

C. Integrated Approaches

New Mexico



Groundwater Protection

New Mexico Environment Department's (NMED) Ground Water Quality Bureau, [Ground Water Agriculture Compliance Section](#) issues individual groundwater discharge permits (GWDPs) to all New Mexico dairies. Dairies must obtain an individual GWDP to protect “groundwater and those segments of surface water gaining from groundwater inflow, for present and potential future use as domestic and agricultural water supply and other uses, and to protect public health” ([DP-706, Part A100.A](#)). NMED GWDPs are not NPDES permits and do not authorize discharges to surface waters.

NMED individual dairy GWDPs contain the following authorizations and monitoring requirements, as appropriate to each dairy.

- Dairy GWDPs authorize the discharge of a maximum volume of wastewater (e.g., [60,000 gallons per day](#)) from the production area to land application fields.
- Flow meters to record fresh water inflow to the milking parlor, to estimate the volume of freshwater contributing to wastewater discharged to the impoundment(s) and wastewater flow from the terminal impoundment to land application fields.
- Each dairy must install a sufficient number of monitoring wells at appropriate depths and locations to monitor ground water quality upgradient of the dairy facility and hydrologically downgradient of each source of ground water contamination: wastewater, stormwater, and combination wastewater/stormwater impoundments, and fields within the land application area (20.6.6.23). Monitoring wells must be installed within 120 days of the effective date of the GWDP (20.6.6.23(1)(b)).
- Develop and submit annual updates to the dairy's nutrient management plan (NMP)

Quarterly ground water samples must be collected and analyzed for nitrate as nitrogen (NO_3^- -N), total Kjeldahl nitrogen (TKN), chloride (Cl), sulfate (SO_4^{2-}), and total dissolved solids (TDS). The dairy operator must submit a quarterly monitoring report containing these analytical results, as well as depth-to-most shallow groundwater, field parameter measurements, parameter stabilization log, and a map showing potential groundwater contamination sources, and well locations and numbers to NMED. Dairies must also develop and submit quarterly ground water elevation contour maps using data collected from all ground water monitoring wells at the facility.

Each GWDP is effective for five years from the date of issuance.

Programmatic Framework

New Mexico Administrative Code (NMAC) [20.6.2.3104](#) states that no person shall cause or allow effluent or leachate to discharge so that it may move directly or indirectly into ground water unless he is discharging pursuant to a discharge permit issued by the New Mexico Environment Department (NMED). [NMAC 20.6.6.8.A](#). (Supplemental Permitting Requirements for Dairy Facilities (Dairy Rule, New Mexico Water Quality Control Commission 2011)) establishes that “no person shall discharge from a dairy facility without a discharge permit.”

NMED's Ground Water Quality Bureau derives authority to issue GWDPs and to require the conditions in the Dairy Rule (20.6.6 NMAC) under the Water Quality Act, NMSA 1978, [Sections 74-6-1 through 74-6-17](#).

Implementation

According to NMED, as of March 2016, approximately 200 dairies have GWDPs. Individual dairy GWDPs are available for review on NMED, Ground Water Quality Bureau's [List of Final Dairy Discharge Permits](#) webpage.

If consecutive groundwater monitoring samples are found to exceed groundwater quality standards or contamination is increasing, a dairy operator must submit a corrective action plan within 120 days of the sampling analysis date. This plan must include any actions taken to control the source of the exceedance, propose source control measures, and an implementation schedule. The contingency requirements of the Dairy Rule apply until at least eight consecutive ground water sampling events confirm that NMAC [20.6.2.3103](#) standards are not exceeded and the total nitrogen concentration does not exceed 10 mg/l.

References

New Mexico Water Quality Control Commission. 2011. *Dairy Rule 20.6.6 NMAC, as amended*. <<http://164.64.110.239/nmac/parts/title20/20.006.0006.pdf>>. Accessed January 6, 2017