Introduction

As the California drought continues, policy makers, scientists, and citizens are working to understand changes in water availability and appropriate responses. Impacts have ranged from environmental to economic and it is unclear how resilient the state is for future challenges. In 2015, serious ecosystem damages were identified for the first time, while farmland in the San Joaquin Valley sunk at an unprecedented rate due to groundwater depletion.\(^1\) Given the concerns over water availability in California, legislators are continually working to craft laws that can prevent or at least mitigate the effects of water shortages. It is critical to understand the intended impact of drought legislation, along with the actual outcomes. Further, it is necessary to understand how different sectors of the California population are affected by resiliency measures and who will be hurt the most if such measures fail to be effective.

On August 29, 2016, Senate Bill 814 (SB 814), earlier passed by the California legislature, was signed by Governor Jerry Brown. In short, the bill seeks to reduce excessive water use during emergency periods when water conservation is of the utmost priority, and will go into effect on January 1, 2017. This paper seeks to understand the potential impacts of SB 814. To do so, it is necessary to establish a base understanding of prior California legislation pertaining to drought management and water conservation. This will help to contextualize some of the arguments put forth by proponents and opponents of the bill. Finally, the likely impacts of SB 814 will be explored by examining individual components of the bill and what they mean in

the greater context of developing drought resiliency in California. Specifically, this last section of the paper will focus on the effectiveness of fines and shaming techniques and the decision to only apply legislation during emergency periods.

**Past Legislation**

Prior to SB 814, legislation pertaining to excessive water use existed in a multitude of forms. Cities and water districts across California passed ordinances in 2009 that prohibited “excessive water flow or runoff,” with violators subject to fines. However, these ordinances mostly addressed issues of runoff onto adjacent properties or sidewalks, rather than specific values for water consumption. As a result, excessive water use was not able to be quantitatively measured. In April of 2015, the East Bay Municipal Utility District (EBMUD) held two hearings about introducing a new ordinance to address excessive water use. The penalties for excessive water use would apply to single family residential customers using 4.5 times more water than the average household; customers would be charged “$2 per unit [748 gallons] over the limit.”

Under the California Public Records Act, upon request, EBMUD is required to release the names, addresses, and water use information for customers who violate the ordinance. The ordinance was ultimately suspended in May of 2016, after the EBMUD stated that reservoirs were restored to “healthy levels,” due to above-average rainfall during the winter.

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4 Ibid.


6 Ibid.
Following the EBMUD ordinance, the mayor of Los Angeles, Eric Garcetti, signed an ordinance that “requires the Los Angeles Department of Water and Power (LADWP) to assess the water use of single family customers in the highest water rate, Tier 4, and determine if their consumption is excessive.” The DWP will then be able to issue a fine between $1,000-$40,000 per month to customers whose use is deemed “unreasonable.” For customers who consistently exhibit excessive use, the DWP is permitted to run a “water analysis” on the household to produce a conservation plan. The plans would detail specific requirements a household must meet, and “failure to meet any of the requirements of the plan could result in a penalty.”

Both the EBMUD and LADWP ordinances are relevant in the context of California’s State Water Board emergency water conservation regulation adopted in May 2016, which is in effect through January 2017. This change in regulation was a shift from earlier state-level priority setting. In 2015, Governor Brown released an executive order that required restrictions to “consider the relative per capita water usage of each water supplier's service area, and require those areas with high per capita use [to] achieve proportionally greater reductions than those with low use” in order to meet a statewide goal in 25 percent reduction of potable urban water usage by February 28, 2016. All 411 water districts across the state were responsible for reducing their water use. Urban water suppliers were put into tiers, each assigned a conservation standard ranging from 8 percent to 36 percent for reduction mandates (in comparison to 2013 levels). For example, a city like Santa Cruz that already had low per-capita water use only had an 8 percent

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9 Ibid.


target while cities like Beverly Hills and Bakersfield had to cut by 36 percent.\textsuperscript{12} This measure had a similar effect as the intention of SB 814 - to ensure the largest water users make the largest reductions to help ensure equality of use (as much as possible/appropriate) across the state.

Beginning in 2016, emergency drought regulations shifted to place more power at the local level.\textsuperscript{13} The California Water Resources Board declared that 379 of the 411 districts no longer had to follow the statewide restriction goals and could set their own priorities. When the Water Resources Board asked individual water district boards if they would be able to handle continued drought, almost 85 percent of California’s water boards told the water board that they are readily prepared if the drought continues, and do not need to cut back on water use.\textsuperscript{14} However, Tracy Quinn, a policy analyst with the Natural Resources Defense Council, said that “the zero percent [conservation targets] we are seeing aren’t real numbers,” and that the way the 411 districts are set up allows water districts to be “overly optimistic” regarding water conservation.\textsuperscript{15} The backlash against the lifting of statewide regulations on districts across California has led to increased concern that the state is not prepared to deal with continued drought. Legislators are continuing to debate new drought-related policy measures, statewide goals, and concerns.

\textbf{Senate Bill 814}


\textsuperscript{15} Ibid.
On January 4th 2016, Senator Jerry Hill (D-San Mateo) introduced SB 814 in light of the worst drought in California’s recorded history. The law states that in times the Governor declares a state of emergency under the California Emergency Services Act, “Each urban retail water supplier shall establish a method to identify and discourage excessive water use.” The law also encourages retailers (entities that sell water to consumers) to discourage excessive water use and requires that retailers create a “rate structure that includes block tiers, water budgets, or rate surcharges over and above base rates for excessive water use by residential customers.” If a customer violates this regulation, urban retail water suppliers have the authority to penalize said violation as an “infraction or administrative civil penalty.”

As discussed earlier, Governor Brown declared a statewide drought emergency in January 2014, which led the State Water Resources Control Board to impose a mandatory 25 percent water-use reduction order on urban water suppliers and fines on customers who waste water. Although overall water reduction between June 2015 and June 2016 was around 24.2 percent, certain households--predominantly in affluent neighborhoods--have shown little to no water reduction. News reports have shown that several households continue to consume millions of gallons of water every year: one such report reveals a household in Bel Air using 11.8 million gallons every year--enough water for 90 average households. The so-called practice of “water-guzzling” typically occurs in more affluent areas with residents who can afford to pay for excessive water use. Senator Hill’s intention for SB 814 was to extend Governor Brown’s 2014

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18 Ibid.
19 Ibid.
20 Ibid. Examples of customer water waste include: using a hose without an automatic shutoff valve, washing one’s driveway or sidewalk, watering outdoor plants within 48 hours of precipitation, and disobeying local rules on watering day restrictions.
21 Lopez, Steve. "In Bel-Air, Someone Is Using 1,300 Gallons of Water — per Hour." Los Angeles Times (Los Angeles, CA), October 7, 2015.
Executive Order to properly “bring enforcement actions against illegal diverters and those engaging in the wasteful and unreasonable use of water.” Proponents of the bill included the Sierra Club California, Clean Water Action, East Bay Municipal Water District, and California League of Conservation Voters. SB 814 passed the Assembly Floor (45-29-6) on August 4, 2016 and the Senate Floor (23-13-3) on August 11, and was signed into law by Governor Brown on August 29.23,24

Before SB 814 passed, there was no mechanism to hold individuals accountable for their excessive water use. While ninety-two of the top one hundred water consumers in California reside in Los Angeles, they remained anonymous because the city as a whole met its necessary conservation targets.25 Senator Hill addressed this lack of accountability, noting, “There’s a tremendous amount of wealth, and some people may feel that this drought shouldn’t affect them . . . and they’ll just buy their way out of it.”26 However, Senator Hill intended to address a clear equity issue in California’s water conservation efforts, ensuring that under SB 814, “no one can buy their way out of the drought during a statewide drought emergency.”27 The approach of identifying excessive users did not gain much traction until the East Bay Municipal Utility District (EBMUD) became the first district to publish a list of excessive water users, as mentioned previously. EBMUD spokeswoman Andrea Pook claimed that this condemning action would allow the bill to gain traction, which it did after local media became interested in

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26 Ibid.
publicizing the list.\textsuperscript{28} She also noted that shaming was \textit{not} the main goal; instead, it was creation of a learning process to change human behavior. Pook also expressed optimism that similar measures would have a large impact if implemented across the state.

Opponents of the bill argued that state-mandated water restrictions overlook local environmental concerns that differ across districts. During a Senate Committee on Natural Resources and Water hearing on August 10, the Association of California Water Agencies (ACWA) argued that “local control is the most effective path to mitigating the effects of drought and cannot support a top-down statewide approach as proposed in this bill.”\textsuperscript{29} The ACWA expressed concern that such a state mandate was unnecessary, even though SB 814 allowed for localized rates.\textsuperscript{30} Opposition also focused on aspects of the bill that would authorize the disclosure of names, addresses, and water usage of those who violate the limit, overturning a 1997 California law that protects utility companies from publicly disclosing customer’s information. Many argued that publicly disclosing the names of violators of the law could encourage an atmosphere of public shaming and would not create the productive conservation action so desperately needed.\textsuperscript{31,32} Further, although the California Constitution requires the state government to compensate local agencies for regulations mandated by the state, SB 814 includes no such compensation. The reason for this is that “the only costs that may be incurred by a local

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\item Alexei Koseff, “‘Excessive water users’ fine would elevate drought-shaming to California policy”, \textit{The Sacramento Bee}, February 19, 2016, \url{http://www.sacbee.com/}.
\item Ibid.
\item Alexei Koseff, “‘Excessive water users’ fine would elevate drought-shaming to California policy”, \textit{The Sacramento Bee}, February 19, 2016, \url{http://www.sacbee.com/}.
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agency or school district will be incurred because this act creates a new crime or infraction.”

Opponents of the law worry its implementation will be overly costly to local water districts.

**Effectiveness of SB 814**

Regardless of opinions on the necessity of the bill, the question of SB 814’s effectiveness remains. The most important mechanism is the use of fines and publication of the names of excessive water users. It is thus useful to examine whether fines and publicity have been effective techniques to reduce water consumption in California. Further, SB 814 is technically only enacted during emergency periods, and thus it is necessary to understand what constitutes an emergency period. Another important factor is the amount of autonomy water agencies have in implementation and how they determine such rates; due to the recent nature of this bill, there is a lack of information on this final issue and the other points will be focused on instead.

Substantial opposition to SB 814 is related to the question of fines and shaming as mechanisms to spur water conservation. However, use of such mechanisms is not new to the state of California and it is possible they had an effect when the state met water conservation goals in the past. Publication of excessive water users seems to be effective - both for spurring change in behavior by the users and for helping the public understand the vast disparities in water usage. According to a spokesman from EBMUD, 75 percent of customers whose names were released publicly as excessive water users reduced their usage. This reduced usage can be attributed to multiple factors--in addition to the shaming component, the *Sacramento Bee* reported that the lists published by utility companies of excessive users also alerted users to leaks

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or other problems of which they had been unaware.\textsuperscript{35} Public shaming tactics were also used by local water districts in order to meet the statewide goal of 25 percent reduction in water use required by the State Water Resources Control Board. After testing multiple strategies to reduce water use, officials began sending out letters to excessive water users, whose names were subsequently obtained and published in lists by the \textit{Los Angeles Times}. Following the public shaming, water use in Beverly Hills declined by 26 percent, the largest reduction since the implementation of new water restrictions.\textsuperscript{36} The advantage with this type of system is that it draws attention to the actual lack of compliance, allowing policy makers and citizens to understand whether the blame lies with agencies or customers. Cris Carrigan, the state Water Board’s Chief of Enforcement, attributed the lack of compliance to individual customers, rather than the water agencies, whom Carrigan states are “providing the right tools.”\textsuperscript{37} Due to past success of public shaming, Senator Hill and other proponents are optimistic that SB 814 will be effective at reducing water use because customers who are not financially compelled by fines may be more effectively targeted through shaming.

Fines have also demonstrated effectiveness in a few instances and seem to indicate potential success for SB 814. For instance, in Beverly Hills, residents consistently failed to meet the city’s conservation mandate of 32 percent reduction in water use. After earlier restrictions had failed to affect residents’ water use, the city began imposing penalty surcharges on individuals who failed to comply with conservation regulations.\textsuperscript{38} The city was also fined $61,000 by the State Water Board. After penalty surcharges took effect in late 2015, Beverly

\textsuperscript{35} Ibid.
\textsuperscript{38} Ibid.
Hills reported a record 26 percent reduction in water consumption for the month of January 2016. However, both the 26 percent reduction in January and the city’s average reduction of 19 percent use in 2015 (compared to use in 2013) still fall below the city’s mandated reduction target of 32 percent. As a result, the State Water Board says the city may still be subjected to fines.39

There are general questions of follow-through. From January 2014 to August 2015, the City of Los Angeles sent more than 7,300 warning letters and citations for excessive water use.40 However, the city only issued ten fines for violations. Other cities have not shied away from harsher enforcement. Santa Cruz imposed a strict program and issued about $1.6 million in water fines, leading to the collection of around $800,000 after some citizens waived the penalties by attending “water school.”41 The State Water Resources Board also approved fines across the state, including a $500 fee for people caught watering their sidewalk.42

Despite the prevalence of fines, a valid concern remains that fines might not work because those who can afford to pay a higher water bill will not be deterred by fining structures. EBMUD fine structures seem to disprove this. The fining systems applies to “…single-family residential customers who use more than 80 units, or 58,840 gallons of water per billing period, are subject to a $2 penalty for each unit over that threshold.”43 For some the fine was the “minimum $2” for others it summed up to “more than $1,800,” and people changed their behavior in response.44 Fines also demonstrated a response in Beverly Hills. For example, David

39 Ibid.
41 Ibid.
44 Ibid.
Geffen, founder of Dreamworks and Geffen Records, was using about 27,000 gallons of water a day, which was about 60 times the use of an average LA family. He was “charged more than $30,000 for 1.6 million gallons [of overuse] . . . [and] during the most recent billing cycle . . . water use at the estate dropped by 56%”.45 Others who have been fined found leaks on their property that, after being fixed, dropped their water consumption levels.46 Overall, it seems that fines have been impactful as a drought policy across California in recent years.

Turning to the issue of states of emergency, Section 1 Chapter 3.3 of SB 814 prohibits excessive residential water use during a period for which the Governor has issued a proclamation of a state of emergency under the California Emergency Services Act based on statewide drought conditions. Despite the obvious benefits of increased water conservation through limiting water use, the question remains - why is this provision enacted only during declared states of emergency, and what are the effects of this on water conservation and drought management?

Droughts are nothing new to California history. Over 40 of the past 100 years were designated as dry years, which experienced below average precipitation using the US Geological Survey precipitation standards.47 The state has also experienced severe droughts in 1929-1934, the 1950s, 1976-77, 1986-1991, 2007-2009, and 2011-2016. Despite being the 12th worst drought period in California’s history, the drought of 2007-2009 was the first drought for which a statewide proclamation of emergency was issued.48

Pursuant to the California Emergency Services Act, the Governor or governing body of a city or county may proclaim a state of emergency when conditions of disaster or extreme peril

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46 Ibid.
exist. The proclamation enables the city or county to use emergency funds, resources, and powers, including promulgating emergency orders and regulations. When local resources are insufficient to control the disaster, or if several counties or cities declare a state of emergency, the Governor may proclaim a statewide state of emergency. This makes mutual aid from other cities or counties mandatory, permits suspension of state statutes or regulations, and allows for state reimbursement of response costs.49

With regard to droughts, the governing body of a water supply may declare a water shortage emergency condition in its service area whenever it finds that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection. This declaration allows the water supplier to adopt regulations covering measures to stretch its supplies, such as mandatory rationing or connection bans.50

Governor Schwarzenegger's Executive Order S-11-09 from 2008 called for providing temporary supplemental assistance to local governments and nonprofit organizations that provide food and other aid, in recognition of the continuing need for drought-related social services assistance, especially in the San Joaquin Valley.51 Interestingly, it did not include drought reduction or water conservation measures.

The next instance of a California governor declaring a state of emergency was in January, 2014, under Governor Jerry Brown. In April, Governor Brown announced the first-ever 25 percent statewide mandatory water reductions and a series of actions to help save water, increase enforcement to prevent wasteful water use, streamline the state's drought response and invest in

50 Ibid.
new technologies that will make California more drought resilient. Californians have responded with unprecedented conservation efforts, exceeding the Governor's water reduction order for a number of months in 2015.52

The provisions for water restriction during a state of emergency outlined in SB 814 present themselves as the codification into law and standardization of a trend started by Governor Jerry Brown in 2015. Based on this trend, the effectiveness of SB 814 may not be reduced by its limitation to emergency periods though conservationists still question why excessive use should not be curbed at all times.

Conclusion

SB 814 is in line with California’s increasing focus on locally based strategies to mitigate the state’s prolonged drought. Its localized approach means that the effects of the bill will depend largely on each urban water district, considering that it is up to each district to define both what qualifies as excessive use and the ensuing consequences when one is labelled an excessive user. The average consumer in California will be unaffected by SB 814, since only individuals who are excessive users are fined and publicly named. However, all of California will likely benefit from a water resource standpoint, as SB 814 should help with long-term resource conservation.

SB 814 ensures that all California residents, regardless of income level, properly contribute to water conservation efforts during drought periods. Although opponents see the law as a political ploy to further tax the wealthiest residents, such innovative solutions can have dramatic effects on water conservation efforts. Nevertheless, the new law’s success will depend on effective implementation: local water agencies will decide whether to implement block tiers, water budgets, or rate surcharges to combat excessive water use. In addition, the law only applies

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during declared emergency drought periods emergencies and only time will tell if public
shaming and fines will be effective in reducing overall water consumption.

Even though SB 814 may not affect the average water consumer, the bill is important in
the context of California’s shifting strategy to address the drought. As the drought persists,
Governor Brown has consistently supported new policies aimed at creating individualized
standards for water agencies to follow when reducing use. For example, a section of recently
issued Executive Order B-37-16 (EO B-37-16) commits the Department of Water Resources and
the State Water Resources Control Board to collaborate and create water use standards for urban
water suppliers, based on each supplier’s location. The suppliers are then expected to form
their own water use targets, guided by state agencies’ suggested targets.

The effectiveness of newly implemented drought policies such as SB 814 and EO B-37-
16 will ultimately depend on urban water suppliers, rather than state officials. Until the policies
have been in place long enough for results to be gathered and assessed, it will be unknown
whether or not urban water suppliers will be able to meet the increased expectations set out for
them by the state. In the long term, consumers will likely see a lot of changes in how their water
supplier sets usage targets and related standards.

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53Executive Order of the State of California, May 9, 2016, B-37-16 1 (2016)