EPA Region 6
Annual Evaluation Report
for the
New Mexico Environment Department
Underground Injection Control Program
State Fiscal Year 2011 (FY11)
July 1, 2010 through June 30, 2011

I. Introduction

The Ground Water Quality Bureau (GWQB) of the New Mexico Environment Department (NMED) administers the State's underground injection control (UIC) program for all wastes disposed into Class I, Class III, and Class V injection wells not associated with oil and gas production, brine mining, geothermal (unless the geothermal use is incidental to another use NMED regulates), and oil field service related facilities.

This annual review considers all activities of the approved State UIC program administered by NMED, including the requirements of the grant work plan as well as other program activities, for the period July 1, 2010 through June 30, 2011.

II. Work Plan Objectives and Activity Level

Activities for the three major classes of injection wells within the NMED UIC program are presented in Table 1.

Table 1 – FY11 Grant Work Plan Activities

Activity[1]	Annual Work Plan Commitments	Accomplishments		
		Class I	Class III	Class V
Well Permits[2]	80	0	0	148
Well Inspections	200	0	0	305
Mechanical Integrity Tests	0	0	0	0

[1] - Permits Issued, Inspections and MITs are reported per well.
[2] - Permits Issued include new approvals, renewals and modifications.

<u>Permits</u>

The NMED issued 148 Class V well permits during the review period. This total includes 111 for new wells and 37 for permit renewals. Figure 1 shows the number of Class V wells permitted and the number of permits modified by NMED during the last five years.

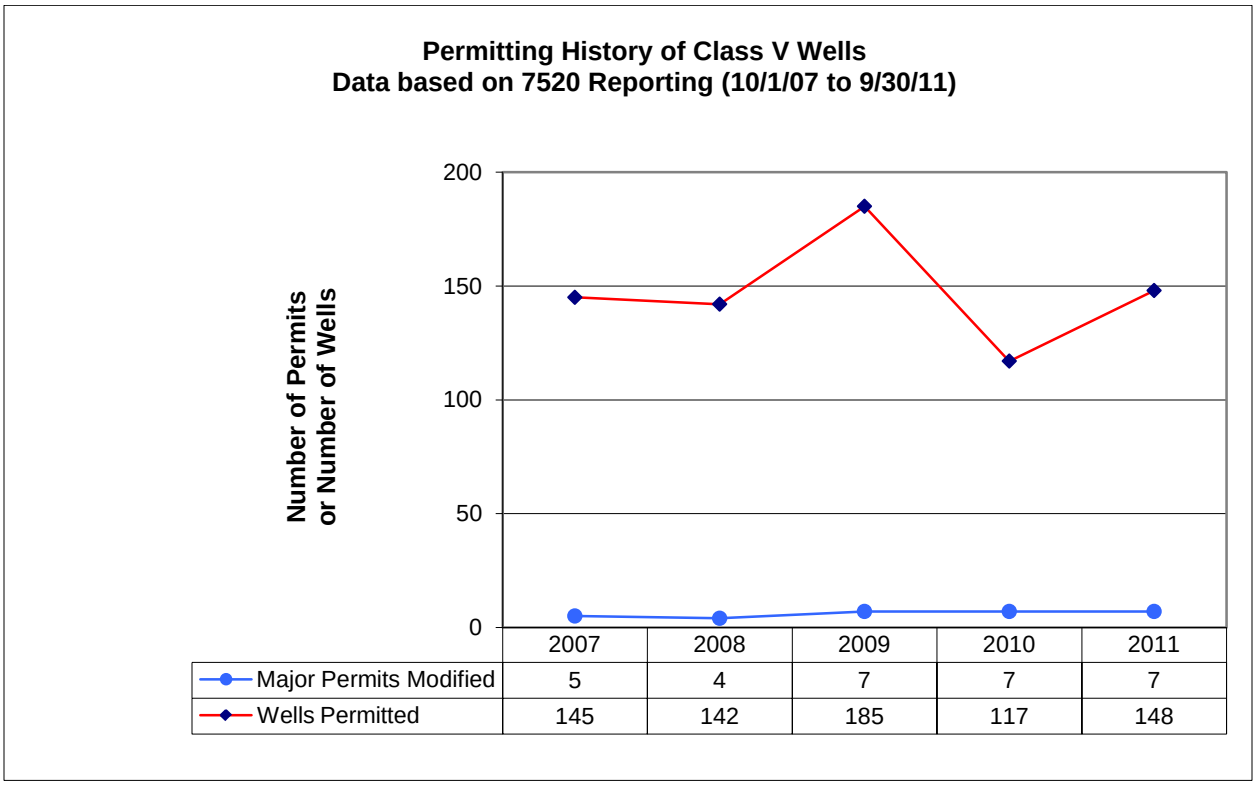


Figure 1. Five-year Permitting Activity for Class V wells

Inspections

The NMED generally inspects each permitted facility every 1.5 years, or more frequently if warranted. As shown in Table 1, the NMED inspected 305 Class V wells during FY11, 100 wells more than it had planned. Figure 2 depicts the number of inspections conducted by the NMED during the last five years. The total number of inspections in FY11 is about 70 wells more than that of last fiscal year due to the increased number of compliance/enforcement actions.

Mechanical Integrity Testing

Class V wells typically do not require an MIT. Class I non-hazardous wells require an MIT every five years. No mechanical integrity tests were required or conducted during FY11.

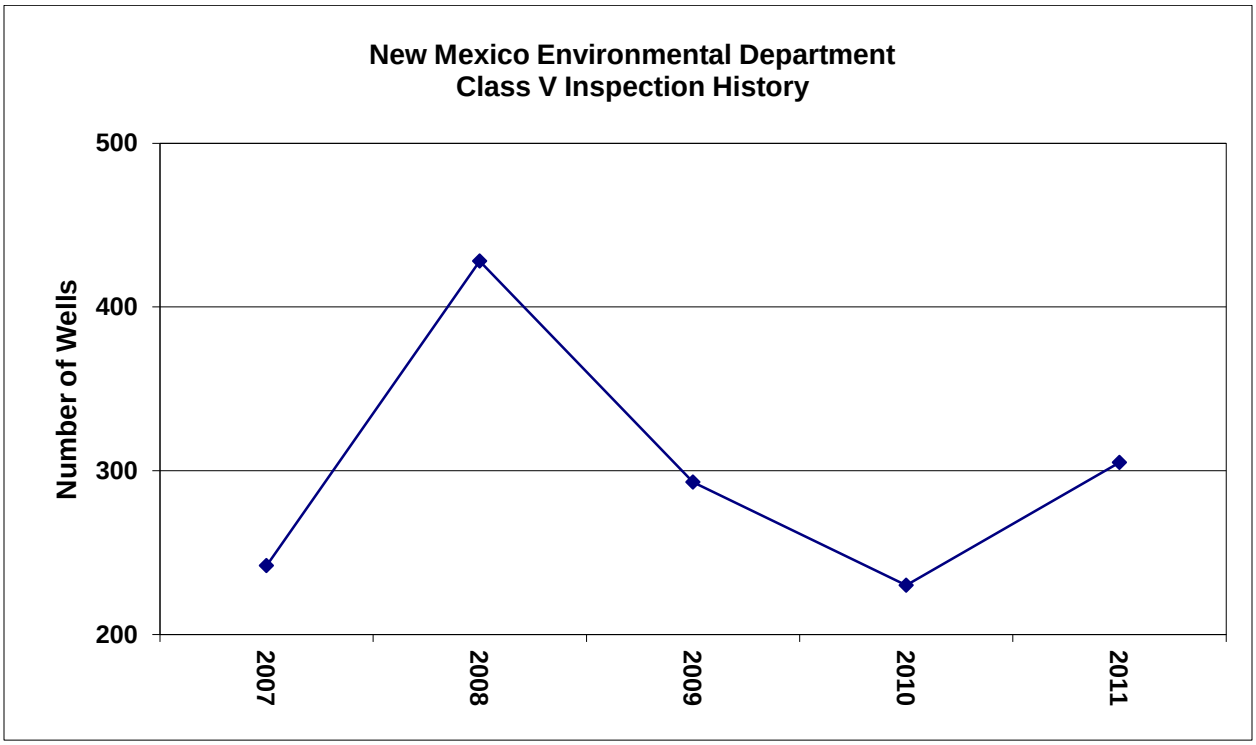


Figure 2. Five-year Inspection History for Class V wells

Deliverables

There are twelve documents that are required to be delivered to Region 6 in the FY11 work plan. Table 2 lists all of these deliverables, the dates they are due, and the date received. NMED is generally very timely with the required submissions. The Quality Management Plan (QMP) and Quality Assurance Project Plan (QAPP) are updated annually by amendment, including new concurrence signature pages and current organizational charts.

Table 2 – FY11 Grant Work Plan Deliverables

Deliverables	Due	Received
FY10 Financial Status Report[1]	9/30/11	10/04/11
FY11 Well Inventory[2]	1/30/11	1/19/11
FY11 Semi-Annual Accomplishments Report[1]	1/30/11	1/19/11
Quarterly Reports (Form 7520-4)[3]	10/30/10, 1/30/11, 4/30/11, 7/30/11	10/30/10, 1/30/11, 4/30/11, 7/30/11
Semi-annual Reports (Forms 7520-2A, 2B)[3]	10/30/10, 4/30/11	10/30/10, 4/30/11
Annual Reports (Forms 7520-1,3)[3]	10/30/11	10/30/11
FY11 Annual Accomplishments Report[1]	7/30/11	6/27/11

Update of QMP[1]	4/30/11	12/01/10
Update of QAPP[1]	6/30/11	4/06/11
FY12 Grant Application and Work Plan[1]	5/01/11	5/01/11

[1] - Applicable to grant period and state fiscal year
[2] - Applicable to calendar year
[3] - Applicable to federal fiscal year

Inventory

The primary types of Class V wells permitted in New Mexico are large capacity (> 2,000 gallons per day) septic systems, other domestic waste disposal systems, and wells used for the re-injection of treated contaminated ground water at remediation sites. Evaluation of applications for septic system discharge plans generally includes review of soil texture, leach field loading, total nitrogen loading, effluent testing requirements, and specific reporting requirements. Monitoring wells and periodic sample analyses are required on the larger septic systems and those in hydrologically sensitive areas.

The NMED UIC well inventory for FY11 is presented in Table 3. The information provided is based on a database query as of September 30, 2011.

Table 3 - NMED UIC FY11 Well Inventory

Class	Facilities	Wells-UC[1]	Wells-AC[2]	Wells-TA[3]	Wells-PA[4]
I	0	0	0	0	0
III	0	0	0	0	0
V	454	73	1319	566	1279
Totals	454	73	1319	566	1279

[1]- Under Construction, [2] – Active, [3] – Temporarily Abandoned, [4] – Plugged and Abandoned

Figure 3 summarizes the total inventory of Class V active and temporarily abandoned wells during the last five years. The total increased significantly during FY11 because the full number of injection wells at the Homestake Mining Uranium Mill were never included.

Monitoring

NMED's UIC inventory consists only of Class V wells. All of the active wells are required to submit monitoring reports on a regular basis as specified in the discharge permits. Monitoring requirements may include water quality sampling of effluent, water quality sampling of monitoring wells, measuring water levels in monitoring wells, reporting of effluent volumes, and reporting of system maintenance. Requirements are based on specific discharge and site information. NMED reviews monitoring reports and other facility data on a regular basis to ensure facility compliance with the approved discharge plan and notifies the facility operator if there is any compliance issue.

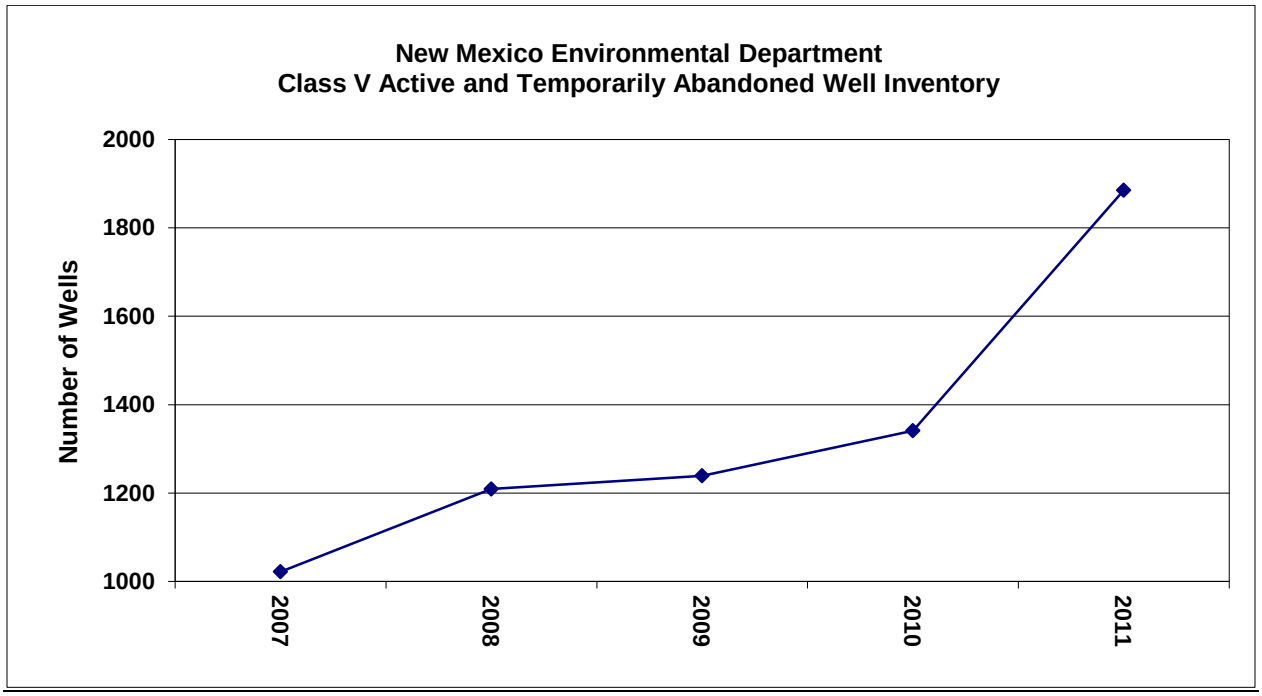
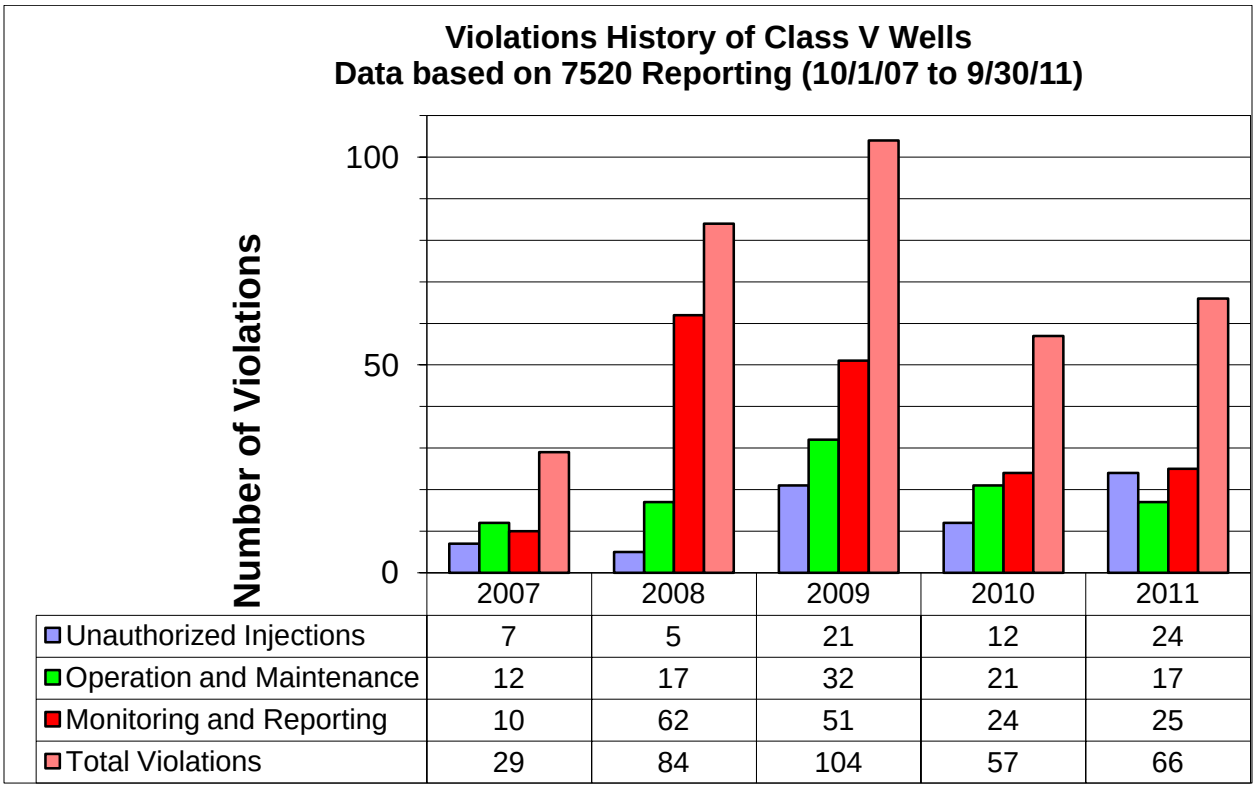


Figure 3. Five-year Inventory for Class V Active and Temporarily Abandoned Injection Wells

Compliance/Enforcement

1. Class V wells - As a result of compliance issues discovered due to complaints and during regular file reviews and site inspections, NMED issued 17 written compliance/enforcement actions on 62 Class V wells and performed 47 additional enforcement phone calls, emails, or faxes concerning 162 wells from July 1, 2010 to June 30, 2011. NMED is mandated by statute to seek voluntary compliance before initiating formal enforcement actions. Corrective Action Required letters, Notices of Non-Compliance, Notices of Violation, and Compliance Orders are issued for various violations, including: submittal of incomplete permit applications, monitoring report violations, discharging without a permit, operational violations, exceedance of ground water standards or effluent limitations, and failure to install monitoring wells. NMED issued two letters notifying UIC facilities of the requirements to obtain a Discharge Permit.



	2007	2008	2009	2010	2011
Unauthorized Injections	7	5	21	12	24
Operation and Maintenance	12	17	32	21	17
Monitoring and Reporting	10	62	51	24	25
Total Violations	29	84	104	57	66

Figure 4. Summary of Five-year Violations History for Class V Wells

Figure 4 summarizes the number of violations discovered by the NMED and reported on EPA Form 7520-2A for five consecutive years. No violations were reported for Class I and III wells. In FY08, the increase of monitoring and reporting violations reflect nearly full staff levels. This trend continued in FY09; however, due to state budget limitations, these figures were all lower in FY10 and FY11.

In addition, Figure 5 compares the number of Class V wells with enforcement actions versus those returned to compliance during the last five years. The total number of wells with enforcement actions was higher than the total number of violations because some facilities have more than one well.

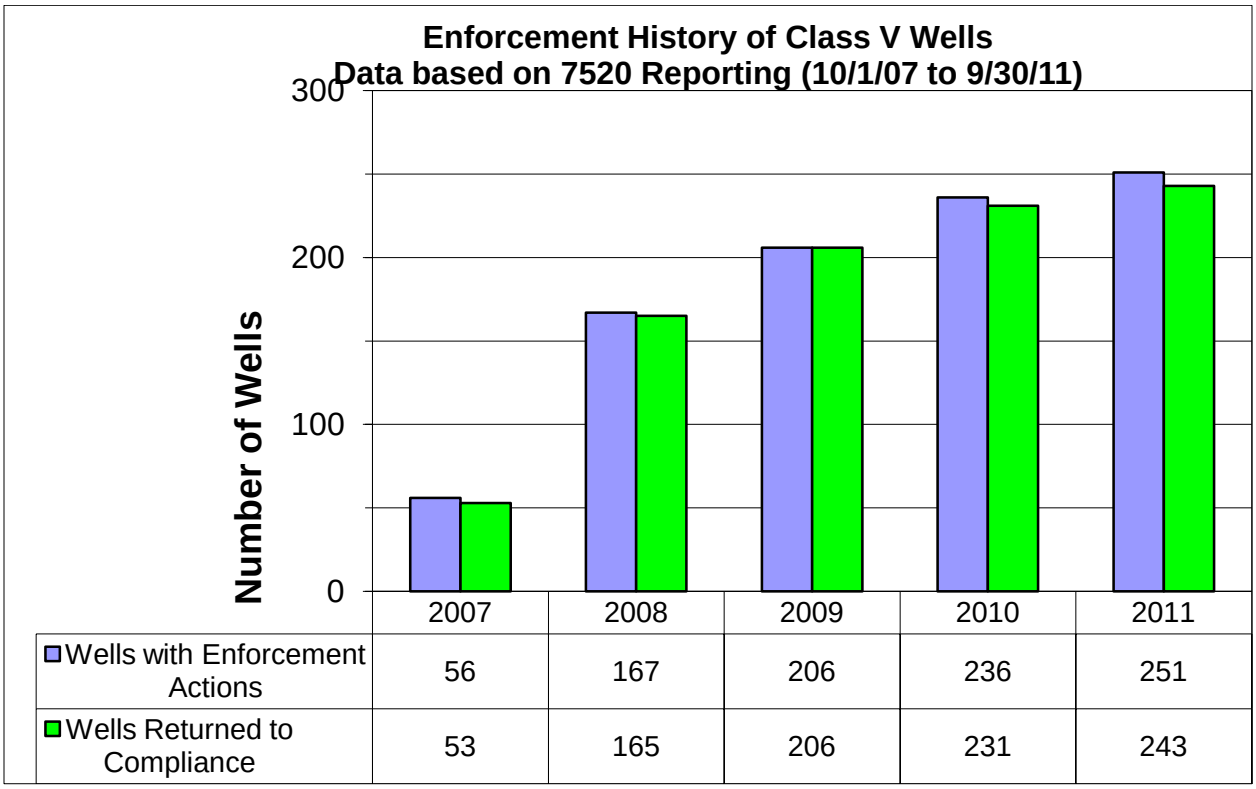


Figure 5. Summary of Five-year Enforcement History for Class V Wells

Public Participation

During FY11, the following public hearings, meetings, and negotiations were held for UIC-related permitting decisions.

- A new treatment system for the Tablazon Pueblo needs to be designed and constructed due to ground water impacts. The Mutual Domestic Wastewater Association (MDWWA) was attempting to take the responsibility and construct this new facility; however, homeowners concern that it is too costly for them regardless who will construct it. NMED met with Tablazon Pueblo homeowners, the MDWWA, their attorney and engineer to discuss funding sources and design of a proposed wastewater treatment facility (WWTF). Negotiations have broken down; as a result, NMED is preparing to send a notice of violation with the anticipation that enforcement actions will be necessary to resolve this problem.

- Owner of Harry's Roahouse Restaurant and his attorney expressed concerns regarding the potential impact upon domestic and supply wells of the nearby unpermitted facilities (El Gancho Club/Steaksmith). Since then, NMED has worked with both dischargers in effort to bring municipal sewer service to the area. All parties involved agreed to have the

businesses connected to City of Santa Fe municipal sanitary sewer. This construction is near completion.

- Mr. and Mrs. Lee and Gloria Lantz, the owner of property adjacent to the Life Healing Center, requested a hearing and raised concerns regarding easement issue of the draft permit for expanded leach fields at this Center. Since then, NMED investigated and attempted to revise the draft permit that would not conflict with the uses allowed under the easements. The Bureau requested additional information from the applicant on June 3, 2011 and the Center asked for more time on June 22, 2011. If consensus cannot be reached, NMED will seek a decision on the hearing request from Secretary Martin and then proceed based upon the outcome.

- NMED met with the Rancho De Bosque Homeowners Association Board members to discuss the Bureau's proposed draft permit renewal for this site. The Board was concerned about the cost of the proposed monitoring wells and flow meters in this renewal. The Bureau then allowed additional time for the installation of the monitoring well in the permit and the use of potable water meter data for estimating discharging volumes. The Board accepted this and the final permit was issued on May 9, 2011.

- NMED received a complaint letter from a local irrigation ditch association concerning surfacing sewage at the Las Lagunitas Subdivision. It is concerned that the surfacing effluent and failing treatment systems may impact the ground and surface water quality in the area. Since then, the Bureau inspected the facility twice, March 24 and April 19, 2011. The surfacing wastewater problems were resolved but the treatment systems were found to be violating their permit effluent permits. In addition, the monitoring wells were found to be located and constructed improperly. After meeting with the Association Board of the Las Lagunitas Subdivision, NMED drafted the renewal permit and sent out for public comment.

- On April 9, 2011, GWQB staff attended a forum on aquifer storage and recovery organized by the Middle Rio Grande Water Assembly to provide information on the regulations pertaining to Class V UIC wells.

- On April 13, 2011, GWQB staff presented courses on "Ground Water Permitting, Monitoring and Reporting" and "Effluent Discharge Options in New Mexico" at the New Mexico Rural Water Association Conference. Both courses included regulatory considerations with discharges to UIC wells.

- The owner of the Abiquiu Inn raised concerns regarding the Bureau's requirements to construct an on-site treatment system and disposal system to replace the majority of the existing septic tank/leach field systems in accordance with its permit. The owner stated the fact that his business is poor due to the current economy and such construction within the current timeline will be a heavy financial burden. Following a conference call on May 2, 2011 with NMED, the owner submitted a request to amend the permit. On June 22, 2011, NMED issued the permit amendment with a two year delay in the installation

of the on-site treatment system. Once the monitoring wells are installed, the Bureau will review any needed future actions.

- On May 10, 2011, NMED participated in a meeting with SWQB, CPB, and representatives of the Mora Water and Sanitation District (Mora WSD) to discuss a draft Preliminary Engineering Report (PER) that addresses Mora WSD's wastewater treatment facility. Currently, POTW of Mora WSD discharges to the Mora River pursuant to a NPDES permit with very stringent effluent limits. The recommended option from the PER is to construct a new treatment system that discharges under the groundwater discharge permit, rather than under the NPDES permit. The discharge will be to a UIC well, either infiltration basins or subsurface disposal fields. NMED will continue to participate in this discussion.

- On May 25, 2011, GWQB and Santa Fe County conducted a joint inspection of the La Pradera Subdivision wastewater treatment facility. The subdivision has proposed a multi-phased expansion that will increase the number of homes built and connected to the on-site treatment and disposal system. The public concerns about its growth, especially the odor from the treatment system. Upon facts finding from the joint inspection, GWQB will likely propose an approval of the application of the La Pradera Subdivision. The Bureau also will work with the public to address their concerns within the scope of its regulatory authority.

- On June 24, 2011, GWQB met the City of Rio Rancho to discuss the submittal of a permit application for the City's Class V aquifer recharge well using highly treated domestic wastewater. The public is greatly concerned about the impact of this project upon the Rio Rancho's drinking water supply. GWQB has recommended the City to provide additional voluntary public notices and hold public meetings to provide information so that issues can be well understood. GWQB has agreed to participate in these outreach efforts. The application of this project is anticipated to be submitted before the end of 2011.

<u>Interagency Coordination</u>

- GWQB staff continues to coordinate with the Environmental Health Division (EHD) to address issues of common concern regarding small on-site systems and to route applicants to the correct regulatory program. The GWQB UIC Coordinator and the Domestic Waste Team Leader attended a meeting in February, 2010 with EHD to present the decision tree created by the Bureau that is designed to clarify the permitting facilities that straddle the boundary between two programs and facilities subject to NMED's single lot policy. The decision tree is currently being reviewed by NMED attorneys.

- GWQB continues to coordinate with the Energy, Minerals, and Natural Resources Department's Oil Conservation Division (OCD) to develop an NMED program for permitting UIC non-hazardous Class I UIC injection wells. NMED has received one application for a Class I potash brine waste disposal well which would be used to dispose

of oil field waste also. NMED is coordinating with OCD to adapt OCD well application forms. Currently, NMED requires a parallel permitting process with OCD for wells that receive both oilfield and non-oilfield wastes. NMED also will coordinate with federal agencies when wells need permits are located on federal lands.

Staffing

1. The GWQB Pollution Prevention Section (PPS) currently has six vacancies among its discharge permitting and compliance/enforcement staff. Unfortunately, due to a revenue shortfall, PPS will not be able to fill these vacancies this fiscal year. Moreover, essential hires require an approval from the Governor's Office.

III. Current Initiatives

1. PPS is shifting some limited resources from inspections and other compliance/enforcement activities to permitting as this activity requires less financial resources and generates permit fees. Inspections will focus on Discharge Permit pre-approval inspections and problematic facilities that present an immediate threat to human health and ground water. Similarly, other compliance/enforcement activities will become more focused on sites with more serious violations.

2. PPS is currently working with NMED's information technology division to develop a UIC database to store UIC data that is not captured in its current data system and to provide electronic reporting to EPA. This database will also be capable of storing monitoring data. It is anticipated that GWQB will attempt to flow UIC data to EPA over the Exchange Network in the near future. The NMED's UIC manager is constantly praised by EPA HQ for his strong support and diligence on this effort.

IV. Summary

NMED continues to run an effective Class V UIC program and is commended for its implementation of the program in FY11. The staffing additions, increased field activities, and active public participation for the year reflect the agency's commitment to protecting the State's ground water resources, and involving the public in decisions. In addition, NMED's continuous efforts to explore means to improve both efficiency of its operations and operator compliance are impressive.