



Compliance Advisory

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
#2025-09
Issued: 07/8/2025

Well Permitting Requirements for Artificial Ground Freezing Technology

WHO IS AFFECTED BY THIS ADVISORY?

This advisory affects any person, company, partnership, corporation, or other entity engaged in the installation, drilling, construction, repair, maintenance, or decommissioning of a well within the applicability of N.J.A.C. 7:9D in connection with the use of artificial ground freezing technology. Such entities must ensure compliance with the Well Construction and Maintenance; Sealing of Abandoned Well rules, N.J.A.C. 7:9D.

WHY IS THE DEPARTMENT ISSUING THIS ADVISORY?

Pursuant to N.J.S.A. 58:4A-4.1, et seq. and implementation regulations at N.J.A.C. 7:9D,¹ the New Jersey Department of Environmental Protection (Department) regulates the permitting, installation, drilling, construction, repair, maintenance and decommissioning of “wells”² for the protection of the State’s water resources. The Department’s regulations provide that no person shall construct, repair, or decommission any well without possessing a valid New Jersey well driller’s license and obtaining a well permit from the Department, in addition to other requirements.

This compliance advisory puts parties on notice that all wells drilled in the State of New Jersey, fitting within the applicability of N.J.A.C. 7:9D, must follow the requirements of N.J.A.C. 7:9D. For the purposes of well construction standards, wells drilled for artificial ground freezing will generally be classified at Category 3, Cased Environmental Resource and Geotechnical Wells which include wells for environmental engineering and remediation.

The Department is aware of well-drilling activities, as defined at N.J.A.C. 7:9D-1.5,³ that utilize artificial ground freeze technology to stabilize the soil surrounding a well as a means of ground shoring during excavation. Artificial ground freeze technology may be used in, but is not limited to, the remediation of contaminated sites. These wells must adhere to the requirements of N.J.A.C. 7:9D to the extent applicable.

¹ The statutory authority for N.J.A.C. 7:9D is as follows: N.J.S.A. 13:1D-1 et seq., 58:4A-4.1 et seq., 58:10A-1 et seq., and 58:12A-1 et seq. This authority includes the Water Pollution Control Act as N.J.S.A. 58:10A-1 et seq., which encompasses ground and surface water protection.

² Pursuant to N.J.A.C. 7:9D-1.5, “well” is defined as “a hole or excavation larger than four inches in diameter or a hole or excavation deeper than 10 feet in depth that is drilled, bored, cored, driven, jetted, dug, or otherwise constructed for the purpose of removal or emplacement of, or investigation of, or exploration for, fluids, water, oil, gas, minerals, soil, or rock, or for the installation of an elevator shaft.”

³ Pursuant to N.J.A.C. 7:9D-1.5, “well drilling” means any operation or activity involving the drilling, constructing, installing, repairing, replacing, modifying, stimulating or sealing of any well.

Failure to properly construct and decommission wells may threaten the ground and surface waters of the State by creating potential pathways for contamination to travel through the unconsolidated soil or bedrock. Proper grouting of the annular space(s) is necessary during both well construction and decommissioning to prevent the migration of contaminants. When the annular space around a casing is not properly grouted and sealed upon installation, the space becomes a vertical conduit that interconnects all geologic units through which the original borehole traversed. Similarly, if the inside of a well casing or uncased borehole is not properly grouted upon decommissioning, the borehole interconnects the surface with all subsurface units and would allow contamination from ground surface or shallow depths to pass through previously impervious units, such as clay confining units or competent bedrock. This jeopardizes the State's groundwaters by putting them at increased risk of infiltration by contaminated water emanating from septic systems, gas stations, industrial sites, and other sources of groundwater contamination. The purpose of a licensed well driller emplacing a Department-approved grout material is to eliminate these vertical contamination migration pathways.

WHAT IS DEP DOING?

This advisory is being issued to educate Licensed Well Drillers and Licensed Site Remediation Professionals to achieve or maintain compliance. The Department will continue to assist any person to achieve or maintain compliance with the Well Construction and Maintenance; Sealing of Abandoned Well rules, N.J.A.C. 7:9D-1 et seq.

WHAT SHOULD I DO?

If you are planning to utilize artificial ground freeze technology, review the Well Construction and Maintenance; Sealing of Abandoned Well rules at N.J.A.C. 7:9D-1 et seq. Wells drilled in the State of New Jersey, fitting within the applicability of N.J.A.C. 7:9D, must follow the all requirements of N.J.A.C. 7:9D, including those related to installation, repairs, drilling, construction, maintenance, and decommissioning. These activities must be conducted or overseen by a Licensed Well Driller.

Licensed Well Drillers must obtain a valid well permit prior to drilling, constructing, installing, or physically altering ground freeze pipes. A sitewide permit may be obtained for ten or more wells for the same use pursuant to N.J.A.C. 7:9D-1.11(c). Licensed well drillers must submit complete and accurate well records and decommissioning reports within 90 days of completing the applicable activities.

Please reach out to the Department with any questions regarding the applicability of these rules and/or how to obtain a valid well permit.

WHO SHOULD I CONTACT WITH QUESTIONS?

Steve Reya

Bureau of Water Allocation and Well Permitting

609-984-6831

Wellpermitting@dep.nj.gov

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WHERE CAN I GET MORE INFORMATION?

The following website can be accessed for additional information: [Division of Water Supply & Geoscience Website](#)

Please note this advisory is intended to be a summary explanation of Department requirements. It does not include all potentially applicable requirements. If you have any questions related to compliance with this advisory, please contact the number listed above.