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Submitted via email: commentletters@waterboards.ca.gov



Comment Letter – Ventura River Algae TMDL

Dear Ms. Townsend,

I appreciate the opportunity to comment on the Ventura River Algae and Nutrient TMDL. I am writing on behalf of myself, and as a member of the board of directors of the Ventura County Cattlemen's Association (VCCA). VCCA is an organization whose primary goal is to support the cattle industry and its members who rely on that industry for their livelihood. We have approximately 125 active members of which approximately half are also active members of California Cattlemen's Association. I am a cattle rancher, currently leasing land and managing cattle in the Ventura River Watershed. I have ranched in this area for nearly 5 years and in Ventura County for over 14 years. I'm also the treasurer of the Horse and Livestock Watershed Alliance.

As this is my first sojourn into the matter of water regulation let me first say that my experience with the LARWQCB staff has been surprisingly positive. I have been impressed with their availability, cordiality, and professionalism as well as the spirit of cooperation they impart.

Since the submission of my comment letter to the LARWQCB I have obtained information of a scientific and statistical nature which could affect the manner of cattle grazing activities inclusion in this TMDL. VCCA referenced this information during the LARWQCB hearing in December, resulting in some positive changes in the language of the TMDL, allowing flexibility in its implementation. However we believe the time constraints imposed by the EPA consent decree prevented an adequate review of this information by the LARWQCB prior to the adoption of this TMDL. As such I would like to take this opportunity to present this information for review by the State Water Quality Control Board so that decisions can be made with up to date cattle stocking information, and the best available science. The information is as follows:

1. Cattle Numbers and Acres Grazed:

Data provided in the Algae TMDL staff report greatly overestimated the number of cattle, as well as acres grazed in the Ventura River Watershed. Section 4.2.2 of the Algae TMDL estimates 1940 cattle are grazing in this watershed, according to a 2007 Census Survey (LARWQCB 2012).

The staff report estimated acres grazed at 34,000, using "California Department of Conservation's Farmland Mapping Program... Spatial data of the area in Ventura County suitable for grazing was clipped to the Ventura River watershed using GIS. The grazing data were then overlain with SCAG data to exclude areas that were obviously not used for grazing, such as oil and gas exploration and areas slated for development." (LARWQCB 2012).

Ventura County Cattlemen's Association Conducted a survey in November 2012 there were 613 cows, belonging to 12 producers grazing in the watershed. According to the

VCCA survey 20,919 of the 34,000 acres cited in the staff report were actually being grazed. This equals a stocking rate of one cow per 34.12 acres. This is a 68% reduction in the number of grazing cattle within the watershed in five years.

The Ventura River watershed consists of 220 square miles or 140,800 acres. Of that, less than 21,000 acres are being grazed by less than 1000 cows scattered throughout the open spaces.

The impact, if any, grazing activities are having in this watershed is minimal.

2. The best available science overwhelming demonstrates grazing activities do not contribute to eutrophication of streams in California range lands.

The algae TMDL provides weak data concerning wet weather loading from grazing activities, and they admittedly had no data on dry weather loading from grazing activities. (LARWQCB 2012) Dr. Ken Tate, Rangeland Hydrology Specialist and Chair of the Plant Sciences Department at UC Davis when commenting on the Algae TMDL (LARWQCB 2012) states “It’s unfortunate that the wealth of literature was not discovered or included (as far as I can tell) as part of the best available science. The weight of evidence is that free range cattle are not a major (or even minor) source of nitrogen and phosphorus on CA rangelands” (K. W. Tate 2012). He went on to say “Bottom-line is they did not really find the best available science on these topics. It’s readily available on line or from scientists at UC working on this topic”. (K. W. Tate 2012)

There is an overwhelming amount of data that suggests that cattle grazing activities do not contribute to elevated nitrogen and phosphorus in-stream concentrations in California. Oak woodlands and annual grass-dominated rangelands similar to that which exist in the Ventura River watershed have been studied extensively throughout California. Some of the sources are as follows:

- i. UC Hopland Research and Extension Center found “Preliminary data from a new series of studies...indicate that livestock grazing does not significantly increase nutrient and sediment levels in stream water”. (Dahlgren, et al. 2001).
- ii. In another study, researchers found “Under the grazing levels and climatic conditions realized during the 20 years of data collection the watershed actually served as a sink for mineral N deposited as dry and wet atmospheric deposition. While there was certainly export of NO₃-N from the watershed on a daily and annual basis, these data raise the possibility that annual rangeland watersheds sequester more N than they generate.” (Lewis, et al. 2006).
- iii. A study concerning breeding habitat of the Yosemite Toad found “an unexpected and important finding of this study was that, for this system, concentrations of water quality constituents generally of ecological concern were uniformly low in 2006 when all meadows had been grazed for at least a decade, and remained low throughout the study regardless of treatment”. (Roche, et al. 2012). This study went on to say “The expected trend following cattle exclusion treatments was for nutrient concentrations and temperature to decrease in comparison to standard grazing. The year to year variation observed among treatment does not support this hypothesis” (Roche, et al. 2012).
- iv. A new study on public lands by UC Davis found “Nutrient concentrations observed across this extensively grazed landscape were at least one order of

magnitude below levels of ecological concern, and were similar to USEPA estimates for background conditions in the region” (Kromschroeder, et al. 2012).

- v. In a study by UC Berkeley researchers found that nitrate levels actually increased when grazing was removed from these wetlands. The study states “removal of livestock grazing resulted in increased levels of nitrate in wetland waters and thus higher levels of nitrate pollution compared to grazed springs”. (Allen-Diaz, et al. 2004) The study declares some of the reasons for the difference is “Grazing removal allowed dead plant material to accumulate, thereby inhibiting plant production (hence, plant nitrogen demand), resulting in stream-water nitrate concentrations that far exceeded the U.S. Environmental Protection Agency’s surface-water standard”. (Allen-Diaz, et al. 2004)
- vi. Another study looked closer at the relationship of grazing and nitrogen uptake. They confirmed the findings of the previous study. It asserts “Aboveground biomass trends provided compelling evidence that harvesting of plant material by grazing livestock maintained greater plant productivity, hence, N demand, resulting in reduced NO_3^- in soils of grazed wetlands”. (Jackson, et al. 2006). The study goes on to say that “dead biomass that had accumulated on ungrazed plots likely depressed primary productivity, and therefor N demand or that grazing stimulated plant growth and N uptake”. (Jackson, et al. 2006). They conclude “The grazing-plant uptake mechanism affords the added benefit of N conservation to the watershed-cattle will redistribute harvested nutrients across the landscape”. (Jackson, et al. 2006)
- vii. While these studies were not conducted in the Ventura River watershed, a study which compared various regions across the state of California showed our region to be very similar to those in which these studies were conducted. (Hogan, et al. n.d.)
- viii. In another E-Mail correspondence with Dr. Tate he wrote “Our research team has been examining water quality and riparian health across California’s rangeland watersheds for over 25 years. Based on the collective evidence of over 100 research papers and thousands of stream water samples collected across the state, we consistently find relatively high water quality conditions. In particular, we consistently find N and P concentrations to be 1 to 2 orders of magnitude below levels of ecological concern (e.g., eutrophication) or human health risk. We commonly find the majority (90+ %) of samples to be below US EPA estimated background concentrations for N and P for these regions. These results are not surprising, nor at odds with research findings from intensive animal agriculture systems. Livestock production on rangelands is extensive (e.g., 1 animal for every 10 to 15 acres) – based upon the forage that is grown in place and not on the importation of significant feed stuffs (bringing N and P to the watershed). Our research, and a recent comprehensive review by USDA of the literature on livestock grazing and riparian health demonstrates that adaptive, site-specific implementation of best management grazing practices will offset any detrimental impacts of unmanaged grazing on water and riparian resources. It is clear to us that with appropriate management – range livestock production, clean water, and plentiful high quality riparian habitats are completely compatible outcomes.” (K. W. Tate 2013)

A common source of confusion when discussing data on cattle's contribution to nutrient loading can be differentiating between Extensive-grazing systems, and confined- animal feeding operations (CFOs), examples of which would be diaries and feedlots. Staff and other interested parties without a clear understanding of cattle operations sometimes extrapolate data from other regions confined feeding operations, and cite this as evidence of "grazing" and "livestock" being major sources of N and P. CFOs can be a source of N and P and require a higher level of management. These types of operations are rare in the Ventura River Watershed and would be categorized with the horse/intensive livestock section.

The science is clear and overwhelming, extensive grazing activities, with proper rangeland management practices are not a source of nutrient loading and eutrophication.

3. Water monitoring requirements are costly and burdensome to producer with little or no ecological benefits.

The number of cattle grazing in the water shed coupled with the best available science, on the contribution grazing activities have on nutrient loading, clearly demonstrates that any impact cattle are having on algae in this watershed is minimal to non-existent.

A 10% reduction in nutrient levels, as required by this TMDL, from the minimal to non-existent contribution from grazing activities would be insignificant.

However the potential water monitoring costs to producers could be extremely significant, and could make some operations unviable with no ecological benefit.

Recommendations:

1. Due to the insignificant number of cattle in the Ventura river water shed, the overwhelming amount of data that show they do not contribute to nutrient loading, and eutrophication and the potential harm to the producers, and the community by the cost associated with this TMDLs implementation, I recommend that cattle grazing be exempted from this TMDL.
2. In the event Grazing Activities remain in this TMDL, I recommend the water monitoring requirement (including base line monitoring) for grazing activities be removed and replaced with acceptable water management plans and evidence of BMPs.

Thank you for the opportunity to comment on this TMDL. I look forward to your response. Feel free to contact me if you have any questions regarding this material. Also the researchers from the Rangeland science Dept. at UC Davis has indicated they would also be available for questions.

Sincerely,

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