Heber Valley
Aquifer Alliance

UNRESOLVED AQUIFER PROTECTION RISKS AT THE SLOPE DEVELOPMENT

The Case for a USGS & UGS Environmental Impact Study

June 2026

Heber Valley Aquifer Alliance - Mission

Heber Valley Aquifer Alliance (HVAA) works to protect, preserve, and sustain the Heber Valley aquifer through science-based advocacy, public education and policy engagement. We partner with hydrologists, state scientists, water experts and community leaders to ensure decisions about development and groundwater use are responsible, transparent and grounded in sound science.

Heber Valley Aquifer Alliance – What We Do

Educate the Community - We simplify complex hydrology issues and make water data accessible through reports, visuals, events, and public briefings.

Advocate for Responsible Water Policy - We push for stronger oversight, groundwater protection standards, and cumulative impact studies before high-volume pumping occurs.

Promote Better Development Practices - Smart growth can coexist with water security — but only with transparent planning and science-based limits.

Collaborate with Experts - We work with USGS, UGS, engineers, hydrologists, and researchers to ensure assessments are accurate and independent.

Scientific Review

This report is an assessment of The Slope stormwater and drainage plan based on publicly available documents, including the developer's geotechnical, groundwater, stormwater, drainage and response materials, as well as publicly available scientific and regulatory information related to Heber Valley's aquifer system.

This document *has not* been reviewed, endorsed or approved by USGS, UGS or any independent hydrologist, hydrogeologist or licensed professional engineer. It should not be treated as a stamped engineering report or formal expert opinion.

However, the absence of formal expert review does not mean the concerns should be dismissed. The issues identified in this report are grounded in the submitted project documents themselves and in established scientific understanding of shallow groundwater, highly permeable soils, stormwater infiltration and Class IA aquifer protection.

The findings show that The Slope stormwater plan leaves significant questions unanswered. The current record does not prove that infiltrating stormwater from a dense mixed-use development into shallow, highly permeable subsurface materials will protect Heber Valley's Class IA aquifer from degradation. The unresolved issues include groundwater separation, seasonal groundwater fluctuation, contaminant transport, bypass flows, construction-phase risks, long-term maintenance and potential connection to the Provo River system.

For these reasons, Heber City must not proceed with the submitted stormwater and drainage design until an independent hydrogeologic review is conducted to ensure the aquifer is adequately protected. This report is a serious, evidence-based warning demanding immediate action

Disclaimer

This paper represents the opinions and interpretations of its authors, who have undertaken their best effort to analyze publicly available data concerning the stormwater drainage plans for the The Slope development. The findings, conclusions and recommendations expressed herein are based solely on information available in the public domain at the time of writing. The analyses contained in this document are intended for informational and educational purposes only and should not be construed as definitive scientific conclusions. The authors make no warranties, express or implied, regarding the accuracy, completeness or fitness of this material for any particular purpose and expressly disclaim any liability for damages or losses arising from the use, reliance upon or interpretation of the information presented herein. It is not the authors intent to impugn the integrity of The Slope development, its consultants or any public officials involved. This document is presented as an independent technical assessment prepared in good faith to encourage transparency, scientific review and responsible stewardship. A comprehensive, federally supported Environmental Impact Study conducted by the U.S. Geological Survey (USGS), in coordination with the Utah Geological Survey (UGS), would provide a more complete, peer-reviewed and authoritative evaluation of hydrologic conditions and potential environmental impacts.

Executive Summary

The Slope development proposes to collect, treat and infiltrate stormwater from a dense mixed-use project located at River Road and Highway 40 in Heber City. The project sits in a highly sensitive groundwater setting, with shallow groundwater, highly permeable gravelly soils and proximity to the Provo River system. The area is part of the Heber Valley aquifer system, which includes Class IA groundwater — the most protected groundwater classification in Utah.

This report is based on publicly available project documents, including the developer's geotechnical, groundwater, stormwater, drainage and response materials, as well as publicly available scientific and regulatory information related to Heber Valley's aquifer system. It has not been reviewed, endorsed or approved by USGS, UGS or any independent hydrologist, hydrogeologist or licensed professional engineer. It *should not* be treated as a stamped engineering report or formal expert opinion.

However, the concerns identified in this report should not be dismissed. They arise directly from the submitted project documents and from well-established principles of groundwater protection, stormwater infiltration and contaminant transport. The central conclusion is straightforward: the submitted studies show a proposed stormwater system, but they do not prove that the system will protect Heber Valley's Class IA aquifer from degradation.

The proposed stormwater design relies heavily on infiltration through StormTree treatment units, perforated pipes, stone trenches and underground chamber systems. The design assumes that adequate separation from historic high groundwater can be maintained and that stormwater can be treated before entering the subsurface system. However, the record does not adequately demonstrate that these assumptions are valid under real-world conditions, including wet years, high-water seasons, snowmelt, groundwater mounding, construction disturbance, system clogging, maintenance failure or large storm events.

The groundwater analysis is one of the most important unresolved issues. The submitted studies document shallow groundwater across the site, with some estimated historic groundwater levels only a few feet below ground surface. The developer's analysis relies heavily on limited field observations and mottling-based estimates of historic high groundwater. Those methods may provide preliminary information, but they are not enough, by themselves, to establish long-term aquifer protection for a large development proposing direct stormwater infiltration above a pristine aquifer.

The studies also do not provide a site-specific groundwater-flow or contaminant-transport analysis. The documents do not show where infiltrated stormwater will go, how quickly it will move, whether it will migrate toward the Provo River system, how much natural attenuation will occur or whether contaminants could reach shallow groundwater. This is a major omission. In highly permeable subsurface materials with shallow groundwater, contaminants may have limited opportunity for filtration before reaching the aquifer.

The proposed treatment system also leaves significant unanswered questions. StormTree units may provide treatment for certain pollutants under specific design and maintenance conditions, but their

use does not prove that all contaminants of concern will be removed. Pollutants such as dissolved salts, chloride, total dissolved solids, hydrocarbons, nutrients, pesticides, herbicides, pathogens, pH-altering materials and construction-related contaminants require specific analysis. The submitted materials do not provide a pollutant-by-pollutant demonstration that infiltrated stormwater will comply with Class IA aquifer protection standards.

A further concern is the treatment of larger storm events. The stormwater design appears to size treatment capacity around smaller water-quality events, while larger storm flows may bypass portions of the treatment media and enter the perforated pipe and infiltration network. That creates an unresolved risk that partially treated or untreated stormwater could be routed into the subsurface system during high-flow events. The documents do not adequately quantify pollutant loading during (these) bypass conditions, first-flush events or back-to-back storms.

Construction-phase risk is also not adequately addressed in the submitted record. Construction in an area with shallow groundwater and highly permeable soil creates elevated risk from excavation, dewatering, sediment, fuel, hydraulic fluids, concrete washout, equipment leaks and accidental spills. A generic Stormwater Pollution Prevention Plan (SWPPP) should not be considered sufficient protection for a Class IA aquifer. Heber City should require a site-specific construction-phase aquifer protection plan before grading, excavation, dewatering or utility work continues.

Long-term maintenance is another unresolved issue. The entire stormwater concept depends on the continued performance of treatment units, isolator rows, swales, perforated pipes, stone trenches and underground chambers. If these systems clog, bypass, are not cleaned, or are not properly maintained, they may become direct pathways for contaminated stormwater to enter the subsurface. The submitted record does not provide sufficiently enforceable maintenance, funding, inspection, reporting and corrective-action framework.

The primary issue before Heber City is not whether the developer has proposed a stormwater system. The issue is whether the City has enough independent evidence to conclude that the proposed system will protect the aquifer over the life of the project. At this point, HVAA feels the answer is no.

Before construction continues, Heber City should require independent hydrogeologic review, full high-water-season groundwater monitoring, groundwater mounding analysis, contaminant fate-and-transport analysis, pollutant-specific water-quality evaluation, bypass-event analysis, a construction-phase aquifer protection plan, enforceable long-term maintenance requirements and baseline and post-construction groundwater monitoring.

The Slope stormwater studies do not yet demonstrate that the proposed development will protect Heber Valley's Class IA aquifer. They present an engineering concept, but they do not prove aquifer protection. Because contamination of a pristine aquifer may be difficult or impossible to reverse, Heber City should require proof before construction continues, not explanations after damage occurs.

Assessment of The Slope's Stormwater Drainage Design

What the developer's studies do show

The Anderson Wahlen & Associates (AWA) drainage report proposes full on-site retention and infiltration of the 100-year storm using StormTree units, perforated pipes, stone trenches and underground chambers. It states that infiltration systems are designed with 4 feet of separation from "historic high groundwater," and that the StormTree units will treat the 2-year water-quality event while 100-year flows can bypass into the perforated pipe system.

GSH Geotechnical, Inc (GSH) measured groundwater in 12 test pits on August 4, 2025, with measured depths ranging from **4.5 feet to 10.2 feet** below ground surface. GSH then estimated "historic groundwater" from mottling, with estimated historic depths as shallow as **3.0 feet** at TP-5 and **4.0–4.7 feet** at several other pits. GSH also expressly warns that its groundwater measurements and estimated historic depths "may not be representative of other times or locations," and that groundwater may be shallower or deeper during construction and over the life of the structure.

Applied GeoTech (AGEC) separately found shallow groundwater generally at **about 5.5 to 10 feet**, warned that "significant fluctuations" should be expected, and noted that if the parking garage extends below or near high water, "significant water flows should be expected" and pump tests are recommended.

Major Gaps, Assumptions and Technical Concerns

1. The Groundwater Analysis is Too Narrow for a Class IA Aquifer

The project relies heavily on limited site observations and mottling-based estimates of historic high groundwater. That is not enough for this location.

The strongest mismatch with earlier USGS work is that the project documents focus primarily on three limited site-level test pits and mottling, while the USGS describes the Heber Valley aquifer as a connected valley-fill groundwater system. That system receives recharge from irrigation, stream infiltration, precipitation and subsurface inflow, and discharges to Deer Creek Reservoir, springs, seeps, the Provo River, other streams, evapotranspiration and wells. USGS also documented significant seasonal water-level fluctuations in the valley-fill aquifer system, generally highest in June or July and lowest in winter.

This does not prove that The Slope site itself fluctuates by the same amount documented elsewhere in the valley. But it does mean that a one-time late-summer groundwater observation, supplemented by mottling, should not be used as the primary basis for concluding that the stormwater system has adequate separation from groundwater or that historic high groundwater has been reliably established.

The developer's reports do not adequately reconcile the site-specific groundwater assumptions with the broader USGS understanding of the Heber Valley aquifer.

GSH itself acknowledges that seasonal and annual groundwater drivers were beyond the scope of its evaluation. In a Class IA aquifer setting, that limitation is significant.

Recommended Follow-up

Heber City should require at least one full high-water-season monitoring program, including surveyed piezometers, continuous data loggers, river/ditch/irrigation correlation and comparison to nearby wells.

2. The Studies Do Not Prove That Four Feet of Separation Will Exist Under Real Conditions

The stormwater design depends heavily on maintaining vertical separation between infiltration features and historic high groundwater.

But the submitted studies acknowledge that groundwater can vary by season, year and location. The documents do not demonstrate that the proposed infiltration system will maintain the required separation during wet years, peak irrigation recharge, snowmelt periods, storm sequences, or groundwater mounding caused by the infiltration system itself.

If the groundwater elevation is underestimated, the entire protective basis of the design becomes questionable.

Recommended Follow-up

Heber City should not allow further construction until groundwater separation is confirmed under real high-water conditions, not merely inferred from limited field observations.

3. The Studies Do Not Provide a Groundwater-Flow or Contaminant-Transport Analysis

The project proposes to infiltrate stormwater into highly permeable subsurface materials above a Class IA aquifer. AWA acknowledges the porous soils and aquifer issues, but the submitted stormwater materials do not provide a site-specific groundwater-flow or contaminant-transport analysis. ***That is a major omission.***

The current record does not show:

1. Where infiltrated stormwater will go.
2. How quickly it will move.
3. Whether it will move laterally toward the Provo River.
4. Whether it will reach shallow groundwater.
5. Whether contaminants will be attenuated, diluted or transported.
6. Whether groundwater mounding will reduce the claimed separation distance.
7. Whether the infiltration system could create preferential pathways into the aquifer.

This is especially important because USGS describes groundwater discharge to the Provo River and other streams as part of the Heber Valley groundwater system. The nearby Army Corps documents also show that North Fields hydrology is complex, with relic swales, wetlands, ditches, shallow groundwater and Provo River-related drainage features. The Army Corps determination describes a wetland in a relic stream channel that may temporarily hold precipitation and intercept high groundwater.

In this setting, it is not enough to show that stormwater can be collected and infiltrated. The City needs to know where that water goes after infiltration and whether contaminants could migrate into the aquifer or toward the Provo River system.

Recommended Follow-up

Heber City should require a site-specific hydrogeologic fate-and-transport analysis that evaluates groundwater flow direction, travel time, attenuation, dilution, mounding, preferential pathways and potential connection to the Provo River system.

4. "StormTree GULD-certified" Certification Does Not Prove Aquifer Protection

The developer relies heavily on StormTree treatment units and their certification for certain pollutant categories. That does not resolve the aquifer-protection issue.

StormTree's GULD certification is for Basic treatment, including total suspended solids, enhanced treatment, including certain dissolved metals, and phosphorus treatment under specified sizing, media-depth, loading-rate, installation and maintenance conditions. That certification does not prove removal of all contaminants relevant to a Class IA aquifer.

Pollutants of concern include, at a minimum:

1. Total dissolved solids.
2. Chloride and deicing salts.
3. Petroleum hydrocarbons.
4. PAHs.
5. VOCs.
6. Metals.
7. Nutrients beyond phosphorus.
8. Pesticides and herbicides.
9. Pathogens.
10. pH impacts.
11. Construction-related contaminants.
12. Contaminants associated with parking areas, garages, trash areas, commercial uses and vehicle traffic.

Many of these pollutants are dissolved-phase contaminants that are not reliably removed by sediment-based or media-based pretreatment systems. In particular, total dissolved solids and

chloride are persistent and difficult to remove through conventional stormwater best management practices.

The GULD document also makes clear that performance depends on site-specific conditions, proper sizing, installation, operation and maintenance. It also states that runoff from the test facility may not represent all sites, and that owners must inspect systems frequently during the first year to determine the actual maintenance schedule.

This matters because Utah's Class IA groundwater standard requires pristine groundwater to be protected to the maximum extent feasible from degradation by facilities that discharge or would probably discharge to groundwater.

Recommended Follow-up

Heber City should not accept the presence of a proprietary treatment device as proof that the aquifer is protected. Before relying on StormTree units as the primary water-quality protection for this site, the City should require a pollutant-specific analysis showing that the full stormwater system will prevent degradation of the Class IA aquifer under actual site conditions, including large storms, bypass flows, snowmelt, maintenance failure and long-term operation.

5. The New UDOT Bypass Design Leaves a Major Water-Quality Risk Unresolved

The submitted stormwater design indicates that StormTree units are sized for the 2-year treatment flow, while larger storm events, including 100-year flows, can bypass portions of the treatment system and enter the underdrain, perforated pipe and infiltration network.

This is one of the largest weaknesses of the design.

The system may provide treatment for ordinary water-quality events, but larger storms can send much higher flows into the subsurface infiltration system without the same level of treatment. The first flush of a storm can carry a concentrated pollutant load, and large storms can mobilize sediment, hydrocarbons, trash, metals, nutrients and other contaminants.

If those flows bypass the treatment media and enter the subsurface infiltration system, the City needs to know what level of treatment actually occurs before that water reaches shallow groundwater or the aquifer.

The submitted documents do not clearly quantify this risk. They do not adequately evaluate pollutant loading during bypass events, first-flush behavior, sediment resuspension, dissolved pollutant movement, back-to-back storm events, or whether the isolator rows meaningfully control dissolved contaminants.

Recommended Follow-up

Heber City should require a pollutant-loading and bypass-event analysis that evaluates first-flush conditions, large storms, back-to-back storms, sediment resuspension, dissolved contaminants and the actual level of treatment provided before infiltration into the subsurface system.

6. The Infiltration-Rate Testing is Not Sufficient For a ~40 Acre Development

AWA did not use double-ring infiltrometer testing. Instead, the design relies on limited percolation testing using three small test holes, with measured rates of 2, 3 and 10 minutes per inch. The slowest measured rate was then cut in half to 20 minutes per inch for design.

That reduction may be conservative for preliminary drainage sizing, but it does not answer the more important aquifer-protection questions. The issue is not simply whether stormwater can infiltrate. The issue is whether the infiltration system will remain protective of groundwater over time and under real-world conditions.

The testing does not adequately address:

1. Spatial variability across the full site.
2. Long-term clogging.
3. Fine sediment accumulation.
4. Frozen-ground or snowmelt conditions.
5. Groundwater mounding.
6. Reduced infiltration capacity over time.
7. Maintenance failure.
8. Preferential flow through gravel layers.
9. High-water-year conditions.
10. Long-term loss of infiltration capacity.

For a normal development site, this may be treated as a drainage-design detail. For a Class IA aquifer site, it is a central risk issue.

Recommended Follow-up

Heber City should require additional field testing and analysis that evaluates infiltration performance, clogging, groundwater mounding, seasonal groundwater conditions, preferential flow and long-term system reliability across the full development area.

7. The Construction-Phase Contamination Risk Is Not Adequately Addressed

The construction period may be the highest-risk phase of the entire project, yet the submitted materials do not adequately address construction-phase aquifer protection.

AWA acknowledges that the preliminary stormwater study does not go into detail on construction stormwater and erosion control and instead indicates that the SWPPP and NOI process will address those issues later. That is not adequate for this site.

For a Class IA aquifer with shallow groundwater and highly permeable soils, construction-phase risk requires more than a generic SWPPP. Construction at this location could involve disturbed soils, exposed gravel, excavation below or near groundwater, shallow groundwater entering open excavations, dewatering, sediment-laden water, fuel storage, hydraulic fluids, equipment leaks, concrete washout, trash, petroleum hydrocarbons and accidental spills. During construction, the permanent stormwater treatment system may not yet be installed or functioning, leaving the aquifer more exposed.

Concrete washout is a particular concern because it can be highly alkaline. Fuel, oil and hydraulic fluids are also serious concerns because even small releases can move quickly through permeable subsurface materials if not contained. If dewatering is required, the City must know where that water will go, whether it will be treated, whether it will be sampled and whether any discharge could enter the stormwater system, groundwater or nearby drainage features.

A generic SWPPP should not be treated as sufficient protection for a pristine aquifer.

Recommended Follow-up

Heber City should require a site-specific construction-phase aquifer protection plan. That plan should address dewatering, fuel storage, secondary containment, equipment staging, spill response, concrete washout, turbidity, petroleum hydrocarbons, sediment control, trash control, groundwater encountered in excavations, sampling requirements and clear discharge prohibitions.

8. The Long-Term Maintenance Plan Is Not Strong Enough In The Record

The entire stormwater concept depends on long-term performance of treatment units, isolator rows, perforated pipes, stone trenches, swales, chambers and infiltration surfaces. If maintenance fails, the system can become a direct pathway for contaminated stormwater into the subsurface. The City should require a legally enforceable long-term maintenance plan that includes:

1. Responsible party.
2. Dedicated funding mechanism.
3. Inspection schedule.
4. Cleaning schedule.
5. Sediment removal requirements.
6. Media replacement requirements.
7. Flow-testing or performance verification.
8. City access rights.
9. Annual reporting.
10. Corrective-action triggers and consequences for noncompliance.

Without this, the design is only a paper plan.

9. City Stormwater "Code Compliance" Is Not the Same as Class IA Aquifer Protection

The developer's materials repeatedly point to compliance with Heber City's stormwater design manual and the use of City-requested methodology. That may be true, but it does not resolve the aquifer-protection issue.

This site is not merely a drainage-design problem. It is an aquifer-protection problem.

A stormwater system can comply with municipal design criteria and still fail to demonstrate that it will protect a pristine aquifer from degradation. The applicable standard should not simply be whether the system stores the required storm volume, maintains a modeled separation distance or satisfies the City's stormwater manual. The standard should be whether the system protects groundwater quality under actual site conditions over the life of the project.

Utah defines Class IA groundwater as pristine groundwater, including groundwater with total dissolved solids below 500 mg/L and no contaminants exceeding groundwater quality standards. Class IA protection levels require protection to the maximum extent feasible from degradation by facilities that discharge or would probably discharge to groundwater.

That standard is higher than ordinary stormwater design compliance.

UDOT's Heber Valley Corridor water-quality report provides a useful comparison. UDOT treated stormwater infiltration into the Heber Valley Aquifer as requiring pollutant-specific modeling and comparison to Class IA groundwater standards. UDOT's modeling found that total dissolved solids, dissolved chromium, dissolved lead and pH could be concerns in stormwater runoff before infiltration or treatment. UDOT also specifically noted that traditional BMPs are not highly effective at removing TDS from deicing runoff.

The Slope documents do not provide a comparable pollutant-by-pollutant groundwater compliance analysis.

For that reason, ***Heber City should not treat stormwater design-manual compliance as a substitute for independent aquifer analysis.***

Recommended Follow-up

Heber City should require a pollutant-specific groundwater protection evaluation showing that the proposed system will not degrade the Class IA aquifer under actual site conditions, including seasonal groundwater fluctuations, large storms, snowmelt, bypass flows, maintenance failure and long-term operation.

Areas Where the Developer's Conclusions Do Not Align with Broader Scientific Understanding

USGS Heber Valley Groundwater Studies

USGS describes Heber Valley as a connected groundwater system in which recharge, groundwater levels, surface water, streams, springs, seeps, irrigation and Deer Creek Reservoir interact.

The developer's studies do not adequately address that connected system. They focus primarily on site-level stormwater sizing and shallow groundwater estimates. They do not provide a full analysis of how infiltrated stormwater would behave within the broader groundwater system.

UGS and Groundwater-Sensitivity Principles

Groundwater-sensitivity analysis generally recognizes that shallow groundwater, coarse permeable materials and limited natural filtration create greater vulnerability to contamination.

The Slope site has exactly those characteristics: shallow groundwater, permeable gravelly soils and proposed direct infiltration of developed-site runoff.

The developer's studies acknowledge the porous soils but do not adequately evaluate the contamination implications of those soils.

UDOT Heber Valley Water-Quality Analysis

UDOT's Heber Valley Corridor water-quality analysis treats stormwater infiltration into the Heber Valley aquifer as requiring pollutant-specific evaluation, including comparison to Class IA groundwater standards.

The Slope documents do not provide a comparable pollutant-by-pollutant analysis.

This is a major gap. A private development infiltrating stormwater into the same sensitive aquifer system should be held to a similarly rigorous standard.

Real Risk to the Aquifer

The real risk is not limited to one catastrophic spill. It includes the cumulative effect of repeated stormwater infiltration over years and decades. Potential contaminant sources include:

1. Roads and parking areas.
2. Vehicle leaks.
3. Deicing salts.
4. Trash and dumpster areas.
5. Landscaping chemicals.
6. Fertilizers.
7. Pesticides and herbicides.
8. Pet waste.

9. Commercial-use runoff.
10. Construction contaminants.
11. Sediment and turbidity.
12. Accidental spills.
13. Maintenance failures.
14. Sewer or lift-station incidents.

Because the site has shallow groundwater and highly permeable subsurface materials, contaminants may have limited opportunity for natural filtration before reaching groundwater. ***That is the central aquifer risk.***

Required Conditions Before Approval

Heber City should halt development until the following conditions are met:

1. Independent hydrogeologic review—Heber City should require an independent hydrogeologic review by a qualified groundwater expert selected by or acceptable to the City, not retained solely by the developer.

2. Full high-water-season groundwater monitoring—Heber City should require surveyed monitoring wells or piezometers with continuous groundwater-level data through at least one full high-water season.

3. Groundwater mounding analysis—Heber City should require modeling to determine whether the proposed infiltration system will raise groundwater levels and reduce the claimed separation distance.

4. Contaminant fate-and-transport analysis—Heber City should require an analysis showing expected pollutant movement, flow direction, travel time, attenuation, and potential connection to the Provo River or other groundwater discharge areas.

5. Pollutant-specific water-quality analysis—Heber City should require a pollutant-by-pollutant analysis for contaminants relevant to a Class IA aquifer, including TDS, chloride, metals, hydrocarbons, nutrients, pesticides, herbicides, pathogens, pH, and construction-related pollutants.

6. Bypass-event analysis—Heber City should require a clear explanation of what happens during larger storm events when flows bypass portions of the treatment media.

7. Construction-phase aquifer protection plan—Heber City should require a detailed plan addressing grading, excavation, dewatering, spills, concrete washout, fuel storage, equipment staging, sediment control, and groundwater encountered during construction.

8. Long-term maintenance and enforcement plan—Heber City should require a legally enforceable maintenance program with funding, reporting, inspection rights, corrective-action triggers, and consequences for noncompliance.

9. Baseline and post-construction groundwater monitoring—Heber City should require upgradient and downgradient monitoring wells, baseline water-quality testing before construction, and continued post-construction sampling after occupancy.

Conclusion

The Slope stormwater studies do not yet demonstrate that the proposed development will protect Heber Valley's Class IA aquifer.

The submitted documents show a proposed engineering design. They do not prove that the design will prevent groundwater degradation under real-world conditions.

Because this project sits in a highly sensitive aquifer area with shallow groundwater and permeable soils, the City should require independent hydrogeologic review, seasonal groundwater monitoring, pollutant-specific analysis and enforceable long-term monitoring before allowing the project to proceed.

The City should not allow this development to move forward based on assumptions that have not been independently verified.

Once a pristine aquifer is contaminated, the damage may be irreversible. Heber City should require proof before construction continues, not explanations after contamination occurs.