CITY OF ALBUQUERQUE

November 24, 2009

Ms. Suzanna Perea
U.S. EPA, Region 6
Water Quality Protection Division
Permits and Technical Section (6WQ-PP)
1445 Ross Avenue
Dallas, Texas 75202-2733

Enf file #5

6WQ

DEC 0 4 2009

RECEIVED

RE: Albuquerque Municipal Separate Storm Sewer System (MS4) Permit No. NMS000101 TMDL Progress Report

As per Table III.B, Activity 12, of the above mentioned MS4 Permit, the following is a summary of the progress made by all of the co-permittees to comply with the Fecal Coliform TMDL of the permit.

Because the fecal coliform contamination appears to be a watershed-wide problem, the MS4 co-permittees continue to work with its other storm education partners, including the County of Bernalillo, Southern Sandoval County Arroyo Flood Control Authority, and the Ciudad Soil and Water Conservation District to implement a watershed-wide public information program, targeted at the control of dog feces and other pollutant sources in the Middle Rio Grande Watershed. Because a new water treatment plant installed along the Rio Grande went on line this past year to supplement the area's drinking water supply with surface water, increasing public awareness of problems associated with improper pet waste disposal is particularly important.

This year, as in previous years, a $50,000 contract has been awarded to a local public relations firm and a public information program has been implemented to reduce fecal coliform contamination. This program has emphasized the use of TV and radio spots to target dog feces and trash as unwanted storm water pollutants. The MS4 co-permittees and the storm water education team also continue to reduce fecal coliform contamination through the "Scoop the Poop" educational program. A one-page informational Scoop the Poop "rack card" was recently prepared by the educational partners and will be distributed along with other brochures describing good pet waste disposal practices at community events such as a sustainability fair, the state fair, and "Dia del Rio" or "River clean-up day". In addition, the MS4 partners have volunteered to speak at public meetings about the importance of picking up after pets. The Storm Drainage Section with the City of Albuquerque also continues to work with the Open Space Division to add plastic bag dispensers at City Parks and Open Space areas at public request, particularly in areas where dog walking is prevalent.

Flotables and sediment continue to be removed on the streets and within the storm drainage system by each of the partners thereby reducing surface areas to which bacteria may cling and lowering overall bacterial loads.

The attached TMDL results show that the co-permittees of the Albuquerque MS4 Storm Water Permit are currently well within the target goals of the fecal coliform load allocations stated in the permit. Albuquerque is currently at over a 2-inch rainfall deficit for the year. Therefore, fecal coliform loadings have decreased at all four outfalls when compared to last year's values. Loading allocations at the North Diversion Channel and San Jose Drain have dropped from about 26% and 30% of target values to 18 % and 4% of target values respectively. Note that fecal coliform loading for the South Diversion Channel and Tijeras Arroyo are about four orders of magnitude below their target load allocation.

Please feel free to contact Kathy Verhage by phone at (505) 768-3654 or by email at kverhage@cabq.gov should you have any questions regarding this year's TMDL progress report.

PO Box 1293

Albuquerque

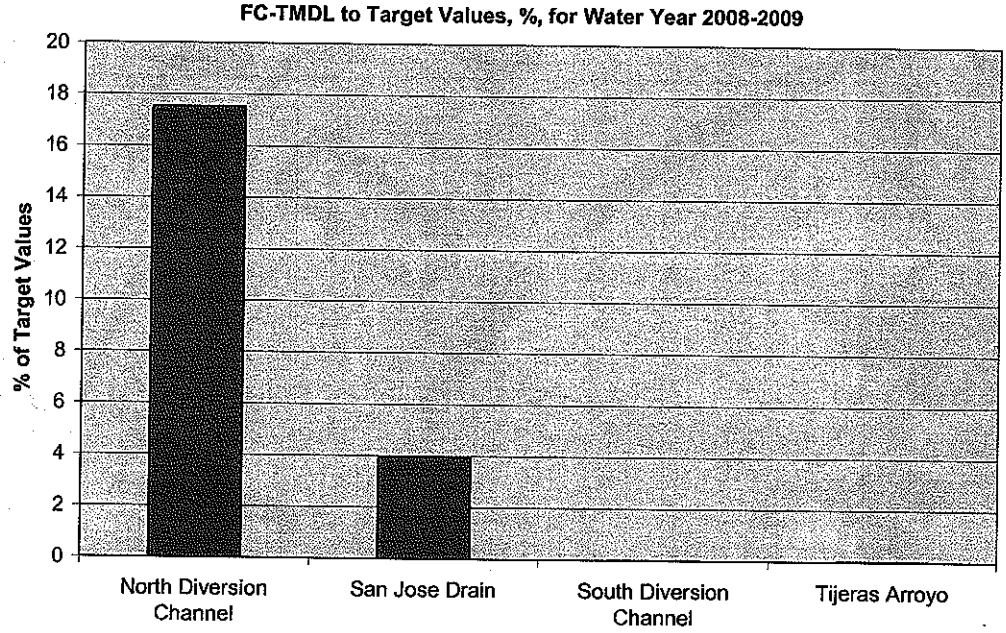
NM 87103

www.cabq.gov

Fecal Coliform Total Maximum Daily Loading (TMDL)

	Maximum 30-day Geometric Mean, coliform forming units (cfu)/day						
Conveyance	Target*	2003 - 2004	2004 - 2005	2005 - 2006	2006 - 2007	2007 - 2008	2008 - 2009
North Diversion Channel	6.438×10^{11}	1.05×10^{11}	1.24×10^{10}	3.21×10^{11}	3.05×10^{10}	1.67×10^{11}	1.13×10^{11}
San Jose Drain	1.068×10^{10}	5.12×10^{9}	1.54×10^{9}	2.10×10^{9}	2.71×10^{8}	3.21×10^{9}	4.23×10^{8}
South Diversion Channel	1.444×10^{11}	3.69×10^{7}	3.9×10^{7}	4.85×10^{8}	1.67×10^{7}	8.49×10^{9}	1.23×10^{7}
Tijeras Arroyo	1.199×10^{11}	2.43×10^{5}	3.4×10^{6}	4.74×10^{9}	9.23×10^{6}	1.77×10^{10}	2.19×10^{7}

* From Table III.B.2 of MS4 Permit NMS000101



Annual Calculation of TMDL Loading 2008-2009 – Monthly GEOMETRIC MEAN in cfu/day				
Month	San Jose Drain	Tijeras Arroyo	South Diversion Channel	North Diversion Channel
October 2008	4.231E+08	7.823E+05	6.419E+05	3.196E+10
November 2008	2.167E+08	3.339E+05	5.629E+05	2.739E+10
December 2008	2.538E+08	1.577E+06	8.357E+05	3.793E+10
January 2009	2.050E+08	2.924E+05	2.447E+05	2.249E+10
February 2009	2.208E+08	3.631E+05	2.447E+05	2.393E+10
March 2009	2.507E+08	4.760E+05	5.756E+05	2.828E+10
April 2009	4.083E+08	1.018E+06	5.788E+06	3.703E+10
May 2009	1.835E+08	1.476E+07	2.447E+05	2.408E+10
June 2009	1.835E+08	9.537E+06	1.235E+07	1.030E+11
July 2009	3.034E+08	5.247E+06	1.124E+06	6.576E+10
August 2009	3.188E+08	4.092E+06	2.793E+06	4.160E+10
September 2009	4.045E+08	2.193E+07	4.262E+06	1.129E+11

CERTIFICATE LETTER

We the undersigned, certify under penalty of law that this document and all attachments were prepared under our direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on our inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of our knowledge and belief, true, accurate, and complete. We are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Roland Penttila, P.E.
Manager, Storm Drainage Section
Department of Municipal Development
City of Albuquerque, New Mexico

John Kelly, P.E.
Executive Engineer
Albuquerque Metropolitan Arroyo
Flood Control Authority

For **Larry Velasquez, P.E.**
District Engineer
NM Department of Transportation

David W. Harris
Executive Vice President
for Administration
University of New Mexico

Attachments

PDF-CC:
- Kathy Verhage, COA
- Kevin Daggett, AMAFCA
- Jerry Lovato, AMAFCA
- KatherineTrujillo, NMDOT
- Vern Hershberger, UNM
- Richard Powell, NMED
- Scott Bulgrin, Pueblo of Sandia
- Jim Piatt, Pueblo of Isleta

CITY OF ALBUQUERQUE

October 7, 2009

U.S. EPA, Region 6
NPDES Permits and Technical Section
6WQ-PP
ATTN: Ms. Susanna Perea
1445 Ross Avenue
Dallas, Texas 75202-2733

Enf file #5

RE: Albuquerque Municipal Separate Storm Sewer System Permit No. NMS000101

A compact disk (CD) containing an electronic copy of the City of Albuquerque's (COA) and the Albuquerque Metropolitan Flood Control Authority's (AMAFCA) Storm Water Management Plan (SWMP) is included with this correspondence. The CD also contains progress reports and annual reports, and the section from our Development Process Manual (DPM) describing post construction controls. It appears that very few changes as noted in the progress reports were made to the SWMP once it was submitted to the EPA in 2004.

Let me know if you need any additional information. You can contact me by phone at (505) 768-3654 or by email at kverhage@cabq.gov.

Sincerely,

Kathy Verhage

Kathy Verhage, P.E.
Storm Drainage Section
Engineering Division, DMD

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

NMS000101 MS4 AUDIT
CITY OF ABLUQUERQUE (COA) (only)
September 22 – 24, 2009
Administered by the Storm Drainage of the Department of Municipal Development (DMD)

I. STORM WATER MANAGEMENT PROGRAM (SWMP):

A. Structural Controls and Storm Water Collection System Operation

SWMP - Consists of underground storm sewers and inlets, lined and unlined open channels, natural arroyos, pump stations, detention basins and flood control dams. COA maintains controls not belonging to AMAFCA. Although this Best Management Practice (BMP) is discussed in the SWMP, it is described in more detail in the DPM. Inspections are on-going but no less than annually. Maintenance activities are generally assigned based on results of field inspections of existing systems, especially prior to primary rainy season (June through September). New constructed systems are accepted into agency maintenance only after inspections have been completed to assure they were built to agency regulations. Inspections are also conducted after every major rain event and in response to customer concerns. Floatable accumulations in open channels are periodically removed during normal maintenance activities and disposed of through COA Solid Waste Disposal Programs. Structural controls are inlet grates, pump station bar screens, outlet structure control mechanisms for detention basins and flood control dams, and special water quality control structures. Accumulations are removed on an as needed basis and when scheduled maintenance is conducted. Minor detention basins are normally associated with homeowners associations and are not routinely inspected by COA. However, they are inspected as problems occur or there is a complaint received from the public.

Findings - COA coordinates with its other co-permittees, the New Mexico Environment Department (NMED), and various federal agencies. COA has 115 ponds including 11 dams. The Senior Engineer regularly inspects the dams and small ponds. While on site, he will note any trash problems. These ponds and dams are inspected and cleaned out on a regular scheduled basis (usually twice a year) by DMD Maintenance. The controls were initially installed to control flood waters. There is an emergency response program (written) through which the Water Utilities Authority (WUA) agreed to inspect the 14 lift stations prior to the rainy season. They also check for floatables. Maintenance is tracked though work orders. Most complaints come to DMD through the 311 complaint system and the majority of those are for mosquito control. COA contracts with Southwest Sewer to clean entire system on a regular basis. They clean wet wells and pumps stations. The DMD maintains paper files of all maintenance done by COA crews.

Records of trash and sediments removed are kept. Water quality monitoring is used to validate Water Quality. COA is working with the US Geological Service (USGS) to validate the quality of data not collected by the GS. Historical records of floatables are

that have helped with floatables. Dumpster design change minimized dumpster juice which helped with bacteria loading.

COA isn't sure how to quantify whether or not structural controls are effective in these areas. There is an issue with the Homeowners Associations. It is unclear who is supposed to maintain ponds. COA doesn't keep management records at private ponds. Also, the DPM dictates maximum amount of loading will be allowed but the burden of proving they aren't exceeding limits is up to the developer.

COA does not administer the Notice of Intent (NOI) program. The Planning Department sends out letters approving each project (after review) and notifies a NOI must be submitted and operator must have a SWPPP. The Planning Department also makes sure projects (basins) are put in correctly. COA feels the DPM is the control mechanism versus an ordinance. There is a financial guarantee and agreement and a punch list that the developer hands to the COA. That punch list is the quality control. The developer has to do any cleanup before the COA will accept. There is no good way to measure effectiveness. COA does not differentiate from new development / redevelopment. They don't believe either is a significant contributor of pollutants. Newer development is taken into consideration when evaluating Water Quality.

C. Roadways.

SWMP –The Public Works Department (PWD) Street Maintenance Division operates a de-icing program for the winter season. SWMP states they use a rock salt and cinder rock mixture. They have four street maintenance yards where covered storage is provided for all winter de-icing material. The COA's eleven street sweeper units sweep residential and arterial streets a minimum of three times a year, with any bike lane streets being swept an additional two times a year. Because The Downtown and Old Town areas are high trash producers and high visibility areas, they are swept once a week. Areas adjacent to major concrete and asphalt production areas are swept once every two weeks. The Downtown Action Team, a privately funded business organization, operates a cadre of manual street cleaners and a mini-street sweeper which operate daily in the immediate downtown area surrounding City Hall. This group also provides security in the downtown area. The Weed and Litter Division of the Street Department provide maintenance for the Right-of-Ways (ROWs) in COA. This includes mowing roadside vegetation and removal of inadvertent dumping in areas along the ROWs. Maintenance is performed on an as-needed basis and is mostly dependent on the amount of rainfall received annually. The Department has licensed applicators who apply herbicides such as Roundup or Rodeo, depending on area.

Findings - The DMD coordinates with the Street Maintenance Division on street maintenance and road repair activities. They also coordinate with the Public Works Department (PWD, NMDOT, University of New Mexico, Bernalillo County, the Middle Rio Grande Council of Governments, and the Metropolitan Planning Organization (MPO). All requests for state and federal funding on roadways must go through the Middle Rio Grande COG. Maintenance records are maintained by the Maintenance

Water Quality features based on historical observations of effectiveness at reducing gross pollutants and continued function.

E. Pesticide, Herbicide, and Fertilizer Application.

SWMP – The conversation of drinking water from ground water to surface water from the Rio Grande River has re-emphasized the need for COA to control the amount of herbicides, pesticides and fertilizers entering the Rio Grand River. The Water Conservation Office of the COA Water Utility Department (WUD) has taken the lead role in promoting not only landscape based water conservation, but also the prudent use of landscape based pesticides, herbicides, and fertilizers (PHFs).

The COA EHD operates a Household Hazardous Waste Program for collection and disposal of household hazardous waste, which includes pesticides, herbicides and fertilizers. This program is supported by a monthly surcharge on refuse collections bills.

The following is a summary of the COA departments that utilize PHF:

1. Parks and Recreation Department, Maintenance Division, uses non-restricted pesticides and herbicides in limited quantities for pest and vegetation control. Applicators are trained and licensed by the New Mexico Department of Agriculture (NMDA). City-wide water conservation efforts have reduced the amount of turf areas with the utilization of xeriscape planting and landscape materials.

2. The Weed and Litter Division, utilizes herbicides on a limited basis for partial vegetation control. All applicators are trained and licensed by NMDA.

3. The COA Environmental Health Department (EHD) operates a Bio-Disease Management Program that utilizes various insecticides at various times of the year for control of mosquitoes in residential and agricultural areas. Applicators are licensed by the NMDA. The department also utilizes gambusia minnows for mosquito larvae control in riparian areas.

4. The Water Conservation Office of the COA WUD developed and implemented a successful xeriscape program that encourages conservation of irrigated turf areas to native xeriscape. The program includes rebates for both residential and commercial areas that convert to xeriscape. The WUD published brochures emphasizing correct use of fertilizers in landscape installations. COA Planning Department implemented guidelines that limit the percent of irrigated turf area permitted in new development.

Findings – COA has moved toward water conservation and more and more people use xeriscaping, thus reducing the use of PFHs. The DMD SW Division does not keep records of other departments' PFH use. Staff was unable to provide any information except that pesticides monitoring has always shown below detections.

F. Illicit Discharges and Improper Disposal.

to submit the data. The USGS is currently shifting through all collected data to determine monitoring results.

G. Sanitary Sewers

SWMP – In 1976 COA Wastewater Utility Division performed a massive infiltration/inflow study and found I/I was not a significant problem. In 1999, a newer study of older areas in of the Albuquerque East Valley Area, which encompasses low lying areas east of the Rio Grande from the north city limits to the south city limits. These studies resulted in maps for final input into the COA GIS and determined locations and extent of any possible cross-connections found. Since there was a small amount of suspected cross connections, there were no furthering dye testing, smoke or TV inspections. The COA has an annual program to rehab existing sanitary sewer system manholes and lines. The COA PWD Standard Specification includes specifications for specific pipe material and size for sanitary sewer construction.

Findings - The Water Utility Authority (WUA) manages sanitary sewers. This section of the SWMP will have to be re-written. Any calls received by DMD regarding infiltration of sanitary sewer seepage is referred to the WUA. COA seldom has problems with privately owned sewer lines but if they do they will report to WUA who investigates by conducting smoke tests. WUA will contact COA if they are responsible and COA will resolve. Seepage would show up as a smell and would be handled appropriately, either by the Sewer Maintenance Department or by the landowner. WUA has procedures where they will provide a map to plumbers indicating the depth of sewer lines and the size of the lines. The 311 database is used where issues of this type are tagged as "unusual". They have had only one in the last five years.

H. Spill Prevention and Response –

SWMP – The COA Fire Department is the primary response agency for spills of toxic material with two response teams – one in the northeast section of the city, the other in the southwest area of the city. They are concerned with containment, control and clean up of hazardous material spills. They have approximately 100 personnel involved in the program with approximately 50 certified by the State ads Level 3 qualified. The remainder varies in training from OSH technician rating to OSHA specialist rating. The COA EHD provides assistance in spill control. They provide assistance to industries and commercial businesses on proper storage and handling of hazardous materials. They also coordinate clean up effort with the COA Fire Department and other fire response agencies servicing the overall area. The PWD also provides assistance and support. They have an on-call contractor for collection and disposal of material spills, particularly petroleum type materials. The NMED also provides response with follow-up enforcement if necessary.

Findings - The Hazmat Team with the Fire Department is call for all spills of toxic materials. There is one team in the northeast area of the COA and one in the southwest area. These teams will respond to every spill because they assume everything

notification to applicant of the need to prepare a SWPPP and the need to conform to the EPA NOI process before construction activities begin. All construction contracts funded by COA include a pay item and requirements for preparation and implementation of SWPPPs for the project. Inspections provided by:

1. COA Construction, Storm Water, or Code Enforcement Divisions,
2. Spot check site inspections conducted by COA SW Division, AMAFCA and NMED,
3. Storm Water Division maintain NOIs for Department of Development construction projects and assists contractors in developing SWPPPs.
4. Additional inspections conducted by cooperation between COA PWD, Planning Department, AMAFCA and the DMD,
5. Telephone hot-line currently operating for citizen complaints.

Training program certification was required in the SWMP, but the training program was not described. Fugitive dust training was done with a cursory one hour class. The training was reported in Appendix B of the 2004 annual report.

Findings - There is coordination between the DMD SW, the Planning Department, and CIP Department with Construction Services, the NMED, and AMAFCA on projects they do together, and with Dot on projects they do together. There are regular pre-construction meetings with all agencies involved with individual projects. DMD SW attends these pre-con meetings for public projects, but they don't get involved with private projects. They only get involved with private projects if there is a citizen's complaint or Planning inspectors have a problem. For municipal owned projects there are inspectors (not dedicated) from the Construction Services Division inspectors, who have been trained to look for stormwater issues. They look for the basics. They don't document what they find. Private construction inspections are done by the Planning Division. The construction inspectors at municipal-owned sites make sure the operators have SWPPPS AND BMPS. Also, DMD SW does training of inspectors and training of contractors. They also do fugitive dust training. There are specific guidelines and specs required when contractors bid for contracts. On non-municipal owned projects, the Planning Department notifies operators of the need for NOIs and SWPPPs. For infrastructure installation, PD checks for dust controls. For grading and drainage plans there has to be an Erosion and Sediment Control Plan per development process (per the DPM). Contractors also have to have fugitive dust permit before beginning. Inspectors try to work directly with contractors. For continued problems, inspectors will report to DMD SW. There is no enforcement program other that the fugitive dust program. The pollutants of concern identified are sediment and floatables, possibly metals if touched by sediment particles, oil and grease. A study conducted by the Fugitive Dust Department showed that silt fence control blowing dust, so it is a requirement of the Fire Department permit. If there is a detention pond on site, no wattles are requirements due to a flood issuing. DMD SW is working with consultants to let them know the MS4 does not want stormwat4er inlet protections installed. COA is still in the process of looking at collected data to see if sediment has dropped over time. AMAFCA has traditionally kept track of what they took out of the channel. Amount is dependent on rainfall amounts and better

advertising on public transportation transit buses, pencils, flyers, Frisbees, and magnets for hand out at special events, demonstration computer game know as ECO-MASTERS, a computerized tour of an urban area identifying common pollution problems, public educational brochures, letter mail out to specific industries and businesses exhibiting potential for stormwater pollution. They take part in many events including Albuquerque Children's Festival, and Albuquerque City Employee Day. COA has participated in the education of construction association members. They developed a 24-hour Stormwater Hotline to aid citizens in reporting incidences of illegal dumping or illicit discharges to the storm drainage system. The local pubic access TV channel has been used to show taped informational videos. They have utilized the Youth Development, Inc Program to mark stormwater drainage inlets. The SWMP does not discuss public involvement, only education.

Findings – COA is currently not measuring performance in this BMP. They have established a website. Their budget includes money to provide outreach with their co-permittees. DMD SW thinks a survey would be a good thing. They have noticed more bag stations for pet waste installed after outreach project. They have the 24-hour stormwater hotline in addition to the 311 system. They have conducted the inlet marking project and hung door hangers both of which have information and a phone number to report illicit discharges and any other concerns. They have developed magnetic door plaques, brochures, wheels, Kooney Watson videos. They have seen greater volunteerism. The failure of the system is that there are not enough people to respond to complaints. City is a minority city. Storm drain markers are in Spanish and English. They don't print brochures in Spanish because the majority of the Hispanic community cannot read Spanish.

L. Monitoring Programs.

1. The Dry Weather / Wet Weather Screening Program –

SWMP - According to the November 28, 2004, SWMP, dry weather field screening was performed for the entire storm drainage system as part of the original NPDES Storm Water Permit application. Since that time, system screening has been accomplished based on complaints and/or as part of normal field inspection for improvements or maintenance. The permit requires dry weather screening of entire MS4 once per year and for wet weather screening, the permit requires all major outfalls discharging directly to the Rio Grande be screened at least once per year. In a letter dated November 30, 2004, COA informed EPA that they were combining dry and wet weather screening due to arid conditions and sporadic rainfall events. The letter further states they will monitor 17 major screening points (and list the locations) and states that these monitoring points will be screened at least once a year and sampled at least once every other year.

Findings: Dry and wet weather screening are done at 17 locations annually and is reported in the annual report. Other monitoring is done by the USGS based on the schedule in the permit – wet season (6/1-9/30) and dry season (10/1-5/30.

indicated they had forwarded them. While the AMAFCA is a co-permittee, the COA has relied on their control measures to prevent pollutant discharges to the Rio Grande. In year four of the permit (2007) COA was suppose to report seasonal loading data and event mean concentrations. However, they failed to do so. USGS is currently reviewing their data. Also, toxicity testing in year five of the permit was not conducted in accordance with the permit.

Schedule
MS4 NM0000101

9/21/09	10:30 AM	Arrive Albuquerque
	11:30 AM	Meet NMED (somewhere close to UNM) Eat lunch
	1:00 PM	Meet with Vern Hershberger (UNM) For Inspection of Construction and Floatables Monitoring BMPs Field: Oversight inspection of construction site (if there is one)
	4:30 PM	End of Inspection
9/22/09	9:00 AM	Audit entrance meeting with City of Albuquerque
	9:30 AM	Begin audit
	4:30 PM	End of day one
9/23/09	8:30 AM	Resume audit
		Field: NMED Inspector do oversight inspection at City owned industrial site and construction sites (both public and private).
		While tv slot is being filmed, one auditor can go with City while other two review files (inspection and enforcement).
9/24/09	8:30 AM	Resume audit
		Field: NMED will conduct any remaining inspections
	11:30 AM	Audit ends
	1:00 PM	NMDOT Inspection of Construction and Floatables Monitoring BMPs
		Field: NMED will conduct oversight of construction site inspection.
	4:30 PM	End of day