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August 28, 2026

Ms. Amanda Otieno
New Mexico Environment Department
Ground Water Quality Bureau
Remediation Oversight Section
2301 Entrada Del Sol
Las Cruces, NM 88001

Dear Ms. Otieno:

On behalf of Doña Ana Dairies, Inc., EA Engineering, Science, and Technology, Inc., PBC is submitting this Quarterly Groundwater Monitoring Report for the dairies located in Mesquite, Vado, and Anthony, New Mexico. The report includes the Del Oro Dairy pump and reuse system performance assessment and the quarterly groundwater sampling event conducted to fulfill requirements of the Stage 2 Abatement Plan for Doña Ana Dairies.

Please let me know if you have any questions regarding the information provided in this report.

Sincerely,

Gina Mullen
Project Manager

Jay Snyder, P.E.
Senior Hydrogeologist

Enclosure

Cc: Linda Armstrong, Doña Ana Dairies (electronic)
File

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QUARTERLY GROUNDWATER MONITORING REPORT DOÑA ANA DAIRIES MESQUITE, NEW MEXICO

Prepared for:

Doña Ana Dairies
Mesquite, New Mexico

Prepared by:

EA Engineering, Science,
and Technology, Inc., PBC
320 Gold Avenue SW, Suite 600
Albuquerque, New Mexico 87102

August 2026

EA Project No. 14641-18-00.02
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Gina Mullen — August 28, 2026
Gina Mullen, Project Manager — Date

Jay Snyder — August 28, 2026
Jay Snyder, P.E., Senior Hydrogeologist — Date

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1.0 INTRODUCTION

On behalf of Doña Ana Dairies (Dairies), EA Engineering, Science, and Technology, Inc., PBC (EA) has prepared this Quarterly Monitoring Report for Doña Ana Dairies located south of Las Cruces, New Mexico (Figure 1). The report was completed in accordance with the *Stage 2 Abatement Plan* and the *Sampling and Analysis Plan, Doña Ana Dairies, Doña Ana County, New Mexico* dated November 7, 2013, and August 11, 2008, respectively, and the Conceptual Work Plan (CWP) dated February 1, 2008. All were prepared to satisfy requirements stated in the New Mexico Administrative Code (NMAC), Title 20, Chapter 6, Part 2, Sections 4106 through 4110 (20.6.2.4106 – 20.6.2.4110 NMAC). The Sampling and Analysis Plan was approved by the New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) on September 25, 2008 (NMED 2008). On March 25, 2015, the stipulated agreement to additional requirements to the Dona Ana Dairies Stage 2 Abatement Plan was agreed upon by NMED, the Dairies, and the Rio Valle Concerned Citizens (NMED, Doña Ana Dairies, and Rio Valle Concerned Citizens 2015). The Stage 2 Abatement Plan was approved by NMED by Final Order on April 10, 2015. A Stage 2 Abatement Plan Modification was approved by NMED on April 26, 2022 (NMED 2022). Full document references are provided in Section 5.0.

1.1 Objective and Monitoring Scope

The objectives of this monitoring program are to satisfy the requirements set forth in the Stage 2 Abatement Plan and the Stipulated Agreement and to satisfy the requirements set forth in 20.6.2.4110 NMAC.

The following work was performed to meet the objectives of the monitoring program:

- Representatives from United Uptime Services (UUS) gauged discharge plan (DP) monitoring wells, abatement plan (AP) monitoring wells, and Anthony Waste Water Treatment Plant (WWTP) wells from May 5, 2026 through May 8, 2026.

- From May 11, 2026 through June 11, 2026, UUS representatives collected groundwater samples from all scheduled and sampleable AP and DP wells. Field parameters including specific conductance, pH, temperature, oxidation reduction potential (ORP), and dissolved oxygen were monitored and recorded on field forms during sampling.

Additionally, performance assessment was performed on the Del Oro pump and reuse system in compliance with the Stage 2 Abatement Plan Modification Performance Plan for Dona Ana Dairies (EA 2022). The performance assessment is provided in Appendix A.

1.2 Background

In correspondence dated April 7, 2006, NMED required a Stage 1 Abatement Plan for 13 dairies in Doña Ana County, based on analytical results from DP monitoring of on-site compliance monitoring wells that showed concentrations of nitrate, chloride, and TDS exceeding ground water standards promulgated in New Mexico Water Quality Control Commission (NMWQCC) Regulations (20.6.2.3103 NMAC). The 13 dairies that were part of the original consortium are

listed below, with those no longer involved in the consortium marked with a strike-through.

1. ~~Organ Dairy (Former Daybreak and Del Norte Dairy)~~
2. Mountain View Dairy
3. ~~Buena Vista I Dairy~~
4. Bright Star Dairy
5. Dominguez 2 (Former D&J Dairy)
6. Dominguez Dairy
7. ~~Gonzales Dairy~~
8. ~~Buena Vista Dairy II~~
9. ~~River Valley Dairy~~
10. Big Sky Dairy
11. Sunset Dairy
12. Desert Land Dairy
13. Del Oro Dairy

On October 30, 2006, the 13 original dairies notified NMED that they had reached an agreement to work as a group and submit a joint response to NMED's request (Doña Ana Dairies 2006). Currently, the Doña Ana Dairies (DAD) consortium consists of 8 dairies with the departure from the group by Buena Vista I Dairy in 2011, River Valley Dairy in April 2019, and Gonzalez Dairy in October 2020. Buena Vista Dairy II left the consortium in May 2024. Organ Dairy left the consortium in February 2025.

The current DAD consortium is organized geographically into the northern area, central area and southern area. The northern area currently consists of Mountain View Dairy, Bright Star Dairy, Dominguez Dairy, and the former Dominguez 2 Dairy. The northern land application is also included in the northern area of DAD. Buena Vista Dairy, Gonzalez Dairy, and Organ Dairy, though no longer members of the DAD consortium, are located within the northern area. The central area consists of Buena Vista Dairy II, Big Sky Dairy, and Sunset Dairy/Desert Land Dairy. Though no longer a member of the DAD consortium, River Valley Dairy is also located in the central area. The southern area includes only the Del Oro Dairy.

On December 11, 2006, on behalf of the Doña Ana Dairies, Golder Associates Inc. (Golder) submitted a Stage 1 and 2 Abatement Plan Proposal to address impacts to groundwater in the area containing the Dairies (Golder 2006)

The first major deliverable in the Abatement Plan Proposal was an Existing Data Report (EDR), created to combine all existing and historical data and practices of the constituent dairies. The EDR, submitted on February 1, 2008 (Golder 2008a), was intended to satisfy the DAD consortiums' commitment for compilation and submission of existing data identified in the Doña Ana Dairies response (Golder 2006) to the NMED requirement for Stage 1 Abatement Plans. Section 9 of the EDR outlined data gaps identified during the preparation of the report, as well as the actions recommended. To facilitate the discussion of the path forward after the submittal of the EDR and concurrent with the EDR submission, a conceptual work plan (CWP) was prepared (Golder 2008b).

A meeting was held on July 15, 2008, between the DAD consortium, Golder and NMED. During that meeting, plume maps presented in the EDR (Golder 2008a), new monitoring data, and knowledge of monitoring well locations and groundwater chemistry results at adjacent DP-regulated facilities were used to identify data gaps with respect to ground water flow direction and plume delineation. The agreed upon data gaps yielded monitoring well locations (including

contingency monitoring well locations) recorded in the meeting minutes (Golder 2008c) and depicted in the Sampling and Analysis Plan (SAP) dated August 8, 2008 (Golder 2008d). The SAP outlined the details of the field operations to be implemented for completion of data gaps, such that a Site Investigation Report (§4106.C.6 NMAC) and Stage 2 Abatement Plan (§4106.D NMAC) could be prepared.

Between February 2008 and December 2008, quarterly groundwater gauging was conducted concurrent to discussions with NMED at the DAD consortium to determine the current and historical site groundwater gradient.

In May 2009, field work was conducted as outlined in the SAP and ten AP monitoring wells (DAD-01 through DAD-10) were installed. In July 2009, the Site Investigation Report was submitted to the NMED (EA 2009).

On February 9, 2012, the Final Site Investigation Report was submitted to NMED (EA 2012a). The report summarized field activities that occurred from October 10 through October 14, 2011, and November 10 through 18, 2011, during which eleven soil borings were advanced at the site and converted into monitoring wells DAD-12 through DAD-14, DAD-16 through DAD-22, and DP well 177-03A.

On August 16, 2012, soil boring/monitoring well DAD-15 was installed and on August 20, 2012, well DAD-15 was sampled. An addendum to the Final Site Investigation Report was submitted to NMED on September 9, 2012 (EA 2012b), which summarized DAD-15 field activities.

A Stage 2 Abatement Plan was submitted to NMED on March 13, 2013 (EA 2013a). Based on an NMED response in August 2013, a Revision to the Stage 2 Abatement Plan was submitted on November 7, 2013 (EA 2013b).

On March 25, 2015, the stipulated agreement to additional requirements to the Doña Ana Dairies Stage 2 Abatement Plan was agreed to by NMED Doña Ana Dairies, and the Rio Valle Concerned Citizens. On April 10, 2015, the Stage 2 Abatement Plan with the stipulated agreement was approved by NMED by Final Order (NMED 2015).

EA began implementation of the Stage 2 Abatement Plan and stipulated agreement as directed by the Final Order in December 2015. To meet objectives, four monitoring wells were installed (DAD-23 through DAD-26) and Del Oro Dairy discharge plan (DP) well 692-01 was plugged and abandoned. Details on implementation of these tasks are included *Stage 2 Implementation and Quarterly Groundwater Monitoring Report* dated July 2016 (EA 2016).

In accordance with the approved Stage 2 Abatement Plan and stipulated agreement, a baseline compound specific isotope analysis (CSIA) for nitrogen 14 and nitrogen 15 ($^{15}N/^{14}N$ [$\delta^{15}N$]) and total organic carbon (TOC) was completed for 16 monitoring wells in spring of 2016. Additionally, existing conditions concentrations were recalculated for the contaminants of concern. Results of these analyses are presented in the *Stage 2 Implementation and Quarterly Groundwater Monitoring Report* dated July 2016 (EA 2016). The stipulated agreement requires that CSIA of site groundwater and recalculation of existing conditions is conducted every five years. Five-year reviews containing CSIA results and recalculation of existing conditions were submitted to NMED in December 2020 (EA 2020a) and in January 2026 (EA 2026).

Contaminant concentration trend analysis as well as geospatial analysis to evaluate changes in plume behavior are required on an annual basis and are provided in the annual report. Additionally, the results of the annual sampling of irrigation and supply wells and concentration trends of analytes in AP and DP wells are provided in the annual report.

A Stage 2 Abatement Plan Modification proposal was submitted to NMED on August 10, 2018, to address plume instability in the perched aquifer nitrate plume at Del Oro Dairy. Following discussions with NMED, a revised Stage 2 Abatement Plan Modification proposal was submitted on May 1, 2019. A public meeting to discuss the plan was held in Anthony, New Mexico on May 17, 2019. The Stage 2 Abatement Plan Modification proposal was revised based on additional input from NMED and the public and submitted on July 26, 2019 (EA 2019). Public notice for the proposal was initiated on October 23, 2019, and closed on December 31, 2019. An addendum to the Stage 2 Abatement Plan Modification proposal was submitted on July 15, 2020 (EA 2020b). A revised addendum to the Stage 2 Abatement Plan Modification proposal was submitted on July 13, 2021, based on additional comments from the public (EA 2021). An additional virtual townhall meeting was held on December 15, 2021, that presented the current proposal. The performance plan was submitted to NMED on February 15, 2022 (EA 2022). NMED approved the Stage 2 Abatement Plan Modification for Doña Ana Dairies (EA 2019), the accompanying Stage 2 Abatement Plan Addendum for Reuse of Pumped Groundwater at Del Oro Dairy (EA 2021), and the Stage 2 Abatement Plan Modification Performance Plan (EA 2022) on April 26, 2022 (NMED 2022). Implementation is detailed in the Stage 2 Abatement Plan Modification Completion Report (EA 2023). The quarterly performance assessment of the Del Oro Dairy pump and reuse system, as required by Stage 2 Abatement Plan Modification Performance Plan (EA 2022) is provided in Appendix A.

On September 19, 2024, NMED approved a reduction in monitoring frequency from quarterly to semi-annually for select abatement plan wells (NMED 2024). The following wells are sampled semi-annually during August/September and February/March sampling events: DAD-02, DAD-03, DAD-04, DAD-05, DAD-16, DAD-17, and DAD-24. Water levels are gauged every quarter.

2.0 GROUNDWATER MONITORING ACTIVITIES

Groundwater monitoring activities included gauging AP monitoring wells, DP monitoring wells for dairies that are a part of the DAD consortium, and the Anthony WWTP monitoring wells. Groundwater samples were collected from scheduled AP monitoring wells and DP monitoring wells for dairies that are a part of the DAD consortium (Section 1.2). Groundwater samples were analyzed for nitrate, chloride, TDS, and Total Kjeldahl Nitrogen (TKN). The resulting data from this groundwater monitoring event are compiled and presented below.

2.1 Monitoring Well Gauging

From May 5, 2026 through May 8, 2026, representatives from UUS gauged DP monitoring wells, AP monitoring wells, and Anthony WWTP wells with an electronic water level indicator. Table 1 provides a summary of the groundwater gauging data collected from the monitoring network. Data obtained during gauging are shown on potentiometric surface maps included as Figures 2, 3, 4, and 5. Well gauging field forms are available in Appendix B.

2.2 Groundwater Sampling

UUS collected groundwater samples from all AP monitoring wells scheduled for sampling from June 3, 2026, through June 11, 2026. UUS collected groundwater from DP wells from May 11, 2026, through June 2, 2026. Bright Star well 340-02, Dominguez 2 wells 42-08, 42-10, 42-11, 42-12, and 42-13, and Del Oro Dairy well 692-04 were dry and could not be sampled.

Prior to sampling, all wells were purged of three well casing volumes, if practicable, by (1) hand-bailing with new, disposable bailers and twine, (2) pumping with a submersible pump and new polyethylene tubing, or (3) pumping with a dedicated pump and new polyethylene tubing.

The wells were sampled from historically clean to dirty to the extent possible to minimize cross-contamination potential. All non-dedicated or disposable equipment was decontaminated between wells with an Alconox™ solution to further ensure sample quality. All meters were calibrated and/or checked with standards in accordance with the manufacturer's specifications prior to daily use. Purge water was ground-discharged.

When sufficient water was available, field parameters including specific conductance, temperature, pH, ORP, and dissolved oxygen were monitored using a water quality meter and data were recorded on field forms. Field parameters are summarized in Table 2. The sampling field forms are presented in Appendix B.

All groundwater samples were collected immediately after purging. Sampling was either accomplished by carefully pouring groundwater from the bailer into the sample containers or by pumping groundwater through new polyethylene tubing into the sample container. Sample containers were provided by Eurofins Environment Testing South Central, LLC in Albuquerque, New Mexico (Eurofins). Container size, type, sample preservatives, analytical methods, and holding times are specified in Table 3. All samples were preserved in accordance with method requirements, labeled, then immediately cooled to <6°C with ice and delivered under chain-of-custody to Eurofins. All analytical laboratory reports are provided in Appendix C.

3.0 GROUNDWATER MONITORING RESULTS

3.1 Hydraulic Gradient and Direction of Groundwater Flow

During the past quarter, groundwater was present beneath the site at depths ranging from 13.24 feet below top-of-casing (ft btoc) in Sunset well 257-03 to 97.91 ft btoc in AP well DAD-15. Groundwater was encountered at shallower depths near the Mesquite Drain and at greater depths near I-10 where the topographic elevation increases.

AP monitoring well DAD-25 may have been completed in a perched aquifer, as groundwater elevations have consistently measured several feet higher than groundwater elevations in surrounding wells. As a result, groundwater elevation data from this well is not used in contouring for the central area potentiometric surface map. Additionally, vertical delineations wells are not used for contouring.

Potentiometric surface maps of groundwater elevations were completed using monitoring well gauging data for the northern, central, and southern areas (perched and regional aquifers) of the Dairies. Groundwater elevation data are provided in Table 1 and potentiometric surface maps are provided as Figures 2 through 5. Hydrographs were completed for select monitoring wells in each area and are provided in Appendix D.

southern area (0.29 foot) of the regional aquifer. In the southern perched aquifer, groundwater elevations decreased by an average of 0.40 feet.

During the most recent gauging event, groundwater flow direction of the northern regional aquifer varied from east to southeast. Flow direction in the central and southern portions of the regional aquifer were generally to the southeast.

The hydraulic gradient across the northern and central portions of the Dairies in the regional aquifer is 0.001 ft/ft. The southern portion of the Dairies has a regional aquifer hydraulic gradient of 0.002 ft/ft. The hydraulic gradient in the perched aquifer in the southern area was calculated as 0.005 ft/ft.

Changes in groundwater flow have been observed in the regional and perched aquifers of the southern portion. Groundwater mounding can first be observed in the perched aquifer in November 2024 and in the regional aquifer in February 2025. Groundwater gradients were consistent in the southern regional aquifer until this quarter, when the gradient went from 0.001 ft/ft to 0.002 ft/ft. The gradient increased in the perched aquifer from 0.004 ft/ft in November 2024 to a gradient of 0.006 ft/ft in May 2025 through February 2026. The gradient is 0.005 ft/ft this quarter.

3.2 Groundwater Field Parameters

Field parameters from the most recent monitoring event (specific conductance, pH, temperature, ORP, and dissolved oxygen) were recorded on the sampling field forms provided in Appendix B and are summarized in Table 2. Specific conductance, dissolved oxygen, and ORP trends for select wells are presented in Appendix E. Though dissolved oxygen and ORP measurements from wells containing a dedicated pump were recorded, these measurements are not considered

from wells containing a dedicated pump were recorded, these measurements are not considered representative of aquifer conditions. Dissolved oxygen and ORP are only recorded in the first set of readings since hand bailing agitates the aquifer and the ORP and dissolved oxygen measurements are not considered representative once agitation begins.

3.3 Groundwater Analytical Results

AP groundwater analytical results are presented in Table 4. DP groundwater analytical results are presented in Table 5. Nitrate, chloride, and TDS concentration trends for the AP wells by area are presented in Appendix F. Analytical data for all sampled wells are displayed on Figures 6 through 9. Analytical laboratory reports are included in Appendix C. Discussions of upgradient/downgradient conditions in the following section are based on groundwater flow directions presented in Section 3.1.

3.3.1 Abatement Plan Monitoring Well Analytical Results

Nitrate concentrations were below the 10 milligrams per liter (mg/L) NMWQCC standard in groundwater collected from 5 of the 20 AP monitoring wells sampled. The seven AP wells that were not sampled this quarter have been historically below the nitrate standard. Groundwater collected from the following 15 AP wells had nitrate concentrations at or above the standard: DAD-06R, DAD-07, DAD-08, DAD-09, DAD-11 (vertical delineation well), DAD-12 (vertical delineation well), DAD-13, DAD-14, DAD-15, DAD-18 (vertical delineation well), DAD-19 (vertical delineation well), DAD-20, DAD-21, DAD-22, and DAD-23.

Nitrate concentrations decreased or were the same in groundwater collected from AP wells DAD-02, DAD-07, DAD-09, DAD-10, DAD-11 (vertical delineation), DAD-12 (vertical delineation), DAD-14, DAD-15, DAD-18 (vertical delineation), DAD-20, DAD-21, and DAD-25 compared to the previous sampling event. The largest decrease in nitrate concentration was observed in northern well DAD-14, which decreased from 77 mg/L in March 2026 to 45 mg/L in June 2026. The largest nitrate concentration increase was observed in groundwater collected from the southern area perched aquifer well DAD-22. The concentration increased from 16 mg/L in March 2026 to 27 mg/L in June 2026. During this sampling event, detected nitrate concentrations in groundwater collected from AP wells ranged from 45 mg/L in well DAD-14 to 0.82 mg/L in well DAD-10.

Both chloride and TDS concentrations equaled or exceeded their respective NMWQCC standards in most AP wells. Exceptions include chloride and TDS groundwater concentrations with concentrations below their respective standards in central area well DAD-06R. The highest chloride concentration of 1,600 mg/L was detected in groundwater collected from central area well DAD-14. The highest TDS concentration of 4,100 mg/L was detected in groundwater collected from well DAD-07.

Table 4 and Figures 6 through 9 present the analytical results for AP monitoring wells. Analytical laboratory reports are provided in Appendix C. Nitrate, chloride, and TDS concentration trends for select AP wells are presented by area in Appendix F.

3.3.2 Abatement Plan and Discharge Plan Analytical Results by Area

The following sections discuss AP and DP analytical results in the northern portion, central portion, and the southern regional and southern perched aquifers.

Northern Portion

The northern extent of the plume is defined by well 86/340-01, which is located north of the abatement area. Nitrate has been below the nitrate NMWQCC standard of 10 mg/L since February 2018; prior to that time, groundwater concentrations in this well were consistently above the nitrate standard. Northern Land Application Area well 70/86/340-01, located at the northern-most boundary of the abatement area, contained groundwater above the nitrate standard at a concentration of 21 mg/L during this sampling event. The southern extent of the plume is defined by AP well DAD-02, which has concentrations below the standard but was not scheduled for sampling this quarter. DAD-23 is the southern-most well sampled this quarter and contained a groundwater nitrate concentration of 21 mg/L. Nitrate was detected below the standard at western well 624-01 at a concentration of 8.8 mg/L. Dominguez Dairy 2 well 42-02 and Dominguez Dairy well 624-02 have historically delineated the western edge of the nitrate plume. However, nitrate was detected at or above the standard with respective concentrations of 10 mg/L and 13 mg/L this quarter. The nitrate plume is defined to the east by AP well DAD-01 (7.0 mg/L). Historically, Dominguez 2 wells 42-10 and 42-12 were below reporting limits; however, groundwater levels have dropped and these wells are no longer sampleable. AP well DAD-13 is an eastern well with nitrate concentrations that fluctuate above and below the standard; DAD-13 had a nitrate concentration of 17mg/L this quarter. The highest nitrate concentration in the northern portion was observed in groundwater collected from Dominguez 2 well 42-06 (48 mg/L).

The chloride and TDS concentrations in DP wells were at or above standards in all wells sampled within the northern portion of the Dairies except for chloride (200 mg/L) in Bright Star Dairy well 340-01. The highest concentration of chloride was observed in northern land application well 70-03 at 2,000 mg/L; the highest concentration of TDS was detected in northern land application well 70/86/340-01 at a concentration of 5,200 mg/L.

Central Portion

The northern extent of the central nitrate plume is defined by Buena Vista Dairy II wells 74-01, 74-02, and 74-04 with concentrations of 3.5 mg/L, 1.4 mg/L, and 7.9 mg/L, respectively. Historically, the eastern extent of the plume was defined by wells DAD-06R, DAD-07 and DAD-15. In the most recent sampling event, nitrate concentrations in groundwater collected from these wells exceeded the standard at concentrations of 16 mg/L, 42 mg/L and 21 mg/L, respectively. The western extent is defined by Buena Vista Dairy well 74-02 (1.4 mg/L), Big Sky Dairy well 833-10 (1.5 mg/L), and Sunset Dairy well 257-02 (7.3 mg/L). AP well DAD-16 was not sampled this quarter but is a delineating well with nitrate concentrations below standard. The southern extent of the central portion nitrate plume is defined by Las Cruces Community Farms (formerly McAnally Enterprises) well MW-4, where nitrate was detected at a concentration of 1.2 mg/L.The highest nitrate concentration in the central portion was 89 mg/L, observed in Big Sky Dairy wells 833-07 and 833-09.

Chloride was below the standard in AP wells DAD-06R (100 mg/L) and Sunset well 257-03 (41 mg/L). TDS was below the standard in AP well DAD-06R (730 mg/L) and Sunset well 257-03

(520 mg/L). The highest chloride concentration was detected at Big Sky well 833-05 at a concentration of 1,600 mg/L. The highest TDS concentration was observed at Buena Vista Dairy II well 74-02 at a concentration of 6,300 mg/L.

Southern Portion – Regional Aquifer

Wells completed in the regional aquifer in the southern portion of the dairies include AP well DAD-10 and Del Oro wells 692-05 through 692-10 (Figure 8). All of the groundwater collected from wells in the regional aquifer contained nitrate below the NMWQCC standard except for Del Oro wells 692-05 (14 mg/L) and 692-08 (220 mg/L). The nitrate concentration at Del Oro 692-08, which is located at the northern (upgradient) edge of Del Oro Dairy, has been orders of magnitude higher than historical results starting in September 2025.

Chloride concentrations were detected above the NMWQCC standard and ranged from 420 mg/L in AP well DAD-10 to 1,400 mg/L in Del Oro Dairy well 692-08. TDS concentrations ranged from 1,400 mg/L in Del Oro well 692-09 and AP well DAD-10 to 4,400 mg/L in Del Oro Dairy well 692-08. Chloride and TDS concentrations in Del Oro well 692-08 have been anomalously high for the past four quarters.

Southern Portion – Perched Aquifer

Wells completed in the perched aquifer in the southern portion include wells 692-02, 692-04 (dry), DAD-09, DAD-20, DAD-21, DAD-22, DAD-26, and DAD-27 (Figure 9). Groundwater nitrate concentrations were above the standard in all monitoring wells in the perched aquifer except for DAD-26 (4.7 mg/L), DAD-27 (5.5 mg/L), and 692-02 (6.0 mg/L) which are located downgradient (DAD wells) or on the southern border of the AP area (Del Oro well 692-02). The highest nitrate concentration was detected at AP well DAD-22 (27 mg/L).

Chloride concentrations in the perched aquifer monitoring wells ranged from 450 mg/L in Del Oro Dairy well 692-02 to 720 mg/L in AP well DAD-21. TDS in the perched aquifer ranged from 1,500 mg/L in Del Oro Dairy well 692-02 to 2,400 mg/L in AP well DAD-21.

There are multiple influences on analyte concentrations at Del Oro Dairy. A pump and reuse system became operational in April 2023 and is currently running. The system performance assessment is provided in Appendix A. Also influencing the area is the rebound of analyte concentrations after a suspected municipal water line leak. The suspected leak was located at the southwest corner of the Del Oro Dairy. Based on groundwater elevation and groundwater concentration data, it is likely the water line started to leak before May 2019 and may have been repaired during the winter of 2020/2021. Concentrations of analytes decreased with the introduction of municipal water to the perched aquifer, and concentrations increased after the suspected repair. Concentrations were still increasing when the pump and reuse system became operational resulting in a lack of baseline concentrations. Additionally, there appears to be a subsurface release of water which may be currently impacting analyte concentrations. Groundwater mounding can first be observed in the perched aquifer in November 2024 and in the regional aquifer in February 2025.

3.3.3 Anomalous Results

Five wells spread throughout the AP plan area had analytical results significantly outside of historical ranges in August/September 2025. Three wells had anomalously low concentrations of nitrate, chloride, and/or TDS (Bright Star Dairy well 257-03, Sunset Dairy well 340-01, and AP well DAD-25). Two wells had anomalously high concentrations of nitrate, chloride, and TDS (Big Sky well 833-09 and Del Oro well 692-08) in August/September 2025. Concentrations of one or more analytes remain outside of the ranges observed prior to August/September 2025 at each of these wells. Due to the consistency of the results over the last several sampling events, most of these results are no longer considered suspect and are considered reflective of groundwater conditions. Analytical concentrations at Big Sky 833-09 have returned to historical ranges; concentrations from the second half of 2025 remain suspect.

Concentrations of nitrate, chloride, and TDS were outside of historical ranges in Big Sky Dairy well 833-08 in February 2026. In February, concentrations were unusually high. Concentrations, though low, returned to historical ranges in the May monitoring event.

4.0 CONCLUSION AND RECOMMENDATIONS

This groundwater monitoring event included the gauging of DP and AP wells and sampling of wells scheduled for sampling that contained sufficient water. Based on the data collected, the following conclusions and recommendations are presented:

4.1 Hydraulic Gradient and Direction of Groundwater Flow

- Depth to groundwater ranged from 13.24 ft btoc in Sunset well 257-03 to 97.91 ft btoc in AP well DAD-15.

- On average, water levels decreased in the northern area (0.39 foot), central area (0.31 foot), and southern area (0.29 foot) of the regional aquifer. In the southern perched aquifer, groundwater elevations decreased by an average of 0.40 feet.

- Bright Star well 340-02, Dominguez 2 wells 42-08, 42-10, 42-11, 42-12, and 42-13, and Del Oro Dairy well 692-04 were dry and could not be sampled.

- During the most recent gauging event, groundwater flow direction of the northern regional aquifer varied from east to southeast. Flow direction in the central and southern portions of the regional aquifer were generally to the southeast.

- The hydraulic gradient across the northern and central portions of the Dairies in the regional aquifer is 0.001 ft/ft. The southern portion of the Dairies has a regional aquifer hydraulic gradient of 0.002 ft/ft. The hydraulic gradient in the perched aquifer in the southern area was calculated as 0.005 ft/ft.

- Groundwater gradients were consistent in the southern regional aquifer until this quarter, when the gradient increased from 0.001 ft/ft to 0.002 ft/ft. The gradient increased in the perched aquifer from 0.004 ft/ft in November 2024 to a gradient of 0.006 ft/ft in May 2025 through February 2026. The gradient is 0.005 ft/ft this quarter.

4.2 Groundwater Nitrate, Chloride, and TDS Analytical Results

- The following AP wells were not scheduled for sampling this quarter: DAD-02, DAD-03, DAD-04, DAD-05, DAD-16, DAD-17, and DAD-24. They are sampled semi-annually, with sampling events in February/March and August/September.

- Nitrate concentrations were below the 10 mg/L NMWQCC standard in groundwater collected from 5 of the 20 AP monitoring wells sampled.

- Chloride and TDS generally remain at or above standards in wells across the site, including upgradient of the northern, central, and southern portions at the Dairies.

- Five wells spread throughout the AP plan area had analytical results significantly outside of historical ranges starting in August/September 2025 (Bright Star well 257-03, Sunset well 340-01, AP well DAD-25, Big Sky well 833-09, and Del Oro well 692-08).

Although these results were initially considered suspect, results from most wells are now considered reflective of groundwater conditions due to the consistency of the results over the last several sampling events. Analytical concentrations at Big Sky 833-09 have returned to historical ranges; concentrations from the second half of 2025 remain suspect.

5.0 REFERENCES

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