

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION (NDEP)
Public Workshop on Proposed Amendments to NAC 445A
Underground Injection Control

August 26, 2026

Nevada Division of Environmental Protection
DCNR Conference Room, Bonnie
901 S. Stewart Street
Carson City, Nevada 89701

MEETING SUMMARY

ATTENDEES:

Workshop Chair: Bret Allen, Supervisor, Underground Injection Control (UIC) Branch

NDEP Staff: Jeffrey Kinder (Deputy Administrator), Andrew Dixon (Bureau Chief), Lisa Aleman (UIC Permit Writer), Lauren Bowen (Staff Engineer), and Andrew Kowler (UIC Permit Writer).

Public:

Carson City:

Mark Hauenstein, UCI

Virtual – Microsoft Teams:

Matthew Winterhawk W4Nevada Live

Dustin Holcomb

Haley Brown

Widegren, Birgit M.

Erica Freese

Sheldon Byde

Caity Smith

Lisa A. Kirschner

Samuel Oppong

Robert Ghiglieri

Quinlan Byrne

Amelia Letvin (Geothermal Rising)

Amelia Letvin (Geothermal Rising)

Jeff Crater

Ryan Colley

Hannah

INTRODUCTION

The Workshop Chair welcomed attendees and reviewed housekeeping items. Attendees were directed to follow staff to the appropriate exit in the event of an emergency. In-person attendees were asked to sign in and indicate whether they or their affiliated organization qualified as a small business, defined as an organization with 150 or fewer employees. Attendees were also asked to confirm that they had received copies of the proposed regulations and associated forms.

For participants attending via Microsoft Teams, the Chair requested that names and affiliations be current for the record. The Chair also explained that participants wishing to provide comments or ask questions would be asked to state their name, affiliation, and whether their organization is a small business.

PRESENTATION

The workshop addressed proposed amendments to the Underground Injection Control (UIC) regulations, LCB File R116-26. The agenda included welcome and introductions, a presentation on the proposed amendments, the regulatory adoption timeline, and an opportunity for public comments and questions.

NDEP staff reviewed the regulatory adoption process, including identifying the need for new or amended regulations, developing proposed language, submitting the proposal to the Legislative Counsel Bureau (LCB) for review, conducting a public workshop, submitting the proposal to the State Environmental Commission (SEC) for a 30-day public comment period, holding an SEC hearing to consider adoption, obtaining LCB approval, and filing the adopted regulations with the Secretary of State for their effective date.

The proposed amendments include requirements for public notice of major permit modifications prior to approval and provide that an approved major modification may result in a permit being reissued for up to five years. Major modifications would include increases in injection volume or pressure, changes to the permitted injection zone, changes in the location, design, or operation of an injection well or related infrastructure, and changes to injection fluids, methods, or operations that increase risk to an underground source of drinking water (USDW) or result in environmental impacts. Changes not otherwise classified as minor modifications under NAC 445A.902 would also be considered major modifications.

The proposed amendments also require applicants to prepare and submit an Operations and Maintenance (O&M) Manual for approval by the Division or district health board. The O&M Manual would address the facility and system overview; operations; discharge management; quality assurance; chemical management; routine operation and maintenance; emergency response; equipment replacement; and supporting documents, including permits, monitoring reports, safety data sheets, and applicable regulatory materials. The manual must be maintained on-site, made available to facility staff and the Division, and reviewed and updated at least every 10 years or sooner if required by the Division.

Additional proposed changes address information required for Class V well applications. Previous submissions would not satisfy the requirement for a current application. Applicants would be required to submit complete and current information requested by the Director, use the most current forms, and provide all required information before an application can be processed.

The Chair clarified that the O&M requirements were inadvertently placed under NAC 445A.6667. The substance of the proposed requirements will not change; however, the requirements will be relocated to a new section within the UIC regulations, NAC 445A.810–925, to place them in the appropriate regulatory section.

COMMENTS AND QUESTIONS

Mark Hauenstein, UCI – Small Business Geothermal Developer

Mr. Hauenstein asked about the regulatory process and whether the proposed changes would amend the Nevada Revised Statutes (NRS). NDEP clarified that the proposal amends the Nevada Administrative Code (NAC). Mr. Hauenstein then asked whether the proposed changes comply with or exceed the primacy agreement signed by the Attorney General in May 2021. Andrew Dixon explained that the UIC program is regulated under the Safe Drinking Water Act rather than the Clean Water Act and stated that he was unsure whether the referenced agreement applies to the UIC program. Mr. Dixon offered to follow up if Mr. Hauenstein provided additional information regarding the agreement.

Mr. Hauenstein raised concerns regarding confidentiality and referenced NRS 445.665, which addresses proprietary trade secrets and excludes information describing discharges into state waters or the injection of contaminants through a well from trade-secret protection. He recommended that the proposed NAC language clarify what injection-related information may be treated as confidential. The Department reiterated that the workshop addresses amendments to the NAC and does not amend the NRS. Mr. Dixon explained that information submitted with a permit application may be requested as confidential, subject to Department review and approval under the applicable statutory requirements. He clarified that the permit itself is a public document, while portions of a permit application may qualify for confidential treatment. Mr. Hauenstein asked whether the table in Appendix B of UIC General Permit GHGU-26RC would be publicly available, and the Department confirmed that it would.

Mr. Hauenstein noted that NAC 445A.902 allows a permit modification to be considered minor based solely on a change in flow rate and recommended that this provision be reviewed for consistency with the proposed amendments. The Department acknowledged the comment and indicated that it would be reviewed.

Mr. Hauenstein recommended including changes in injection fluid chemistry among the criteria for modifications that increase risk to a USDW, noting that changes in chemistry could potentially constitute a major modification. Mr. Dixon explained that the determination would depend on factors such as the existing injection fluid, background water chemistry, and beneficial use of the water. He noted that degradation beyond drinking water standards would be

a clear consideration under the UIC program. Brent Allen clarified that such determinations would be made by the Department's permit writers.

Mr. Hauenstein also raised concerns regarding an outstanding gap in the current MOU with NDOM, which allows injection for up to seven days and could alter reservoir water chemistry before testing. He suggested conducting testing when the well is drilled and samples are already being collected, which he stated could avoid additional costs. He asked whether the MOU would be updated and whether any changes would be subject to public or stakeholder review. Jeff Kinder stated that the Department would consider the comments and address the questions as it moves forward with the regulatory package.

Matthew Winterhawk, W4Nevada

Mr. Winterhawk raised concerns regarding the proposed language in NAC 445A.6667 and the O&M requirements for public water systems. He questioned whether requirements addressing power generation systems, injection wells, cooling towers, well blowout procedures, and radioactive tracer surveys are intended to apply to all public water suppliers. He noted that the draft does not include an "if applicable" provision and asked whether the requirements are intended only for underground injection facilities or whether the incorrect regulatory section was referenced. He stated that the applicability should be clear in the regulation.

Mr. Winterhawk also identified inconsistencies among the supporting documents regarding the regulatory and economic impacts of the proposal. He noted that Form 1 states there are no new substantive technical or operational requirements and only minimal economic impact, while the proposal adds requirements related to O&M manuals, chemical use requests, testing procedures, and long-term recordkeeping. He further noted that Form 1 states the proposal is not more stringent than federal requirements, while Form 4 indicates that some provisions may be more stringent. He also referenced information on the SEC website indicating an economic impact on the regulated community. Mr. Winterhawk requested that NDEP reconcile these statements and provide supporting analysis.

Mr. Winterhawk expressed concern that website notice and an opt-in mailing list would not provide sufficient notice for major modifications involving increased pressure, volume, injection area, or risk. He recommended direct notice to affected counties, cities, tribal governments, water suppliers, and nearby well owners.

Mr. Winterhawk asked whether a major modification would reset a permit for another five years and stated that a modification should not postpone a full renewal review or allow unresolved compliance issues to be avoided.

Mr. Winterhawk requested that NDEP correct the public water system language, reconcile the conflicting impact statements, publish the completed and signed supporting documents, strengthen direct notice requirements, and provide an opportunity for additional public review. He emphasized the importance of protecting Nevada's drinking water sources and referenced NRS 535.025.

NDEP staff thanked Mr. Winterhawk for his comments.

Sheldon Byde, Fervo Energy

Mr. Byde thanked NDEP for the workshop and stated that Fervo Energy generally supports efforts to improve and streamline the regulations. He focused on the definition of major modifications and noted that the process requires significant time and effort from both industry and the Department. He recommended retaining sufficient agency discretion to ensure that only substantive major modifications are subject to the major modification process.

Mr. Byde noted that the proposal appears to expand the types of changes that could be considered major modifications while narrowing the scope of minor modifications. He referenced the proposed language concerning changes in the location, design, or operation of an injection well that differ from the existing permit and compared it with language addressing changes to injection fluids or methods that increase risk to a USDW. He recommended applying the risk-increase criterion to changes in well location, design, or operation. He stated that relocating or adding an injection well within an existing area of review (AOR) should not automatically constitute a major modification if the change does not increase risk to a USDW.

Mr. Byde further recommended retaining discretion for agency staff and leadership to determine that a proposed change is not a major modification when the change can be demonstrated not to increase risk to drinking water. He referenced the Director's discretion provisions in NAC 445A.902 as a potential model.

Mr. Byde then asked about the proposed requirement in NAC 445A.920 that an injection well maintain constant pressure for the duration of a mechanical integrity test (MIT). He noted that certain tests, including pressure-temperature logs and radioactive tracer surveys, may require a constant injection rate rather than constant pressure. Lauren Bowen explained that the proposed language refers to a static pressure test used to evaluate the internal mechanical integrity of a well and verify that there are no leaks in the casing. She clarified that other surveys, including pressure-temperature-spinner surveys, are dynamic tests in which pressure may change.

Mr. Byde asked whether "constant pressure" allows for minor pressure loss during testing. NDEP staff explained that no specific numerical standard was included because the appropriate pressure may vary based on well depth and site-specific conditions. Staff also noted that NDEP follows EPA Region 9 guidance addressing the testing requirements and that the proposed language was intentionally not limited to a specific numerical value.

Mr. Byde thanked NDEP for the clarification and reiterated the importance of preserving agency discretion and flexibility within the regulations.

NDEP staff thanked Mr. Byde for his comments.

Ryan Colley, Ormat

Mr. Colley raised a concern regarding the proposed requirements for internal and external MITs and the requirement to maintain operational conditions during testing. He noted that, in some situations, the required operational conditions may exceed the conditions under which testing equipment can effectively operate. He recommended including language that allows for additional discussion and Department discretion in unique circumstances where an alternative testing approach could verify equipment integrity and prevent equipment failure or damage to the injection or production system.

NDEP staff acknowledged the concern and indicated that the Department would consider adding language allowing discretion for unique circumstances, consistent with the discussion regarding MIT requirements.

Mr. Colley thanked NDEP staff for the consideration.

CONCLUSION

NDEP staff provided an opportunity for additional comments and questions before concluding the workshop. Mr. Winterhawk asked whether NDEP intended to move the proposed regulation forward or revise it based on the comments received. NDEP staff stated that the Department would review and respond to all comments and post the responses but was not prepared to provide a determination at that time.

Jeff Kinder stated that the proposed regulation is currently scheduled for consideration by the State Environmental Commission on September 16, 2026. He noted that the Department would consider all comments received during the workshop and confirm whether the proposed schedule remains appropriate.

NDEP staff provided a final opportunity for comments or questions. With no further comments, staff thanked participants for attending and stated that the Department would review the comments received and post its responses on the NDEP website.