC POLICY 4 (6th ed. 2009).

18. MAUDE BARLOW & TONY CLARKE, BLUE GOLD: THE FIGHT TO STOP THE CORPORATE THEFT OF THE WORLD'S WATER 5-6 (2002).

19. *Id.* at 6-7.

20. Raphael J. Moses, *Transmountain Diversions of Water in Colorado*, 6 DENV. J. INT'L L. & POL'Y 329, 329 (1976-1977); *Colorado Water Terms*, COLORADO RIVER DISTRICT, http://www.crwcd.org/page_100 (last accessed April 15, 2012) (noting that "The West Slope of Colorado receives roughly 80% of the entire state's precipitation, yet its population is a fraction of that found in the metropolitan areas along Colorado's Front Range, or East Slope").

21. Fred Pearce, When the Rivers Run Dry: Water—The Defining Crisis of the Twenty-First Century 22 (2006).

22. *Id.* at 22.

[22] TARLOCK, ET AL, *supra* note 17, at 1.

percent of the world's population."[23]

On another level, the geographic and temporal mismatch of water is becoming more acute as a result the world's soaring population. Now largely concentrated in the exploding mega-cities of the modern world, the insatiable demands of *Homo urbanus*[24] have catalyzed huge investments in dams and irrigation canals to feed high-yield varieties of rice, wheat, and corn.[25] Though this undertaking to keep food production ahead of population growth has immensely benefited developing countries like India, China, Pakistan, and Brazil, it has required vast amounts of water to accomplish its goals.[26] According to one commentator, "[p]erhaps the most telling statistic of all is this: the world grows twice as much food as it did a generation ago, but it abstracts three times more water from rivers and underground aquifers to do it."[27] As the water table drops, this has left some of the world's mightiest rivers drying up, its reservoirs empty or half-full, and its farmlands bare and fallow.[28]

The disparity is exacerbated when one considers the wide-scale impact of expanded activity in agriculture and manufacturing to meet the demands of a growing worldwide population.[29] At the same time that greater population has increased demand for water, it has also contributed to the widespread pollution of surface and ground water supplies.[30] Though many countries in the world, particularly the develop-

23. Pearce, *supra* note 21, at 23.

24. In 2007, half-of the world's population lived in the city, thus marking the moment when "*Homo sapiens* became *Homo urbanus*." Illeana M. Porras, *The City and International Law: In Pursuit of Sustainable Development*, 36 FORDHAM URB. L. J. 537, 542 (2009); *A Survey Of Cities: The World Goes To Town*, THE ECONOMIST, May 3, 2007, at 3, *available at* http://www.economist.com/node/9070726?story_id=9070726. In 2008, world population figures stood at roughly 6.7 billion, which meant that just over 3.35 billion people lived in cities at that time. *See* POPULATION REFERENCE BUREAU, *2008 World Population Data Sheet*, http://www.prb.org/Publications/Datasheets/2008/2008wpds.aspx (last visited Feb. 25, 2012).

25. Pearce, *supra* note 21, at 23-4.

26. *Id.*; *see also* Gary Duffy, *Brazil's Farms See Quiet Revolution*, BBC NEWS (Aug. 20, 2008, 15:57 GMT), http://news.bbc.co.uk/2/hi/business/7567778.stm.

27. Pearce, *supra* note 21, at 24.

28. *See id.* at 24.

29. *Id.* at 23.

30. UNITED NATIONS, THE MILLENNIUM DEVELOPMENT GOALS REPORT 59, at 59 (2010) [hereinafter UN MDG 2010 REPORT].

ing world, lack reliable regulatory regimes to monitor industrial and commercial waste, problems of industrial contamination, including inorganic arsenic in Bangladesh and unsafe levels of fluoride in China and India, have affected the ability to drink water, even if one has easy access to a drinking water supply.[31] Even in the United States, somewhere between 49-62 million people in 2009 drank water that had unsafe concentrations of chemicals like arsenic or radioactive substances such as uranium, as well as dangerous bacteria.[32] To further complicate matters, the United States' own regulatory laws tend to underestimate the problem of industrial waste in the drinking water supply. The Safe Drinking Water Act, for instance, regulates only 91 contaminants, while more than 60,000 chemicals are used and discharged into the water supply within the nation.[33]

Water inequality is also evident in how humans have distributed the basic infrastructure to use water in their everyday lives for drinking, cooking, and sanitation. This disparity became abundantly clear in the work of the U.N.'s Millennium Project to halve the proportion of the worldwide population without sustainable access to safe drinking water and basic sanitation by 2015.[34] To put these numbers in perspective, as of 2010, nearly 900 million people were without access to safe drinking water and more than 2.6 billion lacked access to basic sanitation.[35] The lack of access to safe drinking water and basic sanitation is entirely a human-made phenomenon comprised of two components. First, safe drinking water and basic sanitation require networks of pumps, pipes, storage facilities, catchment systems, treatment sites, and a legal framework governing the regulation of water. While most urban areas in developing regions around the world contain 94% of the basic infrastructure needed to deliver drinking water, nearly one-quarter of

31. *See id.*; *see also* Pearce, *supra* note 21, at 49-55.

32. Charles Duhigg, *Millions in U.S. Drink Dirty Water, Records Show*, N.Y. TIMES, Dec 7, 2009, http://www.nytimes.com/2009/12/08/business/energy-environment/08water.html?emc=eta1; Charles Duhigg, *That Tap Water Is Legal But May Be Unhealthy*, N.Y. TIMES, Dec. 16, 2009, http://www.nytimes.com/2009/12/17/us/17water.html?emc=eta1.

33. *Id.*

34. U.N. MDG 2010 REPORT, supra note 30, at 58.

35. Press Release, General Assembly, General Assembly Adopts Resolution Recognizing Access to Clean Water, Sanitation as Human Right, by Recorded Vote of 122 in Favour, None Against, 41 Abstentions: Delegates also Confirm Nominee to Head Office f Internal Oversight Services, Elect Belarus to UNEP Governing Council, U.N. Press Release G/A10967 (July 28, 2010).

the world's rural populations in developing regions lack such basic amenities.[36] According to the United Nations, "The rural-urban gap is much wider when only households having a piped drinking water supply on premises are considered. The proportion of people who enjoy the health and economic benefits of piped water is more than twice as high in urban areas than in rural areas."[37]

Access to sewage systems directly impacts access to safe drinking water. In 2010, the U.N. reported that approximately 1.1 billion people routinely practice open defecation due to a lack of any sort of sewage facility.[38] Combined with industrial and agricultural waste, 2 million tons of sewage is discharged everyday into the world's water supply.[39] Over the course of one year, six times more wastewater is produced than exists in all the rivers of the world.[40] The burden of this disparity in access to basic piping or catchment systems for drinking water or basic sanitation, moreover, falls almost exclusively on the world's poor—who are largely non-White and located in informal settlements in close proximity to wealth and water infrastructure.[41] As a result, the disparate impact on such communities is profound. According to the World Health Organization ("WHO"), more people die worldwide from unsafe water annually than from all forms of violence, including war.[42] This has had a particularly devastating generational impact, as

36. U.N. MDG 2010 Report at 58. According the U.N., "The largest disparities are in Oceania and sub-Saharan Africa, but significant differences between urban and rural areas are found even in regions that have achieved relatively high coverage, such as Western Asia and Latin America and the Caribbean . . . Globally, eight out of 10 people who are still without access to an improved drinking water source live in rural areas." *Id.* at 59.

37. *Id.* The report further notes, "Disparities are particularly evident in Oceania and sub-Saharan Africa, where rural coverage of piped water remains very low at 37 per cent and 47 per cent, respectively, as compared to 91 per cent and 83 per cent in urban areas." *Id.*

38. *Id.* at 61.

39. *World Water Quality Facts and Statistics*, THE PAC. INST., (Mar. 22, 2010), http://www.pacinst.org/reports/water_quality/water_quality_facts_and_stats.pdf.

40. *Id.*

41. *See* UN MGD 2010 REPORT, *supra* note 30, at 62.

42. Unsafe or inadequate water, sanitation, and hygiene cause approximately 3.1% of all deaths worldwide and 3.7% of DALYs (disability adjusted life years) worldwide. ANTHONY RODGERS ET AL., WORLD HEALTH ORG., THE WORLD HEALTH REPORT 2002: REDUCING RISKS PROMOTING HEALTHY LIFE 68 (2002) [hereinafter WHO REPORT 2002]. In raw numbers, this means that 1.8 million die each year from water-borne diarrheal diseases. INT'L NETWORK TO PROMOTE HOUSEHOLD WATER TREATMENT AND

waterborne infectious diseases attribute to approximately fifteen percent of child deaths each year worldwide.[43] To put this in temporal terms, a child dies every eighteen seconds as a result of water contamination, most of these occurring in the non-White developing world.[44]

Water is central to human survival. Yet, access to water, much less water fit for human consumption, is unevenly distributed throughout the globe. The world has mighty glaciers, immense rivers, and vast aquifers; but access to these resources is greatly truncated. We have long understood unequal access to water to be a matter of geography, technology, climate, and circumstance. Hidden behind these realities, however, is the primary role of law in abstracting water from both its geographical location and physical properties. "Water" and our rights to it, is largely a creation of law[45] and as such the following sections will show, it has contributed to vast social inequalities in the contemporary world.

III. MIGHTY WATERCOURSES SEIZED BY PRIVATE HANDS FEED STAINLESS STEEL FAUCETS ON TICKY TACKY LANDS SOME BUFFALOS DIVERT FOR THEIR OWN FOUL USE BENEFICIAL CITIES ARISE RESERVOIRS DAMMED REFUSE

Law is everywhere when it comes to water. From the very nascent stages of civilization, humans have developed a complex body of

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SAFE STORAGE, WORLD HEALTH ORG., COMBATING WATER BORNE DISEASES AT THE HOUSEHOLD LEVEL 7 (2007) [hereinafter WHO COMBATING WATER BORNE DISEASES]. The World Health Organization estimates that 1.6 million die each year from all forms of violence. WORLD HEALTH ORG., WORLD REPORT ON VIOLENCE AND HEALTH 9-10 (Etienne G. Krug et al. eds., 2002).

43. Unsafe water causes approximately 4 billion cases of diarrhea each year, and results in 1,8 million deaths, 90% of these deaths are children under five. WHO COMBATING WATER BORNE DISEASES, *supra* note 42, at 7, 11. In 2000 10.9 million child deaths occurred worldwide. WHO REPORT 2002, *supra* note 42, at 114. This means that approximately 15% of child deaths each year are attributable to diarrhea.

44. There are 31,536,000 seconds per year with 1.8 million deaths attributed to unsafe water. WHO COMBATING WATER BORNE DISEASES, *supra* note 42, at 7.

45. DESHEN HU, WATER RIGHTS: AN INTERNATIONAL AND COMPARATIVE STUDY 16-18 (2006)

rules, rights, and procedures governing the capture, use, and distribution of water.[46] This was especially evident in hydraulic civilizations that had reliable surface water supplies such as the Assyro-Babylonese in the Tigris and Euphrates rivers, the Egyptians in the Nile River, the Hindu in the Indus River, and the Chinese in relation to the Huang-Ho River.[47] In the Americas, even hundreds of years before the arrival of the Spanish and other Europeans, when Peruvian civilizations such as the Incas and Meso-American civilizations such as the Aztecs rose to power around the coastal valleys of Central and South America, control of water and its distribution played a key role.[48] This was even more true in water-scare regions. As early as five or six hundred years before the arrival of the Spanish in the arid American Southwest, for instance, the Ancestral Pueblans instituted an elaborate system of water control.[49] As Professor Meyer notes, "[w]ater disputes undoubtedly occurred in pre-conquest America, especially in the desert regions. Harnessing water for productive purposes required the cooperative effort of many, but subsequent allocation schemes were a source of potential conflict."[50]

Accordingly, water law came to have two critical divergences, as different practical and policy concerns shaped different legal regimes for water in areas with copious water supplies as compared to areas with scarce water resources. The first deviation occurs in regions and cultures where water was abundant, rules and regulations were "directed towards defense against the harmful effects of water such as flood warning and control and fight against water invasion, land recla-

46. CYNTHIA JORDAN BANNON, GARDENS AND NEIGHBORS: PRIVATE WATER RIGHTS IN ROMAN ITALY 102-44 (2009); JOSHUA GETZLER, A HISTORY OF WATER RIGHTS AT COMMON LAW (2006); DANTE A. CAPONERA, PRINCIPLES OF WATER LAW AND ADMINISTRATION: NATIONAL AND INTERNATIONAL 9-10 (2007).

47. Itzchak E. Kornfeld, *Mesopotamia: A History of Water and Law, in* THE EVOLUTION OF THE LAW AND POLITICS OF WATER 21-36 (Joseph Dellapenna & Joyeeta Gupta eds., 2008); and CAPONERA, *supra* note 46, at 9.

48. CAPONERA, *supra* note 46, at 22.

49. MICHAEL C. MEYER, WATER IN THE HISPANIC SOUTHWEST: A SOCIAL AND LEGAL HISTORY, 1550–1850, at 11–14 (1984). Professor Michael Meyer notes: "On Chapin Mesa at Mesa Verde in Southwestern Colorado they built check dams and an irrigation ditch more than four miles in length." *Id.* at 12. *See also* Gregory J. Hobbs, Jr., *The Role of Climate in Shaping Western Water Institutions*, 7 U. DENV. WATER. L. REV. 1, 6-9, 12 (2003) (discussing archeological evidence of water storage systems found in Mesa Verde).

50. MEYER, *supra* note 49, at 12.

mation, embankment and dyke construction and maintenance."[51] In both the civil law and common law world of Europe and England, for instance, such concerns were intricately connected to the proximity of private property to the surface water resource. Within these legal schemes, expressed best by the riparian rights doctrine that originated in the English common law, water is not separate property, but an incident of land ownership.[52] Therefore, the law gave land owners who lived along a watercourse the right to use water "reasonably" so as not to seriously diminish the availability of water nor seriously damage the private property rights of other "riparian" owners downstream.[53]

In contrast to the development of a doctrine of riparian rights in water abundant areas, the second divergence in law has served to develop rules and procedures for the conservation and distribution of water in areas where it is scarce. In the Muslim world, for instance, the Prophet Mohammed declared water "the common entitlement of all Moslems, that he prohibited the selling of it, and that he had established a community of water use among men."[54] In the arid desert regions of the Arabian Peninsula, water law was meant to promote the right to take water to "quench one's thirst or to water one's animals" and the right to use "water for watering land, trees, and plants."[55] This in turn, promoted a rich legacy of hydraulic development in the Muslim world, from aqueducts and brick lined canals to water-driven paddles, pulleys, counter-balances, and Archimedean screws for the broadest distribution of the resource.[56]

In what would become the American Southwest, mixed-race Hispano settlers introduced water law principles forged in civil law Spanish and Mexican experience "designed to protect individual rights, to encourage private initiative and entrepreneurship, to stimulate econom-

51. CAPONERA, *supra* note 46, at 9.

52. GETZLER, *supra* note 46, at 44 ("The nineteenth-century courts commonly described water rights as naturally connected to land or a concomitant of ownership of riparian land, in the sense that ownership or occupation of abutting land was both necessary and sufficient to afford a right to appropriate the benefit of a running stream.").

53. *Id.*

54. CAPONERA, *supra* note 46, at 63.

55. *Id.*

56. Thomas Naff, *Islamic Law and the Politics of Water*, *in* THE EVOLUTION OF THE LAW AND POLITICS OF WATER 44-45 (Joseph W. Dellapenna & Joyeeta Gupta eds., 2008).

ic development, and even to accumulate personal wealth."[57] Yet, New Mexican water law balanced these individual values by recognizing the needs of the larger community. Importantly, the "law recognized that unbridled individual ambition would never produce a harmonious society and viewed justice not as a metaphysical abstraction but as an attainable goal."[58] As a result, New Mexicans enshrined the concept of normative restraint, a commitment towards understanding the reasonable use of a surface water resource, in order "to check monopoly, limit the influence of irresponsible locals, protect the disadvantaged, and most importantly to encourage equity."[59] By balancing private property rights in relation to the needs of the common good, New Mexicans highlighted tensions between water as a commodity and water as a public good.

This tension between water as a community resource as opposed to a private good is represented best by the emergence of the doctrine of prior appropriation in the American West during the1870s, particularly in Colorado. After the gold rush and homesteading radically altered the demographic composition of the western half of the United States, litigants, lawyers, judges, and legislators applied such principles to reject the Anglo-American common law doctrine of riparian rights.[60] Applying the principle of "first in time, first in right," the doctrine of

57. MEYER, *supra* note 49, at 179. Especially in relation to rights associated with groundwater, the system represented, "incipient capitalism, a glorification of the sanctity of private property and a celebration of laissez faire. With but very few exceptions, a person could do what he wanted with his groundwater resource even if it prejudiced the interests of his neighbor . . . . Groundwater law represented free enterprise with but very few constraints." *Id*. *See also* Hobbs, Jr., *The Role of Climate*, supra note 48, at 13 ("Beneficial use and priority of use were important principles in the New Mexico water system, which derived from Moorish and Spanish laws and customs."); Wells A. Hutchins, *The Community Acequia: Its Origin and Development*, 31 SW. HIST. Q. 261 (1928).

58. MEYER, *supra* note 49, at 179

59. *Id*.

60. Robert G. Dunbar, *The Adaptability of Water Law to the Aridity of the West*, 24 J. WEST 57, 60–62 (1985). *But see*, DONALD J. PISANI, WATER, LAND, AND LAW IN THE WEST: THE LIMITS OF PUBLIC POLICY, 1850–1920 1 (1996). Pisani notes that "[p]rior appropriation was not invented in the . . . West" as parts of Massachusetts, New York, and other eastern states adopted a form of the doctrine at the beginning of the nineteenth century. *Id*. Pisani concedes, however, that due to the doctrine of prior appropriation, the American West "was the first part of the country in which water could be used far from the channel of a living stream and became a commodity that could be bought and sold like coal, timber, or land." *Id*.

prior appropriation protects the first person to use the water against all subsequent takers.[61] As one account details, "in sharp contrast to riparian rights, a miner could now dam up and divert an entire stream flow . . . . As long as he had the senior claim to use that water and continued to use the water in a 'beneficial' way, the other[s] . . . downstream could not challenge his actions."[62] A second person who wants to use the same water, for example, has to use whatever water remains after the first user has satisfied his legal needs. In many cases, this leaves no water for the second person or any other subsequent users.

In Colorado, which "pioneered" prior appropriation law, the legal regime of Mexican water law co-existed in relative tension with the emerging priority scheme. "Under Mexican law, for instance, all users, whatever their priority, would find themselves included in structure of access to a state-owned patrimony that looked to principles of equitable sharing and necessity to allocate water among all users."[63] In the immediate years after Colorado's incorporation as Territory in 1861, which included land and people from the Territory of New Mexico, Colorado's territorial legislature provided for the recognition and protection of pre-existing Mexican water rights in its Spanish-speaking counties.[64] Nevertheless, soon after statehood and the adoption of Article XIV to the Colorado Constitution providing for the right of prior appropriation, the first priority right in the state was granted in the Spanish-speaking San Luis Valley.[65] The consequence was to overlay and thereby eradicate the communal rights of Hispano residents in the state.[66]

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61. CAPONERA, *supra* note 46, at 144

62. Stephen Sturgeon, Wayne Aspinall and the Politics of Western Water 4 (1998) (unpublished Ph.D. dissertation, University of Colorado at Boulder) (on file with University of Colorado Norlin Library).

63. Gregory A. Hicks and Devon G. Peña, *Community Acequias in Colorado's Rio Culbrea Watershed: A Customary Commons in the Domain of Prior Appropriation*, 74 U. COLO. L. REV. 387, 400 (2002).

64. *Id.* at 406.

65. The oldest water right in Colorado is the San Luis People's Ditch with an appropriation date of April 10, 1852 and an adjudication date of June 14, 1889. June 14, 1889 decrees for waters from the Culebra River in Costilla County Colorado. *In re* Water District No. 24, (D. Colo. 1889). The earthen ditch, with likely a rudimentary headgate and check dam, was established and operated under the principles of Mexican water law until that time. See Hicks and Peña, *supra* note 63, at 391, 406-431; and Romero, *Uncertain Waters and Contested Lands*, *supra* note 2, at 535, n. 70.

66. Hicks and Peña, *supra* note 63, at 431. For a detailed analysis of this process as

By the end of the 19th century, most of the seventeen Western States as well as parts of Australia and Canada (all with multiracial populations) adopted some version of a prior appropriation system.[67] At its core, the doctrine of prior appropriation encompasses four basic principles. First, appropriated water must be put to a "beneficial" use. Courts legally recognized as "beneficial" only those uses that were for domestic consumption, irrigation, municipal, industrial, power production, and more recently, uses that promote recreational activities such as skiing and environmental protection.[68] Second, priority of right becomes the basis for allocating water during periods of scarcity. In practice, this means that even though thousands of cubic feet per second may flow by a family's farm, they are not allowed to use the water if a senior user has "called" the river.[69] Priority, not equality, is the guiding principle in times of drought.[70] Third, the right to use water is quantified. Accordingly, permits or decrees in the prior appropriation scheme identify one's "ownership" of water independent of the actual water

it concerns the San Luis People's ditch, *see id.* at 418-443.

67. Dunbar, *supra* note 60, at 262; *see* COLO. CONST. art. XVI, § 7 ("The right [to appropriate] the unappropriated waters of [the] natural streams [of the state for] beneficial uses shall never be denied."). For the adoption of the prior appropriation by states in the American West, *see* Yunker v. Nichols, 1 Colo. 551, 553 (1872) (asserting that the "rules respecting the tenure of property must yield to the physical laws of nature" in a "dry and thirsty land" such as Colorado) and Coffin v. Left Hand Ditch Co., 6 Colo. 443, 446 (1882); Clough v. Wing, 17 P. 453 (Ariz. 1888); Drake v. Earhart, 23 P. 541 (Idaho 1890); Stowell v. Johnson, 26 P. 290 (Utah 1891); Moyer v. Preston, 44 P. 845 (Wyo. 1896).

68. The core idea here is that water is not wasted, but put to a productive use that does not harm others. In Colorado, for example, beneficial uses that are legally recognized include instream flows for conservation, commercial, domestic, dust suppression, fire protection, fish and wildlife, flood control, recreational in-channel diversions, industrial, irrigation, mined land reclamation, municipal, nature centers, power generation, recreation, release from storage for boating and fishing flows, snowmaking, and stock watering. COLORADO FOUNDATION FOR WATER EDUCATION, CITIZEN'S GUIDE TO COLORADO WATER LAW 7 (2004).

69. For a classic application of this, *see* Cary v. Cochran, 292 N.W. 239 (Neb. 1940).

70. Notions of "fairness" do apply, though. For instance, Colorado law does not deny water to junior water rights holders if the senior's "call" does not make a material difference in meeting the water right, as provided in the "futile call doctrine" of COLO. REV. STAT. § 37-92-502(2)(1) (2008). *But see* A. Dan Tarlock, *Prior Appropriation: Rule, Principle, or Rhetoric?*, 76 N.D. L. REV. 881 (2000) (arguing this fairness principle only exists in theory).

course or watershed that delivered or housed the water.[71] It also ensures that people do not have an equal or even a minimum right to water; rather, peoples' rights are "what they have appropriated, paid for, or otherwise deserved as a water customer."[72] Finally, the right to use water in the prior appropriation system is a property right that is alienable on an open market independent from the land in which it flows. Consequently, someone can buy a senior water right and use that water hundreds if not thousands of miles away from its natural watercourse, even if the sale of the water results in fallow fields and empty wells.

The doctrine of prior appropriation, and the principles of property and private enterprise that it represented, became the basis by which those in the United States seized the great watercourses of the American West and deployed them in the service of suburbanization and metropolitan fragmentation. The United States' largest and most "wild" rivers, for instance, were reengineered into water-storage and water-delivery systems.[73] While initially vast property rights in water were designed to serve a vast agricultural economy, by the early decades of the 20th century, the insatiable needs of homo-urbanus made prior appropriation the central element in the rise of sprawling megacities like Los Angeles, San Diego, Phoenix, Las Vegas, and Denver.[74] One of the leading cases in the law of prior appropriation and metropolitan development held that governmental water supply agencies could not be expected to be held to the same burdensome and restrictive conditions

71. *See* Christine A. Klein, *The Constitutional Mythology of Western Water Law*, 14 VA. ENVTL. L. J. 343, 347-48 (1995); *see also* COLO. CONST. art. XVI, § 5; Strickler v. City of Colo. Springs, 26 P. 313, 316 (Colo. 1891) (holding that "[a] priority to the use of water [for irrigation] is a property right" that may be sold and transferred separately from the land upon which the right arose); City of Denver v. Fulton Irrigating Ditch Co., 179 Colo. 47 (1972) (examining reuse of water in a trans mountain diversion of Colorado River basin water to the South Platte river basin).

72. James L. Wescoat, Jr. et al., *Water, Poverty, Equity, and Justice in Colorado: A Pragmatic Approach*, *in* JUSTICE AND NATURAL RESOURCES: CONCEPTS, STRATEGIES, AND APPLICATIONS 57, 68 (Kathyrn M. Mutz et al. eds., 2002).

73. The best analysis of this remains MARC REISNER, CADILLAC DESERT: THE AMERICAN WEST AND ITS DISAPPEARING WATER 333 (1986); *see also* NORRIS HUNDLEY, JR., THE GREAT THIRST: CALIFORNIANS AND WATER, A HISTORY 121-171 (2001); David J. Hayes, *Accommodation Turns to Conflicts: Lessons from the Colorado*, *in* WHOSE WATER IS IT: THE UNQUENCHABLE THIRST OF A WATER-HUNGRY WORLD 139, 141 (Bernadette McDonald & Douglas Jehl, eds, 2003).

74. Hayes, *supra* note 73, at 146.

as private entities in order to perfect a water right.[75] The case exemplifies what has become known as the "growing cities doctrine," thereby highlighting that a primary function of the modern doctrine of prior appropriation has been to support unlimited metropolitan growth.[76]

Los Angeles is the prototypical example of how water has fed metropolitan growth. Beginning in the early decades of the 20th century, Los Angeles's Metropolitan Water District used the doctrine of prior appropriation to buy up water rights in the Owens Valley in the Sierra Mountains. As the city "captured" and "diverted" the water through large aqueducts that stretched hundreds of miles to the outskirts of Los Angles, the Owens Valley literally and economically dried up.[77] As Los Angeles grew and the Owens Valley water supply proved insufficient for the city's needs, it followed the same model in other water basins with great "success." Other growing metropolises followed Los Angeles's example, putting incredible strain on a limited water supply. Today, 25 million Americans in metropolitan areas rely on one river, the Colorado, to keep the taps turned on.[78]

Yet, keeping the taps turned on in such metropolitan areas requires acknowledging the centrality of race where such water is both used and taken. The great urban archipelagos of the American West where water is delivered, for instance, are heavily defined by the presence of large, thriving, and racially segregated multi-racial communities.[79] So too does race play a role in shaping the hinterlands that are

75. City of Denver .v Sheriff, 96 P.2d 836, 840 (1939).

76. Colorado cases are revealing of this shift. *See* Metro. Suburban Water Users Ass'n v. Colorado River Water Conservation Dist., 365 P.2d. 273, 284-85 (1961) (granting a conditional right for the entire water project, even though work had not be accomplished on all parts of the project); City of Thornton v. Bijou Irrigation Co., 926 P.2d 1 (Colo. 1996) (arguing that cities were not speculating when it conditionally appropriated a water right bases upon a municipalities reasonably anticipated projections of future growth). *See also* Tarlock, *supra* note 3, at 177-78. *But see* Pagosa Area Water & Sanitation Dist. v. Trout Unlimited, 170 P.3d 307, 309-10 (Colo. 2007) (indicating that the law must place some limits on unchecked municipal growth).

77. *See* REISNER, *supra* note 73, at 100; *see also* HUNDLEY, *supra* note 73, at 347.

78. Hayes, *supra* note 73, at 146.

79. *See* Richard White, *Race Relations in the American West*, 38 AM. Q. 396, 397 (June 1986) available at http://www.jstor.org/stable/2712674; *See generally* SHANA BERNSTEIN, BRIDGES OF REFORM: INTERRACIAL CIVIL RIGHTS ACTIVISM IN TWENTIETH CENTURY LOS ANGELES (2011); MARK BRILLIANT, THE COLOR OF AMERICA HAS CHANGED: HOW RACIAL DIVERSITY SHAPED CIVIL RIGHTS REFORM IN CALIFORNIA, 1941-1978 (2010); ALBERT S. BROUSSARD, BLACK SAN FRANCISCO: THE STRUGGLE FOR RACIAL EQUALITY IN THE WEST, 1900-1954 (1994); ALBERT CAMARILLO, CHICANOS IN

essential to the metropolitan American West's growth and sustainment.[80] From the resource rich reservations of the Diné and Southern Utes to the migrant labor that sows, cultivates, and harvests its water subsidized farmlands, multiple color lines intractably define the entire American West.

Not surprisingly, water has played an extremely pernicious role in both displacing and disfranchising multiracial communities in metropolitan as well as rural areas.[81] Take for instance the case of the Wileys, a Black family who had purchased a lot and began to build a home in one of the suburban subdivisions of Portland, Oregon in the 1960s.[82] Residents of the neighborhood, alarmed at the prospect of "Negroes" living in their all-White neighborhood, organized and enlisted the support of the local water district's board of directors to address the issue.[83] The district's water commissioners, at a special meeting, subsequently considered whether the new home would be in violation of the district's sanitary regulations.[84] According to the Superintendent of the Water District, *color* and water were the two primary considerations its administrators considered in examining whether the Wiley home and its sewage was located too close to one of the dis-

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A CHANGING SOCIETY FROM MEXICAN PUEBLOS TO AMERICAN BARRIOS IN SANTA BARBARA AND SOUTHERN CALIFORNIA, 1848-1930 (Cambridge, Mass: Harvard University Press, 1996); SCOTT KURASHIGE, THE SHIFTING GROUNDS OF RACE: BLACK AND JAPANESE AMERICANS IN THE MAKING OF MULTIETHNIC LOS ANGELES, (2007); DAVID MANTEJANO, ANGLOS AND MEXICANS IN THE MAKING OF TEXAS, 1836-1986 (1987); GEORGE J. SÁNCHEZ, BECOMING MEXICAN AMERICAN: ETHNICITY, CULTURE, AND IDENTITY IN CHICANO LOS ANGELES, 1900-1945, (1993); ROBERT O. SELF, AMERICAN BABYLON: RACE AND THE STRUGGLE FOR POSTWAR OAKLAND (2005); QUINTARD TAYLOR, THE FORGING OF A BLACK COMMUNITY SEATTLE'S CENTRAL DISTRICT, FROM 1870 THROUGH THE CIVIL RIGHTS ERA (1994); ERNESTO VIGIL, THE CRUSADE FOR JUSTICE: CHICANO MILITANCY AND THE GOVERNMENT'S WAR ON DISSENT (1999).

80. The concept of the hinterlands and its relationship to metropolitan growth is detailed best in WILLIAM CRONON, NATURE'S METROPOLIS: CHICAGO AND THE GREAT WEST 263–68 (1991). The hinterlands of a city, or the rural and less dense landscapes that exist far removed from a metropolitan area, Cronon reminds us, are inextricably connected. *Id.* at 51.

81. *See* Tom I. Romero, II, *Kelo, Parents and the Spatialization of Color (blindness) in the Berman Brown Metropolitan Heterotopia*, 2008 UTAH L. REV. 947, 976-78 (2008).

82. Wiley v. Richland Water Dist., 5 RACE REL. L. REP. 788, 788 (D. Or. 1960).

83. *Id.*

84. *Id.* at 789.

trict's wells.[85] The Board answered in the affirmative and initiated its power of eminent domain to acquire the Wiley family's lot.[86] Though a federal judge enjoined the water board from using its power to acquire the real property, soon after the decision, arsonists doused the Wiley's unfinished home and set it ablaze.[87] Undeterred, the Wiley's rebuilt their home and remained there for several years.[88]

The unquenchable thirst of racially stratified cities, in turn, masked an equally pernicious pattern of racial exploitation in the development of metropolitan water supplies in areas hundreds of miles removed from urban settlement. A prominent example occurred in the San Luis Valley located in Southern Colorado, where a broad coalition of locals fought for years to keep water entrepreneurs from pumping groundwater out of the region.[89] In the late 1980s and early 1990s, American Water Development, Inc. ("AWDI") proposed to drill ninety-seven wells in the San Luis Valley and to pump as much as 200,000 acre feet a year to Denver's largely White suburbs.[90] In order to tap this

85. *Id.*

86. *Id.*

87. Letter from E. Shelton Hill, Exec. Dir., Urban League of Portland, to Urban League Members and Organizations Interested in Race Relations (July 8, 1960) (on file with the Oregon Historical Society, Mss. 1585), *available at* http://www.ohs.org/education/oregonhistory/historical_records/dspDocument.cfm?doc_ID=C664A1A6-A3A1-DA3A-70EEFFCB5EA4A500.

88. Joshua Binus, *Wiley Family Housing Struggle*, THE OREGON HISTORY PROJECT (2004), http://www.ohs.org/education/oregonhistory/historical_records/dspDocument.cfm?doc_ID=C664A1A6-A3A1-DA3A-70EEFFCB5EA4A500.

89. As early as 1976, the Houston Natural Gas Corporation proposed building a nine-hundred mile coal slurry that would transport coal from Walsenburg, Colorado to Houston, Texas by mixing it with water taken from the San Luis Valley. Described by Denver water developers as "competition for water between energy and agriculture," the plan garnered intense opposition from the Valley's residents who believed the struggle involved nothing less than "life and death." Peggy Strain, *Water, Land, Life—It's All One in Valley Pipeline Debate*, DENVER POST, Nov. 13, 1977, at 3; *see also* Ted Delaney, *Water Binds, Divides Neighbors*, COLO. SPRINGS GAZETTE TEL., July 9, 1989, at B1. At the end of the twentieth century, the politics of water manifested itself in *Am. Water Dev., Inc. v. City of Alamosa*, 874 P.2d 352 (Colo. 1994) and *Sanchez v. Colorado*, 97 F.3d 1303 (10th Cir. 1996). Although ostensibly two separate legal actions, the issue of water rights became embroiled in efforts to create a minority-majority voting district in the San Luis Valley.

90. Julia Rubin, *Residents Mistrustful of Canadian Developer: Prospect of Huge Colorado Desert Aquifer Sets off Water Rights Battle*, L.A. TIMES, July 30, 1989, at 22; *see also Thirsty Denver Area May Pipe from Aquifer*, OMAHA WORLD HERALD, Aug.

resource, AWDI immediately claimed legal right to the aquifer beneath the San Luis Valley—home to a multicultural community that encompassed Colorado's oldest Latino community.[91]

Proponents of AWDI, however, failed to grasp the importance of water to the social, political, and cultural lives of the Valley's residents. Consequently, Valley residents engaged in an intense legal battle to prevent AWDI from claiming the vital resource.[92] In this struggle, "many residents of the valley—from Republicans to Democrats, from hippies to crusty potato farmers . . . united against" AWDI.[93] A retired water division engineer noted, "It's the first time I've seen the people of this valley get together and fight something."[94]

Such unity did not last long. In 1993, a group of Chicano residents in the San Luis Valley filed suit to create a minority-majority voting district in the Valley.[95] Remarkably, Mexican Americans had not been represented in the state House of Representatives since 1936.[96] Though Mexican Americans in the Valley were a prominent and substantial part of the community since its founding, they often encountered racial-bloc voting, school segregation, and overt acts of discrimination.[97] Opponents of the suit, however, recognized the threat that political redistricting of the Valley represented to many of their water interests. As one opponent of AWDI asserted, the voting rights

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26, 1989, at 15.

91. *Am. Water Dev., Inc.*, 874 P.2d at 357–58; *Town Of San Luis*, STATE OF COLORADO, http://www.colorado.gov/cs/Satellite/CNTY-Costilla/CBON/1251595062802 (last visited March 5, 2012).

92. Fearing the impact that the AWDI project would have on their lives and livelihoods, Valley lawyers used treaties, land surveys, congressional actions, and water court determinations to protect the water rights of the region's diverse residents. *See, e.g.*, Patrick O'Driscoll, *Water Export Bid Hits Dry Well: Judge Rejects Spanish Law Use*, DENVER POST, July 6, 1990, at 1B; *see also* Gary Theimer, *Water Appeal Killed: High Court Won't Take San Luis Case*, DENVER POST, Nov. 29, 1994, at B4. In 1989, Valley residents taxed themselves millions of dollars in order to wage the legal battle against AWDI. Mark H. Hunter, *Sand Dunes Action Would End Water War*, DENVER POST, Jul 25, 2000, at B4.

93. Jennifer Gavin, *Valley Residents Expected to Fight District Breakup: AWDI Water Battle Unites San Luis*, DENVER POST, Nov. 18, 1991, at 1B.

94. Julia Rubin, *Battle Brews Over Development of San Luis Valley Water*, ASSOCIATED PRESS, July 17, 1989.

95. *Sanchez v. Colorado*, 97 F.3d at 1305-06.

96. Robert Kowalski, *Redistrict Bid Splits Hispanics: San Luis Valley Rift Centers on Race, Water*, DENVER POST, Apr. 20, 1997, at A1.

97. *See id.*

suit was "an effort to dilute our representation, done under the guise of minority-bloc voting."[98] According to some, the suit threatened to "split the San Luis Valley, leaving [many of its residents] without a locally elected state representative, and hence without a defender of their water in the state government."[99] Yet as one of the Latina plaintiffs argued, the suit has "absolutely nothing to do with the water because we don't own any water."[100]

After years of legal and political struggle, AWDI eventually lost its bid to develop the Valley's water resource,[101] while the Chicano litigants prevailed on their right to create a minority-majority voting district.[102] Professor Federico Cheever highlighted the tensions inherent in the AWDI and the Sanchez litigation: "On the surface, the fight is about maintaining the wells for potato farmers and maintaining the forage for grazing[,] . . . but it's really about maintaining an extraordinarily unique place, the sand dunes and the Hispanic community."[103]

Yet the issues in each case reverberated far beyond the mountains, streams, and aquifers in the San Luis Valley. The dispute represented the legal displacement of Latinos from the land and the community in which they were a part. It symbolized the exploitation, for profit and recreation, of the vital resources that poor communities, especially communities of color, rely upon for everyday domestic needs. It highlighted the insatiable appetite for water fueled by sprawling suburban White water users. It connected patterns of racial and social fragmentation in the modern metropolis. Collectively, the battle for control of water and the struggle for racial identity in the San Luis Valley were a microcosm about the logic of water law in much of the world. Law has helped water to be become far removed from the multiracial communities from which it was extracted by overlaying concepts of private property over communal need, reifying individual enterprise instead of

98. Gavin, *supra* note 93, at 1B.

99. Kowalski, *supra* note 96.

100. *Id.*

101. Am. Water Dev., Inc. v. City of Alamosa, 874 P.2d 352, 357 (Colo. 1994). For a fuller exploration of the AWDI legal and political battle, see SAM BINGHAM, THE LAST RANCH (1996).

102. *Sanchez v. Colorado*, 97 F.3d at 1329; *see also* John Brinkley, *Court Stays Out of San Luis Fight: Legislature Can Draw Boundaries to Boost Hispanics' Strength*, ROCKY MTN. NEWS, May 20, 1997, at 8A.

103. Michelle Nijhuis, *Running Low?*, U. DENV. MAG., Winter 2001, at 18, 22.

societal sustainability, and creating heightened protection for economic markets and unchecked metropolitan growth. In turn, it has given lawyers, judges, and policy makers the freedom to refrain from considering those social inequalities that allocation of water rights has created and perpetuated.

IV. POTABLE TANKS THROUGH COLONIAS ROLL NO PIPES NOR TOILETS HANDS CUPPED SOUL ONE BILLION REMAIN THIRSTY COCKROACH BRETHREN CANNOT EVEN AFFORD METERED TEARS FROM HEAVEN

Along the border of the United States and Mexico, a true "borderlands" of water law and policy exists.[104] In this space over half-a-

104. Mary L. Dudziak & Leti Volpp, *Introduction Legal Borderland: Law and the Construction of American Borders*, 57 AM. Q. 593, 594 (2005) (arguing the U.S.-Mexico border as "the most iconic American border, a space that has been the subject of much powerful scholarship."). As Dudziak and Volpp ask and answer:

What, then, is a *legal* borderland? We might start with the role of law in borderlands that are geographic places. Borderlands can be contact zones between distinct physical spaces; they can be interstitial zones of hybridization. They can constitute spaces that challenge paradigms and that therefore reveal the criteria that determine what fits in those paradigms. Borderlands can also function not as literal physical spaces but as contact zones between ideas, as spaces of ideological ambiguity that can open up new possibilities of both repression and liberation . . . . Legal borderlands can be physical territories with an ambiguous legal identity, such as U.S. territories where the Constitution does not follow the flag, or Guantánamo . . . . Law also help define the boundaries of American national identity.

Id. at 595-96. *See also*, Tom I. Romero, II, Between and Beyond the Borderlands: Region, Race, Scale, and Subnational Legal History, 9 OR. Rev. Intl. L. 301, 308 n 19, 328 n. 82-83 and related tex (2007). Borderlands scholars owe a debt of gratitude to GLORIA ANZALDÚA, BORDERLANDS (1987) who provided the foundational theoretical understanding of this concept in understanding social, economic, political, and historical change. *See generally* Aigner-Varoz, *Metaphors of a Mestiza Consciousness* (2000), Cantu, *Living on the Border* (1993), Keating, *Interviews/Entrevistas*, (2000), Keating *Entre Mundos/Among Worlds* (2005), Perez, *Gloria Anzaldúa: La Gran Nueva Mestiza* (2005), Alarcon, Alvarez, Bachetta, Barcelo, Cantu, Castillo, Cisneros, Cuevas, Joysmith, (2007) *Borderlands* 3rd. edition ; Walter Mignolo and Madina Tlostanova, (2007) *Theorizing from the Borders*, Saldivar (2007), *Unsettling Race, Coloniality, and Caste* and Soja, (1996). *Thirdspace.*

million poor Latinos live in so-called Colonia communities.[105] Cameron Park is a typical small neighborhood on Texas's border with Mexico, not far from Brownsville. Walking down the street, one would likely encounter "children, dogs and chickens…playing in the streets. A few businesses—taco trucks, car repair, beauty salon—advertised with handwritten signs. Some of the homes [are] lushly landscaped, with hibiscus flowers and orange trees," while others are "broken-down shacks interspersed with piles of lumber and rumble."[106] In 2000, it was the poorest place in the United States with more than 1,000 people.[107]

At the most basic level, Colonias are unregulated subdivisions that have emerged as unincorporated municipalities. Because of the fact that they have no formal legal status as local governments, the communities do not have basic powers of zoning, taxing, and eminent domain.[108] As a result, Colonias lack basic infrastructure needed to serve densely concentrated communities; most importantly, most Colonias do not have water or sewage lines to serve residents.

Colonias first emerged in Texas in the 1950s, and the process of land-use and settlement has remained virtually the same for the last sixty years. Landowners in unincorporated rural areas subdivide pieces of agriculturally worthless land that often lies in low-lying flood plains. The landowning developer then sells, with a Contract for Deed, plots to prospective low-income Latinos who seek affordable housing.[109] Though the developer would make vague promises about future devel-

105. Colonias are found in Texas, New Mexico, Arizona, and California. Over 2,000 Colonias exist in Texas, where Colonia residents are overwhelming Latino and an overwhelming majority are American citizens. Where most of the colonias are located, per capita annual income tends to be one-third to one-half of the state average of $16,717. *Colonias FAQs (Frequently Asked Questions)*, TEXAS SECRETARY OF STATE, http://www.sos.state.tx.us/border/colonias/faqs.shtml (last visited Jan. 5, 2011) [hereinafter Colonia Housing Report].

106. *The Colonias of the Mexican Border: Paving the Way*, THE ECONOMIST, Jan. 27, 2011, *available at* http://www.economist.com/node/18013822.

107. *Id.*

108. *See* Jane E. Larson, *Free Markets Deep in the Heart of Texas*, 84 GEO. L.J. 179, 183 (1995). The structure of Texas government denied general ordinance making powers to counties and counties had only the power delegated to them by the State. *Id.* at 199.

109. A contract for deed is a real estate instrument by which a grantee makes a small down payment and monthly payments, receiving fee simple title only when the total value of the land is paid off. Upon default of the contract at any point until the land is paid off, the grantee forfeits the land including any equity and improvements.

opment, the land was almost always unimproved and did not have piping for the delivery of potable water or any capability for wastewater disposal. Nor did the developers make provisions for adequate drainage. Thus, when it rains, Colonia residents find themselves subject to significant property damage and contamination by human waste. Such problems are exacerbated by the reality housing development in Colonia communities. Residents build houses in phases as their owners can afford materials. Because there is no housing code, most homes lack basic amenities such as electricity and plumbing.[110]

Colonia households deal with water and wastewater on an ad hoc basis. To obtain water for drinking, bathing, and cooking, some residents dig shallow wells; others buy water by the bucket or drum to meet their daily needs.[111] In terms of wastewater, Colonia residents rely on often inadequate wastewater disposal methods, such as septic tank systems. In many circumstances, these systems are too small or improperly installed and can overflow.[112] The problem is exacerbated by the poor quality of Colonia roads, which are often unpaved and covered with caliche or other materials that prevent thorough drainage. During heavy rains it is common to find sewage pooling on the ground. The lack of wastewater treatment, in turn, impacts the drinking water supply. Wells are often contaminated while untreated or inadequately treated wastewater is discharged into canals and arroyos, which then flow into Rio Grande River or the Gulf of Mexico. Health care advocates blamed the lack of safe drinking water and wastewater disposal as the primary culprit for increased rates of hepatitis, ancephaly, cholera, tuberculosis, encephalitis, and diarrhea in Colonia communities.[113]

Law, accordingly, has played a primary role in the racial inequity of Colonia communities. Because Colonias emerged in unincorporated rural counties along the international border, county governments lacked many of the fundamental powers of land use regulation in these areas.[114] Rather than address the problems associated with unfettered growth, both county governments and state legislatures choose to ig-

110. Colonia Housing Report, *supra* note 105.

111. For example, counties in Texas until the early 1990s did not have the power to pass and enforce ordinances and had very little power over proposed development on unincorporated land.

112. Colonia Housing Report, *supra* note 105.

113. *Id.*

114. *Id.*

nore or only partially address the problems.[115] It was not until the late 1980s and early 1990s, however, that state governments recognized the crisis facing the Colonia communities. The Texas State Legislature, for instance, created the Economically Distressed Area Program ("EDAP") as a result of the explosion of Colonia communities and its associated problems.[116] Water, not surprisingly, is a primary indicator in the explicit definition of a Colonia as an economically distressed area.[117] An economically distressed area is one "in which: (A) water supply or sewer services are inadequate to meet minimal needs of residential users ...; [and] (B) financial resources are inadequate to provide water supply or sewer services that will satisfy those needs."[118] The EDAP provided funding for water and sewer services to economically distressed areas in exchange for the acceptance of certain regulatory structures.[119] The legislation also provided for civil and criminal penalties for unscrupulous developers.[120] Despite the regulatory promise of the EDAP, it exempted many Colonia communities, contained various loopholes, and was grossly underfunded.[121]

Additionally, as metropolitan density increases in counties with Colonia communities, the EDAP fails to account for the municipal underbounding problem,[122] by which municipalities refuse to annex

115. *Id.*

116. 1989 Tex. Sess. Law Serv. ch. 624, § 1.01(a) (West).

117. *See* TEX. GOV'T CODE ANN. § 775.001(2) (2001); *see also* TEX. WATER CODE ANN. § 17.921(1) (1999).

118. TEX. WATER CODE ANN. § 17.921(1) (1999).

119. In 1993, the Texas State Legislature granted counties the power to enforce subdivision rules as a precondition for receiving funding for the state's Economically Distressed Area Program funding. In 1995 an additional set of laws passed by the Texas legislature gave counties the power to approve at the county commissioners court level whether or not new subdivisions meet certain plating requirements. However, these requirements contained grandfather clauses. The legislature in 1995 passed legislation requiring that any new subdivision in a severely economically distressed area and within fifty miles of the border comply with strict platting requirement. TEX. LOC. GOV'T CODE ANN. §§ 232.021-23 and 232.029 (1995).

120. *Id.* §§ 232.035-36. *See also* David L. Hanna, *Third World Texas: NAFTA, State Law, and Environmental Problems Facing Texas Colonias*, 27 ST. MARY'S L.J. 871, 911-12 (1996).

121. *See* Hanna, *supra* note 120, at 878-79, 917.

122. Michelle Wilde Anderson, *Cities Inside Out: Race, Poverty, and Exclusion at the Urban Fringe*, 55 UCLA L. REV. 1095, 1114 (2008) [hereinafter Anderson, *Cities Inside Out*]; Michelle Wilde Anderson, *Mapped Out of Local Democracy*, 62 STAN. L. REV. 931, 935 (2010) [hereinafter Anderson, *Mapped Out*].

impoverished, minority, fringe communities.[123] One theoretical response to the lack of regulatory authority is for a Colonia to come under the jurisdiction of an incorporated municipality, either through annexation, incorporation, or the chartering of a new municipality. All the Colonia's existing and new developments would then be subject to the land use regulation regime of the existing municipality, or new land use regulations created by ordinance under the new municipality. Colonias, however, are neither economically nor socially attractive prospects for municipal incorporation. The ad hoc nature of their water infrastructure (if any at all) requires large capital investments to bring their community in line with existing ordinances.[124] Moreover, any anticipated income and/or property tax benefits pale in comparison to the economic and social costs to a municipality for incorporating these undesirable lands and impoverished Latino residents.[125] When not incorporated into a municipality, the county then governs Colonia residents who are geographically isolated from the county seat and consequentially less able to politically assert themselves.[126]

Colonia residents therefore find themselves in a precarious position. On one hand, the lack of water regulation breeds inequitable health outcomes directly resulting from no access to safe drinking water or basic sanitation. On the other hand, regulations delivering water and wastewater disposal services to Colonia residents would price the poorest resident out of the market. Colonias exist to meet the affordable housing needs of poor Latinos living in border regions. Unfortunately, programs that offer assistance often have contribution requirements that Colonia residents simply cannot afford. Many promise to bring water and sewage lines to Colonias but require that households pay water and sewage tapping fees. Colonia residents, however, do not have the means to pay for cost intensive improvements or additional monthly fees because they are extremely poor and lack equity under their Contract for Deed titles,.[127]

123. Anderson, *Cities Inside Out*, *supra* note 122, at 1113; Anderson, *Mapped Out*, *supra* note 122, at 938.

124. *See* Anderson, *Mapped Out*, *supra* note 122, at 936, 937.

125. *See* Anderson, *Cities Inside Out*, *supra* note 122, at 1111-12.

126. Anderson, *Mapped Out*, *supra* note 122, at 937-39; Anderson, *Cities Inside Out*, *supra* note 122, at 1098, 1113.

127. The EDAP and NADBank programs have been criticized for requiring financial feasibility before bringing water to Colonias. For Texas legislative reports summarizing concerns

According to Critical Race Theorists such as Professor Richard Delgado, Colonias are internal racialized colonies structured by American law and policy[128] that epitomize racialized water law and policy problems in the developed world. Household water requirements represent a tiny fraction of global water use, usually less than five percent of the total.[129] Most people, however, feel the most pernicious and direct impact of water inequality when paying for this household use. In high-income areas of cities in the United States, Asia, Latin America and Sub-Saharan Africa, their residents enjoy inexpensive access to several hundred gallons of water a day because public utilities and government subsidies keep delivery expenses artificially low.[130]

In contrast, Colonia residents, urban slum dwellers, and poor, rural households around the world pay a significantly higher price (socially and financially) for water, barely meeting their basic human needs.[131] According to the United Nations, slum dwellers in Barranquilla, Colombia pay nearly five times more for water than New York City residents.[132] Similarly, consider the case of Nogales, Arizona in the United States and Nogales, Sonora in Mexico. Essentially a single

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regarding water and other infrastructure developments in Colonias, see generally COLONIAL INITIATIVES PROGRAM, TEX. SEC'Y OF STATE, TRACKING THE PROGRESS OF STATE FUNDED PROJECTS THAT BENEFIT COLONIAS, S.B. 99, 82nd Reg. Sess. (Tex. 2010), http://www.sos.state.tx.us/border/forms/reports-11/sb-99-progress.pdf; SEN. JUDITH ZAFFARINI & REP. RYAN GUILLEN, COLONIAL INITIATIVES PROGRAM, TRACKING THE PROGRESS OF STATE-FUNDED PROJECTS THAT BENEFIT COLONIAS, S.B. 827, 79th Reg. WILLIAMS, TEX. EC'Y OF STATE, A REPORT RELATING TO THE COORDINATION OF COLONIA INITIATIVES AND SERVICES TO COLONIA RESIDENTS, S.B. 1202, 79th Reg. Sess. (Tex. 2006), http://www.sos.state.tx.us/border/forms/sb1202_112106.pdf.

128. Richard Delgado & Jean Stefancic, *What if John Calmore Had a Latino/a Sibling?*, 86 N.C. L. REV. 769, 785, 787 (2008); *See also* Sheila R. Foster, *Urban Informality as a Common Dilemma*, 40 U. MIAMI INTER-AM. L. REV. 261, 262-81 (2009).

129. Kevin Watkins, *Human Development Report 2006: Beyond Scarcity: Power, Poverty and the Global Water Crisis*, U.N. DEV. PROGRAMME 2 (2006) http://hdr.undp.org/en/media/HDR06-complete.pdf [hereinafter UN HDR 2006]. This report also states that "[p]oor people living in slums often pay 5–10 times more per litre of water than wealthy people living in the same city." *Id.* at 10.

130. *Id.* at 2.

131. *Id.*

132. *Water Rights and Wrongs, Dealing with Inequality*, U.N. DEV. PROGRAMME, http://hdr.undp.org/external/hdr2006/water/16.htm (March 9, 2012). Moreover, "women and young girls carry a double burden of disadvantage, since they are the ones who sacrifice their time and their education to collect water." UN HDR 2006, *supra* note 129, at 2.

city, separated only by an international border, where the residents of Nogales, Sonora "actually pay more for less reliable, lower-quality water than their counterparts in Arizona."[133] And just as in Colonias, poor people of color around the world are unable to afford the connection fee to lower priced water and sewage lines. According to the United Nations, "even in the poorest countries this [fee] can exceed one hundred dollars. In Manila the cost of connecting to the utility represents about three months' income for the poorest twenty percent of households, rising to six months' in urban Kenya."[134]

Access to water for the most basic needs is an expensive and unattainable proposition. Despite the UN Millennium Project's objectives regarding water, 2.6 billion people still do not have access to basic sanitation and 1.1 billion do not have basic access to clean water.[135] Though policy makers and scholars around the world disagree on whether public or private solutions are the answer,[136] communities of color disproportionately bear the brunt of an underdeveloped water infrastructure. This infrastructure deficiency, coupled with the legal constructs discussed above, suggests that, much like interstate highways came to mark, bound, segregate, and contain neighborhoods of color in the United States,[137] the lack of water and wastewater infrastructure serves an equally powerful – if not more pernicious – social and economic function. The geographical reach of this infrastructure – the underground pipes and pumps, the water storage reservoirs, and the wastewater treatment plants – marks the boundaries of property devel-

133. HELEN INGRAM ET AL., DIVIDED WATERS: BRIDGING THE U.S.-MEXICO BORDER 211 (1995).

134. UN HDR 2006, *supra* note 129, at 10.

135. *Id.* at 5.

136. In Dakar, for example, "poor households using standpipes pay more than three times the price paid by households connected to the utility." In terms of public solutions, public utilities are motivated by inequitable market pressures. According to the UN, "most utilities now implement rising block tariff systems. These aim to combine equity with efficiency by raising the price with the volume of water used. In practice, the effect is often to lock the poorest households into the higher tariff bands. The reason: the intermediaries serving poor households are buying water in bulk at the highest rate." *Id.* at 10.

137. Charles E. Connerly, *From Racial Zoning to Community Empowerment: The Interstate Highway System and the African American Community in Birmingham, Alabama*, 22 J. PLAN. EDUC. & RES., 99. 99-100 (2002); Marc Seitles, *The Perpetuation of Residential Racial Segregation in America: Historical Discrimination, Modern Forms of Exclusion, and Inclusionary Remedies*, 14 J. Land Use & Envtl. L. 89, 93 (1998).

opment, limits an area's economic growth and investment, and determines a neighborhood's long-term sustainability, thereby creating – and powerfully reinforcing – patterns of racial segregation and economic subordination.[138]

Water and land use laws disaggregate water infrastructure from its human and social dimensions. In this vein, the law has contributed to the view that water is incidental to, rather than a primary component of, actual household possession. This disaggregation has entrenched the law's treatment of water as a commodity to be bought and sold, rather than as an inestimable human need. The law has failed to recognize safe water and basic sanitation as essential to the realization of human dignity, regardless of class or race.

V. ROTATING CANNONS SOAK ONE MANICURED LAWN HUNDREDS OF GALLONS WASTED EVERY DUSK AND DAWN OTHER BUFFALOS DECRY TRUNK LINES SO SLIGHT DENYING ENTRÉE TO A FOUNTAIN OF HUMAN RIGHTS

Outside of the Colonias, many Americans take water for granted. The United States has one of the most developed and comprehensive systems of water infrastructure in the world, with massive dams and reservoirs, modern groundwater pumps, billions of miles of water and sewage pipes, sophisticated wastewater treatment plants, and a broad regulatory framework over industrial and hazardous waste. In turn, few Americans realize how much water they consume each and every day, nor do a vast majority have to wonder each and every day whether that water might make them sick.[139] An average suburban American house-

138. ALEMAYEHU BISHAW, U.S. CENSUS BUREAU, AREAS WITH CONCENTRATED POVERTY: 2006-2010, at 1, 6-7 (2011) *available* at http://www.census.gov/prod/2011pubs/acsbr10-17.pdf; *Safe Water and Waste Disposal Facilities*, INDIAN HEALTH SERVICES, http://www.ihs.gov/PublicAffairs/IHSBrochure/SafeWater.asp (Jan. 2012); Colonia Housing Report, *supra* note 105.

139. *Value of Water Survey: Americans on the U.S. Water Crisis*, ITT CORPORATION, 11 http://www.xyleminc.com/valueofwater/VOW_presentation/pdf/itt-value-of-water.pdf (last visited Apr. 15, 2012).

hold, for instance, consumes about 350 gallons of water a day for drinking, personal hygiene and sanitation, landscaping, and other outdoor uses, such as maintaining a swimming pool, running a fountain, or washing a car.[140] According to one account, a suburban household in Florida consumed on average more than 10,400 gallons a day.[141]

Yet such direct consumption only touches the tip of the iceberg if one includes the water consumed to produce the goods we eat, wear, and use every day. Consider, for instance, the typical daily meals of an average middle-class American. When that person buys his or her first cup of coffee at Starbucks each morning, getting that cup into his or her hand required 37 gallons of water. At lunch, producing the sandwich bread required 40 gallons of water, a glass of milk required 265 gallons, and a scoop of ice cream required 400 gallons. Finally, at dinner, the mixed salad needed 130 gallons, 1,320 gallons for a small steak, and 530 gallons for an after dinner brandy. In these terms, one person in the United States uses nearly 3,000 gallons of water a day just to eat![142]

In the United States, the costs of such water consumption, like the underground pipes delivering the water, lie beneath the surface of our immediate perception. One reason Americans do not perceive these costs is that, because of massive government subsidy, people in the United States pay much less for direct water use than for cable or satellite television, phone service, or electricity.[143] In fact, water consumers in the United States pay the lowest rates in the world for access to and use of clean water.[144]

As the Colonias demonstrate, however, communities of color in the United States routinely lack "access" to safe drinking water and adequate sanitation. This is not just a "border" phenomenon. In Co-

140. *Water Use Statistics*, AMERICAN WATER WORKS ASSOCIATION, http://www.drinktap.org/consumerdnn/Home/WaterInformation/Conservation/WaterUseStatistics/tabid/85/Default.aspx (last visited Apr. 15, 2012). *See generally* NANCY L. BARBOUR, U.S. GEOLOGICAL SURVEY, SUMMARY OF ESTIMATED WATER USE IN THE UNITED STATES IN 2005 (2009) (providing information on water sources and the proportion of water used for domestic, industrial, agricultural, or mining purposes).

141. FRED PEARCE, WHEN RIVERS RUN DRY: WATER – THE DEFINING CRISIS OF THE TWENTY-FIRST CENTURY 3 (2006).

142. *Id.* at 4

143. Susan Thornton, *In Search of Clean Water*, DENVER POST (Oct. 31, 2010), http://www.denverpost.com/thornton/ci_16461626.

144. *Water Rights and Wrongs*, *supra* note 132.

lumbia, Missouri, for example, the city's largest predominantly black neighborhood is bisected by Flat Branch Creek, which ran through the heart of the neighborhood. Until the 1960s, it was described as "an open sewer, which flowed near homes from Switzler Street south past the MK&T depot."[145] Several black residents in this neighborhood lived in "shacks, many with no running water or sewers."[146] In response, the city authorities, declined to provide adequate trunk and sewage lines to the existing community. Instead, in 1954, the City of Columbia, under the power of urban renewal, razed blocks of housing that comprised the "heart of the city's Black community."[147] The creek and much of its physical topography was forced underground, untold numbers of Black property owners were displaced, and in its place emerged parking lots and public housing projects.[148]

While land use practices such as urban redevelopment ostensibly serve a public purpose, even if its effect is to displace communities of color, problems of inadequate access to drinking water and sanitation arise as well from patterns and practices of intentional discrimination and water segregation against communities of color. A relatively recent case in Zanesville, Ohio provides insight into the racist dimensions of water development. Zanesville is situated about 50 miles east of Columbus, Ohio, off a major east-west interstate highway.[149] Various governmental units, including three charged with water delivery in Zanesville and its surrounding townships and county, carried out a policy, pattern, and practice of denying public water service to the only predominantly African-American neighborhood in the area, Coal Run.[150] Evidence in the case revealed that over a thirty-five year period, the city rejected or disregarded numerous requests from Coal Run

145. ALAN R. HAVIG, FROM SOUTHERN VILLAGE TO MIDWESTERN CITY: AN ILLUSTRATED HISTORY OF COLUMBIA 19 (1984).

146. COLUMBIA, MISSOURI: IMAGES OF OUR LIVES SINCE 1901 124 (Vicki S. Russell, ed., 2001).

147. Jason Jindrich, "Our Black Children": The Evolution of Black Space in Columbia, Missouri (Master's Thesis, University of Missouri-Columbia) (on file with author), at 37.

148. *Id.* at 6, 37.

149. *Official Ohio Transportation Map*, OHIO DEP'T OF TRANSP., http://www.dot.state.oh.us/maps/Overview/OTM2007ALG.jpg (last visited Mar. 14, 2012).

150. Kennedy v. City of Zanesville, 505 F. Supp. 2d 456, 463-64 (S.D. Ohio 2007).

residents to connect to existing water and sewage lines that bounded and bordered the Coal Run neighborhood.

At the same time, the single government agency charged with water development in the city and county actively pursued funding and construction of a host of water projects in the city and surrounding areas in the 1990s, but never to Coal Run.[151] Most egregiously, while the city routinely denied individual requests from African American residents to connect to an existing water and sewage lines, it purposefully routed those same water and sewage connections around the Coal Run neighborhood to adjacent communities with predominantly white residents.[152]

Exacerbating matters even further was the fact that the black neighborhood sat atop an abandoned coal mine that contaminated the groundwater supply.[153] Instead of getting water from a well, "[i]n Coal Run the residents had to catch water off their roofs, melt snow, or truck it in using barrels, pool liners, and every other manner of container. The water that was gathered went into cisterns . . .though [these] cisterns would fill with bugs and worms and rodents, and animals would crawl in them and die."[154] The story of Coal Run is not unique. Indeed, similar cases have arisen relatively recently in Salisbury, New Jersey,[155] Dallas, Texas,[156] Chicago, Illinois,[157] Bartlett, Tennessee,[158] and

151. *Id.* at 466.

152. *Id.* at 467.

153. *Id.* at 463.

154. Plaintiff's Combined Opposition to Defendant's Motion for Summary Judgment, Kennedy v. City of Zanesville, 505 F. Supp. 2d 456 (S.D. Ohio 2007) (No. 2:03-cv-1047), 2007 WL 5312887 at *17. For further discussion of this case, *see* Dirk Johnson, *For a Recently Plumbed Neighborhood, Validation in a Verdict*, N.Y. TIMES, Aug. 11, 2008 available at http://www.nytimes.com/2008/08/12/us/12ohio.html; Eoin O'Carroll, *Black Ohio Neighborhood Unjustly Denied Water for Decades*, Jury Finds, CHRISTIAN SCI. MONITOR, July 11, 2008 available at http://www.csmonitor.com/Environment/Bright-Green/2008/0711/black-ohio-neighborhood-unjustly-denied-water-for-decades-jury-finds; and Claire Suddath, *Making Water a Matter of Race*, TIME, July 14, 2008 available at http://www.time.com/time/nation/article/0,8599,1822455,00.html.

155. Jersey Heights Neighborhood Ass'n v. Glendening, 174 F.3d 180, 194 (4th Cir. 1999).

156. Cox v. City of Dallas, 430 F.3d 734 (5th Cir. 2005); Lopez v. Dallas, No. 3:03-CV-2223-M, 2006 WL 1450520 (N.D. Tex. May 24, 2006); Miller v. City of Dallas, No. Civ.A. 3:98-CV-2955-D, 2002 WL 230834 (N.D. Tex. Feb. 14, 2002).

157. Good Shepherd Manor Found. v. City of Momence, 323 F.3d 557 (7th Cir. 2003).

Port Wentworth, Georgia.[159]

An inverse mirror to the case of Coal Run is found in a suburban neighborhood in Austin, Texas. In the Spring of 2008, a water utility district in serving this suburban neighborhood failed to persuade a three-judge panel of the federal district court that the water utility should be exempted from the "preclearance" requirement of Section 5[160] of the Voting Rights Act of 1965.[161] At issue was whether the water utility, which delivers water to over 3,500 people in a suburb of Austin, Texas, could be removed from Section 5 jurisdiction of the Voting Rights Act of 1965 because there has been no history of racial discrimination in voting in the district at issue.[162] Though Austin and Texas had long had racially stratified housing patterns that created a presumption that the suburban was racially stratified, the District also challenged the constitutionality of the Act altogether, arguing that the racially discriminatory environment that justified its passage no longer exists.[163]

158. Middlebrook v. City of Bartlett, 341 F. Supp. 2d 950 (W.D. Tenn. 2003), *aff'd*, 103 F. App'x 560 (6th Cir. 2004).

159. Steele v. City of Port Wentworth, No. CV405-135, 2008 WL 717813 (S.D. Ga. Mar. 17, 2008).

160. Voting Rights Act of 1965, Pub. L. No. 89-110 § 5 (1965) (codified as amended at 42 U.S.C. § 1973c (2006)). Known as the "Preclearance Requirement" of the Voting Rights Act of 1965, § 5 requires government units to preclear with the U.S. Attorney or the U.S. District Court for the District of Columbia, those municipal decisions that may lead to voting discrimination. Such decisions include the changing or modification of an election system, the revising of candidate qualifications, annexing neighboring districts, and re-drawing district lines. A government unit can ask to have itself removed from this requirement if it has a ten-year record of no voting rights violations.

161. Nw. Austin Mun. Util. v. Mukasey, 573 F. Supp. 2d 221 (D.D.C. 2008) (opinion denying Plaintiff's Motion for Summary Judgment and granting Defendant's and Defendant-Intervenors' Motions for Summary Judgment), *rev'd and remanded*, 557 U.S. 193 (2009) (holding unconstitutional the 2006 reenactment of § 5 of the Voting Rights Act; Congress must prove that "the extreme circumstances warranting § 5's enactment persist today.").

162. *Id.* at 223, 230, 246*; see also* Brief of Members of the Texas House of Representatives as Amici Curae in Support of Appellees, Nw. Austin Mun. Util. v. Holder, 557 U.S. 193 (2009), 2009 WL 796300, pages 11-18 (indicating persistent racial discrimination and segregation in housing, education, and policing in Texas likely being the case in relation to the jurisdictional boundaries of the water district).

163. Nw. Austin Mun. Util, 573 F. Supp 2d at 223. *See also* Brief of Members of the Texas House of Representatives, *supra* note 162, at 11-18 (indicating the strong correlation that the new suburban water utility would mirror Texas's racially stratified housing patterns); and

This case, involving a fairly new metropolitan water district servicing a recently incorporated community, is rife with assumptions about the irrelevance of the color line to such situations. Such assumptions, in a state where municipalities have been at the forefront of efforts to prevent the exclusion of non-whites from living and participating in the state's political process, reflect the insidious nature of water in identifying racially concentrated communities. Whereas lack of water concentrated and bound Blacks in Coal Run or Latinos in Cameron Park, its wide-spread availability for an exclusively new white neighborhood indicated the complete absence of racial discrimination.

The legal framework to address discriminatory impact or intent in relation to water delivery, however, is extremely truncated. While many states require a duty to provide water for animals,[164] there is no direct human or civil right to water in American law. Instead, racialized litigants have had to claim legal right of equal access to water, sewage, and other municipal services under the Constitution's guarantee of equal protection or under the narrow limits of Federal statutory authority.[165] What the cases reveal is that equal protection and civil rights protection provide a mixed bag for litigants. While some courts have held the gross disparities in the provisions of municipal services to communities of color is enough to provide a prima facie case of state sponsored racial discrimination, others have held that the absence of intent to discriminate, even if there are gross disparities, fails to state a cognizable legal claim.[166]

Plaintiff's Motion for Summary Judgment with Memorandum of Points and Authorities in Support of Motion for Summary Judgment, Nw. Austin Mun. Util. v. Mukasey, 573 F. Supp. 2d 221 (D.D.C. 2008) (No. 1:06-CV-01384), 2007 WL 5918668, *rev'd and remanded*, 557 U.S. 193 (2009).

164. *See, e.g.*, COLO. REV. STAT. §§ 18-9-201 (LEXIS 2011), 35-42-108 (LEXIS 2011).

165. *See, e.g.*, Robert G. Schwemm, *Cox, Halprin, and Discriminatory Municipal Services Under the Fair Housing Act*, 41 IND. L. REV. 717 (2008) (discussing the *Cox* and *Halprin* circuit cases and respective interpretations of the FHA). Some circuits depart, but the FHA has not been a very effective tool for individuals to force municipalities to provide water, *Id.* 42 U.S.C. §§ 1981, 1982 and 1983 have been more efficacious than the FHA, *Id.* Successful legal claims include Coleman v. Aycock, 304 F. Supp. 132 (N.D. Miss. 1969); Hawkins v. Town of Shaw, *Miss.*, 437 F.2d 1286 (5th Cir. 1971); Miller v. City of Dallas, No. Civ.A. 3:98-CV-2955-D, 2002 WL 230834 (N.D. Tex. Feb. 14, 2002); Kennedy v. City of Zanesville, 505 F. Supp. 2d 456, 463 (S.D. Ohio 2007); *See also* Johnson v. City of Arcadia, Fla., 450 F. Supp. 1363 (M.D. Fla. 1978).

166. *See, e.g.*, Palmer v. Thompson, 403 U.S. 217 (1971); Yick Wo v. Hopkins, 118

Rooting a right to safe drinking water or basic sanitation in either equal protection constitutional provisions, or broader remedies of Fair Housing or Civil Rights law, however, focuses the analysis and ultimate remedy on a narrow set of adverse racial outcomes and decision making.[167] A similar problem seemingly exists in providing a viable remedy to the human right to water.[168] As Professor Itzchak Kornfeld argues, the human right to water is "unenforceable," thereby reinforcing "global water apartheid" in the provision of potable water and basic sanitation.[169] As a result, the law is unable to address the pervasive white privileges that have shaped and reproduced water and sewage inequalities in American culture and life.

There is a perverse incongruity in the legal remedies available to those individuals and communities in the United States that are systematically denied water. At their core, water rights allocations in the United States are inherently unequal, but the remedies available to litigants in most cases focus on questions of equity or fairness rather than those of social inequality. Such equity claims rarely take racial or related intersectional social inequalities such as class and gender into account. While "equity may require that third-party impacts of long-distance water diversions be compensated...it may bar differential water utility rates for low-income groups—on grounds of equity."[170] Indeed, courts throughout the United States have consistently held that

U.S. 356 (1886); Good Shepherd Manor Foundation v. City of Momence, 323 F.3d 557 (7th Cir. 2003); Ammons v. Dade City, 783 F.2d 982 (11th Cir. 1986).

167. *See, e.g.*, Palmer v. Thompson, 403 U.S. 217 (1971); Yick Wo v. Hopkins, 118 U.S. 356 (1886); Cox v. City yof Dallas, 430 F.3d 734 (5th Cir. 2005); Good Shepherd Manor Foundation v. City of Momence, 323 F.3d 557 (7th Cir. 2003); Jersey Heights Neighborhood Ass'n v. Glendening, 174 F.3d 180 (4th Cir. 1999); Ammons v. Dade City, 783 F.2d 982 (11th Cir. 1986); Campbell v. Bowlin, 724 F.2d 484 (5th Cir. 1984); Heritage Homes of Attleboro, Inc. v. Seekonk Water Dist., 670 F.2d 1 (1st Cir. 1982); United Farmworkers of Florida Housing Project v. City of Delray Beach, 493 F.2d 799 (5th Cir. 1974); Hawkins v. Town of Shaw, Miss., 437 F.2d 1286 (5th Cir. 1971); Kennedy Park Homes Ass'n v. City of Lackawanna, 436 F.2d 108 (2d Cir. 1970).

168. *See* JOHN SCANLON ET AL, WATER AS A HUMAN RIGHT 12 (Int'l Union for Conservation of Nature & Natural Res., 2004); Ling-Yee Huang, *Not Just Another Drop in the Human Rights Bucket: The Legal Significance of a Codified Human Right to Water*, 20 FLA. J. INT'L L. 353 (2008); Stephen C. McCaffrey, *A Human Right to Water: Domestic and International Implications*, 5 GEO. INT'L ENVTL. L. REV. 1, 6 (1992).

169. Itzchak Kornfeld, *A Global Water Apartheid: From Revelation to Resolution*, 43 VAND. J. TRANSNAT'L L. 701, 704 (2010)

170. Wescoat, et al., *supra* note 72, at 76.

urban water utilities serving a metropolitan region cannot charge their largely suburban middle-to-upper class white customers more for water service than they may charge a city's more racially and class diverse residents.[171]

Even when the question of race is unavoidable, equal protection and civil rights laws prove poor proxies in ensuring a legal and moral duty to provide minimum standards of water and sanitation access[172]. The issue in such cases is not really about water per se, but rather the equal provision of a governmental service. Yet, access to water may be something distinctly unique. According to the UN, "'[n]ot having access' to water and sanitation is a polite euphemism for a form of deprivation that threatens life, destroys opportunity and undermines human dignity."[173] As long as legal rules and remedies regarding water fail to account directly for racial inequality, human dignity is denied at the expense of the lush lawns, manicured landscapes, and majestic fountains that so dominate the post-urban landscape of the contemporary United States.

VI. ONYX BLUE
FLOOD FIELDS OF GRAIN
INDIGO AUBURN
DROWN STREETS THEY STAIN
AQUA WHITE
CHOKE SALINE RIVERS
BRONZE SHOULDERS
HUNCHED OVER EMPTY AQUIFERS

While we have examined differences between those communities that have drinking water and sewage lines and those that do not, there are also unseen racial differences in the piped infrastructure that does exist. Again, the United States provides a case in point. Despite having one of the world's most developed water delivery infrastructures, much of the United States water delivery system is old and rapidly deteriorating. A significant proportion of the nation's trunk lines, sewage lines,

171. *See* Texarkana v. Wiggins, 151 Tex. 100, 246 S.W.2d 622 (1952); Board of County comm'rs of Arapahoe County v. Denver Board of Water Comm'rs, 718 Pl.2d 235 (Colo. 1986); Thompson v. Salt Lake City Corpo, 724 P.2d 958 (Utah 1986). *But see* Zepp v. Mayor & Council of Athens, 180 GA. App. 72, 348 S.E.2d 673 (1986).

172. *See supra* notes 157-58.

173. Watkins, *supra* note 129, at 5.

and pumping systems were laid in the 19th or early 20th century, or in the housing boom that immediately followed World War II. As a result, much of the United States' water infrastructure is in dire need of repair or replacement. The U.S. Environmental Protection Agency, for example, has found that more than 1.7 trillion gallons of water are lost per year to leakage while millions more are lost to over 240,000 water main breaks each and every year.[174]

From 2006-2009, "more than 9,400 of the nation's 25,000 sewage systems" dumped "untreated or partly treated human waste, chemicals, and other hazardous materials" into rivers, lakes, and groundwater supplies.[175] A 2007 study by the U.S. Environmental Protection Agency documented over 75,000 sanitary sewer overflows each year resulting in the discharge of three to ten billion gallons of wastewater entering the United States drinking water system.[176]

While much of this aging and failing infrastructure is located in the urban-core, a significant proportion is also located in first-ring suburbs of many major metropolitan areas. In 1999, for instance, the residents of Santee, a suburb directly east of San Diego, discovered over 400,000 gallons of raw-sewage spilling into the San Diego River after a fifty-year-old sewer main line ruptured.[177] Importantly, such first-tier suburbs are rapidly becoming home to Latino, Asian, and other immigrants.[178] Indeed, during the last ten years, more non-white immigrants lived in these older suburbs than in cities, and their growth rates there

174. U.S. ENV'T PROT. AGENCY, AGING WATER INFRASTRUCTURE RESEARCH PROGRAM: ADDRESSING THE CHALLENGE THROUGH INNOVATION 2 (Office of Research & Dev., 2007), *available at* http://nepis.epa.gov/EPA/html/DLwait.htm?url=/Adobe/PDF/60000I2A.PDF. These numbers, and their astronomical costs, are expected to rise as the systems continue to age. *Id.*

175. Charles Duhigg, *As Sewers Fill, Waste Poisons Waterways*, N.Y. TIMES, Nov. 23, 2009, http://www.nytimes.com/2009/11/23/us/23sewer.html?pagewanted=all.

176. AGING WATER INFRASTRUCTURE RESEARCH PROGRAM, *supra* note 174.

177. Suzanne Marie Michael, Place, Power, and Water Pollution in the Californias: A Geographical Analysis of Water Quality Politics in the Tijuana-San Diego Metropolitan Region 142-43 n.7 (May 11, 2000) (unpublished Ph.D. dissertation, University of Colorado at Boulder).

178. *See* Audrey Singer, Immigration Fellow, THE BROOKINGS INSTITUTION, Immigrant Gateways: Faces of the Next Cities (May 4, 2007) (slides available at http://www.brookings.edu/~/media/Files/rc/speeches/2007/0504demographics_singer/20070504.pdf).

exceeded those in the cities.[179] In addition to being non-white, these immigrants have minimal to no English proficiency and are less likely to be U.S. citizens.[180] Though communities of color are no longer confined to an urban core, racial and ethnic concentrations throughout metropolitan regions are compounded by concentrated poverty, linguistic segregation, and alienation from the polity. In the aggregate, such factors compound the ability of communities to advocate for the necessary improvements to their water infrastructure.

The perverse irony of this is that immigration to the United States, particularly from Mexico, is in some sense attributable to water laws and policy that are drying up international water supplies. For instance, the treaty governing water allocation of the Rio Grande River between the United States and Mexico requires one-third of the water flowing from the six Mexican tributaries to be allocated to the United States.[181] Like many of the allocation schemes governing the great rivers that flow out of Colorado, the allocation scheme signed in 1944 was based on faulty assumptions regarding how much water would actually be in the river from year to year and the rate of metropolitan growth. Thus, by the beginning of the 21st century, thousands of farms in northern Mexico lay fallow because the treaty allocated their water supplies to Texas farmers.[182] As the Mexican agricultural economy has collapsed, many have traveled north across the United States border in search of work. Those who have stayed dig deeper into the earth in search of non-renewable groundwater supplies.[183]

This problem of resource allocation and the push pull factors of migration are not unique to Mexico and the United States. Around the world, everywhere from India, China, and Pakistan to the United States, Israel, and Palestine, farmers are over-pumping groundwater in order to survive. The uneven legal allocation of rivers for agricultural and municipal uses, inefficiencies and inequalities in water and sewage distribution, and the unseen reliance on groundwater that cannot be replaced, combine to form a "slow-burning disaster" that has already

179. *Id.*

180. *See Id.*

181. Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande, U.S. – Mex., Feb. 3, 1944.

182. PEARCE, *supra* note 21, at 16.

183. *Id.* at 17.

affected hundreds of millions of people.[184]

VII. BLUE IT LOOKS
BROWN IT STINKS
GOLD IT TAPS
GREEN IT DRINKS

The first decade of the 21st century has seen an explosion in academic and policy concern about the global water crisis.[185] Though water seems to be everywhere, "northern China, large areas of Asia and Africa, the Middle East, Australia, the Midwestern United States and sections of South America and Mexico" are running out of potable water.[186] Indeed, much of the world lacks sufficient water, and even in those places with a seemingly abundant supply, water is becoming more scare and more inequitably distributed.[187] In conjunction with inadequate sanitation, a "perfect storm" is emerging.[188] According to one study, in the United States alone:

[M]ore extreme droughts, surging water demand and water pollution are idling once-productive farms and spurring litigation between states battling for supplies. Reduced water supply means more threats to endangered species and critical ecosystems, resulting in stronger environmental regulations that also restrict water access, creating the basis for further legal battles.[189]

Rapidly aging water infrastructure delivery systems that need to be maintained or replaced exacerbate these water supply problems. The American Society of Civil Engineers, for instance, estimates that over the course of the next five years, the United States alone will need $445 billion dollars for routine maintenance or replacement of aging, corroding and bursting pipes, dams, inland waterways, levees and dilapidated sewer systems.[190] Scarcity, increased litigation to control re-

184. *Id.* at 58.

185. According to one account, "[i]n the first seven years of the new millennium, more studies, reports and books on the global water crisis have been published than in all of the preceding century." MAUDE BARLOW, BLUE COVENANT: THE GLOBAL WATER CRISES AND THE COMING BATTLE FOR THE RIGHT TO WATER 2 (2007).

186. *Id.* at 3.

187. *Id.* at 3

188. *Id.* at 3; SHARLENE LEURIG, CERES, THE RIPPLE EFFECT: WATER RISK IN THE MUNICIPAL BOND MARKET 12 (2010)

189. LEURIG, *supra* note 188, at 11.

190. AM. SOC'Y OF CIVIL ENG'RS, 2009 REPORT CARD FOR AMERICA'S INFRASTRUCTURE 7 (2009).

maining water supplies, and capital intensive maintenance and development projects drive up the overall price of water. . As one commentator notes, "in a world running out of clean water, whoever controls it will be both powerful and wealthy."[191]

Yet, current capital spending at all levels of government to address such problems faces a $180 billion shortfall that is only expected to increase exponentially as the aging system fails at ever increasing rates.[192] This in turn will cause public water utilities to increase long-term debt 40-50% from current levels.[193] Such debt does not even account for the costs associated with developing and managing "increasingly volatile supplies."[194] Collectively, "emerging water risks for public utilities)(may force capital assets into early retirement or saddle utilities with stranded assets. Any of these scenarios may impair a utility's liquidity, undermining its ability to honor debt obligations."[195]

The recent economic crisis exacerbates this situation in two critical ways. First, there has been a persistent underinvestment in the creation and maintenance of water infrastructure, water resource management, and water governance.[196] In order to reach those UN Millennium Development Goals regarding access to potable water and basic sanitation, the World Bank estimated the costs of achieving "universal coverage" would range from $ 9 billion to $30 million a year over the next 25 years.[197] Even before the current crisis, however, public and private funds needed to meet even the more modest goals were largely inadequate. The fact that the usual sources of revenue—tariffs, taxes, and external transfers—are all negatively impacted by downturns in the economy has led to reduced public investments in water infrastruc-

191. BARLOW, *supra* note 185, at 35.

192. AM. SOC'Y OF CIVIL ENG'RS, *supra* note 190, at 3,7.

193. LEURIG, *supra* note 188, at 25.

194. *Id.*

195. *Id.* at 13.

196. JIM WINPENNY ET AL., THE GLOBAL ECONOMIC AND FINANCIAL CRISES AND THE WATER SECTOR 1 (Stockholm International Water Institute 2009).

197. Shantayanan Devarajan, Margaret J. Miller & Eric V. Swanson, *Goals for Development: History, Prospects and Costs* 29 (World Bank Policy Research Working Paper No. 2819, 2002), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=636102. (The same report acknowledges that the "institutional arrangements" do not exist to reach the goal in any case, and concludes that taking the estimates and their caveats together, the estimated cost is between $5 and $21 billion annually).

ture[198]

The second and related economic development problem is that there has been massive private investment in water over the last two decades. Motivated initially by the so-called "'Washington Consensus," the World Bank, the International Monetary Fund, and regional development banks encouraged the privatization of water systems around the world.[199] While 6 million people in developing countries were served by private utilities in 1991, by the end of 2007, 160 million people in the developing world received water and sewage services from private entities.[200] Moreover, private investors discovered that with exploding urbanization, increased population, and water scarcity, significant money could be made by investing in technologies to treat water, to move water, and to increase the amount of available water. Water, "what many are calling 'Blue Gold,'" has emerged as the 21st century's investment of choice.[201] A couple of years before the current financial crisis, water related-equipment and services made up around $400 billion of the global market.[202] Yet, the insatiable demand for water has made it nearly inflation and recession proof as an investment.[203] In 2010, for instance, Morgan and Stanley listed water related industries as one of its top ten investments for the foreseeable future.[204]

How then does one reconcile massive underinvestment in water infrastructure around the world and an explosion in water investments? The answer, according to Maude Barlow, is simple. Private investment in water "will flow where the money is, not where it is needed. No corporation is in business to deliver water to the poor."[205] In turn, the

198. Jack Moss, *Water and the Economic Crisis*, OECD OBSERVER http://www.oecdobserver.org/news/fullstory.php/aid/2845 (last visited Apr. 15, 2012).

199. *See* BARLOW, *supra* note 185, at 37-38.

200. PHILLIPPE MARIN, PUBLIC-PRIVATE PARTNERSHIPS FOR URBAN WATER UTILITIES: A REVIEW OF EXPERIENCES IN DEVELOPING COUNTRIES 2 (2009).

201. Susan Berfield, *There Will Be Water: T. Boone Pickens Thinks Water is the New Oil—and He's Betting $100 Million that He's Right*," BUSINESSWEEK, June 23, 2008, at 40, 40.

202. Claudia Deutsch, *There's Money in Thirst: Global Demand for Clean Water Attracts Companies Big and Small*, N.Y. TIMES, August 10, 2006, at C1.

203. BARLOW, *supra* note 185, at 86.

204. Jeff Applegate et al., *Global Investment Committee: Investment Ideas for* 2011, MORGAN STANLEY SMITH BARNEY, http://fa.smithbarney.com/public/projectfiles/b38739c7-0016-488a-a16b-78daca70344e.pdf (last visited January 11, 2011).

205. BARLOW, *supra* note 185, at 93.

privatization of public water services has proven to be a mixed bag at best, and tremendously unequal at worst. Huge profits, higher water prices, cutoffs to customers, reduced water quality, shoddy maintenance, and even greater levels of public debt represent the legacy of privatization from Atlanta, Georgia to Cochabamba, Bolivia.[206]

Privatization also aggregates control of water in the hands of a few private companies or individuals, who are outside the bounds of either public scrutiny or accountability. Take T. Boone Pickens, for example, who "owns more water than any other individual in the United States and is looking to control even more."[207] Beginning in 1999, Pickens began buying water rights in arid parts of Texas–all groundwater–in order to sell water to Dallas or other growing metropolitan areas by "transporting it over 250 miles, 11 counties, and about 650 tracts of private property."[208] With the help of the Texas State Legislature, Pickens "won the right to issue tax-free bonds for his [water] pipeline … as well as the extraordinary power to claim land across swaths of the state."[209]

Pickens' vast Texas water empire, like the privatization of water utilities around the world, has little to do with equality or equity. As Pickens himself declares: "Water is a commodity … Heck, isn't it like oil? ... Do I care what Dallas does with the water? Hell no."[210] Yet, members from the Texas House of Representatives themselves noted that Pickens public enterprise and "the ease with which special purpose [water] districts may form and accrete substantial power" implicates

206. *See* Kornfeld, *supra* note 169, at 709-11; Craig Anthony Arnold, *Water Privatization Trends in the United States: Human Rights, National Security, and Public Stewardship*, 33 WM. & MARY ENVTL. L. & POL'Y REV. 785, 785-87 (2009); Craig Anthony Arnold, *Privatization of Public Water Services: The States' Role in Ensuring Public Accountability*, 32 PEPP. L. REV. 561, 562-66 (2005).

207. Berfield, *supra* note 201.

208. *Id.*

209. *Id.*

210. *Id.* In 2011, Pickens Mesa Water decided to keep the water in region by selling over 200,000 acres of water to the Canadian River Municipal Water District, which covers the City of Amerillo. Kevin Welch, *Authority Seals Water Deal With Pickens*, AMARILLO GLOBE-NEWS, December 30,.2011, http://amarillo.com/news/local-news/2011-12-29/authority-seals-water-deal-pickens (last accessed April 24, 2012). Pickens, who as paid $103 million for the water rights wryly noted to the residents of Amarillo, who feared the water would be piped to Texas: "I don't think you owe me any thanks…you paid for the water." *Id.*

directly "minority voting rights."[211] The fact that such districts begin as small, privately influenced, and likely racially homogenous limited purpose utilities results in communities of color not having any meaningful opportunity to participate in the choices governing the acquisition, allocation, and availability of this most essential resource.[212]

The commodification of water by men like Pickens ensures that "decisions regarding the allocation of water center on commercial, not environmental or social justice considerations. Privatization means that the management of water resources is based on principles of scarcity and profit maximization rather than long-term sustainability."[213] While the issue has long been framed as the choice between a private right and a public good,[214] it has completely obscured water's legal and social role in creating and perpetuating racial inequality, regardless of who "owns" the resource. Legal control, access, and distribution of water are the most essential elements in the processes of constituting racially stratified and concentrated communities throughout the world. The globalization of capital and the commodification of water have only served to reinforce and reify existing racial inequalities.

Water is one of the ultimate signifiers of "property" in a world defined by "property rights."[215] Water contributes to the creation of distinct color lines, marking the type of home one owns or occupies; it helps to identify the way government comes to interact with distinct neighborhoods and communities; it determines whether children are healthy enough to attend school and receive an equal education. In the end, the racialized inequities of the contemporary world come to light in the troubled rivers, lakes, ponds, aquifers, septic tanks, and reservoirs that flow dangerously unheeded through the world's most current

211. Brief of Members of Texas House of Representatives, *supra* note,162, at 16-17.

212. *Id.* at 18,

213. Maude Barlow & Tony Clark, *Who Owns Water?*, THE NATION, Aug. 15, 2002, *available at* http://www.thenation.com/print/article/who-owns-water.

214. *See* Arnold, *Water Privatization Trends*, *supra* note 206, at 804-820.

215. Professor Robert Self notes the social function of property in context of the metropolitan post-World War II United States. In the metropolitan America that comes to be configured in the 1950s, real property comes to have added economic value and social meaning of land use law creating "[b]oundaries . . . around [real] property—in the form of corporate city limits[,] . . . zoning codes[,] . . . highway rights-of-way," special service districts, school attendance boundaries, public housing sites, and urban renewal zones in order to "signal where to invest and where not invest." ROBERT O. SELF, AMERICAN BABYLON: RACE AND THE STRUGGLE FOR POSTWAR OAKLAND 18 (2003).

economic meltdown.

VIII. CONCLUSION: THE BROWN BUFFALO BLUE

Water law and policy no doubt is poetry. The profound power of its scope, the elegant creation and subsequent application of its rules, and the immense intellectual energy that has resulted in its maintenance and perpetuation speaks to the lyrically profound relationship that all cultures have with protecting, distributing, and allocating this most precious resource. Because everyone is so reliant on water and the concomitant rules that every society has created governing its allocation and use, it seems easy to conclude that water law and policy is the penultimate color-blind or post-racial topic of our modern age.

As this article has attempted to demonstrate in a variety of contexts, such a conclusion would be naïve at best, dangerous and discriminatory at worst. Just as poetry has the ability to describe water laws' most socially and culturally ubiquitous dimensions, I, as a Brown Buffalo, have deployed its form to bring consciousness to the realities of water law and policy in creating and perpetuating real and durable color lines in our contemporary world.

During the 1950s, the Denver Water Board ("DWB") instituted a "blue line" that stretched slightly beyond the corporate limits of the City and County of Denver.[216] The line indicated a fixed point beyond which the DWB would not extend water due to concern about the then-existing water supply. That "line," as I and others have argued elsewhere, helped contribute to the conditions that reflected Denver's non-White urban core and the White suburbs surrounding the city.[217] The "blue line," thereby represented the "noose" that symbolically lynched regional efforts to promote integration and racial equality throughout the entire metropolitan area.

Water–and its related infrastructure–is not merely blue. With the help of law and millions of policy decisions, water helps to mark and identify White, Black, Latino, Asian, and Indigenous communities. It creates the conditions for development, or lack thereof for individuals, property owners, and entrepreneurs from each of these groups. Water, perhaps most importantly, represents power and inequity in a racially

216. Franklin J. James & Christopher B. Gerboth, *A Camp Divided: Annexation Battles, the Poundstone Amendment, and Their Impact on Metropolitan Denver*, 5 Colo. Hist. 129, 144 (2001).

217. *Id.* at 143-60; Romero, *supra* note 81, at 1011.

diverse world. True, water connects us all, but it also divides us by its legal allocation. As water continues to animate some of our most fiercely contested legal and policy disputes, we must be vigilantly aware of its many colors.