

---

## Lahontan Regional Water Quality Control Board

October 31, 2013

Patty Kouyoumdjian  
Executive Officer  
California Regional Water Quality Control Board – Lahontan Region

### **RESPONSE TO COMMENTS ON THE PROPOSED SETTLEMENT AGREEMENT AND STIPULATION FOR ENTRY OF ORDER FOR THE N&M DAIRY AND NEIL AND MARY DE VRIES, SAN BERNARDINO COUNTY – WDID NO. 6B368010004**

The Lahontan Regional Water Quality Control Board (Water Board) Prosecution Team has reviewed the questions and comments provided in the Water Board Advisory Team's October 18, 2013 Request for Response and the October 4, 2013 comments and concerns provided by Jessica Culpepper and Deborah Rosenthal on behalf of Helendale and Barstow residents. The Water Board Prosecution Team offers the following responses.

#### **Response to Advisory Team Comments**

##### **1. Staff Costs**

The “administrative considerations” in the proposed Settlement Agreement refers to Water Board Prosecution Team and the State Water Resources Control Board (State Water Board) Office of Enforcement recommendations in light of the findings made by the California State Auditor in its 2012-120 Audit Report. Specifically, one of the findings in the Audit Report is that staffing costs in penalty actions for water quality certification violations are, “generally not supported and are inaccurate because of inflated cost rates.” (California State Auditor Report 2012-120 State Water Resources Control Board, *It Should Ensure a More Consistent Administration of Water Quality Certification Program*, June 2013). This enforcement action does not involve violations of a 401 Certification as was the focus in Audit Report 2012-120. However, staff believes the justification in the Audit Report still applies to this enforcement action where the staff cost rate has not yet been revised to reflect actual staff salaries and overhead cost for each program. In an abundance of caution Water Board Prosecution Team and the State Water Board Office of Enforcement decided to recommend removing staff costs for this enforcement action.

2. Conservation Easement Title Holder

The Prosecution Team agrees that identifying the holder of the conservation easement is a critical piece to enforcing the terms of the conservation easement. This Settlement Agreement and Stipulated Order, including Exhibit C, generally outlines the conservation easement. Progress to complete the Supplemental Environmental Project (SEP), including the mechanics and specifics of setting up the proposed easement such as identification of a holder, are to be documented to the Water Board in accordance with the Schedule of Performance in Exhibit C, starting with the first monthly progress report due on December 30, 2013. In consideration of resolving the outstanding water quality violations as soon as practical, the Prosecution Team reached an agreement for penalties for water quality violations in addition to deferring part of the penalty in exchange for the implementation of the proposed SEP, the conservation easement. Proposed Order R6V-2013-0075 provides the general terms of the conservation easement. The Proposed Order was issued without additional details, such as the holder of the easement, to facilitate the resolution of the outstanding violations and prevent further delay in the enforcement of water quality violations. The SEP Description contained in Exhibit C states (page 3), “[t]he SEP must be devised in conformance with the Conservation Easement Act (Civil Code sections 815-816).” The failure to comply with Section 815.3 of the Civil Code would trigger the payment of the suspended administrative civil liability (\$188,425).

3. Executive Officer Approval of Conservation Easement

The Advisory Team requests, “[t]he SEP should provide an opportunity for the Executive Officer to approve the terms of the conservation easement before it is recorded. Please include this in Section 5 of the Schedule of Performance in Appendix B.” The Prosecution Team does not object to this request and will revise Proposed Order R6V-2013-0075, Exhibit C accordingly to identify in the Schedule for Performance the submission of the conservation easement to the Executive Officer before it is recorded.

4. Appropriate Demarcation

Demarcation is a determination and marking off a boundary. Typically, such demarcation could consist of fences or other such permanent structure. The SEP boundaries include areas within the active channel of the Mojave River in addition to areas within the floodplain or adjacent to the floodplain of the Mojave River. The Prosecution Team recognizes that fencing or other permanent boundary demarcation structures within the active channel of the Mojave River are not appropriate for demarcation and may adversely affect river and/or habitat function. This proposed Settlement Agreement requires the Discharger to submit a proposal acceptable to the Executive Officer of the Water Board for identifying and demarking the boundaries of the conservation easement both within the active channel area and within areas outside the active channel in the demarcation proposal referenced in Section 5 of Exhibit C.

5. Affected Area Boundary Justification

The Affected Area (also known as the Study Area) boundary identified in the proposed Cleanup and Abatement Order (CAO) is currently very similar to the Affected Area boundary identified in CAO No. R6V-2011-0055-A1 (issued January 19, 2012), and there is no change in the southern boundary of the Affected Area. Attachment A to the proposed CAO provides the map of the Affected Area. The solid red line outlining the Affected Area boundary is described as the, "January 2012 Expanded Study Area Boundary." The Affected Area boundary is drawn to include all private domestic wells exhibiting nitrate as nitrogen (N) concentrations or Total Dissolved Concentration (TDS) above apparent background levels.

The Affected Area boundary identified in the proposed CAO is intended to be dynamic. It may expand in size if downgradient domestic wells equal or exceed the trigger nitrate or TDS concentrations. Conversely, the Affected Area may be modified if specific monitoring result conditions outlined in the proposed CAO are satisfied.

Please note that the proposed CAO is not a stipulation of the Settlement Agreement.

6. Replacement Water for Areas Currently Outside the Affected Area

The proposed CAO currently requires the Discharger to collect and analyze ground water samples within the defined Affected Area (the January, 2012, expanded study area noted in CAO No. R6V-2011-0055-A1). The Discharger is also required to provide replacement water to impacted residences located within this area.

The defined Affected Area is drawn to contain elevated nitrate and TDS concentration levels that may be attributed to upgradient sources, including the former dairy facility. The furthest downgradient groundwater monitoring well, Well No. 57, has elevated nitrate concentrations, but the recent nitrate concentration of this well is 5.8 mg/L (see April 29, 2013 Domestic Well Sampling Report), which is below the current trigger concentration of 7 mg/L. The report indicates a sudden spike in nitrate and TDS concentrations upgradient from Well No. 57 that does not appear to be correlated to the Dairy's discharge, indicating another potential contaminant source or sources (residential septic systems, localized irrigation, etc.) may exist somewhere between Monitoring Well Nos. 50 and 57. Such a potential contamination source is something that should be investigated outside the limits of the proposed Settlement Agreement. Meanwhile, Water Board staff find that the Dairy, albeit now closed, has contributed and continues to pose a threat to the water quality of downgradient neighbors. Thus, the need for the proposed CAO.

Should future monitoring efforts demonstrate that the contamination from the former Dairy Facility has migrated beyond the boundaries of the Affected Area, the CAO could be amended to expand the boundary. This is the procedure that was used to expand the boundary in January 2012.

7. Reasonableness of Deadlines

Given the time necessary to conduct the surveys, develop and submit a boundary demarcation proposal, properly record the easement pursuant to Civil Code sections 815-816, and submit a final report, the Prosecution Team and the Discharger agreed upon the proposed deadlines as both appropriate and reasonable. However, the deadlines were established assuming the Settlement Agreement would be signed by October 1, 2013. The Prosecution Team does not object to a reasonable extension of the deadlines in light of the delay. The Prosecution Team and the Discharger will provide an amendment to the Settlement Agreement with revised deadlines.

**Response to October 4, 2013 Comments by Jessica Culpepper and Deborah Rosenthal on behalf of Helendale and Barstow residents**

8. Comment I, Pages 5-6: Establish TDS Trigger Level at 500 mg/L

The Residents argue that the trigger for providing replacement water should be 500 mg/L for TDS concentrations. The Prosecution Team will not accommodate the Residents' request to lower the trigger level to 500 mg/L for TDS. According to California Code of Regulations, Title 22, the recommended secondary maximum contaminant level (MCL) for TDS is 500 mg/L, and the secondary MCL upper limit is 1,000 mg/L (short term MCL is 1,500 mg/L). This is a consumer acceptance level that is still protective of beneficial uses for drinking water.

Finding No. C.d. of CAO No. R6V-2011-0055-A1 found that the average background TDS concentration upgradient from the Dairy is 636 mg/L. The Water Board determined that a concentration level trigger of 700 mg/L would allow for variation in the background data and was within the acceptable secondary MCL range prescribed by the California Code of Regulations.

The Discharger requested increasing the TDS concentration trigger level to provide replacement water. As part of this Settlement Agreement the Discharger and the Prosecution Team agreed on a higher trigger of 815 mg/L<sup>1</sup> where such a level is deemed still protective of beneficial uses.

9. Comment II, Pages 6-7: Do Not Reduce Study Area

The residents express opposition to the potential to reduce the size of the Affected Area, and they also express concern that not enough wells are being tested in order to protect additional community members.

Please note that the proposed CAO does not immediately contemplate any reduction in the study area. Rather, Order No. 6 of the proposed CAO outlines a lengthy process in which wells (and residences) can be removed from the replacement water requirement within the Affected Area. It reads:

---

<sup>1</sup> Consistent with the rationale for developing a reduced nitrate trigger level in Amended CAO No. R6V-2011-0055-A1, 815 mg/L was derived by subtracting the standard deviation of 185 mg/L from the upper limit secondary MCL of 1000 mg/L.

*“The Discharger may cease providing uninterrupted replacement water at any individual residence only when one of the two following conditions is met at the specific individual residence’s well being evaluated:*

- a. Groundwater nitrate as nitrogen and TDS concentrations are below 7 mg/L and 815 mg/L, respectively, for two consecutive nine-month sampling periods; or*
- b. Groundwater nitrate as nitrogen and TDS concentrations are below 7 mg/L and 815 mg/L, respectively, for four consecutive three-month sampling periods (i.e., the Dischargers may elect to collect groundwater samples on a quarterly basis and submit the results to the Water Board with notification that uninterrupted replacement water will no longer be provided based upon the monitoring results).*

*The Discharger must notify the respective property owner/tenant and submit the test result documentation to the Water Board.”*

The Prosecution Team agrees with the Resident’s concern that not all the wells in the Affected Area have been adequately monitored. This is due to either well abandonment, property transfers, lack of permission to monitor wells, etc. This is why Order No. 2 was written into the proposed CAO. It reads:

*“**Thirty (30) days prior to each groundwater sampling event** described in Directive No. 3, below, the Discharger shall visit all well locations in the Affected Area whose respective property owners and/or property tenants (including new property owners and new tenants) have not already been notified of the potential for elevated nitrate and TDS concentrations in the groundwater, or have not already provided permission for well sampling. The Discharger shall provide the respective property owners and/or property tenants notice of the following:*

- a. How beneficial uses are affected from elevated nitrate and TDS in groundwater at levels greater than that allowed under the Basin Plan, and information (e.g. pamphlets or flyers already prepared by CDPH or other local health agency) regarding the potential health concerns from consuming water with elevated nitrate concentrations;*
- b. A request for consent to sample the domestic supply well(s) providing water to the property occupant (owner and/or tenant) at a maximum frequency of every nine months; and*
- c. The existing contact information of the property owner and/or tenant along with a request for updated contact information.*

*In cases where the Discharger cannot access the property for purposes of notification, a written notice will be left in a prominent location at the property. If any property owner or tenant declines to have their private domestic water well sampled, such a decision, including a nonresponsive to the notice, must be documented and submitted with the associated monitoring report (described in Directive No. 5, below)."*

The current boundary for the Affected Area is drawn to incorporate those residential wells with nitrate or TDS concentrations elevated from background upgradient wells. The narrative description for the southern boundary has been modified to reflect a more accurate and average distance from National Trails Highway. More importantly, the Affected Area's southern boundary line has not been modified from that established by CAO No. R6V-2011-0055-A1.

10. Comment III, Pages 7-9: Require N&M Dairy to Remediate Contaminated Soil by Removing Nitrates and Other Contaminants

The Prosecution Team agrees that leaving nitrate-saturated soil currently poses a threat to groundwater quality. However, we also recognize that in ceasing dairy operations and removing the manure and hard pack, a large contamination source and driver of continued saturation and downward migration of contamination through the soil profile is also removed. Further, the SEP in the proposed Settlement Agreement will allow the land area to develop equilibrium so that natural processes (biodegradation and attenuation) can, over time, naturally attenuate and decrease the ongoing contamination of the underlying groundwater, thereby improving water quality overtime.

Though this proposed Settlement Agreement does not require the cleanup and removal of contaminated soils, the Water Board reserves its authority to require cleanup or abatement, in compliance with standards set forth in State Water Resources Control Board, Resolution 92-49, pursuant to Water Code section 13304.

11. Comment I, Pages 9-11: Provide Deeper Wells to the Residents

The Discharger and the Prosecution Team have determined that the terms of the proposed Settlement Agreement are appropriate in light of the alleged violations. With that said, the Prosecution Team does not disagree that providing deeper wells could be an option for the Discharger to consider in complying with Order No. 1 of the proposed CAO. Order No. 1 requires the Discharger to supply uninterrupted replacement drinking water, either bottled water or equivalent, for consumption and cooking to all adversely impacted residences within the Affected Area. Providing deeper wells may be an equivalent measure. Without dictating the manner of compliance, the proposed CAO provides the Discharger the option to pursue equivalent measures such as providing deeper wells. Water Board staff notes that deeper aquifers within the Mojave River generally have higher TDS concentrations than shallower aquifers; however, this alone does not foreclose deeper wells as an equivalent measure. To date, the Discharger has not identified the construction of deeper wells as an equivalent measure.

The Residents go on to comment that ceasing dairy operations will not sufficiently remediate the groundwater because, "...nitrates can persist in groundwater for decades and accumulate to even higher levels, as years of soil build-up continues to leach into the aquifers." The Residents base this comment on the USGS Nutrients National Synthesis Project, *A National Look at Nitrate Contamination of Ground Water* (Water Conditioning and Purification, January 1998, v. 39, no. 12, pages 76-79). However, that study actually states that nitrates can accumulate to even higher levels, "...as more nitrogen is applied to the land surface every year." Therefore, the Prosecution Team's interpretation of this article is that groundwater nitrate concentrations will not accumulate to higher levels because additional nitrogen (manure and other dairy waste) is no longer being applied every year. In fact, the concentrations will eventually decrease as the nitrate concentrations attenuate.

The Residents also comment that, "[w]ell water is the Residents' only source of water outside of bottled water, and the bottled water they receive is only enough for drinking. This means that the Residents are using contaminated well water for food preparation ..." However, CAO No. R6V-2011-0055-A1, Order No. 1, requires the Discharger to, "[s]upply uninterrupted replacement drinking water service...for consumption and cooking ..." The Prosecution Team is unaware that inadequate water supply has been provided. If the Residents need additional replacement water for cooking, the Discharger is currently required to provide it. This same requirement is retained in the proposed CAO.

Finally, the Residents indicate that using contaminated water for irrigation of food crops poses a rather significant health threat. They state that, "eating food irrigated with nitrate-rich water can lead to chronic nitrate poisoning because the dietary intake of nitrate is usually much larger than that from drinking water." The Residents cite an August 11, 2013 study published by the Canadian Center of Science and Education, *Would Use of Contaminated Water for Irrigation Lead to More Accumulation of Nitrate in Crops?* However, this August 11, 2013 study cannot be used to support an allegation that irrigating local food crops with the residential wells can lead to chronic nitrate poisoning. That study used sewage wastewater that likely has much higher nitrogen concentrations than groundwater within the study area, and the nitrate concentrations in groundwater would not be expected to significantly affect nitrate concentrations in crops grown with the groundwater. Each type of plant has a normal range of nitrate in its plant parts, with some naturally being higher than others (see <http://www.efsa.europa.eu/en/scdocs/doc/689.pdf>).

#### 12. Comment II, Page 11: Require N&M Dairy to Effectively Communicate Water Delivery and Contamination Issues to the Residents

The Residents related past instances where the Discharger failed to provide adequate, uninterrupted replacement water during the summer months, thereby causing the Residents to ration their water supply. They request a neutral third party be hired for the Residents to contact with problems related to water delivery. The Residents also request notification of sample results of their wells.

The Discharger and the Prosecution Team have determined that the terms of the proposed Settlement Agreement are appropriate in light of the alleged violations. The Prosecution Team is concerned that the Water Board was never notified that the residents were not provided with adequate replacement water during the summer months. Such an interruption or inadequate supply is a violation of the existing CAO issued to the Discharger. The Water Board should be notified of such violations so that such issues can be addressed; the manner in which it is addressed would depend on the circumstances.

The Prosecution Team notes that Water Board staff did receive one complaint from an affected residence near the beginning of the replacement water delivery program. Water Board staff immediately addressed the issue when the complaint was received, ensured replacement water delivery was immediately re-established, and confirmed with the complainant that water delivery was indeed resumed in accordance with the CAO.

13. Comment III, Page 12: Include Penalty Against N&M and Compensation to Residents for Failure to Provide Replacement Water

The Prosecution Team disagrees with the request to modify the proposed Settlement Agreement to provide compensation to the Residents for violations of the replacement water provisions. The proposed Settlement Agreement provides an assessment of administrative civil liability pursuant to Water Code section 13350, subdivision (a), for violations of water quality including the: 1) failure to remove all excess manure by January 17, 2012; 2) failure to submit monthly manure progress reports; and 3) failure to complete drainage, corral grading and eliminate storm water ponding in the corrals. It is not within the jurisdiction of the Water Board to allow for the payment of administrative civil liability to be directed as compensation to the Residents. Water Code section 13350, subdivision k, requires that liability imposed pursuant to Water Code section 13350, subdivision a, be deposited into the Waste Discharge Permit Fund.

The Discharger and the Prosecution Team have determined that the terms of the proposed Settlement Agreement are appropriate in light of the alleged violations. The Prosecution Team encourages the Residents to notify Water Board staff immediately of any lapses in bottled water delivery.

14. Comment IV, Pages 12-13: Include Provisions That Address Odors and Vectors

The Water Board's authority to control odor and vector issues rising to the level of a nuisance, as defined in section 13050 of the Water Code, is limited by its authority to control the discharge causing the nuisance condition. The Water Board does not have general authority to abate nuisance or assure the protection of public health. Control of these areas of concern have been statutorily assigned to local agencies and state health officials and it is the Prosecution Team's understanding that Water Board staff will continue to work together with local agencies to address odor and vector complaints related to the remaining manure until the Discharger completes closure of its operations.

There are different sources of potential odor and vector nuisance currently at the facility. Nuisance conditions for sources that fall under the Water Board's jurisdiction are prohibited under Discharge Specification I.C.4.d. in the Discharger's waste discharge requirements, Board Order No. 6-01-38, which remain in effect until after the Discharger completes closure, including the removal of manure from the lagoons, storage ponds and composting area.

The Discharger and the Prosecution Team have determined that, in accordance with California Government Code section 11415.60, the terms of the proposed Settlement Agreement are appropriate in light of the alleged violations. If nuisance conditions occur within the Water Board's jurisdiction, the Water Board may enforce on the terms of the Discharger's waste discharge requirements with the ultimate goal of abating the nuisance.

Please feel free to contact me at (530) 542-5436 if you have any questions regarding our response. You may also contact Scott Ferguson at (530) 542-5432 or Eric Taxer at (530) 542-5434 if you have any specific questions related to technical issues, or you may contact our Counsel, Vanessa Young, at (916) 327-8622 if you have any specific questions related to legal issues.



Lauri Kemper, P.E.  
Assistant Executive Officer

cc: Tracy Egoscue, Egoscue Law Group,

[Tracy@egoscuelaw.com](mailto:Tracy@egoscuelaw.com)

Robert Feenstra, Ag. Concepts, Inc.

[bobfeenstra@gmail.com](mailto:bobfeenstra@gmail.com)

Neil and Mary de Vries

Kim Niemeyer, State Water Resources Control Board, Office of Chief Counsel

Vanessa Young, State Water Resources Control Board, Office of Enforcement

Jessica Culpepper, Public Justice

[jculpepper@publicjustice.net](mailto:jculpepper@publicjustice.net)

Derek Brandt, Simmons Browder Gianaris Angelides & Barnerd LLC

[dbrandt@simmonsfirm.com](mailto:dbrandt@simmonsfirm.com)

Deborah Rosenthal, Simmons Browder Gianaris Angelides & Barnerd LLC

[drosenthal@simmonsfirm.com](mailto:drosenthal@simmonsfirm.com)

Doug Smith, Lahontan Water Board

Richard Booth, Lahontan Water Board