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Agua es Vida: The Invisibility of the Latino Population in Drought Assistance and Innovation

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Abstract

Often lost in conversations about recent water shortages is that drought is a defining feature of the Western United States. Drought can and should be expected and prepared for accordingly, rather than treated as a unpredictable disaster. Also glaringly absent is the disproportionate effect drought has on the Latino population. Given the distribution of Latinos in the West, their cultural values, and their socioeconomic condition, Latinos experience with drought is unique and deserves to be treated as such. Finding innovative solutions to drought is critical both in the United States and globally, but little attention has been paid, either on a policy or research level, to how these solutions could affect a large and growing segment of the American population. This paper intends to be a broad evaluation of the Latino experience and potential opportunities for effective, culturally sensitive solutions to reduce the impacts of drought.

Introduction

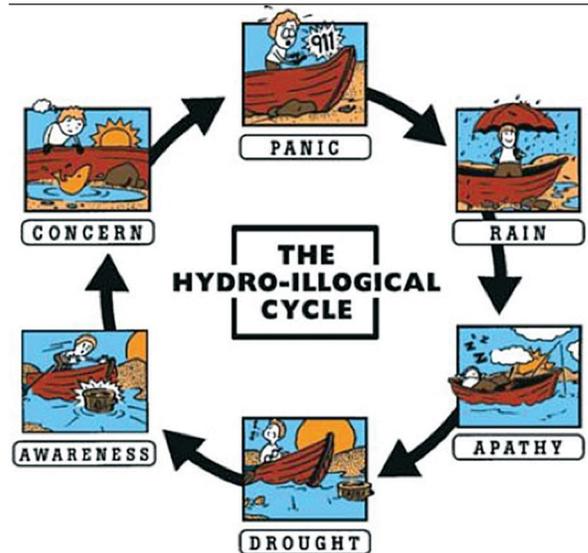
Water and the West

Historically, aridity is a key feature of the American West. Traditionally defined by the 100th Meridian, the region west of this marker receives less than 20 inches of annual rainfall.¹ In the midst of one of the severest droughts on record, as of September 30, 2014, more than 68% of the West is experiencing abnormally dry to

exceptional drought conditions, while more than 55% of land in Western states is currently in a state of drought.² Water wars, then, exist as another defining characteristic of the West. Given the complex, often irrational, and occasionally savage history of water management in the United States, the search for water pits north versus south, urban versus agricultural, and county against county, resulting in a piecemeal strategy lacking in comprehensive vision. The multiplicity of regulatory entities on the local, state and federal levels involved in agriculture, flood control, conservation, fisheries, and wildlife alone is bound to result in fragmented management.

Knee-jerk responses to drought, such as disrupting environmental protections and draining underground aquifers, provide no more than palliative care. The hydro-illogical cycle, so-called by the National Drought Mitigation Center, illustrates the current drought management system, where awareness and solutions emerge under extreme duress, and are forgotten during times of water surplus.

Figure 1



Source © National Drought Mitigation Center

This lack of foresight and thoughtful planning results in a serious threat to our food production, employment and economy. The United States Department of Agriculture (USDA) highlights that agricultural uses consumed 85 percent of the nation's water in 2005. Of the 57 million irrigated acres in the United States that year, nearly three-quarters—43 million acres—are in the 17 Western-most contiguous states³, the states most commonly plagued by drought. Furthermore, "the American economy lost \$50 billion because of drought from 2011 to 2013, much of that

Water scarcity did not limit the development of the American West, thanks in no small part to the enterprising and often contentious efforts of engineers and bureaucrats at the local, state and federal levels⁶. The dams, levees, aqueducts and other storage and conveyance mechanisms built in the early 20th century allowed heavily Latino cities like Los Angeles and Phoenix to be built in the middle of the desert.

from the agricultural sector,⁴ which threatens not only rural communities and farm workers, but also the stability of the American food economy. Agriculture and agriculture-related industries contributed \$775.8 billion dollars to the U.S. gross domestic product in 2012, which is 4.8 percent of the total; agriculture and its related industries provide 9.2 percent of employment in the United States, with 16.5 million jobs related to agriculture.⁵ Substandard drought mitigation strategies only intensify the harm done to the economy and those employed in the agricultural industry.

Latinos and the West

Population distribution alone indicates that Latinos will be hard-hit by drought without significant policy changes. Latinos, defined by the United States Census Bureau as individuals of Mexican, Cuban, Puerto Rican, Dominican, Spanish, or Cen-

tral and South American descent of any race, are heavily concentrated in the West and Southwest. This distribution dovetails almost exactly with the regions deeply impacted by drought. Compare the following maps, the first an index of the severity of the drought created by the National Drought Mitigation Center, and the second a map of the distribution of the Hispanic or Latino population in the United States from the U.S. Census.

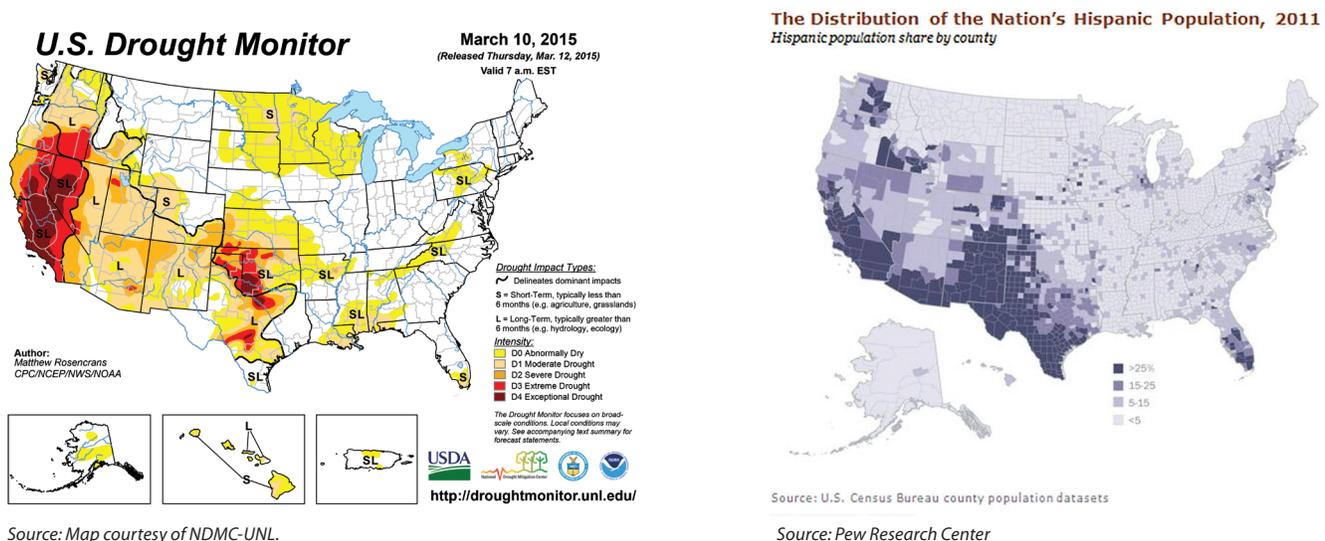
Water scarcity did not limit the development of the American West, thanks in no small part to the enterprising and often contentious efforts of engineers and bureaucrats at the local, state and federal levels⁶. The dams, levees, aqueducts and other storage and conveyance mechanisms built in the early 20th century allowed heavily Latino cities like Los Angeles and Phoenix to be built in the middle of the desert. The population of the West as a whole has grown dramatically, with

four of the top five fastest-growing states in the US located in the West (California, New Mexico, Arizona and Nevada)⁷. This growth alone kindles tension between urban and agricultural interests, between coastal users and those inland, and between wealthy and poor. The Latino population finds itself at the nexus of these conflicts. The presence of Hispanic and Latinos would bring their own skills, cultures and policy challenges to the West and southwest.

Understanding the Latino Experience

Given the employment profiles, cultural values and socioeconomic conditions of Latinos, it is surprising that this population has been largely invisible in dialogue regarding drought mitigation. We do know that drought incurs large costs across society, bringing forth changes such as rising food prices or farm labor layoffs likely to

Figure 2



Water means far more than something to drink in the Latino culture, according to Margaret Montoya, a Professor of Law at the University of New Mexico. It serves as a boundary, forming the contested space between Mexico and the United States, and it carries historical meanings and connection to community.¹⁷

disproportionately affect Latinos. Our lack of comprehensive drought planning exacerbates systemic inequalities.

Labor and Employment

The impact of Western drought falls first upon farm labor, the majority of whom are Hispanic. From layoffs to drinking water quality, drought affects those tied intimately to the land—and migrant or undocumented workers are the most vulnerable in the agricultural community. Furthermore, the overwhelming majority of farm laborers in the United States identify as Hispanic. The National Agricultural Workers Survey, conducted by the Department of Labor's Employment and Training Administration, found that, in 2009-2010, 82% of farm workers were Hispanic, 78% were foreign born (75% from Mexico), and 27% were migrant workers.⁸ Geographically, farm labor is concentrated in the areas plagued by drought, illustrated by the map above. The Southwest, defined as Arizona, California, Colorado, New Mexico and Texas, employed roughly 37% of all hired farmworkers. California and Texas alone, the two states hardest-hit by recent drought, employ more than one-third of all farmworkers.⁹ Thus, drought is intimately linked with the Latino community.

The disenfranchisement of undocumented, migrant workers magnifies the economic costs of drought. According to the Bureau of Labor Statistics, only 2% of Hispanic or Latino workers are in agriculture.¹⁰ But hired farmworkers are disadvantaged in the labor market relative to most other U.S. workers, particularly if undocumented, as they earn less than average wage while contending with considerable health and housing disadvantages.¹¹ Despite inflation, furthermore,

wages for farm labor are stagnant. According to the Farm Labor Service (FLS), the average hourly earnings of non-supervisory farm laborers has been between \$10.50 and \$10.80 since 2007, and stood at \$10.80 in 2012. Real farmworker wages have risen at only 0.8 percent per year since 1990.¹² Drought compounds the economic challenges that come with the lack of a political voice.

Household Impacts

The majority of Latinos, of course, are not farm labor. The effects of drought however, are still magnified by the economic realities of the Latino population in the United States. Drought can result in increased household costs, including rising grocery and water bills for all Americans. But given that the average Hispanic household income in 2010 dollars is only \$108,871 dollars, compared to the average U.S. household wealth of \$494,916 dollars, rising costs have a disproportionate effect on the Latino population.¹³ Disagreement exists as to the impact of drought on food prices, in part due to the number of variables involved in the cost of food production, including labor, shipping and insurance. But the U.S. Department of Agriculture has documented a slow and steady climb in grocery costs, with meat prices disrupted by the Texas drought and fruit, vegetables, dairy and egg prices similarly affected by the California drought.¹⁴

The impact of drought goes beyond simple scarcity and corresponding price increases—it is also important to note its impact on water quality. For example, in California's Central Valley, decreased water deliveries from the Bay-Delta lead to increased groundwater pumping for drinking water. A recent report from the State Water Re-

sources Control Board discovered 31 contaminants in groundwater at levels well above the state's regulations.¹⁵ Many local families, often farm workers, are forced to spend huge proportions of their income on bottled water for drinking and bathing. Furthermore, there is evidence to support that low-income and minority communities in the San Joaquin Valley are disproportionately exposed to contaminants,¹⁶ particularly in smaller community water systems. A multitude of research demonstrates on the importance of water quality and its impact on consumers; drought magnifies these documented impacts.

Cultural Impacts and Competency

Water means far more than something to drink in the Latino culture, according to Margaret Montoya, a Professor of Law at the University of New Mexico. It serves as a boundary, forming the contested space between Mexico and the United States, and it carries historical meanings and connection to community.¹⁷ The United States uses a hybrid system of riparian rights (where those adjacent to the body of water may use what they choose) and prior appropriation (the earliest user gets the first opportunity to divert water, or "first in time, first in right"), where water users must put their water allocation to beneficial use, or lose the right to the water in the coming years ("use it or lose it"). These policies can result in a tragedy of the commons during dry years, when nervous water users are punished for conservation and also face temptations to endlessly pump groundwater before their neighbors drain it dry. On the other hand, the system of *acequias*, or irrigation ditches common to New Mexico and the Southwest, leads to communal, sustainable management of limited resources. As "identity-constructing

Latinos themselves place a high premium on responsible management of natural resources. Latino Decisions polling found that Hispanics rate protecting the environment as one of their highest priorities, with more than 75% of Latino voters in Colorado identifying environmental protection as a significant issue.¹⁹

structures...connect[ing] groups of Latinos to each other through shared experiences and collective narratives told from specific places with reference to common customs, consensual decision-making, and an organic leadership",¹⁸ the native system incorporates all voices, not merely those with government-issued water rights. The difference between this system of communal management, native to the Southwest, stands in stark contrast to the hydro-illogical cycle perpetuated by U.S. water policies imported from the East Coast and the United Kingdom, where water scarcity is much less common.

Latinos themselves place a high premium on responsible management of natural resources. Latino Decisions polling found that Hispanics rate protecting the environment as one of their highest priorities, with more than 75% of Latino voters in Colorado identifying environmental protection as a significant issue. Colorado College's annual State of the Rockies poll also found that Latino voters are "more likely to say that every single environmental problem is a serious problem" than Anglo voters.¹⁹ Similarly, over 70% of Latino voters in Colorado, New Mexico, Arizona and Nevada rated protecting rivers and lakes as "very important." Finally, eight in ten Latinos favor conservation over diverting water out of rivers and lakes in response to the question, "What do you think the priority should be for our government in dealing with the water shortage in the West?"²⁰ While conservation and recycling may sound like reasonable solutions to water shortages, U.S. drought policy is not currently built to align with Latino cultural realities, from the shortcomings of disaster aid to the impacts of new drought innovations.

Policy Considerations

Disaster Preparedness

Minorities are generally more vulnerable to disaster due to both economic stress and to the lack of cultural understanding in disaster preparedness and response. Studies show that they experience higher rates of injury, disease, traumatic stress, death and loss during public emergencies, when compared to the non-minority population.²¹ According to the recommendations of the National Consensus Panel on Emergency Preparedness and Cultural Diversity from the Department of Health and Human Services' Office of Minority Health and the Texas Health Institute, disasters highlight "challenges in access to health care, education, housing and structural inequalities starkly evident during times of disaster and public health emergencies."²² This report also notes that effective disaster management requires intensive community participation and engagement in order to tailor services to a community's unique needs and circumstances.

Latinos bring their own distinct challenges in culturally aware disaster response. In order to reduce the harm that drought has, officials must navigate both Hispanic language and cultural barriers while also working past a distinct distrust and avoidance of government personnel. Not only is the fear of deportation for themselves, relatives or friends a real hindrance, but many Latinos carry deep-rooted distrust of government from traumatic experiences in their home countries. Furthermore, the Migrant and Seasonal Farm Worker Emergency Preparedness Planning Guide notes that understanding where these communities live and work is a key part of protecting vulnerable and isolated populations, particularly since many lack access to transportation or driver's licenses. All of this is compounded by Latinos' ten-

dency to eschew mainstream media in favor of informal networks and Hispanic media, making them difficult to reach. Spanish-language media can be an effective tool for outreach to the Latino population, as it generally serves as a platform for civic engagement and community outreach more frequently than mainstream media.²³ Disaster preparedness officials should be aware of Latinos' tendency to turn to media for important safety information²⁴ in order to provide important communications in a relevant, trusted and accessible manner. The safety of minorities, and emergency responders, will improve if emergency policies have established relationships with Latino community leaders and media before an emergency occurs.

Federal Disaster Assistance and Policies

Establishing trust in order to communicate effectively forms key part of disaster assistance, and particularly in drought assistance. It is important to note that, while non-profits and non-governmental organizations are not required to report or enquire about a refugee's immigration status, governmental organizations (including FEMA and most state and local governments) cannot provide long-term or financial assistance to immigrants.²⁵ They are only allowed to provide undocumented disaster victims with warnings, evacuations, rescues, medical care and emergency care and shelter. However, the impacts of drought differ drastically from those of a flood, fire or hurricane. While most disasters hit immediately and then move on, droughts hit relatively slowly, as water managers can rely on water re-scheduling, storage and groundwater to mitigate its effects. The services that can be rendered to immigrants are intended as immediate relief to an imminent prob-

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lem, but applying them to the impacts of a drought applies a short-term solution to a problem that could last months or years.

The majority of the federal government's role in managing the most recent Western droughts has been through federal aid, particularly to rural areas without the clout of municipal water districts. While the Department of the Interior has increased operational flexibility to maximize water deliveries to devastated areas in California, it is still too soon to analyze the success of their drought contingency plan. Congress has also mulled the option of rolling back Endangered Species Act protections for fish in order to further maximize delivery, but no option has made it to the President's desk. Meanwhile, the Supreme Court has let stand ESA protections for key aquatic species.

But drought relief and assistance from the federal government, consisting primarily of financial aid to farm owners of disaster-designated counties, does little to benefit the most vulnerable in the population, whether urban or rural. Of the \$183 million in emergency California drought funding announced by President Obama in 2014, \$3 million went to rural community water systems, and \$60 million went to food banks. None of the \$50 million in 2015 emergency funding provided by Interior Secretary Jewell went directly to rural communities, though \$22.9 million did go to water conservation and drought plans. Similar distributions of funding for livestock disaster assistance and environmental conservation took place in Texas, Oklahoma, Nebraska, Colorado and New Mexico in 2014. The absence of relief or assistance for farmworkers and families highlights their marginalization in the face of crisis. Farmers and businesses lobby for aid and increased water deliveries by using images and stories of devastated farm labor, but federal assis-

tance flows to those who have property, livestock and resources. While employers suffer similarly, laborers are forced to grapple with household impacts and limited employment opportunities, all without the security of a \$183 million safety net.

Concerns in Evaluating Cross-Sector Drought Innovations

Drought policies often seem to boil down to funding assistance until the drought ends, opportunistic rolling back of Endangered Species Act protections and, on the local level, increased groundwater pumping. But the current drought has galvanized all levels of government to take a more long-term perspective into management of the water system as a whole, from much-needed investments in recycling and conservation to improvements in management and infrastructure that broadly benefit society. However, more research is needed to evaluate the impacts of these innovations on the Latino population, as some of them could work to benefit fish or farmers while neglecting or even harming disenfranchised populations. Thoughtful outreach to Latinos, keeping in mind cultural attitudes towards water, has the potential improve drought mitigation for minorities.

Case Study: Water Markets and Dry-Year Fallowing

One example of an innovation heavily in need of careful impacts analysis is that of water markets for assuaging demand during drought. Under a typical structure, these programs would allow the government (acting on behalf of the environment or urban populations) or farmers with thirsty permanent crops to purchase short-term water rights from other water users, who would not jeopardize their long-term water rights under beneficial

use. Colorado has taken the lead in these programs, instituting a dry year fallowing program in which farmers can fallow their perennial crops and sell water rights in declared dry years. The systems vary, from those that sell the water to municipal users to those that are only available during declared drought. Many are also pursuing federal or local grants to finance purchasing water rights from farmers.²⁶

While many argue that these programs assist the biggest losers in drought, they are often speaking about the environment, not the others incidentally harmed by these programs. Providing the necessary flexibility not available under our current water system while also protecting the environment are two laudable goals. However, it is important to acknowledge the effects that sending water away can have on the local community. Namely, dry-year fallowing can put the farm workers who previously harvested those crops out of work, with the profit going only to the water rights holder. Second, water markets can result in municipalities paying higher prices for water, due to the associated risk and transaction costs.²⁷ Third, if the market is only available during times of drought, determining exactly when a drought begins and ends could have dramatic impacts on when layoffs and cost increases could go into effect. Fourth, drought is likely to become a permanent way of life in the American West;²⁸ time-delimited drought programs tend to assuage agricultural fears about urban locales stealing rural water, but a mega-drought could bring these problems to the surface. Finally, it is important to note that use and consumption are not synonymous; though it may seem that decreasing agricultural consumption could be a positive, sending the water to cities or permanent crops could incentivize urban growth or planting highly lucrative but thirsty crops that cannot be fallowed.

Proponents of water markets and transfers should carefully evaluate the potential impacts on the Latino populations. Neither farm workers nor urban populations can safely weather decreased employment and increased water costs, just as fish and farm owners suffer serious costs during times of drought. In order to take into account these negative impacts, research should be done to evaluate the potential of charging transfer fees that could provide funding for underserved communities hardest hit by the drought. This potential fund could go towards food banks job retraining for those out of work. In this time of increasingly technical agricultural equipment, this could result in a higher-skilled workforce when the drought ends, or it could help the underserved find other job opportunities if and when drought becomes a permanent reality.

Conclusion

Understanding the condition of Latinos in the American West proves vital to a nuanced policy discussion regarding solutions to the drought. However, there is a dearth of either understanding or consideration of how drought impacts Latinos, particularly farmworkers. While protecting the environment and agricultural business owners carries importance, the Latino experience are often used as a bargaining chip in negotiations but garner very little relief. Innovative new solutions to water management are to be welcomed, as our current system is far from perfect and many of them, such as infrastructure improvements and groundwater management could benefit all populations. But policymakers should be sure to carefully evaluate their proposals to take into account minorities and rural populations lacking a powerful lobby in their favor. Drought's impacts become oversimplified into rural versus urban and farmers versus fish, while neglecting minorities and the disenfranchised. Researchers and policymakers should be sure to take stock of the burgeoning but invisible Latino population when reforming Western water policies.

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