

January 13, 2020

State of California State Water Resources Control Board, DIVISION OF WATER RIGHTS,

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Clerk to the Board (916) 341-5600 commentletters@waterboards.ca.gov

# Wasteful and Unreasonable Use Complaint

#### Dear SWRCB Board Members:

We hereby submit the following complaint to the SWRCB concerning the use of water owned and controlled by the Central Valley Meat Company/Harris Feeding Company (29475 Fresno-Coalinga Road, Coalinga, CA 93210), Bidart Dairy (20400 Old River Rd., Bakersfield, CA 93311), Western Sky Dairy (18501 Old River Road, Bakersfield, CA 93311), T&W Farms Dairy (18346/18000/16101-18707 Old River Road, Bakersfield, CA 93311), Carlos Echeverria & Sons Dairy (20229 Old River Road, Bakersfield, CA 93311), and Southern Cross Dairy (26509 W Lerdo Hwy, Buttonwillow, CA 93206) to produce beef, cow milk, and cow-milk-based commodities.

This complaint incorporates by reference in its entirety the September 29, 2016, Wasteful and Unreasonable Use Complaint <a href="https://storage.googleapis.com/wzukusers/user-24637701/documents/57f56cbb1ae1e5yOJx9e/WURU%20Amended%20Complaint%2009%2029%20">https://storage.googleapis.com/wzukusers/user-24637701/documents/57f56cbb1ae1e5yOJx9e/WURU%20Amended%20Complaint%2009%2029%20</a> <a href="https://storage.googleapis.com/wzukusers/user-24637701/documents/57f56cbb1ae1e5yOJx9e/WURU%20Amended%20Complaint%2009%2029%20">https://storage.googleapis.com/wzukusers/user-24637701/documents/57f56cbb1ae1e5yOJx9e/WURU%20Amended%20Complaint%2009%2029%20</a> <a href="https://storage.googleapis.com/wzukusers/user-24637701/documents/57f56cbb1ae1e5yOJx9e/WURU%20Amended%20Complaint%2009%2029%20</a> <a href="https://storage.googleapis.com/wzukusers/user-24637701/documents/57f56cbb1ae1e5yOJx9e/WURU%20Amended%20Complaint%2009%2029%20</a> <a href="https://storage.googleapis.com/wzukusers/user-24637701/documents/57f56cbb1ae1e5yOJx9e/WURU%20Amended%20Complaint%2009%2029%20</a> <a href="https://storage.googleapis.com/wzukusers/user-24637701/documents/57f56cbb1ae1e5yOJx9e/WURU%20Amended%20Complaint%2009%2029%20</a> <a href="https://storage.googleapis.com/wzukusers/user-24637701/documents/57f56cbb1ae1e5yOJx9e/WURU%20Amended%20Complaint%2009%2029%20</a> <a href="https://storage.googleapis.com/wzukusers/user-24637701/documents/googleapis.com/wzukusers/user-24637701/documents/googleapis.com/wzukusers/user-24637701/documents/googleapis.com/wzukusers/user-24637701/documents/googleapis.com/wzukusers/user-24637701/documents/googleapis.com/wzukusers/user-24637701/documents/googleapis.com/wzukusers/user-24637701/documents/googleapis.com/wzukusers/user-24637701/documents/googleapis.com/wzukusers/user-24637701/documents/googleapis.com/wzukusers/user-24637701/documents/googleapis.com/wzukusers/user-24637701/documents/googleapis.com/wzukusers/user-24637701/documents/googleapis.com/wzukuser-24637701/documents/googleapis.com/wzukuser-24637701/documents

Based on the information submitted below, as well as previously-submitted comments and the complaint noted above, we allege that the current and past use of water by Central Valley Meat Company/Harris Feeding Company, Bidart Dairy, Western Sky Dairy, T&W Farms Dairy, Carlos Echeverria & Sons Dairy, and Southern Cross Dairy, hereafter collectively called the livestock water users group, to produce beef, cow milk, and cow-milk-based commodities is currently (and has been previously) wasteful, unreasonable, and unconstitutional. We request that the State Water Resources Control Board (SWRCB) issue a finding that the current and past use of water by the livestock water users group to produce beef, cow milk, and cow-milk-based commodities is (and has been previously) wasteful, unreasonable, and unconstitutional. We further request that the SWRCB issue a finding that further use of water by the livestock water users group to produce beef, cow milk, and cow-milk-based commodities will be considered by the SWRCB to be wasteful, unreasonable, and unconstitutional.

The actions taken by the livestock water users group that trigger this complaint relate to their use of water to produce methane-emitting cattle livestock and associated cattle-based dairy commodities (such as cows milk). [https://www.kerncounty.com/planning/pdfs/kcdairylist.pdf]

We note that production of cattle-based commodities in large Concentrated Animal Feeding Operations (CAFOs) requires substantial amounts of water. Thomas has documented the daily water usage for a 1000 cow dairy operation in Michigan, and we provide that documentation below for reference:

From Estimating Water Usage on Michigan Dairy Farms (1,000 head) Dr. Craig V. Thomas Michigan State University Extension <a href="https://co.ashland.wi.us/vertical/sites/%7B215E4EAC-21AA-4D0B-8377-85A847C0D0ED%7D/uploads/WaterUseDeterminationforDairyLarge.pdf">https://co.ashland.wi.us/vertical/sites/%7B215E4EAC-21AA-4D0B-8377-85A847C0D0ED%7D/uploads/WaterUseDeterminationforDairyLarge.pdf</a>

**TABLE 5.** Estimated total daily water usage for a 1,000 cow dairy farm not recycling milk precooling water (in gallons)

Raise Heifers			Do Not Raise Heifers	
Lower Limit of	<b>Total Daily Usage</b>	<b>Upper Limit of Total Daily Usage</b>	<b>Lower Limit of Total Daily Usage</b>	<b>Upper Limit of Total Daily Usage</b>
Direct	32,750	62,100	22,130	47,000
Indirect <sub>1,2,3</sub>	19,733	21,826	19,733	21,826
Total	52,483	83,926	41,863	68,826

<sup>1</sup> Assumes three time per day milking.

**TABLE 6.** Estimated total daily water usage for a 1,000 cow dairy farm that recycles milk precooling water.

Raise Heifers			Do Not Raise Heifers	
Lower Limit	of Total Daily Usage	<b>Upper Limit of Total Daily Usage</b>	<b>Lower Limit of Total Daily Usage</b>	<b>Upper Limit of Total Daily Usage</b>
Direct	32,750	62,100	22,130	47,000
Indirect <sub>1,2,3</sub>	3,348	5,440	3,348	5,440
Total	36,098	67,540	25,478	52,440

<sup>1</sup> Assumes three time per day milking.

We also note that the production of cattle-associated commodities in large Concentrated Animal Feeding Operations (CAFOs) generates substantial cattle-associated enteric methane [CH4] emissions, as well as methane emissions associated with anerobic dairy manure lagoons.

(The enteric methane [CH4] emissions associated with a typical steer range from 60 to 71 kg per year, according to Johnson and Johnson, 1995. Dairy cows typically emit between 109 and 126 kg of methane per year. [K. A. Johnson and D. E. Johnson, "Methane Emissions from Cattle," <u>Journal of Animal Science</u> 73(8) (1995): 2483–92].) [https://academic.oup.com/jas/article-abstract/73/8/2483/4632901]

### **Statement**

1). We assert that it is profoundly unreasonable—indeed, intensely irrational—for the SWRCB to allow California water to be used for activities that are likely to promote further global warming of the planetary climate. Such further GHG-induced planetary heating will likely increase the frequency of drought events in California's future, and hence, further water scarcity in California. We assert also that it is unreasonable for the SWRCB to allow California water to be used for activities that are likely to promote extreme weather conditions throughout California, the United States, and the rest of the planet. Given the severe adverse impacts that have been, and will likely be, partially generated by further global warming-induced extreme weather events, we assert that it is unreasonable (and hence unconstitutional) for California water to be used for livestock production, as such production is likely to contribute to further global warming (via cattle-associated methane emissions)—even when drought conditions in California are absent.

<sup>2</sup> Based on 80 lbs/cow/d milk production that would require the cleaning of a 6,000 gallon bulk tank 1.5 times per day.

<sup>3</sup> Assumes 80 lbs/cow/d milk production.

<sup>2</sup> Based on 80 lbs/cow/d milk production that would require the cleaning of a 6,000 gallon bulk tank 1.5 times per day.

<sup>3</sup> Assumes 80 lbs/cow/d milk production.

- 2). Livestock-associated carbon emissions in California are significant. Enteric methane emissions from livestock (mostly from dairy and non-dairy cattle in California) constitute about 30 percent of methane emissions in California in a normal year. This methane emission source constitutes just under a billion pounds of methane emission per year in California, as of 2013, (or 0.452022 Megatonnes [Mt] or million metric tonnes [MMT]. (Total cumulative California-associated methane emissions due to dairy and livestock production—both enteric and manure-related are typically just under one Mt per year 0.867 Mt. As noted above, CH4 [methane] emitted by a typical steer ranges from 60 to 71 kg per year, according to Johnson and Johnson, 1995. Dairy cows typically emit between 109 and 126 kg per year. [K. A. Johnson and D. E. Johnson, "Methane emissions from cattle," Journal of Animal Science 73(8) (1995): 2483–92].)
- 3). Just under a billion pounds of methane emitted per year from this specific methane emission source have been, and are, contributing to a large and growing global accumulation of enteric-related atmospheric methane that has been contributing to significantly-increased global surface and ocean temperatures over the last 55 years. (Methane is a positive radiative forcing agent when in the atmosphere, trapping heat re-radiated from the Earth at least 84 times as efficiently as carbon dioxide on a per weight comparative basis over a 20-year comparative interval.) Moreover, it is likely that these emissions have already contributed (and are currently contributing) to the further warming of our planet and the associated severe drought that has afflicted California.
- 4). We note for the record that this latter claim is consistent with a published scientific study concerning this matter: Williams et al. (2015) concluded that

"anthropogenic warming is estimated to have accounted for 8–27% of the observed drought anomaly [in California] in 2012–2014 and 5–18% in 2014. [---- anthropogenic warming has substantially increased the overall likelihood of extreme California droughts." [Williams, A. P., R. Seager, J. T. Abatzoglou, B. I. Cook, J. E. Smerdon, and E. R. Cook (2015), Contribution of anthropogenic warming to California drought during 2012–2014, Geophys. Res. Lett., 42, 6819–6828, doi:10.1002/2015GL064924.] http://onlinelibrary.wiley.com/doi/10.1002/2015GL064924/full

5). The prominent Stanford University scientist and professor, Noah Diffenbaugh, also noted in 2015 that

"We have a very high statistical confidence that the warming of California would not happen without human influence, and the amount of years that are warm and dry would not have happened without humans. ... Continued human emissions are likely to lead to the continued warming of California, increased co-occurrence of dry years and warm conditions and the increased occurrence of extremely low precipitation seasons."

"What has happened in California has been a clear warming trend over the historical record ... that probably would not have happened without humans," said Stanford climate scientist Noah Diffenbaugh. ...

"Continued global warming will result in more frequent occurrences of high temperatures and low precipitation," said Diffenbaugh, "leading to more of the severe drought conditions that we've been experiencing."

 $\label{likely-a-fixture-says-stanford-study} \begin{tabular}{ll} \hline $(https://www.pressreader.com/][https://www.theperfectlawn.com/blogs/news/17349341-california-drought-likely-a-fixture-says-stanford-study] \end{tabular}$ 

6). Diffenbaugh was quoted in another article stating that

"High temperatures plus low precipitation are more likely to produce a drought, and this will increase with climate change. ... Global warming has at least tripled the probability of the atmospheric condition that brought the resilient high-pressure ridge"— the phenomenon that has been the primary cause of the 2012-2015 California drought.

 $[https://www.dailybreeze.com/2015/08/25/california-climate-researchers-sound-the-alarm-at-symposium-theres-no-way-out/\ ]$ 

And Dr. Noah Diffenbaugh, an Earth System Science professor at Stanford University, was quoted in other articles:

"The warming we are seeing is not consistent with natural forcing alone," Diffenbaugh explained.

"The percentage of drought years in California has doubled as the state's temperatures have been higher than average," Diffenbaugh explained.

https://www.nbcbayarea.com/news/local/Warmer-Golden-State-Stanford-Professor-California-Climate-Future-470748383.html

Quantifying the influence of global warming on unprecedented extreme climate events Noah S. Diffenbaugh, Deepti Singh, Justin S. Mankin, Daniel E. Horton, Daniel L. Swain, Danielle Touma, Allison Charland, Yunjie Liu, Matz Haugen, Michael Tsiang, and Bala Rajaratnam, PNAS May 9, 2017 114 (19) 4881–4886; published ahead of print April 24, 2017, <a href="https://doi.org/10.1073/pnas.1618082114">https://doi.org/10.1073/pnas.1618082114</a>

#### From Abstract:

"We find that historical warming has increased the severity and probability of the hottest month and hottest day of the year at >80% of the available observational area. Our framework also suggests that the historical climate forcing has increased the probability of the driest year and wettest 5-d period at 57% and 41% of the observed area, respectively ... For the most protracted hot and dry events, the strongest and most widespread contributions of anthropogenic climate forcing occur in the tropics, including increases in probability of at least a factor of 4 for the hottest month and at least a factor of 2 for the driest year."

Quantifying the influence of global warming on unprecedented extreme climate events

7). The best available science (see below) continues to assert that further emission of greenhouse gases in the present and near future is likely to further accelerate the warming of the planet generally and thus increase the probability that California will be adversely impacted by more frequent high-temperature-associated climatic events in the future:

"Twenty years ago the level of methane in the atmosphere stopped increasing ... But the concentration started rising again in 2007—and it's been picking up the pace over the last four years, according to new research." [https://www.latimes.com/science/sciencenow/la-sci-sn-methane-atmosphere-accelerating-20190301-story.html].

"Global carbon emissions will jump to a record high in 2018, according to a <u>report</u> ... The report estimates CO2 emissions will rise by 2.7% in 2018, sharply up on the plateau from 2014-16 and 1.6% rise in 2017." [https://www.theguardian.com/environment/2018/dec/05/brutal-news-global-carbon-emissions-jump-to-all-time-high-in-2018?fbclid=IwAR3i4hOcNgyygZ3s08WegDWXvz488nQqiuIKuc2YgDk249cFJH9pj9Ju6W0].)

We must, therefore, re-assert our previous claim: it is profoundly unreasonable—indeed, intensely irrational—for the SWRCB to continue to allow California water to be used during this time of drought for activities that are likely to generate even more water scarcity in California over the long run.

- 8). It is likely that livestock-associated methane emissions generated in California have already contributed to the further warming of our planet. It is also likely that such livestock-associated methane-related atmospheric heat trapping has increased the probability that certain types of extreme weather-related events will become even more likely to occur in California and the U.S. in the future. It is also likely that these types of extreme weather-related events (triggered in part by livestock-related methane emission) will generate significant adverse impacts on human health, essential infrastructure, and vulnerable coastal populations. A number of published studies in 2015 and 2016 provide evidentiary support for the latter two claims.
- 9). A peer-reviewed study has directly linked human-caused global warming to the catastrophic flooding in Texas and Oklahoma in spring of 2015. (In May of 2015, more than 35 trillion gallons of water fell on Texas—enough to cover the entire state in eight inches of water. More than two dozen people were killed, and it was the wettest single month on record in both Texas and Oklahoma.) The new peer-reviewed study from Utah State and Taiwanese researchers concluded,

"There was a detectable effect of anthropogenic [manmade] global warming in the physical processes that caused the persistent precipitation in May of 2015 over the southern Great Plains." (See Simon Wang, S.-Y., W.-R. Huang, H.-H. Hsu, and R. R. Gillies (2015), Role of the strengthened El Niño teleconnection in the May 2015 floods over the southern Great Plains, Geophys. Res. Lett., 42, 8140–8146, doi:10.1002/2015GL065211.

10). We note that a National Academies of Science study claims a high confidence level for extreme event attribution modeling studies that are clearly related to heat and temperature, such as the Wang et al. study summarized above:

"Confidence in attribution findings of anthropogenic influence is greatest for those extreme events that are related to an aspect of temperature, such as the observed long-term warming of the regional or global climate, where there is little doubt that human activities have caused an observed change. For example, a warmer atmosphere is associated with higher evapotranspiration rates and heavier precipitation events through changes in the air's capacity to absorb moisture ... Confidence in attribution analyses of specific extreme events is highest for extreme heat and cold events, followed by hydrological drought and heavy precipitation." (National Academies of Sciences, Engineering, and Medicine. 2016. Attribution of extreme weather events in the context of climate change. Washington, DC: The National Academies Press. doi: 10.17226/21852. Page 106.)]

11). A published study by Swain, Horton, Singh, and Diffenbaugh (2016) has documented that the number of very dry atmospheric patterns in California has increased in recent decades, while the number of "average" moisture atmospheric patterns has declined. Swain noted:

"We're seeing an increase in certain atmospheric patterns that have historically resulted in extremely dry conditions ... What seems to be happening is that we're having fewer 'average' years, and instead we're seeing more extremes on both sides. This means that California is indeed experiencing more warm and dry periods, punctuated by wet conditions." https://www.sciencedaily.com/releases/2016/04/160401144457.htm

12). While the authors of this study have deployed careful and highly technical language in their study, they have, nonetheless, written a crucially important statement concerning an apparent positive statistical relationship between global greenhouse gas forcing and the specific extreme atmospheric configurations that have been manifest in the northeastern Pacific over the last 65 years:

"The results presented in the current study therefore confirm that the observed pattern of the long-term GPH [geopotential height field] trend in the NPD [Northern Pacific domain] is spatially nonuniform, strongly positive in the mean, driven by the specific pattern of lower tropospheric warming, and characterized by an amplification of the West Coast mean ridge highly reminiscent of that which occurred during historical dry and warm years in California. These empirical findings demonstrate a complex evolution over the northeastern Pacific between 1949 and 2015, with 500-mb GPH and SLP [sea level pressure] trends of generally the same sign occurring "in-phase" with the mean West Coast cool-season ridge (Fig. 1, A to C, and fig. S1) and the largest trends occurring just east of the terminus of the East Pacific storm track (33). This is especially interesting in light of recent investigations into the physical structure of anthropogenically forced trends in regional atmospheric circulation, which have suggested that changes in mean flow (via momentum/energy fluxes driven by embedded transient cyclones) may reinforce planetary-scale stationary waves in the upper atmosphere under certain conditions (37, 45, 54, 56)."

"Additionally, because the location and amplitude of atmospheric stationary waves are dictated by the relative placement and orography of global landmasses, the observed alignment of the nonuniform spatial pattern of thermal dilation with the North American continent (Fig. 1B) supports the notion that at least some of the observed trend in GPH—and thus specific extreme atmospheric configurations—may be due to increasing landsea thermal contrasts. Enhanced warming over the continents is a predicted (and observed) response to global greenhouse forcing and has the potential to influence broader circulation regimes (57, 58)." [emphasis added, see *Daniel L. Swain, Daniel E. Horton, Deepti Singh, and Noah S. Diffenbaugh. Trends in atmospheric patterns conducive to seasonal precipitation and temperature extremes in California.* Science Advances, March 2016, page 9 DOI: 10.1126/sciadv.1501344] http://advances.sciencemag.org/content/2/4/e1501344/tab-pdf

13). A comprehensive meta-study released by the Federal Government (U.S. Global Change Research Program, April 2016) has documented numerous significant adverse impacts associated with "Extreme Events" driven by anthropogenic forcing (greenhouse gas emissions). The key findings of this study, summarized on page 100, are provided below:

"Increased Exposure to Extreme Events-Key Finding 1: Health impacts associated with climate-related changes in exposure to extreme events include death, injury, or illness; exacerbation of underlying medical conditions; and adverse effects on mental health [High Confidence]. Climate change will increase exposure risk in some regions of the United States due to projected increases in the frequency and/or intensity of drought, wildfires, and flooding related to extreme precipitation and hurricanes [Medium Confidence]. ... Key Finding 2: Many types of extreme events related to climate change cause disruption of infrastructure, including power, water, transportation, and communication systems, that are essential to maintaining access to

health care and emergency response services and safeguarding human health [High Confidence]. ... Key Finding 3: Coastal populations with greater vulnerability to health impacts from coastal flooding include persons with disabilities or other access and functional needs, certain populations of color, older adults, pregnant women and children, low-income populations, and some occupational groups [High Confidence]. Climate change will increase exposure risk to coastal flooding due to increases in extreme precipitation and in hurricane intensity and rainfall rates, as well as sea level rise and the resulting increases in storm surge [High Confidence]." (See Bell, J.E., S.C. Herring, L. Jantarasami, C. Adrianopoli, K. Benedict, K. Conlon, V. Escobar, J. Hess, J. Luvall, C.P. Garcia-Pando, D. Quattrochi, J. Runkle, and C.J. Schreck, III, 2016: Ch. 4: Impacts of Extreme Events on Human Health. The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment. U.S. Global Change Research Program, Washington, DC, 99–128. http://dx.doi.org/10.7930/J0BZ63ZV.)

- 14). The FOURTH NATIONAL CLIMATE ASSESSMENT Volume II: Impacts, Risks, and Adaptation in the United States, "A major scientific report issued by 13 federal agencies" "presents the starkest warnings to date of the consequences of climate change for the United States, predicting that if significant steps are not taken to rein in global warming, the damage will knock as much as 10 percent off the size of the American economy by century's end."

  [https://www.nytimes.com/2018/11/23/climate/us-climate-report.html].
- 15). "'Observations of global average temperature provide clear and compelling evidence the global average temperature is much higher and is rising more rapidly than anything modern civilization has experienced,' said David Easterling, chief of the scientific services division at the National Oceanic and Atmospheric Administration's National Climatic Data Center in Asheville, North Carolina. 'This warming trend can only be explained by human activities, especially emissions of greenhouse gases into the atmosphere.' Last year, the U.S. Global Change Research Program released a special report the first volume of the Fourth National Climate Assessment—that found Earth has entered the warmest period 'in the history of modern civilization,' with global average air temperatures having increased by 1.8 degrees Fahrenheit over the last 115 years. And in October, the Intergovernmental Panel on Climate Change, the leading United Nations consortium of researchers studying human-caused climate change, issued a report warning world governments must cut global emissions in half over the next 12 years to avoid warming of 2.3 degrees Fahrenheit, beyond which climate change is forecast to cause a cataclysmic \$54 trillion in damages. A series of devastating natural disasters, worsened by rising temperatures, made those findings tangible. In October, Typhoon Yutu, the most powerful storm all year, struck the Northern Mariana Islands, plunging the U.S. territory into chaos just a year after Hurricane Maria left thousands dead in Puerto Rico and the U.S. Virgin Islands, California, meanwhile, is suffering its deadliest and most destructive wildfire on record during what was once the state's rainy season." [https://www.huffingtonpost.com/entry/trump-climate assessment\_us\_5bf5b31fe4b0771fb6b57ccb].)
- 16). "Annual precipitation is already more variable year-to-year in California than anywhere else in the United States. Climate projections show this variability increasing, which is to be expected given the increasingly flashy precipitation regime, i.e. smaller sample size of storms providing the annual total precipitation resulting in greater sampling variability. Here we show that precipitation delivered by land-falling ARs [Atmospheric Rivers] along the West Coast will be enhanced by climate change, resulting in more frequent and stronger precipitation extremes even as the overall frequency of precipitation decreases due to fewer non-AR storms ... Our most robust conclusions with respect to total annual precipitation point at increasing year-to-year precipitation variability due to decreasing frequency of storms making up California's annual total precipitation and greater contribution of AR-related extreme events ... the stronger increasing trends in AR-related precipitation combine with

weaker decreasing trends in non-AR-related precipitation to produce an overall increase in total California precipitation ... The challenges faced by West Coast reservoir managers in balancing the mandates for water storage and flood control will escalate with an increasingly volatile precipitation regime. Exacerbating these mounting challenges, ARs tend to be warm storms, which in a warmer world will yield progressively higher rain/snow ratios, resulting in an additional boost to runoff in winter and added threat to an already dwindling snowpack from rain on snow events. The climate warming could thus operate via an additional mechanism of warmer and stronger ARs to enhance snowpack erosion from lower elevations progressively upwards. Enhanced runoff generated by boosted and warmer rainfall extremes in a flashier precipitation regime will likely also adversely impact groundwater recharge and storage. The impacts of hazards such as floods, debris flows, and coastal water quality will be exacerbated by the changing precipitation regime alongside the more regionally extensive impacts of drought." (pp 5,6,7)

[Precipitation regime change in Western North America: the role of Atmospheric Rivers (ARs)
Alexander Gershunov Tamara Shulgina1, Rachel E. S. Clemesha, Kristen Guirguis, David W. Pierce,
Michael D. Dettinger, David A. Lavers, Daniel R. Cayan, Suraj D. Polade, Julie Kalansky, F. Martin
Ralph, July, 2019 https://www.nature.com/articles/s41598-019-46169-w ]

### Legal Argument

17). To start, we present an overview of the "rule of reasonableness," which constitutes the core mandatory legal authority that both animates our arguments <u>and</u> requires the State Water Resources Control Board (SWRCB) to act "reasonably." This overview is quoted from a recent summary of this doctrine by the First District Court of Appeal, in *Light v. SWRCB* (2014) 226 Cal.App.4th 1463, 1479–80:

Water use by both riparian users and appropriators is constrained by the rule of reasonableness, which has been preserved in the state Constitution since 1928. (Cal. Const., art. X, § 2; hereafter Article X, Section 2.) ... As the Supreme Court recognized soon after Article X, Section 2 was added, the rule limiting water use to that reasonably necessary "appl[ies] to the use of all water, under whatever right the use may be enjoyed." (*Peabody v. City of Vallejo* (1935) 2 Cal.2d 351, 367–68 (*Peabody*).) The rule of reasonableness is now "the overriding principle governing the use of water in California." (*People ex rel. State Water Resources Control Bd. v. Forni* (1976) 54 Cal.App.3d 743, 750 (*Forni*).

California courts have never defined, nor as far as we have been able to determine, even attempted to define what constitutes an unreasonable use of water, perhaps because the reasonableness of any particular use depends largely on the circumstances. (Peabody, supra, 2 Cal.2d at p. 368.) "What may be a reasonable beneficial use, where water is present in excess of all needs, would not be a reasonable beneficial use in an area of great scarcity and great need. What is a beneficial use at one time may, because of changed conditions, become a waste of water at a later time." (Tulare Dist. v. Lindsay-Strathmore Dist. (1935) 3 Cal.2d 489, 567.) In this regard, the Joslin court commented, "Although, as we have said, what is a reasonable use of water depends on the circumstances of each case, such an inquiry cannot be resolved in vacuo isolated from statewide considerations of transcendent importance. Paramount among these, we see the ever increasing need for the conservation of water in this state, an inescapable reality of life quite apart from its express recognition in [Article X, Section 2]." ([Joslin v. Marin Municipal Water District (1967) 67 Cal.2d 132, 140 (Joslin)]; see similarly In re Waters of Long Valley Creek Stream System (1979) 25 Cal.3d 339, 354 ["it appears self-evident that the reasonableness of a riparian use cannot be determined without considering the effect of such use on all the needs of those in the stream system [citation], nor can it be made 'in vacuo isolated

from statewide considerations of transcendent importance"].) Few decisions have ruled on the reasonableness of a specific use of water, but in separate cases the Supreme Court has concluded, essentially as self-evident, that the use of water for the sole purpose of flooding the land to kill gophers and squirrels is unreasonable (*Tulare Dist.*, at p. 568), as is the use of floodwaters solely to deposit sand and gravel on flooded land (*Joslin*, at p. 141.)

(Light v. SWRCB, 226 Cal.App.4th at 1479–80.)

The Board's authority to prevent unreasonable or wasteful use of water extends to all users, regardless of the basis under which the users' water rights are held. ([California Farm Bureau Federation vs. State Water Resources Control Board (2011) 51 Cal.4th 421, 429].)

(Light v. SWRCB 226 Cal.App.4th at 1482.)

- 18). The conservation of the waters of the state is of paramount importance. We believe that we have presented sufficient evidence in this comment to establish that water used to produce methane-emitting livestock is, on its face, wasteful and unreasonable, and the consequences of such use adversely impact California society and natural ecosystems across a number of different yet inter-related economic, political, social, and ecological spheres. The cumulative impact of all these effects has now created in California a phenomenon of "transcendent importance" (*Joslin v. Marin Mun. Water Dist.*, 67 Cal.2d 132, [1967]). What is this phenomenon? California is out of balance, and the use of water to produce livestock promotes further imbalance between the human species and California's native ecosystems. The path to balance requires actions that reduce and/or eliminate these wasteful and unreasonable uses that have been contributing to the imbalance between the human species and California's native ecosystems.
- 19). We believe that the SWRCB is required to act on the matter of wasteful, unreasonable use of water being used to produce livestock. The mandatory legal authority to buttress SWRCB action has three components. First, the SWRCB and the courts can nullify "beneficial" use of water, if such use is wasteful and/or unreasonable (*Joslin*, 1967, *Forni*, 1976, *Light v. SWRCB*, 2014). Second, the SWRCB can reduce and/or eliminate wasteful, unreasonable water use to rebalance an unbalanced situation (*U.S. v. SWRCB*, 1986). Third, the SWRCB is *required* to re-balance imbalanced situations (*Audubon*, 1983, *Cal Trout II*.).
- 20). Concerning our first point, we rely primarily on *Joslin* (1967), but also *Forni* (1976). In *Joslin*, the CA Supreme Court commented about the plaintiffs' claim:
  - [5] In essence their position is that such use is a [67 Cal.2d 143] beneficial one encompassed within their riparian rights and that all beneficial uses are reasonable uses. Such a position ignores rather than observes the constitutional mandate. Article XIV, section 3, does not equate "beneficial use" with "reasonable use."... the mere fact that a use may be beneficial to a riparian's lands is not sufficient if the use is not also reasonable within the meaning of section 3 of article XIV and, as indicated ... use must be deemed unreasonable. (*Joslin v. Marin Mun. Water Dist.*, (1967))
- 21). Concerning *Forni* (1976), Littleworth and Garner (2007) note, "*Forni* followed *Joslin* in holding that a beneficial use could nonetheless be unreasonable (p. 111)." Finally, *Light v. SWRCB* (which the CA Supreme Court declined to review on Oct 1, 2014) appears to also reinforce the previous holdings of the court in both *Joslin* and *Forni*.

22). Concerning our second point, we rely primarily on *U.S. v. SWRCB* (1986). In this case, the First Appellate Court of Appeals upheld a decision in which the SWRCB made an implicit finding of unreasonable use to justify a curtailment of CVP and SWP project activities that resulted in a reduction of water storage and a reduction in water exports. The SWRCB made this decision on the basis of new information documenting "adverse impacts of the projects upon the Delta." The First Appellate Court of Appeals explicitly stated:

"Independent of its reserved powers, we think the Board was authorized to modify the permit terms under its power to prevent waste or unreasonable use of methods of diversion of water ... Though we are mindful that the Board made no express finding of unreasonable use, such underlying finding is implicit in the Board's decision to impose without project standards upon the projects to prevent 'any material deterioration of water quality which would impair its usefulness for ... senior right holders.' Curtailment of project activities through reduced storage and export was eminently reasonable and proper to maintain the required level of water quality in the Delta."

We assert that it is reasonable to interpret the SWRCB's decision as an act of "balancing": the SWRCB discerned an imbalance in the relationship between human activities and the Delta ecosystem and curtailed the unreasonable use of water that was generating the imbalance. By reducing an unreasonable use of water, the SWRCB promoted balance in the relationship between humans and the natural world.

23). As for our last point, we rely upon *Audubon* (1983) and *Cal Trout II* (1990). In both of these cases, the SWRCB had refused, over extended periods, to take actions that would compel a rebalancing of the severely imbalanced relationships between the City of Los Angeles, the Mono Lake ecosystem, and the fisheries of Mono Lake's feeder streams. While neither of these cases focused on Article X, Section 2 of the California Constitution, the courts in both of these cases clearly ruled that the SWRCB had a legal duty to re-balance relationships between human institutions and natural ecosystems that had been clearly unbalanced for significant periods of time. In both of these cases, the court stepped in to "re-balance" when the SWRCB failed to meet its legal duty to "re-balance" an unbalanced situation. (Littleworth and Garner, [2007], pp. 101–105 and 121–122.)

Sincerely,

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