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November 14, 2025

Sierra Valley Groundwater Management District  
P.O. Box 88  
Chilcoot, California 96105

**Reference:      Response to Loyalton Landfill Groundwater Conditions and Monitoring Concerns**

This letter is in response to correspondence from Avalex Inc. (Avalex) dated October 24, 2025, regarding their concerns about potential impacts that groundwater recharge in the Smithneck Creek area may have on groundwater conditions proximal to the Loyalton Landfill. The primary concerns identified by Avalex are:

- (1) the potential for groundwater elevations to rise to the depth of waste disposal; and,
- (2) groundwater flow direction to change in response to additional recharge from the projects.

Avalex's concerns are duly noted. UES has conducted a preliminary review of the information provided by Avalex in addition to data obtained during project site work for the area. Based on this preliminary review, UES has the following observations:

- *Assumed base of waste disposal is at an approximate elevation of 5015 feet.*
- *Water level elevations in the western landfill monitoring wells (MW-2, MW-3, MW-8, MW-MY) range from 4980 to 4990 feet amsl. Depths to groundwater at the Griffin recharge sites are estimated to be approximately 30 feet below the base elevation of the landfill.*
- *Recharge locations are located between approximately 1680 feet southwest (Potter) and 700 to 1360 feet (Griffin 1 and 2, respectively) northwest from the landfill waste (Figure 1). The recharge locations are located cross-gradient (Potter) and down-gradient (Griffin 1 and 2) of the landfill (Figure 1).*
- *The recharge projects are augmenting already occurring natural recharge in ephemeral and intermittent drainages. Increases in water level elevations resulting from the recharge facilities are not envisioned to cause any water table elevation increases at the landfill. More detailed evaluations will be performed based on pilot facility observations and estimates of magnitude and duration of augmented recharge.*
- *Drainages running seasonally at up-gradient locations to the landfill are not being proposed for recharge augmentation.*

Based on our initial hydrogeologic review and understanding of the local conditions, it appears unlikely the additional recharge introduced by the projects would have a noticeable impact on groundwater conditions at the landfill. However, given the proximity of the recharge projects to the landfill, additional analysis to evaluate the potential for groundwater mounding at the recharge sites to negatively impact groundwater conditions at the landfill site is warranted. The following is recommended:

1. Complete a preliminary mounding analysis based on a potential range in magnitude and duration of recharge augmentation (additional recharge being introduced by runoff).
2. Conduct additional field monitoring in WY2026 to aid in the quantification of the magnitude and timing of augmented recharge occurring at the recharge facility locations, and to define background conditions.
3. Based on the additional data collection and analysis, provide recommendations for operation or limitation of operation of recharge facilities as may be appropriate based on the data.

UES appreciates the opportunity to be of service to the Sierra Valley Groundwater Management District. Should there be any questions or concerns about this response, please feel free to contact us at your earliest convenience.

Respectfully,  
UES



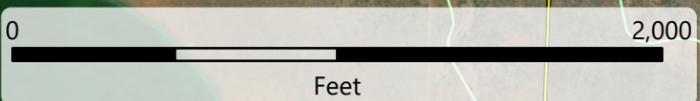
Kaimana Lunaria  
Staff Hydrogeologist



Dwight L. Smith, PG, CHg  
Principal Hydrogeologist



- ▲ Potter Dry Well
- Recharge Structures
- ⊕ Monitoring Wells
- ⊕ Landfill Monitoring Wells
- Approximate Landfill Boundary
- Water Level Elevation Contours (ft amsl)
- Poning Areas
- Sierra County Parcels



**FIGURE 1**  
 Sierra Valley Recharge Project  
 Site Map  
 Loyalton, CA

Client: Larry Walker Associates  
 Project Code: SVLWA  
 NAD 1983 UTM Zone 11N  
 K. Lunaria 11/13/2025



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