

Nevada Well Construction Regulations Workshop

Water Handling, Treatment,
Disposal & Use

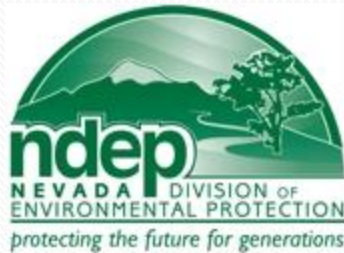
Jay Fischer

Reese River Hydrologic

Test pumping and Discharge



NDEP Regulations for discharge



Bureau of Water Pollution Control (BWPC)

- **NRS 445A.485 Permits: Issuance of temporary permits.** The Department may issue a temporary permit for the discharge of pollutants or the injection of fluids through a well. The permit is valid for not more than 180 days.
- (Added to NRS by [1991, 1741](#); A [1993, 2790](#))

Temporary Discharge Permit

- The Temporary Discharge to Waters of the State Permit covers discharges from remediating and disinfection activities, well pump testing, aquifer drawdown testing, dewatering, underground injection of fluids, and other discharges of a temporary nature and requiring immediate action. This permit is required prior to any discharge that may affect directly or indirectly waters of the State.

Permit Guidelines to Ground Surface

- The permit costs \$250.00
- The permit is effective for 180 days
- The typical turnaround time from application to permit issuance ranges from 1-4 weeks
- The permit discharge monitoring and reporting requirements are determined by the permit writer, but typically include the following parameters:
 - Flow rate
 - Total Volume of Water Discharged
 - Nevada Profile 1
 - Total Petroleum Hydrocarbons (in the event of an equipment failure or fuel leak at the site)
- The permit typically requires Best Management Practices (BMPs) to control the flow of water and limit sediment runoff
- The permit application and additional information for Temporary Discharge Permits can be found at the following web address:
http://ndep.nv.gov/bwpc/temporary_permits.htm

Permit Guidelines to Surface Water

The De Minimis General Permit

- The permit application cost is \$200.00 and has an annual fee of \$200.00, which is due July 1 annually
- The permit is effective for as long as the annual fee is paid
- The typical turnaround time from application submittal to permit issuance is 1-2 weeks, assuming the permit application is complete
- The permit is obtained by filling out an online Notice of Intent and submitting an application package
- Included with the application package is a water quality analysis report from a State certified lab. The water analysis must show that the discharged well water meets all of the requirements listed on pages 7-8 of the De Minimis permit (permit Section A.9.1.3)
- **If any of the parameters exceed the limits from Section A.9.1.3 of the permit, the discharge is not eligible for coverage under the De Minimis General Permit**
- Once permit coverage is obtained, the monitoring and sampling requirements are those found on pages 11-12 of the permit (section A.10.3.3)
- Permit Coverage is terminated by a Notice of Termination
- The online Notice of Intent and information about the De Minimis permit can be found at the following web address: <http://ndep.nv.gov/bwpc/diminimis.htm>

National Pollution Discharge Elimination System

NPDES Permit

- The cost for an individual permit ranges from \$1000.00 to \$10,000.00, depending on the amount of water discharged
- The permit is effective for five years and has an annual fee which also depends on the amount of water discharged
- The turnaround time for these permits can be 6-8 months
- The permit conditions are determined by the permit writer and depend on such things as the receiving water and quality of the discharged well water
- The permit application and additional information about individual NPDES permits can be found at the following web address: http://ndep.nv.gov/bwpc/discharge_ind.htm

Common Methods for Managing discharge

- Basins
- Open land application
- Discharge into existing facilities (storm drains)
- Injection
- Use (irrigation, other)

Basin containment



BMP's

Rip Rap, Wattles, Geotextile



Silt Fencing to manage erosion



Storm drain protection

“Not so Good”



Storm Drain protection “Better”



Storm Water System



Treatment Options

- Discharge without treatment (BMP's)
- Treatment prior to discharge (Suspended Solids)
- Dissolved constituents of concern

Monitoring requirements for various disposal methods

Typical Monitoring Requirements

- Flow rate
- Total Volume of Water Discharged
- Nevada Profile 1
- Total Petroleum Hydrocarbons (in the event of an equipment failure or fuel leak at the site)

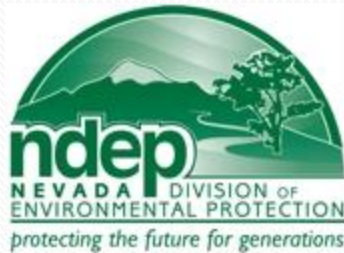
“Typical” Discharge Management Report (DMR)

- Final DMR is due 28 days after project completion or 28 days after permit expires. Which ever comes first
- DMR should include:
 - Flow rate
 - Total water quantity
 - All water chemistry results from certified NV lab
 - Narrative describing all activity including BMP's
 - Photos

Summary

- Discharge planning
 - Duration of discharge
 - Quantity of water
 - Quality of water
- Preferred Discharge method
- Permit required for discharge method
 - Data collection
 - Reporting

Acknowledgements



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Bureau of Water Pollution Control

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