

Nevada Division of Environmental Protection Proposed On-Site Sewage Disposal System Regulations

Fact Sheet – July 13th, 2007

In the past, the Nevada Division of Environmental Protection (NDEP) utilized the Nevada Division of Health's Individual Sewage Disposal Systems regulations to regulate septic tank and leach field applications. When the Division of Health transferred the Safe Drinking Water Program to NDEP, the authority to regulate commercial (non-residential) septic tanks and leach fields was also transferred, creating a regulatory gap for commercial systems. Therefore, it became necessary for NDEP to develop the proposed regulations presented today.

After industrial waste, septic tanks and leach field applications are the second leading cause of groundwater pollution in America. NDEP has recognized this threat and has taken a proactive approach, which, in part includes promulgation of these regulations. This threat to groundwater has also prompted the U.S. Environmental Protection Agency (EPA) to regulate certain large On-site Sewage Disposal Systems under the Class V well section, in the Underground Injection Control Program (UIC) (40 CFR 144.81) Currently, this is limited to systems that receive industrial waste or serve 20 or more people per day.

NDEP is the delegated agency for the UIC program in Nevada. EPA currently allows the states to determine the flow estimates from 20 people. We have exercised our flexibility and set that flow at 3,000 gallons per day for the purposes of these regulations. By doing so, On-site Sewage Disposal Systems 3,000 gallons per day or less will be exempted from future requirement by EPA. This protects many small businesses from potential regulatory burdens.

The NDEP's authority to be lead agency for these regulations comes from:

NRS 445A.425 Powers and duties of Commission.

1. Except as specifically provided in [NRS 445A.625](#) to [445A.645](#), inclusive, the Commission shall:

(a) Adopt regulations carrying out the provisions of [NRS 445A.300](#) to [445A.730](#), inclusive, including standards of water quality and amounts of waste which may be discharged into the waters of the State. (Also known as the Nevada Water Pollution Control Law).

NRS 445A.720 Final authority concerning prevention, abatement and control of water pollution. The Department has the final authority in the administration of water pollution prevention, abatement and control. No other department or agency of the State and no municipal corporation, county or other political subdivision having jurisdiction over water pollution prevention, abatement and control may permit, under authority of such jurisdiction, the discharges of wastes into the waters of the State which would result in the pollution of any of such waters in excess of any water quality standard promulgated by the Commission.”

Highlights of the proposed regulations with a brief explanation include:

- All Permit Fees are Identical.
 - All permit fees for each category will be the same as before.
 - There is no economic impact to Small businesses.
- New OSDS systems will have a maximum size of 15,000 gallons.
 - Existing OSDS systems over 15,000 gallons will continue to be permitted.
- Use of General Permits for regulating OSDS.
 - Streamlines the permit process, reducing costs and administrative delays to the owner.
 - Individual permits are still available for variances granted and other special cases.
- The new regulations provide design flexibility.
 - The Division may still grant variances and exemptions on a case by case basis.
 - Allows the staff engineer to determine if new technology, new construction techniques, etc. are acceptable without a lengthy variance process that could hinder or delay the project.
 - Requires design engineer to ensure proposed changes are equivalent to standard technology.
- Establish Moratorium Areas.
 - Identifies areas of impacted groundwater.
 - Process will eliminate any surprise to the local planning agency and developers.
- Establish Nitrogen Management Areas.
 - These areas already exist in the Division's Geographic Information System (GIS) used for subdivision reviews.
- Establish a limit for nitrogen removal units.
 - These units will only be required in established Nitrogen Management areas.
 - The total nitrogen effluent limit will be 20 mg/l.
 - Most nitrogen reduction systems have the technology to reduce total nitrogen to 20 mg/l.
 - This technology-based standard is reasonable and does not prohibit use of these systems.
- Establish Minimum land area requirements.
 - Previous health regulations allowed an application of 1,980 gallons of domestic sewage per acre.
 - The proposed change will to allow 1,000 gallons of domestic sewage per acre.
 - This is consistent with current Health Division residential regulations.
- Increasing the minimum septic tank size.
 - Septic tank sizing in the past was performed utilizing the Uniform Plumbing Code.
 - This guidance is acceptable for tanks up to about 5,000 gallons. Beyond those

- flows, it creates undersized tanks with inadequate sludge storage.
- Proposed regulations provide space for sludge storage. This prevents premature failure from solids getting into the leach line.
- Providing for holding tanks for special situations.
 - Sets minimum performance standards for holding tanks.
 - Holding tanks are generally used by the U.S. Forest Service, State Parks, county fairgrounds, minerals exploration companies, etc.
- Use soil classification studies to establish effluent application rates.
 - Percolation rates have been recognized as a poor technology for determining soil absorption capacity.
 - Soil classification methods are better indicator of soil absorption capacity.
 - Less time is spent by the person performing the test.
 - Test pit doesn't have to stay open overnight; reducing costs and liability.
- Use of Long Term Acceptance Rate (LTAR) for sizing disposal areas.
 - LTAR rates based on soil type have been incorporated into the regulations.
 - LTAR take into account the restrictive nature of the bio-mat formed at the bottom and sides of the absorption trench and bed.
 - Once equilibrium is reached, effluent disposal is governed by a steady-state absorption rate.
- Establish a mounding study, if necessary.
 - This would be necessary in areas of high groundwater or where the hydraulic load rate may be high (i.e. reduction in field size).
 - Provides guidance on how to address areas of shallow groundwater.
 - Prevents premature failure of disposal area due to immersion/anaerobic conditions.
- Requiring a 'Certificate of Completion' by the design engineer.
 - A permit may not be issued until this certificate is submitted and approved.
 - This places the burden of ensuring the OSDS was properly constructed squarely on the design engineer.
 - NDEP does not have staff or resources to inspect OSDS statewide.
- Requiring an Operations & Maintenance Manual.
 - The design engineer develops this document to aid the owner and/or operator in ensuring the OSDS is running properly.
- Allowing the District Health Departments and other qualified authorities to regulate OSDS in their jurisdiction.
 - NDEP's intent is to allow existing and new agencies throughout Nevada to continue administering their programs.

The Bureau is also drafting a companion "Guidance Manual" intended to assist small businesses and their design engineer in complying with the proposed regulations. When finished, it will be posted on the agency website for public use.