
Memorandum

Date: March 5, 2026
To: Buckman Direct Diversion Board
From: Brad Prada (BDD Facility Manager)
Paul Drakos, Jim Riesterer, Boot Pierce, GZA GeoEnvironmental, Inc. d/b/a
Glorieta Geoscience (GGI)
Nancy R. Long, Kyle Harwood (BDD General Counsel)
Subject: Rio Grande Water Quality Calendar Year 2026 Workplan pursuant to BDDB
Resolution No. 2022-2

This memorandum is provided pursuant to Buckman Direct Diversion Board ("BDDB") Resolution No. 2022-2, to set forth the anticipated water quality issues for the BDDB in Calendar Year 2026.

These issues are ranked according to their priority to the BDDB. Tier 1 is top priority where immediate attention may be required and impending actions. Tier 2 has future actions anticipated and ongoing monitoring. Tier 3 issues require no action at present but may require attention and actions in the future.

A copy of Resolution No. 2022-2 is attached to this memo for reference.

TIER 1 ISSUES:

1. Memorandum of Understanding ("MOU") with the U.S. Department of Energy ("DOE")

The BDDB and DOE (collectively, the "Parties") entered a fifth MOU in December 2025 that memorializes their respective commitments through December 1, 2028, concerning stormwater and sediment migration from the Los Alamos National Laboratory ("LANL") to the Rio Grande above the Buckman Direct Diversion. Aside from extending the term of the MOU, the major change from the fourth MOU is that DOE will no longer provide funding for sampling.

Issues addressed in the 2025 MOU included:

- Ongoing operation and maintenance of the Early Notification System ("ENS"), including resolution of data transmission issues as well as an agreement to modify the E110.7 gage, located near the confluence of the Los Alamos/Pueblo (LA/Pueblo) Canyon and the Rio Grande, such that the camera (with night functionality) shall be pointed upstream so that LA/Pueblo Canyon flows can be determined even when the Rio Grande may be in flood stage. The approval of Pueblo de San Ildefonso will be required for this new camera alignment

- Clarifications to the map exhibit.
- Changes to the description of reporting by LANL EM-LA to NMED of LA/Pueblo Canyon environmental monitoring and the reporting to the Intellus database.
- Minor edits recommended by the parties
- Ongoing sampling, data collection, and data sharing with DOE and the New Mexico Environment Department ("NMED").

Recommendations for 2026:

- Continue to work with DOE in accordance with the terms of the MOU to monitor discharges of stormwater from the LANL property to the Rio Grande.
- Coordinate with the Pueblo and EM-LA to implement changes to the camera configuration at E110.7 to direct the camera view upstream in LA/Pueblo Canyon, including night viewing, to allow confirmation of storm flows.
- Work with the Pueblo and EM-LA to investigate options for more robust data transmission from the camera at E110.7. BDD General Counsel, BDD Facilities Manager, and GGI will continue to work with DOE as operation, maintenance, and data transmission issues arise.
- BDD General Counsel, BDD Facilities Manager, and GGI will participate in the Annual Review (anticipated to occur in May).
- GGI will support the facilities manager for BDD intake sampling and LA-Pueblo sediment surveillance sampling. The BDD Intake Sampling Program will continue.

Leads: BDD General Counsel, BDD Facility Manager, GGI

2. LA/Pueblo Canyon Waning Limb Discharge Lag Time Determination

When a storm event results in surface water flow from LA/Pueblo Canyon to the Rio Grande, the BDD halts diversions from the river to ensure that no contaminants from LA/Pueblo Canyon are taken into the Buckman facility. Current BDD operations policy requires that the diversion be shut down for a minimum of 12 hours following the end of an LA/Pueblo Canyon discharge event, as recorded at the E 110.7 gage.

Recommendation for 2026: GGI, the BDD Facilities Manager, and Staff will work to develop and implement a program to quantify the transport time for contaminants discharging from LA/Pueblo Canyon to reach the BDD intake. Implementation of the plan will be contingent on stormwater discharges taking place from LA/Pueblo Canyon during CY 2026.

3. Hexavalent Chromium ("Cr-VI") Water Rights Protest and Plume Mitigation Monitoring

3a. Hexavalent Chromium Water Rights Protest

DOE and Los Alamos County filed an application ("the Application") with the New Mexico Office of the State Engineer ("OSE") to transfer water rights from existing points of diversion to extraction, injection, and monitoring wells used in the remediation Interim Measure ("IM") for the Cr-VI groundwater plume. In 2020, the BDDB protested the application asserting that, among other deficiencies, DOE failed to provide information

about impacts to the Rio Grande. Although two settlement conferences occurred in 2022, the protest is still pending. Also, in 2022, NMED took several regulatory actions that could affect the factual basis of the Application, including directives to cease injection of treated water at the current locations under the IM, and to consider land application or an alternative injection site outside of the plume for treated water under strict conditions. The outcome of these directives could affect the factual basis of the Application, potentially leading to its modification or even withdrawal.

In December 2023, Environmental Management-Los Alamos (EM-LA) issued its responses to comments on the Draft Chromium Interim Measure and Final Remedy Environmental Assessment ("IM-EA"). Options 1 and 2 of the IM-EA require a diversion of 1688 ac-ft/yr which greatly exceeds the original application to the OSE for 679 ac-ft/yr and will require filing a new permit. The BDDDB has prepared and submitted comments on the draft IM-EA, describing its preferred remediation alternatives, including requiring DOE to specifically test and list results for Cr-VI, and advocating for land application of treated water to create a cone of depression to achieve hydraulic and hydrologic control of the Cr-VI plume. In addition, the BDDDB has requested as a condition of any groundwater pumping that all impacts to the Rio Grande from that pumping be offset.

Recommendations for 2026: Monitor the regulatory actions and, if appropriate, engage with the EM-LA and NMED in their resolution. The BDDDB will continue the OSE protest of the 679 ac-ft/yr application and protest the new application (not currently submitted) to ensure EM-LA offsets depletion effects on the Rio Grande, in coordination with Santa Fe County (who is also a co-protestant).

Leads: BDD General Counsel, BDD Facility Manager, and GGI

3b. Hexavalent Chromium Plume Migration Monitoring

In December 2023, the DOE-EM-LA, together with the NMED, prepared a letter requesting that an independent technical review be conducted of actions taken by EM-LA to characterize, model, and contain the hexavalent chromium plume at LANL and the efficacy of chromium plume control interim measures taken to prevent plume migration offsite.

The Independent Technical Review report was released in December 2024 and the report's conclusions are in agreement with GGI's previous assessment that the chromium plume boundaries have not been adequately defined. This has now been confirmed by preliminary sample results from the San Ildefonso Mortandad Regional Well 3 (SIMR3) well that showed Cr-VI concentration exceeding groundwater standards.

Recommendations for 2026: Monitor and evaluate pumping during IM activities – obtain pumping records to evaluate both cumulative and annual total groundwater diversions and cumulative and annual net groundwater diversions. GGI will continue to monitor progress on

SIMR3 well completion, development, and testing to further assess implications for the plume migration and delineation of the plume boundaries

Leads: GGI, BDD Facility Manager

4. PFAS

In January 2024, the LANL NPDES permittees submitted the second Annual Data Report for per- and polyfluoroalkyl substances ("PFAS") as required by the settlement agreement with the DOE. As in 2022, three of the 15 locations proposed to be sampled were in the Los Alamos Canyon watershed, none of which were sampleable due to lack of triggering events (i.e., sufficient flow). One location - outside of the LA/Pueblo Canyon watershed - was sampled in 2023, with various PFAS detected. In the two years of monitoring under this program, no samples have been collected in sites in the LA/Pueblo Canyon watershed. The BDDDB has also approached NMED to adopt surface water standards for PFAS. LANL has committed to continue PFAS sampling of groundwater. In 2025 GGI collected samples from the Rio Grande above and below the confluence with Los Alamos/Pueblo Canyon. No PFAS compounds were detected that exceeded NMED standards.

It is important to note that the Granular Activated Carbon (GAC), which is part of the BDD treatment train, is very effective in removing PFAS from water. If PFAS is present in source water, the GAC will effectively treat it.

Recommendations for 2026: Closely monitor PFAS standards and actions at the federal and state level. Coordinate with BDD Facility Manager to assess costs and develop strategies for sampling at the BDD intake. Continue outreach to NMED to stay apprised of amendments to state groundwater and surface water standards that may involve PFAS.

Leads: GGI, BDD Facility Manager

5. New Mexico NPDES Primacy

New Mexico is one of three states that does not have authority from the federal government to implement the NPDES permitting program under the Clean Water Act. Consequently, NPDES permits in New Mexico are issued by the Environmental Protection Agency, Dallas office.

Two bills passed in the 2025 Legislative Session that contained outlines for new NM Water Quality Control Commission rules for development of a State-run NPDES permitting program. In these bills, NMED requested funding for new staff to support a permitting program. NMED is in the process of developing permitting rules and has petitioned the Water Quality Control Commission (WQCC) for a public hearing on proposed rules in spring of 2026.

Recommendations for 2026: Continue to interface with NMED as appropriate to track development of the permitting program both as it may affect permitting at LANL and BDD's

current NPDES permit for sediment return to the Rio Grande. Participate in public hearings as needed.

Leads: GGI, BDD General Counsel

TIER 2 ISSUES:

6. LANL National Pollutant Discharge Elimination System (NPDES) Permits

The BDDDB provided comments to NMED in 2020 on the State certification of LANL's surface water permits for its industrial outfalls (NPDES Permit No. NM002835) and stormwater discharges (NPDES Permit No. NM0030759). The Board's comments centered on technical aspects of the permits, and how they relate to the cleanup activities for legacy pollution at LANL. The LANL operators petitioned for review of the State certification of the two permits and conditions imposed in the certification process, and hearings were granted although not scheduled. In a Settlement Agreement of the petition the parties agreed to address per- and polyfluoroalkyl substances ("PFAS") monitoring as described above in Issue #3.

In the wake of *Sackett v. USEPA*, the EPA appears to continue its enforcement of NPDES permits issued for areas where outfall or stormwater discharges into intermittent streams where there is a confluence with a body of water defined as a "Waters of the United States" ("WOTUS") (e.g., the Rio Grande). As part of its analysis of Jemez Mountain streams, the EPA determined that Los Alamos Canyon is a WOTUS and should be regulated under NPDES permitting.

Recommendations for 2026: Monitor these and other LANL permits, particularly when LANL is required to seek renewals or seeks to modify the existing permits. Monitoring results collected from Los Alamos and Pueblo Canyons and their tributaries under the Agreement will be reviewed. Monitor NMED's progress to obtain NPDES primacy and how NMED will regulate surface water discharges from LANL. Participate in public hearings as needed.

Leads: BDD Facility Manager, GGI

7. DOE's Sitewide Environmental Impact Statement for LANL

In January of 2025, the U.S. Department of Energy, National Nuclear Security Administration and Los Alamos National Laboratory published a Draft Site-Wide Environmental Impact Statement for Continued Operation of Los Alamos National Laboratory ("SWEIS").

The BDDDB's primary concern is contaminants originating from Los Alamos and Pueblo Canyons and their tributaries and groundwater discharge to the Rio Grande upstream of the BDD intake. The SWEIS, however, does not specifically address Los Alamos and Pueblo Canyons but presents a wide range of issues that LANL will address. The SWEIS broadly addresses the Hexavalent Chromium plume, PFAS contamination and water rights. The BDDDB submitted

comments on the draft SWEIS in April, 2025. Comments included eight specific recommendations.

Recommendations for 2026: Follow up with NMED and DOE on the BDDDB recommendations and whether they have been incorporated/implemented in revisions to the draft SWEIS.

Leads: GGI, BDD Facility Manager

TIER 3 ISSUES:

8. NMED/LANL Consent Order

In August 2024, to avoid lengthy and costly litigation, NMED and LANL entered into a Settlement Agreement on the Consent Order. The general purposes of this Consent Order are to: provide a framework for current and future actions to implement regulatory requirements; establish an effective structure for accomplishing work on a priority basis through cleanup campaigns with achievable milestones and targets; drive toward cost effective work resulting in tangible, measurable environmental clean-up; minimize the duplication of investigative and analytical work and documentation and ensure the quality of data management; set a structure for the establishment of additional cleanup campaigns and milestones as new information becomes available and campaigns are completed; facilitate cooperation; exchange of information; provide for effective public participation; and define and clarify the Settlement Agreement's relationship to other regulatory requirements. On January 14, 2026, LANL presented proposed consent order activities in 2026, which include development of a workplan to investigate (Phase III investigation) reaches of Pueblo Canyon and Upper LA/Pueblo Canyon.

Recommendation for 2026: GGI will work with NMED to track progress on the Settlement Agreement and pursue BDD interests. GGI will engage with LANL and report back to the BDD Facilities Manager regarding development of the Pueblo Canyon Phase III Investigation Workplan and Upper LA/Pueblo Canyon Phase III Investigation Workplan.

Leads: GGI, BDD General Counsel, BDD Facility Manager

9. Clean Water Act §303(d)/305(b) Integrated Report and List of Impaired Waters ("Integrated Report")

NMED prepares an Integrated Report every two years in compliance with Sections 303(d) and 305(b) of the Clean Water Act. The Integrated Report serves as a source of information on water quality and pollution control programs as well as how NMED assesses surface water quality data against water quality standards. The BDDDB has provided comments to NMED on the last three (2020, 2022, and 2023) Integrated Reports. The BDDDB's comments on the 2024-2026 Integrated Report centered on NMED's delays in implementing Total Maximum Daily Loads ("TMDLs") to address impairment of the Rio Grande and streams on the Pajarito Plateau,

as well as assessing the entirety of Los Alamos Canyon and its tributaries in 2024 for its suitability as a Public Water Supply ("PWS").

NMED stated in the March 12, 2024, Water Quality Control Commission ("WQCC") meeting that it did not intend to assess LA/Pueblo Canyon and its tributaries as a PWS. The WQCC voted unanimously to send the current 303(d) list and 305(b) report to the EPA.

NMED submitted the final Draft Integrated Report to the EPA on April 1, 2024. NMED TMDL sample collection was proposed for the Rio Grande (Cochiti Reservoir to San Ildefonso boundary).

The NMED Surface Water Quality Bureau submitted a 2025-2026 Middle Rio Grande and Santa Fe Watershed Field Sampling Plan on February 28, 2025. The sample collection was initiated in 2025 and is expected by NMED to be finalized in November 2026, with final data validation to follow and publication of a survey report to follow in the Spring of 2027.

On December 8, 2025, a public notice was issued by NMED on the 2026-2028 CWA §§303(d)/305(b) Integrated List of Assessed Surface Waters. No BDD comments were provided.

Recommendations for 2026: Continue to monitor and review NMED TMDL assessment efforts and documents for the Rio Grande reach (Cochiti Reservoir to San Ildefonso boundary) and assess data as it becomes available. Coordinate with the BDD Facility Manager and prepare to develop public comments on the assessment.

Leads: GGI, BDD General Counsel, BDD Facility Manager

10. Los Alamos County Municipal Separate Storm Sewer System ("MS4") Permit

Prior to 2022, the EPA was in the process of drafting a NPDES MS4 permit for Los Alamos County, the New Mexico Department of Transportation, and DOE to regulate stormwater discharges in Los Alamos County outside of LANL, which is covered by its own stormwater discharge permit. A significant portion of these discharge locations are in the Los Alamos Canyon watershed. In December 2024, the EPA issued a determination that discharges from small MS4s located in the Los Alamos Urban Area, as defined by the latest decennial Census, and from MS4s located on LANL property within Los Alamos and Santa Fe Counties, New Mexico require NPDES permit coverage because the discharges are contributing to violations of New Mexico Water Quality Standards in Waters of the United States.

At this time, the current permit is active, but administratively continued and no additional discharges may be added until the next draft of the new permit is issued by the EPA.

Recommendations for 2026: Monitor the development of this permit as it pertains to numerous uncontrolled discharges that are not currently covered by the LANL stormwater NPDES permit.

Coordinate with the BDD Facility Manager on any draft EPA permit revisions and prepare comments on the draft permits, once released, for the BDD's consideration.

Leads: BDD Facility Manager, BDD General Counsel, GGI.

11. Triennial Review of State Surface Water Quality Standards

In January 2024, the Board provided comments to NMED on the draft 2024-2026 State of New Mexico Clean Water Act (CWA) §303(d)/305(b) Integrated List of Assessed Surface Waters. In the past the BDD has requested that NMED provide special provisions and assessments for stream segments from the Pajarito Plateau and the Rio Grande at the BDD intake in State Standards.

Recommendations for 2026: The next Triennial Review process will begin in 2028, when the public will be invited to review and comment on NMED's surface water quality standards. It is not anticipated that work on the 2028 review will begin during 2026, but if any unforeseen issues related to the Triennial Review arise in 2026, GGI will coordinate with the BDD facility manager to address them as appropriate.

Leads: GGI, BDD General Counsel, BDD Facilities Manager