

CITY OF ALBUQUERQUE
STORM WATER MANAGEMENT PROGRAM (SWMP)

DECEMBER 1, 2016

PREPARED FOR COVERAGE UNDER US EPA NPDES
GENERAL PERMIT NMR04A000
MIDDLE RIO GRANDE WATERSHED BASED MUNICIPAL
SEPARATE STORM SEWER SYSTEM (MS4) PERMIT



Revisions

SWMP Version	Date Submitted to EPA	Reason for Revision (e.g., Annual Report, Modification, etc.)	Notes
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Appendix O: Delegation of Authority

Appendix P: MS4 Technical Advisory Group

Abbreviations

<i>E. coli</i>	<i>Escherichia coli</i>
mg/L	milligrams per liter
NM	New Mexico
N	North
U.S.	United States

Acronyms

ABCWUA	Albuquerque Bernalillo County Water Utility Authority
ACT	Advanced Chemical Transport
AMAFCA	Albuquerque Metropolitan Arroyo Flood Control Authority
BMP	Best Management Practice
BO	Biological Opinion
BOD ₅	Biological Oxygen Demand
CFR	Code of Federal Regulations
CGP	Construction General Permit
CISEC	Certified Inspector of Sediment and Erosion Control
CMC	Compliance Monitoring Cooperative
COA	City of Albuquerque
COD	Chemical Oxygen Demand
CPESC	Certified Professional of Erosion and Sediment Control
CSI-MS4	Certified Stormwater Inspector - MS4
CWA	Clean Water Act
DCIA	Directly Connected Impervious Area
DPM	Development Process Manual
DO	Dissolved Oxygen
DMR	Discharge Monitoring Report
EPA	Environmental Protection Agency
ESC	Erosion and Sediment Control
FSP	Field Sampling Plan
GI/LID	Green Infrastructure/Low Impact Development
Haz-Mat	Hazardous Materials
HHWCC	Household Hazardous Waste Collection Center

COA MS4 Stormwater Management Program

IA	Impervious Area
IDDE	Illicit Discharge Detection and Elimination
KAFB	Kirtland Air Force Base
MEP	Maximum Extent Practicable
MQL	Minimum Quantification Levels
MRG	Middle Rio Grande
MRGSWQT	Middle Rio Grande Stormwater Quality Team
MS4	Municipal Separate Stormwater Sewer System
MSGP	Multi-Sector General Permit
NDC	North Diversion Channel
NMDA	New Mexico Department of Agriculture
NMDOT	New Mexico Department of Transportation
NMED	New Mexico Environment Department
NOI	Notice Of Intent
NOT	Notice Of Termination
NPDES	National Pollutant Discharge Elimination System
OSE	Office of the State Engineer (New Mexico)
P2/GH	Pollution Prevention/Good Housekeeping
PCB	Polychlorinated Biphenyls
PE	Professional Engineer
QAPP	Quality Assurance Project Plan
SAP	Sampling and Analysis Plan
SIC	Standard Industrial Classification
SIO	Significantly Identical Outfall
SJD	San Jose Drain

COA MS4 Stormwater Management Program

SNL	Sandia National Laboratories
SPCC	Spill Prevention, Control and Countermeasure Plan
SSCAFCA	Southern Sandoval County Arroyo Flood Control Authority
SWMP	Stormwater Management Program
SWPPP	Stormwater Pollution Prevention Plan
TAG	Technical Advisory Group
TDS	Total Dissolved Solids
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
UA	Urbanized Area
UNM	University Of New Mexico
WLA	Waste Load Allocation
WQS	Water Quality Standard
WQCC	Water Quality Control Commission (New Mexico)
WWTP	Waste Water Treatment Plant

1. Introduction

This Stormwater Management Program (SWMP) was prepared by the City of Albuquerque (COA). The SWMP was developed in support of the requirements of the United States Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) Middle Rio Grande Watershed Based Municipal Separate Stormwater Sewer System (MS4) Permit NMR04A000 (herein MS4 Permit or Permit). The MS4 Permit was issued and became effective on December 22, 2014, and was subsequently modified by EPA on April 9, 2015 and February 10, 2016¹. The MS4 Permit is included in Appendix A-1 of this SWMP, the April Notice of Modification from EPA is Appendix A-2, and the February Notice of Modification from EPA is Appendix A-3.

The SWMP serves to document proposals, implementation, and assessments associated with operation of the SWMP. The SWMP will be revised and modified as necessary and required over the course of the Permit term, and will include all applicable records.

The initial SWMP summarizes the applicable Permit requirements and describes how the COA intends to comply with the requirements to ensure that stormwater discharges from the COA MS4 do not contribute pollutants to waters of the United States, namely the Rio Grande. The initial SWMP provides as much information as is currently available with regard to elements of COA's Notice of Intent (NOI), description of best management practices (BMPs), measurable goals, and anticipated implementation dates as required by MS4 Part I.B.2. A complete SWMP will be submitted with the first Annual Report (due December 1, 2016), as required in Part III.B.

1.1. Purpose of the MS4 Permit

The MS4 Permit was developed for MS4 operators within the Middle Rio Grande (MRG) Watershed that discharge stormwater to waters of the United States (U.S.).

EPA's MS4 program addresses pollution from stormwater runoff that is conveyed by MS4s and discharged into rivers and streams. The EPA defines a MS4 as a conveyance or system of conveyances that is:

- Owned by a state, city, town, village, or other public entity that discharges to waters of the U.S.;
- Designed or used to collect or convey stormwater (including storm drains, pipes, ditches, etc.);
- Not a combined sewer; and
- Not part of a Publicly Owned Treatment Works (sewage treatment plant).

In 1990, the EPA established Phase I of the NPDES program, requiring operators of "medium" and "large" MS4s, generally those serving populations greater than 100,000, to implement stormwater management programs to control the discharge of pollutants from their stormwater systems. In 1999, the Phase II NPDES program extended coverage of the MS4 stormwater permits to qualifying "small" MS4s.

The MRG Watershed MS4 Permit provides coverage to MS4 operators located fully or partially within the Albuquerque Urbanized Area (UA) (based on the 2000 and 2010 Decennial Census). In addition, the Permit attempts to regulate stormwater discharges on a watershed basis by providing incentives for

¹ The version of the MS4 Permit referenced throughout this SWMP Plan (Appendix A-1) was issued on December 22, 2014 and modified by EPA on April 9, 2015, and February 10, 2016.

collaboration and legally-binding cooperation among the various MS4s within the Middle Rio Grande; however, the option to independently meet Permit requirements is preserved. The COA will comply with all of the requirements of the MS4 Permit, and cooperates to the extent practicable for each program element.

1.2. Permittee Eligibility [MS4 Part I.A]

1.2.1. Permit Area [MS4 Part I.A.1]

This SWMP covers the COA MS4. The COA is located within Bernalillo County, New Mexico (NM). The majority of the COA's stormwater runoff is captured by channels under the jurisdiction of the Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA) MS4. Bernalillo County, New Mexico Department of Transportation (NMDOT), the University of New Mexico (UNM), Kirtland Air Force Base (KAFB), Sandia National Laboratory (SNL), Los Ranchos de Albuquerque, Sandoval County, Southern Sandoval County Arroyo and Flood Control Authority (SSCAFCA), Corrales, and the City of Rio Rancho, are all other MS4's under the MRG MS4 Permit that are adjacent to or within the COA. These separate MS4 are all working in cooperation with the COA in implementation of the MS4 Permit requirements.

1.2.2. National Historical Preservation Act [MS4 Part I.A.3.b]

The COA meets Criterion A of MS4 Part I.A.3.b(i): storm water discharges, allowable non-storm water discharges, and discharge related activities do not affect a property that is listed or is eligible for listing on the National Register of Historic Places as maintained by the Secretary of the Interior. The COA complies with the National Historical Preservation Act as follows:

1. There are no historic properties that are affected by stormwater or allowable non-stormwater discharges.
2. Per the current Phase I MS4 Permit, the COA is in compliance with NMState Historic Preservation Office (SHPO) requirements specified in Part IV, Section U (EPA, March 1, 2012). Language in the 2012 MS4 Permit was approved by SHPO during the 2008 reapplication.
3. The COA has an Archaeological Ordinance, approved in 2007, that establishes procedures to protect archaeological sites within the city. Land disturbances resulting in discovery of such sites must undergo review by qualified individuals.

1.2.3. Authorized Non-Stormwater Discharges [MS4 Part I.A.4]

Any such discharge that is identified as a significant contributor of pollutants to the COA MS4, or is causing or contributing to a water quality standard violation, will be addressed as an illicit discharge pursuant to Part I.D.5.e of the MS4 Permit.

Table 1-1 below lists authorized non-stormwater discharges and indicates those that are applicable to the COA MS4, and the reason these discharges are not expected to be significant contributors of pollutants to the MS4.

Table 1-1: Authorized Non-Stormwater Discharges

Allowable Non-Stormwater Discharges	Reason discharge is not expected to be a significant contributor of pollutants:
Potable water sources, including routine water line flushing and fire hydrant flushing	Line flushing discharges are directed to the storm drain system and are not expected to contribute pollutants. Chlorine dissipation occurs rapidly in the open flow channels.
Lawn, landscape, and other irrigation waters	The Albuquerque Bernalillo County Water Utility Authority (ABCWUA) has a water use ordinance controlling this discharge. Fertilizer, herbicide, and pesticides are applied to manufacturer recommendations.
Diverted stream flows	Not applicable to the COA.
Rising ground waters	Discharged directly through the storm drain system.
Uncontaminated groundwater infiltration and pumped groundwater	Discharged directly through the storm drain system.
Foundation and footing drains, or water from crawl space pumps	Not a large source of discharge.
Air conditioning or compressor condensate	Not expected to be contaminated.
Springs	Not applicable to the COA.
Individual residential car washing	Not a large source of discharge.
Flows from riparian habitats and wetlands	Not a large source of discharge.
Dechlorinated swimming pool discharges	When directed to the storm drain system and are not expected to contribute pollutants.
Street wash waters that do not contain detergents and where no un-remediated spills or leaks of toxic or hazardous materials have occurred	Streets are swept with vacuum and mechanical sweepers.
Discharges or flows from firefighting activities (excludes firefighting training activities)	Not a large source of discharge.
Other similar occasional incidental non-stormwater discharges	Not a large source of discharge.

1.2.4. Limitations of Coverage [MS4 Part I.A.5]

The COA does not authorize the mixing of stormwater discharges with sources of non-stormwater unless such non-stormwater discharges are in compliance with a separate NPDES permit; exempt from permitting under the NPDES program; or determined not to be a substantial contributor of pollutants to waters of the U.S. [I.A.4.a]

The COA discharges industrial stormwater within the COA in accordance with the provisions of the Multi-Sector General Permit (MSGP) see Table 1-2. These sites will remain compliant with the requirements of the MSGP and the associated Stormwater Pollution Prevention Plan (SWPPP). [I.A.5.f]

The COA discharges stormwater from construction activities within the COA in accordance with the provisions of the Construction General Permit (CGP). There are multiple sites with NOIs for coverage

under the CGP. These sites will remain compliant with the requirements of the CGP and their associated SWPPPs. [I.A.5.c]

The COA will implement measures or controls that are consistent with the EPA-approved TMDL through the SWMP, as documented in the SWMP. [I.A.5.f]

1.3. Notice of Intent [MS4 Parts I.A.3.a, I.A.6.a, I.B, I.D.5.h(i) and Appendix E]

For coverage under the MS4 Permit as a Class A Permittee with cooperative programs, the COA filed an NOI to EPA on or before June 20, 2015 (no later than 180 days from the effective date of the Permit of December 22, 2014). The NOI is provided as Appendix C-1 of this SWMP.

1.3.1. Public Notice

This SWMP will be available for public review and comment. The MS4 Permit, NOIs and SWMP are available to the public and any interested party through the City of Albuquerque's homepage (<http://www.cabq.gov/municipaldevelopment/our-department/engineering/storm-water-management/municipal-separate-storm-sewer-system-ms4-permit>).

1.3.1.1 Copy of Public Notice

A copy of the public notices, including the legal newspaper publication is provided as Appendix C-2 of this SWMP.

1.3.1.2 Permittee's Notification of Coverage

The COA received notice from the EPA on December 17, 2015 that the NOI was found to be technically complete and granting authorization under NMR04A000. The assigned Permit tracking number for the COA is NMR04A014. A copy of the coverage notification letter is included in Appendix C-3 of this SWMP.

1.3.1.3 Permittee's Responses to Public Comments

Public comments received by the COA will be reviewed and considered for incorporation into a SWMP revision. The comments and a summary of COA responses will be submitted to EPA with the SWMP on or before December 1, 2016.

1.3.1.4 Continued Availability of Records to Public

Public participation in the review, modification, and implementation of this SWMP is encouraged and provided for as described in Section 11 of this SWMP. The MS4 Permit, NOI and SWMP are available to the public and any interested party through the COA website (<http://www.cabq.gov/municipaldevelopment/our-department/engineering/storm-water-management/municipal-separate-storm-sewer-system-ms4-permit>). Documents associated with the COA's MS4 Permit coverage will be posted to and maintained on this website throughout the Permit term.

1.3.2. Classification and Population

As prescribed by Appendix A of the MS4 Permit, the COA is classified as a Class A Permittee. This SWMP complies with the requirements set forth in the Permit for Class A Permittees.

The COA MS4 serves a total population of approximately 546,364 people based on the 2010 Census.

1.3.3. NOI Filed

The NOI form available at <http://www.epa.gov/region6/water/npdes/sw/ms4/index.htm> includes the information required by Part I.B.2 of the MS4 Permit. The NOI was submitted to EPA via e-mail at the R6_MS4Permits@epa.gov on or before June 20, 2015. The NOI was also submitted to the New Mexico Environment Department (NMED) and the Pueblo of Isleta on or before June 20, 2015.

New Mexico Environment Department
Attn: Bruce Yurdin, Program Manager
Surface Water Quality Bureau
Point Source Regulation Section
P.O. Box 5469
Santa Fe, NM 87502

Pueblo of Isleta
Attn: Ramona M. Montoya, Environmental Division Manager
P.O. Box 1270
Isleta, NM 87022

1.3.4. Duty to Reapply [MS4 Part IV.C]

The COA acknowledges the duty to reapply for coverage under the MS4 Permit at least 180 days prior to the Permit expiration date of December 19, 2019 (i.e., prior to June 22, 2019).

1.4. Site Description

1.4.1 MS4 Boundary

The COA MS4 boundary is the City limits.

1.4.2 Other NPDES Permit Coverage

Some COA sites that are covered under the MSGP and/or CGP are located within the boundary of the MS4. The COA MSGP facilities are listed in Table 1-2 below. The list of COA construction sites is a dynamic list that is available upon request. Stormwater discharges associated with industrial and/or construction activities at these sites will be addressed pursuant to the MSGP or CGP, as applicable. All other stormwater discharges associated with these sites will be addressed pursuant to the MS4 Permit. Note that the number and identification of construction sites is dynamic, and permit coverage is terminated following stabilization. As the SWMP is revised, Table 1-2 will be updated.

Table 1-2: COA Sites Covered Under the MSGP within the COA MS4 Boundary as of October 10, 2016

Site Name	Drainage Basin	Permit	NOI Number	Status
Albuquerque International Sunport	Tijeras Arroyo	MSGP	NMR053023	Active
Double Eagle II Airport	South Boca Negra Arroyo	MSGP	NMR053025	Active
Yale Maintenance Facility	South Diversion Channel	MSGP	NMR053201	Active
Daytona Maintenance Facility	Tierra Bayita Channel	MSGP	NMR053200	Active
Montessa Park Convenience Center	Tijeras Arroyo	MSGP	NMR053423	Active
Edith Yards Maintenance Facility	Alameda Drain	MSGP	NMR053422	Active
Eagle Rock Convenience Center	South La Cueva Arroyo	MSGP	NMR053421	Active
Don Reservoir Convenience Center	Snow Vista Arroyo	MSGP	NMR053420	Active
Clean City Division at Pino Yards	South Domingo Baca Arroyo	MSGP	NMR053419	Active

1.5. Compliance with Other Laws and Regulatory Requirements [MS4 Parts I.D.1 and IV.N]

Part I.D.1 of the MS4 Permit states that if a Permittee is already in compliance with one or more requirements of the MS4 Permit because it is already subject to and complying with a related local, state, or federal requirement that is at least as stringent as the MS4 Permit requirement, the Permittee may reference the relevant requirement as part of the SWMP and document why the MS4 Permit requirement has been satisfied.

The COA maintains compliance with state and federal regulations and laws that are related to (but do not conflict with) the requirements of the MS4 Permit. In some cases, compliance with the additional regulations and laws (as described below) meets or exceeds the requirements of the MS4 Permit, or demonstrates compliance with NPDES Permits (i.e., CGP, MSGP and MS4).

1.5.1 Endangered Species Act

COA meets Endangered Species Act eligibility Criterion C, which means that federally-listed threatened or endangered species or their designated critical habitat(s) are likely to occur in or near the site's action area², and the site's discharges and discharge-related activities are not likely to adversely affect listed threatened or endangered species or critical habitat.

There are 2 current/proposed federally-listed species and/or federally-designated critical habitats within the COA boundary; the following are federally and State of New Mexico listed species and/or federally designated critical habitats located in Bernalillo County and the action area:

- Yellow-billed Cuckoo (*Coccyzus americanus*) (proposed critical habitat)

² 50 CFR 402 defines "action area" as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.

COA MS4 Stormwater Management Program

- Mexican Spotted Owl (*Strix occidentalis lucida*)
- Southwestern Willow Flycatcher (*Empidonax traillii extimus*)
- Rio Grande silvery minnow (*Hybognathus amarus*) (critical habitat)
- New Mexico meadow jumping mouse (*Zapus hudsonius luteus*)
- Desert massasauga (*Sistrurus catenatus ssp. edwardsii*; under review)
- Gray Vireo (*Vireo vicinior*; State of New Mexico listed only)

Stormwater discharges and discharge-related activities are not likely to adversely affect the species and critical habitats listed above. Although several threatened and endangered species are recognized as having the potential for occurring in the vicinity of the COA MS4, it is not anticipated to impact any protected species. The surrounding area has been extensively developed and in use for more than 50 years. It is unlikely that habitat for any species of concern is present within the project area or surrounding vicinity. The conclusion of no impact is based on previous experience in the area with similar projects.

Based on the justification provided above, COA can verify that the installation of stormwater BMPs will not occur in or adversely affect currently listed endangered or threatened species critical habitat, in accordance with the requirements of Part I.C.3.b(vi). A current list of endangered or threatened species is available at the U.S. Fish and Wildlife service website <http://criticalhabitat.fws.gov/crithab/>. A current list of state endangered or threatened species is available at <http://www.wildlife.state.nm.us/conservation/wildlife-species-information/threatened-and-endangered-species/>.

The COA MS4 program is consistent with the USFWS Biological Opinion (BO) related to the MRG Watershed MS4 Permit dated August 21, 2014 - Cons. #22420-2011-F-0024-R001. There are two requirements associated with the BO: Dissolved Oxygen Strategy and Sediment Pollutant Load Reduction Strategy

1.5.2 Office of the State Engineer

Section 19.26.2.15 NMAC, issued by the Office of the State Engineer, states, "A permit is required to capture or store surface water in an impoundment" and "A permit to appropriate water is required for an impoundment created by constructed works, sand and gravel operations, or mining operations, including excavations that fill with water." Subsection B of 19.26.2.15 NMAC states, "No permit to appropriate water is required for an impoundment when the primary purpose of the impoundment is flood control, provided the outlet drains the impoundment (from the spillway crest) in 96 hours. The water shall not be detained in the impoundment in excess of 96 hours unless the state engineer has issued a waiver to the owner of the impoundment."

In compliance with the MS4 Permit, the COA may be constructing detention basins and/or dams for post-construction stormwater management and may be constructing basins as sediment control BMPs. The COA's stormwater management detention basins and sediment basins will not be constructed for the purpose of capturing, storing or appropriating waters of the state, but may be used for the primary purpose of flood control as follows:

- Stormwater management detention basins and dams will be designed to allow for the release of detained stormwater within 96 hours. Storm events that exceed the design volume of the impoundment will cause stormwater to discharge in a controlled manner from the impoundment.
- Sediment basins on active construction sites or other areas highly erosive areas of COA will be constructed for the purpose of retaining water long enough to allow for sediment drop-out. Sediment basins will be designed to allow for the infiltration of stormwater within 96 hours. Storm events that exceed the design volume of the impoundment will cause stormwater to discharge in a controlled manner from the impoundment.

1.6. Legal and Enforcement Authority [MS4 Part I.D.2]

The COA is a local city government located within Bernalillo County.

The COA has the legal authority to control discharges to and from the COA MS4, and therefore filed an NOI to obtain coverage under the MS4 Permit. A SWMP will be prepared by the COA. With cooperative elements of the MS4 Permit submittals, where possible, reports and other documentation filed in accordance with the requirements of the MS4 Permit will be jointly certified, or otherwise submitted in duplicate by each cooperative partner.

Several parts of the MS4 Permit require an enforcement plan. The COA has passed ordinances to allow for enforcement activities associated with MS4 Permit components.

1.7. MS4 Stormwater Team [MS4 Part I.D.3]

The MS4 stormwater team is responsible for developing, implementing, maintaining and revising this SWMP Plan. Implementation of the SWMP will involve multiple departments within the COA, in addition to the Storm Drainage Section. As responsibilities are identified for other departments, Table 1-3 will be updated.

Table 1-3. COA MS4 Stormwater Team

Permittee / Department	Roles and Responsibilities	Primary Contacts
<p>1. City of Albuquerque (COA)</p> <p>Department of Municipal Development - Engineering Division</p>	<ul style="list-style-type: none"> • Files NOI for COA. Certified by CAO • Prepares and Certifies SWMP • Oversees COA's compliance with MS4 Permit requirements. • Certifies SWMP revisions, Annual Reports, DMRs and all other necessary documentation. • Require compliance with conditions in ordinances, permits, contracts and/or orders. • Complies with MS4 Permit requirements to: <ul style="list-style-type: none"> ○ Control the discharge of stormwater and pollutants (construction and postconstruction). ○ Prohibit illicit discharges and sanitary sewer overflows to the MS4 and require removal of such discharges. ○ Control the discharge of spills and prohibit the dumping or disposal of materials other than stormwater into the MS4. • Carry out all inspection, surveillance and monitoring procedures necessary to maintain compliance with the MS4 Permit. 	<p>Kevin Daggett, Storm Drainage Section Manager (505) 768-2778 kdaggett@cabq.gov</p> <p>Kathy Verhage, Senior Engineer (505) 768-3654 kverhage@cabq.gov</p> <p>Shellie Eaton, Senior Engineer (505) 768-2774 seaton@cabq.gov</p>
<p>Planning Department</p>	<ul style="list-style-type: none"> • Control the discharge of stormwater and pollutants (construction) 	<p>Curtis Cherne, Storm Water Quality Engineer (505) 924-3420 CCherne@cabq.gov</p>

2. Water Quality Standards [MS4 Part I.C]

The MS4 Permit includes provisions to ensure that Permittees do not cause or contribute to exceedances of applicable water quality standards, and to control discharges to the maximum extent practicable (MEP). This Section of the SWMP Plan presents the water quality standards applicable to the COA MS4. Measures taken to ensure compliance with those standards are contained throughout the remainder of this SWMP Plan.

2.1 Applicable Standards [MS4 Part I.C.1.b]

Water quality standards that apply to discharges from the COA MS4 include the State of New Mexico Water Quality Control Commission (WQCC) Standards for Interstate and Intrastate Surface Waters and the Pueblo of Isleta Surface Water Quality Standards (Appendix E of this SWMP Plan). While the MS4 Permit prohibits the discharge of stormwater from the COA MS4 that would cause or contribute to an exceedance of any regulated constituent, stormwater sampling is only required for key indicator water quality constituents. These include: temperature, total suspended solids (TSS), total dissolved solids (TDS), chemical oxygen demand (COD), biological oxygen demand (BOD₅), dissolved oxygen (DO), oil and grease, *Escherichia coli* (*E. coli*), pH, total Kjeldahl nitrogen (TKN), total phosphorus, polychlorinated biphenyls (PCBs), and gross alpha. The applicable water quality standard for each of these constituents is listed in Table 2-1 below. The most stringent of the applicable standards listed in the table apply to the COA MS4.

Table 2-1. Applicable Water Quality Standards for Monitored Constituents

Constituent	Unit	WQCC WQ Standard October 12, 2000	Isleta Pueblo WQ Standard March 18, 2002	Most Stringent Applicable WQ Standard
Temperature	°C	< 32.2	< 32.2	< 32.2
TSS	mg/L	--	--	--
TDS	mg/L	1,500 ^a	--	1,500 ^a
COD	mg/L	--	--	--
BOD ₅	mg/L	--	--	--
DO	mg/L	>5	>5	>5
Oil and Grease	mg/L	--	10/15 ^b	10/15 ^b
E. coli	cfu/100mL	206/940 ^c	47/88c	47/88 ^c
pH	mg/L	6.6-9.0	6.0-9.0	6.6-9.0
TKN	mg/L	varies ^d	varies ^d	varies ^d
Total Phosphorus	mg/L	--	--	--
PCBs	µg/L	0.00064	0.00074	0.00064
Gross Alpha	pCi/L	15	15	15

--no established standard

^amonthly average

^bweekly average/single sample

^cmonthly geometric mean/single sample

^dbased on ammonia as nitrogen; no TKN listed; temperature and pH dependent; typical anticipated range is 2-6 mg/L, calculated as $N = ((0.0577/1+10^{7.688-pH}))+(2.487-(1+10^{pH-7.688})) * \text{MIN}(2.85, 1.45 * 10^{0.028 * (25-T)})$

2.2 Notification of Exceedance [MS4 Part I.C.1.c]

In the event of an exceedance of any Pueblo of Isleta water quality standard at an in-stream sampling location, the COA will notify EPA and the Pueblo of Isleta in writing within 30 days of discovery of the exceedance. An "in-stream sampling location" is a sampling location in a Water of the U.S. The COA MS4 is participating in the Compliance Monitoring Cooperative (CMC) and has two in-stream sampling locations for compliance with the MS4 Permit.

The MS4 Permit holds no specific requirement for the COA to provide notice of an exceedance of the WQCC Standards for Interstate and Intrastate Surface Waters, except as part of the Annual Report. Reporting of exceedances in the Annual Report is addressed in Section 13 of this SWMP Plan.

2.3 Impaired Waters Status [MS4 Part I.C.2]

Impaired waters in New Mexico are those that have been identified by an EPA approved CWA §303(d) List as not meeting applicable New Mexico Surface Water Quality Standards. The MS4 Permit requirements for discharges to impaired waters also extend to controlling pollutants in MS4 discharges to receiving waters of the impaired waters.

The only impaired water in the MRG watershed is the Rio Grande. The Rio Grande has been segregated into several reaches, each with reach-specific impairments. There are two segments of the Rio Grande with a TMDL for E. coli. The Rio Grande from the Alameda Street Bridge to US 550 (ID: NM-2105.1_00) and the Rio Grande from the Isleta Pueblo boundary to Alameda (ID: NM-2105_50).

The Rio Grande has the following impairments in the MS4 area without TMDLs:

- Rio Grande (Isleta Pueblo to US 550 – ID NM-2105.1_00 and NM-2105_50) – DO and PCBs in Fish Tissue;
- Rio Grande (Alameda to US 550 – ID NM-2105.1_00) – PCBs in water column and Gross Alpha adjusted;
- Rio Grande (Isleta Pueblo to Alameda – ID NM-2105_50) – water temperature.

The Tijeras Arroyo, upstream of the Four Hills Bridge, is impaired for nutrient/eutrophication.

Impairments were determined using the 2014-2016 State of New Mexico Clean Water Act 303(d)/305(b) Integrated Report, Appendix A – Final List of Assessed Surface Waters, November 18, 2014, State of New Mexico Water Quality Control Commission (<https://www.env.nm.gov/swqb/303d-305b/2014-2016/2014-2016NMList.pdf>).

2.4 Discharges to Impaired Waters with an Approved TMDL and their Receiving Waters [MS4 Part I.C.2.b(i)]

The COA MS4 discharges to the Rio Grande and the Rio Grande has a TMDL so the requirements of Part I.C.2.b(i) apply to COA.

A TMDL for bacteria within the Alameda Bridge to Isleta Pueblo reach of the Middle Rio Grande and Alameda Bridge to US 550 reach of the Middle Rio Grande were published by the WQCC on April 13,

2010, and approved by EPA on June 30, 2010 (US EPA, 2010). The 2010 TMDL specifies *E. coli* as the indicator parameter used to assess compliance (see the 2014-2016 State of New Mexico Clean Water Act §303(d)/§305(b) Integrated List in Appendix E of this SWMP Plan).

Discharges of pollutants to an impaired water body with an established TMDL are not permitted under the MS4 Permit unless they are consistent with the established TMDL. Each individual MS4 is allowed to discharge a predetermined proportion of the total TMDL, which is referred to as the waste load allocation (WLA). The Permit specifies that the “percent jurisdiction approach” be used to determine the maximum WLA for each MS4, or cooperating group of MS4s. A description of the percent jurisdictional approach and relevant TMDL data for the Middle Rio Grande watershed are provided in Appendix B of the Permit. Detailed discussions of the TMDLs and the percent jurisdictional approach can also be found in the document U.S. EPA Approved TMDL for the Middle Rio Grande Watershed, June 30, 2010 (U.S. EPA, 2010).

An aggregate WLA for the CMC was requested from NMED in September 2015, a copy of the letter is included in Appendix E. Confirmation of the approved aggregate WLA was received from NMED in November 2015. WLAs were determined for each of the monitoring locations described in Section 12.2 of this SWMP Plan. The combined WLA for CMC is provided in Table 2-2 below. Monitoring methods that will be used to determine waste loads for evaluating TMDL compliance are described in Section 2.4.2 below.

Table 2-2. COA MS4 Areas and Associated Waste Load Allocations (Angostura to Isleta Pueblo Reach of the MRG)

Alameda to Isleta	High	Moist	Mid	Dry	Low
	(>3360 cfs)	(929-3360 cfs)	(664-929 cfs)	(319-664 cfs)	(0-319 cfs)
Kirtland AFB	1.2E+11	3.01E+10	2.03E+10	7.46E+9	1.74E+9
Sandia Labs/DOE	2.08E+9	5.2E+8	3.5E+8	1.29E+8	2.99E+7
Combined WLA for Cooperative	2.51E+11	6.29E+10	4.22E+10	1.57E+10	3.42E+9
Total WLA	3.7308E+11	9.35E+10	6.285E+10	2.329E+10	5.19E+9
Angostura to Alameda	High	Moist	Mid	Dry	Low
	(>3360 cfs)	(929-3360 cfs)	(664-929 cfs)	(319-664 cfs)	(0-319 cfs)
EXPO NM	6.23E+08	1.56E+08	1.05E+08	3.86E+07	8.98E+06
Combined WLA for Cooperative	3.14E+11	9.09E+10	No Value	3.24E+10	1.68E+10
Total WLA	3.15E+11	9.11E+10		3.24E+10	1.68E+10

2.4.1 Bacteria-Specific BMPs

The COA’s proposed plans for the targeted controls and measureable goals for bacteria include:

2.4.1.1 Sanitary Sewer Systems:

The COA has pre-treatment units that are used to meet acceptable discharge limits, but discharges all sanitary wastewater via underground sewer lines that are maintained and operated by the ABCWUA. The wastewater treatment plant for the ABCWUA is located outside of the COA MS4 within Bernalillo County.

Measureable goals are N/A for COA.

2.4.1.2 On-site Sewage Facilities:

The COA maintains no on-site sewage treatment facilities within COA owned property. Bernalillo County handles all permitting for on-site sewage treatment systems.

Measureable goals are N/A for COA.

2.4.1.3 Illicit Discharges and Dumping:

The COA has a robust IDDE Program that addresses sources of bacteria. Refer to Section 9 of this SWMP.

The COA will address Illicit Discharges and Dumping in its IDDE program. The COA will continue to coordinate with the ABCWUA for correction of any cross-connections detected during the IDDE Program. The COA will continue coordination with the ABCWUA, who informs the COA of any sewer overflows that impact COA facilities.

2.4.1.4 Animal Sources:

The COA will continue its focus on pet waste through its Mutt Mitt Stations, “Scoop the Poop” campaign with the MRGSWQT, and a “There is no Poop Fairy” campaign. Proper pet waste disposal is addressed in the Storm Water Quality Ordinance. The Albuquerque BioPark has a robust program to handle animal waste from the Zoo. Exhibits at the Zoo are self-contained in respect to the discharge of stormwater. The animal shelters in the area have drains directing stormwater from any potential animal waste areas to the sanitary sewer.

The COA will continue to provide Mutt Mitt stations. The COA will contribute and participate in the MRGSWQT. The COA refers to the MRGSWQT Outcomes Report in each Annual Report that will summarize the activities where educational materials are distributed.

2.4.1.5 Residential Education:

The ABCWUA has an extensive fats, oils, and grease clogging campaign. Efforts at residential education are made through the MRGSWQT.

The COA will contribute and participate in the MRGSWQT. The COA refers to the MRGSWQT Outcomes Report in each Annual Report that will summarize the activities where educational materials are distributed.

2.4.2 Monitoring and Assessment

The Permit specifies that the TMDL applies only to areas within the Albuquerque UA. The COA participates in the CMC which is conducting sampling at the upstream and downstream MS4 extents of the MRG in accordance with Part III.A of this Permit. Calculations for the WLA are under discussion with NMED. The SWMP will be updated once final methods of calculating the WLA are agreed upon.

2.5 Discharges Directly to Impaired Waters without an Approved TMDL [MS4 Part I.C.2.b(ii)]

The Rio Grande has the following impairments, without TMDLs:

- Rio Grande (Isleta Pueblo to US 550) - DO and PCBs in Fish Tissue;
- Rio Grande (Alameda to US 550) - PCBs and Gross Alpha adjusted;
- Rio Grande (Isleta Pueblo to Alameda) - water temperature

The Tijeras Arroyo, upstream of the Four Hills Bridge, is impaired for nutrient/eutrophication. The Tijeras Arroyo, upstream of the Four Hills Bridge, is all privately owned land that crosses COA, Bernalillo County and NMDOT MS4s. The COA is working with Bernalillo County and NMDOT on a study on nutrients in the Tijeras Arroyo, see Appendix D-1.

The other impairments are discussed in other sections of this SWMP. Compliance monitoring (Part III.A) includes Gross Alpha testing. The testing will allow AMAFCA to determine background level relative to stormwater discharges. Future assessment related to this impairment will be based on results of those samples.

2.6 PCBs [MS4 Part I.C.1.e]

The results from the 2012-2014 monitoring of the North Diversion Channel (NDC) watershed indicated the presence of PCBs at the Grantline and N. Camino Inlets. Based on the data, MS4 partners conclude that there are no “hot spots” in the municipal area that are continuing to produce PCBs with the possible exception of the Grantline and N. Camino watersheds. In 2014-2015, AMAFCA continued activities to identify and eliminate controllable sources of PCBs that cause or contribute to exceedances of applicable water quality standards in waters of the US in accordance with the MS4 Permit No. NMS000101 (Table IV.A.2 in the Permit). In particular, a water quality consultant was tasked with reviewing and assessing all past PCB data for the NDC; identifying commercial and industrial properties that may have contributed PCBs to the North Camino and the Grantline Channel; researching past PCB releases from PNM in these areas; and providing additional PCB monitoring activity recommendations. In addition, a Field Sampling Plan (FSP) and a Quality Assurance Project Plan (QAPP) for soil and sediment sampling were developed. Sediment sampling and analysis for PCBs in the North Camino and the Grantline Channel area will occur in 2015 based on the results of the 2014 study and using the developed FSP and QAPP.

Based on ownership responsibilities, COA will continue to take the lead regarding follow-up PCB permit activities on the SJD and AMAFCA will continue to take the lead on follow-up PCB permit activities on the NDC. In 2015, AMAFCA, with the assistance of a water quality consultant, completed reviewing and

assessing all past PCB data for the NDC; identifying commercial and industrial properties that may have contribute PCBs to the North Camino and the Grantline Channel; researching past PCB releases in these areas; and providing additional PCB monitoring activity recommendations. In addition, a Sampling and Analysis Plan (SAP), a Field Sampling Plan (FSP), and a Quality Assurance Project Plan (QAPP) for soil and sediment sampling were developed. Additional sediment sampling and analysis for PCBs in the North Camino and the Grantline Channel area will occur later in 2015 into 2016 based on the results of the 2015 study and using the developed FSP, SAP, and QAPP. AMAFCA will continue to include in its Annual Reports a progress report of PCB permit activities on the NDC. AMAFCA does not have jurisdictional authority to create ordinances or enact enforcement if PCB sources are found on privately owned properties.

A cooperative strategy will be discussed with AMAFCA as needed, if PCBs are discovered in channels or arroyos.

2.7 Temperature [MS4 Part I.C.1.f]

AMAFCA and the original MS4 co-permittees (COA, NMDOT, and UNM) do not believe that MS4 discharges adversely affect temperature in the receiving waters of the Rio Grande. In order to prove this assertion, temperature data from 1982 to 2012 was assembled and analyzed. This data analysis proved the assertion that the receiving waters of the Rio Grande are not adversely affected by the temperature of stormwater from the Albuquerque MS4. This data was presented in an initial report that was submitted to EPA on May 1, 2012. However, to meet the MS4 Permit requirements, AMAFCA will continue assessing the potential effect of stormwater discharges in the Rio Grande by collecting and evaluating additional data. Details on AMAFCA's program are available in the AMAFCA SWMP.

Temperature data will continue to be collected in the Rio Grande using Sondes (Sondes are part of the Endangered Species Act, DO, and BO Permit program requirements). Temperature of stormwater has been shown to be consistently below standards. Sondes data is available upon request from AMAFCA.

2.8 Anticipated Program Development and Implementation Schedule [MS4 Table 1.a]

Table 2-3. Pre-TMDL Bacteria Program Development and Implementation Schedule

Activity	Required Implementation Date	Implementation Status
Identify potential significant sources of pollutants of concern entering the MS4	4/21/2016	Completed
Develop and implement a public education program to reduce the discharge of bacteria in municipal stormwater contributed by pets, recreational and exhibition livestock, and zoos.	4/21/2016	Completed
Develop and implement a program to reduce the discharge of bacteria in municipal stormwater contributed by areas within the MS4 served by on-site wastewater treatment systems.	6/21/2016	N/A
Review results to date from IDDE (see Part I.D.5.e) and modify as necessary to prioritize the detection and elimination of discharges contributing bacteria to the MS4.	6/21/2016	Ongoing
Develop and implement a program to reduce the discharge of bacteria in municipal stormwater contributed by other significant sources identified in the IDDE (see Part I.D.5.e).	8/22/2016	Completed under NMS000101, but ongoing revisitations
Include in the Annual Reports progress on program implementation and reducing the bacteria and updates their measurable goals as necessary.	December 1 each year (first due 12/01/2016)	Ongoing

Table 2-4. Pre-TMDL Nutrient Program Development and Implementation Schedule

Activity	Required Implementation Date	Implementation Status
Identify potential significant sources of pollutants of concern entering the MS4	4/21/2016	Completed under NMS000101, but ongoing revisions
Develop and implement a public education program to reduce the discharge of the pollutant of concern in municipal stormwater contributed by residential and commercial use of fertilizer.	4/21/2016	Completed under NMS000101, but ongoing revisions
Develop and implement a program to reduce the discharge of pollutant of concern in municipal stormwater contributed by fertilizer use at municipal operations (e.g., parks, roadways, municipal facilities)	6/21/2016	Completed under NMS000101, but ongoing revisions
Develop and implement a program to reduce the discharge of the pollutant of concern in municipal storm water contributed by municipal and private golf courses within your jurisdiction	6/21/2016	Completed under NMS000101, but ongoing revisions
Develop and implement a program to reduce the discharge of the pollutant of concern in municipal stormwater contributed by other significant sources identified in the IDDE (see Part I.D.5.e).	6/21/2016	Completed under NMS000101, but ongoing revisions
Include in the Annual Reports progress on program implementation and reducing the nutrient pollutant of concern and updates their measurable goals as necessary.	December 1 each year (first due 12/01/2016)	Completed under NMS000101, but ongoing revisions

3. Endangered Species Act Requirements [MS4 Part I.C.3]

Permittees are required to meet the following requirements in order to ensure actions allowed by the MS4 Permit are not likely to jeopardize the continued existence of an endangered species or threatened species listed in the U.S. Fish and Wildlife Biological Opinion dated August 21, 2014, or adversely affect its critical habitat.

3.1 Dissolved Oxygen Strategy in Receiving Waters [MS4 Part I.C.3.a(i)]

The MS4 Permit requires the COA to identify structural elements, topographical and geographical formations, MS4 operations, or oxygen consuming pollutants contributing to reduced dissolved oxygen (DO) in the receiving waters of the Rio Grande. Permittees are required to submit a summary of investigations, findings, and activities undertaken with each Annual Report, and include a detailed description of controls implemented (or proposed) and the corresponding measurable goals in the first and fourth SWMP revisions.

AMAFCA takes the lead on DO data collection. The primary areas having shown reduced DO levels in the past are all maintained by AMAFCA. Following retrofits by AMAFCA in 2015 and 2016, the COA no longer believes that reduced DO will be an issue in the MRG. Please see the AMAFCA SWMP for more details. AMAFCA has the lead on the Annual Incidental Take Report, a copy of the report will be included with the Annual Report.

3.2 Sediment Pollutant Load Reduction Strategy [MS4 Part I.C.3.b]

The MS4 Permit requires the COA to develop, implement, and evaluate a Sediment Pollutant Load Reduction Strategy to assess and reduce sediment loads of discharges to receiving waters of the Rio Grande to include the elements outlined below.

3.2.1 Sediment Assessment [MS4 Part I.C.3.b(i)]

The COA will identify and investigate areas that may be contributing excessive levels of pollutants in sediments to receiving waters of the Rio Grande. Structural elements, topographical and geographical formations, MS4 operations, and areas indicated as potential sources of sediment pollutants located within the boundary of the COA MS4 will be identified, and observed erosion of soil or sediment along ephemeral channels or arroyos will be recorded. The COA MS4 sediment assessment report is included in the first Annual Report (due December 1, 2016) and SWMP, see Appendix D-2.

3.2.2 Estimate of Baseline Loading [MS4 Part I.C.3.b(ii)]

Based on the results of the Sediment Assessment, the baseline sediment loading and potential for contamination from those sediments to enter the Rio Grande will be estimated for the COA MS4 drainage areas, impervious areas, and directly connected impervious area. Results of this estimate will be provided to EPA in the first Annual Report (due December 1, 2016).

3.2.3 Targeted Controls {MS4 Part I.C.3.b.(iii)}

Using the results from the Sediment Assessment and Estimate of Baseline Loading, targeted controls and BMPs will be developed for the COA MS4 to decrease the sediment pollutant loads to the Rio Grande. The COA has an extensive network of ponds and dams that have dual purpose functions, sediment removal and flood control. An implementation schedule with measurable interim goals for each control/BMP will be developed for the next 10 years and submitted with the first Annual Report (due December 1, 2016).

3.2.4 Monitoring and Interim Reporting [MS4 Part I.C.3.b(iv)]

Monitoring will be conducted annually, to evaluate the effectiveness of targeted controls and BMPs, and coordinated with the monitoring activities described in Part III of the MS4 Permit (Section 13 of this SWMP). Documentation of methods and any available monitoring results will be provided in the SWMP submitted with the first Annual Report (due December 1, 2016), and with each subsequent SWMP and Annual Report.

3.2.5 Progress Evaluation and Reporting [MS4 Part I.C.3.b(v)]

The overall effectiveness of the Sediment Pollutant Load Reduction Strategy will be evaluated and reported in a Progress Report submitted with the fifth Annual Report (due December 1, 2020). The Progress Report will provide data and analysis in a manner that will facilitate the evaluation of BMP effectiveness and compliance with Endangered Species Act requirements specified in Part I.C.3.b(iii) of the MS4 Permit.

4. SWMP Components and Compliance

4.1 Purpose of SWMP [MS4 Part I.D.1]

The SWMP developed by the COA is designed to control and reduce discharges of pollutants from the COA MS4 to the MRG, and to protect water quality within and downstream of the COA MS4. The SWMP will meet the requirements of NPDES Permit NMR04A000, Section 402(p)(3)(B) of the Clean Water Act, and National Pollutant Discharge Elimination System regulations (40CFR 122.26 through 122.34).

The SWMP Plan documents the COA's development, implementation and enforcement of the SWMP, as well as compliance with the MS4 Permit. The SWMP Plan is revised as necessary (annually at a minimum), and submitted to EPA with the Annual Report due December 1st each year.

4.2 Control Measure Programs [MS4 Parts I.D.4 and I.D.5]

In accordance with the MS4 Permit, the SWMP will include the control measure programs listed below. Each control measure program is addressed in a separate section of this SWMP Plan as listed.

- Section 5: Construction Site Runoff Control Program - Controls the discharge of stormwater and pollutants associated with land disturbance and development activities.
- Section 6: Post-Construction Stormwater Management Program - Controls the discharge of stormwater from new development and redevelopment projects after construction site stabilization has been achieved to minimize water quality impacts.
- Section 7: Pollution Prevention / Good Housekeeping Program – Prevents or reduces pollutant runoff from municipal operations through training, maintenance, and waste management.
- Section 8: Industrial and High Risk Program – Controls the discharge of stormwater and pollutants associated with industrial activities.
- Section 9: Illicit Discharge Detection and Elimination Program - Prohibits illicit dumping or disposal of materials other than stormwater into the MS4 and controls the discharge of spills.
- Section 10: Control of Floatable Discharges Program - Controls floatables in discharges to the MS4 through implementation of source controls and structural controls.
- Section 11: Public Education and Outreach Program - Provides education to the regulated community of the impact that illegal discharges and improper disposal of waste have on stormwater quality.
- Section 12: Public Involvement and Participation Program - Encourages public involvement and provides opportunities for participation in review, modification and implementation of the SWMP.

4.3 Organizational Structure of Programs [MS4 Part I.B.2.i]

For each control measure program, this SWMP Plan includes a description of the BMPs to be implemented; the measurable goals for each BMP; and the anticipated time frames (and interim milestones as appropriate) for implementing each BMP. As the SWMP Plan evolves through annual revisions, each control measure program will include the following information:

1. Requirement Descriptions and Cooperative Status
2. Mechanisms Used to Comply with Permit Requirements (BMPs)
3. Measurable Goals
4. Anticipated Program Development and Implementation Schedule
5. Performance Assessment

4.4 Process for SWMP Reviews [MS4 Part I.D.6.a]

The SWMP will undergo an annual review in conjunction with preparation of the Annual Report and include the following components:

- A discussion of progress made in SWMP implementation, including achievement of measurable goals and compliance with control measure program elements and other MS4 Permit conditions.
- An evaluation of the effectiveness of the SWMP in complying with the Permit with respect to controlling pollutant discharges, and complying with water quality standards and TMDLs.
- The necessity for SWMP modifications to comply with the Permit and control pollutant discharges, if applicable.
- The adequacy of staff (man hours needed and projected), funding levels, equipment, and support capabilities to fully implement the SWMP and comply with the Permit conditions.

The first and fourth Annual Reports will contain a complete SWMP revision.

4.5 Schedules of Implementation

The NOI submittal deadline is 180 days from the Permit effective date (i.e., June 20, 2015). While a complete SWMP Plan is not required to be submitted with the NOI, the NOI form requests submission of information that requires significant progress to have been made on the SWMP Plan. This initial SWMP Plan summarizes the applicable Permit requirements and describes how the COA intends to comply with the requirements to ensure that stormwater discharges from the COA MS4 do not contribute pollutants to waters of the United States, namely the Rio Grande. The initial SWMP Plan provides as much information as is currently available with regard to the elements of the COA's NOI, description of BMPs, measurable goals and anticipated implementation dates as required by MS4 Part I.B.2.

A complete SWMP Plan is required (by Part III.B) to be submitted with the first Annual Report (due December 1, 2016); however, the Permit requires implementation of several SWMP elements prior to December 1, 2016. There are separate implementation schedules for the monitoring program and each control measure, which are presented in Sections 5 through 12 of this SWMP Plan.

The SWMP Plan serves to document proposals, implementations, and assessments associated with operation of the SWMP. The SWMP Plan will be revised and modified as necessary and required over the course of the Permit term, and will include all applicable records.

4.6 SWMP Modifications

The SWMP may be modified under the conditions described below. Any modifications pursuant to Part IV.A of the MS4 Permit will be done in accordance with Part V.B [MS4 Part VI.D].

4.6.1 Permittee-Initiated Modifications [MS4 Part I.D.6.b]

The COA may modify this SWMP Plan with prior notification or request to the EPA and NMED in accordance with Part I.D.6 of the MS4 Permit. Modification requests or notifications shall be made in writing and signed in accordance with Part IV.H of the Permit.

- Modifications adding, but not eliminating, replacing, or jeopardizing fulfillment of any component, control, or requirements of the SWMP can be made by the Permittee at any time upon written notification to the EPA.
- Modifications replacing or eliminating an ineffective or infeasible component, control, or requirement of the SWMP (including monitoring and analysis requirements) may be requested of EPA in writing at any time. When requesting a modification, the Permittee shall include the following information:
 - A description of why the SWMP component is ineffective, unfeasible (including cost prohibitions), or unnecessary to support compliance with the permit;
 - Expectations on the effectiveness of the proposed replacement component; and
 - An analysis of how the proposed replacement component is expected to achieve the goals of the component to be replaced.

4.6.2 EPA-Required Modifications [MS4 Part I.D.6.c]

Modifications may be requested by EPA to address impacts to receiving water quality, include requirements to comply with new or revised regulations, add measures needed to comply with the Clean Water Act, or add measures needed to comply with the MS4 Permit.

If modifications are requested by EPA, the Permittee will be provided with an opportunity to propose alternative program modifications to meet the objective of the requested modification.

4.6.3 Due to Modifications of the MS4 Permit [MS4 Part V]

The MS4 Permit may be reopened and modified, in accordance with 40 CFR §122.62, §122.63, and §124.5. Only those portions of the SWMP specifically required as Permit conditions shall be subject to the modification requirements of 40 CFR §124.5.

5. Construction Site Runoff Control Program [MS4 Part I.D.5.a]

5.1 Requirement Descriptions and Cooperative Status

Permittees are required to develop, revise, implement, and enforce a program to reduce pollutants in any stormwater runoff to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre or are part of a larger common plan of development (consistent with the permitting requirements of the NPDES CGP).

The COA will comply with all of the requirements of the MS4 Permit, and cooperates to the extent practicable for each program element.

5.2 Mechanisms Used to Comply with Permit Requirements (BMPs)

5.2.1 Development of Municipal Ordinance [MS4 Part I.D.5.a(ii)(a)]

The COA has a flood control and drainage ordinance that addresses the requirements for erosion and sediment controls and allows for sanctions for failure to comply. The Drainage Ordinance meets all of the MS4 permit requirements for construction. The ordinance contains policies, procedures, criteria, and requirements for stormwater drainage and quality.

The COA has a Development Process Manual (DPM) that compiles city processes and procedures in one document. The DPM has elements that address the MS4 Permit requirements. Chapter 22, "Drainage, Flood Control, and Erosion Control" provides COA regulatory guidance for public and private construction activities with regards to control of storm water runoff.

5.2.2 Development of Requirements/Procedures [MS4 Parts I.D.5.a(ii)(b) through (h)]

5.2.2.1 Existing Construction Program (SWPPPs, Inspections and Records Management)

The COA currently complies with the requirements of Parts I.D.5.a(ii)(b) through (h) of the MS4 Permit. Per the DPM, requests for approvals of development and/or platting proposals to the City Engineer must be accompanied by drainage control, flood control, stormwater quality control, and erosion control information and/or commitments. The particular nature, location and scope of the proposed development define the degree of detail. One or more of the following levels of submittal are generally required based on the following: Conceptual Grading and Drainage Plan, Drainage Plan, Drainage Report, Erosion and Sediment Control Plan (ESC Plan), all which address stormwater quality control. An Erosion and Sediment Control Permit (ESC Permit) will continue to be required for all construction, demolition clearing and grading operations within the COA that disturbs the soil on sites one acre or greater or that are a larger common plan of development. Per the DPM, the COA has encouraged and will continue to encourage active construction sites to implement structural and non-structural controls, such as phased construction, dust control, good housekeeping practices, proper waste disposal, and spill prevention and response.

Per the DPM, every Stormwater Control Permittee shall comply with the following. At a minimum a routine compliance self-inspection is required to review vegetation, erosion and sediment control measures, and other protective measures identified in the Erosion and Sediment Control Plan and the associated Stormwater Permit for Erosion and Sediment Control, if any. Until the site construction has been completed and the Notice of Termination approved under the General Construction Permit, the owner or his/her agent shall make a thorough inspection of the stormwater management system as established by the Erosion and Sediment Control Plan. These inspections' frequency shall be based on site conditions and project circumstances as noted in the site's Erosion and Sediment Control Plan. Regardless of the planned frequency, inspections shall occur after each precipitation event of .25 inch or greater. Reports of these inspections shall be kept by the person or entity authorized to direct the construction activities conducted during progress of the work, during work suspensions, and until the permit is closed. Inspectors with Construction Services Division (CSD) inspect City construction projects and provide NPDES support.

5.2.2.2 Existing Training Program

The COA, co-permittees, and other local agencies have provided and will continue to provide training sessions for permittee personnel, developers, construction site operators, contractors and supporting personnel on SWPPP preparation, processes, and consequences for lack of implementation of BMPs.

5.2.2.3 Planned Improvements to the Program

In addition to maintaining the CGP process discussed above, the COA has been updating the DPM to include relevant changes that have resulted from the MS4 Permit.

Pursuant to Part I.D.5.a(ii)(e) of the Permit, the COA plans to use the public notice process associated with the MS4 NOI, SWMP and Annual Reports to consider input from the public regarding the development and implementation of this program.

5.2.3 Annual Inspection of 100 Percent of Construction Sites [MS4 Part I.D.5.a(iii)]

As described above, construction site inspections are routinely performed by the Planning Stormwater Quality Engineer and CSD Team members in accordance with the CGP and SWPPP requirements; therefore, 100 percent of all construction projects cumulatively disturbing one or more acres or part of a larger common plan of development within the MS4 jurisdiction will be inspected throughout the year. When site inspections reveal necessary maintenance, repair or other problems with the site, corrective action reports are created and follow-up inspections are performed to document completion of corrective actions. Sites in Priority areas are inspected two times minimum.

5.2.4 Coordination with Departments Involved in Construction Projects/Activities [MS4 Part I.D.5.a(iv)]

As the SMWP evolves, the Stormwater Team identified in Section 1.7 of this SWMP Plan will expand to include subject matter experts and points of contacts in multiple organizations including the Planning Department, CSD, Engineering Division, and Parks. Currently, the Planning Department and Engineering Division promote coordination with many departments that have responsibilities associated with the

planning, review, permitting, or approval of construction projects/activities, to ensure that stormwater runoff controls prevent erosion and maintain sediment on site.

5.2.5 Evaluation of Green Infrastructure/Low Impact Development (GI/LID)/Sustainable Practices [MS4 Part I.D.5.a(v)]

Permittees are required to include an evaluation of opportunities for use of GI/LID/Sustainable Practices and encourage project proponents to incorporate such practices into the site design to mimic the pre-development hydrology of the previously undeveloped site during the site plan review required in Part I.D.5.a.(ii)(d).

The COA's compliance with GI/LID/Sustainable Practices is discussed in detail in Section 6.2.7 of this SWMP Plan. A review already occurs in the construction planning stages of each project to demonstrate compliance with GI/LID/Sustainable Practices. A tally of the annual construction projects with approved plans will be included in the Annual Report under line item 7H.

5.2.6 Additional Proposed Activities to Address Construction Site Runoff

The COA recognizes the potential and severity of stormwater pollution from construction projects/activities. The Stormwater Quality Ordinance encourages the installation/use of the following stormwater controls and pollution prevention measures for the duration of the project:

- Install sediment controls for any storm drains or drop inlets within the boundary of the project area. The drain/inlet controls should be designed, installed and maintained to limit or prevent the discharge of debris, chemicals, sediment or other pollutants in stormwater runoff generated by the construction project. Controls should be installed such that sediment is prevented from entering the drain/inlet while allowing stormwater to pass through, avoiding flooding.
- Chemicals stored outdoors must be covered/containerized to prevent contact with precipitation and on secondary containment to prevent contact with stormwater.
- Secure portable toilets to prevent tipping (e.g., stake with rebar or bolt to trailer).
- Containers and trucks containing paint, concrete or other building products must be washed into an appropriate waste container. Discharges to the sanitary sewer, storm drain or ground surface are prohibited.

The COA is working towards implementation of these controls on smaller sized City projects.

5.3 Measureable Goals

The COA has developed the following measureable goals and/or information to be provided in the Annual Report to correspond with the existing and/or proposed BMPs discussed above:

- A current list of active construction projects including applicable permit details will be maintained by the Planning Department and CSD at all times.
- For active construction sites located within the boundary of the COA MS4, a summary of the number and frequency of inspections, required corrective actions (discovery during site inspections) and associated compliance history will be maintained with the SWMP Plan.

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- A log will be maintained of any issued stop work orders for work within the boundary of the COA MS4 [I.D.5.a(ii)(h)].
- A count of the approved construction projects (one acre or more) that met the COA's Drainage Ordinance criteria will be maintained.

5.4 Anticipated Program Development and Implementation Schedule [MS4 Table 2]

Table 5-1. Construction Site Runoff Control Program Implementation Schedule

Activity	Required Implementation Date	Implementation Status
Develop Ordinance [I.D.5.a.(ii)(a)]	6/21/2016	Completed
Include Requirements in Procedure [I.D.5.a.(ii)(b) through (h)]	6/21/2016	Completed
Inspect 100 percent of Construction Sites [I.D.5.a.(iii)]	12/22/2016	Completed
Coordinate with Other Departments [I.D.5.a.(iv)]	2/20/2016	Completed
Evaluate Projects for GI/LID/Sustainable Practices [I.D.5.a.(v)]	2/20/2016	Completed
Update the SWMP and Submit Annual Report [I.D.5.a.(vi) and (vii)]	December 1 each year (first due 12/01/2016)	Ongoing
Enhance the program to include program elements of Parts I.D.5.a(viii) through (x).	update as necessary / applicable	Ongoing

5.5 Performance Assessment

This section is reserved for future SWMP Plan revisions.

6. Post-Construction Stormwater Management Program [MS4 Part I.D.5.b]

6.1 Requirement Descriptions and Cooperative Status

Permittees are required to develop, revise, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the MS4. The program must ensure that controls are in place that would prevent or minimize stormwater quality impacts.

The COA will comply with all of the requirements of the MS4 Permit, and cooperates to the extent practicable for each program element.

6.2 Mechanisms Used to Comply with Permit Requirements (BMPs)

6.2.1 Development of Strategies [MS4 Part I.D.5.b(ii)(a)]

A combination of structural and/or non-structural BMPs will be implemented to control pollutants in stormwater runoff on new development and redevelopment projects within the COA MS4. Details of these strategies are discussed below.

6.2.2 Development of Municipal Ordinance [MS4 Part I.D.5.b(ii)(b)]

The COA has a flood control and drainage ordinance that addresses the requirements for post-construction runoff from new development and redevelopment projects, as discussed below. The Drainage Ordinance will need to be revised to meet the MS4 Permit definition of the 90% storm event. The ordinance contains policies, procedures, criteria, and requirements for stormwater drainage and quality.

The DPM has elements that address the MS4 Permit post-construction requirements. Chapter 22, “Drainage, Flood Control, and Erosion Control” provides COA regulatory guidance for redevelopment projects with regards to control of storm water runoff. Additional revisions to the DPM to incorporate MS4 Permit requirements are underway.

6.2.3 Implementation and Enforcement of Design Standards [MS4 Part I.D.5.b(ii)(b)]

The MS4 Permit requires Permittees to incorporate a stormwater quality design standard that manages on-site the 90th percentile storm event discharge volume associated with new development sites and 80th percentile storm event discharge volume associated with redevelopment sites. Estimation of the 90th or 80th percentile storm event discharge volume is included in EPA Technical Report entitled “Estimating Predevelopment Hydrology in the Middle Rio Grande Watershed, New Mexico, EPA Publication Number 832-R-14-007”.

Management of stormwater on-site can be achieved through measures such as infiltration, evapotranspiration, detention, and other means. Any impoundments used for flood control will comply with New Mexico Office of the State Engineer (OSE) requirements (19.26.2.15 NMAC) and drain within 96 hours unless OSE has issued a waiver.

Additionally, as discussed in detail in Section 1.5.2 of this SWMP Plan, detention basins will be constructed within the COA for post-construction stormwater management (pursuant to the MS4 Permit) and basins may also be constructed as sediment control BMPs. Stormwater management detention basins and sediment basins will be designed to allow for the release or infiltration of detained stormwater within 96 hours. Storm events that exceed the design volume of the impoundment will cause stormwater to discharge in a controlled manner from the impoundment.

The Drainage Ordinance and DPM discuss the implementation and enforcement of post-construction control measures.

6.2.4 Implementation of Structural Controls [MS4 Parts I.D.5.b(ii)(c) and (d)]

The COA will perform the following actions for privately maintained facilities:

- Pre-construction reviews of BMP designs will be completed during review of Erosion and Sediment Control Plans, and prior to issuance of Building, Grading or Paving Permits as described in Section 5.2.2 of this SWMP Plan.
- Inspections will be performed prior to approval for Occupancy to verify post-construction stormwater management BMPs are being built as designed.

In accordance with Chapter 22 of the DPM, all public stormwater facilities shall be maintained by the city or other public body. The maintenance of multiple use facilities to which the general public is denied access shall be the responsibility of the owners and shall be performed to City Engineer standards. The City Engineer may allow private maintenance within public right-of-way or easement provided that adequate guarantees and indemnifications are supplied. Private stormwater facilities shall be maintained by the facilities' owner to standards established by the City Engineer and published in the DPM. Periodic inspection and certifications of facilities are hereby required and shall be reported to the City Engineer on forms established by the city. Inspections and Certifications by a New Mexico Professional Engineer shall occur not less frequently than once every three years from the date the Notice of Termination is signed. Ongoing Stormwater Control Permit obligations may be required as to Stormwater Control Measures.

Non-compliance with pre-construction BMP design, failure to construct BMPs in accordance with the design, and ineffective post-construction operation and maintenance of BMPs will be addressed through the enforcement protocol discussed in Section 1.6 of this SWMP Plan.

The COA will review and revise the post-construction program requirements as appropriate to incorporate improvements in control techniques and technologies. Chapter 22 Section 11 of the DPM covering Stormwater Quality and LID has been drafted and is in the review process.

6.2.5 Development of Procedures [MS4 Parts I.D.5.b(ii)(e) through (h)]

The COA works with the MRGSWQT to provide funding for a local arid LID workshop. The development community is encouraged to attend the workshops in the Albuquerque Metropolitan area.

In accordance with Chapter 22 of the DPM, private stormwater facilities shall be maintained by the facilities' owner to standards established by the City Engineer and published in the DPM. Periodic inspection and certifications of facilities are hereby required and shall be reported to the City Engineer on forms established by the city. Inspections and Certifications by a New Mexico Professional Engineer shall occur not less frequently than once every three years from the date the Notice of Termination is signed.

Pesticide, herbicide and fertilizer applicators are trained and certified by the New Mexico Department of Agriculture (NMDA).

Revisions to the DPM to incorporate MS4 Permit requirements are currently underway.

6.2.6 Coordination with Departments Involved In Construction Projects/Activities [MS4 Part I.D.5.b(iii)]

As the SMWP evolves, the Stormwater Team identified in Section 1.7 of this SWMP Plan will expand to include subject matter experts and points of contacts in multiple organizations including the Planning Department, CSD, Engineering Division, and Parks. Currently, the Planning Department and Engineering Division promote coordination with many departments that have responsibilities associated with the planning, review, permitting, or approval of new development and redevelopment projects/activities within the COA MS4.

6.2.7 Assessment of Existing Policies and Procedures for Potential Impediments to GI/LID/Sustainable Practices [MS4 Part I.D.5.b(iv)]

Permittees are required to assess all existing codes, ordinances, planning documents and other applicable regulations, for impediments to the use of GI/LID/Sustainable Practices and develop a report of the assessment findings to be used to provide information to promote necessary changes and allow implementation of GI/LID/Sustainable Practices.

The COA has previously completed an assessment of the impediments to GI/LID/Sustainable Practices under the previous MS4 permit NMS000101. It can resubmit the assessment on the scheduled due date if necessary.

6.2.8 Number of Impervious Area (IA) and Directly Connected Impervious Area (DCIA) Acres [MS4 Part I.D.5.b(vi)]

An estimation of the number of acres of IA (including conventional pavements, sidewalks, driveways, roadways, parking lots, and rooftops) and DCIA (the portion of IA with a direct hydraulic connection to the MS4 via continuous paved surfaces, gutters, pipes, and other impervious features) will be provided in the Annual Report for the COA MS4.

6.2.9 Inventory and Priority Ranking of Infrastructure for Potential GI/LID/Sustainable Practice Retrofits [MS4 Part I.D.5.b(vii)]

The COA has previously submitted a letter report that discusses the priority ranking of the property within the COA MS4 that may have the potential to be retrofitted with control measures designed to control the frequency, volume, and peak intensity of stormwater discharges within and from the MS4. If necessary, the COA can resubmit this letter report.

6.2.10 Incorporation of Watershed Protection Elements [MS4 Part I.D.5.b(viii)]

The DPM (or others as applicable) will be revised to include the following watershed protection elements:

- A description of master planning and project planning procedures to control the discharge of pollutants to and from the MS4 [I.D.5.b(viii)(a)].
- Recommendations to minimize the amount of impervious surfaces (roads, parking lots, roofs, etc.) within the COA MS4 watershed, by controlling the unnecessary creation, extension and widening of impervious parking lots, roads and associated development. This may be evaluated on a case-by-case basis to identify alternatives that will meet the need without creating the impervious surface [I.D.5.b(viii)(b)].
- Recommendations to identify environmentally and ecologically sensitive areas that serve critical watershed functions within the MS4 (as applicable) during the plan and design phases of project, and to preserve, protect, create and/or restore these areas during and after construction [I.D.5.b(viii)(c)].
- Recommendations for disconnecting direct discharges to surface waters from impervious surfaces such as parking lots [I.D.5.b(viii)(d)].
- Recommendations for implementing stormwater management practices that protect groundwater quality [I.D.5.b(viii)(e)].
- Recommendations to avoid or prevent hydromodification of streams and other water bodies caused by development, including roads, highways, and bridges [I.D.5.b(viii)(f)]. Such hydromodification may require additional permitting under Section 404 of the CWA.
- Requirements to protect native soils, prevent topsoil stripping, and prevent compaction of soils [I.D.5.b(viii)(g)].
- Requirements to reduce water quality impacts and recommendations to maintain redevelopment runoff conditions [I.D.5.b(viii)(h)].

6.3 Measurable Goals

The COA has developed the following measurable goals and/or information to be provided in the Annual Report to correspond with the existing and/or proposed BMPs discussed above:

- Notable GI/LID/Sustainable Practices will be summarized in the Annual Report.
- A log will be maintained to summarize any additional measures that have been implemented to decrease impervious areas, decrease stormwater discharges, and/or improve water quality. If no measureable improvements are noted, master planning and project planning procedures will be

reviewed and a plan to encourage the use of such measures will be developed. The log will be updated annually.

6.4 Anticipated Program Development and Implementation Schedule [MS4 Table 3]

Table 6-1. Post-Construction Stormwater Management Program Implementation Schedule

Activity	Required Implementation Date	Implementation Status
Develop Strategies [I.D.5.b(ii)(a)]	2/20/2016	Completed and ongoing revisions
Develop Procedure [I.D.5.b(ii)(b)]	12/22/2017	Completed and ongoing revisions
Implement Site Design Standards [I.D.5.b(ii)(b)]	12/22/2018	Completed and ongoing revisions
Ensure Implementation of Structural Controls [I.D.5.b(ii)(c) and (d)]	6/21/2017	Completed and ongoing revisions
Develop Procedures [I.D.5.b(ii)(e) through (h)]	6/21/2016	Completed and ongoing revisions
Coordinate with Other Departments [I.D.5.b(iii)]	12/23/2015	Completed and ongoing revisions
Perform GI/LID/Sustainable Practices Assessment of Procedures, Plans and Other Documents [I.D.5.b(iv)]	12/22/2016	Completed and ongoing revisions
Develop and Submit Assessment Report [I.D.5.b(iv)]	3/22/2017	Completed and ongoing revisions
Estimate IA and DCIA Acres [I.D.5.b(vi)]	6/21/2017	Completed; Annual tracking occurs
Retrofit Inventory and Priority Ranking [I.D.5.b(vii)]	6/21/2018	Completed
Incorporate Watershed Protection Elements into Procedure [I.D.5.b(viii)]	6/21/2017	Ongoing
Update the SWMP and Submit Annual Report [I.D.5.b(ix) and (x)]	December 1 each year (first due 12/01/2016)	Ongoing
Enhance Program to include elements of Parts I.D.5.b(xi) through (xiii).	update as necessary / applicable	Ongoing

6.5 Performance Assessment

This section is reserved for future SWMP Plan revisions.

7. Pollution Prevention / Good Housekeeping Program [MS4 Part I.D.5.c]

7.1 Requirement Descriptions and Cooperative Status

Permittees are required to develop, revise, and implement an operation and maintenance program that includes a training component with the ultimate goal of preventing or reducing pollutant runoff from municipal operations.

The COA will comply with all of the requirements of the MS4 Permit, and cooperates to the extent practicable for each program element.

7.2 Mechanisms Used to Comply with Permit Requirements (BMPs)

7.2.1 Development of Pollution Prevention / Good Housekeeping Program [MS4 Parts I.D.5.c(i) and (ii)]

The COA will include documentation of the COA MS4 Pollution Prevention/Good Housekeeping Program in the SWMP Plan. The majority of the requirements of these Parts are already effective at the COA; however, some program elements need additional refinement to align with the MS4 Permit. A description of activities and programs already in place, and additional measures planned are provided below.

7.2.1.1 Employee Training Program [MS4 Part I.D.5.c(i)(a)]

As discussed in Section 5.2.2.2 of this SWMP Plan, the COA requires City employees with job duties that have the potential to impact stormwater quality to take Good Housekeeping/ Pollution Prevention Training. While the training is most commonly administered to people with construction-related jobs, the curriculum is comprehensive including stormwater protection, allowable non-stormwater discharges, prohibited discharges, training, spill prevention and response, good housekeeping, and pollution prevention measures, as well as the requirements of all three NPDES Permits (i.e., CGP, MSGP and MS4) applicable to the COA.

The annual training is required for City Employees with the following specific job duties:

- Design, install, maintain, or repair stormwater controls, conduct inspections, or implement corrective actions at construction sites;
- Plan, review, permit or approve construction site plans, inspections and corrective actions;
- Construction site operators, contractors or provide support;
- Work in permitted areas where industrial materials or activities are exposed to stormwater, or are responsible for implementing stormwater pollution prevention controls/activities necessary to meet the conditions of the industrial stormwater permit;
- Operate or maintain COA grounds or landscaping, fleet, buildings (outside), roads, stormwater inlets or drainage system, or work on projects with any ground disturbance;
- Design projects that control the effects of water quality from stormwater runoff; or

- Plan or review projects with regard to stormwater quality standards and pollution prevention controls.

A sample copy of the training will be included in Appendix H of the SWMP, since each training is facility specific.

7.2.1.2 Maintenance and Inspections [MS4 Part I.D.5.c(i)(b)]

Permittees are required to include maintenance activities, maintenance schedules, and long term inspection procedures for structural and non-structural stormwater controls to reduce floatables, trash, and other pollutants discharged from the MS4.

Executed by other Departments within the COA, maintenance activities and schedules (e.g., stormwater drainage system maintenance and street sweeping) exist and are available upon request.

The frequency of inspections for facilities covered by the MSGP or Good Housekeeping SWPPPs is facility specific and specified in each SWPPP. These inspections cover structural and non-structural stormwater controls for MS4 owned facilities. All City Employees conducting inspections will have a minimum credential as a “qualified inspector.” The COA consider a “qualified inspector” to be knowledgeable in the principles and practices of erosion and sediment controls and pollution prevention, and to possess the skills to assess: conditions within the MS4 that could impact stormwater quality; and the effectiveness of any stormwater controls selected and installed to meet the requirements of the Permit. Members of the Stormwater Team (see Section 1.7 of this SWMP Plan) that conduct inspections are qualified inspectors. Types of licenses and certifications held by qualified inspectors may include Professional Engineer (PE), Certified Professional of Erosion and Sediment Control (CPESC), Certified Inspector of Sediment and Erosion Control (CISEC), and Certified Stormwater Inspector - MS4 (CSI-MS4). Stormwater Team training documentation and certificates are available upon request.

7.2.1.3 Controls for Reducing Pollutants from Roads, Parking Lots, and Storage Areas [MS4 Part I.D.5.c(i)(c)]

The COA MS4 uses diversion ditches and detention basins to collect runoff from roads and parking lots. By increasing the time of concentration, floatables and sediment are able to be captured as opposed to transported directly into the stormwater drainage system.

Salt or deicing products are sparingly used on roadways and sidewalks when necessary. Salt/deicer is stored at several maintenance yards throughout the COA in covered areas to minimize exposure to precipitation. Additional stormwater controls implemented include good housekeeping, and adhering to manufacturer-recommended application rates. Maintenance and fleet yards, including those with outside vehicle or materials storage include the following stormwater controls, to the extent possible: maintenance areas are covered; liquids are stored on secondary containment; solid building products are stored on lifts (e.g., pallets above the ground surface) such that they will not come into contact with stormwater; and spills or equipment leaks are reported and cleaned up immediately.

Due to the arid nature of the COA, there are no dedicated snow disposal areas operated by the COA.

The COA operates four waste convenience centers that are covered by the MSGP. Three of these facilities are located within the COA MS4 and one is located within the Bernalillo County MS4. All four facilities drain to detention ponds where floatables and trash are captured before release into the storm drain system. The COA Cerro Colorado landfill is located in Bernalillo County but outside of the MS4 Permit boundary as it drains to the Rio Puerco. Dumpster and curbside trash pick-up is currently hauled directly by truck to the landfill for disposal. Recycling pickup within the COA is taken directly to a commercial recycle facility operated by a non-COA entity.

Additionally, the fleet or maintenance shops, salt/sand storage locations, and convenience centers, adhere to the stormwater control requirements of the MSGP (as applicable) or Good Housekeeping Program and are inspected at least quarterly for compliance. Inspectors review the history of spills and leaks, any exceedances of benchmarks, results of visual inspections, and corrective actions prior to conducting the inspection. While on-site, inspectors look for evidence of the following: clean orderly site operations and maintenance; spills or equipment leaks; industrial material, residues, or trash that could be exposed to stormwater; soil disturbance; ponds in good condition and free of debris; offsite tracking of industrial waste materials; and storm clean drain inlets/grates.

Additional information applicable to Permit Part I.D.5.c(i)(c) will be provided in future SWMP revisions.

7.2.1.4 Cleaning and Disposing of Waste from the Stormwater Drainage System [MS4 Part I.D.5.c(i)(d)]

The COA has an active program for the removal of and cleaning of debris, floatables, and sediment from dams, basins, ditches, and other conveyance infrastructure. The removal will be conducted in a manner to ensure that any accumulated sources of materials that may contribute to water quality degradation are not discharged from the MS4 during a storm event. Removed material is disposed of at the Cerro Colorado landfill.

The COA maintains equipment and qualified operators who currently conduct this work. Details of the operation and the maintenance schedule are available upon request.

7.2.1.5 Flood Management [MS4 Parts I.D.5.c(i)(e) and I.D.5.c(ii)(m)]

The COA will review existing procedures to ensure that new flood management projects assess the impacts on water quality and examine existing projects for incorporating additional water quality protection devices or practices, by June 21, 2017. Additionally, an assessment of technical guidance documents will be performed to determine water quality impacts and the potential for incorporation of water quality controls into new flood control projects. The assessment (due June 21, 2017) is required to include the following elements:

- Methods for determining water quality impacts;
- Citations and descriptions of design standards that ensure water quality controls are incorporated;
- A summary of master planning and project planning procedures and design review procedures; and

- A schedule for future review and revision to update standards with new or innovative practices.

7.2.1.6 Enhanced Pollution Control/Good Housekeeping Measures [MS4 Part I.D.5.c(ii)]

In addition to maintaining the primary Pollution Prevention/Good Housekeeping elements described above and the construction pollution prevention measures discussed in Section 5.2.2 of this SWMP Plan, The COA will evaluate the successfulness of the program and revise the SWMP to include the following, as appropriate:

- A list of all stormwater quality facilities (by drainage area), including location and description [I.D.5.c(ii)(a)];
- An operational manual for de-icing activities, including methods to protect water quality [I.D.5.c(ii)(b)];
- A plan to control stormwater quality associated with vehicle related pollutants from storage and maintenance yards [I.D.5.c(ii)(c)];
- A review and revision of the existing street sweeping plan and schedule to optimize benefit to stormwater quality [I.D.5.c(ii)(d)];
- A list of the roadways most likely contributing to pollution in runoff to target for pollution prevention and good housekeeping [I.D.5.c(ii)(e)];
- A review and revision of existing plan for collecting used motor vehicle fluids, toxics, and hazardous materials [I.D.5.c(ii)(f)];
- A review and revision of the existing procedures and schedule for cleaning debris and sediment from the stormwater drainage system [I.D.5.c(ii)(g)];
- A review and revision of the existing litter control program, including public awareness campaigns [I.D.5.c(ii)(h)];
- Procedures and a schedule to evaluate existing flood control devices, structures and drainage ways to assess the potential for retrofitting to improve pollutant removal [I.D.5.c(ii)(i)];
- A review and revision of the existing inspection procedure for stormwater drainage structures [I.D.5.c(ii)(j)];
- MS4 Part I.D.5.c(ii)(k), that requires control of floatables and trash discharged from the MS4 for industrial and commercial areas, is addressed in Section 9 of this SWMP Plan.
- MS4 Part I.D.5.c(ii)(m), that requires review of flood control projects for impacts or benefits to water quality, is addressed in Section 7.2.1.5 of this SWMP Plan (above).
- MS4 Part I.D.5.c(ii)(n), that requires procedures to control the discharge of pollutants related to the storage and application of pesticides, herbicides, and fertilizers applied by the Permittee or contractors, is addressed in Section 6.2.5 of this SWMP Plan.

7.2.1.7 Compliance with EPA MGSP to Control Runoff from Industrial Facilities [MS4 Part I.D.5.c(iii)]

The COA discharges industrial stormwater at the COA in accordance with the provisions of the MSGP as discussed in Sections 1.2.4 and 1.4.6 of this SWMP Plan. Any measures required by the MS4 Permit will

be applied to MSGP sites located within boundaries of the COA MS4 to augment measures already in place under the MSGP.

Table 1-2 of Section 1.4.6 of this SWMP Plan includes a list of sites within the COA MS4 boundary that are currently covered under the MSGP, and their associated drainage basin. A map of these sites is included in Appendix B of the SWMP Plan.

7.3 Measureable Goals

The COA has developed the following measureable goals and/or information to be provided in the Annual Report to correspond with the existing and/or proposed BMPs discussed above:

- Maintain current list of stormwater quality facilities by drainage basin, including location and description.
- The chemicals and application methods associated with deicing operations and storage at the COA will be reviewed and procedures revised (as necessary) by June 21, 2017.
- The COA will prepare a cumulative summary of retrofit evaluations conducted during the Permit term on existing flood control devices, structures and drainage ways to benefit water quality. The SWMP Plan will be updated to include a schedule (with priorities) for identified retrofit projects [I.D.5.c(ii)(I)].

7.4 Anticipated Program Development and Implementation Schedule [MS4 Table 4]

Table 7-1. Pollution Prevention / Good Housekeeping Program Implementation Schedule

Activity	Required Implementation Date	Implementation Status
Develop Pollution Prevention Program [I.D.5.c.(i)]	6/21/2016	Completed
Enhance P2/GH Program [I.D.5.c.(ii)]	6/21/2017	Ongoing
Produce Map of Industrial Facilities [I.D.5.c.(iii)]	6/21/2016	Completed
Update the SWMP and Annual Report [I.D.5.c.(iv) and (v)]	December 1 each year (first due 12/01/2016)	pending

7.5 Performance Assessment

This section is reserved for future SWMP Plan revisions.

8. Industrial and High Risk Runoff [MS4 Part I.D.5.d]

8.1 Requirement Descriptions and Cooperative Status

Permittees are required to develop, revise, implement and enforce a program to control industrial and high risk discharges into the MS4.

The COA will comply with all of the requirements of the MS4 Permit, and cooperates to the extent practicable for each program element.

8.2 Mechanisms Used to Comply with Permit Requirements (BMPs)

8.2.1 Development of Municipal Ordinance [MS4 Part I.D.5.d(i)]

The COA has developed a Storm Water Quality Ordinance (O-16-16) that controls the contribution of pollutants to the MS4 by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity as defined in 40 CFR 122.26(b)(14)(i)-(ix) and (xi).

8.2.2 Industrial and High Risk Program [MS4 Part I.D.5.d(ii)]

The COA does not have facilities subject to EPCRA Title II, Section 313 requirements located within the COA MS4. The COA does have an inspection program in place for commercial and industrial facilities that are covered under the MSGP.

These facilities have been prioritized by:

- Initial ranking of facilities as high, medium or low risk based on perceived risk implied based on the business type (SIC Code)
- Ranking where updated based on:
 - Review of aerial coverage of selected facilities
 - Reviewed 100% of high risk facilities
 - Randomly selected 25% of medium risk facilities
 - Randomly selected 5% of low risk facilities
 - Site inspections and interviews at selected facilities

Inspections of the industrial facilities are on-going. A mobile application has been developed to utilize in completing the field inspections. The mobile application is tied to GIS to allow for a visual representation of facilities throughout the COA.

8.2.3 Monitoring [MS4 Parts I.D.5.d(iii)]

Industrial and commercial facilities are permitted to discharge only the allowable discharges listed in Section 1.2.3. Upon discovery, any other unauthorized discharges will be sampled and analyzed for the following parameters:

- Any pollutants limited in an existing NPDES permit to a subject facility;
- Oil and grease;

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- Chemical oxygen demand (COD);
- pH;
- biochemical oxygen demand, five-day (BOD₅);
- total suspended solids (TSS)
- total phosphorous;
- total Kjeldahl nitrogen (TKN);
- nitrate plus nitrite nitrogen;
- any discharge information required under 40 CFR §122.21(g)(7)(iii) and (iv);
- total cadmium;
- total chromium;
- total copper;
- total lead;
- total nickel;
- total silver;
- total zinc; and
- PCBs.

In lieu, of the above parameter list, the COA may alter the monitoring requirement for any individual facility:

- To coincide with the corresponding industrial sector-specific monitoring requirements of the 2008 Multi-Sector General Stormwater Permit or any applicable general permit issued after September 2008.
- To coincide with the monitoring requirements of any individual permit for the stormwater discharges from that facility, and
- Any optional monitoring list must be supplemented by pollutants of concern identified by the COA for that facility.

Upon inspection of facilities covered by the MSGP, the COA will review the on-site SWPPP and monitoring records, if required.

The COA will accept a copy of a “no exposure” certification from a facility made to EPA under 40 CFR §122.26(g), in lieu of a requirement for a SWPPP and analytical monitoring.

8.2.4 Program modifications [MS4 Part I.D.5.d(iv)]

The list of facilities included in the program, by drainage basin is included in Appendix I.

The COA has prioritized a list of 41 facilities for the next round of inspections. As these facilities are inspected using the mobile application for documentation, the list of facilities for future inspection will be expanded. The inspection form includes evaluation of the facility SWPPP, DMRs, site map, and a through facility inspection. The facilities monitoring history will be reviewed during the inspection.

8.3 Measureable Goals

The COA has developed the following measureable goals and/or information to be provided in the Annual Report to correspond with the existing and/or proposed BMPs discussed above:

- The COA will report the number of inspections performed under this program in each annual report.
- The COA will maintain a GIS map of facilities that have been inspected.

8.4 Anticipated Program Development and Implementation Schedule [MS4 Table 5]

Table 8-1. Industrial and High Risk Runoff Program Implementation Schedule

Activity	Required Implementation Date	Implementation Status
Ordinance [I.D.5.d.(i)]	12/23/2015	Passed 06/20/2016
Program implementation [I.D.5.d.(ii)]	12/23/2015	Ongoing
Meet Monitoring requirements [I.D.5.d.(iii)]	12/23/2015	Ongoing
Include requirements [I.D.5.d.(vi)]	12/23/2015	Ongoing
Update the SWMP and Annual Report [I.D.5.d.(v) and (vi)]	December 1 each year (first due 12/01/2016)	Ongoing
Enhance the program [I.D.5.d.(vii)]	Update as necessary / applicable	Ongoing

8.5 Performance Assessment

This section is reserved for future SWMP Plan revisions.

9. Illicit Discharge Detection and Elimination Program ([MS4 Part I.D.5.e])

9.1 Requirement Descriptions and Cooperative Status

Permittees are required to develop, revise, implement, and enforce a program to detect and eliminate illicit discharges entering the MS4.

The COA will comply with all of the requirements of the MS4 Permit, and cooperates to the extent practicable for each program element.

9.2 Mechanisms Used to Comply with Permit Requirements (BMPs)

9.2.1 Development of a Stormwater Drainage System Map [MS4 Part I.D.5.e(i)(a)]

A map of the COA MS4 stormwater drainage system, indicating all outfalls and the names and locations of all waters of the U.S. that receive discharges from those outfalls is provided in Appendix B of this SWMP Plan.

9.2.2 Development of Municipal Ordinance [MS4 Part I.D.5.e(i)(b)]

The COA has a Stormwater Quality Ordinance (O-16-16) that was passed June 20, 2016 that prohibits illicit discharges into the COA MS4 and meets the requirements of the MS4 Permit. The ordinance includes enforcement procedures and activities.

9.2.3 Development of a Plan to Detect and Address Illicit Discharges [MS4 Part I.D.5.e(i)(c)]

The MS4 Permit requires development of an Illicit Discharge Detection and Elimination (IDDE) Program to detect and address illicit discharges to the MS4, to contain the following elements:

9.2.3.1 Procedures for Locating Priority Areas [MS4 Part I.D.5.e(i)(c)A]

In the arid climate of Albuquerque, NM, illicit discharges are relatively easy to visually detect. The COA has an IDDE Plan that is attached in Appendix J. There are thirtyseven outfall locations that are visually screened during dry weather and field tested for the selected pollutant indicators (ammonia, boron, chlorine, color, conductivity, detergents, E. coli, enterococci, total coliform, fluoride, hardness, pH, potassium, conductivity, surfactants).

9.2.3.2 Procedures for Enforcement [MS4 Part I.D.5.e(i)(c)B]

Enforcement of the IDDE Program will be addressed through the protocol discussed in Section 1.6 of this SWMP Plan. Enforcement is also discussed in the IDDE Plan in Appendix J.

9.2.3.3 Procedures for Removing the Source of the Discharge [MS4 Part I.D.5.e(i)(c)C]

Illicit discharges reported via 311 or discovered during field investigations will be investigated by the appropriate personnel depending upon the nature of the release. The Stormwater Team (see Section 1.7

of the SWMP) and/or contractors will assist in the investigation of illicit discharges within the jurisdiction of the COA MS4.

Upon identification of illicit discharge sources or source areas, all responsible parties will be notified. Investigations into the exact cause of the illicit discharge will be conducted to determine how operations or controls can be modified to prevent future illicit discharges.

9.2.3.4 Procedures for Program Evaluation and Assessment [MS4 Part I.D.5.e(i)(c)D]

The COA will evaluate and assess the effectiveness of the COA MS4 IDDE Program annually, and revise the SWMP accordingly for submission with the Annual Report due by December 1st each year. The number and type of sites inspected will be summarized on a map.

9.2.3.5 Procedures for Coordination with Adjacent MS4s [MS4 Part I.D.5.e(i)(c)E]

MS4s adjacent to COA include AMAFCA, Bernalillo County, NMDOT, UNM, KAFB, SNL, Los Ranchos de Albuquerque, Sandoval County, SSCAFCA, Corrales, and the City of Rio Rancho. The COA will investigate suspected illicit discharges and if appropriate will notify adjacent MS4s that the source of the discharge is originating from within their MS4. The COA is also notified by adjacent MS4s if a suspected illicit discharge is originating from within the COA MS4. Following notification from an adjacent MS4, the COA completes the investigation of the suspected illicit discharge.

The COA maintains a database for illicit discharges which includes the location of the illicit discharge, parties responsible, address, date, known contaminants, and previous violations, if any.

9.2.4 Development of an IDDE Program Education Plan [MS4 Part I.D.5.e(i)(d)]

The COA continues to participate in the MRGSWQT and collaborates with the MS4 permittees to provide educational information regarding stormwater quality to the community. This information will promote, publicize, and facilitate public reporting of illicit connections or discharges, and distribution of outreach materials. This program informs the public of hazards associated with illicit discharges and improper waste disposal, as well as proper ways to dispose of hazardous wastes.

Information brochures are provided to parties responsible for illicit discharges. The COA is sending information letters to the business community notifying them about the stormwater quality ordinance, allowable discharges.

9.2.5 Establishment of a Hotline [MS4 Parts I.D.5.e(i)(e) and I.D.5.g(iii)]

The MS4 Permit requires establishment of a hotline to address complaints from "the public" and a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality concerns associated with discharges from municipal separate stormwater drainage systems. The COA has instituted a 311 Citizen Contact Center centralized call center. The 311 service is a single telephone number for all non-emergency COA inquiries and services. This program includes citizen calls regarding illicit discharges and notifies adjacent MS4s of such calls within their jurisdiction.

9.2.6 Investigation of Suspected Significant Illicit Discharges [MS4 Part I.D.5.e(i)(f)]

All illicit discharges within the COA are taken seriously by the COA. Should an illicit discharge be detected, it will be investigated within 48 hours of the notification of the discharge during normal work day operations, and the sources identified as soon as possible. Should calls occur over weekends or holidays, investigation will occur within 2 business days. Cessation of discharge, should one exist, will be required.

9.2.7 Review compliant records [MS4 Part I.D.5.e(i)(g)]

The COA has reviewed compliant records for the last permit term and developed a targeted source reduction program for those illicit discharges/improper disposal incidents that have occurred more than twice in two or more years from different locations. The COA targeted the landscaping businesses in the fall of 2016 with letters providing information about the stormwater quality ordinance and allowable non-stormwater discharges. Potential future targets include mobile pet grooming services and carpet cleaners.

9.2.8 Addressing Specific Sources of Non-Stormwater Discharges [MS4 Part I.D.5.e(ii)]

The Permit requires that the non-stormwater discharges listed in Section 1.2.3 of this SWMP Plan be addressed if they have been determined to be a significant source of pollutants to the MS4. The COA has not identified any illicit discharges within these categories (or any other category) thought to be contributors of pollutants to the COA MS4. Any illicit discharges detected will be sampled and investigated in accordance with Section 8. If sources of illicit discharges containing significant pollutants are identified in the future, the SWMP Plan will be updated to include specific measures to address those discharges.

9.2.9 System Screening Plan [MS4 Part I.D.5.e(iii)]

The MS4 Permit requires screening of the entire MS4 jurisdiction at least once every five years, and high priority areas at least once every year. High priority areas include those areas where known illicit discharges are occurring (as identified by the methods described in Section 8.2.3 of this SWMP Plan), or where there have been five or more complaints from the public in the past year.

The COA MS4 has no identified high priority areas at this time. However, if high priority areas are identified in the future at least one high priority area will be screened per year. Screening of the COA MS4 is informally conducted on an on-going basis by field personnel trained to monitor for leaks, spills, and other discharges. A formal screening program has been developed and is in the process of implementation. The IDDE Plan is included in Appendix J which includes discussion of the means, methods, quality assurance and control protocols, field monitoring, laboratory analysis, investigations, and analysis of data collected. The dry weather screening inspections cover 37 outfalls for the presence of illicit discharge and required sampling if discharges are present. The locations inspected, observations and findings will be documented on an inspection form. Any illicit discharge encountered will be sampled, tracked to its source, and corrected through administrative or engineered control measures.

9.2.10 Development of a Waste Collection Program [MS4 Part I.D.5.e(iv)]

The COA's solid waste management department mission statement is to "Commitment and dedication of ensuring a sustainable, vibrant, and a beautiful Albuquerque, delivers premier solid waste collection, recycling service, anti-graffiti efforts, weed and litter clean up, and related community outreach

programs. These services are united, comprehensive and available to City residents, business, and other government agencies. In continuing to meet the needs of a growing community the Department is ever expanding its role for a cleaner environment and researching ways to convert waste to a sustainable resource for the benefit of the public.”

9.2.10.1 Used Motor Vehicle Fluids

There are approximately 62 businesses within the COA MS4 that will accept used oil and antifreeze from “do-it-yourselfers”. The businesses voluntarily provide the service at no charge to the COA. For COA facilities, the individual departments responsible for the facilities contract with used oil collection companies to remove used oil from the COA facilities.

9.2.10.2 Household Hazardous Waste

Residents of the COA can take any household hazardous wastes to the Household Hazardous Waste Collection Center (HHWCC) at no charge. The COA contracts with Advanced Chemical Transport (ACT) who operates the HHWCC. Common examples of household hazardous waste include, but are not limited to: solvents, paints, fertilizers, pesticides, herbicides, and any liquid not specifically allowed in stormwater drainage systems or sanitary sewers.

9.2.11 Development of a Spill Prevention and Response Plan [MS4 Part I.D.5.e(v)]

Permittees are required to develop, update and implement a program to prevent, contain, and respond to spills that may discharge into the MS4, while taking all reasonable steps to control or prevent any adverse effects to human health or the environment.

The COA has a detailed SPCC Plan that includes prevention measures including inspections, testing, records, security, operational procedures, best management practices, and personnel for facilities with oil storage volumes in excess of 1,320 gallons. In the event of a release, the COA maintains a sophisticated system of containment facilities, trained response staff, and emergency equipment to prevent pollutants from entering the stormwater drainage system.

Spill prevention is stressed in the Good Housekeeping/MSGP facility SWPPP training and SPCC Training. Spill kits are required to be kept on all applicable industrial sites, and equipped to respond to the types and quantities of chemicals stored on-site. Personnel are required to be familiar with spill kit locations.

Spill response can be initiated via a 911 call. The fire department hazardous material (Haz-Mat) response team will respond, stop, and clean-up spills of hazardous materials. There are two Haz-Mat task force stations manned by 22 firefighters who have volunteered to receive specialized training in the prevention and mitigation of incidents involving hazardous materials.

Information such as the location, date, time, duration, source, cause, quality/volume, description and corrective action is recorded, and immediate verbal notifications (federal and state, as applicable) are initiated. Coordination with various applicable subject matter experts (e.g., stormwater, wastewater, groundwater, etc.) occurs to ensure compliance with all laws and regulations. All required written notifications and reporting to federal, state and local authorities is completed by the COA.

9.3 Measureable Goals

The COA has developed the following measureable goals and/or information to be provided in the Annual Report to correspond with the existing and/or proposed BMPs discussed above:

- Good Housekeeping/MSGP SWPPP training and SPCC training will be reviewed and updated annually, at a minimum, to ensure regulatory and contact information is current, and to respond to the educational and training needs of City employees.
- A log will be maintained of illicit discharges reported within the COA MS4 boundary. The log will include the method of reporting, pertinent details about the illicit discharge, and a summary of the findings and corrective actions.
- Measureable goals associated with the education plan are discussed in Section 10 of this SWMP Plan.
- The entire COA MS4 jurisdiction will be screened for illicit discharges at least once every five years, and recorded. High priority areas within the COA MS4 jurisdiction (to be identified) will be screened for illicit discharges at least once every year, and recorded.

9.4 Anticipated Program Development and Implementation Schedule [MS4 Table 6]

Table 9-1. Illicit Discharge Detection and Elimination Program Implementation Schedule

Activity	Required Implementation Date	Implementation Status
Develop Stormwater Drainage System Map [I.D.5.e(i)(a)]	2/20/2016	Completed
Develop Ordinance [I.D.5.e(i)(b)]	6/21/2017	Completed
Develop IDDE Plan [I.D.5.e(i)(c)]	6/21/2017	Completed
Develop Education Plan [I.D.5.e(i)(d)]	6/21/2016	Completed
Establish Hotline [I.D.5.e(i)(e)]	6/21/2016	Completed
Investigate IDDE [I.D.5.e(i)(f)]	6/21/2016	On-going
Review Complaints [I.D.5.e(i)(g)]	6/21/2016	Completed
Screen High Priority Areas [I.D.5.e(iii)]	12/23/2015	N/A
Screen Entire System [I.D.5.e(iii)]	12/23/2019	On-going
Develop Waste Collection Program [I.D.5.e(iv)]	6/21/2017	Completed
Develop Spill Prevention Program [I.D.5.e(v)]	6/21/2016	Completed
Update SWMP and Annual Report [I.D.5.e(vi) and (vii)]	December 1 each year (first due 12/01/2016)	On-going
Enhance Program to include elements of Part I.D.5.e(ix)(f)	Update as necessary / applicable	On-going

9.5 Performance Assessment

This section is reserved for future SWMP Plan revisions.

10. Control of Floatable Discharges Program [MS4 Parts I.D.5.f and III.A.3]

10.1 Requirement Descriptions and Cooperative Status

The MS4 Permit requires permittees to develop, revise and implement a program to control floatables in discharges into the MS4. The floatables program is required to include source controls and structural controls, where needed. This section of the SWMP Plan also satisfies that requirements of MS4 Permit Part III.A.3 regarding floatables monitoring.

The COA will comply with all of the requirements of the MS4 Permit, and cooperates to the extent practicable for each program element.

10.2 Mechanisms Used to Comply with Permit Requirements (BMPs)

10.2.1 Development of a Program Implementation Plan [MS4 Part I.D.5.f(i)(a)]

The COA will continue to implement a program to address and control floatables in discharges to the MS4.

10.2.2 Plan for Source or Structural Controls to Control Floatable Discharges [MS4 Part I.D.5.f(i)(a) and (b)]

The COA will continue to install stormwater quality features to control floatables, such as ported risers, trash racks, and screened inlets in both new construction and retrofits where appropriate. The COA will continue to coordinate with AMAFCA relative to structural BMPs within AMAFCA right-of-ways.

The COA will continue to estimate the annual volume of floatables and trash removed from each control facility as well as to characterize the floatable type. The COA maintenance crews track the volume of floatables, sediment, trash, and debris removed from COA facilities.

10.2.3 Program Enhancement [MS4 Part I.D.5.c(ii)(k)]

The Floatables Program established in compliance with the MS4 Permit will be enhanced to control the discharge of floatables and trash from the COA MS4 by implementing source control of floatables specifically in industrial and commercial areas.

10.3 Measureable Goals

The COA has developed the following measureable goals and/or information to be provided in the Annual Report to correspond with the existing and/or proposed BMPs discussed above:

- An annual assessment of the Floatables Program will be conducted to evaluate the need for structural controls. The assessment will include a review of all documents and procedures associated with waste management and stormwater, a review of the findings of quarterly inspection reports, and a recommendation whether or not to propose structural controls as a corrective action (if necessary).
- A reporting of the volume of material collected from the streets and arroyos.

10.4 Anticipated Program Development and Implementation Schedule [MS4 Table 7]

Table 10-1. Control of Floatable Discharges Program Implementation Schedule

Activity	Required Implementation Date	Implementation Status
Develop Implementation Schedule [I.D.5.f(i)(a)]	6/21/2016	Completed
Estimate Annual Floatables Volume [I.D.5.f(i)(b)]	6/21/2017	Pending
Update the SMWP and Submit Annual Report [I.D.5.f(ii) and (iii)]	December 1 each year (first due 12/01/2016)	Pending

10.5 Performance Assessment

This section is reserved for future SWMP Plan revisions.

11. Public Education and Outreach Program [MS4 Part I.D.5.g]

11.1 Requirement Descriptions and Cooperative Status

Permittees are required to develop, revise, implement, and maintain a comprehensive stormwater program to educate the community, employees, businesses, and the general public about: the hazards associated with the illegal discharges and improper disposal of waste; the impact that stormwater discharges have on local waterways; and the actions the public can take to reduce pollutants in stormwater.

The COA will comply with all of the requirements of the MS4 Permit, cooperates to the extent practicable for each program element, and is a member of the Middle Rio Grande Storm Water Quality Team (MRGSWQT).

11.2 Mechanisms Used to Comply with Permit Requirements (BMPs)

11.2.1 Development of an Education and Outreach Program [MS4 Parts I.D.5.g(i) and (ii)]

The COA will implement an education and training program with the following objectives [I.D.5.g(i)(a)]:

- To teach City employees about the impacts of stormwater discharges on surface water bodies.
- To train City employees how to reduce pollutants in stormwater runoff while performing their job duties, as well as at home.
- To educate school children about the impacts of stormwater discharges on surface water bodies and teach them how to reduce pollutants in stormwater runoff at home.

Parts I.D.5.g(i)(b) and (e) of the MS4 Permit require development of educational materials. The COA already uses (and will continue to use) the following materials:

- The Department of Municipal Development has a website for access by COA employees and the public that contains basic regulatory requirements pertaining to the protection of stormwater quality, training information, and a contact from the Storm Drainage Department.
- The COA distributes informational letters and brochures to local businesses and community members to address new ordinances, illicit discharges, or other issues of concern.
- Parks and Open Space staff host community clean-up days in the spring of each year in an effort to promote the importance of reducing floatables and debris.
- Parks and Open Space staff work with schools to engage youth in restoration efforts in the Bosque and along trails.
- In addition, the COA is a member of the MRGSWQT, a group formed in 2003 to address county-wide stormwater quality issues. This group has expanded to encompass issues facing the Middle Rio Grande watershed.
- The MRGSWQT funds classroom and field education programs, media campaigns, printed materials including brochures, public presentations/events, giveaways, display booth/kiosk, signage at select locations, website (www.KeeptheRioGrand.org), and Facebook page.

The following educational elements are a part the COA's educational program:

- The COA is an active participant with the MRGSWQT cooperative. The COA will continue to collaborate with the MS4 permittees to improve upon the existing public education and outreach program.
- The MRGSWQT has a local Public Relations consulting firm under contract to provide public education and outreach on stormwater impacts. Included in their scope is to provide an Outcomes Report to summarize the yearly outreach activities through different media and methods, target audiences and an estimate of people reached.
- Target pollutants include pet waste and trash/debris. These pollutants were chosen on the basis of studies conducted in the previous permit cycle.
- Information about proper septic system maintenance, proper use and disposal of fertilizers and pesticides, protection and restoration of riparian vegetation, and proper disposal of motor oil and household hazardous wastes is available on the MRGSWQT website and COA website [I.D.5.g(i)(c) and I.D.5.g(viii)(i)].
- Information on how to become involved in local stream restoration and watershed cleanup activities [I.D.5.g(i)(d)].
- Information about litter reduction, recycling, reduction of pesticide/herbicide use, xeriscaping and reduced water consumption is available from the ABCWUA and COA websites [I.D.5.g(v)(b)].
- Information about pet waste and solid waste management [I.D.5.g(viii)(h) and I.D.5.g(viii)(k)].

Educational materials targeted towards City employees will focus on how job duties can impact stormwater quality. Outreach activities (and associated materials), such as the stormwater/watershed model demonstration, will be age-appropriate for grade-school children, and focus on how residential activities can impact stormwater quality [I.D.5.g(i)(f)].

11.3 Measureable Goals

The COA has developed the following measureable goals and/or information to be provided in the Annual Report to correspond with the existing and/or proposed BMPs discussed above:

- The informational brochures and website will be reviewed and updated annually to ensure regulatory and contact information is current, and to respond to the educational and training needs of the targeted audiences.
- The COA will contribute and participate in the MRGSWQT.
- The COA will continue to conduct education and outreach presentations to the community specific to water quality.
- A reporting of the activities carried out will be summarized in the Annual Report.

11.4 Anticipated Program Development and Implementation Schedule [MS4 Table 8]

Table 11-1. Public Education and Outreach Program Implementation Schedule

Activity	Required Implementation Date	Implementation Status
Develop Program [I.D.5.g(i) and (ii)]	2/20/2016	Completed
Update the SWMP and Submit Annual Report [I.D.5.g(iii) and (iv)]	December 1 each year (first due 12/01/2016)	Pending
Enhance Program to include applicable elements of Parts I.D.5.g(v) through (viii)	update as necessary / applicable	Pending

11.5 Performance Assessment

This section is reserved for future SWMP Plan revisions.

12. Public Involvement and Participation Program [MS4 Part I.D.5.h]

12.1 Requirement Descriptions and Cooperative Status

Permittees are required to develop, revise, implement and maintain a program to encourage public involvement and provide opportunities for participation in the review, modification and implementation of the SWMP Plan. Permittees are required to make the SWMP Plan available to the public and to other MS4 operators or Tribal authorities receiving discharges from the MS4, and develop and implement a process by which public comments are received and reviewed by the entities responsible for the SWMP.

The COA will comply with all of the requirements of the MS4 Permit, and cooperates to the extent practicable for each program element, and is a member of the MRGSWQT.

12.2 Mechanisms Used to Comply with Permit Requirements (BMPs)

12.2.1 Development of a Public Involvement and Participation Program [MS4 Parts I.D.5.h(ii), (iii) and (viii)]

The Public Involvement and Participation Program will include a comprehensive planning process which involves public participation and, where necessary, intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and other such provisions as appropriate.

The COA will notify the public via legal notice in the Albuquerque Journal for a period of 30 days, prior to the submission of the NOI. The SWMP Plan and each Annual Report (and associated SWMP Plan revision) are all posted on the COA website for public comment.

In accordance with Part I.D.5.h(viii), a copy of each public notice, a copy of the MS4 Permit and the applicable documents (i.e., NOI, Annual Report, SWMP Plan, etc.) will be maintained up-to-date at on the COA website and at www.KeeptheRioGrand.org website. Current documents associated with the COA's MS4 Permit coverage will be posted to and maintained on this website throughout the Permit term.

Comments received by COA in response to any public comment period will be reviewed and considered for incorporation into the applicable document (NOI, Annual Report, SWMP Plan, etc.). The comments and a summary of COA responses will be submitted to EPA.

Part I.D.5.h(iii)(b) of the Permit requires the COA to perform "one assessment of public behavioral change following a public education and/or participation event". In compliance with this requirement, the COA will continue to distribute and collect surveys filled out by the public at community events that have been designed to gauge their involvement in issues regarding watershed health.

As necessary, pursuant to Part I.D.5.h(iii)(c) of the Permit, the COA will solicit involvement from the Technical Advisory Group (TAG) for the Middle Rio Grande Watershed MS4 Permit. The TAG is comprised of MS4 Permittees and meets on a routine basis to discuss technical and regulatory aspects of compliance with the MS4 Permit (see Memorandum of Agreement included in Appendix P of this SWMP Plan).

Various departments of the COA retain volunteers for stormwater pollution prevention activities and awareness throughout the area, as required by Part I.D.5.h(iii)(d). The COA makes presentations at the Watershed Protection Advisory Board about the MS4 Permit and COA compliance activities.

12.2.2 Plan to Comply with State, Tribal and Local Notice Requirements [MS4 Part I.D.5.h(iv)]

The COA will comply with State, Tribal, and local public notice requirements when implementing a public involvement/ participation program.

12.2.3 Open Public Process [I.D.5.h(v)]

The Public Involvement and Participation Program is not intended to be limited to any specific economic or ethnic groups. Public notices will be printed in a newspaper of general circulation in the Albuquerque area (i.e., The Albuquerque Journal) and be available online.

12.3 Measureable Goals

The COA has developed the following measureable goals and/or information to be provided in the Annual Report to correspond with the existing and/or proposed BMPs discussed above:

- Comments received by the public in response to any and all public notices will be considered and maintained with the SWMP Plan for the duration of the Permit term.
- The COA will continue to conduct surveys of the public at community events.

12.4 Anticipated Program Development and Implementation Schedule [MS4 Table 9]

Table 12-1. Public Involvement and Participation Program Implementation Schedule

Activity	Required Implementation Date	Implementation Status
Develop Program [I.D.5.h(ii) and (iii)]	12/23/2015	Ongoing
Comply with State, Tribal, and Local Public Notice Requirements [I.D.5.h(iv)]	2/20/2016	Ongoing
Include elements of Part I.D.5.h(v)	6/21/2016	Ongoing
Update the SWMP and Submit Annual Report [I.D.5.h(vi), (vii) and (viii)]	December 1 each year (first due 12/01/2016)	Ongoing
Enhance Program to include elements of Part I.D.5.h(ix)	Update as necessary/applicable	Ongoing

12.5 Performance Assessment

This section is reserved for future SWMP Plan revisions.

13. Comprehensive Monitoring and Assessment Program [MS4 Part III.A]

13.1 Program Objectives [MS4 Part III.A]

This monitoring and assessment program is designed to meet the following objectives related to the COA MS4:

- Assess compliance with the MS4 Permit.
- Assess the effectiveness of the COA's SWMP.
- Assess the impacts to receiving waters resulting from stormwater discharges.
- Characterize stormwater discharges.
- Identify sources of elevated pollutant loads and specific pollutants.
- Detect and eliminate illicit discharges and illegal connections to the COA MS4.
- Assess the overall health and evaluate long-term trends in receiving water quality.

The COA is a member of the Compliance Monitoring Cooperative (CMC) program along with 12 other agencies in the Middle Rio Grande. The COA will comply with all of the requirements of the MS4 Permit. Monitoring data may be shared with other MS4s to help understand impacts on receiving waters. The sharing of data shall not be construed as evidence of the existence of a cooperative program or a shared responsibility for meeting Permit requirements.

For the purposes of this SWMP Plan and to be consistent with the intent of the MS4 Permit, "monitoring" and "sampling" are synonymous terms that mean the sampling and visual observation of stormwater discharges, including the related preparation and documentation tasks.

13.2 Monitoring Locations [MS4 Part III.A.1.a(ii)]

Rio Grande (NORTH)- In stream sampling within the Rio Grande will be performed upstream of the Angostura Diversion Dam at the north end of the watershed (upstream or background).

Rio Grande (SOUTH) – In stream sampling within the Rio Grande will be performed at the Isleta Diversion Dam at the south end of the watershed and downstream of all inputs from the Urban Area to the river to provide the downstream water conditions.

These locations have been identified and are proposed to meet the permit requirements as identified in Part III.A. These up and down stream sample locations capture all inputs to the river within the Urbanized Area.

Locations along the ephemeral channels entering the urbanized area were not selected for sampling locations due to logistical issues with responding to storm events in a timely fashion upstream of the urbanized area. Due to the nature of the storms in the middle Rio Grande, the time frame needed to identify a storm event, mobilize manpower an upstream location would prove logistically challenging. The typical storm event is high intensity and short duration, making it challenging to obtain the needed samples. The usage of automated sampling on ephemeral, natural channels is also logistically challenging. Due to the nature of the channels, the flow path of the runoff varies along the floor of the channel. Placement of automated sampling equipment within this type of environment is extremely challenging and can lead to loss of equipment due to the variations in flow paths.

13.2.1 Changes to Monitoring Locations [MS4 Part III.A.1.g]

Alternate monitoring locations may be substituted for just cause during the term of the MS4 Permit. Requests for approval of an alternate monitoring location(s) will be made to the EPA and NMED in writing and include the rationale for the requested monitoring station relocation. Unless disapproved by the EPA, use of an alternate monitoring location(s) may commence thirty days from the date of the request. At least six samples are required to be collected during the first year of monitoring at the substitute monitoring location(s). In the event that there are less than six events where a sample was able to be collected, it will be documented for reporting purposes.

13.3 Wet Weather Monitoring [MS4 Parts III.A.1 and III.A.5.a]

Wet weather monitoring will be conducted during both the wet season and dry season at the sampling locations identified in Section 12.2 of this SWMP Plan. The wet season occurs between July 1 and October 31, and the dry season occurs between November 1 and May 31. Wet weather monitoring is required to be conducted for a minimum of seven events during the Permit term (December 22, 2014 through December 19, 2019) of which at least three events occur during the wet season and two events occur during the dry season. Wet weather monitoring will be performed when the magnitude of a storm event is greater than 0.25 inches with no antecedent dry period occurs anywhere in the watershed that creates a discharge to the Rio Grande.

Typical precipitation events in the Middle Rio Grande Basin are brief, intense, and highly localized. Stormwater flow may occur far from an actual rain event, and the water quality of the flow may have little to do with pollutants originating within the MS4.

The CMC maintain a network of rain gauges at within the MS4, specifically at stormwater sampling points. Sources for determining a qualifying storm event may include, CoCoRahs, wundermap.com data, calibrated National Weather Service radar, and/or USGS weather data based on rainfall measurements taken within the watershed. If the sources register 0.25 inches of precipitation (i.e., a qualifying event), wet weather sampling at the points detailed in the Sampling Plan attached in Appendix N will be performed. The CMC MS4 sampling points are identified on maps in Appendix B of this SWMP Plan.

Samples will be collected using the grab sample option described in Part III.A.1.c of the Permit by field crews. The grab samples will be collected in equal volumes and composited in equal portions in the field. Field measurements of temperature, pH, conductivity, and DO will be measured in each subsample container and in the composited sample. The composited sample will be preserved (as appropriate) and processed before shipment to the appropriate laboratory. Wet weather monitoring constituents required in the Permit, along with acceptable analytical methods (from 40CFR Part 136) and their associated hold times are listed in Table 12-1 below. Limitations that may affect the retrieval time of the auto-collected samples, compositing methods, and laboratory analysis are discussed below in Section 12.3.1.

Wet weather monitoring will also consist of determining flow rates during the discharge event so that the total daily discharge can be determined. Daily discharge volumes will be used to calculate the *E. coli* waste load for evaluation of TMDL compliance. A discussion of flow measurements, waste loads, and TMDLs is provided in Section 2.4 and Appendix E of this SWMP Plan.

Table 13-1. Wet Weather Monitoring Parameters, Analytical Methods, MQLs, and Hold Times

Parameter	Analytical Method	MQL (mg/L)	Hold Time
pH	field meter	--	15 minutes
Temperature	field meter	--	15 minutes
Conductivity	field meter	--	15 minutes
DO	field meter	5.0 ^a	15 minutes
TSS	SM 2540 D	100 ^a	7 days
TDS	SM 2540 C	1500 ^a	7 days
COD	EPA 410.4	120 ^b	28 days
BOD ₅	SM 5210 B	30 ^b	48 hours
Oil and Grease	SM 1664 A	15 ^b	28 days
<i>E. coli</i>	SM 9223 B	47 ^a cfu/100mL	6 hours
TKN (Total Ammonia + Organic Nitrogen)	SM 4500	2 ^a	28 days
Nitrate + Nitrite	EPA 300.0	132 ^a	28 days
Dissolved Phosphorous	SM 4500	2.0 ^b	14 days
Total Phosphorous	SM 4500	2.0 ^b	14 days
PCBs	EPA 1668	0.00064 ^a µg/L	1 year
Gross Alpha	SM 7110 B	15 ^a pCi/L	6 months

^aNo established MQL for the analytical method has been established. The values in this table reflects the water quality standards listed in Section 2.1

^bNo established MQL for the analytical method listed has been established. There are no water quality standards for this constituent either. The value listed is an EPA "benchmark" value indicating levels EPA considers having the potential to impair water quality.

13.3.1 Sampling Limitations

13.3.1.1 Safety

The CMC adheres to strict safety procedures when performing work. Wet season storm events in Albuquerque are typically accompanied by lightning and flash flooding of stormwater drainage areas (e.g, conveyance channels, arroyos, etc.). Safety procedures prohibit worker exposure to such situations; therefore it may not be possible to retrieve the automatically collected samples within 15 minutes to measure field parameters. The samplers will be accessed as soon as practicable to measure field parameters and retrieve the automatically-collected samples.

13.3.1.2 Business Hours

Samples will be retrieved from the automatic samplers during normal business hours – Monday through Friday, 7:30 am to 5:00 pm. Additionally, Members of the Workforce that conduct stormwater monitoring are not required to work on the following observed holidays: Memorial Day; Independence Day; Labor Day; Thanksgiving Day; and Christmas Day through New Year's Day (i.e., winter shutdown).

The field team is staffed with multiple technicians; however, the inability to collect samples during normal business hours due to unexpected circumstances (e.g., sick/personal leave, inclement weather, facility shutdown, or Kirtland Air Force Base gate closure) is possible. Should this occur, automatically-collected samples will be retrieved as soon as practicable or during the next qualifying storm event.

13.3.1.3 Stormwater Flow Duration and Sample Volume

Stormwater from wet season storm events has a tendency to flow with high velocity at high volumes for a short period of time. It is anticipated that the collection of four grab samples collected a minimum of 15 minutes apart (as required by the Permit) will be a challenge. Should fewer than four grab samples be collected, subsamples of equal volumes will be composited in equal portions in the field while achieving the minimum volume for laboratory analysis of all parameters. In the event that the volume of a subsample is inadequate to achieve the minimum volume for laboratory analysis, it will be discarded and not incorporated as part of the composite sample. In the event that the volume of a composite sample is inadequate to achieve the minimum volume for laboratory analysis, the list of required parameters may be divided over multiple storm events.

13.3.1.4 *E. coli*

E. coli has a holding time of six hours. Laboratories contracted to conduct *E. coli* analysis operate on standard business hours of Monday through Friday, 8:00 am to 5:00 pm. Should a storm event create a stormwater discharge at a period when timely sample retrieval is not possible or on a Friday afternoon, the retrieval, processing and delivery of the collected sample to the laboratory may not occur within the maximum hold time. However, the sample may be submitted to the laboratory for analysis, or *E. coli* may be analyzed in stormwater from another storm event.

13.3.1.5 Documentation

In the event any of the above limitations occur, the COA will document such occurrences on a Discharge Monitoring Report (DMR), Annual Report or SWMP Plan revision, as applicable.

13.3.2 Anticipated Program Development and Implementation Schedule [MS4 Table 10]

Table 13-2. Wet Weather Monitoring Implementation Schedule

Activity	Required Implementation Date	Status or Anticipated Completion Date
Submit Wet Weather Monitoring Preference	06/22/2015	Completed
Submit Detailed Description of Monitoring Scheme	12/23/2015	Completed
Submit Certification that Sampling Sites are Operational; Begin Sampling	6/21/2016	Completed
Update SWMP and Submit Annual Report	December 1 each year (first due 12/01/2016)	Pending

13.3.3 Contingency Plan [MS4 Parts III.A.1.h]

If the results from wet weather monitoring indicate that the COA MS4 is contributing to instream Water Quality Standard (WQS) exceedances, then additional monitoring locations will be established to determine the potential source(s) of contamination. The locations of the additional wet weather monitoring stations will be submitted to EPA and NMED for approval, and the SWMP updated to reflect their addition.

13.4 Dry Weather Discharge Screening [MS4 Part III.A.2]

Dry weather monitoring will be conducted to identify, investigate, and address areas that may be contributing contaminants to the COA MS4 as a result of discharges that occur without the direct influence of storm events (i.e., illicit discharge, allowable non-stormwater discharges). Dry weather screening will be conducted in conjunction with the Illicit Discharge Detection and Elimination Program described in Section 8 of this SWMP Plan.

The entire COA MS4 will be screened at least once every five years and any identified high priority areas (where known illicit discharges are occurring) at least once every year. Currently thirty-seven locations are screened during the dry season which typically occurs from November thru April.

13.5 Floatable Monitoring [MS4 Part III.A.3]

Floatable monitoring will be conducted as described in Section 9 of this SWMP Plan. The details and results associated with floatables monitoring will be maintained in Section 9.

13.6 Analytical Methods [MS4 Parts III.A.5.b and IV.Q]

Analysis of all samples (i.e., wet weather, dry weather, and IDDEP) will be done in accordance with the methods specified in 40 CFR 136. Analytical results will be reported with minimum quantification levels (MQLs) at or below those listed in Appendix E of the MS4 Permit, as applicable. Parameters, analytical methods, MQLs, and holding times are listed in Table 13-1 above.

13.7 Additional Monitoring by the Permittee [MS4 Part IV.T]

Should the approved sampling locations for the COA MS4 be monitored more frequently than required by the Permit, using test procedures approved under 40 CFR §136 or as specified in the Permit, the results shall be included in the calculation and reporting of the data submitted in the DMR. Such increased monitoring frequency shall also be indicated on the DMR.

13.8 Recording of Monitoring Results and Maintaining Records [MS4 Part IV.P]

The recording and maintenance of monitoring results is discussed in Section 15 of this SWMP.

13.9 Reporting of Monitoring Results [MS4 Part III.D]

Monitoring results are reported with the Annual Reports. Submission of Annual Reports, DMRs and SWMP revisions are discussed in Section 13 of this SWMP. Section 14 of this SWMP includes additional reporting requirements regarding: items for compliance with Permit requirements associated with WQS (MS4 Part I.C.1) and TMDLs (MS4 Part I.C.2); monitoring scheme and certifications required in Part III.A.1; modifications to monitoring locations; and all other reports.

14. Annual Report [MS4 Part III.B]

Annual Reports, including DMRs, will be submitted by December 1 each year, and will report on the monitoring period of July 1 through June 30. The suggested Annual Report form is located at <http://epa.gov/region6/water/npdes/sw/ms4/index.htm>.

The first Annual Report for the COA MS4 will be due December 1, 2016, and will cover the reporting period of July 1, 2015 through June 30, 2016. The first and fourth Annual Reports (due December 1, 2016 and December 1, 2019) will include the submittal of a complete SWMP Plan revision.

14.1 SWMP Implementation Status [MS4 Part III.B.1]

Each Annual Report will include a section addressing SWMP implementation status. The section will describe the status of compliance with all schedules established under the MS4 Permit, and the status of actions required in Parts I, III, and VI of the Permit.

14.2 SWMP Revisions [MS4 Part III.B.2]

Revisions to the SWMP Plan will be included in the Annual Report. Revisions will include any reassessment of or changes to control measures and BMPs reported in the NOI. A cumulative list of SWMP Plan revisions will be maintained.

14.3 Performance Assessment [MS4 Part III.B.3]

Each Annual Report will include an assessment of performance of the SWMP and overall compliance with the MS4 Permit. The assessment will include:

- An evaluation of performance in terms of measureable goals, including, but not limited to, a description of number and nature of enforceable actions and inspections, public education, and public involvement aspects of the SWMP.
- A summary of the data that are accumulated throughout the monitoring period (July 1 through June 30). Data will include water quality monitoring results, calculated waste loads, floatables monitoring results, illicit discharge detections, and any other quantitative measures of performance.
- Identification of water quality degradations or improvements.

14.4 Annual Expenditures [MS4 Part III.B.4]

Tracking and reporting of annual expenditures is required for Class A permittees. The COA is reporting the annual expenditures in the Annual Report.

14.5 Cooperative Responsibilities [MS4 Part III.B.5]

The MS4 Permit requires Permittees participating in a cooperative program to share responsibility for preparation and contents of the Annual Report. The COA shares applicable data with other MS4 permittees as required in the MS4 Permit and as necessary to meet the reporting requirements of the Annual Report. In some instances, the COA may refer EPA to another permittees Annual Report for the data or report in order to prevent miscommunication of the data and duplicative efforts in reporting.

14.6 Public Notice and Comments [MS4 Part III.B.6]

A minimum of 45 days prior to submission of each Annual Report, the COA will provide public notice and make a copy of the draft Annual Report and SWMP Plan revision available for public review and

comment. All public comments received will be reviewed and considered for incorporation into the final Annual Report and SWMP Plan.

14.7 Signature Requirements [MS4 Part III.B.7]

Annual Reports shall be signed and certified, in accordance with Part IV.H and include a statement or resolution that the Permittee's governing body or agency (or delegated representative) has reviewed or been apprised of the content of the Annual Report. Section 17 of this SWMP Plan includes more detail on signature requirements and notes authorized designees, as applicable.

14.8 Submission of DMRs, Annual Reports and SWMP Revisions [MS4 Part III.D]

Monitoring results (Parts III.A.1 III.A.3, and III.A.5.e) obtained between July 1 and June 30 will be submitted on DMRs along with the Annual Report. The DMR forms will be provided by EPA following approval of the Comprehensive Monitoring and Assessment Program for the COA MS4. A separate DMR is required for each of the two monitoring seasons; the wet season (July 1 through October 31) and the dry season (November 1 through June 30).

Signed copies of the DMRs, Annual Reports and revised SWMP Plans will be submitted electronically to R6_MS4Permits@epa.gov. DMRs, Annual Reports, and revised SWMP Plans will also be submitted (in hard copy unless otherwise requested) to NMED and the Pueblo of Isleta.

New Mexico Environment Department
Attn: Bruce Yurdin, Program Manager
Surface Water Quality Bureau
Point Source Regulation Section
P.O. Box 5469
Santa Fe, New Mexico 87502

Pueblo of Isleta
Attn: Ramona M. Montoya, Environmental Division Manager
P.O. Box 1270
Isleta, NM 87022

15. Additional Reporting [MS4 Part III.D]

Submission of Annual Reports, DMRs and SWMP Plan revisions is discussed in Section 13 of this SWMP Plan.

Requests for SWMP updates, modifications to monitoring locations or an application for an individual MS4 Permit will be submitted to EPA at the address below.

U.S.EPA Region
Water Quality Protection Agency
Operations Support Office (6WQ-O)
1445 Ross Avenue
Dallas, TX 75202-2733

The submission of NOTs, requests for SWMP updates, items for compliance with Permit requirements associated with WQS (MS4 Part I.C.1) and TMDLs (MS4 Part I.C.2), monitoring scheme and certifications required in Part III.A.1, modifications to monitoring locations, and all other reports will also be submitted (in hard copy unless otherwise requested) to NMED and the Pueblo of Isleta.

New Mexico Environment Department
Attn: Bruce Yurdin, Program Manager
Surface Water Quality Bureau
Point Source Regulation Section
P.O. Box 5469
Santa Fe, New Mexico 87502

Pueblo of Isleta
Attn: Ramona M. Montoya, Environmental Division Manager
P.O. Box 1270
Isleta, NM 87022

15.1 Anticipated Non-Compliance [MS4 Part IV.X]

The COA will provide advance notice to EPA and NMED of any planned changes or activity which may result in noncompliance with the MS4 Permit.

16. Records

16.1 Recordkeeping [MS4 Part IV.P]

The following records and documentation will be maintained for the COA MS4:

- Monitoring Information
 - Date, time, location of sampling event or measurement
 - Initials or name of individuals performing the sampling
 - Date and time analyses were performed
 - Initials or names of individuals who performed the analyses
 - References and written procedures for analytical methods used
 - Results of analyses, including bench sheets or instrument readouts
 - Calibration and maintenance records
- Reports
- DMRs
- Permit NMR04A000
- Data used to complete the NOI, if applicable
- NOI(s)
- SWMP
- All information and determinations used to document permit eligibility under Part I.A.5.f and Part I.A.3.b of the Permit.

Records will be maintained for the duration of the Permit term or five years from the time of generation, whichever is longer. Following a review, all records, data, and documents will be made available to EPA and the public, upon written request.

16.2 Records Retention [MS4 Part I.D.7]

The COA will maintain SWMP records developed in accordance with Part I.D, Part IV.P, and Part IV for at least five years after Permit coverage is terminated or coverage under the Permit expires.

17. References

New Mexico Water Quality Control Commission, October 12, 2000. Water Quality Standards for Interstate and Intrastate Surface Waters; 20.6.4 NMAC.

<http://water.epa.gov/scitech/swguidance/standards/wqslibrary/upload/nmwqs.pdf>

Pueblo of Isleta, March 18, 2002. Pueblo of Isleta Surface Water Quality Standards, Tribal Resolution 02-064.

http://water.epa.gov/scitech/swguidance/standards/upload/2005_12_14_standards_wqslibrary_tribes_isleta_6_wqs.pdf

U.S. Bureau of Reclamation (Water Resources Research Laboratory), 2001. Flow Measurement Manual, 3rd Edition.

http://www.usbr.gov/pmts/hydraulics_lab/pubs/wmm/

U.S. EPA, June 30, 2010. U.S. EPA Approved Total Maximum Daily Loads for the Middle Rio Grande Watershed.

http://www.nmenv.state.nm.us/swqb/documents/swqbdocs/MAS/TMDLs/MRG/Online/USEPA-ApprovedMRG_TMDL06-30-10.pdf

U.S. EPA, November 18, 2014. 2014-2016 State of New Mexico Clean Water Act §303(d)/§305(b) Integrated Report, Appendix A.

<http://www.nmenv.state.nm.us/swqb/303d-305b/2014-2016/2014-2016NMList.pdf>

18. Certifications [MS4 Parts IV.H and III.C]

Pursuant to Parts I.B.2.I and I.A.6.a(v) of the MS4 Permit, the NOI will be signed and certified in accordance with Parts IV.H.1 and 4 of the Permit, by a principal executive officer for the corporation or agency. Signature for the NOI may not be delegated to a lower level. Similarly, pursuant to I.A.6.b(iii) of the MS4 Permit, the NOT will be signed and certified in accordance with Part IV.H.1 of the Permit, by a principal executive officer for the corporation or agency.

Annual Reports shall be signed and certified, in accordance with Part IV.H and include a statement or resolution that the Permittee's governing body or agency (or delegated representative) has reviewed or been apprised of the content of the Annual Report. [Part III.B.7]

All DMRs, SWMPs, reports, certifications, or information either submitted to EPA, or that the MS4 Permit requires the Permittee to maintain, will be signed and certified in accordance with Part IV.H of the Permit as follows:

- Signature shall be of a principal executive officer or authorized designee.
- The authorized designee can be either a specific person or corporate position having responsibility for the overall operation of the regulated facility, such as position of manager or position having responsibility for the environmental matters for the corporation or agency.
- Authorization of the designee must be made in writing and submitted.

18.1 Delegation of Authority

As individuals or positions are authorized as signatory designees for the City of Albuquerque, their names or positions will be identified in a letter(s) of authorization. A copy of the letter(s) will be provided to EPA as well as maintained in Appendix O of the SWMP Plan.

18.2 City of Albuquerque Certifying Signature for SWMP dated December 1, 2016

CITY OF ALBUQUERQUE

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my 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 my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name: Robert J. Perry

Title: Chief Administrative Officer, City of Albuquerque

Signature: 

Date: 11.2.16

APPENDICES

Compact Disc (CD) of selected appendices

- Appendix A: A-1: MS4 Permit No. NMR04A000
A-2: April Modification Letter
A-3: February Modification Letter
- Appendix B: B-1: MSGP facility locations
B-2: COA Outfall locations
B-3: CMC Sample locations
- Appendix C: C-1: NOI
C-2: Public Notice
C-3: Coverage Authorization
- Appendix D: D-1: Nutrient Study
D-2: Sediment Study
- Appendix E: Water Quality Standards, TMDLs, §303(d) List, WLA Letter
- Appendix F: Supporting Documents for Construction Site Runoff Control Program
- Appendix G: Supporting Documents for Post-Construction Stormwater Management Program
- Appendix H: Supporting Documents for Pollution Prevention / Good Housekeeping Program
- Appendix I: Supporting Documents for Industrial and High Risk Runoff Program
- Appendix J: Supporting Documents for Illicit Discharge Detection and Elimination Program
- Appendix K: Supporting Documents for Control of Floatable Discharges Program
- Appendix L: Supporting Documents for Public Education and Outreach Program
- Appendix M: Supporting Documents for Public Involvement and Participation Program
- Appendix N: Supporting Documents for Monitoring Program
N-1: COA Sampling Certification
N-2: Final Sampling Plan
N-3: Sampling Cooperative Agreement

COA MS4 Stormwater Management Program

Appendix O: Delegation of Authority

Appendix P: MS4 Technical Advisory Group

APPENDIX A: MS4 Permit No. NMR04A000

No.	Description
A-1	MS4 Permit No. NMR04A000 issued December 22, 2014
A-2	Notice of Minor Permit Modification, dated April 9, 2015
A-3	Notice of Minor Permit Modification, dated February 10, 2016

APPENDIX A-1



Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

NPDES General Permit No. NMR04A000

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"), except as provided in Part I.A.5 of this permit, operators of municipal separate storm sewer systems located in the area specified in Part I.A.1 are authorized to discharge pollutants to waters of the United States in accordance with the conditions and requirements set forth herein.

Only operators of municipal separate storm sewer systems in the general permit area who submit a Notice of Intent and a storm water management program document in accordance with Part I.A.6 of this permit are authorized to discharge storm water under this general permit.


This is a renewal NPDES permit issued for these portions of the small municipal separate storm sewer systems covered under the NPDES permit No NMR040000 and NMR040001 and the large municipal separate storm sewer systems covered under the NPDES permit No NMS000101.

This permit is issued on and shall become effective on the date of publication in the Federal Register. DEC 22 2014


This permit and the authorization to discharge shall expire at, midnight, December 19, 2019.

Signed by

Prepared by



William K. Honker, P.E.
Director
Water Quality Protection Division



Nelly Smith
Environmental Engineer
NPDES Permits and TMDLs Branch

MIDDLE RIO GRANDE WATERSHED BASED MUNICIPAL SEPARATE STORM SEWER
SYSTEM PERMIT

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PART I. INDIVIDUAL PERMIT CONDITIONS

A. DISCHARGES AUTHORIZED UNDER THIS PERMIT

1. **Permit Area.** This permit is available for MS4 operators within the Middle Rio Grande Sub-Watersheds described in Appendix A. This permit may authorize stormwater discharges to waters of the United States from MS4s within the Middle Rio Grande Watershed provided the MS4:

- a. Is located fully or partially within the corporate boundary of the City of Albuquerque;
- b. Is located fully or partially within the Albuquerque urbanized area as determined by the 2000 and 2010 Decennial Census. Maps of Census 2010 urbanized areas are available at: <http://water.epa.gov/polwaste/npdes/stormwater/Urbanized-Area-Maps-for-NPDES-MS4-Phase-II-Stormwater-Permits.cfm>;
- c. Is designated as a regulated MS4 pursuant to 40 CFR 122.32; or
- d. This permit may also authorize an operator of a MS4 covered by this permit for discharges from areas of a regulated small MS4 located outside an Urbanized Areas or areas designated by the Director provided the permittee complies with all permit conditions in all areas covered under the permit.

2. **Potentially Eligible MS4s.** MS4s located within the following jurisdictions and other areas, including any designated by the Director, are potentially eligible for authorization under this permit:

- City of Albuquerque
- AMAFCA (Albuquerque Metropolitan Arroyo Flood Control Authority)
- UNM (University of New Mexico)
- NMDOT (New Mexico Department of Transportation District 3)
- Bernalillo County
- Sandoval County
- Village of Corrales
- City of Rio Rancho
- Los Ranchos de Albuquerque
- KAFB (Kirtland Air Force Base)
- Town of Bernalillo
- EXPO (State Fairgrounds/Expo NM)
- SSCAFCA (Southern Sandoval County Arroyo Flood Control Authority)
- ESCAFCA (Eastern Sandoval County Arroyo Flood Control Authority)
- Sandia Laboratories, Department of Energy (DOE)
- Pueblo of Sandia
- Pueblo of Isleta
- Pueblo of Santa Ana

3. **Eligibility.** To be eligible for this permit, the operator of the MS4 must provide:

- a. **Public Participation:** Prior submitting the Notice of Intent (NOI), the operator of the MS4 must follow the local notice and comment to procedures at Part I.D.5.h.(i).
- b. **National Historic Preservation Act (NHPA) Eligibility Provisions**

In order to be eligible for coverage under this permit, the applicant must be in compliance with the National Historic Preservation Act. Discharges may be authorized under this permit only if:

- (i) Criterion A: storm water discharges, allowable non-storm water discharges, and discharge-related activities do not affect a property that is listed or is eligible for listing on the National Register of Historic Places as maintained by the Secretary of the Interior; or
- (ii) Criterion B: the applicant has obtained and is in compliance with a written agreement with the State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO) (or equivalent tribal authority) that outlines all measures the MS4 operator will undertake to mitigate or prevent adverse effect to the historic property.

Appendix C of this permit provides procedures and references to assist with determining permit eligibility concerning this provision. You must document and incorporate the results of your eligibility determination in your SWMP.

The permittee shall also comply with the requirements in Part IV.U.

4. **Authorized Non-Stormwater Discharges.** The following non-stormwater discharges need not be prohibited unless determined by the permittees, U.S. Environmental Protection Agency (EPA), or New Mexico Environment Department (NMED) to be significant contributors of pollutants to the municipal separate storm sewer system (MS4). Any such discharge that is identified as significant contributor pollutants to the MS4, or as causing or contributing to a water quality standards violation, must be addressed as an illicit discharge under the illicit discharge and improper disposal practices established pursuant to Part I.D.5.e of this permit. For all of the discharges listed below, not treated as illicit discharges, the permittee must document the reason these discharges are not expected to be significant contributors of pollutants to the MS4. This documentation may be based on either the nature of the discharge or any pollution prevention/treatment requirements placed on such discharges by the permittee.

- potable water sources, including routine water line flushing;
- lawn, landscape, and other irrigation waters provided all pesticides, herbicides and fertilizers have been applied in accordance with approved manufacturing labeling and any applicable permits for discharges associated with pesticide, herbicide and fertilizer application;
- diverted stream flows;
- rising ground waters;
- uncontaminated groundwater infiltration (as defined at 40 CFR §35.2005 (20));
- uncontaminated pumped groundwater;
- foundation and footing drains;
- air conditioning or compressor condensate;
- springs;
- water from crawl space pumps;
- individual residential car washing;
- flows from riparian habitats and wetlands;
- dechlorinated swimming pool discharges;
- street wash waters that do not contain detergents and where no un-remediated spills or leaks of toxic or hazardous materials have occurred;
- discharges or flows from fire fighting activities (does not include discharges from fire fighting training activities); and,
- other similar occasional incidental non-stormwater discharges (e.g. non-commercial or charity car washes, etc.)

5. **Limitations of Coverage.** This permit does not authorize:

- a. **Non-Storm Water:** Discharges that are mixed with sources of non-storm water unless such non-storm water discharges are:
 - (i) In compliance with a separate NPDES permit; or
 - (ii) Exempt from permitting under the NPDES program; or

- (iii) Determined not to be a substantial contributor of pollutants to waters of the United States. See Part I.A.4.
- b. Industrial Storm Water: Storm water discharges associated with industrial activity as defined in 40 CFR §122.26(b)(14)(i)-(ix) and (xi).
- c. Construction Storm Water: Storm water discharges associated with construction activity as defined in 40 CFR §122.26(b)(14)(x) or 40 CFR §122.26(b)(15).
- d. Currently Permitted Discharges: Storm water discharges currently covered under another NPDES permit.
- e. Discharges Compromising Water Quality: Discharges that EPA, prior to authorization under this permit, determines will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable water quality standard. Where such a determination is made prior to authorization, EPA may notify you that an individual permit application is necessary in accordance with Part IV.M. However, EPA may authorize your coverage under this permit after you have included appropriate controls and implementation procedures in your SWMP designed to bring your discharge into compliance with water quality standards.
- f. Discharges Inconsistent with a TMDL: You are not eligible for coverage under this permit for discharges of pollutants of concern to waters for which there is an applicable total maximum daily load (TMDL) established or approved by EPA unless you incorporate into your SWMP measures or controls that are consistent with the assumptions and requirements of such TMDL. To be eligible for coverage under this general permit, you must incorporate documentation into your SWMP supporting a determination of permit eligibility with regard to waters that have an EPA-established or approved TMDL. If a wasteload allocation has been established that would apply to your discharge, you must comply with the requirements established in Part I.C.2.b.(i). Where an EPA-approved or established TMDL has not specified a wasteload allocation applicable to municipal storm water discharges, but has not specifically excluded these discharges, adherence to a SWMP that meets the requirements in Part I.C.2.b.(ii) of this general permit will be presumed to be consistent with the requirements of the TMDL. If the EPA-approved or established TMDL specifically precludes such discharges, the operator is not eligible for coverage under this general permit.

6. Authorization Under This General Permit

a. Obtaining Permit Coverage.

- (i) An MS4 operator seeking authorization to discharge under this general permit must submit electronically a complete notice of intent (NOI) to the e-mail address provided in Part I.B.3 (see suggested EPA R6 MS4 NOI format located in EPA website at <http://epa.gov/region6/water/npdes/sw/ms4/index.htm>), in accordance with the deadlines in Part I.B.1 of this permit. The NOI must include the information and attachments required by Parts I.B.2, Part I.A.3, Part I.D.5.h.(i), and I.A.5.f of this permit. By submitting a signed NOI, the applicant certifies that all eligibility criteria for permit coverage have been met. If EPA notifies a discharger (either directly, by public notice, or by making information available on the Internet) of other NOI options that become available at a later date, such as electronic submission of forms or information, the MS4 operator may take advantage of those options to satisfy the NOI submittal requirements.
- (ii) If an operator changes or a new operator is added after an NOI has been submitted, the operator must submit a new or revised NOI to EPA.
- (iii) An MS4 operator who submits a complete NOI and meets the eligibility requirements in Part I of this permit is authorized to discharge storm water from the MS4 under the terms and conditions of this general permit only upon written notification by the Director. After review of the NOI and any public comments on the NOI, EPA may condition permit coverage on correcting any deficiencies or on including a schedule to respond to any public comments. (See also Parts I.A.3 and Part I.D.5.h.(i).)

- (iv) If EPA notifies the MS4 operator of deficiencies or inadequacies in any portion of the NOI (including the SWMP), the MS4 operator must correct the deficient or inadequate portions and submit a written statement to EPA certifying that appropriate changes have been made. The certification must be submitted within the time-frame specified by EPA and must specify how the NOI has been amended to address the identified concerns.
 - (v) The NOI must be signed and certified in accordance with Parts IV.H.1 and 4. Signature for the NOI, which effectively takes the place of an individual permit application, may not be delegated to a lower level under Part IV.H.2
- b. Terminating Coverage.
- (i) A permittee may terminate coverage under this general permit by submitting a notice of termination (NOT). Authorization to discharge terminates at midnight on the day the NOT is post-marked for delivery to EPA.
 - (ii) A permittee must submit an NOT to EPA within 30 days after the permittee:
 - (a) Ceases discharging storm water from the MS4,
 - (b) Ceases operations at the MS4, or
 - (c) Transfers ownership of or responsibility for the facility to another operator.
 - (iii) The NOT will consist of a letter to EPA and must include the following information:
 - (a) Name, mailing address, and location of the MS4 for which the notification is submitted;
 - (b) The name, address and telephone number of the operator addressed by the NOT;
 - (c) The NPDES permit number for the MS4;
 - (d) An indication of whether another operator has assumed responsibility for the MS4, the discharger has ceased operations at the MS4, or the storm water discharges have been eliminated; and
 - (e) The following certification:

I certify under penalty of law that all storm water discharges from the identified MS4 that are authorized by an NPDES general permit have been eliminated, or that I am no longer the operator of the MS4, or that I have ceased operations at the MS4. I understand that by submitting this Notice of Termination I am no longer authorized to discharge storm water under this general permit, and that discharging pollutants in storm water to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by an NPDES permit. I also understand that the submission of this Notice of Termination does not release an operator from liability for any violations of this permit or the Clean Water Act.
 - (f) NOTs, signed in accordance with Part IV.H.1 of this permit, must be sent to the e-mail address in Part I.B.3. Electronic submittal of the NOT required in the permit using a compatible Integrated Compliance Information System (ICIS) format would be allowed if available.

B. NOTICE OF INTENT REQUIREMENTS

1. Deadlines for Notification.

- a. Designations: Small MS4s automatically designated under 40 CFR 122.32(a)(1), large MS4s located within the corporate boundary of the COA including the COA and former co-permittees under the NPDES permit No

NMS000101, and MS4s designated under 40 CFR 122.26(a)(1)(v), 40 CFR 122.26(a)(9)(i)(C) or (D), or 40 CFR 122.32(a)(2) are required to submit individual NOIs by the dates listed in Table 1. Any MS4 designated as needing a permit after issuance of this permit will be given an individualized deadline for NOI submittal by the Director at the time of designation.

In lieu of creating duplicate program elements for each individual permittee, implementation of the SWMP, as required in Part I.D, may be achieved through participation with other permittees, public agencies, or private entities in cooperative efforts to satisfy the requirements of Part D. For these programs with cooperative elements, the permittee may submit individual NOIs as established in Table 1. See also “Permittees with Cooperative Elements in their SWMP” under Part.I.B.4 and “Shared Responsibilities and Cooperative Programs” under Part I.D.3.

Table 1 Deadlines to Submit NOI

Permittee Class Type	NOI Deadlines
Class A: MS4s within the Cooperate Boundary of the COA including former co-permittees under the NPDES permit No NMS000101	90 days from effective date of the permit or 180 days from effective date of the permit if participating in cooperative programs for one or more program elements.
Class B: MS4s designated under 40 CFR 122.32(a)(1). Based on 2000 Decennial Census Map	90 days from effective date of the permit or 180 days from effective date of the permit if participating in cooperative programs for one or more program elements.
Class C: MS4s designated under 40 CFR 122.26(a)(1)(v), 40 CFR 122.26(a)(9)(i)(C) or (D), or 40 CFR 122.32(a)(2) or MS4s newly designated under 122.32(a)(1) based on 2010 Decennial Census Map	180 days from effective date of the permit or notice of designation, unless the notice of designation grants a later date or; 180 days from effective date of the permit if participating in cooperative programs for one or more program elements.
Class D: MS4s within Indian Country Lands designed under 40 CFR 122.26(a)(1)(v), 122.26(a)(9)(i)(C) or (D), 122.32(a)(1), or 122.32(a)(2)	180 days from effective date of the permit or notice of designation, unless the notice of designation grants a later date or; 180 days from effective date of the permit if participating in cooperative programs for one or more program elements.

See Appendix A for list of potential permittees in the Middle Rio Grande Watershed

- b. New Operators. For new operators of all or a part of an already permitted MS4 (due to change on operator or expansion of the MS4) who will take over implementation of the existing SWMP covering those areas, the NOI must be submitted 30 days prior to taking over operational control of the MS4. Existing permittees who are expanding coverage of their MS4 area (e.g., city annexes part of unincorporated county MS4) are not required to submit a new NOI, but must comply with Part I.D.6.d.
- c. Submitting a Late NOI. MS4s not able to meet the NOI deadline in Table I and Part I.B.1.b due to delays in determining eligibility should notify EPA of the circumstance and progress to date at the address in Part I.B.3 and then proceed with a late NOI. MS4 operators are not prohibited from submitting an NOI after the dates provided in Table I and Part I.B.1.b. If a late NOI is submitted, the authorization is only for discharges that occur after permit coverage is effective. The permitting authority reserves the right to take appropriate enforcement actions for any unpermitted discharges.
- d. End of Administrative Continued Coverage under Previous Permit. Administrative continuance is triggered by a timely reapplication. Discharges submitting an NOI for coverage under this permit are considered to have met

the timely reapplication requirement if NOI is submitted by the deadlines included in Table 1 of Part I.B.1. For MS4s previously covered under either NMS000101 or NMR040000, continued coverage under those permits ends: a) the day after the applicable deadline for submittal of an NOI if a complete NOI has not been submitted or b) upon notice of authorization under this permit if a complete and timely NOI is submitted.

2. **Contents of Notice of Intent.** An MS4 operator eligible for coverage under this general permit must submit an NOI to discharge under this general permit. The NOI will consist of a letter to EPA containing the following information (see suggested EPA R6 MS4 NOI Format located in EPA website at <http://www.epa.gov/region6/water/npdes/sw/ms4/index.htm>) and must be signed in accordance with Part IV.H of this permit:
- a. The legal name of the MS4 operator and the name of the urbanized area and core municipality (or Indian reservation/pueblo) in which the operator's MS4 is located;
 - b. The full facility mailing address and telephone number;
 - c. The name and phone number of the person or persons responsible for overall coordination of the SWMP;
 - d. An attached location map showing the boundaries of the MS4 under the applicant's jurisdiction. The map must include streets or other demarcations so that the exact boundaries can be located;
 - e. The area of land served by the applicant's MS4 (in square miles);
 - f. The latitude and longitude of the approximate center of the MS4;
 - g. The name(s) of the waters of the United States that receive discharges from the system.
 - h. If the applicant is participating in a cooperative program element or is relying on another entity to satisfy one or more permit obligations (see Part I.D.3), identify the entity(ies) and the element(s) the entity(ies) will be implementing;
 - i. Information on each of the storm water minimum control measures in Part I.D.5 of this permit and how the SWMP will reduce pollutants in discharges to the Maximum Extent Practicable. For each minimum control measure, include the following:
 - (i) Description of the best management practices (BMPs) that will be implemented;
 - (ii) Measurable goals for each BMP; and
 - (iii) Time frames (i.e., month and year) for implementing each BMP;
 - j. Based on the requirements of Part I.A.3.b describe how the eligibility criteria for historic properties have been met;
 - k. Indicate whether or not the MS4 discharges to a receiving water for which EPA has approved or developed a TMDL. If so, describe how the eligibility requirements of Part I.A.5.f and Part I.C.2 have been met.
- Note: If an individual permittee or a group of permittees seeks an alternative sub-measurable goal for TMDL controls under Part I.C.2.b.(i).(c).B, the permittee or a group of permittees must submit a preliminary proposal with the NOI. This proposal shall include, but is not limited to, the elements included in Appendix B under Section B.2.
- l. Signature and certification by an appropriate official (see Part IV.H). The NOI must include the certification statement from Part IV.H.4.

3. **Where to Submit.** The MS4 operator must submit the signed NOI to EPA via e-mail at R6_MS4Permits@epa.gov (note: there is an underscore between R6 and MS4) and NMED to the address provided in Part III.D.4. See also Part III.D.4 to determine if a copy must be provided to a Tribal agency.

The following MS4 operators: AMAFCA, Sandoval County, Village of Corrales, City of Rio Rancho, Town of Bernalillo, SSCAFCA, and ESCAFCA must submit the signed NOI to the Pueblo of Sandia to the address provided in Part III.D.4.

Note: See suggested EPA R6 MS4 NOI Format located in EPA website at <http://www.epa.gov/region6/water/npdes/sw/ms4/index.htm>. A complete copy of the signed NOI should be maintained on site. Electronic submittal of the documents required in the permit using a compatible Integrated Compliance Information System (ICIS) format would be allowed if available.

4. **Permittees with Cooperative Elements in their SWMP.** Any MS4 that meets the requirements of Part I.A of this general permit may choose to partner with one or more other regulated MS4 to develop and implement a SWMP or SWMP element. The partnering MS4s must submit separate NOIs and have their own SWMP, which may incorporate jointly developed program elements. If responsibilities are being shared as provided in Part I.D.3 of this permit, the SWMP must describe which permittees are responsible for implementing which aspects of each of the minimum measures. All MS4 permittees are subject to the provisions in Part I.D.6.

Each individual MS4 in a joint agreement implementing a permit condition will be independently assessed for compliance with the terms of the joint agreement. Compliance with that individual MS4s obligations under the joint agreement will be deemed compliance with that permit condition. Should one or more individual MS4s fail to comply with the joint agreement, causing the joint agreement program to fail to meet the requirements of the permit, the obligation of all parties to the joint agreement is to develop within 30 days and implement within 90 days an alternative program to satisfy the terms of the permit.

C. SPECIAL CONDITIONS

1. **Compliance with Water Quality Standards.** Pursuant to Clean Water Act §402(p)(3)(B)(iii) and 40 CFR §122.44(d)(1), this permit includes provisions to ensure that discharges from the permittee's MS4 do not cause or contribute to exceedances of applicable surface water quality standards, in addition to requirements to control discharges to the maximum extent practicable (MEP) set forth in Part I.D. Permittees shall address stormwater management through development of the SWMP that shall include the following elements and specific requirements included in Part VI.
 - a. Permittee's discharges shall not cause or contribute to an exceedance of surface water quality standards (including numeric and narrative water quality criteria) applicable to the receiving waters. In determining whether the SWMP is effective in meeting this requirement or if enhancements to the plan are needed, the permittee shall consider available monitoring data, visual assessment, and site inspection reports.
 - b. Applicable surface water quality standards for discharges from the permittees' MS4 are those that are approved by EPA and any other subsequent modifications approved by EPA upon the effective date of this permit found at New Mexico Administrative Code §20.6.4. Discharges from various portions of the MS4 also flow downstream into waters with Pueblo of Isleta and Pueblo of Sandia Water Quality Standards;
 - c. The permittee shall notify EPA and the Pueblo of Isleta in writing as soon as practical but not later than thirty (30) calendar days following each Pueblo of Isleta water quality standard exceedance at an in-stream sampling location. In the event that EPA determines that a discharge from the MS4 causes or contributes to an exceedance of applicable surface water quality standards and notifies the permittee of such an exceedance, the permittee shall, within sixty (60) days of notification, submit to EPA, NMED, Pueblo of Isleta (upon request) and Pueblo of Sandia (upon request), a report that describes controls that are currently being implemented and additional controls that will be implemented to prevent pollutants sufficient to ensure that the discharge will no longer cause or contribute to an exceedance of applicable surface water quality standards. The permittee shall implement such additional controls upon notification by EPA and shall incorporate such measures into their SWMP as described in Part I.D of this permit. NMED or the affected Tribe may provide information

documenting exceedances of applicable water quality standards caused or contributed to by the discharges authorized by this permit to EPA Region 6 and request EPA take action under this paragraph.

- d. Phase I Dissolved Oxygen Program (Applicable only to the COA and AMAFCA as a continuation of program in 2012 NMS000101 individual permit): Within one year from effective date of the permit, the permittees shall revise the May 1, 2012 Strategy to continue taking measures to address concerns regarding discharges to the Rio Grande by implementing controls to eliminate conditions that cause or contribute to exceedances of applicable dissolved oxygen water quality standards in waters of the United States. The permittees shall:
- (i) Continue identifying structural elements, natural or man-made topographical and geographical formations, MS4 operations activities, or oxygen demanding pollutants contributing to reduced dissolved oxygen in the receiving waters of the Rio Grande. Both dry and wet weather discharges shall be addressed. Assessment may be made using available data or collecting additional data;
 - (ii) Continue implementing controls, and updating/revising as necessary, to eliminate structural elements or the discharge of pollutants at levels that cause or contribute to exceedances of applicable water quality standards for dissolved oxygen in waters of the United States;
 - (iii) To verify the remedial action in the North Diversion Channel Embayment, the COA and AMAFCA shall continue sampling for DO and temperature until the data indicate the discharge does not exceed applicable dissolved oxygen water quality standards in waters of the United States; and
 - (iv) Submit a revised strategy to FWS for consultation and EPA for approval from a year of effective date of the permit and progress reports with the subsequent Annual Reports. Progress reports to include:
 - (a) Summary of data.
 - (b) Activities undertaken to identify MS4 discharge contribution to exceedances of applicable dissolved oxygen water quality standards in waters of the United States. Including summary of findings of the assessment required in Part I.C.1.d.(i).
 - (c) Conclusions drawn, including support for any determinations.
 - (d) Activities undertaken to eliminate MS4 discharge contribution to exceedances of applicable dissolved oxygen water quality standards in waters of the United States.
 - (e) Account of stakeholder involvement.
- e. PCBs (Applicable only to the COA and AMAFCA as a continuation of program in 2012 NMS000101 individual permit and Bernalillo County): The permittee shall address concerns regarding PCBs in channel drainage areas specified in Part I.C.1.e.(vi) by developing or continue updating/revising and implementing a strategy to identify and eliminate controllable sources of PCBs that cause or contribute to exceedances of applicable water quality standards in waters of the United States. Bernalillo County shall submit the proposed PCB strategy to EPA within two (2) years from the effective date of the permit and submit a progress report with the third and with subsequent Annual Reports. COA and AMAFCA shall submit a progress report with the first and with the subsequent Annual Reports. The progress reports shall include:
- (i) Summary of data.
 - (ii) Findings regarding controllable sources of PCBs in the channel drainages area specified in Part I.C.1.e.(vi) that cause or contribute to exceedances of applicable water quality standards in waters of the United States via the discharge of municipal stormwater.
 - (iii) Conclusions drawn, including supporting information for any determinations.

(iv) Activities undertaken to eliminate controllable sources of PCBs in the drainage areas specified in Part I.C.1.e.(vi) that cause or contribute to exceedances of applicable water quality standards in waters of the United States via the discharge of municipal stormwater including proposed activities that extend beyond the five (5) year permit term.

(v) Account of stakeholder involvement in the process.

(vi) Channel Drainage Areas: The PCB strategy required in Part I.C.1.e is only applicable to:

COA and AMAFCA Channel Drainage Areas:

- San Jose Drain
- North Diversion Channel

Bernalillo County Channel Drainage Areas:

- Adobe Acres Drain
- Alameda Outfall Channel
- Paseo del Norte Outfall Channel
- Sanchez Farm Drainage Area

A cooperative strategy to address PCBs in the COA, AMAFCA and Bernalillo County's drainage areas may be developed between Bernalillo County, AMAFCA, and the COA. If a cooperative strategy is developed, the cooperative strategy shall be submitted to EPA within three (3) years from the effective date of the permit and submit a progress report with the fourth and with subsequent Annual Reports,

Note: COA and AMAFCA must continue implementing the existing PCB strategy until a new Cooperative PCB Strategy is submitted to EPA.

- f. Temperature (Applicable only to the COA and AMAFCA as a continuation of program in 2012 NMS000101 individual permit): The permittees must continue assessing the potential effect of stormwater discharges in the Rio Grande by collecting and evaluating additional data. If the data indicates there is a potential of stormwater discharges contributing to exceedances of applicable temperature water quality standards in waters of the United States, within thirty (30) days such as findings, the permittees must develop and implement a strategy to eliminate conditions that cause or contribute to these exceedances. The strategy must include:
- (i) Identify structural controls, post construction design standards, or pollutants contributing to raised temperatures in the receiving waters of the Rio Grande. Both dry and wet weather discharges shall be addressed. Assessment may be made using available data or collecting additional data;
 - (ii) Develop and implement controls to eliminate structural controls, post construction design standards, or the discharge of pollutants at levels that cause or contribute to exceedances of applicable water quality standards for temperature in waters of the United States; and
 - (iii) Provide a progress report with the first and with subsequent Annual Reports. The progress reports shall include:
 - (a) Summary of data.
 - (b) Activities undertaken to identify MS4 discharge contribution to exceedances of applicable temperature water quality standards in waters of the United States.
 - (c) Conclusions drawn, including supporting information for any determinations.
 - (d) Activities undertaken to reduce MS4 discharge contribution to exceedances of applicable temperature water quality standards in waters of the United States.
 - (e) Accounting of stakeholder involvement.

2. **Discharges to Impaired Waters with and without approved TMDLs.** Impaired waters are those that have been identified pursuant to Section 303(d) of the Clean Water Act as not meeting applicable surface water quality standards. This may include both waters with EPA-approved Total Maximum Daily Loads (TMDLs) and those for which a TMDL has not yet been approved. For the purposes of this permit, the conditions for discharges to impaired waters also extend to controlling pollutants in MS4 discharges to tributaries to the listed impaired waters in the Middle Rio Grande watershed boundary identified in Appendix A.
 - a. Discharges of pollutant(s) of concern to impaired water bodies for which there is an EPA approved total maximum daily load (TMDL) are not eligible for this general permit unless they are consistent with the approved TMDL. A water body is considered impaired for the purposes of this permit if it has been identified, pursuant to the latest EPA approved CWA §303(d) list, as not meeting New Mexico Surface Water Quality Standards.
 - b. The permittee shall control the discharges of pollutant(s) of concern to impaired waters and waters with approved TMDLs as provided in sections (i) and (ii) below, and shall assess the success in controlling those pollutants.
 - (i) **Discharges to Water Quality Impaired Water Bodies with an Approved TMDL**

If the permittee discharges to an impaired water body with an approved TMDL (see Appendix B), where stormwater has the potential to cause or contribute to the impairment, the permittee shall include in the SWMP controls targeting the pollutant(s) of concern along with any additional or modified controls required in the TMDL and this section. The SWMP and required annual reports must include information on implementing any focused controls required to reduce the pollutant(s) of concern as described below:

 - (a) Targeted Controls: The SWMP submitted with the first annual report must include a detailed description of all targeted controls to be implemented, such as identifying areas of focused effort or implementing additional Best Management Practices (BMPs) that will be implemented to reduce the pollutant(s) of concern in the impaired waters.
 - (b) Measurable Goals: For each targeted control, the SWMP must include a measurable goal and an implementation schedule describing BMPs to be implemented during each year of the permit term. Where the impairment is for bacteria, the permittee must, at minimum comply with the activities and schedules described in Table 1.a of Part I.C.2.(iii).
 - (c) Identification of Measurable Goal: The SWMP must identify a measurable goal for the pollutant(s) of concern. The value of the measurable goal must be based on one of the following options:
 - A. If the permittee is subject to a TMDL that identifies an aggregate Waste Load Allocation (WLA) for all or a class of permitted MS4 stormwater sources, then the SWMP may identify such WLA as the measurable goal. Where an aggregate WLA measurable goal is used, all affected MS4 operators are jointly responsible for progress in meeting the measurable goal and shall (jointly or individually) develop a monitoring/assessment plan. This program element may be coordinated with the monitoring required in Part III.A.
 - B. Alternatively, if multiple permittees are discharging into the same impaired water body with an approved TMDL (which has an aggregate WLA for all permitted stormwater MS4s), the MS4s may combine or share efforts, in consultation with/and the approval of NMED, to determine an alternative sub-measurable goal derived from the WLA for the pollutant(s) of concern (e.g., bacteria) for their respective MS4. The SWMP must clearly define this alternative approach and must describe how the sub-measurable goals would cumulatively support the aggregate WLA. Where an aggregate WLA measurable goal has been broken into sub-measurable goals for individual MS4s, each permittee is only responsible for progress in meeting its WLA sub-measurable goal.

- C. If the permittee is subject to an individual WLA specifically assigned to that permittee, the measurable goal must be the assigned WLA. Where WLAs have been individually assigned, or where the permittee is the only regulated MS4 within the urbanized area that is discharging into the impaired watershed with an approved TMDL, the permittee is only responsible for progress in meeting its WLA measurable goal.
- (d) Annual Report: The annual report must include an analysis of how the selected BMPs have been effective in contributing to achieving the measurable goal and shall include graphic representation of pollutant trends, along with computations of annual percent reductions achieved from the baseline loads and comparisons with the target loads.
- (e) Impairment for Bacteria: If the pollutant of concern is bacteria, the permittee shall include focused BMPs addressing the five areas below, as applicable, in the SWMP and implement as appropriate. If a TMDL Implementation Plan (a plan created by the State or a Tribe) is available, the permittee may refer to the TMDL Implementation Plan for appropriate BMPs. The SWMP and annual report must include justification for not implementing a particular BMP included in the TMDL Implementation Plan. The permittee may not exclude BMPs associated with the minimum control measures required under 40 CFR §122.34 from their list of proposed BMPs. The BMPs shall, as appropriate, address the following:
- A. Sanitary Sewer Systems
 - Make improvements to sanitary sewers;
 - Address lift station inadequacies;
 - Identify and implement operation and maintenance procedures;
 - Improve reporting of violations; and
 - Strengthen controls designed to prevent over flows
 - B. On-site Sewage Facilities (for entities with appropriate jurisdiction)
 - Identify and address failing systems; and
 - Address inadequate maintenance of On-Site Sewage Facilities (OSSFs).
 - C. Illicit Discharges and Dumping
 - Place additional effort to reduce waste sources of bacteria; for example, from septic systems, grease traps, and grit traps.
 - D. Animal Sources
 - Expand existing management programs to identify and target animal sources such as zoos, pet waste, and horse stables.
 - E. Residential Education: Increase focus to educate residents on:
 - Bacteria discharging from a residential site either during runoff events or directly;
 - Fats, oils, and grease clogging sanitary sewer lines and resulting overflows;
 - Decorative ponds; and
 - Pet waste.
- (f) Monitoring or Assessment of Progress: The permittee shall monitor or assess progress in achieving measurable goals and determining the effectiveness of BMPs, and shall include documentation of this monitoring or assessment in the SWMP and annual reports. In addition, the SWMP must include methods to be used. This program element may be coordinated with the monitoring required in Part III.A. The permittee may use the following methods either individually or in conjunction to evaluate progress towards the measurable goal and improvements in water quality as follows:
- A. Evaluating Program Implementation Measures: The permittee may evaluate and report progress towards the measurable goal by describing the activities and BMPs implemented, by identifying the appropriateness of the identified BMPs, and by evaluating the success of implementing the measurable goals. The permittee may assess progress by using program implementation indicators

such as: (1) number of sources identified or eliminated; (2) decrease in number of illegal dumping; (3) increase in illegal dumping reporting; (4) number of educational opportunities conducted; (5) reductions in SSOs; or, 6) increase in illegal discharge detection through dry screening, etc.; and

B. Assessing Improvements in Water Quality: The permittee may assess improvements in water quality by using available data for segment and assessment units of water bodies from other reliable sources, or by proposing and justifying a different approach such as collecting additional instream or outfall monitoring data, etc. Data may be acquired from NMED, local river authorities, partnerships, and/or other local efforts as appropriate. Progress towards achieving the measurable goal shall be reported in the annual report. Annual reports shall report the measurable goal and the year(s) during the permit term that the MS4 conducted additional sampling or other assessment activities.

- (g) Observing no Progress towards the Measurable Goal: If, by the end of the third year from the effective date of the permit, the permittee observes no progress toward the measurable goal either from program implementation or water quality assessments, the permittee shall identify alternative focused BMPs that address new or increased efforts towards the measurable goal. As appropriate, the MS4 may develop a new approach to identify the most significant sources of the pollutant(s) of concern and shall develop alternative focused BMPs (this may also include information that identifies issues beyond the MS4's control). These revised BMPs must be included in the SWMP and subsequent annual reports.

Where the permittee originally used a measurable goal based on an aggregated WLA, the permittee may combine or share efforts with other MS4s discharging to the same impaired stream segment to determine an alternative sub-measurable goal for the pollutant(s) of concern for their respective MS4s, as described in Part I.C.2.b.(i).(c).B above. Permittees must document, in their SWMP for the next permit term, the proposed schedule for the development and subsequent adoption of alternative sub-measurable goals for the pollutant(s) of concern for their respective MS4s and associated assessment of progress in meeting those individual goals.

(ii) Discharges Directly to Water Quality Impaired Water Bodies without an Approved TMDL:

The permittee shall also determine whether the permitted discharge is directly to one or more water quality impaired water bodies where a TMDL has not yet been approved by NMED and EPA. If the permittee discharges directly into an impaired water body without an approved TMDL, the permittee shall perform the following activities:

- (a) Discharging a Pollutant of Concern: The permittee shall:
- A. Determine whether the MS4 may be a source of the pollutant(s) of concern by referring to the CWA §303(d) list and then determining if discharges from the MS4 would be likely to contain the pollutant(s) of concern at levels of concern. The evaluation of CWA §303(d) list parameters should be carried out based on an analysis of existing data (e.g., Illicit Discharge and Improper Disposal Program) conducted within the permittee's jurisdiction.
 - B. Ensure that the SWMP includes focused BMPs, along with corresponding measurable goals, that the permittee will implement, to reduce, the discharge of pollutant(s) of concern that contribute to the impairment of the water body. (note: Only applicable if the permittee determines that the MS4 may discharge the pollutant(s) of concern to an impaired water body without a TMDL. The SWMP submitted with the first annual report must include a detailed description of proposed controls to be implemented along with corresponding measurable goals.
 - C. Amend the SWMP to include any additional BMPs to address the pollutant(s) of concern.
- (b) Impairment for Bacteria: Where the impairment is for bacteria, the permittee shall identify potential significant sources and develop and implement targeted BMPs to control bacteria from those sources (see Part I.C.2.b.(i).(e).A through E.. The permittee must, at minimum comply with the activities and

schedules described in Table 1.a of Part I.C.2.(iii). The annual report must include information on compliance with this section, including results of any sampling conducted by the permittee.

Note: Probable pollutant sources identified by permittees should be submitted to NMED on the following form: <ftp://ftp.nmenv.state.nm.us/www/swqb/Surveys/PublicProbableSourceIDSurvey.pdf>

- (c) Impairment for Nutrients: Where the impairment is for nutrients (e.g., nitrogen or phosphorus), the permittee shall identify potential significant sources and develop and implement targeted BMPs to control nutrients from potential sources. The permittee must, at minimum comply with the activities and schedules described in Table 1.b of Part I.C.2, (iii). The annual report must include information on compliance with this section, including results of any sampling conducted by the permittee.
 - (d) Impairment for Dissolved Oxygen: See Endangered Species Act (ESA) Requirements in Part I.C.3. These program elements may be coordinated with the monitoring required in Part III.A.
- (iii) Program Development and Implementation Schedules: Where the impairment is for nutrient constituent (e.g., nitrogen or phosphorus) or bacteria, the permittee must at minimum comply with the activities and schedules in Table 1.a and Table 1.b.

Table 1.a. Pre-TMDL Bacteria Program Development and Implementation Schedules

Activity	Class Permittee				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census **)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
Identify potential significant sources of the pollutant of concern entering your MS4	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Sixteen (16) months from effective date of permit
Develop (or modify an existing program ***) and implement a public education program to reduce the discharge of bacteria in municipal storm water contributed by (if applicable) by pets, recreational and exhibition livestock, and zoos.	Twelve (12) months from effective date of permit	Twelve (12) months from effective date of permit	Fourteen (14) months from effective date of permit	Fourteen (14) months from effective date of permit	Sixteen (16) months from effective date of permit
Develop (or modify an existing program ***) and implement a program to reduce the discharge of bacteria in municipal storm water contributed by areas within your MS4 served by on-site wastewater treatment systems.	Fourteen (14) months from effective date of permit	Fourteen (14) months from effective date of permit	Sixteen (16) months from effective date of permit	Sixteen (16) months from effective date of permit	Eighteen (18) months from effective date of permit
Review results to date from the Illicit Discharge Detection and Elimination program (see Part I.D.5.e) and modify as necessary to prioritize the detection and elimination of discharges contributing bacteria to the MS4	Fourteen (14) months from effective date of permit	Fourteen (14) months from effective date of permit	Sixteen (16) months from effective date of permit	Sixteen (16) months from effective date of permit	Eighteen (18) months from effective date of permit

Develop (or modify an existing program ***) and implement a program to reduce the discharge of bacteria in municipal storm water contributed by other significant source identified in the Illicit Discharge Detection and Elimination program (see Part I.D.5.e)	Sixteen (16) months from effective date of permit	Sixteen (16) months from effective date of permit	Eighteen (18) months from effective date of permit	Eighteen (18) months from effective date of permit	Twenty (20) months from effective date of permit
Include in the Annual Reports progress on program implementation and reducing the bacteria and updates their measurable goals as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs

(**) or MS4s designated by the Director

(***) Permittees previously covered under permit NMS000101 or NMR040000

Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

Table 1.b. Pre-TMDL Nutrient Program Development and Implementation Schedules

Activity	Class Permittee				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census **)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
Identify potential significant sources of the pollutant of concern entering your MS4	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Sixteen (16) months from effective date of permit
Develop (or modify an existing program ***) and implement a public education program to reduce the discharge of pollutant of concern in municipal storm water contributed by residential and commercial use of fertilizer	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Sixteen (16) months from effective date of permit
Develop (or modify an existing program ***) and implement a program to reduce the discharge of the pollutant of concern in municipal storm water contributed by fertilizer use at municipal operations (e.g., parks, roadways, municipal facilities)	One (1) year from effective date of permit	One (1) year from effective date of permit	Sixteen (16) months from effective date of permit	Sixteen (16) months from effective date of permit	Eighteen (18) months from effective date of permit

Develop (or modify an existing program ***) and implement a program to reduce the discharge of the pollutant of concern in municipal storm water contributed by municipal and private golf courses within your jurisdiction	One (1) year from effective date of permit	One (1) year from effective date of permit	Sixteen (16) months from effective date of permit	Sixteen (16) months from effective date of permit	Eighteen (18) months from effective date of permit
Develop (or modify an existing program ***) and implement a program to reduce the discharge of the pollutant of concern in municipal storm water contributed by other significant source identified in the Illicit Discharge Detection and Elimination program (see Part I.D.5.e)	One (1) year from effective date of permit	One (1) year from effective date of permit	Sixteen (16) months from effective date of permit	Sixteen (16) months from effective date of permit	Eighteen (18) months from effective date of permit
Include in the Annual Reports progress on program implementation and reducing the nutrient pollutant of concern and updates their measurable goals	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs

(**) or MS4s designated by the Director

(***) Permittees previously covered under permit NMS000101 or NMR040000

Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

These program elements may be coordinated with the monitoring required in Part III.A.

3. **Endangered Species Act (ESA) Requirements.** Consistent with U.S. FWS Biological Opinion dated August 21, 2014 to ensure actions required by this permit are not likely to jeopardize the continued existence of any currently listed as endangered or threatened species or adversely affect its critical habitat, permittees shall meet the following requirements and include them in the SWMP:

a. **Dissolved Oxygen Strategy in the Receiving Waters of the Rio Grande:**

- (i) The permittees must identify (or continue identifying if previously covered under permit NMS000101) structural controls, natural or man-made topographical and geographical formations, MS4 operations, or oxygen demanding pollutants contributing to reduced dissolved oxygen in the receiving waters of the Rio Grande. The permittees shall implement controls, and update/revise as necessary, to eliminate discharge of pollutants at levels that cause or contribute to exceedances of applicable water quality standards for dissolved oxygen in waters of the Rio Grande. The permittees shall submit a summary of findings and a summary of activities undertaken under Part I.C.3.a.(i) with each Annual Report. The SWMP submitted with the first and fourth annual reports must include a detailed description of controls implemented (or/and proposed control to be implemented) along with corresponding measurable goals. (Applicable to all permittees).
- (ii) As required in Part I.C.1.d, the COA and AMAFCA shall revise the May 1, 2012 Strategy for dissolved oxygen to address dissolved oxygen at the North Diversion Channel Embayment and/or other MS4 locations. The permittees shall submit the revised strategy to FWS and EPA for approval within a year of permit issuance and progress reports with the subsequent Annual Reports (see also Part I.C.1.d.(iv)). The permittees shall ensure that actions to reduce pollutants or remedial activities selected for the North Diversion Channel Embayment and its watershed are implemented such that there is a reduction in

frequency and magnitude of all low oxygen storm water discharge events that occur in the Embayment or downstream in the MRG as indicated in Table 1.c. Actions to meet the year 3 measurable goals must be taken within 2 years from the effective date of the permit. Actions to meet the year 5 measurable goals must be taken within 4 years from the effective date of the permit.

Table 1.c Measurable Goals of Anoxic and Hypoxia Levels Measured by Permit Year

<i>Permit Year</i>	<i>Anoxic Events*, max</i>	<i>Hypoxic Events**, max</i>
<i>Year 1</i>	<i>18</i>	<i>36</i>
<i>Year 2</i>	<i>18</i>	<i>36</i>
<i>Year 3</i>	<i>9</i>	<i>18</i>
<i>Year 4</i>	<i>9</i>	<i>18</i>
<i>Year 5</i>	<i>4</i>	<i>9</i>

Notes:

- * Anoxic Events: See Appendix G, for oxygen saturation and dissolved oxygen concentrations at various water temperatures and atmospheric pressures for the North Diversion Channel area that are considered anoxic and associated with the Rio Grande Silvery minnow lethality.
- ** Hypoxic Events: See Appendix for G, for oxygen saturation and dissolved oxygen concentrations at various water temperatures and atmospheric pressures for the North Diversion Channel area that are considered hypoxic and associated with the Rio Grande silvery minnow harassment.

(a) The revised strategy shall include:

- A. A Monitoring Plan describing all procedures necessary to continue conducting continuous monitoring of dissolved oxygen (DO) and temperature in the North Diversion Channel Embayment and at one (1) location in the Rio Grande downstream of the mouth of the North Diversion Channel within the action area (e.g., Central Bridge). The monitoring plan to be developed will describe the methodology used to assure its quality, and will identify the means necessary to address any gaps that occur during monitoring, in a timely manner (that is, within 24 to 48 hours).
- B. A Quality Assurance and Quality Control (QA/QC) Plan describing all standard operating procedures, quality assurance and quality control plans, maintenance, and implementation schedules that will assure timely and accurate collection and reporting of water temperature, dissolved oxygen, oxygen saturation, and flow. The QA/QC plan should include all procedures for estimating oxygen data when any oxygen monitoring equipment fail. Until a monitoring plan with quality assurance and quality control is submitted by EPA, any data, including any provisional or incomplete data from the most recent measurement period (e.g. if inoperative monitoring equipment for one day, use data from previous day) shall be used as substitutes for all values in the calculations for determinations of incidental takes. Given the nature of the data collected as surrogate for incidental take, all data, even provisional data (e.g., oxygen/water temperature data, associated metadata such as flows, date, times), shall be provided to the Service in a spreadsheet or database format within two weeks after formal request.

(b) Reporting: The COA and AMAFCA shall provide

- A. An Annual Incidental Take Report to EPA and the Service that includes the following information: beginning and end date of any qualifying stormwater events, dissolved oxygen values and water temperature in the North Diversion Channel Embayment, dissolved oxygen values and water temperature at a downstream monitoring station in the MRG, flow rate in the North Diversion Channel, mean daily flow rate in the MRG, evaluation of oxygen and temperature data

as either anoxic or hypoxic using Table 2 of the BO, and estimate the number of silvery minnows taken based on Appendix A of the BO. Electronic copy of The Annual Incidental Take Report should be provided with the Annual Report required under Part III.B no later than December 1 for the proceeding calendar year.

- B. A summary of data and findings with each Annual Report to EPA and the Service. All data collected (including provisional oxygen and water temperature data, and associated metadata), transferred, stored, summarized, and evaluated shall be included in the Annual Report. If additional data is requested by EPA or the Service, The COA and AMAFCA shall provide such as information within two weeks upon request,

The revised strategy required under Part I.C.3.a.(ii), the Annual Incidental Take Reports required under Part I.C.3.a.(ii).A, and Annual Reports required under Part III.B can be submitted to FWS via e-mail nmesfo@fws.gov and joel_lusk@fws.gov, or by mail to the New Mexico Ecological Services field office, 2105 Osuna Road NE, Albuquerque, New Mexico 87113. (Only Applicable to the COA and AMAFCA)

- b. Sediment Pollutant Load Reduction Strategy (Applicable to all permittees): The permittee must develop, implement, and evaluate a sediment pollutant load reduction strategy to assess and reduce pollutant loads associated with sediment (e.g., metals, etc. adsorbed to or traveling with sediment, as opposed to clean sediment) into the receiving waters of the Rio Grande. The strategy must include the following elements:
- (i) Sediment Assessment: The permittee must identify and investigate areas within its jurisdiction that may be contributing excessive levels (e.g., levels that may contribute to exceedance of applicable Water Quality Standards) of pollutants in sediments to the receiving waters of the Rio Grande as a result of stormwater discharges. The permittee must identify structural elements, natural or man-made topographical and geographical formations, MS4 operations activities, and areas indicated as potential sources of sediments pollutants in the receiving waters of the Rio Grande. At the time of assessment, the permittee shall record any observed erosion of soil or sediment along ephemeral channels, arroyos, or stream banks, noting the scouring or sedimentation in streams. The assessment should be made using available data from federal, state, or local studies supplemented as necessary with collection of additional data. The permittee must describe, in the first annual report, all standard operating procedures, quality assurance plans to assure that accurate data are collected, summarized, evaluated and reported.
 - (ii) Estimate Baseline Loading: Based on the results of the sediment pollutants assessment required in Part I.C.3.b.(i) above the permittee must provide estimates of baseline total sediment loading and relative potential for contamination of those sediments by urban activities for drainage areas, sub-watersheds, Impervious Areas (IAs), and/or Directly Connected Impervious Area (DCIAs) draining directly to a surface waterbody or other feature used to convey waters of the United States. Sediment loads may be provided for targeted areas in the entire Middle Rio Grande Watershed (see Appendix A) using an individual or cooperative approach. Any data available and/or preliminary numeric modeling results may be used in estimating loads.
 - (iii) Targeted Controls: Include a detailed description of all proposed targeted controls and BMPs that will be implemented to reduce sediment pollutant loads calculated in Part I.C.3.b.(ii) above during the next ten (10) years of permit issuance. For each targeted control, the permittee must include interim measurable goals (e.g., interim sediment pollutant load reductions) and an implementation and maintenance schedule, including interim milestones, for each control measure, and as appropriate, the months and years in which the MS4 will undertake the required actions. Any data available and/or preliminary numeric modeling results may be used in establishing the targeted controls, BMPs, and interim measurable goals. The permittee must prioritize pollutant load reduction efforts and target areas (e.g. drainage areas, sub-watersheds, IAs, DCIAs) that generate the highest annual average pollutant loads.
 - (iv) Monitoring and Interim Reporting: The permittee shall monitor or assess progress in achieving interim measurable goals and determining the effectiveness of BMPs, and shall include documentation of this

monitoring or assessment in the SWMP and annual reports. In addition, the SWMP must include methods to be used. This program element may be coordinated with the monitoring required in Part III.A.

- (v) Progress Evaluation and Reporting: The permittee must assess the overall success of the Sediment Pollutant Load Reduction Strategy and document both direct and indirect measurements of program effectiveness in a Progress Report to be submitted with the fifth Annual Report. Data must be analyzed, interpreted, and reported so that results can be applied to such purposes as documenting effectiveness of the BMPs and compliance with the ESA requirements specified in Part I.C.3.b. The Progress Report must include:
- (a) A list of species likely to be within the action area;
 - (b) Type and number of structural BMPs installed;
 - (c) Evaluation of pollutant source reduction efforts;
 - (d) Any recommendation based on program evaluation;
 - (e) Description of how the interim sediment load reduction goals established in Part I.C.3.b.(iii) were achieved; and
 - (f) Future planning activities needed to achieve increase of sediment load reduction required in Part I.C.3.d.(iii).
- (vi) Critical Habitat (Applicable to all permittees): Verify that the installation of stormwater BMPs will not occur in or adversely affect currently listed endangered or threatened species critical habitat by reviewing the activities and locations of stormwater BMP installation within the location of critical habitat of currently listed endangered or threatened species at the U.S. Fish and Wildlife service website <http://criticalhabitat.fws.gov/crithab/>.

D. STORMWATER MANAGEMENT PROGRAM (SWMP)

1. **General Requirements**. The permittee must develop, implement, and enforce a SWMP designed to reduce the discharge of pollutants from a MS4 to the maximum extent practicable (MEP), to protect water quality (including that of downstream state or tribal waters), and to satisfy applicable surface water quality standards. The permittees shall continue implementation of existing SWMPs, and where necessary modify or revise existing elements and/or develop new elements to comply with all discharges from the MS4 authorized in Part I.A. The updated SWMP shall satisfy all requirements of this permit, and be implemented in accordance with Section 402(p)(3)(B) of the Clean Water Act (Act), and the Stormwater Regulations (40 CFR §122.26 and §122.34). This permit does not extend any compliance deadlines set forth in the previous permits (NMS000101 with effective date March 1, 2012 and permits No: NM NMR040000 and NMR040001 with effective date July 1, 2007).

If a permittee is already in compliance with one or more requirements in this section because it is already subject to and complying with a related local, state, or federal requirement that is at least as stringent as this permit's requirement, the permittee may reference the relevant requirement as part of the SWMP and document why this permit's requirement has been satisfied. Where this permit has additional conditions that apply, above and beyond what is required by the related local, state, or federal requirement, the permittee is still responsible for complying with these additional conditions in this permit.

2. **Legal Authority**. Each permittee shall implement the legal authority granted by the State or Tribal Government to control discharges to and from those portions of the MS4 over which it has jurisdiction. The difference in each co-permittee's jurisdiction and legal authorities, especially with respect to third parties, may be taken into account in developing the scope of program elements and necessary agreements (i.e. Joint Powers Agreement, Memorandum of Agreement, Memorandum of Understanding, etc.). Permittees may use a combination of statute, ordinance, permit, contract, order, interagency or inter-jurisdictional agreement(s) with other permittees to:

- a. Control the contribution of pollutants to the MS4 by stormwater discharges associated with industrial activity and the quality of stormwater discharged from sites of industrial activity (applicable only to MS4s located within the corporate boundary of the COA);
- b. Control the discharge of stormwater and pollutants associated with land disturbance and development activities, both during the construction phase and after site stabilization has been achieved (post-construction), consistent with Part I.D.5.a and Part I.D.5.b;
- c. Prohibit illicit discharges and sanitary sewer overflows to the MS4 and require removal of such discharges consistent with Part I.D.5.e;
- d. Control the discharge of spills and prohibit the dumping or disposal of materials other than stormwater (e.g. industrial and commercial wastes, trash, used motor vehicle fluids, leaf litter, grass clippings, animal wastes, etc.) into the MS4;
- e. Control, through interagency or inter-jurisdictional agreements among permittees, the contribution of pollutants from one (1) portion of the MS4 to another;
- f. Require compliance with conditions in ordinances, permits, contracts and/or orders; and
- g. Carry out all inspection, surveillance and monitoring procedures necessary to maintain compliance with permit conditions.

3. **Shared Responsibility and Cooperative Programs.**

- a. The SWMP, in addition to any interagency or inter-jurisdictional agreement(s) among permittees, (e.g., the Joint Powers Agreement to be entered into by the permittees), shall clearly identify the roles and responsibilities of each permittee.
- b. Implementation of the SWMP may be achieved through participation with other permittees, public agencies, or private entities in cooperative efforts to satisfy the requirements of Part I.D in lieu of creating duplicate program elements for each individual permittee.
 - (i) Implementation of one or more of the control measures may be shared with another entity, or the entity may fully take over the measure. A permittee may rely on another entity only if:
 - (a) the other entity, in fact, implements the control measure;
 - (b) the control measure, or component of that measure, is at least as stringent as the corresponding permit requirement; or,
 - (c) the other entity agrees to implement the control measure on the permittee's behalf. Written acceptance of this obligation is expected. The permittee must maintain this obligation as part of the SWMP description. If the other entity agrees to report on the minimum measure, the permittee must supply the other entity with the reporting requirements in Part III.D of this permit. The permittee remains responsible for compliance with the permit obligations if the other entity fails to implement the control measure component.
- c. Each permittee shall provide adequate finance, staff, equipment, and support capabilities to fully implement its SWMP and all requirements of this permit.

4. **Measurable Goals.** The permittees shall control the discharge of pollutants from its MS4. The permittee shall implement the provisions set forth in Part I.D.5 below, and shall at a minimum incorporate into the SWMP the control measures listed in Part I.D.5 below. The SWMP shall include measurable goals, including interim milestones, for each control measure, and as appropriate, the months and years in which the MS4 will undertake the required actions and the frequency of the action.

5. Control Measures.

a. Construction Site Stormwater Runoff Control.

- (i) The permittee shall develop, revise, implement, and enforce a program to reduce pollutants in any stormwater runoff to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of stormwater discharges from construction activity disturbing less than one acre must be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. **Permittees previously covered under permit NMS000101 or NMR040000 must continue existing programs, updating as necessary, to comply with the requirements of this permit.** (Note: Highway Departments and Flood Control Authorities may only apply the construction site stormwater management program to the permittees's own construction projects)
- (ii) The program must include the development, implementation, and enforcement of, at a minimum:
 - (a) An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State, Tribal or local law;
 - (b) Requirements for construction site operators to implement appropriate erosion and sediment control best management practices (both structural and non-structural);
 - (c) Requirements for construction site operators to control waste such as, but not limited to, discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality (see EPA guidance at <http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=117>);
 - (d) Procedures for site plan review which incorporate consideration of potential water quality impacts. The site plan review must be conducted prior to commencement of construction activities, and include a review of the site design, the planned operations at the construction site, the planned control measures during the construction phase (including the technical criteria for selection of the control measures), and the planned controls to be used to manage runoff created after the development;
 - (e) Procedures for receipt and consideration of information submitted by the public;
 - (f) Procedures for site inspection (during construction) and enforcement of control measures, including provisions to ensure proper construction, operation, maintenance, and repair. The procedures must clearly define who is responsible for site inspections; who has the authority to implement enforcement procedures; and the steps utilized to identify priority sites for inspection and enforcement based on the nature of the construction activity, topography, and the characteristics of soils and the quality of the receiving water. If a construction site operator fails to comply with procedures or policies established by the permittee, the permittee may request EPA enforcement assistance. The site inspection and enforcement procedures must describe sanctions and enforcement mechanism(s) for violations of permit requirements and penalties with detail regarding corrective action follow-up procedures, including enforcement escalation procedures for recalcitrant or repeat offenders. Possible sanctions include non-monetary penalties (such as stop work orders and/or permit denials for non-compliance), as well as monetary penalties such as fines and bonding requirements;
 - (g) Procedures to educate and train permittee personnel involved in the planning, review, permitting, and/or approval of construction site plans, inspections and enforcement. Education and training shall also be provided for developers, construction site operators, contractors and supporting personnel, including requiring a stormwater pollution prevention plan for construction sites within the permittee's jurisdiction;
 - (h) Procedures for keeping records of and tracking all regulated construction activities within the MS4, i.e. site reviews, inspections, inspection reports, warning letters and other enforcement documents. A

summary of the number and frequency of site reviews, inspections (including inspector's checklist for oversight of sediment and erosion controls and proper disposal of construction wastes) and enforcement activities that are conducted annually and cumulatively during the permit term shall be included in each annual report; and

- (iii) Annually conduct site inspections of 100 percent of all construction projects cumulatively disturbing one (1) or more acres within the MS4 jurisdiction. Site inspections are to be followed by any necessary compliance or enforcement action. Follow-up inspections are to be conducted to ensure corrective maintenance has occurred; and, all projects must be inspected at completion for confirmation of final stabilization.
- (iv) The permittee must coordinate with all departments and boards with jurisdiction over the planning, review, permitting, or approval of public and private construction projects/activities within the permit area to ensure that the construction stormwater runoff controls eliminate erosion and maintain sediment on site. Planning documents include, but are not limited to: comprehensive or master plans, subdivision ordinances, general land use plan, zoning code, transportation master plan, specific area plans, such as sector plan, site area plans, corridor plans, or unified development ordinances.
- (v) The site plan review required in Part I.D.5.a.(ii)(d) must include an evaluation of opportunities for use of GI/LID/Sustainable practices and when the opportunity exists, encourage project proponents to incorporate such practices into the site design to mimic the pre-development hydrology of the previously undeveloped site. For purposes of this permit, pre-development hydrology shall be met according to Part I.D.5.b of this permit. (consistent with any limitations on that capture). Include a reporting requirement of the number of plans that had opportunities to implement these practices and how many incorporated these practices.
- (vi) The permittee must include in the SWMP a description of the mechanism(s) that will be utilized to comply with each of the elements required in Part I.D.5.a.(i) throughout Part I.D.5.a.(v), including description of each individual BMP (both structural or non-structural) or source control measures and its corresponding measurable goal.
- (vii) The permittee shall assess the overall success of the program, and document the program effectiveness in the annual report. The permittee must include in each annual report:
 - (a) A summary of the frequency of site reviews, inspections and enforcement activities that are conducted annually and cumulatively during the permit term.
 - (b) The number of plans that had the opportunity to implement GI/LID/Sustainable practices and how many incorporated the practices.

Program Flexibility Elements

- (viii) The permittee may use storm water educational materials locally developed or provided by the EPA (refer to <http://water.epa.gov/polwaste/npdes/swbmp/index.cfm>, <http://www.epa.gov/smartgrowth/parking.htm>, <http://www.epa.gov/smartgrowth/stormwater.htm>), the NMED, environmental, public interest or trade organizations, and/or other MS4s.
- (ix) The permittee may develop or update existing construction handbooks (e.g., the COA NPDES Stormwater Management Guidelines for Construction and Industrial Activities Handbook) to be consistent with promulgated construction and development effluent limitation guidelines.
- (x) The construction site inspections required in Part I.D.5.a.(iii) may be carried out in conjunction with the permittee's building code inspections using a screening prioritization process.

Table 2. Construction Site Stormwater Runoff Control - Program Development and Implementation Schedules

Activity	Permittee Class				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census **)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
Development of an ordinance or other regulatory mechanism as required in Part I.D.5.a.(ii)(a)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of the permit
Develop requirements and procedures as required in Part I.D.5.a.(ii)(b) through in Part I.D.5.a.(ii)(h)	Ten (10) months from effective date of permit	Thirteen (13) months from effective date of permit	Sixteen (16) months from effective date of permit	Sixteen (16) months from effective date of permit	Eighteen (18) months from effective date of permit
Annually conduct site inspections of 100 percent of all construction projects cumulatively disturbing one (1) or more acres as required in Part I.D.5.a.(iii)	Ten (10) months from effective date of permit	Start Thirteen (13) months from effective date of permit and annually thereafter	Start Sixteen (16) months from effective date of permit and annually thereafter	Start eighteen (18) months from effective date of permit and thereafter	Start two (2) years from effective date of permit and thereafter
Coordinate with all departments and boards with jurisdiction over the planning, review, permitting, or approval of public and private construction projects/activities within the permit area as required in Part I.D.5.a.(iv)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	Twelve (12) months from effective date of permit	Twelve (12) months from effective date of permit	Fourteen (14) months from effective date of permit
Evaluation of GI/LID/Sustainable practices in site plan reviews as required in Part I.D.5.a.(v)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	Twelve (12) months from effective date of permit	Twelve (12) months from effective date of permit	Fourteen (14) months from effective date of permit
Update the SWMP document and annual report as required in Part I.D.5.a.(vi) and in Part I.D.5.a.(vii)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary
Enhance the program to include program elements in Part I.D.5.a.(viii) through Part I.D.5.a.(x)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs. (**) or MS4s designated by the Director

Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

b. Post-Construction Stormwater Management in New Development and Redevelopment

(i) The permittee must develop, revise, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the MS4. The program must ensure that controls are in place that would prevent or minimize water quality impacts. **Permittees previously covered under NMS000101 or NMR040000 must continue existing programs, updating as necessary, to comply with the requirements of this permit.** (Note: Highway Departments and Flood Control Authorities may only apply the post-construction stormwater management program to the permittee's own construction projects)

(ii) The program must include the development, implementation, and enforcement of, at a minimum:

(a) Strategies which include a combination of structural and/or non-structural best management practices (BMPs) to control pollutants in stormwater runoff.

(b) An ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State, Tribal or local law. The ordinance or policy must:

Incorporate a stormwater quality design standard that manages on-site the 90th percentile storm event discharge volume associated with new development sites and 80th percentile storm event discharge volume associated with redevelopment sites, through stormwater controls that infiltrate, evapotranspire the discharge volume, except in instances where full compliance cannot be achieved, as provided in Part I.D.5.b.(v). The stormwater from rooftop discharge may be harvested and used on-site for non-commercial use. Any controls utilizing impoundments that are also used for flood control that are located in areas where the New Mexico Office of the State Engineer requirements at NMAC 19.26.2.15 (see also Section 72-5-32 NMSA) apply must drain within 96 hours unless the state engineer has issued a waiver to the owner of the impoundment.

Options to implement the site design standard include, but not limited to: management of the discharge volume achieved by canopy interception, soil amendments, rainfall harvesting, rain tanks and cisterns, engineered infiltration, extended filtration, dry swales, bioretention, roof top disconnections, permeable pavement, porous concrete, permeable pavers, reforestation, grass channels, green roofs and other appropriate techniques, and any combination of these practices, including implementation of other stormwater controls used to reduce pollutants in stormwater (e.g., a water quality facility).

Estimation of the 90th or 80th percentile storm event discharge volume is included in EPA Technical Report entitled "*Estimating Predevelopment Hydrology in the Middle Rio Grande Watershed, New Mexico, EPA Publication Number 832-R-14-007*". Permittees can also estimate:

Option A: a site specific 90th or 80th percentile storm event discharge volume using methodology specified in the referenced EPA Technical Report.

Option B: a site specific pre-development hydrology and associated storm event discharge volume using methodology specified in the referenced EPA technical Report.

(c) The permittee must ensure the appropriate implementation of the structural BMPs by considering some or all of the following: pre-construction review of BMP designs; inspections during construction to verify BMPs are built as designed; post-construction inspection and maintenance of BMPs; and penalty provisions for the noncompliance with preconstruction BMP design; failure to construct BMPs

- in accordance with the agreed upon pre-construction design; and ineffective post-construction operation and maintenance of BMPs;
- (d) The permittee must ensure that the post-construction program requirements are constantly reviewed and revised as appropriate to incorporate improvements in control techniques;
 - (e) Procedure to develop and implement an educational program for project developers regarding designs to control water quality effects from stormwater, and a training program for plan review staff regarding stormwater standards, site design techniques and controls, including training regarding GI/LID/Sustainability practices. Training may be developed independently or obtained from outside resources, i.e. federal, state, or local experts;
 - (f) Procedures for site inspection and enforcement to ensure proper long-term operation, maintenance, and repair of stormwater management practices that are put into place as part of construction projects/activities. Procedure(s) shall include the requirement that as-built plans be submitted within ninety (90) days of completion of construction projects/activities that include controls designed to manage the stormwater associated with the completed site (post-construction stormwater management). Procedure(s) may include the use of dedicated funds or escrow accounts for development projects or the adoption by the permittee of all privately owned control measures. This may also include the development of maintenance contracts between the owner of the control measure and the permittee. The maintenance contract shall include verification of maintenance practices by the owner, allows the MS4 owner/operator to inspect the maintenance practices, and perform maintenance if inspections indicate neglect by the owner;
 - (g) Procedures to control the discharge of pollutants related to commercial application and distribution of pesticides, herbicides, and fertilizers where permittee(s) hold jurisdiction over lands not directly owned by that entity (e.g., incorporated city). The procedures must ensure that herbicides and pesticides applicators doing business within the permittee's jurisdiction have been properly trained and certified, are encouraged to use the least toxic products, and control use and application rates according to the applicable requirements; and
 - (h) Procedure or system to review and update, as necessary, the existing program to ensure that stormwater controls or management practices for new development and redevelopment projects/activities continue to meet the requirements and objectives of the permit.
- (iii) The permittee must coordinate with all departments and boards with jurisdiction over the planning, review, permitting, or approval of public and private new development and redevelopment projects/activities within the permit area to ensure the hydrology associated with new development and redevelopment sites mimic to the extent practicable the pre-development hydrology of the previously undeveloped site, except in instances where the pre-development hydrology requirement conflicts with applicable water rights appropriation requirements. For purposes of this permit, pre-development hydrology shall be met by capturing the 90th percentile storm event runoff (consistent with any limitations on that capture) which under undeveloped natural conditions would be expected to infiltrate or evapotranspire on-site and result in little, if any, off-site runoff. (Note: This permit does not prevent permittees from requiring additional controls for flood control purposes.) Planning documents include, but are not limited to: comprehensive or master plans, subdivision ordinances, general land use plan, zoning code, transportation master plan, specific area plans, such as sector plan, site area plans, corridor plans, or unified development ordinances.
- (iv) The permittee must assess all existing codes, ordinances, planning documents and other applicable regulations, for impediments to the use of GI/LID/Sustainable practices. The assessment shall include a list of the identified impediments, necessary regulation changes, and recommendations and proposed schedules to incorporate policies and standards to relevant documents and procedures to maximize infiltration, recharge, water harvesting, habitat improvement, and hydrological management of stormwater runoff as allowed under the applicable water rights appropriation requirements. The permittee must develop a report of the assessment findings, which is to be used to provide information to the permittee, of the regulation changes necessary to remove impediments and allow implementation of these practices.

- (v) Alternative Compliance for Infeasibility due to Site Constrains:
- (a) Infeasibility to manage the design standard volume specified in Part I(D)(5)(b)(ii)(b), or a portion of the design standard volume, onsite may result from site constraints including the following:
 - A. too small a lot outside of the building footprint to create the necessary infiltrative capacity even with amended soils;
 - B. soil instability as documented by a thorough geotechnical analysis;
 - C. a site use that is inconsistent with capture and reuse of storm water;
 - D. other physical conditions; or,
 - E. to comply with applicable requirements for on-site flood control structures leaves insufficient area to meet the standard.
 - (b) A determination that it is infeasible to manage the design standard volume specified in Part I.D.5.b.(ii)(b), or a portion of the design standard volume, on site may not be based solely on the difficulty or cost of implementing onsite control measures, but must include multiple criteria that rule out an adequate combination of the practices set forth in Part I.D,5.b.(v).
 - (c) This permit does not prevent imposition of more stringent requirements related to flood control. Where both the permittee's site design standard ordinance or policy and local flood control requirements on site cannot be met due to site conditions, the standard may be met through a combination of on-site and off-site controls.
 - (d) Where applicable New Mexico water law limits the ability to fully manage the design standard volume on site, measures to minimize increased discharge consistent with requirements under New Mexico water law must still be implemented.
 - (e) In instances where an alternative to compliance with the standard on site is chosen, technical justification as to the infeasibility of on-site management of the entire design standard volume, or a portion of the design standard volume, is required to be documented by submitting to the permittee a site-specific hydrologic and/or design analysis conducted and endorsed by a registered professional engineer, geologist, architect, and/or landscape architect.
 - (f) When a Permittee determines a project applicant has demonstrated infeasibility due to site constraints specified in Part I.D.5.b.(v) to manage the design standard volume specified in Part I.D.5.b.(ii).(b) or a portion of the design standard volume on-site, the Permittee shall require one of the following mitigation options:
 - A. *Off-site mitigation.* The off-site mitigation option only applies to redevelopment sites and cannot be applied to new development. Management of the standard volume, or a portion of the volume, may be implemented at another location within the MS4 area, approved by the permittee. The permittee shall identify priority areas within the MS4 in which mitigation projects can be completed. The permittee shall determine who will be responsible for long-term maintenance on off-site mitigation projects.
 - B. *Ground Water Replenishment Project:* Implementation of a project that has been determined to provide an opportunity to replenish regional ground water supplies at an offsite location.
 - C. *Payment in lieu.* Payment in lieu may be made to the permittee, who will apply the funds to a public stormwater project. MS4s shall maintain a publicly accessible database of approved projects for which these payments may be used.

- D. *Other.* In a situation where alternative options A through C above are not feasible and the permittee wants to establish another alternative option for projects, the permittee may submit to the EPA for approval, the alternative option that meets the standard.
- (vi) The permittee must estimate the number of acres of impervious area (IA) and directly connected impervious area (DCIA). For the purpose of this part, IA includes conventional pavements, sidewalks, driveways, roadways, parking lots, and rooftops. DCIA is the portion of IA with a direct hydraulic connection to the permittee's MS4 or a waterbody via continuous paved surfaces, gutters, pipes, and other impervious features. DCIA typically does not include isolated impervious areas with an indirect hydraulic connection to the MS4 (e.g., swale or detention basin) or that otherwise drain to a pervious area.
- (vii) The permittee must develop an inventory and priority ranking of MS4-owned property and infrastructure (including public right-of-way) that may have the potential to be retrofitted with control measures designed to control the frequency, volume, and peak intensity of stormwater discharges to and from its MS4. In determining the potential for retrofitting, the permittee shall consider factors such as the complexity and cost of implementation, public safety, access for maintenance purposes, subsurface geology, depth to water table, proximity to aquifers and subsurface infrastructure including sanitary sewers and septic systems, and opportunities for public use and education under the applicable water right requirements and restrictions. In determining its priority ranking, the permittee shall consider factors such as schedules for planned capital improvements to storm and sanitary sewer infrastructure and paving projects; current storm sewer level of service and control of discharges to impaired waters, streams, and critical receiving water (drinking water supply sources);
- (viii) The permittee must incorporate watershed protection elements into relevant policy and/or planning documents as they come up for regular review. If a relevant planning document is not scheduled for review during the term of this permit, the permittee must identify the elements that cannot be implemented until that document is revised, and provide to EPA and NMED a schedule for incorporation and implementation not to exceed five years from the effective date of this permit. As applicable to each permittee's MS4 jurisdiction, policy and/or planning documents must include the following:
- (a) A description of master planning and project planning procedures to control the discharge of pollutants to and from the MS4.
 - (b) Minimize the amount of impervious surfaces (roads, parking lots, roofs, etc.) within each watershed, by controlling the unnecessary creation, extension and widening of impervious parking lots, roads and associated development. The permittee may evaluate the need to add impervious surface on a case-by-case basis and seek to identify alternatives that will meet the need without creating the impervious surface.
 - (c) Identify environmentally and ecologically sensitive areas that provide water quality benefits and serve critical watershed functions within the MS4 and ensure requirements to preserve, protect, create and/or restore these areas are developed and implemented during the plan and design phases of projects in these identified areas. These areas may include, but are not limited to critical watersheds, floodplains, and areas with endangered species concerns and historic properties. Stakeholders shall be consulted as appropriate.
 - (d) Implement stormwater management practices that minimize water quality impacts to streams, including disconnecting direct discharges to surface waters from impervious surfaces such as parking lots.
 - (e) Implement stormwater management practices that protect and enhance groundwater recharge as allowed under the applicable water rights laws.
 - (f) Seek to avoid or prevent hydromodification of streams and other water bodies caused by development, including roads, highways, and bridges.

- (g) Develop and implement policies to protect native soils, prevent topsoil stripping, and prevent compaction of soils.
- (h) The program must be specifically tailored to address local community needs (e.g. protection to drinking water sources, reduction of water quality impacts) and must be designed to attempt to maintain pre-development runoff conditions.
- (ix) The permittee must update the SWMP as necessary to include a description of the mechanism(s) utilized to comply with each of the elements required in Part I.D.5.b.(i) throughout Part I.D.5.b.(viii) as well as the citations and descriptions of design standards for structural and non-structural controls to control pollutants in stormwater runoff, including discussion of the methodology used during design for estimating impacts to water quality and selecting structural and non-structural controls. Description of measurable goals for each BMP (structural or non-structural) or each stormwater control must be included in the SWMP.
- (x) The permittee shall assess the overall success of the program, and document the program effectiveness in the annual report. The following information must be included in each annual report:
 - (a) Include a summary and analysis of all maintenance, inspections and enforcement, and the number and frequency of inspections performed annually.
 - (b) A cumulative listing of the annual modifications made to the Post-Construction Stormwater Management Program during the permit term, and a cumulative listing of annual revisions to administrative procedures made or ordinances enacted during the permit term.
 - (c) According to the schedule presented in the Program Development and Implementation Schedule in Table 3, the permittee must
 - A. Report the number of MS4-owned properties and infrastructure that have been retrofitted with control measures designed to control the frequency, volume, and peak intensity of stormwater discharges. The permittee may also include in its annual report non-MS4 owned property that has been retrofitted with control measures designed to control the frequency, volume, and peak intensity of stormwater discharges.
 - B. As required in Part I.D.5.b.(vi), report the tabulated results for IA and DCIA and its estimation methodology. In each subsequent annual report, the permittee shall estimate the number of acres of IA and DCIA that have been added or removed during the prior year. The permittee shall include in its estimates the additions and reductions resulting from development, redevelopment, or retrofit projects undertaken directly by the permittee; or by private developers and other parties in a voluntary manner or in compliance with the permittee's regulations.

Program Flexibility Elements:

- (xi) The permittee may use storm water educational materials locally developed or provided by EPA (refer to <http://water.epa.gov/polwaste/npdes/swbmp/index.cfm>, <http://www.epa.gov/smartgrowth/parking.htm>, and <http://www.epa.gov/smartgrowth/stormwater.htm>); the NMED; environmental, public interest or trade organizations; and/or other MS4s.
- (xii) When choosing appropriate BMPs, the permittee may participate in locally-based watershed planning efforts, which attempt to involve a diverse group of stakeholders including interested citizens. When developing a program that is consistent with this measure's intent, the permittee may adopt a planning process that identifies the municipality's program goals (e.g., minimize water quality impacts resulting from post-construction runoff from new development and redevelopment), implementation strategies (e.g., adopt a combination of structural and/or non-structural BMPs), operation and maintenance policies and procedures, and enforcement procedures.

- (xiii) The permittee may incorporate the following elements in the Post-Construction Stormwater Management in New Development and Redevelopment program required in Part I.D.5.b.(ii)(b):
- (a) Provide requirements and standards to direct growth to identified areas to protect environmentally and ecologically sensitive areas such as floodplains and/or other areas with endangered species and historic properties concerns;
 - (b) Include requirements to maintain and/or increase open space/buffers along sensitive water bodies, minimize impervious surfaces, and minimize disturbance of soils and vegetation; and
 - (c) Encourage infill development in higher density urban areas, and areas with existing storm sewer infrastructure.

Table 3. Post-Construction Stormwater Management in New Development and Redevelopment - Program Development and Implementation Schedules

Activity	Permittee Class				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census **)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
Development of strategies as required in Part I.D.5.b.(ii).(a)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	Twelve (12) months from effective date of permit	Twelve (12) months from effective date of permit	Fourteen (14) months from effective date of permit
Development of an ordinance or other regulatory mechanism as required in Part I.D.5.b.(ii).(b)	Twenty (24) months from effective date of permit	Thirty (30) months from effective date of permit	Thirty six (36) months from effective date of permit	Thirty six (36) months from effective date of permit	Thirty six (36) months from effective date of permit
Implementation and enforcement, via the ordinance or other regulatory mechanism, of site design standards as required in Part I.D.5.b.(ii).(b)	Within thirty six (36) months from effective date of the permit	Within forty two (42) months from the effective date of the permit	Within forty eight (48) months from effective date of the permit	Within forty eight (48) months from effective date of the permit	Within forty eight (48) months from effective date of the permit
Ensure appropriate implementation of structural controls as required in Part I.D.5.b.(ii).(c) and Part I.D.5.b.(ii).(d)	Ten (10) months from effective date of permit	One (1) year from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Thirty (30) months from effective date of permit
Develop procedures as required in Part I.D.5.b.(ii).(e), Part I.D.5.b.(ii).(f), Part I.D.5.b.(ii).(g), and Part I.D.5.b.(ii).(h)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of permit

Coordinate internally with all departments and boards with jurisdiction over the planning, review, permitting, or approval of public and private construction projects/activities within the permit area as required in Part I.D.5.b.(iii)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	Eleven (11) months from effective date of permit	Eleven (11) months from effective date of permit	One (1) year from effective date of permit
As required in Part I.D.5.b.(iv), the permittee must assess all existing codes, ordinances, planning documents and other applicable regulations, for impediments to the use of GI/LID/Sustainable practices	Ten (10) months from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of permit	Eighteen (18) months from effective date of permit	Two (2) years from effective date of permit
As required in Part I.D.5.b.(iv), develop and submit a report of the assessment findings on GI/LID/Sustainable practices.	Eleven (11) months from effective date of permit	Eighteen (18) months from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Twenty seven (27) months from effective date of permit
Estimation of the number of acres of IA and DCIA as required in Part I.D.5.b.(vi)	Ten (10) months from effective date of permit	One (1) year from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Thirty (30) months from effective date of permit
Inventory and priority ranking as required in section in Part I.D.5.b.(vii)	Within fifteen (15) months from effective date of the permit	Within twenty four (24) months from effective date of the permit	Within thirty six (36) months from effective date of the permit	Within thirty six (36) months from effective date of the permit	Within forty two (42) months from effective date of the permit
Incorporate watershed protection elements as required in Part I.D.5.b.(viii)	Ten (10) months from effective date of permit	One (1) year from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Thirty (30) months from effective date of permit
Update the SWMP document and annual report as required in Part I.D.5.b.(ix) and Part I.D.5.b.(x).	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary
Enhance the program to include program elements in Part I.D.5.b.(xi) and Part I.D.5.b.(xii)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs.

(**) or MS4s designated by the Director

Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

c. Pollution Prevention/Good Housekeeping for Municipal/Co-permittee Operations.

- (i) The permittee must develop, revise and implement an operation and maintenance program that includes a training component and the ultimate goal of preventing or reducing pollutant runoff from municipal operations. **Permittees previously covered under NMS000101 or NMR040000 must continue existing programs while updating those programs, as necessary, to comply with the requirements of this permit.** The program must include:
- (a) Development and implementation of an employee training program to incorporate pollution prevention and good housekeeping techniques into everyday operations and maintenance activities. The employee training program must be designed to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance. The permittee must also develop a tracking procedure and ensure that employee turnover is considered when determining frequency of training;
 - (b) Maintenance activities, maintenance schedules, and long term inspections procedures for structural and non-structural storm water controls to reduce floatable, trash, and other pollutants discharged from the MS4.
 - (c) Controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations, snow disposal areas operated by the permittee, and waste transfer stations;
 - (d) Procedures for properly disposing of waste removed from the separate storm sewers and areas listed in Part I.D.5.c.(i).(c) (such as dredge spoil, accumulated sediments, floatables, and other debris); and
 - (e) Procedures to ensure that new flood management projects assess the impacts on water quality and examine existing projects for incorporating additional water quality protection devices or practices.

Note: The permittee may use training materials that are available from EPA, NMED, Tribe, or other organizations.

(ii) The Pollution Prevention/Good Housekeeping program must include the following elements:

- (a) Develop or update the existing list of all stormwater quality facilities by drainage basin, including location and description;
- (b) Develop or modify existing operational manual for de-icing activities addressing alternate materials and methods to control impacts to stormwater quality;
- (c) Develop or modify existing program to control pollution in stormwater runoff from equipment and vehicle maintenance yards and maintenance center operations located within the MS4;
- (d) Develop or modify existing street sweeping program. Assess possible benefits from changing frequency or timing of sweeping activities or utilizing different equipment for sweeping activities;
- (e) A description of procedures used by permittees to target roadway areas most likely to contribute pollutants to and from the MS4 (i.e., runoff discharges directly to sensitive receiving water, roadway receives majority of de-icing material, roadway receives excess litter, roadway receives greater loads of oil and grease);
- (f) Develop or revise existing standard operating procedures for collection of used motor vehicle fluids (at a minimum oil and antifreeze) and toxics (including paint, solvents, fertilizers, pesticides, herbicides,

- and other hazardous materials) used in permittee operations or discarded in the MS4, for recycle, reuse, or proper disposal;
- (g) Develop or revised existing standard operating procedures for the disposal of accumulated sediments, floatables, and other debris collected from the MS4 and during permittee operations to ensure proper disposal;
 - (h) Develop or revised existing litter source control programs to include public awareness campaigns targeting the permittee audience; and
 - (i) Develop or review and revise, as necessary, the criteria, procedures and schedule to evaluate existing flood control devices, structures and drainage ways to assess the potential of retrofitting to provide additional pollutant removal from stormwater. Implement routine review to ensure new and/or innovative practices are implemented where applicable.
 - (j) Enhance inspection and maintenance programs by coordinating with maintenance personnel to ensure that a target number of structures per basin are inspected and maintained per quarter;
 - (k) Enhance the existing program to control the discharge of floatables and trash from the MS4 by implementing source control of floatables in industrial and commercial areas;
 - (l) Include in each annual report, a cumulative summary of retrofit evaluations conducted during the permit term on existing flood control devices, structures and drainage ways to benefit water quality. Update the SWMP to include a schedule (with priorities) for identified retrofit projects;
 - (m) Flood management projects: review and revise, as necessary, technical criteria guidance documents and program for the assessment of water quality impacts and incorporation of water quality controls into future flood control projects. The criteria guidance document must include the following elements:
 - A. Describe how new flood control projects are assessed for water quality impacts.
 - B. Provide citations and descriptions of design standards that ensure water quality controls are incorporated in future flood control projects.
 - C. Include method for permittees to update standards with new and/or innovative practices.
 - D. Describe master planning and project planning procedures and design review procedures.
 - (n) Develop procedures to control the discharge of pollutants related to the storage and application of pesticides, herbicides, and fertilizers applied, by the permittee's employees or contractors, to public right-of-ways, parks, and other municipal property. The permittee must provide an updated description of the data monitoring system for all permittee departments utilizing pesticides, herbicides and fertilizers.
- (iii) Comply with the requirements included in the EPA Multi Sector General Permit (MSGP) to control runoff from industrial facilities (as defined in 40 CFR 122.26(b)(14)(i)-(ix) and (xi)) owned or operated by the permittees and ultimately discharge to the MS4. The permittees must develop or update:
- (a) A list of municipal/permittee operations impacted by this program,
 - (b) A map showing the industrial facilities owned and operated by the MS4,
 - (c) A list of the industrial facilities (other than large construction activities defined as industrial activity) that will be included in the industrial runoff control program by category and by basin. The list must include the permit authorization number or a MSGP NOI ID for each facility as applicable.

- (iv) The permittee must include in the SWMP a description of the mechanism(s) utilized to comply with each of the elements required in Part I.D.5.c.(i) throughout Part I.D.5.c.(iii) and its corresponding measurable goal.
- (v) The permittee shall assess the overall success of the program, and document the program effectiveness in the annual report.

Table 4. Pollution Prevention/Good Housekeeping for Municipal/Co-permittee Operations - Program Development and Implementation Schedules

Activity	Permittee Class				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census **)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
-Develop or update the Pollution Prevention/Good House Keeping program to include the elements in Part I.D.5.c.(i)	Ten (10) months from effective date of the permit	Twelve (12) months from effective date of the permit	Fourteen (14) months from effective date of the permit	Fourteen (14) months from effective date of the permit	Eighteen (18) months from effective date of the permit
-Enhance the program to include the elements in Part I.D.5.c.(ii)	Ten (10) months from effective date of the permit	One (1) year from effective date of the permit	Two (2) years from effective date of the permit	Two (2) years from effective date of the permit	Thirty (30) months from effective date of the permit
-Develop or update a list and a map of industrial facilities owned or operated by the permittee as required in Part I.D.5.c.(iii)	Ten (10) months from effective date of the permit	Eleven (11) months from effective date of the permit	One (1) year from effective date of the permit	One (1) year from effective date of the permit	Eighteen (18) months from effective date of the permit
Update the SWMP document and annual report as required in Part I.D.5.c.(iv) and Part I.D.5.c.(v)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs (**)

Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

d. Industrial and High Risk Runoff (Applicable only to Class A permittees)

- (i) The permittee must control through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity as defined in 40 CFR 122.26(b)(14)(i)-(ix) and (xi). If no such industrial activities are in a permittees jurisdiction, that permittee may certify that this program element does not apply.
- (ii) The permittee must continue implementation and enforcement of the Industrial and High Risk Runoff program, assess the overall success of the program, and document both direct and indirect measurements of program effectiveness in the annual report. The program shall include:
 - (a) A description of a program to identify, monitor, and control pollutants in stormwater discharges to the MS4 from municipal landfills; other treatment, storage, or disposal facilities for municipal waste (e.g. transfer stations, incinerators, etc.); hazardous waste treatment, storage, disposal and recovery facilities; facilities that are subject to EPCRA Title III, Section 313; and any other industrial or commercial discharge the permittee(s) determines are contributing a substantial pollutant loading to the

MS4. (Note: If no such facilities are in a permittees jurisdiction, that permittee may certify that this program element does not apply.); and

- (b) Priorities and procedures for inspections and establishing and implementing control measures for such discharges.
- (iii) Permittees must comply with the monitoring requirements specified in Part III.A.4;
- (iv) The permittee must modify the following as necessary:
 - (a) The list of the facilities included in the program, by category and basin;
 - (b) Schedules and frequency of inspection for listed facilities. Facility inspections may be carried out in conjunction with other municipal programs (e.g. pretreatment inspections of industrial users, health inspections, fire inspections, etc.), but must include random inspections for facilities not normally visited by the municipality;
 - (c) The priorities for inspections and procedures used during inspections (e.g. inspection checklist, review for NPDES permit coverage; review of stormwater pollution prevention plan; etc.); and
 - (d) Monitoring frequency, parameters and entity performing monitoring and analyses (MS4 permittees or subject facility). The monitoring program may include a waiver of monitoring for parameters at individual facilities based on a "no-exposure" certification;
- (v) The permittee must include in the SWMP a description of the mechanism(s) utilized to comply with each of the elements required in Part I.D.5.d.(i) throughout Part I.D.5.d.(iv) and its corresponding measurable goal.
- (vi) The permittee shall assess the overall success of the program, and document the program effectiveness in the annual report.

Program Flexibility Elements:

(vii) The permittee may:

- (a) Use analytical monitoring data, on a parameter-by-parameter basis, that a facility has collected to comply with or apply for a State or NPDES discharge permit (other than this permit), so as to avoid unnecessary cost and duplication of effort;
- (b) Allow the facility to test only one (1) outfall and to report that the quantitative data also apply to the substantially identical outfalls if:
 - A. A Type 1 or Type 2 industrial facility has two (2) or more outfalls with substantially identical effluents, and
 - B. Demonstration by the facility that the stormwater outfalls are substantially identical, using one (1) or all of the following methods for such demonstration. The NPDES Stormwater Sampling Guidance Document (EPA 833-B-92-001), available on EPA's website at [provides](#) detailed guidance on each of the three options: (1) submission of a narrative description and a site map; (2) submission of matrices; or (3) submission of model matrices.
- (c) Accept a copy of a "no exposure" certification from a facility made to EPA under 40 CFR §122.26(g), in lieu of analytic monitoring.

Table 5: Industrial and High Risk Runoff - Program Development and Implementation Schedules:

Activity	Permittee Class	
	A Phase I MS4s	Cooperative (*) Any Permittee with cooperative programs
Ordinance (or other control method) as required in Part I.D.5.d.(i)	Ten (10) months from effective date of the permit	Twelve (12) months from effective date of the permit
Continue implementation and enforcement of the Industrial and High Risk Runoff program, assess the overall success of the program, and document both direct and indirect measurements of program effectiveness in the annual report as required in Part I.D.5.d.(ii)	Ten (10) months from effective date of the permit	Twelve (12) months from effective date of the permit
Meet the monitoring requirements in Part I.D.5.d.(iii)	Ten (10) months from effective date of the permit	Twelve (12) months from effective date of the permit
Include requirements in Part I.D.5.d.(iv)	Ten (10) months from permit effective date of the permit	Twelve (12) months from effective date of the permit
Update the SWMP document and annual report as required in Part I.D.5.d.(v) and Part I.D.5.d.(vi)	Update as necessary	Update as necessary
Enhance the program to include requirements in Part I.D.5.d.(vii)	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs.
Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

e. Illicit Discharges and Improper Disposal

- (i) The permittee shall develop, revise, implement, and enforce a program to detect and eliminate illicit discharges (as defined at 40 CFR 122.26(b)(2)) entering the MS4. **Permittees previously covered under NMS000101 or NMR040000 must continue existing programs while updating those programs, as necessary, to comply with the requirements of this permit.** The permittee must:
 - (a) Develop, if not already completed, a storm sewer system map, showing the names and locations of all outfalls as well as the names and locations of all waters of the United States that receive discharges from those outfalls. Identify all discharge points into major drainage channels draining more than twenty (20) percent of the MS4 area;
 - (b) To the extent allowable under State, Tribal or local law, effectively prohibit, through ordinance or other regulatory mechanism, non-stormwater discharges into the MS4, and implement appropriate enforcement procedures and actions;
 - (c) Develop and implement a plan to detect and address non-stormwater discharges, including illegal dumping, to the MS4. The permittee must include the following elements in the plan:
 - A. Procedures for locating priority areas likely to have illicit discharges including field test for selected pollutant indicators (ammonia, boron, chlorine, color, conductivity, detergents, *E. coli*, enterococci, total coliform, fluoride, hardness, pH, potassium, conductivity, surfactants), and visually screening outfalls during dry weather;

- B. Procedures for enforcement, including enforcement escalation procedures for recalcitrant or repeat offenders;
 - C. Procedures for removing the source of the discharge;
 - D. Procedures for program evaluation and assessment; and
 - E. Procedures for coordination with adjacent municipalities and/or state, tribal, or federal regulatory agencies to address situations where investigations indicate the illicit discharge originates outside the MS4 jurisdiction.
- (d) Develop an education program to promote, publicize, and facilitate public reporting of illicit connections or discharges, and distribution of outreach materials. The permittee shall inform public employees, businesses and the general public of hazards associated with illegal discharges and improper disposal of waste.
 - (e) Establish a hotline to address complaints from the public.
 - (f) Investigate suspected significant/severe illicit discharges within forty-eight (48) hours of detection and all other discharges as soon as practicable; elimination of such discharges as expeditiously as possible; and, requirement of immediate cessation of illicit discharges upon confirmation of responsible parties.
 - (g) Review complaint records for the last permit term and develop a targeted source reduction program for those illicit discharge/improper disposal incidents that have occurred more than twice in two (2) or more years from different locations. (Applicable only to class A and B permittees)
 - (h) If applicable, implement the program using the priority ranking develop during last permit term
- (ii) The permittee shall address the following categories of non-stormwater discharges or flows (e.g., illicit discharges) only if they are identified as significant contributors of pollutants to the MS4: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(90)), uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water.

Note: Discharges or flows from fire fighting activities are excluded from the effective prohibitions against non-stormwater and need only be addressed where they are identified a significant sources of pollutants to water of the United States).
- (iii) The permittee must screen the entire jurisdiction at least once every five (5) years and high priority areas at least once every year. High priority areas include any area where there is ongoing evidence of illicit discharges or dumping, or where there are citizen complaints on more than five (5) separate events within twelve (12) months. The permittee must:
 - (a) Include in its SWMP document a description of the means, methods, quality assurance and controls protocols, and schedule for successfully implementing the required screening, field monitoring, laboratory analysis, investigations, and analysis evaluation of data collected.
 - (b) Comply with the dry weather screening program established in Table 6 and the monitoring requirements specified in Part III.A.2.
 - (c) If applicable, implement the priority ranking system develop in previous permit term.

- (iv) **Waste Collection Programs:** The permittee must develop, update, and implement programs to collect used motor vehicle fluids (at a minimum, oil and antifreeze) for recycle, reuse, or proper disposal, and to collect household hazardous waste materials (including paint, solvents, fertilizers, pesticides, herbicides, and other hazardous materials) for recycle, reuse, or proper disposal. Where available, collection programs operated by third parties may be a component of the programs. Permittees shall enhance these programs by establishing the following elements as a goal in the SWMP:
- A. Increasing the frequency of the collection days hosted;
 - B. Expanding the program to include commercial fats, oils and greases; and
 - C. Coordinating program efforts between applicable permittee departments.
- (v) **Spill Prevention and Response.** The permittee must develop, update and implement a program to prevent, contain, and respond to spills that may discharge into the MS4. The permittees must continue existing programs while updating those programs, as necessary, to comply with the requirements of this permit. The Spill Prevention and Response program shall include:
- (a) Where discharge of material resulting from a spill is necessary to prevent loss of life, personal injury, or severe property damage, the permittee(s) shall take, or insure the party responsible for the spill takes, all reasonable steps to control or prevent any adverse effects to human health or the environment: and
 - (b) The spill response program may include a combination of spill response actions by the permittee (and/or another public or private entity), and legal requirements for private entities within the permittee's municipal jurisdiction.
- (vi) The permittee must include in the SWMP a description of the mechanism(s) utilized to comply with each of the elements required in Part I.D.5.e.(i) throughout Part I.D.5.e.(v) and its corresponding measurable goal. A description of the means, methods, quality assurance and controls protocols, and schedule for successfully implementing the required screening, field monitoring, laboratory analysis, investigations, and analysis evaluation of data collected
- (vii) The permittee shall assess the overall success of the program, and document the program effectiveness in the annual report.
- (viii) The permittee must expeditiously revise as necessary, within nine (9) months from the effective date of the permit, the existing permitting/certification program to ensure that any entity applying for the use of Right of Way implements controls in their construction and maintenance procedures to control pollutants entering the MS4. (Only applicable to NMDOT)

Program Flexibility Elements

- (ix) The permittee may:
- (a) Divide the jurisdiction into assessment areas where monitoring at fewer locations would still provide sufficient information to determine the presence or absence of illicit discharges within the larger area;
 - (b) Downgrade high priority areas after the area has been screened at least once and there are citizen complaints on no more than five (5) separate events within a twelve (12) month period;
 - (c) Rely on a cooperative program with other MS4s for detection and elimination of illicit discharges and illegal dumping;

- (d) If participating in a cooperative program with other MS4s, required detection program frequencies may be based on the combined jurisdictional area rather than individual jurisdictional areas and may use assessment areas crossing jurisdictional boundaries to reduce total number of screening locations (e.g., a shared single screening location that would provide information on more than one jurisdiction); and
- (e) After screening a non-high priority area once, adopt an “in response to complaints only” IDDE for that area provided there are citizen complaints on no more than two (2) separate events within a twelve (12) month period.
- (f) Enhance the program to utilize procedures and methodologies consistent with those described in “Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments.”

Table 6. Illicit Discharges and Improper Disposal - Program Development and Implementation Schedules

Activity	Permittee Class				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census ***)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
Mapping as required in Part I.D.5.e.(i)(a)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	Eleven (11) months from effective date of permit	Eleven (11) months from effective date of permit	Fourteen (14) months from effective date of permit
Ordinance (or other control method) as required in Part I.D.5.e.(i)(b)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Thirty (30) months from effective date of permit
Develop and implement a IDDE plan as required in Part I.D.5.e.(i)(c)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Thirty (30) months from effective date of permit
Develop an education program as required in Part I.D.5.e.(i)(d)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of permit
Establish a hotline as required in Part I.D.5.e.(i)(e)	Update as necessary	Ten (10) months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of permit
Investigate suspected significant/severe illicit discharges as required in Part I.D.5.e.(i)(f)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of permit
Review complaint records and develop a targeted source reduction program as required in Part I.D.5.e.(i)(g)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	N/A	N/A	One (1) year from effective date of permit

Screening of system as required in Part I.D.5.e.(iii) as follows:	1 / year	1 / year	1 / year	1 / year	1 / year
a.) High priority areas**					
b.) Whole system	-Screen 20% of the MS4 per year	- Screen 20% of the MS4 per year	-Years 1 – 2: develop procedures as required in Part I.D.5.e.(i)(c) -Year 3: screen 30% of the MS4 -Year 4: screen 20% of the MS4 -Year 5: screen 50% of the MS4	-Years 1 – 2: develop procedures as required Part I.D.5.e.(i)(c) -Year 3: screen 30% of the MS4 -Year 4: screen 20% of the MS4 -Year 5: screen 50% of the MS4	-Years 1 – 3: develop procedures as require in Part I.D.5.e.(i)(c) -Year 4: screen 30% of the MS4 -Year 5: screen 70% of the MS4
Develop, update, and implement a Waste Collection Program as required in Part I.D.5.e.(iv)	Ten (10) months from effective date of permit	Eighteen (18) months from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Thirty (30) months from effective date of permit
Develop, update and implement a Spill Prevention and Response program to prevent, contain, and respond to spills that may discharge into the MS4 as required in Part I.D.5.e.(v)	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of permit
Update the SWMP document and annual report as required in Part I.D.5.e.(iii), Part I.D.5.e.(vi), and Part I.D.5.e.(vii).	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary
Enhance the program to include requirements in Part I.D.5.e.(ix)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs.

(**) High priority areas include any area where there is ongoing evidence of illicit discharges or dumping, or where there are citizen complaints on more than five (5) separate events within twelve (12) months

(***) or MS4s designated by the Director

Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

f. Control of Floatables Discharges

- (i) The permittee must develop, update, and implement a program to address and control floatables in discharges into the MS4. The floatables control program shall include source controls and, where necessary, structural controls. **Permittees previously covered under NMS000101 or NMR040000 must continue existing programs while updating those programs, as necessary, to comply with the requirements of this permit.** The following elements must be included in the program:

- (a) Develop a schedule for implementation of the program to control floatables in discharges into the MS4 (Note: AMAFCA and the City of Albuquerque should update the schedule according to the findings of the 2005 AMAFCA/COA Floatable and Gross Pollutant Study and other studies); and
 - (b) Estimate the annual volume of floatables and trash removed from each control facility and characterize the floatable type.
- (ii) The permittee must include in the SWMP a description of the mechanism(s) utilized to comply with each of the elements required in Part I.D.5.f.(i).
- (iii) The permittee shall assess the overall success of the program, and document the program effectiveness in the annual report.

Table 7. Control of Floatables Discharges - Program Development and Implementation Schedules

Activity	Permittee Class				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census **)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
- Develop a schedule to implement the program as required in Part I.D.5.f.(i)(a)	Ten (10) months from the effective date of the permit	Ten (10) months from the effective date of the permit	One (1) year from the effective date of the permit	One (1) year from the effective date of the permit	Eighteen (18) months from the effective date of the permit
-Estimate the annual volume of floatables and trash removed from each control facility and characterize the floatable type as required in Part I.D.5.f.(i)(b)	Ten (10) months from the effective date of the permit	One (1) year from the effective date of the permit	Two (2) years from the effective date of the permit	Two (2) years from the effective date of the permit	Thirty (30) months from the effective date of the permit
Update the SWMP document and annual report as required in Part I.D.5.f.(ii) and Part I.D.5.f.(iii).	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs.

(**) or MS4s designated by the Director

Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

g. Public Education and Outreach on Stormwater Impacts

- (i) The permittee shall, individually or cooperatively, develop, revise, implement, and maintain a comprehensive stormwater program to educate the community, employees, businesses, and the general public of hazards associated with the illegal discharges and improper disposal of waste and about the impact that stormwater discharges on local waterways, as well as the steps that the public can take to reduce pollutants in stormwater. **Permittees previously covered under NMS000101 and NMR040000 must continue existing programs while updating those programs, as necessary, to comply with the requirements of this permit.**
- (ii) The permittee must implement a public education program to distribute educational knowledge to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff. The permittee must:

- (a) Define the goals and objectives of the program based on high priority community-wide issues;
 - (b) Develop or utilize appropriate educational materials, such as printed materials, billboard and mass transit advertisements, signage at select locations, radio advertisements, television advertisements, and websites;
 - (c) Inform individuals and households about ensuring proper septic system maintenance, ensuring the proper use and disposal of landscape and garden chemicals including fertilizers and pesticides, protecting and restoring riparian vegetation, and properly disposing of used motor oil or household hazardous wastes;
 - (d) Inform individuals and groups how to become involved in local stream and beach restoration activities as well as activities that are coordinated by youth service and conservation corps or other citizen groups;
 - (e) Use tailored public education program, using a mix of locally appropriate strategies, to target specific audiences and communities. Examples of strategies include distributing brochures or fact sheets, sponsoring speaking engagements before community groups, providing public service announcements, implementing educational programs targeted at school age children, and conducting community-based projects such as storm drain stenciling, and watershed cleanups; and
 - (f) Use materials or outreach programs directed toward targeted groups of commercial, industrial, and institutional entities likely to have significant stormwater impacts. For example, providing information to restaurants on the impact of grease clogging storm drains and to garages on the impact of oil discharges. The permittee may tailor the outreach program to address the viewpoints and concerns of all communities, particularly minority and disadvantaged communities, as well as any special concerns relating to children. The permittee must make information available for non-English speaking residents, where appropriate.
- (iii) The permittee must include the following information in the Stormwater Management Program (SWMP) document:
- (a) A description of a program to promote, publicize, facilitate public reporting of the presence of illicit discharges or water quality associated with discharges from municipal separate storm sewers;
 - (b) A description of the education activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials; and
 - (c) A description of the mechanism(s) utilized to comply with each of the elements required in Part I.D.5.g.(i) and Part I.D.5.g.(ii) and its corresponding measurable goal.
- (iv) The permittee must assess the overall success of the program, and document both direct and indirect measurements of program effectiveness in the Annual Report.

Program Flexibility Elements

- (v) Where necessary to comply with the Minimum Control Measures established in Part I.D.5.g.(i) and Part I.D.5.g.(ii), the permittee should develop a program or modify/revise an existing education and outreach program to:
 - (a) Promote, publicize, and facilitate the use of Green Infrastructure (GI)/Low Impact Development (LID)/Sustainability practices; and
 - (b) Include an integrated public education program (including all permittee departments and programs within the MS4) regarding litter reduction, reduction in pesticide/herbicide use, recycling and proper

disposal (including yard waste, hazardous waste materials, and used motor vehicle fluids), and GI/LID/Sustainable practices (including xeriscaping, reduced water consumption, water harvesting practices allowed by the New Mexico State Engineer Office).

- (vi) The permittee may collaborate or partner with other MS4 operators to maximize the program and cost effectiveness of the required outreach.
- (vii) The education and outreach program may use citizen hotlines as a low-cost strategy to engage the public in illicit discharge surveillance.
- (viii) The permittee may use stormwater educational materials provided by the State, Tribe, EPA, environmental, public interest or trade organizations, or other MS4s. The permittee may also integrate the education and outreach program with existing education and outreach programs in the Middle Rio Grande area. Example of existing programs include:
 - (a) Classroom education on stormwater;
 - A. Develop watershed map to help students visualize area impacted.
 - B. Develop pet-specific education
 - (b) Establish a water committee/advisor group;
 - (c) Contribute and participate in Stormwater Quality Team;
 - (d) Education/outreach for commercial activities;
 - (e) Hold regular employee trainings with industry groups
 - (f) Education of lawn and garden activities;
 - (g) Education on sustainable practices;
 - (h) Education/outreach of pet waste management;
 - (i) Education on the proper disposal of household hazardous waste;
 - (j) Education/outreach programs aimed at minority and disadvantaged communities and children;
 - (k) Education/outreach of trash management;
 - (l) Education/outreach in public events;
 - A. Participate in local events—brochures, posters, etc.
 - B. Participate in regional events (i.e., State Fair, Balloon Fiesta).
 - (m) Education/outreach using the media (e.g. publish local newsletters);
 - (n) Education/outreach on water conservation practices designed to reduce pollutants in storm water for home residences.

Table 8. Public Education and Outreach on Stormwater Impacts - Program_Development and Implementation Schedules

Activity	Permittee Class				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census **)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
Develop, revise, implement, and maintain an education and outreach program as required in Part I.D.5.g.(i) and Part I.D.5.g.(ii)	Ten (10) months from the effective date of the permit	Eleven (11) months from the effective date of the permit	Twelve (12) months from effective date of the permit	Twelve (12) months from effective date of the permit	Fourteen (14) months from effective date of the permit
Update the SWMP document and annual report as required in Part I.D.5.g.(iii) and Part I.D.5.g.(iv)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary
Enhance the program to include requirements in Part I.D.5.g.(v) through Part I.D.5.g.(viii)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs.

(**) or MS4s designated by the Director

Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

h. Public Involvement and Participation

- (i) The permittee must provide local public notice of and make available for public review a copy of the complete NOI and attachments (see Part I.B.2). Local public notice may be made by newspaper notice, notice at a council meeting, posting on the internet, or other method consistent with state/tribal/local public notice requirements.

The permittee must consider all public comments received during the public notice period and modify the NOI, or include a schedule to modify the SWMP, as necessary, or as required by the Director modify the NOI or/and SWMP in response to such comments. The Permittees must include in the NOI any unresolved public comments and the MS4's response to these comments. Responses provided by the MS4 will be considered as part of EPA's decision-making process. See also Appendix E Providing Comments or Requesting a Public Hearing on an Operator's NOI.

- (ii) The permittee shall develop, revise, implement and maintain a plan to encourage public involvement and provide opportunities for participation in the review, modification and implementation of the SWMP; develop and implement a process by which public comments to the plan are received and reviewed by the person(s) responsible for the SWMP; and, make the SWMP available to the public and to the operator of any MS4 or Tribal authority receiving discharges from the MS4. **Permittee previously covered under NMS000101 or NMR040000 must continue existing public involvement and participation programs while updating those programs, as necessary, to comply with the requirements of this permit.**

- (iii) The plan required in Part I.D.5.h.(ii) shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The permittee must include the following elements in the plan:
 - (a) A detailed description of the general plan for informing the public of involvement and participation opportunities, including types of activities; target audiences; how interested parties may access the SWMP; and how the public was involved in development of the SWMP;
 - (b) The development and implementation of at least one (1) assessment of public behavioral change following a public education and/or participation event;
 - (c) A process to solicit involvement by environmental groups, environmental justice communities, civic organizations or other neighborhoods/organizations interested in water quality-related issues, including but not limited to the Middle Rio Grande Water Quality Work Group, the Middle Rio Grande Bosque Initiative, the Middle Rio Grande Endangered Species Act Collaborative Program, the Middle Rio Grande-Albuquerque Reach Watershed Group, the Pueblos of Santa Ana, Sandia and Isleta, Albuquerque Bernalillo County Water Utility Authority, UNM Colleges and Schools, and Chartered Student Organizations; and
 - (d) An evaluation of opportunities to utilize volunteers for stormwater pollution prevention activities and awareness throughout the area.
- (iv) The permittee shall comply with State, Tribal and local public notice requirements when implementing a public involvement/ participation program.
- (v) The public participation process must reach out to all economic and ethnic groups. Opportunities for members of the public to participate in program development and implementation include serving as citizen representatives on a local stormwater management panel, attending public hearings, working as citizen volunteers to educate other individuals about the program, assisting in program coordination with other pre-existing programs, or participating in volunteer monitoring efforts.
- (vi) The permittee must include in the SWMP a description of the mechanism(s) utilized to comply with each of the elements required in Parts I.D.5.h.(i) throughout Part I.D.5.h.(iv) and its corresponding measurable goal.
- (vii) The permittee shall assess the overall success of the program, and document the program effectiveness in the annual report.
- (viii) The permittee must provide public accessibility of the Storm Water Management Program (SWMP) document and Annual Reports online via the Internet and during normal business hours at the MS4 operator's main office, a local library, posting on the internet and/or other readily accessible location for public inspection and copying consistent with any applicable federal, state, tribal, or local open records requirements. Upon a showing of significant public interest, the MS4 operator is encouraged to hold a public meeting (or include in the agenda of in a regularly scheduled city council meeting, etc.) on the NOI, SWMP, and Annual Reports. (See Part III B)

Program Flexibility Elements

- (ix) The permittee may integrate the public Involvement and participation program with existing education and outreach programs in the Middle Rio Grande area. Example of existing programs include: Adopt-A-Stream Programs; Attitude Surveys; Community Hotlines (e.g. establishment of a "311"-type number and system established to handle storm-water-related concerns, setting up a public tracking/reporting

system, using phones and social media); Revegetation Programs; Storm Drain Stenciling Programs; Stream cleanup and Monitoring program/events.

Table 9. Public Involvement and Participation - *Program Development and Implementation Schedules*

Activity	Permittee Class				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census **)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
Develop (or update), implement, and maintain a public involvement and participation plan as required in Part I.D.5.h.(ii) and Part I.D.5.h.(iii)	Ten (10) months from effective date of the permit	Ten (10) months from effective date of the permit	Eleven (11) months from effective date of the permit	Eleven (11) months from effective date of the permit	One (1) year from effective date of the permit
Comply with State, Tribal, and local notice requirements when implementing a Public Involvement and Participation Program as required in Part I.D.5.h.(iv)	Ten (10) months from effective date of the permit	Eleven (11) months from effective date of the permit	Twelve (12) months from effective date of the permit	Twelve (12) months from effective date of the permit	Fourteen (14) months from effective date of the permit
Include elements as required in Part I.D.5.h.(v)	Ten (10) months from effective date of the permit	Eleven (11) months from effective date of the permit	One (1) year from effective date of the permit	One (1) year from effective date of the permit	Eighteen (18) months from effective date of the permit
Update the SWMP document and annual report as required in Part I.D.5.h.(vi), Part I.D.5.h.(vii), and Part I.D.5.h.(viii)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary
Enhance the program to include requirements in Part I.D.5.h.(ix)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs.

(**) or MS4s designated by the Director

Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

6. Stormwater Management Program Review and Modification.

a. Program Review. Permittee shall participate in an annual review of its SWMP in conjunction with preparation of the annual report required in Part III.B. Results of the review shall be discussed in the annual report and shall include an assessment of:

- (i) SWMP implementation, progress in achieving measurable goals, and compliance with program elements and other permit conditions;
- (ii) the effectiveness of its SWMP, and any necessary modifications, in complying with the permit, including requirements to control the discharge of pollutants, and comply with water quality standards and any applicable approved TMDLs; and the adequacy of staff, funding levels, equipment, and support capabilities to fully implement the SWMP and comply with permit conditions.

- (a) Project staffing requirements, in man hours, for the implementation of the MS4 program during the upcoming year.
 - (b) Staff man hours used during the previous year for implementing the MS4 program. Man hours may be estimated based on staff assigned, assuming a forty (40) hour work week.
- b. Program Modification. The permittee(s) may modify its SWMP with prior notification or request to the EPA and NMED in accordance with this section.
 - (i) Modifications adding, but not eliminating, replacing, or jeopardizing fulfillment of any components, controls, or requirements of its SWMP may be made by the permittee(s) at any time upon written notification to the EPA.
 - (ii) Modifications replacing or eliminating an ineffective or unfeasible component, control or requirement of its SWMP, including monitoring and analysis requirements described in Parts III.A and V, may be requested in writing at any time. If request is denied, the EPA will send a written explanation of the decision. Modification requests shall include the following:
 - (a) a description of why the SWMP component is ineffective, unfeasible (including cost prohibitions), or unnecessary to support compliance with the permit;
 - (b) expectations on the effectiveness of the proposed replacement component; and
 - (c) an analysis of how the proposed replacement component is expected to achieve the goals of the component to be replaced.
 - (iii) Modifications resulting from schedules contained in Part VI may be requested following completion of an interim task or final deadline.
 - (iv) Modification requests or notifications shall be made in writing, signed in accordance with Part IV.H.
- c. Program Modifications Required by EPA. Modifications requested by EPA shall be made in writing, set forth the time schedule for the permittee(s) to develop the modifications, and offer the permittee(s) the opportunity to propose alternative program modifications to meet the objective of the requested modification. The EPA may require changes to the SWMP as needed to:
 - (i) Address impacts on receiving water quality caused, or contributed to, by discharges from the MS4;
 - (ii) Include more stringent requirements necessary to comply with new State or Federal statutory or regulatory requirements;
 - (iii) Include such other conditions deemed necessary by the EPA to comply with the goals and requirements of the Clean Water Act; or
 - (iv) If, at any time, EPA determines that the SWMP does not meet permit requirements.
- d. Transfer of Ownership, Operational Authority, or Responsibility for SWMP Implementation: The permittee(s) shall implement the SWMP:
 - (i) On all new areas added to their portion of the MS4 (or for which they become responsible for implementation of stormwater quality controls) as expeditiously as possible, but not later than one (1) year from addition of the new areas. Implementation may be accomplished in a phased manner to allow additional time for controls that cannot be implemented immediately;

- (ii) Within ninety (90) days of a transfer of ownership, operational authority, or responsibility for SWMP implementation, the permittee(s) shall have a plan for implementing the SWMP on all affected areas. The plan may include schedules for implementation; and information on all new annexed areas and any resulting updates required to the SWMP shall be submitted in the annual report.
7. **Retention of Program Records.** The permittee shall retain SWMP records developed in accordance with Part I.D, Part IV.P, and Part VI for at least five (5) years after coverage under this permit terminates.
 8. **Qualifying State, Tribal or Local Program.** The permittee may substitute the BMPs and measurable goals of an existing storm water pollution control program to qualify for compliance with one or more of the minimum control measures if the existing measure meets the requirements of the minimum control measure as established in Part I.D.5

PART II. NUMERIC DISCHARGE LIMITATIONS

A. DISCHARGE LIMITATIONS. Reserved

PART III. MONITORING, ASSESSMENT, AND REPORTING REQUIREMENTS:

A. MONITORING AND ASSESSMENT

The permittee must develop, in consultation with NMED and EPA (and affected Tribes if monitoring locations would be located on Tribal lands), and implement a comprehensive monitoring and assessment program designed to meet the following objectives:

- Assess compliance with this permit;
- Assess the effectiveness of the permittee's stormwater management program;
- Assess the impacts to receiving waters resulting from stormwater discharges;
- Characterize stormwater discharges;
- Identify sources of elevated pollutant loads and specific pollutants;
- Detect and eliminate illicit discharges and illegal connections to the MS4; and
- Assess the overall health and evaluate long-term trends in receiving water quality.

The permittee shall select specific monitoring locations sufficient to assess effects of storm water discharges on receiving waters. The monitoring program may take advantage of monitoring stations/efforts utilized by the permittees or others in previous stormwater monitoring programs or other water quality monitoring efforts. Data collected by others at such stations may be used to satisfy part, or all, of the permit monitoring requirements provided the data collection by that party meets the requirements established in Part III.A.1 throughout Part III.A.5. The comprehensive monitoring and assessment program shall be described in the SWMP document and the results must be provided in each annual report.

Implementation of the comprehensive monitoring and assessment program may be achieved through participation with other permittees to satisfy the requirements of Part III.A.1 throughout Part III.A.5 below in lieu of creating duplicate program elements for each individual permittee.

1. **Wet Weather Monitoring:** The permittees shall conduct wet weather monitoring to gather information on the response of receiving waters to wet weather discharges from the MS4 during both wet season (July 1 through October 31) and dry season (November 1 through June 30). Wet Weather Monitoring shall be conducted at outfalls, internal sampling stations, and/or in-stream monitoring locations at each water of the US that runs in each entity or entities' jurisdiction(s). Permittees may choose either Option A or Option B below:
 - a. *Option A:* Individual monitoring
 - (i) Class A: Perform wet weather monitoring at a location coming into the MS4 jurisdictional area (upstream) and leaving the MS4 jurisdictional area (downstream), see Appendix D. Monitor for TSS, TDS, COD, BOD₅, DO, oil and grease, *E.coli*, pH, total kjeldahl nitrogen, nitrate plus nitrite, dissolved phosphorus, total ammonia plus organic nitrogen, total phosphorus, PCBs and gross alpha. Monitoring of temperature shall be also conducted at outfalls and/or Rio Grande monitoring locations. Phase I permittees must include additional parameters from monitoring conducted under permit NMS000101 (from last 10 years) whose mean values are at or above a WQS. Permittee must sample these pollutants a minimum of 10 events during the permit term with at least 5 events in wet season and 4 events in dry season.
 - (ii) Class B, C, and D: Perform wet weather monitoring at a location coming into the MS4 jurisdictional area (upstream) and leaving the MS4 jurisdictional area (downstream), see Appendix D. Monitor for TSS, TDS, COD, BOD₅, DO, oil and grease, *E.coli*, pH, total kjeldahl nitrogen, nitrate plus nitrite, dissolved phosphorus, total ammonia plus organic nitrogen, total phosphorus, PCBs and gross alpha. Monitoring of temperature shall be also

conducted at outfalls and/or Rio Grande monitoring locations. If applicable, include additional parameters from monitoring conducted under permits NMR040000 or/and NMR040001 whose mean values are at or above a WQS; sample these pollutants a minimum of 8 events per location during the permit term with at least 4 events in wet season and 2 events in dry season.

b. *Option B: Cooperative Monitoring Program*

Develop a cooperative wet weather monitoring program with other permittees in the Middle Rio Grande watershed (see map in Appendix A). The program will monitor waters coming into the watershed (upstream) and leaving the watershed (downstream), see suggested sampling locations in Appendix D. The program must include sampling for TSS, TDS, COD, BOD5, DO, oil and grease, *E. coli*, pH, total kjeldahl nitrogen, nitrate plus nitrite, dissolved phosphorus, total ammonia plus organic nitrogen, total phosphorus, PCBs and Gross alpha. Monitoring of temperature shall be also conducted at outfalls and/or Rio Grande monitoring locations. Permittees must include additional parameters from monitoring conducted under permits NMS000101, NMR040000 or/and NMR040001 whose mean values are at or above a WQS. The monitoring program must sample the pollutants for a minimum of 7 storm events per location during the permit term with at least 3 events wet season and 2 events in dry season.

Note: Seasonal monitoring periods are: Wet Season: July 1 through October 31; Dry Season: November 1 through June 30.

- c. Wet weather monitoring shall be performed only when the predicted (or actual) rainfall magnitude of a storm event is greater than 0.25 inches and an antecedent dry period of at least forty-eight (48) hours after a rain event greater than 0.1 inch in magnitude is satisfied. Monitoring methodology will consist of collecting a minimum of four (4) grab samples spaced at a minimum interval of fifteen (15) minutes each (or a flow weighted automatic composite, see Part III.A.5.a.(i)). Individual grab samples shall be preserved and delivered to the laboratory where samples will be combined into a single composite sample from each monitoring location.
- d. Monitoring methodology at each MS4 monitoring location shall be collected during any portion of the monitoring location's discharge hydrograph (i.e. first flush, rising limb, peak, and falling limb) after a discernible increase in flow at the tributary inlet.
- e. The permittee must comply with the schedules contained in Table 10. The results of the Wet Weather Monitoring must be provided in each annual report.
- f. DO, pH, conductivity, and temperature shall be analyzed in the field within fifteen (15) minutes of sample collection.
- g. Alternate wet weather monitoring locations established in Part III.A.1.a or Part III.A.1.b may be substituted for just cause during the term of the permit. Requests for approval of alternate monitoring locations shall be made to the EPA and NMED in writing and include the rationale for the requested monitoring station relocation. Unless disapproved by the EPA, use of an alternate monitoring location (except for those with numeric effluent limitations) may commence thirty (30) days from the date of the request. For monitoring locations where numeric effluent limitations have been established, the permit must be modified prior to substitution of alternate monitoring locations. At least six (6) samples shall be collected during the first year of monitoring at substitute monitoring locations. If there are less than six sampleable events, this should be document for reporting purposes.

- h. Response to monitoring results: The monitoring program must include a contingency plan for collecting additional monitoring data within the MS4 or at additional appropriate instream locations should monitoring results indicate that MS4 discharges may be contributing to instream exceedances of WQS. The purpose of this additional monitoring effort would be to identify sources of elevated pollutant loadings so they could be addressed by the SWMP.

Table 10. Wet Weather Monitoring Program Implementation Schedules:

Activity	Permittee Class				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census **)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
Submit wet weather monitoring preference to EPA (i.e., individual monitoring program vs. cooperative monitoring program) with NOI submittals	NOI submittal Deadline (see Table 1)	NOI submittal Deadline (see Table 1)	NOI submittal Deadline (see Table 1)	NOI submittal Deadline (see Table 1)	NOI submittal Deadline (see Table 1)
Submit a detailed description of the monitoring scheme to EPA and NMED for approval. The monitoring scheme should include: a list of pollutants; a description of monitoring sites with an explanation of why those sites were selected; and a detailed map of all proposed monitoring sites	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	Eleven (11) months from effective date of permit	Eleven (11) months from effective date of permit	Twelve (12) months from effective date of permit
Submit certification that all wet weather monitoring sites are operational and begin sampling	Eleven (11) months from effective date of permit	Eleven (11) months from effective date of permit	Thirteen (13) months from effective date of permit	Thirteen (13) months from effective date of permit	Fourteen (14) months from effective date of permit
Update SWMP document and submit annual reports	Annually	Annually	Annually	Annually	Annually

(**) or MS4s designated by the Director

Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

2. **Dry Weather Discharge Screening of MS4:** Each permittee shall identify, investigate, and address areas within its jurisdiction that may be contributing excessive levels of pollutants to the Municipal Separate Storm Sewer System as a result of dry weather discharges (i.e., discharges from separate storm sewers that occur without the direct influence of runoff from storm events, e.g. illicit discharges, allowable non-stormwater, groundwater infiltration, etc.). Due to the arid and semi-arid conditions of the area, the dry weather discharges screening program may be carried out during both wet season (July 1 through October 31) and dry Season (November 1 through June 30). Results of the assessment

shall be provided in each annual report. This program may be coordinated with the illicit discharge detection and elimination program required in Part I.D.5.e. The dry weather screening program shall be described in the SWMP and comply with the schedules contained in Part I.D.5.e.(iii). The permittee shall

- a. Include sufficient screening points to adequately assess pollutant levels from all areas of the MS4.
 - b. Screen for, at a minimum, BODs, sediment or a parameter addressing sediment (e.g., TSS or turbidity), E. coli, Oil and Grease, nutrients, any pollutant that has been identified as cause of impairment of a waterbody receiving discharges from that portion of the MS4, including temperature.
 - c. Specify the sampling and non-sampling techniques to be issued for initial screening and follow-up purposes. Sample collection and analysis need not conform to the requirements of 40 CFR Part 136; and
 - d. Perform monitoring only when an antecedent dry period of at least seventy-two (72) hours after a rain event greater than 0.1 inch in magnitude is satisfied. Monitoring methodology shall consist of collecting a minimum of four (4) grab samples spaced at a minimum interval of fifteen (15) minutes each. Grab samples will be combined into a single composite sample from each station, preserved, and delivered to the laboratory for analysis. A flow weighted automatic composite sample may also be used.
3. **Floatable Monitoring:** The permittees shall establish locations for monitoring/assessing floatable material in discharges to and/or from their MS4. Floatable material shall be monitored at least twice per year at priority locations and at minimum of two (2) stations except as provided in Part III.A.3. below. The amount of collected material shall be estimated in cubic yards.
- a. One (1) station should be located in the North Diversion (only applicable to the COA and AMAFCA).
 - b. Non-traditional MS4 as defined in Part VII shall sample/assess at one (1) station.
 - c. Phase II MS4s shall sample/assess at one (1) station within their jurisdiction or participate in a cooperative floatable monitoring plan addressing impacts on perennial waters of the US on a larger watershed basis.

A cooperative monitoring program may be established in partnership with other MS4s to monitor and assess floatable material in discharges to and/or from a joint jurisdictional area or watershed basis.

4. **Industrial and High Risk Runoff Monitoring** (Applicable only to Class A permittees): The permittees shall monitor stormwater discharges from Type 1 and 2 industrial facilities which discharge to the MS4 provided such facilities are located in their jurisdiction. (Note: if no such facilities are in the permittee's jurisdiction, the permittee must certify that this program element does not apply). The permittee shall:
- a. Conduct analytical monitoring of Type 1 facilities that discharge to the MS4. Type 1 facilities are municipal landfills; hazardous waste treatment, disposal and recovery facilities; facilities that are subject to EPCRA Title III, Section 313; and industrial facilities the permittee(s) determines are contributing a substantial pollutant loading to the MS4.
 - (i) The following parameters shall be monitored:
 - any pollutants limited in an existing NPDES permit to a subject facility;

- oil and grease;
 - chemical oxygen demand (COD);
 - pH;
 - biochemical oxygen demand, five-day (BOD₅);
 - total suspended solids (TSS);
 - total phosphorous;
 - total Kjeldahl nitrogen (TKN);
 - nitrate plus nitrite nitrogen;
 - any discharge information required under 40 CFR §122.21(g)(7)(iii) and (iv);
 - total cadmium;
 - total chromium;
 - total copper;
 - total lead;
 - total nickel;
 - total silver;
 - total zinc; and,
 - PCBs.
- (ii) Frequency of monitoring shall be established by the permittee(s), but may not be less than once per year;
- (iii) In lieu of the above parameter list, the permittee(s) may alter the monitoring requirement for any individual Type 1 facility:
- (a) To coincide with the corresponding industrial sector-specific monitoring requirements of the 2008 Multi-Sector General Stormwater Permit or any applicable general permit issued after September 2008. This exception is not contingent on whether a particular facility is actually covered by the general permit; or
 - (b) To coincide with the monitoring requirements of any individual permit for the stormwater discharges from that facility, and
 - (c) Any optional monitoring list must be supplemented by pollutants of concern identified by the permittee(s) for that facility.
- b. Conduct appropriate monitoring (e.g. analytic, visual), as determined by the permittee(s), at Type 2 facilities that discharge to the MS4. Type 2 facilities are other municipal waste treatment, storage, or disposal facilities (e.g. POTWs, transfer stations, incinerators) and industrial or commercial facilities the permittee(s) believed contributing pollutants to the MS4. The permittee shall include in each annual report, a list of parameters of concern and monitoring frequencies required for each type of facility.
- c. May use analytical monitoring data, on a parameter-by-parameter basis, that a facility has collected to comply with or apply for a State or NPDES discharge permit (other than this permit), so as to avoid unnecessary cost and duplication of effort;
- d. May allow the facility to test only one (1) outfall and to report that the quantitative data also apply to the substantially identical outfalls if:
- (i) A Type 1 or Type 2 industrial facility has two (2) or more outfalls with substantially identical effluents, and

- (ii) Demonstration by the facility that the stormwater outfalls are substantially identical, using one (1) or all of the following methods for such demonstration. The NPDES Stormwater Sampling Guidance Document (EPA 833-B-92-001), available on EPA's website at provides detailed guidance on each of the three options: (1) submission of a narrative description and a site map; (2) submission of matrices; or (3) submission of model matrices.
- b. May accept a copy of a "no exposure" certification from a facility made to EPA under 40 CFR §122.26(g), in lieu of analytic monitoring.

5. **Additional Sample Type, Collection and Analysis:**

- a. **Wet Weather (or Storm Event) Discharge Monitoring:** If storm event discharges are collected to meet the objectives of the Comprehensive Monitoring and Assessment Program required in Part III.A (e.g., assess compliance with this permit; assess the effectiveness of the permittee's stormwater management program; assess the impacts to receiving waters resulting from stormwater discharges), the following requirements apply:
 - (i) **Composite Samples:** Flow-weighted composite samples shall be collected as follows:
 - (a) **Composite Method –** Flow-weighted composite samples may be collected manually or automatically. For both methods, equal volume aliquots may be collected at the time of sampling and then flow-proportioned and composited in the laboratory, or the aliquot volume may be collected based on the flow rate at the time of sample collection and composited in the field.
 - (b) **Sampling Duration –** Samples shall be collected for at least the first three (3) hours of discharge. Where the discharge lasts less than three (3) hours, the permittee should report the value. .
 - (c) **Aliquot Collection –** A minimum of three (3) aliquots per hour, separated by at least fifteen (15) minutes, shall be collected. Where more than three (3) aliquots per hour are collected, comparable intervals between aliquots shall be maintained (e.g. six aliquots per hour, at least seven (7) minute intervals).
 - (ii) **Grab Samples:** Grab samples shall be taken during the first two (2) hours of discharge.
- b. **Analytical Methods:** Analysis and collection of samples shall be done in accordance with the methods specified at 40 CFR §136. Where an approved 40 CFR §136 method does not exist, any available method may be used unless a particular method or criteria for method selection (such as sensitivity) has been specified in the permit. The minimum quantification levels (MQLs) in Appendix F are to be used for reporting pollutant data for NPDES permit applications and/or compliance reporting.

Screening level tests may utilize less expensive "field test kits" using test methods not approved by EPA under 40 CFR 136, provided the manufacturers published detection ranges are adequate for the illicit discharge detection purposes.

EPA Method 1668 shall be utilized when PCB water column monitoring is conducted to determine compliance with permit requirements. For purposes of sediment sampling in dry weather as part of a screening program to identify area(s) where PCB control/clean-up efforts may need to be focused, either the Arochlor test (EPA Method 8082) or USGS test method (8093) may be utilized, but must use EPA Method 1668 (latest revision) for confirmation and determination of specific PCB levels at that location.

EPA Method 900.0 shall be utilized when gross alpha water column monitoring is conducted to determine compliance with permit requirements.

B. ANNUAL REPORT

The permittees shall submit an annual report to be submitted by no later than **December 1st**. See suggested form at <http://epa.gov/region6/water/npdes/sw/ms4/index.htm>. The report shall cover the previous year from **July 1st to June 30rd** and include the below separate sections. Additionally, the year one (1) and year four (4) annual report shall include submittal of a complete SWMP revision.

At least forty five (45) days prior to submission of each Annual Report, the permittee must provide public notice of and make available for public review and comment a draft copy of the Annual Report. All public input must be considered in preparation of the final Annual Reports and any changes to the SWMP.

Note: A complete copy of the signed Annual Report should be maintained on site.

1. **SWMP(s) status of implementation**: shall include the status of compliance with all schedules established under this permit and the status of actions required in Parts I, III, and VI.
2. **SWMP revisions**: shall include revisions, if necessary, to the assessments of controls or BMPs reported in the permit application (or NOI for coverage under this permit) under 40 CFR §122.26(d)(2)(v) and §122.34(d)(1)(i) are to be included, as well as a cumulative list of all SWMP revisions during the permit term.

Class A permittees shall include revisions, if necessary, to the fiscal analysis reported in the permit application (or NOI for coverage under this permit) under §122.26(d)(2)(vi).
3. **Performance assessment**: shall include:
 - a. an assessment of performance in terms of measurable goals, including, but not limited to, a description of the number and nature of enforcement actions and inspections, public education and public involvement efforts;
 - b. a summary of the data, including monitoring data, that is accumulated throughout the monitoring year (July 1 to June 30); actual values of representative monitoring results shall be included, if results are above minimum quantification level (MQL); and
 - c. an identification of water quality improvements or degradation.
4. **Annual expenditures**: for the reporting period, with a breakdown for the major elements of the stormwater management program and the budget for the year following each annual report. (Applicable only to Class A permittees)
5. **Annual Report Responsibilities for Cooperative Programs**: preparation of a system-wide report with cooperative programs may be coordinated among cooperating MS4s and then used as part of individual Annual Reports. The report of a cooperative program element shall indicate which, if any, permittee(s) have failed to provide the required information on the portions of the MS4 for which they are responsible to the cooperation permittees.
 - a. Joint responsibility for reports covering cooperative programs elements shall be limited to participation in preparation of the overview for the entire system and inclusion of the identity of any permittee who failed to provide input to the annual report.

- b. Individual permittees shall be individually responsible for content of the report relating to the portions of the MS4 for which they are responsible and for failure to provide information for the system-wide annual report no later than July 31st of each year.
6. **Public Review and Comment:** a brief summary of any issues raised by the public on the draft Annual Report, along with permittee's responses to the public comments.
7. **Signature on Certification of Annual Reports:** The annual report shall be signed and certified, in accordance with Part IV.H and include a statement or resolution that the permittee's governing body or agency (or delegated representative) has reviewed or been apprised of the content of the Annual Report. Annual report shall be due no later than December 1st of each year. A complete copy of the signed Annual Report should be maintained on site.

C. CERTIFICATION AND SIGNATURE OF RECORDS.

All reports required by the permit and other information requested by the EPA shall be signed and certified in accordance with Part IV.H.

D. REPORTING: WHERE AND WHEN TO SUBMIT

1. Monitoring results (Part III.A.1, Part III.A.3, Part III.A.5.a) obtained during the reporting period running from July 1st to June 30th shall be submitted on discharge monitoring report (DMR) forms along with the annual report required by Part III.B. A separate DMR form is required for each monitoring period (season) specified in Part III.A.1. If any individual analytical test result is less than the minimum quantification level (MQL) listed for that parameter, then a value of zero (0) may be used for that test result for the discharge monitoring report (DMR) calculations and reporting requirements. The annual report shall include the actual value obtained, if test result is less than the MQL (See Appendix F).
2. Signed copies of DMRs required under Part III, the Annual Report required by Part III.B, and all other reports required herein, shall be submitted in electronic form to R6_MS4Permits@epa.gov (note: there is an underscore between R6 and MS4).

Copy of a suggested Annual Report Format is located in EPA R6 website:
<http://epa.gov/region6/water/npdes/sw/ms4/index.htm>.

Electronic submittal of the documents required in the permit using a compatible Integrated Compliance Information System (ICIS) format would be allowed if available.

3. Requests for SWMP updates, modifications in monitoring locations, or application for an individual permit shall, be submitted to,:

U.S. EPA, Region 6
Water Quality Protection Division
Operations Support Office (6WQ-O)
1445 Ross Avenue
Dallas, Texas 75202-2733

4. Additional Notification. Permittee(s) shall also provide copies of NOIs, DMRs, annual reports, NOTs, requests for SWMP updates, items for compliance with permit requirements for Compliance with Water Quality Standards in Part I.C.1, TMDL's reports established in Part I.C.2, monitoring scheme, reports, and certifications required in Part III.A.1, programs or changes in monitoring locations, and all other reports required herein, to:

New Mexico Environment Department
Attn: Bruce Yurdin, Program Manager
Surface Water Quality Bureau
Point Source Regulation Section
P.O. Box 5469
Santa Fe, New Mexico 87502

Pueblo of Sandia Environment Department
Attn: Scott Bulgrin, Water Quality Manager
481 Sandia Loop
Bernalillo, NM 87004

(Note: Only those MS4s with discharges upstream of or to waters under the jurisdiction of the Pueblo of Sandia: AMAFCA, Sandoval County, Village of Corrales, City of Rio Rancho, Town of Bernalillo, SSCAFCA, and ESCAFCA)

Pueblo of Isleta
Attn: Ramona M. Montoya, Environment Division Manager
P.O. Box 1270
Isleta NM 87022

(Notes: Only the City of Albuquerque, Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA), New Mexico Department of Transportation (NMDOT) District 3, KAFB (Kirtland Air Force Base), Sandia Labs (DOE), and Bernalillo County). All parties submitting an NOI or NOT shall notify the Pueblo of Isleta in writing that a NOI or NOT has been submitted to EPA

Water Resources Division Manager
Pueblo of Santa Ana
2 Dove Road
Santa Ana Pueblo, New Mexico 87004

(Note: Only those MS4s with discharges upstream of or to waters under the jurisdiction of the Pueblo of Santa Ana)

PART IV. STANDARD PERMIT CONDITIONS

A. DUTY TO COMPLY.

The permittee(s) must comply with all conditions of this permit insofar as those conditions are applicable to each permittee, either individually or jointly. Any permit noncompliance constitutes a violation of the Clean Water Act (The Act) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

B. PENALTIES FOR VIOLATIONS OF PERMIT CONDITIONS.

The EPA will adjust the Civil and administrative penalties listed below in accordance with the Civil Monetary Penalty Inflation Adjustment Rule (Federal Register: Dec. 31, 1996, Volume 61, No. 252, pages 69359-69366, as corrected, March 20, 1997, Volume 62, No. 54, pages 13514-13517) as mandated by the Debt Collection Improvement Act of 1996 for inflation on a periodic basis. This rule allows EPA's penalties to keep pace with inflation. The Agency is required to review its penalties at least once every four years thereafter and to adjust them as necessary for inflation according to a specified formula. The civil and administrative penalties listed below were adjusted for inflation starting in 1996.

1. Criminal Penalties.

- a. **Negligent Violations:** The Act provides that any person who negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one (1) year, or both.
- b. **Knowing Violations:** The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than three (3) years, or both.
- c. **Knowing Endangerment:** The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury is subject to a fine of not more than \$250,000, or by imprisonment for not more than fifteen (15) years, or both.
- d. **False Statement:** The Act provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the Act, shall upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than two (2) years, or by both. If a conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four (4) years, or by both. (See Section 309(c)(4) of the Act).

2. **Civil Penalties.** The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed \$27,500 per day for each violation.

3. **Administrative Penalties.** The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows:

- a. **Class I penalty:** Not to exceed \$11,000 per violation nor shall the maximum amount exceed \$27,500.

- b. **Class II penalty:** Not to exceed \$11,000 per day for each day during which the violation continues nor shall the maximum amount exceed \$137,500.
- C. DUTY TO REAPPLY.** If the permittee wishes to continue an activity regulated by this permit after the permit expiration date, the permittee must apply for and obtain a new permit. The application shall be submitted at least 180 days prior to expiration of this permit. The EPA may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date. Continuation of expiring permits shall be governed by regulations promulgated at 40 CFR §122.6 and any subsequent amendments.
- D. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- E. DUTY TO MITIGATE.** The permittee(s) shall take all reasonable steps to control or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
- F. DUTY TO PROVIDE INFORMATION.** The permittee(s) shall furnish to the EPA, within a time specified by the EPA, any information which the EPA may request to determine compliance with this permit. The permittee(s) shall also furnish to the EPA upon request copies of records required to be kept by this permit.
- G. OTHER INFORMATION.** When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in any report to the EPA, he or she shall promptly submit such facts or information.
- H. SIGNATORY REQUIREMENTS.** For a municipality, State, or other public agency, all DMRs, SWMPs, reports, certifications or information either submitted to the EPA or that this permit requires be maintained by the permittee(s), shall be signed by either a:
 1. Principal executive officer or ranking elected official; or
 2. Duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described above and submitted to the EPA.
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. A duly authorized representative may thus be either a named individual or any individual occupying a named position.
 3. If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new written authorization satisfying the requirements of this paragraph must be submitted to the EPA prior to or together with any reports, information, or applications to be signed by an authorized representative.
 4. Certification: Any person signing documents under this section shall make the following certification: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my 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 my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- I. PENALTIES FOR FALSIFICATION OF MONITORING SYSTEMS.** The Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by fines and imprisonment described in Section 309 of the Act.
- J. OIL AND HAZARDOUS SUBSTANCE LIABILITY.** Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under section 311 of the Act or section 106 of CERCLA.
- K. PROPERTY RIGHTS.** The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.
- L. SEVERABILITY.** The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.
- M. REQUIRING A SEPARATE PERMIT.**
1. The EPA may require any permittee authorized by this permit to obtain a separate NPDES permit. Any interested person may petition the EPA to take action under this paragraph. The Director may require any permittee authorized to discharge under this permit to apply for a separate NPDES permit only if the permittee has been notified in writing that a permit application is required. This notice shall include a brief statement of the reasons for this decision, an application form (as necessary), a statement setting a deadline for the permittee to file the application, and a statement that on the effective date of the separate NPDES permit, coverage under this permit shall automatically terminate. Separate permit applications shall be submitted to the address shown in Part III.D. The EPA may grant additional time to submit the application upon request of the applicant. If an owner or operator fails to submit, prior to the deadline of the time extension, a separate NPDES permit application as required by the EPA, then the applicability of this permit to the permittee is automatically terminated at the end of the day specified for application submittal.
 2. Any permittee authorized by this permit may request to be excluded from the coverage of this permit by applying for a separate permit. The permittee shall submit a separate application as specified by 40 CFR §122.26(d) for Class A permittees and by 40 CFR §122.33(b)(2) for Class B, C, and D permittees, with reasons supporting the request to the Director. Separate permit applications shall be submitted to the address shown in Part III.D.3. The request may be granted by the issuance of a separate permit if the reasons cited by the permittee are adequate to support the request.
 3. When an individual NPDES permit is issued to a discharger otherwise subject to this permit, or the permittee is authorized to discharge under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. When an individual NPDES permit is denied to an operator otherwise subject to this permit, or the operator is denied for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the date of such denial, unless otherwise specified by the permitting authority.
- N. STATE / ENVIRONMENTAL LAWS.**
1. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by section 510 of the Act.

2. No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

O. PROPER OPERATION AND MAINTENANCE. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of stormwater management programs. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

P. MONITORING AND RECORDS.

1. The permittee must retain records of all monitoring information, including, all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, copies of Discharge Monitoring Reports (DMRs), a copy of the NPDES permit, and records of all data used to complete the NOI for this permit, for a period of at least three years from the date of the sample, measurement, report or application, or for the term of this permit, whichever is longer. This period may be extended by request of the permitting authority at any time.
2. The permittee must submit its records to the permitting authority only when specifically asked to do so. The permittee must retain a description of the SWMP required by this permit (including a copy of the permit language) at a location accessible to the permitting authority. The permittee must make its records, including the NOI and the description of the SWMP, available to the public if requested to do so in writing.
3. Records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The initials or name(s) of the individual(s) who performed the sampling or measurements;
 - c. The date(s) analyses were performed;
 - d. The time(s) analyses were initiated;
 - e. The initials or name(s) of the individual(s) who performed the analyses;
 - f. References and written procedures, when available, for the analytical techniques or methods used; and
 - g. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results.
4. The permittee must maintain, for the term of the permit, copies of all information and determinations used to document permit eligibility under Parts I.A.5.f and Part I.A.3.b.

Q. MONITORING METHODS. Monitoring must be conducted according to test procedures approved under 40 CFR §136, unless other test procedures have been specified in this permit. The minimum quantification levels (MQLs) in Appendix F are to be used for reporting pollutant data for NPDES permit applications and/or compliance reporting.

R. INSPECTION AND ENTRY. The permittee shall allow the EPA or an authorized representative of EPA, or the State, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;

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3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Act, any substance or parameters at any location.
- S. PERMIT ACTIONS.** This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- T. ADDITIONAL MONITORING BY THE PERMITTEE(S).** If the permittee monitors more frequently than required by this permit, using test procedures approved under 40 CFR §136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report (DMR). Such increased monitoring frequency shall also be indicated on the DMR.
- U. ARCHEOLOGICAL AND HISTORIC SITES** (Applicable to areas within the corporate boundary of the City of Albuquerque and Tribal lands). This permit does not authorize any stormwater discharges nor require any controls to control stormwater runoff which are not in compliance with any historic preservation laws.
1. In accordance with the Albuquerque Archaeological Ordinance (Section 2-12-2, 14-16-5, and 14-14-3-4), an applicant for either:
 - a. A preliminary plan for any subdivision that is five acres or more in size; or
 - b. A site development plan or master development plan for a project that is five acres or more in size on property that is zoned SU-1 Special Use, IP Industrial Park, an SU-2 zone that requires site plan review, PC Planned Community with a site, or meets the Zoning Code definition of a Shopping Center must first obtain either a Certificate of No Effect or a Certificate of Approval from the City Archaeologist. Details of the requirements for a Certificate of No Effect or a Certificate of Approval are described in the ordinance. Failure to obtain a certificate as required by ordinance shall subject the property owner to the penalties of §1-1-99 ROA 1994.
 2. If municipal excavation and/or construction projects implementing requirements of this permit will result in the disturbance of previously undisturbed land, and the project is not required to have a separate NPDES permit (e.g. general permit for discharge of stormwater associated with construction activity), then the permittee may seek authorization for stormwater discharges from such sites of disturbance by:
 - a. Submitting, thirty (30) days prior to commencing land disturbance, the following to the State Historic Preservation Officer (SHPO) and to appropriate Tribes and Tribal Historic Preservation Officers for evaluation of possible effects on properties listed or eligible for listing on the National Register of Historic Places:
 - (i) A description of the construction or land disturbing activity and the potential impact that this activity may have upon the ground, and
 - (ii) A copy of a USGS topographic map outlining the location of the project and other ancillary impact areas.
 - (iii) The addresses of the SHPO, Sandia Pueblo, and Isleta Pueblo are:

State Historic Preservation Officer
New Mexico Historic Preservation Division

Bataan Memorial Building
407 Galisteo Street, Ste. 236
Santa Fe, New Mexico 87501

Pueblo of Sandia Environment Department
Attn: Frank Chaves, Environment Director
481 Sandia Loop
Bernalillo, New Mexico 87004

Pueblo of Isleta
Department of Cultural and Historic Preservation
Attn: Daniel Waseta, Director
P.O. Box 1270
Isleta NM 87022

Water Resources Division Manager
Pueblo of Santa Ana
2 Dove Road
Santa Ana Pueblo, New Mexico 87004

3. If the permittee receives a request for an archeological survey or notice of adverse effects from the SHPO, the permittee shall delay such activity until:
 - a. A cultural resource survey report has been submitted to the SHPO for a review and a determination of no effect or no adverse effect has been made, and
 - b. If an adverse effect is anticipated, measures to minimize harm to historic properties have been agreed upon between the permittee and the SHPO.
 4. If the permittee does not receive notification of adverse effects or a request for an archeological survey from the SHPO within thirty (30) days, the permittee may proceed with the activity.
 5. Alternately, the permittee may obtain authorization for stormwater discharges from such sites of disturbance by applying for a modification of this permit. The permittee may apply for a permit modification by submitting the following information to the Permitting Authority 180 days prior to commencing such discharges:
 - a. A letter requesting a permit modification to include discharges from activities subject to this provision, in accordance with the signatory requirements in Part IV.H.
 - b. A description of the construction or land disturbing activity and the potential impact that this activity may have upon the ground; County in which the facility will be constructed; type of facility to be constructed; size area (in acres) that the facility will encompass; expected date of construction; and whether the facility is located on land owned or controlled by any political subdivision of New Mexico; and
 - c. A copy of a USGS topographic map outlining the location of the project and other ancillary impact areas.
- V. **CONTINUATION OF THE EXPIRED GENERAL PERMIT.** If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with the Administrative Procedures Act and remain in force and effect. Any permittee who was granted permit coverage prior to the expiration date will automatically remain covered by the continued permit until the earlier of:

NPDES Permit No. NMR04A000

1. Reissuance or replacement of this permit, at which time the permittee must comply with the Notice of Intent conditions of the new permit to maintain authorization to discharge; or
2. Issuance of an individual permit for your discharges; or
3. A formal permit decision by the permitting authority not to reissue this general permit, at which time the permittee must seek coverage under an alternative general permit or an individual permit.

- W. **PERMIT TRANSFERS:** This permit is not transferable to any person except after notice to the permitting authority. The permitting authority may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act.
- X. **ANTICIPATED NONCOMPLIANCE.** The permittee must give advance notice to the permitting authority of any planned changes in the permitted small MS4 or activity which may result in noncompliance with this permit. (see
- Y. **PROCEDURES FOR MODIFICATION OR REVOCATION:** Permit modification or revocation will be conducted according to 40 CFR 122.62, 122.63, 122.64 and 124.5.

PART V. PERMIT MODIFICATION

A. MODIFICATION OF THE PERMIT. The permit may be reopened and modified, in accordance with 40 CFR §122.62, §122.63, and §124.5, during the life of the permit to address:

1. Changes in the State's Water Quality Management Plan, including Water Quality Standards;
2. Changes in applicable water quality standards, statutes or regulations;
3. A new permittee who is the owner or operator of a portion of the MS4;
4. Changes in portions of the SWMP that are considered permit conditions;
5. Construction activities implementing requirements of this permit that will result in the disturbance of previously undisturbed land and not required to have a separate NPDES permit; or
6. Other modifications deemed necessary by the EPA to meet the requirements of the Act.

B. MODIFICATION OF THE SWMP(s). Only those portions of the SWMPs specifically required as permit conditions shall be subject to the modification requirements of 40 CFR §124.5. Addition of components, controls, or requirements by the permittee(s); replacement of an ineffective or infeasible control implementing a required component of the SWMP with an alternate control expected to achieve the goals of the original control; and changes required as a result of schedules contained in Part VI shall be considered minor changes to the SWMP and not modifications to the permit. (See also Part I.D.6)

C. CHANGES IN REPRESENTATIVE MONITORING SITES. Changes in monitoring sites, other than those with specific numeric effluent limitations (as described in Part III.A.1.g), shall be considered minor modifications to the permit and shall be made in accordance with the procedures at 40 CFR §122.63.

PART VI. SCHEDULES FOR IMPLEMENTATION AND COMPLIANCE.

- A. IMPLEMENTATION AND AUGMENTATION OF THE SWMP(s).** The permittee(s) shall comply with all elements identified in Parts I and III for SWMP implementation and augmentation, and permit compliance. The EPA shall have sixty (60) days from receipt of a modification or augmentation made in compliance with Part VI to provide comments or request revisions. During the initial review period, EPA may extend the time period for review and comment. The permittee(s) shall have thirty (30) days from receipt of the EPA's comments or required revisions to submit a response. All changes to the SWMP or monitoring plans made to comply with schedules in Parts I and III must be approved by EPA prior to implementation.
- B. COMPLIANCE WITH EFFLUENT LIMITATIONS.** Reserved.
- C. REPORTING COMPLIANCE WITH SCHEDULES.** No later than fourteen (14) days following a date for a specific action (interim milestone or final deadline) identified in the Part VI schedule(s), the permittee(s) shall submit a written notice of compliance or noncompliance to the EPA in accordance with Part III.D.
- D. MODIFICATION OF THE SWMP(s).** The permittee(s) shall modify its SWMP, as appropriate, in response to modifications required in Part VI.A. Such modifications shall be made in accordance with Part V.B.

PART VII. DEFINITIONS

All definitions contained in Section 502 of the Act shall apply to this permit and are incorporated herein by reference. Unless otherwise specified, additional definitions of words or phrases used in this permit are as follows:

- (1) **Baseline Load** means the load for the pollutant of concern which is present in the waterbody before BMPs or other water quality improvement efforts are implemented.
- (2) **Best Management Practices (BMPs)** means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
- (3) **Bioretention** means the water quality and water quantity stormwater management practice using the chemical, biological and physical properties of plants, microbes and soils for the removal of pollution from stormwater runoff.
- (4) **Canopy Interception** means the interception of precipitation, by leaves and branches of trees and vegetation that does not reach the soil.
- (5) **Contaminated Discharges:** The following discharges are considered contaminated:
 - Has had a discharge resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 117.21 or 40 CFR 302.6 at any time since November 16, 1987; or
 - Has had a discharge resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 110.6 at any time since November 16, 1987; or
 - Contributes to a violation of an applicable water quality standard.
- (6) **Controls or Control Measures or Measures** means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or control the pollution of waters of the United States. Controls also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
- (7) **Controllable Sources:** Sources, private or public, which fall under the jurisdiction of the MS4.
- (8) **CWA or The Act** means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub.L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483 and Pub. L. 97-117, 33 U.S.C. 1251 et.seq.
- (9) **Co-permittee** means a permittee to a NPDES permit that is only responsible for permit conditions relating to the discharge for which it is operator.
- (10) **Composite Sample** means a sample composed of two or more discrete samples. The aggregate sample will reflect the average water quality covering the compositing or sample period.
- (11) **Core Municipality** means, for the purpose of this permit, the municipality whose corporate boundary (unincorporated area for counties and parishes) defines the municipal separate storm sewer system. (ex. City of Dallas for the Dallas Municipal Separate Storm Sewer System, Harris County for unincorporated Harris County).
- (12) **Direct Connected Impervious Area (DCIA)** means the portion of impervious area with a direct hydraulic connection to the permittee's municipal separate storm sewer system or a waterbody via continuous paved surfaces, gutters, pipes, and other impervious features. Direct connected impervious area typically does not include isolated impervious areas with an indirect hydraulic connection to the municipal separate storm sewer system (e.g., swale or detention basin) or that otherwise drain to a pervious area.
- (13) **Director** means the Regional Administrator or an authorized representative.
- (14) **Discharge** for the purpose of this permit, unless indicated otherwise, means discharges from the municipal separate storm sewer system.
- (15) **Discharge-related activities** include: activities which cause, contribute to, or result in storm water point source pollutant discharges; and measures to control storm water discharges, including the siting, construction and operation of best management practices (BMPs) to control, reduce or prevent storm water pollution.
- (16) **Engineered Infiltration** means an underground device or system designed to accept stormwater and slowly exfiltrates it into the underlying soil. This device or system is designed based on soil tests that define the exfiltration rate.
- (17) **Evaporation** means rainfall that is changed or converted into a vapor.
- (18) **Evapotranspiration** means the sum of evaporation and transpiration of water from the earth's surface to the atmosphere. It includes evaporation of liquid or solid water plus the transpiration of plants.
- (19) **Extended Filtration** means a structural stormwater practice which filters stormwater runoff through vegetation and engineered soil media. A portion of the stormwater runoff drains into an underdrain system which slowly releases it after the storm is over.

- (20) **Facility** means any NPDES "point source" or any other facility (including land or appurtenances thereto) that is subject to regulation under the NPDES program.
- (21) **Flood Control Projects** mean major drainage projects developed to control water quantity rather than quality, including channelization and detention.
- (22) **Flow-weighted composite sample** means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge.
- (23) **Grab Sample** means a sample which is taken from a wastestream on a one-time basis without consideration of the flow rate of the wastestream and without consideration of time.
- (24) **Green Infrastructure** means an array of products, technologies, and practices that use natural systems – or engineered systems that mimic natural processes – to enhance overall environmental quality and provide utility services. As a general principal, Green Infrastructure techniques use soils and vegetation to infiltrate, evapotranspire, and/or recycle stormwater runoff. When used as components of a stormwater management system, Green Infrastructure practices such as green roofs, porous pavement, rain gardens, and vegetated swales can produce a variety of environmental benefits. In addition to effectively retaining and infiltrating rainfall, these technologies can simultaneously help filter air pollutants, reduce energy demands, mitigate urban heat islands, and sequester carbon while also providing communities with aesthetic and natural resource benefits.
- (25) **Hydromodification** means the alteration of the natural flow of water through a landscape, and often takes the form of channel straightening, widening, deepening, or relocating existing, natural stream channels. It also can involve excavation of borrow pits or canals, building of levees, streambank erosion, or other conditions or practices that change the depth, width or location of waterways. Hydromodification usually results in water quality and habitat impacts.
- (26) **Illicit connection** means any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.
- (27) **Illicit discharge** means any discharge to a municipal separate storm sewer that is not composed entirely of stormwater except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.
- (28) **Impervious Area (IA)** means conventional pavements, sidewalks, driveways, roadways, parking lots, and rooftops.
- (29) **Indian Country** means:
- All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation;
 - All dependent Indian communities within the borders of the United States whether within the originally or subsequently acquired territory thereof, and whether within or without the limits of a state; and
 - All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same. This definition includes all land held in trust for an Indian tribe.
- (30) **Individual Residence** means, for the purposes of this permit, single or multi-family residences. (e.g. single family homes and duplexes, town homes, apartments, etc.)
- (31) **Infiltration** means the process by which stormwater penetrates the soil.
- (32) **Land application unit** means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for treatment or disposal.
- (33) **Landfill** means an area of land or an excavation in which wastes are placed for permanent disposal, and which is not a land application unit, surface impoundment, injection well, or waste pile.
- (34) **Land Use** means the way in which land is used, especially in farming and municipal planning.
- (35) **Large or medium municipal separate storm sewer system** means all municipal separate storm sewers that are either:
- located in an incorporated place (city) with a population of 100,000 or more as determined by the latest Decennial Census by the Bureau of Census (these cities are listed in Appendix F of 40 CFR §122); or
 - located in the counties with unincorporated urbanized populations of 100,000 or more, except municipal separate storm sewers are located in the incorporated places, townships, or towns within such counties (these counties are listed in Appendices H and I of 40 CFR §122); or
 - owned or operated by a municipality other than those described in Paragraph (i) or (ii) and that are designated by the Regional Administrator as part of the large or medium municipal separate storm sewer system.
- (36) **MEP** means maximum extent practicable, the technology-based discharge standard for municipal separate storm sewer systems to reduce pollutants in storm water discharges. A discussion of MEP as it applies to small MS4s is found at 40 CFR 122.34. CWA section 402(p)(3)(B)(iii) requires that a municipal permit "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system design, and engineering methods, and other provisions such as the Administrator or the State determines appropriate for the control of such pollutants.
- (37) **Measurable Goal** means a quantitative measure of progress in implementing a component of storm water management program.

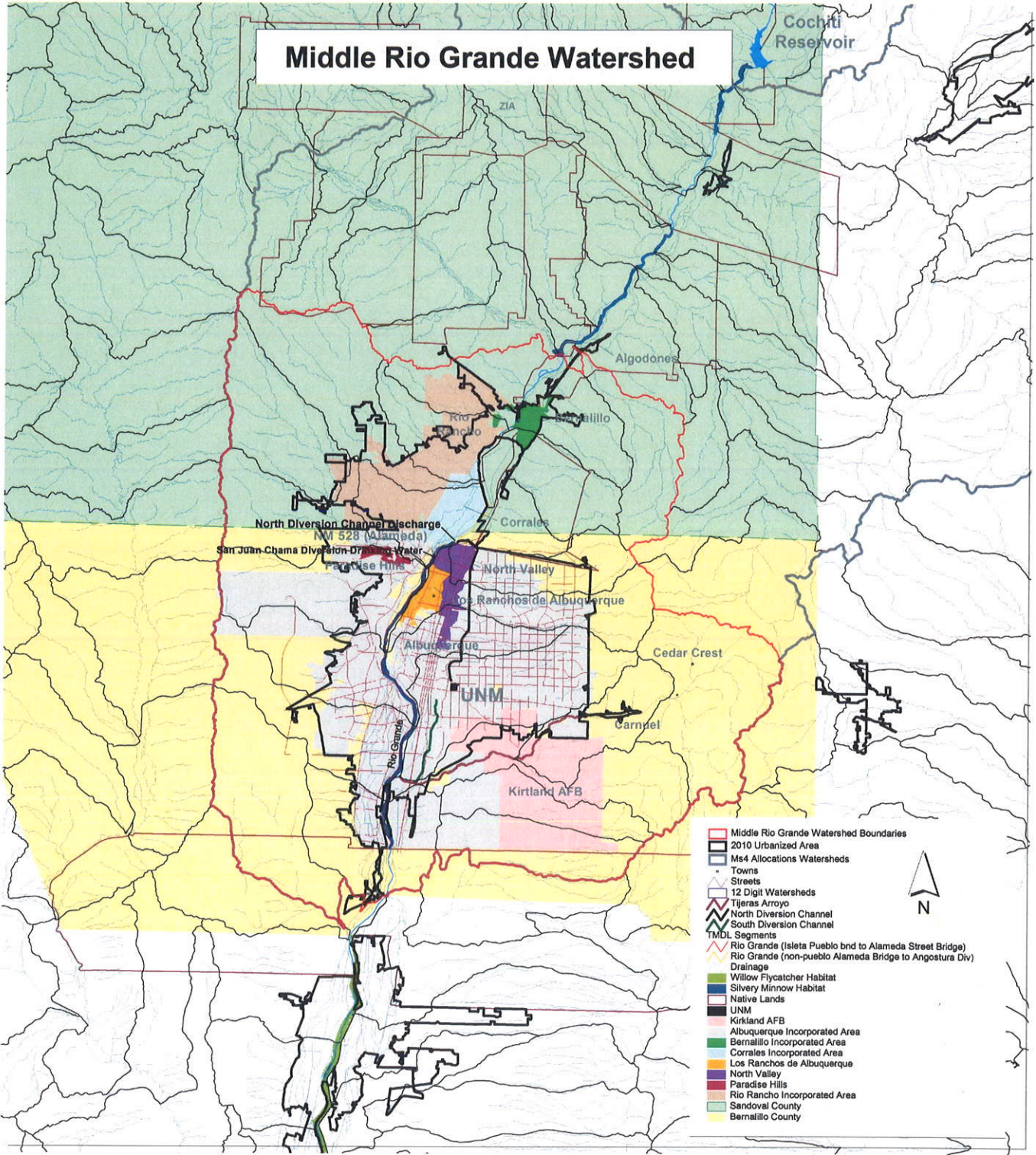
- (38) **Municipal Separate Storm Sewer (MS4)** means all separate storm sewers that are defined as “large” or “medium” or “small” municipal separate storm sewer systems pursuant to paragraphs 40 CFR §122.26(b)(4), (b)(7), and (b)(16), or designated under paragraph 40 CFR §122.26(a)(1)(v).
- (39) **Non-traditional MS4** means systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings. 40 CFR 122.26(a)(16)(iii).
- (40) **NOI** means Notice of Intent to be covered by this permit (see Part I.B of this permit)
- (41) **NOT** means Notice of Termination.
- (42) **Outfall** means a *point source* as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.
- (43) **Percent load reduction** means the difference between the baseline load and the target load divided by the baseline load.
- (44) **Owner or operator** means the owner or operator of any “facility or activity” subject to regulation under the NPDES program.
- (45) **Permittee** refers to any person (defined below) authorized by this NPDES permit to discharge to Waters of the United States.
- (46) **Permitting Authority** means EPA, Region 6.
- (47) **Person** means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.
- (48) **Point Source** means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.
- (49) **Pollutant** is defined at 40 CFR 122.2. Pollutant means dredged spoil, solid waste, incinerator residue, filter back-wash, sewage, garbage, sewage sludge, Munitions, chemical waste, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011), heat, wrecked or discarded equipment, rock sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.
- (50) **Pre-development Hydrology**, Predevelopment hydrology is generally the rain volume at which runoff would be produced when a site or an area is in its natural condition, prior to development disturbances. For the Middle Rio Grande area, EPA considers predevelopment conditions to be a mix of woods and desert shrub.
- (51) **Rainfall and Rainwater Harvesting** means the collection, conveyance, and storage of rainwater. The scope, method, technologies, system complexity, purpose, and end uses vary from rain barrels for garden irrigation in urban areas, to large-scale collection of rainwater for all domestic uses.
- (52) **Soil amendment** means adding components to in-situ or native soils to increase the spacing between soil particles so that the soil can absorb and hold more moisture. The amendment of soils changes various other physical, chemical and biological characteristics so that the soils become more effective in maintaining water quality.
- (53) **Storm drainage projects** include stormwater inlets, culverts, minor conveyances and a host of other structures or devices.
- (54) **Storm sewer**, unless otherwise indicated, means a municipal separate storm sewer.
- (55) **Stormwater** means stormwater runoff, snow melt runoff, and surface runoff and drainage.
- (56) **Stormwater Discharge Associated with Industrial Activity** means the discharge from any conveyance which is used for collecting and conveying stormwater and which is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant (See 40 CFR §122.26(b)(14) for specifics of this definition).
- (57) **Target load** means the load for the pollutant of concern which is necessary to attain water quality goals (e.g. applicable water quality standards).
- (58) **Stormwater Management Program (SWMP)** means a comprehensive program to manage the quality of stormwater discharged from the municipal separate storm sewer system. For the purposes of this permit, the Stormwater Management Program is considered a single document, but may actually consist of separate programs (e.g. “chapters”) for each permittee.
- (59) **Targeted controls** means practices implemented to address particular pollutant of concern. For example litter program targets floatables.
- (60) **Time-weighted composite** means a composite sample consisting of a mixture of equal volume aliquots collected at a constant time interval.
- (61) **Total Maximum Daily Load (TMDL)** means a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards. A TMDL is the sum of individual wasteload allocations for point sources (WLA), load allocations for non-point sources and natural background (LA), and must consider seasonal variation and include a margin of safety. The TMDL comes in the form of a technical document or plan.

- (62) **Toxicity** means an LC50 of <100% effluent.
- (63) **Waste load allocation (WLA)** means the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation.
- (64) **Wetlands** means those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.
- (65) **Whole Effluent Toxicity (WET)** means the aggregate toxic effect of an effluent measured directly by a toxicity test.

PART VIII PERMIT CONDITIONS APPLICABLE TO SPECIFIC AREAS OR INDIAN COUNTY LANDS

Reserved

Appendix A - Middle Rio Grande Watershed Jurisdictions and Potential Permittees



Middle Rio Grande Watershed Jurisdictions and Potential Permittees

Class A:

City of Albuquerque
AMAFCA (Albuquerque Metropolitan Arroyo Flood Control Authority)
UNM (University of New Mexico)
NMDOT (New Mexico Department of Transportation District 3)

Class B:

Bernalillo County
Sandoval County
Village of Corrales
City of Rio Rancho
Los Ranchos de Albuquerque
KAFB (Kirtland Air Force Base)
Town of Bernalillo
EXPO (State Fairgrounds/Expo NM)
SSCAFCA (Southern Sandoval County Arroyo Flood Control Authority)
NMDOT (New Mexico Department of Transportation District 3)

Class C:

ESCAFCA (Eastern Sandoval County Arroyo Flood Control Authority)
Sandia Labs (DOE)

Class D:

Pueblo of Sandia
Pueblo of Isleta
Pueblo of Santa Ana

Note: There could be additional potential permittees.

NMDOT Dist. 3 falls into the Class A type permittee, if an individual program is developed or/and implemented. The timelines for cooperative programs should be used, if NMDOT Dist. 3 cooperates with other permittees.

Appendix B - Total Maximum Daily Loads (TMDLs)

B.1. Approved Total Maximum Daily Loads (TMDLs) Tables

A bacteria TMDL for the Middle Rio Grande was approved by the New Mexico Water Quality Control Commission on April 13, 2010, and by EPA on June 30, 2010. The new TMDL modifies: 1) the indicator parameter for bacteria from fecal coliform to *E. coli*, and 2) the way the WLAs are assigned

Discharges to Impaired Waters – TMDL Waste Load Allocations (WLAs)² for *E. coli*: Rio Grande¹

Stream Segment	Stream Name	Permittee Class	FLOW CONDITIONS & ASSOCIATED WLA (cfu/day) ³				
			High	Moist	Mid-Range	Dray	Low
2105_50	Isleta Pueblo boundary to Alameda Street Bridge (based on flow at USGS Station NM08330000)	Class A ⁴	3.36x10 ¹⁰	8.41 x10 ¹⁰	5.66 x10 ¹⁰	2.09 x10 ¹⁰	4.67 x10 ⁹
		Class B ⁵ Class C ⁶	3.73 x10 ⁹	9.35 x10 ⁹	6.29 x10 ⁹	2.32 x10 ⁹	5.19 x10 ⁸
2105.1_00	non-Pueblo Alameda Bridge to Angostura Diversion (based on flow at USGS Station NM08329928)	Class A	5.25 x10 ¹⁰	1.52 x10 ¹⁰	—	5.43 x10 ⁹	2.80 x10 ⁹
		Class B Class C	2.62 x10 ¹¹	7.59 x10 ¹⁰	—	2.71 x10 ¹⁰	1.40 x10 ¹⁰

- 1 Total Maximum Daily Load for the Middle Rio Grande Watershed, NMED, 2010.
- 2 The WLAs for the stormwater MS4 permit was based on the percent jurisdiction area approach. Thus, the MS4 WLAs are a percentage of the available allocation for each hydrologic zone, where the available allocation = TMDL – WLA – MOS.
- 3 Flow conditions relate to percent of days the flow in the Rio Grande at a USGS Gauge exceeds a particular level: High 0-10%; Moist 10-40%; Mid-Range 40-60%; Dry 60-90%; and Low 90-100%. (Source: Figures 4.3 and 4.4 in 2010 Middle Rio Grande TMDL)
- 4 Phase I MS4s
- 5 Phase II MS4s (2000 Census)
- 6 New Phase II MS4s (2010 Census or MS4s designated by the Director)

Estimating Target Loadings for Particular Monitoring Location:

The Table in B.2 below provides a mechanism to calculate, based on acreage within a drainage area, a target loading value for a particular monitoring location.

B.2. Calculating Alternative Sub-measurable Goals

Individual permittees or a group of permittees seeking alternative sub-measurable goals under C.2.b.(i).(c).B should consult NMED. Preliminary proposals should be submitted with the Notice of Intent (NOI) under Part I.B.2.k according to the due dates specified in Part I.B.1.a of the permit. This proposal shall include, but is not limited to, the following items

B.2.1 Determine base loading for subwatershed areas consistent with TMDL

- a. Using the table below, the permittee must develop a target load consistent with the TMDL for any sampling point in the watershed (even if it includes area outside the jurisdictional area of the permit).

E. coli loading on a per area basis (cfu/sq mi/day)

	high	moist	mid	dry	low
Alameda to Isleta	1.79E+09	4.48E+08	3.02E+08	1.11E+08	2.58E+07
Angostura to Alameda	3.25E+09	9.41E+08	5.19E+08	3.37E+08	1.74E+08

- b. An estimation of the pertinent, subwatershed area that the permittee is responsible for and the basis for determining that area, including the means for excluding any tributary inholdings;
- c. Using the total loading for the watershed (from part a) and the percentage of the watershed area that is part of the permittee(s) jurisdiction (part b) to calculate a base WLA for this subwatershed.

B.2.2 Set Alternative subwatershed targets

- a. Permittee(s) may reallocate WLA within and between subwatershed based on factors including:
 - Population density within the pertinent watershed area;
 - Slope of the waterway;
 - Percent impervious surface and how that value was determined;
 - Stormwater treatment, installation of green infrastructure for the control or treatment of stormwater and stormwater pollution prevention and education programs within specific watersheds
- b. A proposal for an alternative subwatershed target must include the rationale for the factor(s) used

B.2.3 Ensure overall compliance with TMDL WLA allocation

The permittee(s) will provide calculations demonstrating the total WLA under the alternative proposed in (Part II) is consistent with the baseline calculated in (Part I) based on their total jurisdictional area. Permittee(s) will not be allowed to allocate more area within the watershed than is accorded to them under their jurisdictional area. For permittees that work cooperatively, WLA calculations may be combined and used where needed within the sub-watershed amongst the cooperating parties.

WLA calculations must be sent as part of the Notice of Intent to EPA via e-mail at R6_MS4Permits@epa.gov. These calculations must also be sent to:

Sarah Holcomb
 Industrial and Stormwater Team Leader
 NMED Surface Water Quality Bureau
 P.O. Box 5469,

Appendix C - Historic Properties Eligibility Procedures

MS4 operators must determine whether their MS4's storm water discharges, allowable non-storm water discharges, or construction of best management practices (BMPs) to control such discharges, have potential to affect a property that is either listed or eligible for listing on the National Register of Historic Places.

For existing dischargers who do not need to construct BMPs for permit coverage, a simple visual inspection may be sufficient to determine whether historic properties are affected. However, for MS4s which are new storm water dischargers and for existing MS4s which are planning to construct BMPs for permit eligibility, MS4 operators should conduct further inquiry to determine whether historic properties may be affected by the storm water discharge or BMPs to control the discharge. In such instances, MS4 operators should first determine whether there are any historic properties or places listed on the National Register or if any are eligible for listing on the register (e.g., they are "eligible for listing").

Due to the large number of entities seeking coverage under this permit and the limited number of personnel available to State and Tribal Historic Preservation Officers nationwide to respond to inquiries concerning the location of historic properties, EPA suggests that MS4 operators first access the "National Register of Historic Places" information listed on the National Park Service's web page (www.nps.gov/nr/). Addresses for State Historic Preservation Officers and Tribal Historic Preservation Officers are listed in Parts II and III of this appendix, respectively. In instances where a Tribe does not have a Tribal Historic Preservation Officer, MS4 operators should contact the appropriate Tribal government office when responding to this permit eligibility condition. MS4 operators may also contact city, county or other local historical societies for assistance, especially when determining if a place or property is eligible for listing on the register. Tribes that do not currently reside in an area may also have an interest in cultural properties in areas they formerly occupied. Tribal contact information is available at <http://www.epa.gov/region06/6dra/oejta/tribalaffairs/index.html>

The following three scenarios describe how MS4 operators can meet the permit eligibility criteria for protection of historic properties under this permit:

- (1) If historic properties are not identified in the path of an MS4's storm water and allowable non-storm water discharges or where construction activities are planned to install BMPs to control such discharges (e.g., diversion channels or retention ponds), then the MS4 operator has met the permit eligibility criteria under Part I.A.3.b.(i).
- (2) If historic properties are identified but it is determined that they will not be affected by the discharges or construction of BMPs to control the discharge, the MS4 operator has met the permit eligibility criteria under Part I.A.3.b.(ii).
- (3) If historic properties are identified in the path of an MS4's storm water and allowable non-storm water discharges or where construction activities are planned to install BMPs to control such discharges, and it is determined that there is the potential to adversely affect the property, the MS4 operator can still meet the permit eligibility criteria under Part I.A.3.b.(ii) if he/she obtains and complies with a written agreement with the appropriate State or Tribal Historic Preservation Officer which outlines measures the MS4 operator will follow to mitigate or prevent those adverse effects. The operator should notify EPA before exercising this option.

The contents of such a written agreement must be included in the MS4's Storm Water Management Program.

In situations where an agreement cannot be reached between an MS4 operator and the State or Tribal Historic Preservation Officer, MS4 operators should contact EPA for assistance.

The term "adverse effects" includes but is not limited to damage, deterioration, alteration or destruction of the historic property or place. EPA encourages MS4 operators to contact the appropriate State or Tribal Historic Preservation Officer as soon as possible in the event of a potential adverse effect to a historic property.

MS4 operators are reminded that they must comply with applicable State, Tribal and local laws concerning the protection of historic properties and places.

I. Internet Information on the National Register of Historic Places

An electronic listing of the "National Register of Historic Places," as maintained by the National Park Service on its National Register Information System (NRIS), can be accessed on the Internet at www.nps.gov/nr/.

II. State Historic Preservation Officers (SHPO)
SHPO List for areas covered by the permit:

NEW MEXICO

Historic Preservation Div, Office of Cultural Affairs
Bataan Memorial Building, 407 Galisteo Street, Suite 236
Santa Fe, NM 87501
505-827-6320 FAX: 505-827-6338

III. Tribal Historic Preservation Officers
(THPO)

In instances where a Tribe does not have a Tribal Historic Preservation Officer, please contact the appropriate Tribal government office when responding to this permit eligibility condition.

Tribal Historic Preservation Officers:

Mescalero Apache Tribe
P.O. Box 227
Mescalero, New Mexico 88340

Pueblo of Sandia Environment Department
Attn: Frank Chaves, Environment Director
481 Sandia Loop
Bernalillo, New Mexico 87004

Pueblo of Isleta
Department of Cultural and Historic Preservation
Attn: Dr. Henry Walt, THPO
P.O. Box 1270
Isleta NM 87022

Water Resources Division Manager
Pueblo of Santa Ana
2 Dove Road
Santa Ana Pueblo, New Mexico 87004

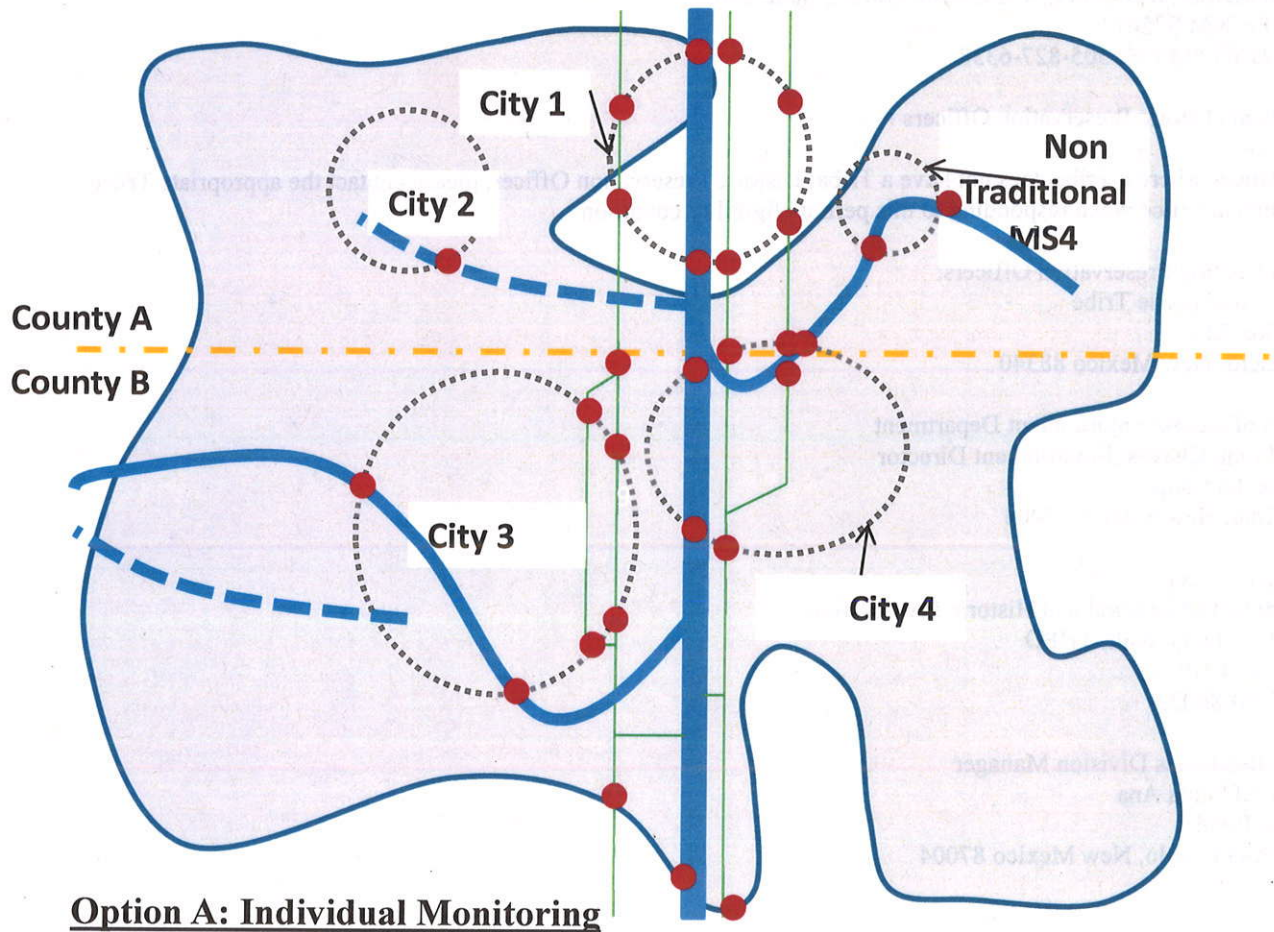
For more information:

National Association of Tribal Historic
Preservation Officers
P.O. Box 19189
Washington, DC 20036-9189
Phone: (202) 628-8476
Fax: (202) 628-2241

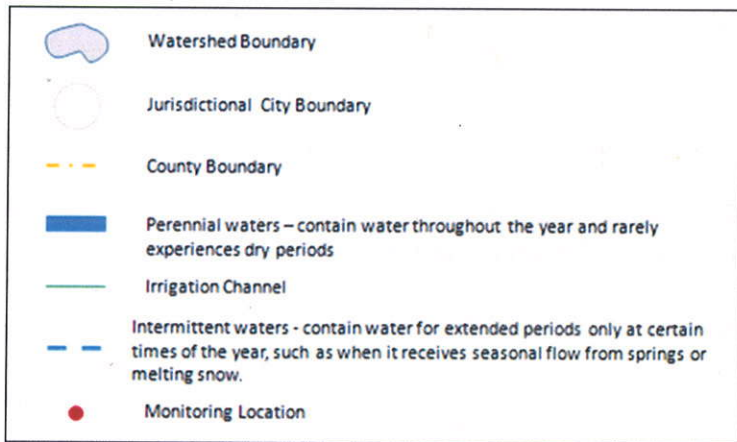
IV. Advisory Council on Historic Preservation

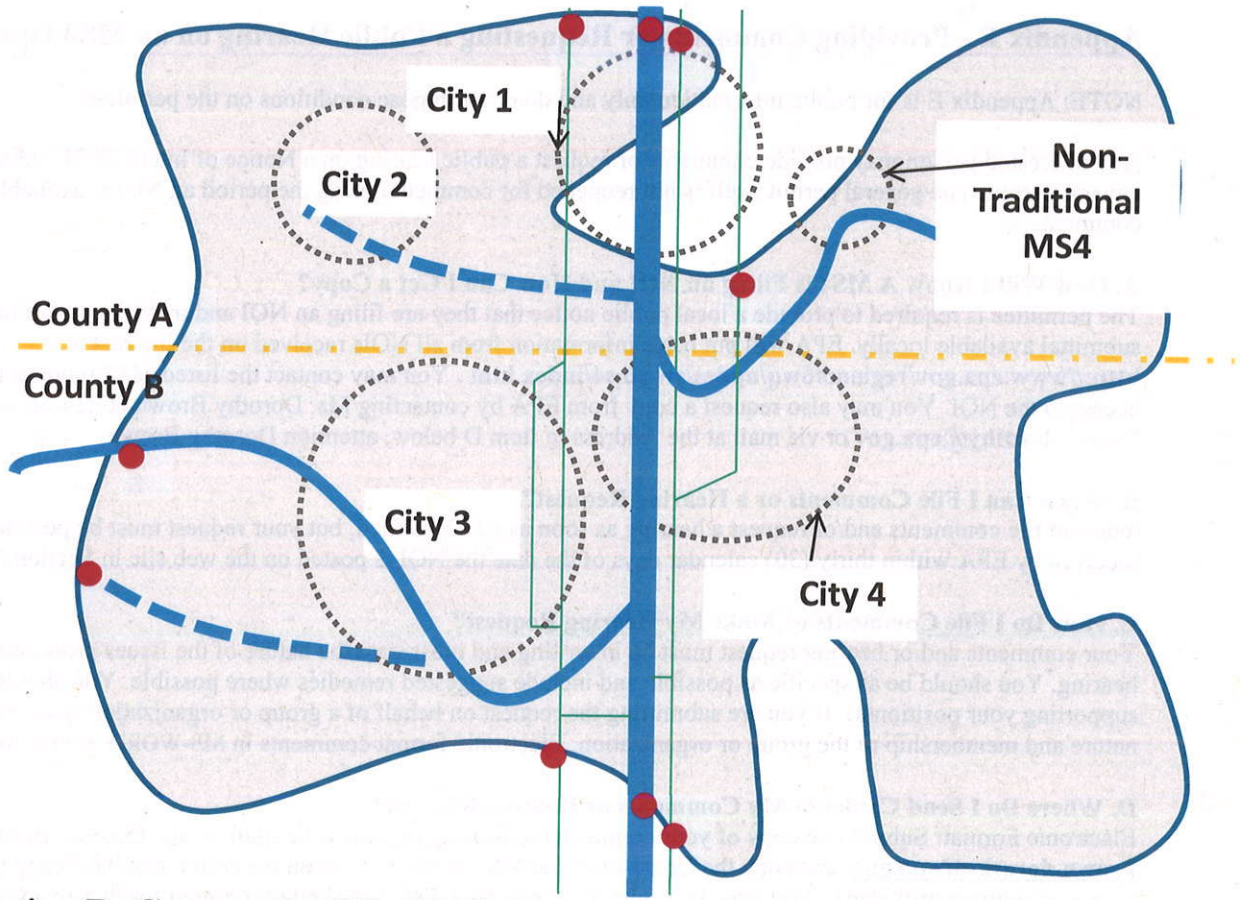
Advisory Council on Historic Preservation, 1100 Pennsylvania Avenue, NW., Suite 803,
Washington, DC 20004 Telephone: (202) 606-8503, Fax: (202) 606-8647/8672, E-mail:
achp@achp.gov

Appendix D - Suggested Initial Phase Sampling Location Concepts – Wet Weather Monitoring

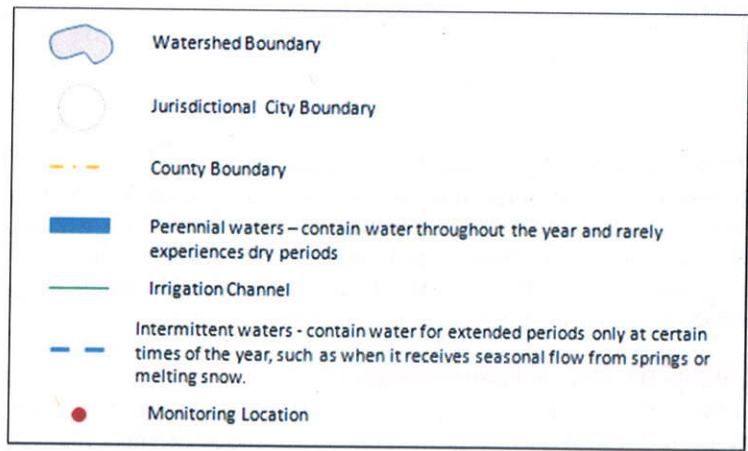


Option A: Individual Monitoring





Option B: Cooperative Monitoring



Appendix E - Providing Comments or Requesting a Public Hearing on an MS4 Operator's NOI

NOTE: Appendix E is for public information only and does not impose conditions on the permittee.

Any interested person may provide comments or request a public hearing on a Notice of Intent (NOI) submitted under this general permit. The general permit itself is not reopened for comment during the period an NOI is available for review and comment.

A. How Will I Know A MS4 is Filing an NOI and How Can I Get a Copy?

The permittee is required to provide a local public notice that they are filing an NOI and make a copy of the draft NOI submittal available locally. EPA will put basic information from all NOIs received on the Internet at: <http://www.epa.gov/region6/6wq/npdes/sw/sms4/index.htm> . You may contact the listed MS4 representative for local access to the NOI. You may also request a copy from EPA by contacting Ms. Dorothy Brown at 214-665-8141 or brown.dorothy@epa.gov or via mail at the Address in Item D below, attention Dorothy Brown.

B. When Can I File Comments or a Hearing Request?

You can file comments and/or request a hearing as soon as a NOI is filed, but your request must be postmarked or physically received by EPA within thirty (30) calendar days of the date the NOI is posted on the web site in Section A.

C. How Do I File Comments or Make My Hearing Request?

Your comments and/or hearing request must be in writing and must state the nature of the issues proposed to be raised in the hearing. You should be as specific as possible and include suggested remedies where possible. You should include any data supporting your position(s). If you are submitting the request on behalf of a group or organization, you should describe the nature and membership of the group or organization. Electronic format comments in MS-WORD or PDF format are preferred.

D. Where Do I Send Copies of My Comments or Hearing Request?

Electronic Format: Submit one copy of your comments or hearing request via e-mail to Ms. Dorothy Brown at brown.dorothy@epa.gov and copy the Operator of the MS4 at the address on the NOI (send hard copy to MS4 Operator if no e-mail address provided). You may also submit via compact disk or diskette formatted for PCs to addresses for hard copy below. (Hard Copy: You must send an original and one copy of your comments or hearing request to EPA at the address below and a copy to the Operator of the MS4 at the address provided on the NOI)

U.S. EPA Region 6
Water Quality Protection Division (6WQ-NP)
Attn: Dorothy Brown
1445 Ross Ave., Suite 1200
Dallas, TX 75202

E. How Will EPA Determine Whether or Not To Hold a Public Hearing?

EPA will evaluate all hearing requests received on an NOI to determine if a significant degree of public interest exists and whether issues raised may warrant clarification of the MS4 Operator's NOI submittal. EPA will hold a public hearing if a significant amount of public interest is evident. EPA may also, at the Agency's discretion, hold either a public hearing or an informal public meeting to clarify issues related to the NOI submittal. EPA may hold a single public hearing or public meeting covering more than one MS4 (e.g., for all MS4s in an Urbanized Area, etc.).

F. How Will EPA Announce a Public Hearing or Public Meeting?

EPA will provide public notice of the time and place for any public hearing or public meeting in a major newspaper with local distribution and via the Internet at <http://www.epa.gov/region6/6wq/npdes/sw/sms4/index.htm>.

G. What Will EPA Do With Comments on an NOI?

EPA will take all comments made directly or in the course of a public hearing or public meeting into consideration in determining whether or not the MS4 that submitted the NOI is appropriately covered under the general permit. The MS4 operator will have the opportunity to provide input on issues raised. The Director may require the MS4 operator to supplement or amend the NOI submittal in order to be authorized under the general permit or may direct the MS4 Operator to submit an individual permit application. A summary of issues raised and EPA's responses will be made available online at <http://www.epa.gov/region6/6wq/npdes/sw/sms4/index.htm>. A hard copy may also be requested by contacting Ms. Dorothy Brown (see paragraph D)

Appendix F - Minimum Quantification Levels (MQL's)

The following Minimum Quantification Levels (MQL's) are to be used for reporting pollutant data for NPDES permit applications and/or compliance reporting.

POLLUTANTS	MQL µg/l	POLLUTANTS	MQL µg/l
METALS, RADIOACTIVITY, CYANIDE and CHLORINE			
Aluminum	2.5	Molybdenum	10
Antimony	60	Nickel	0.5
Arsenic	0.5	Selenium	5
Barium	100	Silver	0.5
Beryllium	0.5	Thallium	0.5
Boron	100	Uranium	0.1
Cadmium	1	Vanadium	50
Chromium	10	Zinc	20
Cobalt	50	Cyanide	10
Copper	0.5	Cyanide, weak acid dissociable	10
Lead	0.5	Total Residual Chlorine	33
Mercury (*)	0.0005 0.005		
DIOXIN			
2,3,7,8-TCDD	0.00001		
VOLATILE COMPOUNDS			
Acrolein	50	1,3-Dichloropropylene	10
Acrylonitrile	20	Ethylbenzene	10
Benzene	10	Methyl Bromide	50
Bromoform	10	Methylene Chloride	20
Carbon Tetrachloride	2	1,1,2,2-Tetrachloroethane	10
Chlorobenzene	10	Tetrachloroethylene	10
Clorodibromomethane	10	Toluene	10
Chloroform	50	1,2-trans-Dichloroethylene	10
Dichlorobromomethane	10	1,1,2-Trichloroethane	10
1,2-Dichloroethane	10	Trichloroethylene	10
1,1-Dichloroethylene	10	Vinyl Chloride	10
1,2-Dichloropropane	10		
ACID COMPOUNDS			
2-Chlorophenol	10	2,4-Dinitrophenol	50
2,4-Dichlorophenol	10	Pentachlorophenol	5
2,4-Dimethylphenol	10	Phenol	10
4,6-Dinitro-o-Cresol	50	2,4,6-Trichlorophenol	10

POLLUTANTS	MQL µg/l	POLLUTANTS	MQL µg/l
BASE/NEUTRAL			
Acenaphthene	10	Dimethyl Phthalate	10
Anthracene	10	Di-n-Butyl Phthalate	10
Benzidine	50	2,4-Dinitrotoluene	10
Benzo(a)anthracene	5	1,2-Diphenylhydrazine	20
Benzo(a)pyrene	5	Fluoranthene	10
3,4-Benzofluoranthene	10	Fluorene	10
Benzo(k)fluoranthene	5	Hexachlorobenzene	5
Bis(2-chloroethyl)Ether	10	Hexachlorobutadiene	10
Bis(2-chloroisopropyl)Ether	10	Hexachlorocyclopentadiene	10
Bis(2-ethylhexyl)Phthalate	10	Hexachloroethane	20
Butyl Benzyl Phthalate	10	Indeno(1,2,3-cd)Pyrene	5
2-Chloronaphthalene	10	Isophorone	10
Chrysene	5	Nitrobenzene	10
Dibenzo(a,h)anthracene	5	n-Nitrosodimethylamine	50
1,2-Dichlorobenzene	10	n-Nitrosodi-n-Propylamine	20
1,3-Dichlorobenzene	10	n-Nitrosodiphenylamine	20
1,4-Dichlorobenzene	10	Pyrene	10
3,3'-Dichlorobenzidine	5	1,2,4-Trichlorobenzene	10
Diethyl Phthalate	10		
PESTICIDES AND PCBS			
Aldrin	0.01	Beta-Endosulfan	0.02
Alpha-BHC	0.05	Endosulfan sulfate	0.02
Beta-BHC	0.05	Endrin	0.02
Gamma-BHC	0.05	Endrin Aldehyde	0.1
Chlordane	0.2	Heptachlor	0.01
4,4'-DDT and derivatives	0.02	Heptachlor Epoxide	0.01
Dieldrin	0.02	PCBs **	0.2
Alpha-Endosulfan	0.01	Toxaphene	0.3

(MQL's Revised November 1, 2007)

- (*) Default MQL for Mercury is 0.005 unless Part I of your permit requires the more sensitive Method 1631 (Oxidation / Purge and Trap / Cold vapor Atomic Fluorescence Spectrometry), then the MQL shall be 0.0005.
- (**) EPA Method 1668 should be utilized when PCB water column monitoring is conducted to determine compliance with permit requirements. Either the Arochlor test (EPA Method 8082) or USGS test method (8093) may be utilized for purposes of sediment sampling as part of a screening program, but must use EPA Method 1668 (latest revision) for confirmation and determination of specific PCB levels at that location.

Appendix G – Oxygen Saturation and Dissolved Oxygen Concentrations North Diversion Channel Area

Concentrations of dissolved oxygen in water at various atmospheric pressures and temperatures with 100 percent oxygen saturation, 54.3 percent oxygen saturation (associated with hypoxia and harassment of silvery minnows), and 8.7 percent oxygen saturation (associated with anoxia and lethality of silvery minnows) at the North Diversion Channel (NDC) (based on USGS DO website <<http://water.usgs.gov/software/DOTABLES/>> for pressures between 628 to 648 millimeters of mercury (Hg)). Source: Biological Consultation Cons. #22420-2011-F-0024-R001

Water temp. (°C)	100% Oxygen Saturation at NDC			54.3% saturation = Harassmen			8.7% saturation= 50%Lethality		
	628mmHg	638mmHg	648mmHg	628mmHg	638mmHg	648mmHg	628mmHg	638mmHg	648mmHg
0	12.1	12.3	12.5	6.6	6.7	6.8	1.1	1.1	1.1
1	11.7	11.9	12.1	6.4	6.5	6.6	1.0	1.0	1.1
2	11.4	11.6	11.8	6.2	6.3	6.4	1.0	1.0	1.0
3	11.1	11.3	11.5	6.0	6.1	6.2	1.0	1.0	1.0
4	10.8	11	11.2	5.9	6.0	6.1	0.9	1.0	1.0
5	10.5	10.7	10.9	5.7	5.8	5.9	0.9	0.9	0.9
6	10.3	10.4	10.6	5.6	5.8	5.0	0.9	0.9	0.9
7	10	10.2	10.3	5.4	5.5	5.6	0.9	0.9	0.9
8	9.8	9.9	10.1	5.3	5.4	5.5	0.9	0.9	0.9
8	9.5	9.7	9.6	5.2	5.3	5.3	0.8	0.8	0.9
9	9.3	9.5	9.6	5.0	5.2	5.2	0.8	0.8	0.8
10	9.1	9.2	9.4	4.9	5.0	5.1	0.8	0.8	0.8
11	8.9	9	9.2	4.8	4.9	5.0	0.8	0.8	0.8
12	8.7	8.8	9	4.7	4.8	4.9	0.8	0.8	0.8
13	8.5	8.6	8.8	4.8	4.7	4.8	0.7	0.7	0.0
14	8.3	8.4	8.8	4.5	4.6	4.7	0.7	0.7	0.7
15	8.1	8.3	0.4	4.4	4.5	4.6	0.7	0.7	0.7
16	8	8.1	8.2	4.3	4.4	4.5	0.7	0.7	0.7
17	7.8	7.9	8	4.2	4.3	4.3	0.7	0.7	0.7
18	7.6	7.8	7.9	4.1	4.2	4.3	0.7	0.7	0.7
19	7.5	7.6	7.7	4.1	4.1	4.2	0.7	0.7	0.7
20	7.3	7.4	7.6	4.0	4.0	4.1	0.6	0.6	0.7
21	7.2	7.3	7.4	3.9	4.0	4.0	0.6	0.6	0.6
22	7	7.2	7.3	3.8	3.9	4.0	0.6	0.6	0.6
23	6.9	7	7.1	3.7	3.8	3.9	0.6	0.6	0.6
24	6.8	6.9	7	3.7	3.7	3.6	0.6	0.6	0.6
25	6.7	6.8	6.9	3.6	3.7	3.7	0.6	0.6	0.6
26	6.5	6.6	6.8	3.5	3.6	3.7	0.6	0.6	0.8
27	6.4	6.5	6.6	3.5	3.5	3.6	0.6	0.8	0.8
28	6.3	6.4	6.5	3.4	3.5	3.5	0.5	0.6	0.8
29	6.2	6.3	6.4	3.4	3.4	3.5	0.5	0.5	0.8
30	6.1	6.2	6.3	3.3	3.4	3.4	0.5	0.5	0.8
31	6	6.1	6.2	3.3	3.3	3.4	0.5	0.5	0.5
32	5.0	6	6.1	3.2	3.3	3.3	0.5	0.5	0.5
33	5.8	5.9	6	3.1	3.2	3.3	0.5	0.5	0.5
34	5.7	5.6	5.9	3.1	3.1	3.2	0.5	0.5	0.5

APPENDIX A-2



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202 - 2733

APR 09 2015

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (See Attachment 1)

Addressees: Middle Rio Grande Watershed Municipal Separate Storm Sewer Systems
Operators
(See Attachment 1)

Re: NPDES Permit No. NMR04A000
Notice of Minor Permit Modification

Dear (See Attachment 1):


Following regulations listed at 40 CFR 122.63(a) and CFR 122.63 (c), the following minor permit modifications are made to the NPDES Permit No. NMR04A000:

- To allow more time to review and approve NOIs, and remove schedule conflicts, certain interim compliance dates in the compliance schedules included in Activity Tables 1.a through 10, except Table 1.c entitled "Measurable Goals of Anoxic and Hypoxia Levels Measured by Permit Year" have been extended. The corrected pages are enclosed in Attachment 2. The new compliance schedules dates are in bold and underlined text.
- The point of contact and address for the Pueblo of Isleta in Part III, Part IV, and Appendix C has been updated. The updated page(s) are enclosed in Attachment 3.

The version of the permit on the EPA R6 website is also being updated. See <http://epa.gov/region6/water/npdes/sw/ms4/index.htm>

If you have any questions on any aspect of these minor permit modifications, please feel free to contact the permit writer, Nelly Smith, by telephone at:214-665-7109 or via E-mail at Nelly.smith@epa.gov.

Sincerely yours,


for Stacey B. Dwyer, P.E.
Associate Director
NPDES Permits & TMDLs Branch

Enclosures

cc w/Enclosure: New Mexico Environment Department

Attachment 1

Attachment 1

MS4	Address	City	State	Zip Code	Contact Name	Return Receipt Requested
City of Albuquerque	Dept. Municipal Development P.O. Box 1293	Albuquerque	NM	87103	Kevin Daggett	7014015000002452 6650
AMAFCA	2600 Prospect Ave NE	Albuquerque	NM	87107	Jerry Lovato	7014015000002452 6643
NMDOT District 3	7500 Pan American Blvd	Albuquerque	NM	87199	Timothy R, Trujillo	7014015000002452 6636
University of New Mexico	1801 Tucker St NE	Albuquerque	NM	87131	Chemanji (Che) Shu-Nyamboli	7014015000002452 6629
SSCAFCA	1041 Commercial Dr SE	Rio Rancho	NM	87124	Chuck Thomas	7014015000002452 6612
Town of Bernalillo	829 Camino del Pueblo	Bernalillo	NM	87004	María Rinaldi	7014015000002452 6605
Sandoval County	2708 Iris NE	Rio Rancho	NM	87144	Fred Marquez	7014015000002452 6599
Village of Corrales	4324 Corrales Rd	Corrales	NM	87048	Mayor Jack Torres	7014015000002452 6582
Los Ranchos de Albuquerque	6718 Rio Grande Blvd NW	Los Ranchos de Albuquerque	NM	87107	Tim McDonough	7014015000002452 6575
City of Rio Rancho	3200 Civic Center Circle NE Ste 200	Rio Rancho	NM	87144	Xavier Pettes	7014015000002452 6568
Bernalillo County	2400 Broadway SE, Bldg N	Albuquerque	NM	87102	Anita Stead	7014015000002452 6551

Attachment 1

Kirtland AFB	377 ABW/CC 200 Wyoming Blvd SE	Kirtland AFB	NM	87117	Chris Segura	7014015000002452 6544
EXPO	P.O. Box 8456	Albuquerque	NM	87198	John C. Jaramillo	7014015000002452 6537
Sandia Laboratories, DOE	P.O. Box 5400, KAFB	Albuquerque	NM		Karen Agogino	7014015000002452 6520
ESCAFCA	829 Camino del Pueblo, Bernalillo, NM	Bernalillo	NM		Jack Torres	7014015000002452 6513
						7014015000002452 6506
Pueblo of Sandia	481 Sandia Loop	Bernalillo	NM	87004	Scott Bulgrin	7014015000002452 6490
Pueblo of Isleta	PO Box 1270	Isleta	NM	87022	Ramona Montoya	7014015000002453 0657

Attachment 2

schedules described in Table 1.a of Part I.C.2.(iii). The annual report must include information on compliance with this section, including results of any sampling conducted by the permittee.

Note: Probable pollutant sources identified by permittees should be submitted to NMED on the following form: <ftp://ftp.nmenv.state.nm.us/www/swqb/Surveys/PublicProbableSourceIDSurvey.pdf>

- (c) Impairment for Nutrients: Where the impairment is for nutrients (e.g., nitrogen or phosphorus), the permittee shall identify potential significant sources and develop and implement targeted BMPs to control nutrients from potential sources. The permittee must, at minimum comply with the activities and schedules described in Table 1.b of Part I.C.2, (iii). The annual report must include information on compliance with this section, including results of any sampling conducted by the permittee.
 - (d) Impairment for Dissolved Oxygen: See Endangered Species Act (ESA) Requirements in Part I.C.3. These program elements may be coordinated with the monitoring required in Part III.A.
- (iii) Program Development and Implementation Schedules: Where the impairment is for nutrient constituent (e.g., nitrogen or phosphorus) or bacteria, the permittee must at minimum comply with the activities and schedules in Table 1.a and Table 1.b.

Table 1.a. Pre-TMDL Bacteria Program Development and Implementation Schedules

Activity	Class Permittee				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census **)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
Identify potential significant sources of the pollutant of concern entering your MS4	<u>Ten (10)</u> months from effective date of permit	<u>Ten (10)</u> months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Sixteen (16) months from effective date of permit
Develop (or modify an existing program ***) and implement a public education program to reduce the discharge of bacteria in municipal storm water contributed by (if applicable) by pets, recreational and exhibition livestock, and zoos.	<u>Twelve (12)</u> months from effective date of permit	<u>Twelve (12)</u> months from effective date of permit	<u>Fourteen (14)</u> months from effective date of permit	<u>Fourteen (14)</u> months from effective date of permit	Sixteen (16) months from effective date of permit
Develop (or modify an existing program ***) and implement a program to reduce the discharge of bacteria in municipal storm water contributed by areas within your MS4 served by on-site wastewater treatment systems.	<u>Fourteen (14)</u> months from effective date of permit	<u>Fourteen (14)</u> months from effective date of permit	Sixteen (16) months from effective date of permit	Sixteen (16) months from effective date of permit	Eighteen (18) months from effective date of permit
Review results to date from the Illicit Discharge Detection and Elimination program (see Part I.D.5.e) and modify as necessary to prioritize the detection and elimination of discharges contributing bacteria to the MS4	<u>Fourteen (14)</u> months from effective date of permit	<u>Fourteen (14)</u> months from effective date of permit	Sixteen (16) months from effective date of permit	Sixteen (16) months from effective date of permit	Eighteen (18) months from effective date of permit

Develop (or modify an existing program ***) and implement a program to reduce the discharge of bacteria in municipal storm water contributed by other significant source identified in the Illicit Discharge Detection and Elimination program (see Part I.D.5.e)	Sixteen (16) months from effective date of permit	Sixteen (16) months from effective date of permit	Eighteen (18) months from effective date of permit	Eighteen (18) months from effective date of permit	Twenty (20) months from effective date of permit
Include in the Annual Reports progress on program implementation and reducing the bacteria and updates their measurable goals as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs

(**) or MS4s designated by the Director

(***) Permittees previously covered under permit NMS000101 or NMR040000

Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

Table 1.b. Pre-TMDL Nutrient Program Development and Implementation Schedules

Activity	Class Permittee				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census **)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
Identify potential significant sources of the pollutant of concern entering your MS4	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Sixteen (16) months from effective date of permit
Develop (or modify an existing program ***) and implement a public education program to reduce the discharge of pollutant of concern in municipal storm water contributed by residential and commercial use of fertilizer	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Sixteen (16) months from effective date of permit
Develop (or modify an existing program ***) and implement a program to reduce the discharge of the pollutant of concern in municipal storm water contributed by fertilizer use at municipal operations (e.g., parks, roadways, municipal facilities)	One (1) year from effective date of permit	One (1) year from effective date of permit	Sixteen (16) months from effective date of permit	Sixteen (16) months from effective date of permit	Eighteen (18) months from effective date of permit

Develop (or modify an existing program ***) and implement a program to reduce the discharge of the pollutant of concern in municipal storm water contributed by municipal and private golf courses within your jurisdiction	One (1) <u>year</u> from effective date of permit	One (1) <u>year</u> from effective date of permit	Sixteen (16) months from effective date of permit	Sixteen (16) months from effective date of permit	Eighteen (18) months from effective date of permit
Develop (or modify an existing program ***) and implement a program to reduce the discharge of the pollutant of concern in municipal storm water contributed by other significant source identified in the Illicit Discharge Detection and Elimination program (see Part I.D.5.e)	One (1) <u>year</u> from effective date of permit	One (1) <u>year</u> from effective date of permit	Sixteen (16) months from effective date of permit	Sixteen (16) months from effective date of permit	Eighteen (18) months from effective date of permit
Include in the Annual Reports progress on program implementation and reducing the nutrient pollutant of concern and updates their measurable goals	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs

(**) or MS4s designated by the Director

(***) Permittees previously covered under permit NMS000101 or NMR040000

Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

These program elements may be coordinated with the monitoring required in Part III.A.

3. **Endangered Species Act (ESA) Requirements.** Consistent with U.S. FWS Biological Opinion dated August 21, 2014 to ensure actions required by this permit are not likely to jeopardize the continued existence of any currently listed as endangered or threatened species or adversely affect its critical habitat, permittees shall meet the following requirements and include them in the SWMP:

a. **Dissolved Oxygen Strategy in the Receiving Waters of the Rio Grande:**

- (i) The permittees must identify (or continue identifying if previously covered under permit NMS000101) structural controls, natural or man-made topographical and geographical formations, MS4 operations, or oxygen demanding pollutants contributing to reduced dissolved oxygen in the receiving waters of the Rio Grande. The permittees shall implement controls, and update/revise as necessary, to eliminate discharge of pollutants at levels that cause or contribute to exceedances of applicable water quality standards for dissolved oxygen in waters of the Rio Grande. The permittees shall submit a summary of findings and a summary of activities undertaken under Part I.C.3.a.(i) with each Annual Report. The SWMP submitted with the first and fourth annual reports must include a detailed description of controls implemented (or/and proposed control to be implemented) along with corresponding measurable goals. (Applicable to all permittees).
- (ii) As required in Part I.C.1.d, the COA and AMAFCA shall revise the May 1, 2012 Strategy for dissolved oxygen to address dissolved oxygen at the North Diversion Channel Embayment and/or other MS4 locations. The permittees shall submit the revised strategy to FWS and EPA for approval within a year of permit issuance and progress reports with the subsequent Annual Reports (see also Part I.C.1.d.(iv)). The permittees shall ensure that actions to reduce pollutants or remedial activities selected for the North Diversion Channel Embayment and its watershed are implemented such that there is a reduction in

Table 2. Construction Site Stormwater Runoff Control - Program Development and Implementation Schedules

Activity	Permittee Class				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census **)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
Development of an ordinance or other regulatory mechanism as required in Part I.D.5.a.(ii)(a)	<u>Ten (10)</u> months from effective date of permit	<u>Ten (10)</u> months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of the permit
Develop requirements and procedures as required in Part I.D.5.a.(ii)(b) through in Part I.D.5.a.(ii)(h)	<u>Ten (10)</u> months from effective date of permit	<u>Thirteen (13)</u> months from effective date of permit	<u>Sixteen (16)</u> months from effective date of permit	<u>Sixteen (16)</u> months from effective date of permit	Eighteen (18) months from effective date of permit
Annually conduct site inspections of 100 percent of all construction projects cumulatively disturbing one (1) or more acres as required in Part I.D.5.a.(iii)	<u>Ten (10)</u> months from effective date of permit	Start <u>Thirteen (13)</u> months from effective date of permit and annually thereafter	Start <u>Sixteen (16)</u> months from effective date of permit and annually thereafter	Start eighteen (18) months from effective date of permit and thereafter	Start two (2) years from effective date of permit and thereafter
Coordinate with all departments and boards with jurisdiction over the planning, review, permitting, or approval of public and private construction projects/activities within the permit area as required in Part I.D.5.a.(iv)	<u>Ten (10)</u> months from effective date of permit	<u>Ten (10)</u> months from effective date of permit	<u>Twelve (12)</u> months from effective date of permit	<u>Twelve (12)</u> months from effective date of permit	<u>Fourteen (14)</u> months from effective date of permit
Evaluation of GI/LID/Sustainable practices in site plan reviews as required in Part I.D.5.a.(v)	<u>Ten (10)</u> months from effective date of permit	<u>Ten (10)</u> months from effective date of permit	<u>Twelve (12)</u> months from effective date of permit	<u>Twelve (12)</u> months from effective date of permit	<u>Fourteen (14)</u> months from effective date of permit
Update the SWMP document and annual report as required in Part I.D.5.a.(vi) and in Part I.D.5.a.(vii)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary
Enhance the program to include program elements in Part I.D.5.a.(viii) through Part I.D.5.a.(x)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

- (xiii) The permittee may incorporate the following elements in the Post-Construction Stormwater Management in New Development and Redevelopment program required in Part I.D.5.b.(ii)(b):
- (a) Provide requirements and standards to direct growth to identified areas to protect environmentally and ecologically sensitive areas such as floodplains and/or other areas with endangered species and historic properties concerns;
 - (b) Include requirements to maintain and/or increase open space/buffers along sensitive water bodies, minimize impervious surfaces, and minimize disturbance of soils and vegetation; and
 - (c) Encourage infill development in higher density urban areas, and areas with existing storm sewer infrastructure.

Table 3. Post-Construction Stormwater Management in New Development and Redevelopment - Program Development and Implementation Schedules

Activity	Permittee Class				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census **)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
Development of strategies as required in Part I.D.5.b.(ii).(a)	<u>Ten (10)</u> months from effective date of permit	<u>Ten (10)</u> months from effective date of permit	<u>Twelve (12)</u> months from effective date of permit	<u>Twelve (12)</u> months from effective date of permit	<u>Fourteen (14)</u> months from effective date of permit
Development of an ordinance or other regulatory mechanism as required in Part I.D.5.b.(ii).(b)	<u>Twenty (24)</u> months from effective date of permit	<u>Thirty (30)</u> months from effective date of permit	<u>Thirty six (36)</u> months from effective date of permit	<u>Thirty six (36)</u> months from effective date of permit	<u>Thirty six (36)</u> months from effective date of permit
Implementation and enforcement, via the ordinance or other regulatory mechanism, of site design standards as required in Part I.D.5.b.(ii).(b)	Within <u>thirty six (36)</u> months from effective date of the permit	Within <u>forty two (42)</u> months from the effective date of the permit	Within <u>forty eight (48)</u> months from effective date of the permit	Within <u>forty eight (48)</u> months from effective date of the permit	Within <u>forty eight (48)</u> months from effective date of the permit
Ensure appropriate implementation of structural controls as required in Part I.D.5.b.(ii).(c) and Part I.D.5.b.(ii).(d)	<u>Ten (10)</u> months from effective date of permit	One (1) year from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Thirty (30) months from effective date of permit
Develop procedures as required in Part I.D.5.b.(ii).(e), Part I.D.5.b.(ii).(f), Part I.D.5.b.(ii).(g), and Part I.D.5.b.(ii).(h)	<u>Ten (10)</u> months from effective date of permit	<u>Ten (10)</u> months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of permit

Coordinate internally with all departments and boards with jurisdiction over the planning, review, permitting, or approval of public and private construction projects/activities within the permit area as required in Part I.D.5.b.(iii)	<u>Ten (10)</u> months from effective date of permit	<u>Ten (10)</u> months from effective date of permit	<u>Eleven (11)</u> months from effective date of permit	<u>Eleven (11)</u> months from effective date of permit	One (1) year from effective date of permit
As required in Part I.D.5.b.(iv), the permittee must assess all existing codes, ordinances, planning documents and other applicable regulations, for impediments to the use of GI/LID/Sustainable practices	<u>Ten (10)</u> months from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of permit	Eighteen (18) months from effective date of permit	Two (2) years from effective date of permit
As required in Part I.D.5.b.(iv), develop and submit a report of the assessment findings on GI/LID/Sustainable practices.	<u>Eleven (11)</u> months from effective date of permit	Eighteen (18) months from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Twenty seven (27) months from effective date of permit
Estimation of the number of acres of IA and DCIA as required in Part I.D.5.b.(vi)	<u>Ten (10)</u> months from effective date of permit	One (1) year from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Thirty (30) months from effective date of permit
Inventory and priority ranking as required in section in Part I.D.5.b.(vii)	Within fifteen (15) months from effective date of the permit	Within <u>twenty four (24)</u> months from effective date of the permit	Within <u>thirty six (36)</u> months from effective date of the permit	Within <u>thirty six (36)</u> months from effective date of the permit	Within <u>forty two (42)</u> months from effective date of the permit
Incorporate watershed protection elements as required in Part I.D.5.b.(viii)	<u>Ten (10)</u> months from effective date of permit	One (1) year from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Thirty (30) months from effective date of permit
Update the SWMP document and annual report as required in Part I.D.5.b.(ix) and Part I.D.5.b.(x).	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary
Enhance the program to include program elements in Part I.D.5.b.(xi) and Part I.D.5.b.(xii)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs.

(**) or MS4s designated by the Director

Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

- (iv) The permittee must include in the SWMP a description of the mechanism(s) utilized to comply with each of the elements required in Part I.D.5.c.(i) throughout Part I.D.5.c.(iii) and its corresponding measurable goal.
- (v) The permittee shall assess the overall success of the program, and document the program effectiveness in the annual report.

Table 4. Pollution Prevention/Good Housekeeping for Municipal/Co-permittee Operations - Program Development and Implementation Schedules

Activity	Permittee Class				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census **)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
-Develop or update the Pollution Prevention/Good House Keeping program to include the elements in Part I.D.5.c.(i)	Ten (10) months from effective date of the permit	Twelve (12) months from effective date of the permit	Fourteen (14) months from effective date of the permit	Fourteen (14) months from effective date of the permit	Eighteen (18) months from effective date of the permit
-Enhance the program to include the elements in Part I.D.5.c.(ii)	Ten (10) months from effective date of the permit	One (1) year from effective date of the permit	Two (2) years from effective date of the permit	Two (2) years from effective date of the permit	Thirty (30) months from effective date of the permit
-Develop or update a list and a map of industrial facilities owned or operated by the permittee as required in Part I.D.5.c.(iii)	Ten (10) months from effective date of the permit	Eleven (11) months from effective date of the permit	One (1) year from effective date of the permit	One (1) year from effective date of the permit	Eighteen (18) months from effective date of the permit
Update the SWMP document and annual report as required in Part I.D.5.c.(iv) and Part I.D.5.c.(v)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs (***) or MS4s designated by the Director

Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

d. Industrial and High Risk Runoff (Applicable only to Class A permittees)

- (i) The permittee must control through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity as defined in 40 CFR 122.26(b)(14)(i)-(ix) and (xi). If no such industrial activities are in a permittees jurisdiction, that permittee may certify that this program element does not apply.
- (ii) The permittee must continue implementation and enforcement of the Industrial and High Risk Runoff program, assess the overall success of the program, and document both direct and indirect measurements of program effectiveness in the annual report. The program shall include:
 - (a) A description of a program to identify, monitor, and control pollutants in stormwater discharges to the MS4 from municipal landfills; other treatment, storage, or disposal facilities for municipal waste (e.g. transfer stations, incinerators, etc.); hazardous waste treatment, storage, disposal and recovery facilities; facilities that are subject to EPCRA Title III, Section 313; and any other industrial or commercial discharge the permittee(s) determines are contributing a substantial pollutant loading to the

Table 5: Industrial and High Risk Runoff - Program Development and Implementation Schedules:

Activity	Permittee Class	
	A Phase I MS4s	Cooperative (*) Any Permittee with cooperative programs
Ordinance (or other control method) as required in Part I.D.5.d.(i)	Ten (10) months from effective date of the permit	Twelve (12) months from effective date of the permit
Continue implementation and enforcement of the Industrial and High Risk Runoff program, assess the overall success of the program, and document both direct and indirect measurements of program effectiveness in the annual report as required in Part I.D.5.d.(ii)	Ten (10) months from effective date of the permit	Twelve (12) months from effective date of the permit
Meet the monitoring requirements in Part I.D.5.d.(iii)	Ten (10) months from effective date of the permit	Twelve (12) months from effective date of the permit
Include requirements in Part I.D.5.d.(iv)	Ten (10) months from permit effective date of the permit	Twelve (12) months from effective date of the permit
Update the SWMP document and annual report as required in Part I.D.5.d.(v) and Part I.D.5.d.(vi)	Update as necessary	Update as necessary
Enhance the program to include requirements in Part I.D.5.d.(vii)	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs. Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

e. Illicit Discharges and Improper Disposal

- (i) The permittee shall develop, revise, implement, and enforce a program to detect and eliminate illicit discharges (as defined at 40 CFR 122.26(b)(2)) entering the MS4. **Permittees previously covered under NMS000101 or NMR040000 must continue existing programs while updating those programs, as necessary, to comply with the requirements of this permit.** The permittee must:
 - (a) Develop, if not already completed, a storm sewer system map, showing the names and locations of all outfalls as well as the names and locations of all waters of the United States that receive discharges from those outfalls. Identify all discharges points into major drainage channels draining more than twenty (20) percent of the MS4 area;
 - (b) To the extent allowable under State, Tribal or local law, effectively prohibit, through ordinance or other regulatory mechanism, non-stormwater discharges into the MS4, and implement appropriate enforcement procedures and actions;
 - (c) Develop and implement a plan to detect and address non-stormwater discharges, including illegal dumping, to the MS4. The permittee must include the following elements in the plan:
 - A. Procedures for locating priority areas likely to have illicit discharges including field test for selected pollutant indicators (ammonia, boron, chlorine, color, conductivity, detergents, *E. coli*, enterococci, total coliform, fluoride, hardness, pH, potassium, conductivity, surfactants), and visually screening outfalls during dry weather;

- (d) If participating in a cooperative program with other MS4s, required detection program frequencies may be based on the combined jurisdictional area rather than individual jurisdictional areas and may use assessment areas crossing jurisdictional boundaries to reduce total number of screening locations (e.g., a shared single screening location that would provide information on more than one jurisdiction); and
- (e) After screening a non-high priority area once, adopt an “in response to complaints only” IDDE for that area provided there are citizen complaints on no more than two (2) separate events within a twelve (12) month period.
- (f) Enhance the program to utilize procedures and methodologies consistent with those described in “Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments.”

Table 6. Illicit Discharges and Improper Disposal - Program Development and Implementation Schedules

Activity	Permittee Class				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census ***)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
Mapping as required in Part I.D.5.e.(i)(a)	<u>Ten (10)</u> months from effective date of permit	<u>Ten (10)</u> months from effective date of permit	<u>Eleven (11)</u> months from effective date of permit	<u>Eleven (11)</u> months from effective date of permit	<u>Fourteen (14)</u> months from effective date of permit
Ordinance (or other control method) as required in Part I.D.5.e.(i)(b)	<u>Ten (10)</u> months from effective date of permit	<u>Ten (10)</u> months from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Thirty (30) months from effective date of permit
Develop and implement a IDDE plan as required in Part I.D.5.e.(i)(c)	<u>Ten (10)</u> months from effective date of permit	<u>Ten (10)</u> months from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Thirty (30) months from effective date of permit
Develop an education program as required in Part I.D.5.e.(i)(d)	<u>Ten (10)</u> months from effective date of permit	<u>Ten (10)</u> months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of permit
Establish a hotline as required in Part I.D.5.e.(i)(e)	Update as necessary	<u>Ten (10)</u> months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of permit
Investigate suspected significant/severe illicit discharges as required in Part I.D.5.e.(i)(f)	<u>Ten (10)</u> months from effective date of permit	<u>Ten (10)</u> months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of permit
Review complaint records and develop a targeted source reduction program as required in Part I.D.5.e.(i)(g)	<u>Ten (10)</u> months from effective date of permit	<u>Ten (10)</u> months from effective date of permit	N/A	N/A	One (1) year from effective date of permit

Screening of system as required in Part I.D.5.e.(iii) as follows:	1 / year	1 / year	1 / year	1 / year	1 / year
a.) High priority areas**					
b.) Whole system	-Screen 20% of the MS4 per year	- Screen 20% of the MS4 per year	-Years 1 – 2: develop procedures as required in Part I.D.5.e.(i)(c) -Year 3: screen 30% of the MS4 -Year 4: screen 20% of the MS4 -Year 5: screen 50% of the MS4	-Years 1 – 2: develop procedures as required Part I.D.5.e.(i)(c) -Year 3: screen 30% of the MS4 -Year 4: screen 20% of the MS4 -Year 5: screen 50% of the MS4	-Years 1 – 3: develop procedures as require in Part I.D.5.e.(i)(c) -Year 4: screen 30% of the MS4 -Year 5: screen 70% of the MS4
Develop, update, and implement a Waste Collection Program as required in Part I.D.5.e.(iv)	<u>Ten (10)</u> months from effective date of permit	Eighteen (18) months from effective date of permit	Two (2) years from effective date of permit	Two (2) years from effective date of permit	Thirty (30) months from effective date of permit
Develop, update and implement a Spill Prevention and Response program to prevent, contain, and respond to spills that may discharge into the MS4 as required in Part I.D.5.e.(v)	<u>Ten (10)</u> months from effective date of permit	<u>Ten (10)</u> months from effective date of permit	One (1) year from effective date of permit	One (1) year from effective date of permit	Eighteen (18) months from effective date of permit
Update the SWMP document and annual report as required in Part I.D.5.e.(iii), Part I.D.5.e.(vi), and Part I.D.5.e.(vii).	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary
Enhance the program to include requirements in Part I.D.5.e.(ix)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs.

(**) High priority areas include any area where there is ongoing evidence of illicit discharges or dumping, or where there are citizen complaints on more than five (5) separate events within twelve (12) months

(***) or MS4s designated by the Director

Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

f. Control of Floatables Discharges

- (i) The permittee must develop, update, and implement a program to address and control floatables in discharges into the MS4. The floatables control program shall include source controls and, where necessary, structural controls. **Permittees previously covered under NMS000101 or NMR040000 must continue existing programs while updating those programs, as necessary, to comply with the requirements of this permit.** The following elements must be included in the program:

- (a) Develop a schedule for implementation of the program to control floatables in discharges into the MS4 (Note: AMAFCA and the City of Albuquerque should update the schedule according to the findings of the 2005 AMAFCA/COA Floatable and Gross Pollutant Study and other studies); and
 - (b) Estimate the annual volume of floatables and trash removed from each control facility and characterize the floatable type.
- (ii) The permittee must include in the SWMP a description of the mechanism(s) utilized to comply with each of the elements required in Part I.D.5.f.(i).
- (iii) The permittee shall assess the overall success of the program, and document the program effectiveness in the annual report.

Table 7. Control of Floatables Discharges - Program Development and Implementation Schedules

Activity	Permittee Class				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census **)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
- Develop a schedule to implement the program as required in Part I.D.5.f.(i)(a)	Ten (10) months from the effective date of the permit	Ten (10) months from the effective date of the permit	One (1) year from the effective date of the permit	One (1) year from the effective date of the permit	Eighteen (18) months from the effective date of the permit
-Estimate the annual volume of floatables and trash removed from each control facility and characterize the floatable type as required in Part I.D.5.f.(i)(b)	Ten (10) months from the effective date of the permit	One (1) year from the effective date of the permit	Two (2) years from the effective date of the permit	Two (2) years from the effective date of the permit	Thirty (30) months from the effective date of the permit
Update the SWMP document and annual report as required in Part I.D.5.f.(ii) and Part I.D.5.f.(iii).	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs.

(**) or MS4s designated by the Director

Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

g. Public Education and Outreach on Stormwater Impacts

- (i) The permittee shall, individually or cooperatively, develop, revise, implement, and maintain a comprehensive stormwater program to educate the community, employees, businesses, and the general public of hazards associated with the illegal discharges and improper disposal of waste and about the impact that stormwater discharges on local waterways, as well as the steps that the public can take to reduce pollutants in stormwater. **Permittees previously covered under NMS000101 and NMR040000 must continue existing programs while updating those programs, as necessary, to comply with the requirements of this permit.**
- (ii) The permittee must implement a public education program to distribute educational knowledge to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff. The permittee must:

Table 8. Public Education and Outreach on Stormwater Impacts - Program_Development and Implementation Schedules

Activity	Permittee Class				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census **)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
Develop, revise, implement, and maintain an education and outreach program as required in Part I.D.5.g.(i) and Part I.D.5.g.(ii)	<u>Ten (10)</u> months from the effective date of the permit	<u>Eleven (11)</u> months from the effective date of the permit	<u>Twelve (12)</u> months from effective date of the permit	<u>Twelve (12)</u> months from effective date of the permit	<u>Fourteen (14)</u> months from effective date of the permit
Update the SWMP document and annual report as required in Part I.D.5.g.(iii) and Part I.D.5.g.(iv)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary
Enhance the program to include requirements in Part I.D.5.g.(v) through Part I.D.5.g.(viii)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs.

(**) or MS4s designated by the Director

Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

h. Public Involvement and Participation

- (i) The permittee must provide local public notice of and make available for public review a copy of the complete NOI and attachments (see Part I.B.2). Local public notice may be made by newspaper notice, notice at a council meeting, posting on the internet, or other method consistent with state/tribal/local public notice requirements.

The permittee must consider all public comments received during the public notice period and modify the NOI, or include a schedule to modify the SWMP, as necessary, or as required by the Director modify the NOI or/and SWMP in response to such comments. The Permittees must include in the NOI any unresolved public comments and the MS4's response to these comments. Responses provided by the MS4 will be considered as part of EPA's decision-making process. See also Appendix E Providing Comments or Requesting a Public Hearing on an Operator's NOI.

- (ii) The permittee shall develop, revise, implement and maintain a plan to encourage public involvement and provide opportunities for participation in the review, modification and implementation of the SWMP; develop and implement a process by which public comments to the plan are received and reviewed by the person(s) responsible for the SWMP; and, make the SWMP available to the public and to the operator of any MS4 or Tribal authority receiving discharges from the MS4. **Permittee previously covered under NMS000101 or NMR040000 must continue existing public involvement and participation programs while updating those programs, as necessary, to comply with the requirements of this permit.**

system, using phones and social media); Revegetation Programs; Storm Drain Stenciling Programs; Stream cleanup and Monitoring program/events.

Table 9. Public Involvement and Participation - *Program Development and Implementation Schedules*

Activity	Permittee Class				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census **)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
Develop (or update), implement, and maintain a public involvement and participation plan as required in Part I.D.5.h.(ii) and Part I.D.5.h.(iii)	<u>Ten (10)</u> months from effective date of the permit	<u>Ten (10)</u> months from effective date of the permit	<u>Eleven (11)</u> months from effective date of the permit	<u>Eleven (11)</u> months from effective date of the permit	One (1) year from effective date of the permit
Comply with State, Tribal, and local notice requirements when implementing a Public Involvement and Participation Program as required in Part I.D.5.h.(iv)	<u>Ten (10)</u> months from effective date of the permit	<u>Eleven (11)</u> months from effective date of the permit	<u>Twelve (12)</u> months from effective date of the permit	<u>Twelve (12)</u> months from effective date of the permit	<u>Fourteen (14)</u> months from effective date of the permit
Include elements as required in Part I.D.5.h.(v)	<u>Ten (10)</u> months from effective date of the permit	<u>Eleven (11)</u> months from effective date of the permit	One (1) year from effective date of the permit	One (1) year from effective date of the permit	Eighteen (18) months from effective date of the permit
Update the SWMP document and annual report as required in Part I.D.5.h.(vi), Part I.D.5.h.(vii), and Part I.D.5.h.(viii)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary
Enhance the program to include requirements in Part I.D.5.h.(ix)	Update as necessary	Update as necessary	Update as necessary	Update as necessary	Update as necessary

(*) During development of cooperative programs, the permittee must continue to implement existing programs.

(**) or MS4s designated by the Director

Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

6. Stormwater Management Program Review and Modification.

- a. Program Review. Permittee shall participate in an annual review of its SWMP in conjunction with preparation of the annual report required in Part III.B. Results of the review shall be discussed in the annual report and shall include an assessment of:
 - (i) SWMP implementation, progress in achieving measurable goals, and compliance with program elements and other permit conditions;
 - (ii) the effectiveness of its SWMP, and any necessary modifications, in complying with the permit, including requirements to control the discharge of pollutants, and comply with water quality standards and any applicable approved TMDLs; and the adequacy of staff, funding levels, equipment, and support capabilities to fully implement the SWMP and comply with permit conditions.

- h. Response to monitoring results: The monitoring program must include a contingency plan for collecting additional monitoring data within the MS4 or at additional appropriate instream locations should monitoring results indicate that MS4 discharges may be contributing to instream exceedances of WQS. The purpose of this additional monitoring effort would be to identify sources of elevated pollutant loadings so they could be addressed by the SWMP.

Table 10. Wet Weather Monitoring Program Implementation Schedules:

Activity	Permittee Class				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census **)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
Submit wet weather monitoring preference to EPA (i.e., individual monitoring program vs. cooperative monitoring program) with NOI submittals	<u>NOI submittal Deadline (see Table 1)</u>	<u>NOI submittal Deadline (see Table 1)</u>	<u>NOI submittal Deadline (see Table 1)</u>	<u>NOI submittal Deadline (see Table 1)</u>	<u>NOI submittal Deadline (see Table 1)</u>
Submit a detailed description of the monitoring scheme to EPA and NMED for approval. The monitoring scheme should include: a list of pollutants; a description of monitoring sites with an explanation of why those sites were selected; and a detailed map of all proposed monitoring sites	<u>Ten (10)</u> months from effective date of permit	<u>Ten (10)</u> months from effective date of permit	<u>Eleven (11)</u> months from effective date of permit	<u>Eleven (11)</u> months from effective date of permit	<u>Twelve (12)</u> months from effective date of permit
Submit certification that all wet weather monitoring sites are operational and begin sampling	<u>Eleven (11)</u> months from effective date of permit	<u>Eleven (11)</u> months from effective date of permit	<u>Thirteen (13)</u> months from effective date of permit	<u>Thirteen (13)</u> months from effective date of permit	<u>Fourteen (14)</u> months from effective date of permit
Update SWMP document and submit annual reports	Annually	Annually	Annually	Annually	Annually

(**) or MS4s designated by the Director

Note: The deadlines established in this table may be extended by the Director for any MS4 designated as needing a permit after issuance of this permit to accommodate expected date of permit coverage.

2. **Dry Weather Discharge Screening of MS4:** Each permittee shall identify, investigate, and address areas within its jurisdiction that may be contributing excessive levels of pollutants to the Municipal Separate Storm Sewer System as a result of dry weather discharges (i.e., discharges from separate storm sewers that occur without the direct influence of runoff from storm events, e.g. illicit discharges, allowable non-stormwater, groundwater infiltration, etc.). Due to the arid and semi-arid conditions of the area, the dry weather discharges screening program may be carried out during both wet season (July 1 through October 31) and dry Season (November 1 through June 30). Results of the assessment

Attachment 3

Attachment 3

Page 9 of Part III.D

Pueblo of Isleta
Attn: Ramona M. Montoya, Environment Division Manager
PO Box 1270
Isleta NM 87022

Page 6 of Part IV.U

Pueblo of Isleta
Department of Cultural and Historic Preservation
Attn: Daniel Waseta, Director
PO Box 1270
Isleta NM 87022

Appendix C

Tribal Historic Preservation Officers (THPO)
Pueblo of Isleta
Department of Cultural and Historic Preservation
Attn: Dr. Henry Walt, THPO
PO Box 1270
Isleta NM 87022

New Mexico Environment Department
Attn: Bruce Yurdin, Program Manager
Surface Water Quality Bureau
Point Source Regulation Section
P.O. Box 5469
Santa Fe, New Mexico 87502

Pueblo of Sandia Environment Department
Attn: Scott Bulgrin, Water Quality Manager
481 Sandia Loop
Bernalillo, NM 87004

(Note: Only those MS4s with discharges upstream of or to waters under the jurisdiction of the Pueblo of Sandia: AMAFCA, Sandoval County, Village of Corrales, City of Rio Rancho, Town of Bernalillo, SSCAFCA, and ESCAFCA)

Pueblo of Isleta

Attn: Ramona M. Montoya, Environment Division Manager
P.O. Box 1270
Isleta NM 87022

(Notes: Only the City of Albuquerque, Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA), New Mexico Department of Transportation (NMDOT) District 3, KAFB (Kirtland Air Force Base), Sandia Labs (DOE), and Bernalillo County). All parties submitting an NOI or NOT shall notify the Pueblo of Isleta in writing that a NOI or NOT has been submitted to EPA

Water Resources Division Manager
Pueblo of Santa Ana
2 Dove Road
Santa Ana Pueblo, New Mexico 87004

(Note: Only those MS4s with discharges upstream of or to waters under the jurisdiction of the Pueblo of Santa Ana)

Bataan Memorial Building
407 Galisteo Street, Ste. 236
Santa Fe, New Mexico 87501

Pueblo of Sandia Environment Department
Attn: Frank Chaves, Environment Director
481 Sandia Loop
Bernalillo, New Mexico 87004

Pueblo of Isleta
Department of Cultural and Historic Preservation
Attn: Daniel Waseta, Director
P.O. Box 1270
Isleta NM 87022

Water Resources Division Manager
Pueblo of Santa Ana
2 Dove Road
Santa Ana Pueblo, New Mexico 87004

3. If the permittee receives a request for an archeological survey or notice of adverse effects from the SHPO, the permittee shall delay such activity until:
 - a. A cultural resource survey report has been submitted to the SHPO for a review and a determination of no effect or no adverse effect has been made, and
 - b. If an adverse effect is anticipated, measures to minimize harm to historic properties have been agreed upon between the permittee and the SHPO.
 4. If the permittee does not receive notification of adverse effects or a request for an archeological survey from the SHPO within thirty (30) days, the permittee may proceed with the activity.
 5. Alternately, the permittee may obtain authorization for stormwater discharges from such sites of disturbance by applying for a modification of this permit. The permittee may apply for a permit modification by submitting the following information to the Permitting Authority 180 days prior to commencing such discharges:
 - a. A letter requesting a permit modification to include discharges from activities subject to this provision, in accordance with the signatory requirements in Part IV.H.
 - b. A description of the construction or land disturbing activity and the potential impact that this activity may have upon the ground; County in which the facility will be constructed; type of facility to be constructed; size area (in acres) that the facility will encompass; expected date of construction; and whether the facility is located on land owned or controlled by any political subdivision of New Mexico; and
 - c. A copy of a USGS topographic map outlining the location of the project and other ancillary impact areas.
- V. **CONTINUATION OF THE EXPIRED GENERAL PERMIT.** If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with the Administrative Procedures Act and remain in force and effect. Any permittee who was granted permit coverage prior to the expiration date will automatically remain covered by the continued permit until the earlier of:

II. State Historic Preservation Officers (SHPO)

SHPO List for areas covered by the permit:

NEW MEXICO

Historic Preservation Div, Office of Cultural Affairs
Bataan Memorial Building, 407 Galisteo Street, Suite 236
Santa Fe, NM 87501
505-827-6320 FAX: 505-827-6338

III. Tribal Historic Preservation Officers
(THPO)

In instances where a Tribe does not have a Tribal Historic Preservation Officer, please contact the appropriate Tribal government office when responding to this permit eligibility condition.

Tribal Historic Preservation Officers:
Mescalero Apache Tribe
P.O. Box 227
Mescalero, New Mexico 88340

Pueblo of Sandia Environment Department
Attn: Frank Chaves, Environment Director
481 Sandia Loop
Bernalillo, New Mexico 87004

Pueblo of Isleta
Department of Cultural and Historic Preservation
Attn: Dr. Henry Walt, THPO
P.O. Box 1270
Isleta NM 87022

Water Resources Division Manager
Pueblo of Santa Ana
2 Dove Road
Santa Ana Pueblo, New Mexico 87004

For more information:

National Association of Tribal Historic
Preservation Officers
P.O. Box 19189
Washington, DC 20036-9189
Phone: (202) 628-8476
Fax: (202) 628-2241

IV. Advisory Council on Historic Preservation

Advisory Council on Historic Preservation, 1100 Pennsylvania Avenue, NW., Suite 803,
Washington, DC 20004 Telephone: (202) 606-8503, Fax: (202) 606-8647/8672, E-mail:
achp@achp.gov

APPENDIX A-3



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 6

1445 Ross Avenue, Suite 1200

Dallas, Texas 75202 - 2733

10 FEB 2016

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (See Attachment 1)

Addressees: Middle Rio Grande Watershed Municipal Separate Storm Sewer Systems Operators
(See Attachment 1)

Re: NPDES Permit No. NMR04A000
Notice of Minor Permit Modification

Dear Permittees:

Following regulations listed at 40 CFR 122.63, the following minor permit modification is made to the NPDES Permit No. NMR04A000:

To allow more time to review and approve monitoring plans, the interim compliance dates to submit wet weather monitoring site certifications in the compliance schedules included in Activity Table 10 entitled "Wet Weather Monitoring Program Implementation Schedules" have been extended by 120 days as allowed by 40 CFR 122.63(c). The extension by 120 days required conversion of the deadlines to actual dates rather than months from effective date of the permit. The corrected Table 10 is enclosed in Attachment 2. The new compliance schedules dates are in bold and underlined text.

The version of the permit on the EPA R6 website is also being updated. See <http://epa.gov/region6/water/npdes/sw/ms4/index.htm>

If you have any questions on any aspect of these minor permit modifications, please feel free to contact the permit writer, Nelly Smith, by telephone at:214-665-7109 or via E-mail at Nelly.smith@epa.gov.

Sincerely yours,

A handwritten signature in black ink that reads "Stacey B. Dwyer".

Stacey B. Dwyer, P.E.

Associate Director

NPDES Permits & TMDLs Branch

Enclosures

cc w/Enclosure: New Mexico Environment Department

Attachment I

MS4	Address	City	State	Zip Code	Contact Name	Return Receipt Requested
City of Albuquerque	Dept. Municipal Development P.O. Box 1293	Albuquerque	NM	87103	Kevin Daggett	7004 1160 0003 0359 8030
AMAFCA	2600 Prospect Ave NE	Albuquerque	NM	87107	Jerry Lovato	7010 2780 0002 4356 2593
NMDOT District 3	7500 Pan American Blvd	Albuquerque	NM	87199	Timothy Trujillo	7010 2780 0002 4356 2609
University of New Mexico	1801 Tucker St NE	Albuquerque	NM	87131	C. Shu-Nyamboli	7014 0150 0000 2452 3840
SSCAFCA	1041 Commercial Dr SE	Rio Rancho	NM	87124	David Gatterman	7014 0150 0000 2452 3857
Town of Bernalillo	829 Camino del Pueblo	Bernalillo	NM	87004	Maria Rinaldi	7014 0150 0000 2452 3864
Sandoval County	2708 Iris NE	Rio Rancho	NM	87144	Fred Marquez	7014 0150 0000 2452 3871
Village of Corrales	4324 Corrales Rd	Corrales	NM	87048	Cynthia Tidwell	7014 0150 0000 2452 3888
Village of Los Ranchos de Albuquerque	6718 Rio Grande Blvd NW	Los Ranchos de Albuquerque	NM	87107	Tim McDonough	7014 0150 0000 2452 3895
City of Rio Rancho	3200 Civic Center Circle NE Ste 200	Rio Rancho	NM	87144	Xavier Pettes	7014 0150 0000 2452 3901
Bernalillo County	2400 Broadway SE, Bldg N	Albuquerque	NM	87102	Daniel McGregor	7014 0150 0000 2452 4090
Kirtland AFB	377 ABW/CC 200 Wyoming Blvd SE	Kirtland AFB	NM	87117	Andrea Cuevas	7014 0150 0000 2452 4106
EXPO	300 San Pedro NE	Albuquerque	NM	87108	Kevin Fannin	7014 0150 0000 2452 4113
Sandia Laboratories, DOE	P.O. Box 5400, KAFB	Albuquerque	NM	87185	Karen Agogino	7014 0150 0000 2452 4120
Sandia Corporation	P.O. Box 5800 MS-0730	Albuquerque	NM	87185	Kathie Deal	7014 0150 0000 2452 4137
ESCAFCA	829 Camino del Pueblo, Bernalillo, NM	Bernalillo	NM	87004	Larry Blair	7014 0150 0000 2452 4144
Pueblo of Sandia	481 Sandia Loop	Bernalillo	NM	87004	Scott Bulgrin	7014 0150 0000 2452 4151
Pueblo of Isleta	PO Box 1270	Isleta	NM	87022	Ramona Montoya	7014 0150 0000 2452 4168

Attachment II

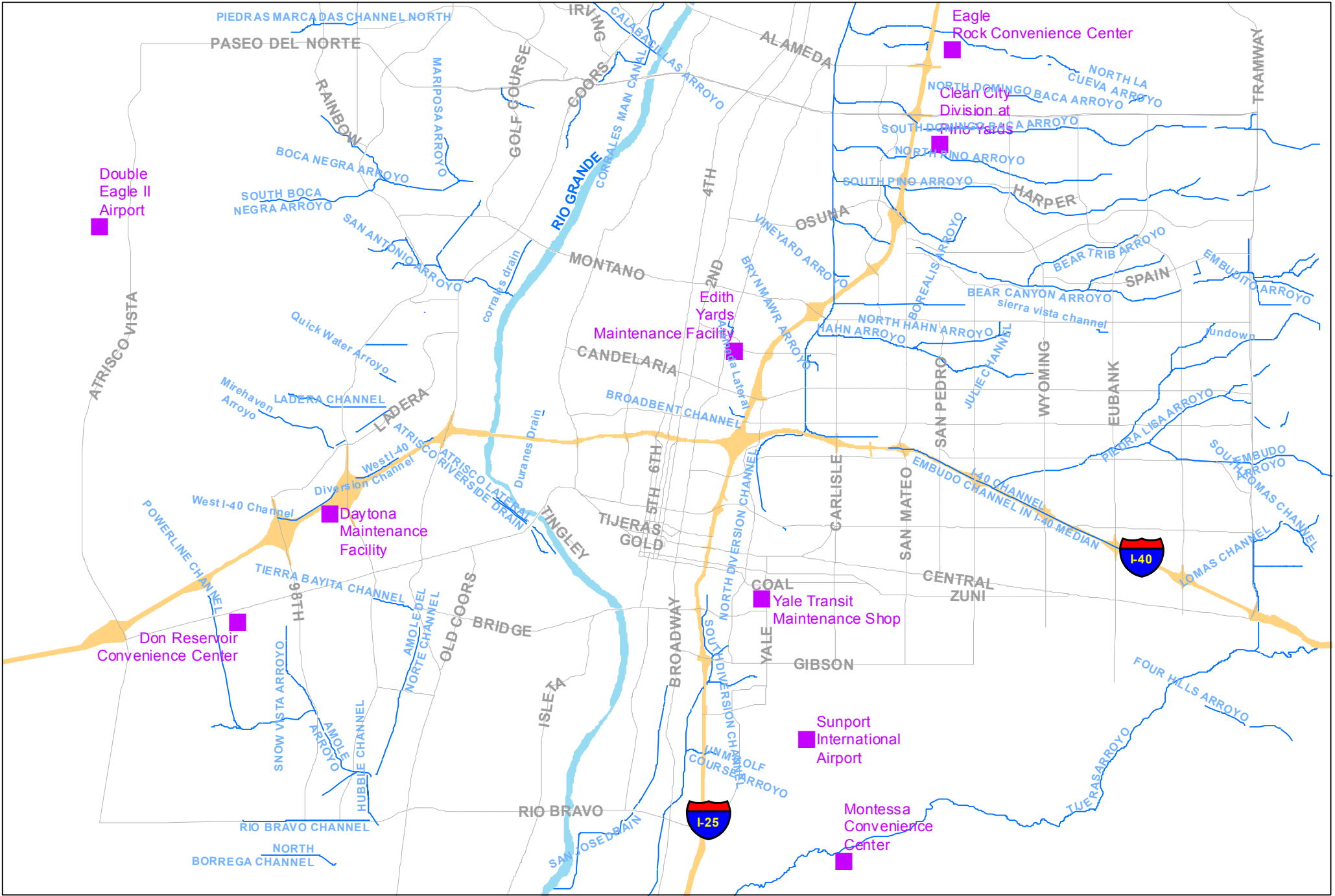
Table 10. Wet Weather Monitoring Program Implementation Schedules:

Activity	Permittee Class				
	A Phase I MS4s	B Phase II MS4s (2000 Census)	C New Phase II MS4s (2010 Census **)	D MS4s within Indian Lands	Cooperative (*) Any Permittee with cooperative programs
Submit wet weather monitoring preference to EPA (i.e., individual monitoring program vs. cooperative monitoring program) with NOI submittals	NOI submittal Deadline (see Table 1)	NOI submittal Deadline (see Table 1)	NOI submittal Deadline (see Table 1)	NOI submittal Deadline (see Table 1)	NOI submittal Deadline (see Table 1)
Submit a detailed description of the monitoring scheme to EPA and NMED for approval. The monitoring scheme should include: a list of pollutants; a description of monitoring sites with an explanation of why those sites were selected; and a detailed map of all proposed monitoring sites	Ten (10) months from effective date of permit	Ten (10) months from effective date of permit	Eleven (11) months from effective date of permit	Eleven (11) months from effective date of permit	Twelve (12) months from effective date of permit
Submit certification that all wet weather monitoring sites are operational and begin sampling	<u>March 22, 2016</u>	<u>March 22, 2016</u>	<u>May 21, 2016</u>	<u>May 21, 2016</u>	<u>June 21, 2016</u>
Update SWMP document and submit annual reports	Annually	Annually	Annually	Annually	Annually

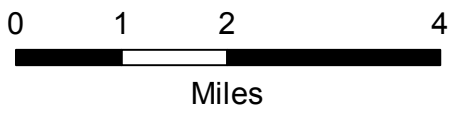
APPENDIX B: COA Site Maps

No.	Description
B-1	MSGP Facility Locations
B-2	Outfall Map
B-3	Sample Locations

APPENDIX B-1



COA MSGP Facilities

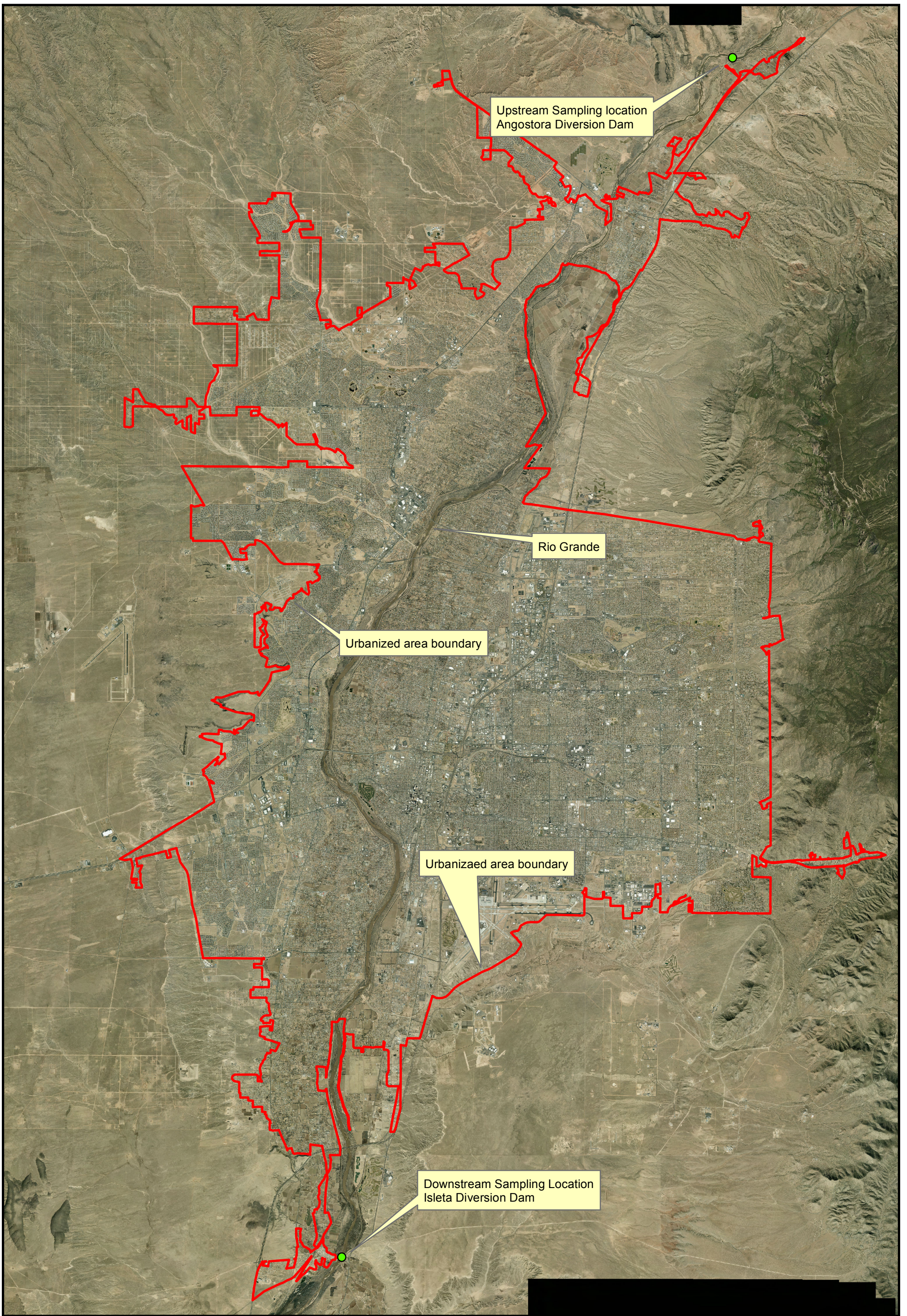


APPENDIX B-2

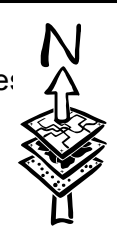
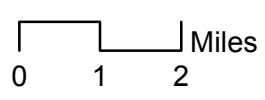


Outfall/Dry Weather Sampling Locations

APPENDIX B-3



1 inch = 2.367424 mile:



WSB MS4 Sampling Locations	
Southern Sandoval County Arroyo Flood Control Authority	
Date: November 13, 2015	
Attachment 1	

APPENDIX C: NOI and Public Notice

No.	Description
C-1	COA NOI
C-2	Public Notice
C-3	Coverage Authorization

APPENDIX C-1

NOTICE OF INTENT



National Pollutant Discharge Elimination System Stormwater Program
MS4 Notice of Intent Format



Check box if you are submitting an individual NOI with one or more cooperative program elements.

Check box if you are submitting an individual NOI with individual program elements only.

Check box if your municipality or organization was previously covered under a MS4 permit.

Please indicate the permittee class type: (Note: The definition of the permittee class type is located in Table 1 of Part I.B.1.)

A (Phase I) B (Phase II) C (New Phase II) D (MS4s within Indian Lands)

I. MS4(s) Information

A. General Information

City of Albuquerque (COA)

Name of MS4

Kathleen

Name of Contact Person (First)

Verhage

(Last)

Senior Engineer

(Title)

(505) 768-3654

Telephone (including area code)

kverhage@caqb.gov

Email

P.O. Box 1293, Dept. of Municipal Development, Storm Drainage Section, Rm 301, Attn: Kathy Verhage

Mailing Address

Albuquerque

City

NM

State

87103

ZIP code

What size population does your MS4(s) serve? 546,364 2010 US C

The operator is: Federal State Tribal other public (check one)

B. In what urbanized area (UA), the MS4 is located in:

- Farmington UA
- Santa Fe UA
- Albuquerque UA
- Los Lunas UA
- Las Cruces UA
- El Paso UA

C. If not located in an UA, the MS4 is located in:

Core Municipality

Indian Reservation/Pueblo

County(ies)

Cluster

D. Is this a Phase I MS4? Yes No

Is this a Non-traditional MS4? Yes No

If so, Check one: Dept. of Transportation Flood Control Authority University

Other - Specify

What is the Latitude and longitude of the approximate center of the MS4?

Latitude Longitude

II. Eligibility Determination

A. Receiving Water(s) Information

Does the MS4 discharge to any waters for which an TMDL applicable to discharges from the MS4 has been approved? (See Part I.A.5.f) Yes No NA

The receiving water(s) are:

The receiving water(s) are:	State or Tribal Segment ID	Approved TMDL	TMDL assigns WLA to MS4
Rio Grande	2105.1_00	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

Is the MS4 (or a group of MS4s) seeking an alternative sub-measurable goal for TMDL controls under Part I.C.2.b.(i).(c).B? Yes No NA

If so, the MS4 or a group of MS4s must submit a preliminary proposal with the NOI to EPA and NMED (see Part I.B.2.k, Section B.2 in Appendix B and Part III.D.4). This proposal should include, but is not limited to, the elements included in Appendix B under Section B.2 of the permit

If the MS4 discharges to a receiving water for which EPA has approved or developed a TMDL, describe how the eligibility requirements of Part I.A.5.f and Part I.C.2. have been met :

The COA meets the Waste Load Allocation (WLA) specified in the Phase 1 Permit issued on March 1, 2012. Measures to meet the WLA are specified in the Stormwater Management Plan (SWMP), which will be revised as necessary, to meet new permit requirements.

The COA has developed and will continue to develop targeted controls in an effort to reduce pollutants of concern. These controls along with measurable goals will be included in the SWMP with the first Annual Report and implemented per the schedule.

The COA has implemented focused controls to address the bacterial impairment and will continue to implement controls in the 5 areas listed in Part I.C.2. e. Monitoring and assessment will be discussed in the SWMP and updates will be reported annually.

The COA will cooperate with other permittees in meeting the assigned WLA for listed stream segments. As specified in Part I.C.2.b.i.c.B, the COA may share efforts and request an aggregate WLA to be specified in the SWMP. See Attachment 1.

B. Is the MS4 partially located on Indian Country lands? Yes No

If so, the Indian Country Lands include the following: (NOTE: MS4s straddling State and Indian Country land boundaries will be issued authorization under all applicable permits and may have additional State or Tribal-specific requirements applicable to different areas of the MS4 - see Part VIII and initial notification under Part III.D.4)

C. Is the permit in compliance with the National Historic Preservation Act (NHPA)? Yes No

In order to be eligible for coverage under this permit, the MS4 operator must meet one of the following criteria: (Please check which criterion the MS4 is eligible under)

Criterion A: storm water discharges, allowable non-storm water discharges, and discharge-related activities do not affect a property that is listed or is eligible for listing on the National Register of Historic Places as maintained by the Secretary of the Interior.

Criterion B: the applicant has obtained and is in compliance with a written agreement with the State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO) (or equivalent tribal authority) that outlines all measures the MS4 operator will undertake to mitigate or prevent adverse effect to the historic property.

Provide a brief summary of the basis for the criterion selected above:

To the best of the COA's knowledge, no historic properties are affected by storm water or allowable non-storm water discharges.

Per its current Phase I MS4 permit, the COA is in compliance with NM State Historic Preservation Office (SHPO) requirements specified in Part IV, Section U (March 1, 2012). Language in the 2012 permit was approved by SHPO during the 2008 reapplication.

The COA has an Archeological Ordinance, approved in 2007, that establishes procedures to protect archaeological sites within the city. Land disturbances resulting in discovery of such sites must undergo review by qualified individuals.

III. Preliminary Description of the Proposed Stormwater Program

As applicable, use Sections 1 through 8 below to describe the storm water management program (SWMP), including best management practices (BMPs) or storm water controls that will be implemented and the measurable goals for each of the storm water minimum control measures specified in Part I.D.5 of this permit, the month and year in which the MS4 operator will start and fully implement each of the minimum control measures or the frequency of the action, the name of the person(s) or position(s) responsible for implementing or coordinating the SWMP.

If the MS4 operator is participating in cooperative programs with other parties (or is relying on another governmental entity) to satisfy one or more permit obligations (see Part I.D.3), use the space provided under *Cooperative Elements* to identify the partners and briefly describe roles and responsibilities.

NOTE:

The space provided in the fields below (255 characters) should be used to briefly describe proposed BMPs and corresponding measurable goals. Individual boxes should be used to describe individual target activities. If additional space is required to describe target activities, the MS4(s) should attach such as information with the NOI using the format provided.

Section 1. Construction Site Stormwater Runoff Control – Proposed BMPS, Stormwater Controls, and Measurable Goals

1.1. Development of an ordinance or other regulatory mechanism as required in Part I.D.5.a.(ii)(a)

The COA developed and passed (on November 4, 2013) a Drainage Ordinance that requires an Erosion and Sediment Control Permit for land disturbances of greater than or equal to one (1) acre.

A Stormwater Quality Ordinance that further regulates post construction discharges has been developed and is currently undergoing review and stakeholder comment. Best Management Practices (BMPs) are also required to control runoff.

Cooperative Elements

The COA participates in a Technical Advisory Group (TAG) composed of co-permittees. The group meets regularly regarding topics of concern. Technical expertise, templates, and ideas for implementation are shared among members that have signed the MOU.

1.2. Develop requirements and procedures as required in Part I.D.5.a.(ii)(b) through in Part I.D.5.a.(ii)(h)

The COA currently requires and will continue to require submittal of erosion and sediment control plans that specify BMPs at construction sites. Site plan reviews for private development are conducted by the Stormwater Quality Engineer.

The COA also requires and will continue to require the preparation of SWPPPs or LEWs for construction of public projects that disturb one (1) or more acres. Review of submittals along with record keeping and tracking will continue to be performed.

Education and training of appropriate personnel in the construction industry regarding implementation of BMPs to prevent stormwater pollution has been and will continue to be required.

Annual and cumulative summaries will continue to be provided in each annual report.

Cooperative Elements

The COA participates in a TAG comprised of co-permittees. The group meets regularly regarding topics of concern. Technical expertise, templates, and ideas for implementation are shared among members that have signed the MOU.

The COA currently participates in and hosts workshops and brown bags during which information regarding SWPPP preparation, BMP implementation and maintenance, CGP requirements and other construction related issues are discussed.

1.3. Annually conduct site inspections of 100 percent of all construction projects cumulatively disturbing one (1) or more acres as required in Part I.D.5.a.(iii)

The COA conducts site inspections of all construction projects cumulatively disturbing one (1) or more acres per its current 2012 permit and will continue to inspect projects of this size under the Watershed Based Permit (WBP).

Inspections are tracked and follow up inspections are scheduled, if necessary. Final stabilization is noted upon occurrence. These activities will continue under the WBP.

Cooperative Elements

The COA participates in a TAG composed of co-permittees. The group meets regularly regarding topics of concern. Technical expertise, templates, and ideas for implementation are shared among members that have signed the MOU.

1.4. Coordinate with all departments and boards with jurisdiction over the planning, review, permitting, or approval of public and private construction projects/activities within the permit area as required in Part I.D.5.a.(iv)

The COA currently coordinates internally and with other agencies, as opportunities arise, and as appropriate, to implement Arid GI/LID/Sustainable practices into private and public construction projects.

The COA currently coordinates with both AMAFCA and Bernalillo County on several flood control projects. These projects are reviewed for and often incorporate water quality features and/or Arid LID/GI/Sustainable practices.

Cooperative Elements

The COA participates in a TAG with other co-permittees. The group meets monthly regarding topics of concern. Technical expertise, templates, and ideas for implementation are shared among members that have signed the MOU.

1.5. Evaluation of GI/LID/Sustainable practices in site plan reviews as required in Part I.D.5.a.(v)

The COA Planning Department currently performs site plan review of all construction projects. Inclusion of appropriate Arid GI/LID/Sustainable practices are encouraged. Per the Drainage Ordinance, capture of the 90% rain event is required.

Cooperative Elements

The COA participates in a TAG with other co-permittees. The group meets monthly regarding topics of concern. Technical expertise, templates, and ideas for implementation are shared among members that have signed the MOU.

The COA currently sponsors or hosts brown bag lunches, seminars, and conferences, and other educational opportunities that promote Arid GI/LID practices. Other permittees, developers, and contractors will continue to be invited and encouraged to attend.

1.6. Enhance the program to include program elements in Part I.D.5.a.(viii) through Part I.D.5.a.(x)

The COA will continue to develop educational materials on its own or in conjunction with other permittees as part the SQT. The COA may also continue to use materials provided by regulatory agencies or trade organizations.

The COA will update its Development Process Manual (DPM) or other applicable documents and/or procedures to include Arid GI/LID/Sustainable practices. It may also coordinate with other agencies to update applicable documents.

Construction site inspections will continue to be performed by appropriate personnel in the Planning Hydrology Department during the grading and construction phases rather than by Building Codes Inspectors.

Cooperative Elements

The COA participates in a TAG with other co-permittees. The group meets monthly regarding topics of concern. Technical expertise, templates, and ideas for implementation are shared among members that have signed the MOU.

The COA is a member of the Stormwater Quality Team (SQT), an organization that promotes educational awareness with regards to stormwater quality issues, including education and outreach activities that encourage implementation of Arid GI/LID practices.

1.7. Describe other proposed activities to address the Construction Site Stormwater Runoff Control Measure:

The COA recently coordinated with the NMDOT to host a brown bag lunch sponsored by a vendor that discussed Arid GI/LID practices, including installation of dry wells. The COA will continue to cooperate with other agencies in such efforts.

Section 2. Post-Construction Stormwater Management in New Development and Redevelopment – Proposed BMPs, Stormwater Controls, and Measurable Goals

2.1. Development of strategies as required in Part I.D.5.b.(ii).(a)

The COA will continue to promote existing strategies, revise as appropriate, and develop new BMPs in an effort to control pollutants in stormwater runoff during post construction activities.

Cooperative Elements

The COA participates in a TAG with other co-permittees. The group meets monthly regarding topics of concern. Technical expertise, templates, and ideas for implementation are shared among members that have signed the MOU.

The COA recently coordinated with the NMDOT to host a brown bag lunch sponsored by a vendor that discussed Arid GI/LID practices, including installation of dry wells. The COA will continue to cooperate with other agencies in such efforts.

2.2. Development of an ordinance or other regulatory mechanism as required in Part I.D.5.b.(ii).(b)

The COA has developed and is currently implementing the details of a Drainage Ordinance that specifies capture of stormwater discharge that occurs during the 90% rain event.

Cooperative Elements

The COA participates in a TAG with other co-permittees. The group meets monthly regarding topics of concern. Technical expertise, templates, and ideas for implementation are shared among members that have signed the MOU.

2.3. Implementation and enforcement, via the ordinance or other regulatory mechanism, of site design standards as required in Part I.D.5.b.(ii).(b).

The COA has developed and is currently implementing the details of a Drainage Ordinance that specifies capture of stormwater discharge that occurs during the 90% rain event . Enforcement policies are detailed in the ordinance.

The DPM is undergoing revision to incorporate Arid LID/GI/Sustainable practices that may be used to meet capture of the stormwater discharge corresponding to the 90% rain event.

Cooperative Elements

The COA participates in a TAG with other co-permittees. The group meets monthly regarding topics of concern. Technical expertise, templates, and ideas for implementation are shared among members that have signed the MOU.

2.4. Ensure appropriate implementation of structural controls as required in Part I.D.5.b.(ii).(c) and Part I.D.5.b.(ii).(d)

The Drainage Ordinance and DPM specify review and acceptance of designs that receive credit for capture of the 90% storm event. Submittal of maintenance records is also required as specified in the "Drainage" Ordinance and DPM.

Program requirements are reviewed and revised as necessary and the COA will continue to do so.

Cooperative Elements

The COA participates in a TAG with other co-permittees. The group meets monthly regarding topics of concern. Technical expertise, templates, and ideas for implementation are shared among members that have signed the MOU.

2.5. Develop procedures as required in Part I.D.5.b.(ii).(e), Part I.D.5.b.(ii).(f), Part I.D.5.b.(ii).(g), and Part I.D.5.b.(ii).(h)

The Drainage Ordinance specifies procedures for long term operation and maintenance (O&M) of stormwater features, including submittals and verification of maintenance activities.

The Department of Agriculture in NM certifies pesticide and herbicide applicators. The COA requires that distributors and applicators follow state standards.

Cooperative Elements

The COA participates in a TAG with other co-permittees. The group meets monthly regarding topics of concern. Technical expertise, templates, and ideas for implementation are shared among members that have signed the MOU.

2.6. Coordinate internally with all departments and boards with jurisdiction over the planning, review, permitting, or approval of public and private construction projects/activities within the permit area as required in Part I.D.5.b.(iii)

The COA has and will continue to coordinate internally with departments regarding the planning, review, permitting or approval of public and private construction projects.

Cooperative Elements

Internal coordination and cooperation is and will continue to occur regarding construction activities.

2.7. As required in Part I.D.5.b.(iv), the permittee must assess all existing codes, ordinances, planning documents and other applicable regulations, for impediments to the use of GI/LID/Sustainable practices

The COA has assessed codes, ordinances, planning documents and regulations for impediments to the use of GI/LID/Sustainable practices per the 2012 permit. A letter report per the 2012 permit was submitted to EPA Region 6 on 09/01/13. ■

Cooperative Elements

The COA is an active participant in the TAG and shares technical expertise, templates, and ideas with other agencies in regular (currently monthly) meetings.

2.8. As required in Part I.D.5.b.(iv), describe the plan to report the assessment findings on GI/LID/Sustainable practices

The COA submitted a letter report to EPA Region 6 on 09/01/13 as required by the 2013 permit regarding findings on GI/LID/Sustainable practices. Another letter report can be prepared and submitted, as required per the WBP. 1

Cooperative Elements

The COA is an active participant in the TAG and shares technical expertise, templates, and ideas with other agencies in regular (currently monthly) meetings.

2.9. Estimation of the number of acres of IA and DCIA as required in Part I.D.5.b.(vi)

The COA reported an estimate of the number of acres of IA and DCIA per its 2012 permit to EPA Region 6 on 09/01/13. It provided updates as required in Annual Reports in subsequent years.

Cooperative Elements

The COA is an active participant in the TAG and shares technical expertise, templates, and ideas with other agencies in regular (currently monthly) meetings.

2.10. Inventory and priority ranking as required in section in Part I.D.5.b.(vii)

The COA submitted a letter report to EPA Region 6 on 09/01/14 that discussed the potential for retrofits of COA property with control measures to regulate stormwater discharges. Another letter report will be submitted in future per WBP requirements.

Cooperative Elements

The COA is an active participant in the TAG and shares technical expertise, templates, and ideas with other agencies in regular (currently monthly) meetings.

2.11. Incorporate watershed protection elements as required in Part I.D.5.b.(viii)

The COA incorporates watershed protection elements into appropriate projects in its master plan (updated every 10 years).

Cooperative Elements

The COA currently cooperates with other agencies, such as AMAFCA and Bernalillo County, in preparation of large scale master plans for the area.

The COA currently cooperates and will continue to cooperate with other agencies in the Middle Rio Grande (MRG) in the protection of sensitive areas, such as the bosque.

2.12. Enhance the program to include program elements in Part I.D.5.b.(xi) and Part I.D.5.b.(xii)

The COA will continue to update its educational materials as required.

The COA will continue to participate in locally based watershed planning efforts, including in the TAG and the SQT.

Cooperative Elements

The COA will continue to participate in the TAG and SQT.

2.13. Describe other proposed activities to address the Post-Construction Stormwater Management in New Development and Redevelopment Measure:

The COA will continue to review procedures and planning documents for incorporation of Arid LID/GI/ Sustainable practices.

Section 3. Pollution Prevention/Good Housekeeping for Municipal/Co-permittee Operations – Proposed BMPs, Stormwater Controls, and Measurable Goals

3.1. Develop or update the Pollution Prevention/Good House Keeping program to include the elements in Part I.D.5.c.(i)

The COA will continue its existing Pollution Prevention/Good House Keeping program and update/revise as necessary.

Cooperative Elements

The COA will continue to participate in the TAG and SQT, providing technical expertise, templates, and ideas to team members.

3.2. Enhance the program to include the elements in Part I.D.5.c.(ii)

The COA has already enhanced its program over the last 12 years since receiving its first permit in 2003 with the elements listed in Part I.D.5.c.(ii). It will continue to enhance its program with additional elements as opportunities to do so arise.

Cooperative Elements

The COA will continue to participate in the TAG and SQT, providing technical expertise, templates, and ideas to team members.

3.3. Develop or update a list and a map of industrial facilities owned or operated by the permittee as required in Part I.D.5.c.(iii)

The COA has not acquired any new facilities. It can provide a current map of its facilities. None of these facilities can be classified as "high risk" or "industrial" although some serve as maintenance facilities.

Cooperative Elements

The COA will continue to participate in the TAG and SQT, providing technical expertise, templates, and ideas to team members.

3.4. Describe other proposed activities to address the Pollution Prevention/Good Housekeeping for Municipal/permittee Operations Measure:

The COA currently has developed SWPPPs for many of its facilities. These will continue to be updated. Training and inspections will continue, per the SWPPPs.

Section 4: Industrial and High Risk Runoff – Proposed BMPs, Stormwater Controls, and Measurable Goals (APPLICABLE ONLY TO CLASS A PERMITTEES)

4.1. Ordinance (or other control method) as required in Part I.D.5.d.(i)

The COA has prepared a Stormwater Quality Ordinance that is currently in review.

Cooperative Elements

The COA participates in a TAG with other WBP agencies. Templates, implementation strategies, and lessons learned will be shared at meetings currently held monthly.

4.2. Continue implementation and enforcement of the Industrial and High Risk Runoff program, assess the overall success of the program, and document both direct and indirect measurements of program effectiveness in the annual report as required in Part I.D.5.d.(ii)

The COA will continue to implement the Industrial and High Risk Runoff program, assess program effectiveness and document results in the Annual Report.

Cooperative Elements

The COA participates in a TAG with other WBP agencies. Templates, implementation strategies, and lessons learned will be shared at meetings currently held monthly.

4.3. Meet the monitoring requirements in Part I.D.5.d.(iii)

The COA requires that industrial facilities with applicable Standard Industrial Classification (SIC) codes meet the industry specific monitoring criteria listed in the Multi-Sector General Permit (MSGP).

Cooperative Elements

The COA participates in a TAG with other WBP agencies. Templates, implementation strategies, and lessons learned will be shared at meetings currently held monthly.

4.4. Include requirements in Part I.D.5.d.(iv)

The COA currently lists and provides updates of the facilities with SIC codes required to comply with the MSGP. Spot inspections are conducted, including review of the SWPPP.

Summaries of the results will continue to be documented in the Annual Report.

Cooperative Elements

The COA participates in a TAG with other WBP agencies. Templates, implementation strategies, and lessons learned will be shared at meetings currently held monthly.

4.5. Enhance the program to include requirements in Part I.D.5.d.(vii)

The COA will use analytical data that has a facility has collected to comply with NPDES and/or State discharge permits.

The COA will accept "No exposure certifications" in lieu of analytical monitoring.

Cooperative Elements

The COA participates in a TAG with other WBP agencies. Templates, implementation strategies, and lessons learned will be shared at meetings currently held monthly.

4.6. Describe other proposed activities to address the Industrial and High Risk Runoff Measure:

The COA will continue its education efforts, working with those not in compliance to meet existing and new regulations.

Section 5. Illicit Discharges and Improper Disposal – Proposed BMPs, Stormwater Controls, and Measurable Goals

5.1. Mapping as required in Part I.D.5.e.(i)(a)

The COA has completed the mapping required in Part I.D.5.e.(i).(a) per permit requirements issued in the 2003 permit. Maps continue to be updated as new features are added.

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Cooperative Elements

The COA will continue to work with agencies as part of the TAG. It will share its maps with any interested agencies.

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5.2. Ordinance (or other control method) as required in Part I.D.5.e.(i)(b)

The COA has drafted a Stormwater Quality Ordinance that regulates non-stormwater discharges into its MS4. The ordinance will be submitted to City Council upon completion of the review process.

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Cooperative Elements

The COA participates in a TAG with other WBP agencies. Templates, implementation strategies, and lessons learned will be shared at meetings currently held monthly.

5.3. Develop and implement a IDDE plan as required in Part I.D.5.e.(i)(c)

The COA has developed and implemented an IDDE plan as required in Part I.D.5.e.(i)(c). Its dry weather screening locations were chosen based on previous screening studies. The COA will continue to work on source control.

Cooperative Elements

The COA already works with copermittees, such as AMAFCA and the NMDOT, and other agencies, such as Bernalillo County to address illicit discharges.

5.4. Develop an education program as required in Part I.D.5.e.(i)(d)

The COA has developed an education program as required in Part I.D.5.e.(i)(d) that promotes, publicizes, and facilitates the reporting of illicit discharges. Brochures and other materials have been developed that promote pollution prevention awareness.

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Cooperative Elements

The COA will continue to participate in the SQT, an organization formed to facilitate education and outreach activities in the MRG watershed.

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5.5. Establish a hotline as required in Part I.D.5.e.(i)(e)

A 311 hotline to address complaints from the public was instituted per 2003 permit requirements.

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Cooperative Elements

The COA will continue to participate in the SQT, sharing funds and ideas with other team members.

The COA will continue to coordinate with other agencies in addressing IDDE complaints.

5.6. Investigate suspected significant/severe illicit discharges as required in Part I.D.5.e.(i)(f)

COA personnel investigate suspected illicit discharges as required in Part I.D.5.e.(i)(f) as expeditiously as possible upon receipt of information.

Cooperative Elements

The COA will continue to coordinate with other agencies in addressing IDDE complaints.

5.7. Review complaint records and develop a targeted source reduction program as required in Part I.D.5.e.(i)(g)

The COA has reviewed complaint records and continues to develop and implement a targeted source reduction program as required in Part I.D.5.(i)(g).

Cooperative Elements

The COA continues to participate with team members in the SQT and other interested agencies and partners in developing targeted pollution prevention/reduction strategies.

5.8. Screening of system as required in Part I.D.5.e.(iii) as follows:

The COA has screened its system as required in Part I.D.5.e.(iii) as required. It's current dry weather screening locations have been chosen as a result of the screening process.

The COA continues to update the screening process based on 311 complaints and field observations.

Cooperative Elements

The COA will continue to work with copermittees in screening efforts as applicable.

5.9. Develop, update, and implement a Waste Collection Program as required in Part I.D.5.e.(iv)

The COA has developed, implemented, and updated a Waste Collection Program as required in Part I.D.5.e. (iv). A Household Hazardous Waste Collection (HHW) facility was opened in the mid-2000's. It's hours have expanded over the years.
In addition to funding the HHW Collection facility, the COA also hosts recycling events in underserved areas of the City.

Cooperative Elements

The COA shares brochures and ideas for implementation with other agencies. The COA household hazardous waste facility accepts waste from Bernalillo and Sandoval County residents.

5.10. Develop, update and implement a Spill Prevention and Response program to prevent, contain, and respond to spills that may discharge into the MS4 as required in Part I.D.5.e.(v)

The COA has developed and implemented a Spill Prevention and Response program to prevent, contain, and respond to spills that may discharge into the MS4 as required in Part 1.D.5.e.(v). It will continue to revise and update the program as necessary.

Cooperative Elements

The COA will continue to work with other agencies, such as AMAFCA, the NMDOT, Water Utility Authority, and Bernalillo County, in addressing spills within Bernalillo County.

As a TAG member, the COA will coordinate with other agencies in the development of and procedures to enhance current Spill Prevention and Response programs.

5.11. Enhance the program to include requirements in Part I.D.5.e.(ix)

The COA will continue to cooperate with agencies that it has as a Phase 1 permittee. As part of the TAG, the COA looks forward to coordinating with additional Class B and C WBP agencies.

The COA will continue to enhance its procedures and methodologies consistent with the EPA IDDE Guidance Manual.

Cooperative Elements

The COA will continue to cooperate with agencies that it has as a Phase 1 permittee. As part of the TAG, the COA looks forward to coordinating with additional Class B and C WBP agencies.

5.12. Describe other proposed activities to address the Illicit Discharges and Improper Disposal Measure:

The COA will continue to enhance its procedures and methodologies consistent with the EPA IDDE Guidance Manual.

Section 6. Control of Floatables Discharges – Proposed BMPs, Stormwater Controls, and Measurable Goals

6.1. Develop a schedule to implement the program as required in Part 1.D.5.f.(i)(a)

The COA will develop a schedule per the requirements specified in Part 1.D.5.f.(i)(a).

The COA currently meets the requirements specified in Part 1.D.5.f.(i)(a).

Cooperative Elements

The COA will continue to coordinate with AMAFCA to install water quality features in appropriate drainage facilities.

As part of the TAG, the COA will share designs and ideas for development and implementation of floatable control with other members.

6.2. Describe the plan to estimate the annual volume of floatables and trash removed from each control facility and characterize the floatable type as required in Part I.D.5.f.(i)(b)

The COA will continue to track the annual volume of floatables and trash removed from its system. Characterization will continue to be based on the "Flotables Study" performed in 2005 and updated, as necessary.

Cooperative Elements

The COA will continue to coordinate with agencies that it has been coordinating with and new agencies as part of the TAG in floatables reduction and reporting programs.

6.3. Describe other proposed activities to address the Control of Floatables Discharges Measure:

The COA will continue to install trash racks or other water quality features in ponds to remove floatables and trash. The COA continues to improve designs of the these features to reduce construction and maintenance costs.

Section 7. Public Education and Outreach on Stormwater Impacts – proposed BMPs, Stormwater Controls, and Measurable Goals

7.1. Develop, revise, implement, and maintain an education and outreach program as required in Part I.D.5.g.(i) and Part I.D.5.g.(ii)

The COA has developed, implemented, maintained and revised an education and outreach program as required in Parts I.D.5.g.(i) and (ii). Goals and objectives have been defined and are reassessed annually.

The COA coordinates internally to involve citizens in Open Space clean up programs and school students in restoration programs. Youth groups such as the scouts have been involved in placing storm drain markers on drains in neighborhoods.

Cooperative Elements

The COA continues to participate in the SQT, a group formed by the original MS4 co-permittees in 2004 to address education and outreach opportunities in the MRG watershed.

The COA continues to participate with individual agencies, such as Bernalillo County, the Nature Conservancy, and Earth Force in activities of mutual interest, such as local clean up events, student field trips, and workshops.

7.2. Enhance the program to include requirements in Part I.D.5.g.(v) through Part I.D.5.g.(viii)

The COA has enhanced the program to include many of the requirements in Part I.D.5.g.(v) through (viii). The COA will continue to enhance its program.

Cooperative Elements

The COA continues to participate in the SQT, a group formed by the original MS4 co-permittees in 2004 to address education and outreach opportunities in the MRG watershed.

7.3. Describe other proposed activities to address the Public Education and Outreach on Stormwater Impacts Measure:

The COA will continue to post required NPDES compliance documents and solicit public input. Public comments will be considered.

Section 8. Public Involvement and Participation – Proposed BMPs, Stormwater Controls, and Measurable Goals

8.1. Develop (or update), implement, and maintain a public involvement and participation plan as required in Part I.D.5.h.(ii) and Part I.D.5.h.(iii)

Public input is currently solicited on the COA's website and via the 311 hotline. The program will be updated, if necessary, to meet new permit conditions.
The COA will post the NOI on its website as well as on the SQT webpage.

Cooperative Elements

The COA is a member of the SQT. Public involvement and participation continues to be one of the core missions of this team.

8.2. Describe the plan to comply with State, Tribal, and local notice requirements when implementing a Public Involvement and Participation Program as required in Part I.D.5.h.(iv)

The COA will continue to notify the State and Tribal entities as required via email, regular mail, or any other format that is desired as part of the Public Involvement and Participation Program requirements.

Cooperative Elements

The COA will continue to participate in the TAG, sharing information among other agencies. As appropriate, for large scale projects or issues involving more than one agency, joint public meetings may be held.

8.3. Describe a plan to include elements as required in Part I.D.5.h.(v)

The COA currently encourages any and all members of the public to participate in its processes. Volunteers currently participate in clean up days, distribute information to neighbors, and stock mutt mitt stations.

Cooperative Elements

The COA currently cooperates with other agencies via the SQT and TAG. It will continue to partner with groups in areas of mutual interest.

8.4. As required in Part I.D.5.h.(viii) provide the internet site (or website) where the SWMP document, Annual Reports, and other documents will be available to the public.

<http://www.cabq.gov/municipaldevelopment/our-department/engineering/storm-water-management/municipal-separate-storm-sewer-system-ms4-permit>

8.5. Enhance the program to include requirements in Part I.D.5.h.(ix)

The COA has already enhanced their program to establish a community hotline, surveys, public tracking and reporting system, restoration programs, clean up days, and monitoring programs in schools.

The COA will continue to integrate public involvement and participation with education and outreach programs regarding pollution prevention and improvement of stormwater quality.

Cooperative Elements

As a team member, the COA will continue to coordinate with the SQT on issues regarding Public Involvement and Participation. The COA will also continue to partner with other agencies as projects of mutual interest arise.

The COA will continue to participate in TAG meetings and share ideas and implementation strategies for Public Involvement and Participation.

8.6. Describe other proposed activities to address the Public Involvement and Participation Measure:

The COA will continue to update and revise their Public Involvement and Participation program. Surveys were prepared in August 2014 by the SQT and will continue to be distributed at local events. Results will continue to be reported.

IV. Proposed Monitoring Program

Indicate wet weather monitoring program preference:

Individual Monitoring Program

Cooperative Monitoring Program

Provide a general description of the propose monitoring program.

The COA will continue to coordinate with other Phase 1 entities under its current monitoring plan per the 2012 permit until the monitoring plan under the WBP is implemented per the schedule in said permit.

The COA plans to coordinate with other permittees in the monitoring of constituents of mutual concern, such as bacteria. Details of the extent of coordination will be provided in a Monitoring Plan as required the implementation schedule in the permit.

The COA will comply with all monitoring requirements.

V. Public Participation

Include a Summary of issues raised in any local public comments received by the MS4 Operator on the draft NOI/SWMP and MS4 operator's responses.

No comments were received during the 30 day public comment period.

VI. Attachments

Attach a location map showing the boundaries of the MS4 under the applicant's jurisdiction. The map must include streets or other demarcations so that the exact boundaries can be located.

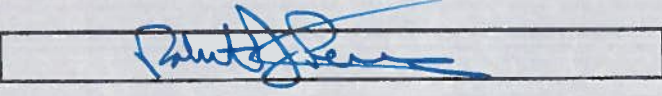
Are other attachments included with the NOI? If so, indicate the title of the document(s).

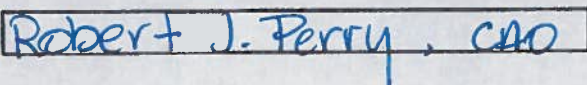
Attachment 1 - Waste Load Allocation (WLA) Calculation for the City of Albuquerque


Map of COA Urbanized Boundaries

VII. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my 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 my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

rlA Signature: 

Printed Name: 

Date: 

ATTACHMENT 1
Notice of Intent to Comply with Permit NMR04A000
City of Albuquerque

WASTE LOAD ALLOCATION CALCULATIONS

For Stream Segment, 2105_50, Isleta Pueblo boundary to Alameda Street Bridge, the COA seeks a WLA based on jurisdictional area.
 ABQ area: 187.7 sq mi 2010 Census

Stream Segment	Stream Name	Permittee Class	Flow Conditions & Associated WLA/Area (sq mi)				
			High	Moist	Mid-Range	Dry	Low
2105_00	non-Pueblo	Class A	1.79E+09	4.48E+08	3.02E+08	1.11E+08	2.58E+07
	Alameda Br to Isleta Pueblo	WLA based on Area	3.36E+11	8.41E+10	5.67E+10	2.08E+10	4.84E+09

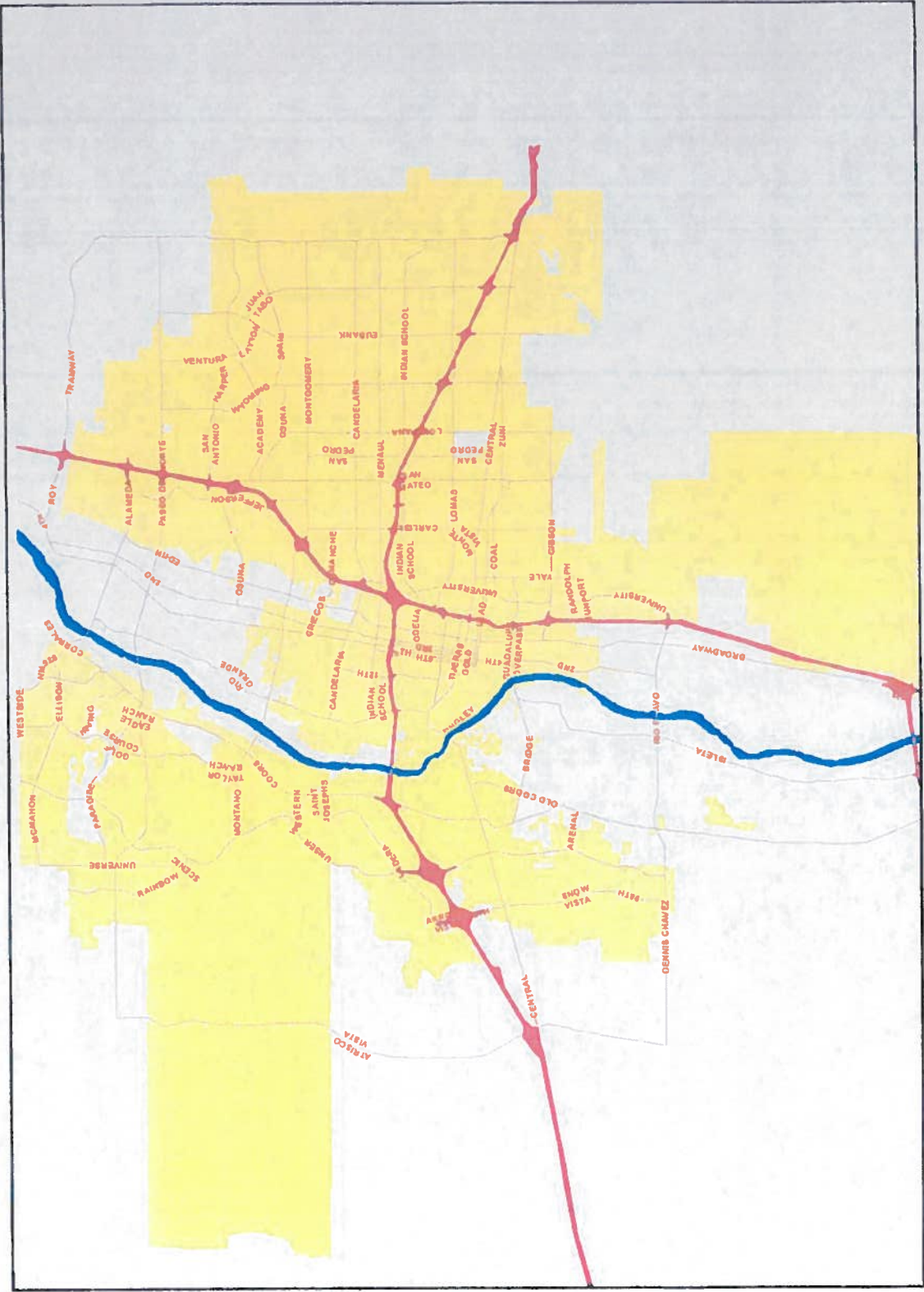
For Stream Segment, 2105.1_00, non-Pueblo Alameda Bridge to Angostura Diversion, the COA seeks a WLA based on the population served by the drainage basin of the North Diversion Channel (NDC). The population served by the NDC, which drains into this stream segment composes, 56% of the total population of Class A, B, and C permittees draining to the segment.

Area Drained by NDC	92 sq mi	2012 permit
Pop Density of ABQ	2907.6 people/sq mi	2010 Census
Pop of NDC Drain Basin (CI A in NDC)	267,499	=area X pop density
Pop of unincorp Bern CO (CI B)	76,665	Bern Co eNOI
Pop of Sandoval CO (CI B, C)	131,561	2010 Census
Total Pop CI A in NDC, B, C	475,725	
Pop CI A in NDC/Total Pop CI A, B, C	0.56	

Stream Segment	Stream Name	Permittee Class	Flow Conditions & Associated WLA				
			High	Moist	Mid-Range	Dry	Low
2105.1_00	non-Pueblo	Class A	5.25E+10	1.52E+10	-	5.43E+09	2.80E+09
	Alameda Br to Angostura Div.	B and C	7.59E+10	7.59E+10	-	2.71E+10	1.40E+10
		TOTAL	1.28E+11	9.11E+10		3.25E+10	1.68E+10
		WLA for NDC based on population	7.22E+10	5.12E+10		1.83E+10	9.45E+09

The table below is a summary of the target WLA's sought by the COA for E-coli.

Stream Segment	Stream Name	Permittee Class	Flow Conditions & Associated WLA				
			High	Moist	Mid-Range	Dry	Low
2105_00	non-Pueblo	Class A	3.36E+11	8.41E+10	5.67E+10	2.08E+10	4.84E+09
	Alameda Br to Isleta Pueblo	WLA for COA based on Area					
2105.1_00	Alameda Br to Angostura Div.	WLA for COA based on Population of NDC	7.22E+10	5.12E+10	--	1.83E+10	9.45E+09



MS4 boundary of city of Albuquerque



APPENDIX C-2



NOTICE
City of Albuquerque

**Filing of Notice of Intent for
Municipal Separate Storm Sewer System (MS4)
Watershed Based Permit – NPDES Permit NMR04A000**

On behalf of the City of Albuquerque (COA), you are hereby notified that the COA is requesting coverage under the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit for the Middle Rio Grande Watershed (NMR04A000).

Stormwater discharges from the COA are currently regulated under the NPDES Phase 1 Permit for the Albuquerque Metropolitan Area NMS000101. On December 22, 2014, the Environmental Protection Agency (EPA) issued a new NPDES Watershed Based MS4 Permit (WBP) for the Middle Rio Grande Watershed. The COA is listed for potential coverage under the permit as a Class A permittee based on its urbanized area and population reported in the 2010 Census. The COA will comply with the requirements of this permit.

To obtain coverage under this WBP, the COA will prepare a Notice of Intent (NOI), notify the public, submit the NOI for a 30 day comment period, and file the NOI with the EPA no later than June 20, 2015.

COMMENT PERIOD

A 30-day public comment period associated with the filing of the proposed NOI begins May 19, 2015. Comments on the proposed draft will be accepted through June 18, 2015. Written comments should be submitted to EPA and the COA via email or hard copy to the contacts listed below.

EPA (via email)
Ms. Dorothy Brown
Brown.dorothy@epa.gov

COA (via email)
Kathy Verhage
kverhage@cabq.gov

EPA (via hard copy)

U.S. EPA Region 6
Water Quality Protection Division
(6WQ-EN)
Attn: Dorothy Brown
1445 Ross Ave., Suite 1200
Dallas, TX 75202

COA (via hard copy)

Dept. of Municipal Development
Storm Drainage Section
P.O. Box 1293
Rm 301
Attn: Kathy Verhage
Albuquerque, NM 87103

PUBLIC HEARING

There is no public hearing scheduled at this time. During the 30 day comment period, requests for a public hearing can be made to the EPA and DOE contacts listed above.

PUBLIC INSPECTION OF DOCUMENTS

The NOI will be available on the COA's webpage at <http://www.cabq.gov/municipaldevelopment/our-department/engineering/storm-water-management/municipal-separate-storm-sewer-system-ms4-permit> for the 30 day public comment period. Documents associated with the COA's MS4 WBP coverage will be posted to this website throughout the permit term. A hard copy of the NOI is available at the front desk of the Engineering Division Office located in Room 303 at City Hall on Civic Plaza from 8am to 5 pm weekdays.

APPENDIX C-3



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

**Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202 - 2733**

December 17, 2015

CERTIFIED MAIL: RETURNED RECEIPT REQUESTED (7014 0150 0000 2452 2065)

Mr. Kevin Daggett
City of Albuquerque
Dept. of Municipal Development
P.O. Box 1293
Albuquerque, NM 87103

Re: Coverage under Middle Rio Grande (MRG) Watershed Based Municipal Sewer Separate Storm Sewer System General Permit (NPDES No. NMR04A000)


Permit Tracking Number: NMR04A014

Dear Mr. Daggett:

EPA has reviewed your Notice of Intent (NOI) submittal and found it to be technically complete and has provided an opportunity for the public to review your NOI and other related documents prior to permit authorization becoming effective. No comments were received from the public during the public comment period. Authorization under this permit and duty to comply is effective as of the date of this letter.

Please contact Nelly Smith via email at Smith.Nelly@epa.gov or phone at (214) 665-7109 if you have questions or concerns regarding your coverage or the requirements included in the MRG MS4 General Permit.

Sincerely,


William K. Honker, P.E.
Director
Water Division

cc: Bruce Yurdin, Manager,
Point Source Regulation Section

Sarah Holcomb
Industrial and Stormwater Team Supervisor

Kathy Verhage
City of Albuquerque

APPENDIX D:

No.	Description
D-1	Nutrient Study
D-2	Sediment Study

APPENDIX D-1



Memorandum

September 27, 2016

To: Sarah Holcomb, New Mexico Environment Department, Surface Water Quality Bureau

From: Kali Bronson, Stormwater Program Compliance Manager, Bernalillo County

CC: Nelly Smith, U.S. Environmental Protection Agency, Region 6
Kathy Verhage, City of Albuquerque
Timothy Trujillo, New Mexico Department of Transportation, District 3

Subject: Pre-TMDL Cooperative Nutrient Study for Tijeras Arroyo, FY 2016

Introduction

The 2014-2016 State of New Mexico CWA 303(d)/305(d) Integrated List and Report (NMED/SWQB 2015a) identifies the Tijeras Arroyo Assessment Unit – Four Hills Bridge to Headwaters as impaired for nutrients. In the Water Quality Survey Summary for select Middle Rio Grande Tributaries – survey year 2014-2015 (NMED/SWQB 2015b), the New Mexico Environment Department’s (NMED) Surface Water Quality Bureau (SWQB) indicates that impairment was based on exceedance of Nutrient Level 2 assessment criteria. The impairment listing is a result of exceedances of assessment criteria for the following indicators: Chlorophyll *a* (response variable), total nitrogen, and total phosphorous.

Because Tijeras Arroyo (Four Hills Bridge to headwaters) has been listed as impaired, the permittees who discharge to this waterbody must address the Special Conditions for the NPDES MS4 General Permit No NMR04A000 (Permit), Part I.C.2.b.(ii), Discharges Directly to Water Quality Impaired Water Bodies without an Approved TMDL (U.S. EPA 2014). This study area includes jurisdictional components for three co-permittees, Bernalillo County (County), City of Albuquerque (COA), and the New Mexico Department of Transportation (NMDOT). The County, COA, and NMDOT are working cooperatively to address this aspect of the permit.



This study is a special study to address the impairment for nutrients and *is not* intended to be a compliance document for MS4 Permit purposes, nor is it meant to suggest that stormwater is a probable source of the impairment.

Background

The length of the Tijeras Arroyo from the headwaters to the easternmost Urbanized Area (UA) boundary is approximately 10.3 miles and passes through the Village of Tijeras and the Carnuel Land Grant.

Approximately 4.7 miles of the Tijeras Arroyo in this assessment unit is within the Urbanized Area. However, due to geographic differences and constraints between the designated Urbanized Area and the stream channel, the channel passes in and out of the urbanized area through this reach. Consequently, less than ½ of the channel length is physically within the urbanized area (2.21 miles).

Tijeras Arroyo is an ephemeral to intermittent stream with very few areas of flowing water, especially in dry weather. As noted in the 2014-2016 State of New Mexico Clean Water Act §303(d)/§305(b) Integrated Report, the Tijeras Arroyo is listed as perennial; however, the entire assessment unit may not be perennial. The channel is heavily braided except where it is restrained by steep slopes and the channel is modified or further braided by off-road traffic. In addition, portions of the Tijeras Arroyo have been identified as potential recharge windows, particularly near the study area. Alternating gaining and losing stream reaches along this portion of the arroyo have been identified. This suggests both surface and near-surface flows may be occurring, which may vary by season and in response to rainfall events. Additionally, during dry weather conditions, areas of ponding and stagnating water are common through this reach.

Initial Review and Investigation

Per the requirements of Table 1.b. of the Permit, Bernalillo County staff have completed site assessments via aerial photo reviews and site walks through the drainages from the Four Hills Bridge eastward to the Carnuel land grant property line. Significant sources of the pollutants of concern, nutrients, were not identified. Suspected potential sources (i.e., horse stables, homeless encampments, etc.) that were identified during the initial site walk were included in follow up investigations. Visual inspections, interviews and sampling did not identify any



stormwater or non-stormwater related sources. No municipal parks or lands exist within the study area that would contribute to nutrient loading by fertilizer use. No commercial uses of fertilizer were identified within the study area. Residential use of fertilizers in the area is likely limited due to the general absence of developed lawns or landscaping within the designated urbanized area. No municipal or private golf courses are located within the area surrounding the impaired assessment unit. No areas with significant agricultural cultivation are within this reach. Review of illicit discharge complaints did not identify any other significant source of nutrients.

Sampling

Sampling locations for both dry weather and wet weather sampling have been presented in the Pre-TMDL Cooperative Nutrient Study for Tijeras Arroyo, 2016 (sampling plan), submitted to the EPA and NMED by Bernalillo County and on behalf of COA and NMDOT (Figure 1). The upstream sample is primarily collected at the Armenta Quarry location. However, if no water is present at this sampling location, the upstream sample may be collected from the Tijeras Arroyo further west, at the Canada de Los Alamos location. Downstream samples have been collected from the Four Hills sample location. During wet weather sampling events, samples may also be collected from the Four Hills Bridge location, based on potential high flow rates and ability to access sample locations.

The County collected baseline samples from surface waters within the study area from October 2015 through March 2016 from the upstream and downstream locations. Samples were analyzed for total phosphorous, total nitrogen, nitrate/nitrite, and total Kjeldahl nitrogen.

During year one of this study, upstream and downstream samples have been collected during dry weather on a monthly basis. Additionally, the sampling plan called for up to 6 upstream and downstream wet weather samples to be collected following a qualifying rainfall event (0.25" precipitation within the study area and sufficient flow). Samples are analyzed for total phosphorous, total nitrogen, nitrate/nitrite, and total Kjeldahl nitrogen.

Results

Results from baseline sampling conducted from October 2015 through March 2016 samples did not indicate any significant sources for nutrients and most results for total phosphorous, total nitrogen, nitrate/nitrite, and total Kjeldahl nitrogen (TKN) generally show no detections above the reporting limit (RL) or low concentrations of the analyte. However, results for samples



collected on October 21, 2015 indicate elevated (relative to concentrations typically found) total nitrogen and TKN concentrations for both the upstream and downstream sample locations (Armenta Quarry and Four Hills, respectively), and an elevated total phosphorous concentration for the upstream sample only. A follow up investigation was conducted to identify any potential sources. No potential sources were identified and subsequent samples collected from these locations did not indicate elevated concentrations for these analytes.

Upstream and downstream dry weather samples have generally been collected on a monthly basis. Wet weather samples were collected from the upstream and downstream sample locations in October 2015 and April 2016. In general, sample results show nutrient concentrations decreasing from upstream to downstream sample locations. Sample results are presented in Table 1 and Figures 2-4.

Table 1. Tijeras Creek Nutrient Monitoring

October 2015 through June 30, 2016

Sampling Location	Date	Analyte (mg/L)				
		Nitrate	Nitrite	Nitrogen, Total	Phosphorous, Total	Nitrogen, Kjeldahl, Total
<i>Dry Weather Monitoring</i>						
Armenta Quarry	10/01/15	0.74	<0.1	<1	0.028	<1
	10/13/15	0.73	<0.1	<1	0.024	<1
	10/19/15	0.71	<0.1	<1	0.021	<1
	11/05/15	0.9	<0.1	<1	0.017	<1
	12/09/15	1.3	<0.1	1.3	0.02	<1
	01/19/16	1.5	<0.1	1.5	0.022	<1
	03/03/16	1.2	<0.1	1.2	0.01	<1
	04/06/16	0.96	<0.1	<1	0.01	<1
	06/16/16	0.17	<0.1	<1	0.047	<1
Canada de Los Alamos	09/22/15	<0.1	<0.1	<1	0.02	<1
Herrera Rd	10/01/15	<0.1	<0.1	<1	0.023	<1
Caballo de Fuerza	10/13/15	<0.1	<0.1	1.1	0.041	1.1
Four Hills	10/13/15	<0.1	<0.1	<1	0.022	<1
	10/19/15	<0.1	<0.1	<1	0.024	<1
	11/05/15	<0.1	<0.1	<1	0.014	<1
	12/09/15	0.1	<0.1	<2	0.036	<1
	01/19/16	<0.1	<0.1	<1	0.018	<1
	03/03/16	<0.1	<0.1	<1	0.012	<1
	04/06/16	<0.1	<0.1	<1	0.014	<1

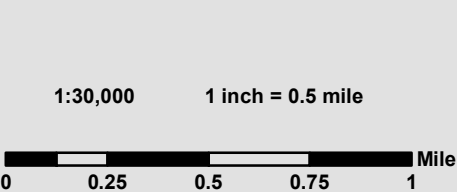
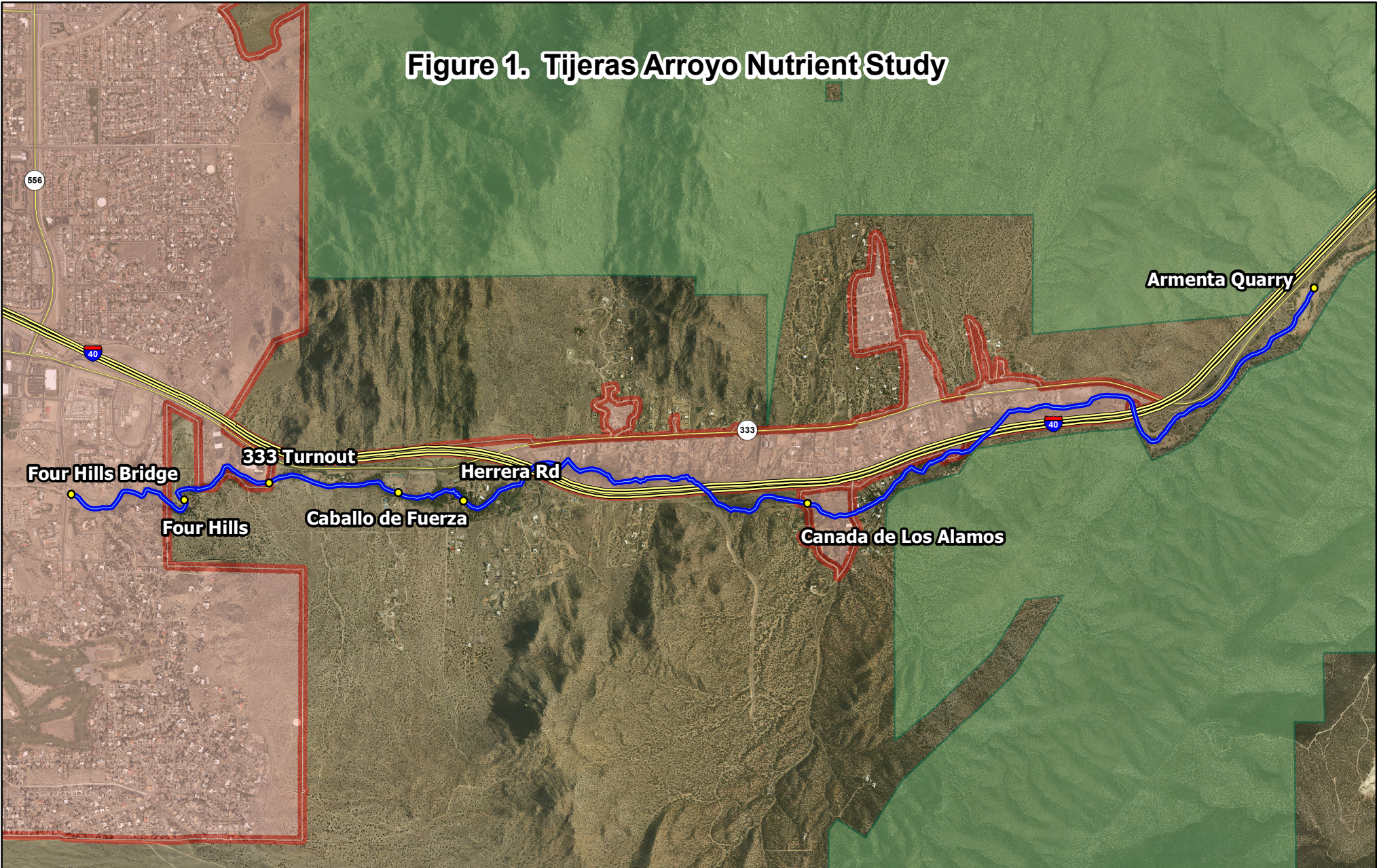


Table 1. Tijeras Creek Nutrient Monitoring

October 2015 through June 30, 2016

Sampling Location	Date	Analyte (mg/L)				
		Nitrate	Nitrite	Nitrogen, Total	Phosphorous, Total	Nitrogen, Kjeldahl, Total
<i>Dry Weather Monitoring</i>						
Four Hills, cont.	06/16/16	<0.1	<0.1	<1	0.01	<1
<i>Wet Weather Monitoring</i>						
Armenta Quarry	10/21/15	0.53	<0.1	4.1	0.25	3.6
	4/8/2016	0.9	<0.1	<1	0.014	<1
Four Hills	10/21/15	<0.1	<0.1	6.6	0.026	6.6
	4/8/2016	<0.1	<0.1	<1	0.015	<1

Figure 1. Tijeras Arroyo Nutrient Study



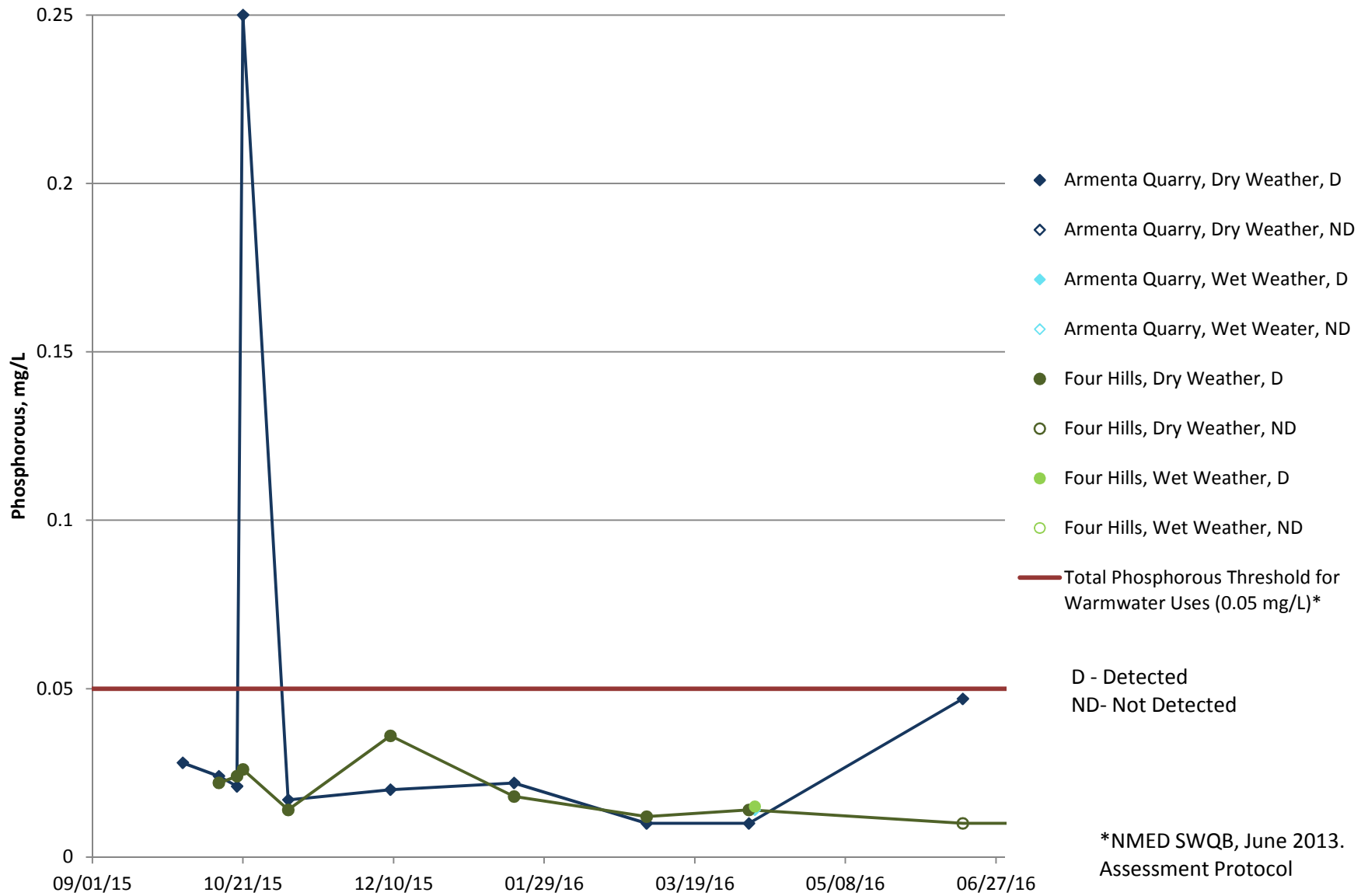
- Sampling Locations
- Tijeras Arroyo
- Interstate
- Major Roads
- Albuquerque, NM Urbanized Area (2010 Census)
- Cibola National Forest



September 21, 2016
Public Works Division
GIS Program

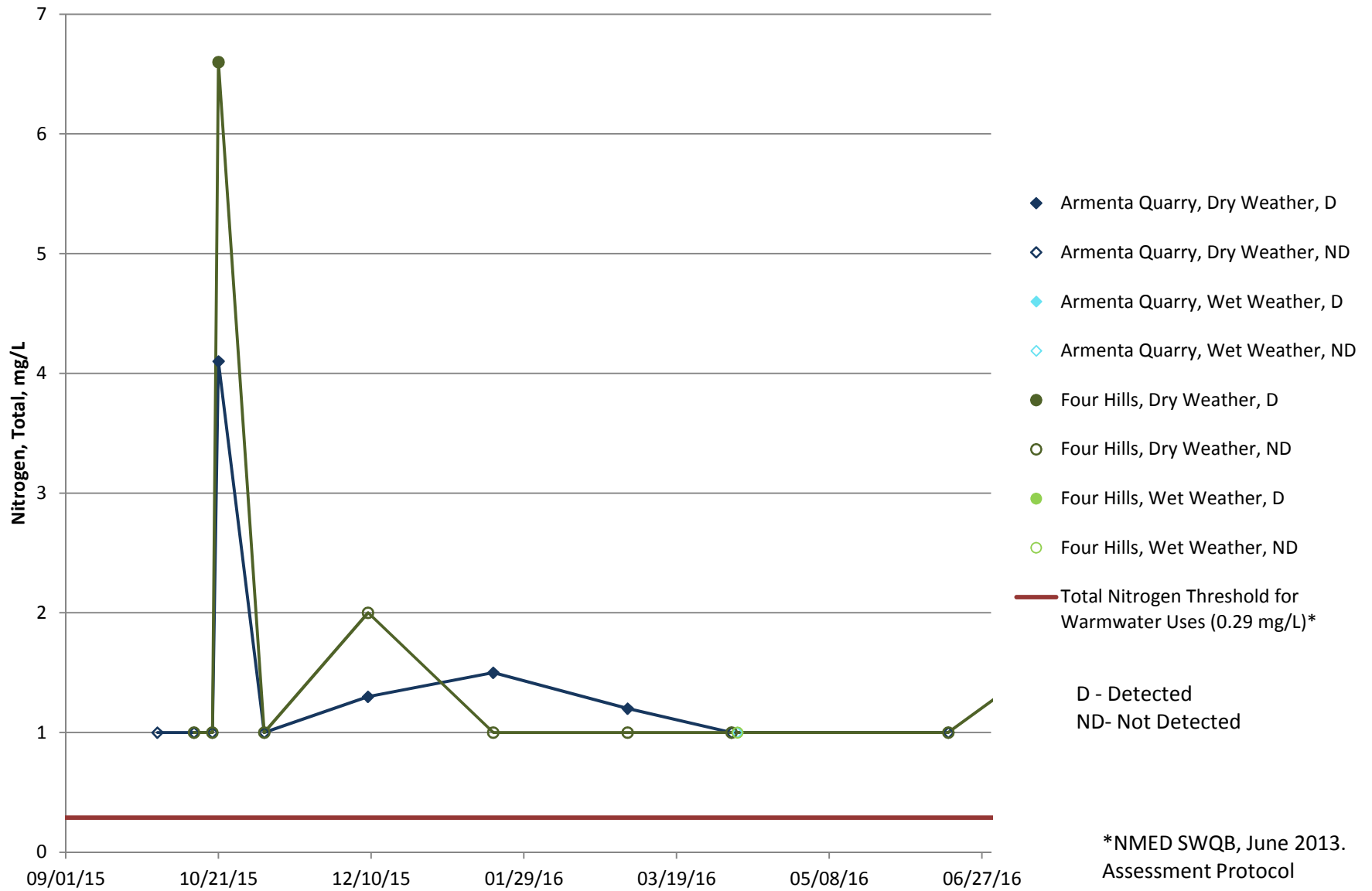
This information is for reference only. Bernalillo County assumes no liability for errors associated with the use of these data. Users are solely responsible for confirming data accuracy when necessary. Source data from Bernalillo County and the City of Albuquerque. For current information visit www.bernco.gov/public-works/gis.aspx.

Figure 2. Tijeras Creek Nutrient Monitoring Total Phosphorous

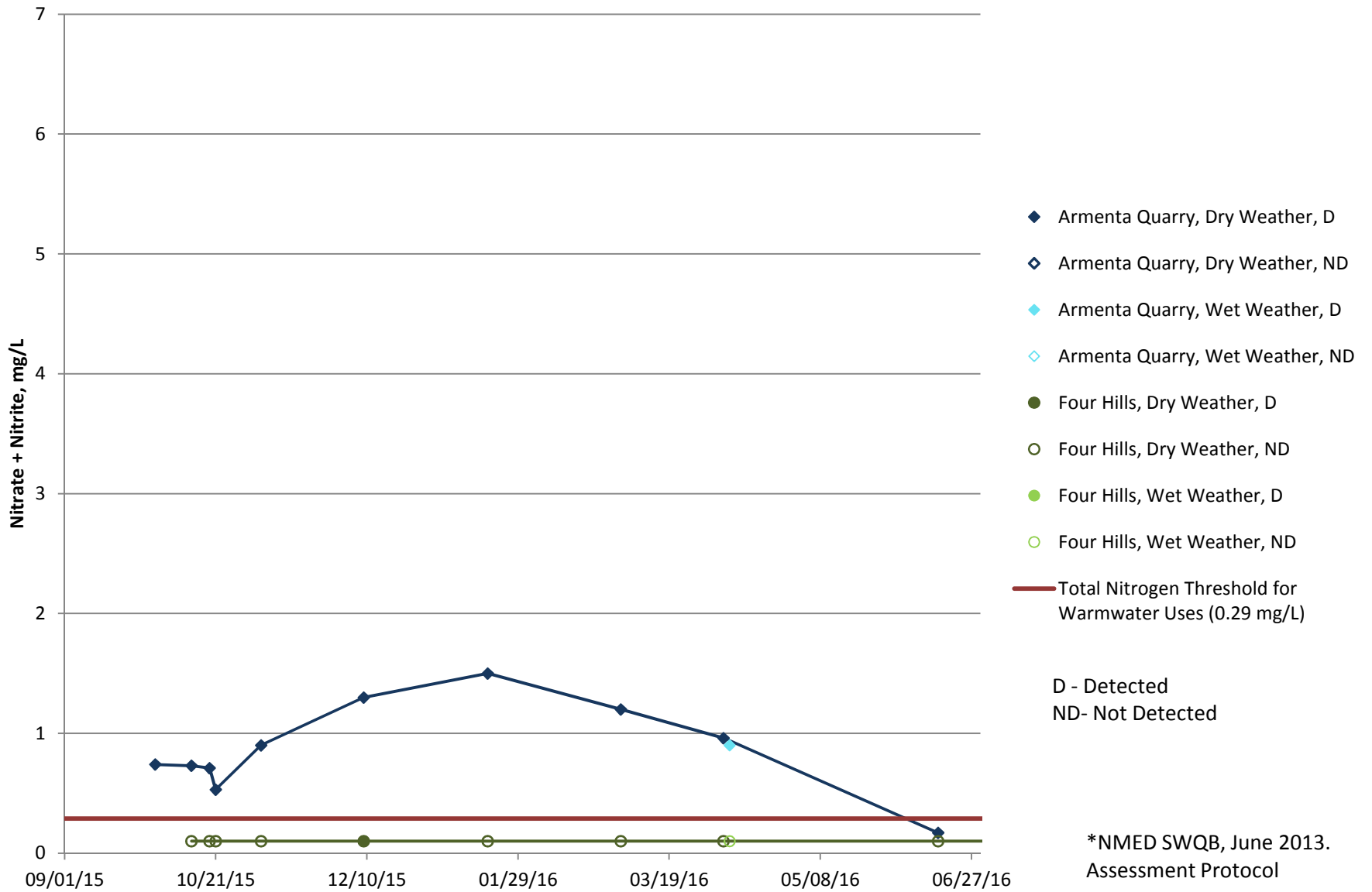


*NMED SWQB, June 2013. Assessment Protocol

Figure 3. Tijeras Creek Nutrient Monitoring Total Nitrogen



**Figure 4. Tijeras Creek Nutrient Monitoring
Nitrate + Nitrite**





Summary

For the reporting period for year one of this study sample results, including baseline sampling, show generally low concentrations for nutrient-related constituents of concern.

Total phosphorous concentrations have generally been near or below the threshold concentration for warmwater uses in New Mexico mountains of 0.05 mg/L (NMED 2013) for both the upstream and downstream locations. Concentrations for total phosphorous have been relatively equivalent between the upstream and downstream samples.

Total nitrogen concentrations for the upstream location have been at or below 1.5 mg/L. Concentrations for the downstream location have not been detected above the laboratory reporting limit of 1.0 mg/L in any sample (excluding the late October 2015 sample). The laboratory reporting limit is above the threshold concentration for warmwater uses in New Mexico mountains of 0.29 mg/L (NMED 2013).

Results for analysis of TKN are generally below the laboratory reporting limit of 1.0 mg/L at both the upstream and downstream locations (excluding the late October 2015 sample).

Nitrate has been detected in the majority of the upstream samples at generally low concentrations, including the October 2015 sample. Nitrate has not been detected above the laboratory detection limit in any of the downstream samples collected to date.

Upstream and downstream samples were collected on October 21st 2015. The samples were collected following a heavy rain event (over 1-inch of precipitation according to the nearest rain gauges). The source for the total nitrogen concentrations in upstream and downstream samples of 4.1 mg/L and 6.6 mg/L, respectively, appears to be primarily due to TKN (3.6mg/L and 6.6 mg/L, respectively). The nitrate concentration in the upstream sample was relatively low and no nitrate was detected in the downstream sample. This has been the typical pattern for nitrate concentrations. Phosphorous concentrations in the upstream sample were elevated and were normal in the downstream sample.

Sources for TKN include fertilizers, failing septic systems, pet waste, livestock waste, decaying plant debris, and wildlife. Several locations with stagnating water exist along this section of the Tijeras Arroyo. This section of the arroyo is also heavily vegetated with deciduous trees and shrubs and the sample was collected in the fall, when most of these trees and shrubs have shed their leaves for the year. A probable source for the elevated TKN concentrations (especially



since TKN is not generally detected above the reporting limit in samples collected for this study) is the disturbance of decaying vegetation by the high flow rates following a heavy precipitation event.

Sources of phosphorous also include fertilizers, failing septic systems, pet waste, livestock waste as well as disturbed land areas, and soil and rocks. The upstream sampling location, the Armenta Quarry, had been an operating sand and gravel mining business at the time of this sampling event. Given the operations at this site, the disturbed land, soil, and rocks, further disturbed by higher flow rates, may have contributed to the elevated phosphorous concentrations at the upstream sample. The disturbance of decaying vegetation by the high flow rates following a heavy precipitation event can also be a source for elevated phosphorous.

Evaluation of the dry weather sampling event data may indicate that stormwater discharges from the MS4 are not likely to be the source of the nutrients listed as the basis for the impairment listing. Additionally, dry weather samples collected on April 6, 2016, and wet weather samples collected on April 8, 2016 (0.25-inch precipitation event) show nearly equivalent concentrations of nutrient-related analytes.

Table 2. Tijeras Creek Nutrient Monitoring

April 6 and April 8, 2016 Samples

Sampling Location	Date	Analyte (mg/L)				
		Nitrate	Nitrite	Nitrogen, Total	Phosphorous, Total	Nitrogen, Kjeldahl, Total
<i>Dry Weather Monitoring</i>						
Armenta Quarry	04/06/16	0.96	<0.1	<1	0.01	<1
Four Hills	04/06/16	<0.1	<0.1	<1	0.014	<1
<i>Wet Weather Monitoring</i>						
Armenta Quarry	4/8/2016	0.9	<0.1	<1	0.014	<1
Four Hills	4/8/2016	<0.1	<0.1	<1	0.015	<1

Part I.C.2.b.(ii).(a).(B and C) of the Permit requires focused BMPs and corresponding measurable goals in the SWMP to reduce discharges of the pollutant of concern. Based on an evaluation of the geographic area and data collected for baseline and year one sampling, it is likely that the stormwater discharges from the MS4 are not a significant source of nutrients.



Based on this information, it has been determined that the focused BMP requirement is not applicable.

Nutrient Study Year Two

The Sampling Plan for this study outlined activities to be performed per year of the study. The plan proposed the following for year two of the study:

- If monitoring results are non-detectable or below levels of concern, sampling frequency shall be reduced by half, i.e. bimonthly background samples, and up to 3 samples after rain events.
- If monitoring results show that run-on from non-UA (upstream) is higher than UA (downstream), sampling frequency shall be reduced by half, i.e. bimonthly background samples, and up to 3 samples after rain events.
- If monitoring results show an increase in nutrient loading within the UA, additional monitoring sites will be selected, first dividing the study area into halves, to determine areas of nutrient contribution.

Based on an evaluation of the data to date, stormwater discharges from the MS4 are not likely to be a significant source of nutrients. Monitoring frequency will be reduced to bi-monthly background (dry weather) sampling and up to 3 wet weather sampling events will be conducted. If elevated concentrations of any of the constituents of concern are detected, previous sampling frequency will resume and a follow up investigation will be conducted to identify any potential sources. If monitoring results again are below levels of concern for these analytes for multiple events, sampling frequency will be reduced once again, as described above.



References

NMED/SWQB, 2015a. 2014-2016 State of New Mexico Clean Water Act Section 303(d)/Section 305(b) Integrated Report. Final. Santa Fe, New Mexico. November 18, 2014.

NMED/SWQB. 2015b. Sampling Summary, Middle Rio Grande and Tributaries Water Quality Survey. Survey Conducted February 2014 – May 2015. Santa Fe, NM. September 2015

NMED/SWQB. 2013. Procedures for Assessing Standards Attainment for the State of New Mexico CWA §303(d)/§305(b) Integrated Report: Assessment Protocol. Santa Fe, NM. June 24, 2013.

NMED/SWQB. 2010. Water Quality Survey Summary for select Middle Rio Grande Tributaries (Survey Year 2005, plus additional monitoring 2000-2009). Santa Fe, NM. June 2010.

USEPA. 2014. NPDES General Permit No. NMR040000 Middle Rio Grande Watershed Based Municipal Separate Storm Sewer System Permit. December 21, 2014

APPENDIX D-2

City of Albuquerque Sediment Assessment

Prepared for

City of Albuquerque, New Mexico

October 17, 2016



Daniel B. Stephens & Associates, Inc.

6020 Academy NE, Suite 100 • Albuquerque, New Mexico 87109

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1. Introduction

The City of Albuquerque (COA) has retained Daniel B. Stephens & Associates, Inc. (DBS&A) to address the requirements of the Sediment Pollutant Load Reduction Strategy (the Strategy) in final watershed-based municipal separate storm sewer system (MS4) permit NMR04A000 (the Permit) (effective date December 22, 2014) and prepare this sediment assessment. The Strategy is to be developed, implemented, and evaluated by the COA to assess and reduce pollutant loads associated with sediment into the receiving water of the Rio Grande. The Strategy must include the following elements:

- Sediment assessment
- Baseline sediment loading estimates
- Targeted controls and best management practices (BMPs)
- Monitoring and interim reporting to assess progress
- Progress evaluation and reporting regarding overall success of the Strategy
- Verification of no adverse effect to the critical habitat of any threatened or endangered species

This report supports the first element of the Strategy, and is based on available data from federal, state, and local studies, supplemented as needed with data collected by COA. The sediment assessment has the following requirements:

- Identify and investigate areas within COA jurisdiction that may be contributing to excessive levels of pollutants in sediment entering the Rio Grande during stormwater discharges
- Identify structural elements, natural or man-made topographical and geographical formations, MS4 operations activities, and areas indicated as potential sources of sediment pollutants

- Record any observed erosion of soil or sediment along ephemeral channels, arroyos, or stream banks, noting as either scouring of sediment or deposition of sediment

Section 2 of this report contains a literature review regarding sediment loading and transport in the Middle Rio Grande. Available water quality and sediment removal data have been compiled, with the results reviewed in Section 3. Section 4 summarizes findings and recommendations for the required Strategy.

2. Background

The mean annual precipitation from 1980 to 2010 recorded at the Albuquerque International Airport weather station was 9.45 inches (WRCC, 2016). The majority of precipitation occurs during the months of July and August as sudden and intense thunderstorms. Elevation in the Albuquerque metropolitan area ranges from 5,000 feet above mean sea level (feet msl) near the Rio Grande to 7,000 feet msl near the Sandia Mountain foothills. Loss of sediment is a continual and natural process, but the approximate 2,000-foot elevational range often translates into massive amounts of sediment being eroded and mobilized during storm events within Albuquerque city limits.

2.1 Sediment Pollutant Loading

The Rio Grande is an alluvial river that has its headwaters in the San Juan Mountains of southwestern Colorado. From there it flows south through New Mexico, then marks the border between Texas and Mexico as it runs southeast toward the Gulf of Mexico.

Historically, the Middle Rio Grande (from Cochiti Dam to Elephant Butte Reservoir) was an aggrading river characterized by a wide, sandy, braided planform with a high sediment load (Scurlock, 1998; Lagasse, 1980). The long dry periods of low peak flows facilitated vegetation encroachment and narrowing, whereas large floods could widen the river channel as “channel reset” events. Today, operation of flood control dams has resulted in a permanently narrower active channel due to the decreased magnitude of upstream peak flows, together with channelization and bank stabilization activities (Makar et al., 2006).

The Middle Rio Grande has some of the most problematic sedimentation issues among rivers of the U.S. Cochiti Dam reduces the suspended sediment loading in the flows downstream of the dam by 87 to 98 percent (USACE et al., 2007; Novak, 2006). However, dam effects diminish downstream because of tributary sediment delivery and in-channel sources of sediment. Excessive channel degradation downstream of the dam can also disconnect the channel from the floodplain, thereby reducing the quality and quantity of in-stream and floodplain habitat and accelerating erosion of the bed and bank. Channel incision downstream of Cochiti Dam and

corresponding increases in the potential for bank collapse are therefore additional sources of sediment.

Sedimentation problems in the Middle Rio Grande also need to be examined in the light of land use, which itself is directly correlated with water quality, hydrologic function, ecosystem health, biodiversity, and the integrity of streams and wetlands. When natural landscapes are converted to urban use, permeable soils are covered with impervious surfaces such as roads, sidewalks, parking lots, and buildings. Increased imperviousness leads to higher volumes and flow velocities of stormwater runoff, often resulting in negative effects on local hydrology, including surface water pollution. Sedimentation from tributaries that drain lands within Albuquerque city limits must therefore be studied in association with potential surface water pollution.

The Permit stipulates that eligible Middle Rio Grande MS4 operators must, in consultation with the New Mexico Environment Department (NMED), the U.S. Environmental Protection Agency (EPA), and affected tribes (if monitoring locations are located on tribal lands), develop and implement a comprehensive monitoring and assessment program designed to meet the following objectives:

- Assess compliance with the permit
- Assess the effectiveness of the permittee's stormwater management program
- Assess the impacts to receiving waters resulting from stormwater discharges
- Characterize stormwater discharges
- Identify sources of elevated pollutant loads and specific pollutants
- Detect and eliminate illicit discharges and illegal connections to the MS4
- Assess the overall health and evaluate long-term trends in receiving water quality

Sedimentation data are valuable in quantifying impacts so that remedial plans can be developed. The terms of the Permit stipulate that "the permittee shall control the discharges of pollutant(s) of concern to impaired waters and waters with approved Total Maximum Daily Loads (TMDLs) . . . , and shall assess the success in controlling those pollutants."

2.2 Naturally Occurring Constituents

Natural drainage to the Rio Grande in the Albuquerque metropolitan area occurs through arroyos (typically dry channels that flow only in response to snowmelt or large rainstorms) that originate on alluvial fans at the foothills of the Sandia Mountains and flow westward to the Rio Grande (Figure 1). In areas west of the Rio Grande, arroyos originate along the West Mesa and flow eastward to the Rio Grande. Many of the arroyos are concrete lined to enhance their capacity to convey storm runoff and prevent erosion, while other arroyos, particularly in the western part of the city, remain natural.

The surface geology on the east side of the Rio Grande includes Sandia granite (pink megacrystic biotite monzogranite and granodiorite) in the higher elevations, and primarily Quaternary-aged sediments from tributary stream-valley alluvium and fluvial terrace deposits (Connell, 2006). The Quaternary deposits are typically composed of sand with varying amounts of clay and gravel. Quaternary alluvium deposits associated with Tijeras Arroyo are composed of variable proportions of subangular to subrounded granite, greenstone, gneiss, limestone, and sandstone derived from the eastern slope of the Sandia Mountains (Connell et al., 1998). The surface geology on the west side of the Rio Grande includes basaltic lavas of the Albuquerque volcanoes, and primarily Quaternary-aged sediments from tributary stream-valley alluvium and fluvial terrace deposits (Connell, 2006). Although metals occur naturally in local soils, concentrations from soil samples within city limits show a possible trend of increasing contamination from upstream sites to the more downstream sites (Martinez, 2015).

2.3 Current Metropolitan Area Stormwater Management

The primary purpose of the Sediment Pollutant Load Reduction Strategy, as required by the Permit, is to reduce pollutant loads associated with sediment in runoff reaching the Rio Grande. The COA and the Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA) have a comprehensive Storm Water Management Program (SWMP) in place to reduce stormwater pollution to the maximum extent practicable and to eliminate prohibited non-stormwater discharges.

AMAFCA maintains the flood control system by routinely removing sediment from the many portions of the system that have been designed to capture sediment (i.e., detention basins shown on Figure 1). Many different types of detention basins have been put in place within the Albuquerque MS4 system, including some with wetland components that can slow the water down to reduce sediment loading to the Rio Grande. For example the North Pino Pond has a “secondary environmental pond,” or an extended detention pond that slows down stormwater and, because it is lined by vegetation acting as a filter, increases sediment removal. AMAFCA has designed and built many structures that catch debris, sediment, and trash. These structural BMPs, which protect the Rio Grande from pollution, are often modeled in the University of New Mexico (UNM) Hydraulics Laboratory to enhance their debris-capturing capability. The reduction in sediment has resulted in downstream water quality improvements, as much of the pollutant load involved in urban waters is sediment related.

In addition, the COA has recently updated its drainage ordinance. Under the new drainage ordinance, a current stormwater control permit is now required for erosion and sediment control for all construction, demolition, clearing, and grading operations that disturb the soil on 1 acre or more of land. The permit requires submittal of an erosion sediment control plan prepared by a licensed New Mexico Professional Engineer to ensure that minimum design standards are met and to reduce potential pollutants that may result from the demolition and construction activities. The COA Stormwater Quality Planning Section reviews these plans prior to the start of grading and conducts inspections on all construction sites.

3. Data Review

In cooperation with the COA, AMAFCA, the New Mexico Department of Transportation, and UNM, the U.S. Geological Survey (USGS) conducted a sampling study of stormwater in the Albuquerque metropolitan area. The following sample outfall locations, all of which fall under COA jurisdiction, were selected for investigation as areas that could be contributing to pollutants in sediment entering the Rio Grande during stormwater discharges (Figure 1 and Table 1):

- North Diversion Channel (NDC) near Alameda (North Diversion Channel)
- Mariposa Diversion of San Antonio Arroyo (San Antonio Arroyo)
- COA Barelás Lift Station no. 32 (Barelás Pump Station)
- San Jose Drain at Woodward Road at Albuquerque (San Jose Drain)
- South Diversion Channel (SDC) above Tijeras Arroyo (South Diversion Channel)
- Tijeras Arroyo near Albuquerque (Tijeras Arroyo)

All of these outfalls discharge stormwater directly or indirectly to the Rio Grande. They are located at the downstream end of a drainage basin. Concentrations of pollutants measured at each outfall therefore reflect (1) the extent of sedimentation loading and surface water pollution within the corresponding drainage basin and (2) the effectiveness of sediment removal structures. For example, San Antonio Arroyo has a settling pond above the sampling location, while there is a detention pond right above the San Jose Drain sampling location. The NDC embayment at NDC reduces sediment. The baffle chute structure (along the SDC), the NDC embayment (where trash is collected manually by AMAFCA crews), and the Bear Arroyo debris screen represent three other structures designed to help with sediment removal. The USGS *Summary of Urban Stormwater Quality in Albuquerque, New Mexico, 2003–12* (Storms et al., 2015) was used to summarize and review total dissolved solids (TDS) (Section 3.1), total suspended solids (TSS) (Section 3.2), metal concentrations (Section 3.3), and polychlorinated biphenyl (PCB) congeners (Section 3.4). The USGS report concluded that stormwater samples from outfalls with more urban development (industrial, commercial, and residential) had higher median concentrations of selected physical and chemical constituents (e.g., pH, specific

conductance, TDS, TSS) than stormwater samples from outfalls with less urban development (Storms et al., 2015).

Additional available water quality data were downloaded from the online USGS National Water Information System (NWIS) database (USGS, 2016) for the discharge outfalls and for several stream gage locations along the Rio Grande within the greater Albuquerque area (Figure 1). 2015 sediment removal data from the metropolitan flood control system were obtained from AMAFCA, and are discussed in Section 3.5.

3.1 Total Dissolved Solids

Figure 2a shows recent TDS concentrations for samples collected at the six outfall locations. Figure 2b shows recent TDS concentrations for samples collected from the Rio Grande stream gage locations within the greater Albuquerque area.

3.1.1 Outfall Locations

Since 2003, the TDS concentrations in the sampled outfall locations have ranged from not detected (less than 10 milligrams per liter [mg/L], shown as open symbols in Figure 2a for several outfall locations) to 997 mg/L at the San Antonio Arroyo outfall (Figure 2a). The TDS concentrations are highly variable within each of the outfalls, but overall concentrations are generally below 400 mg/L. None of the measured values in the stormwater samples at the six outfalls exceeded the New Mexico water quality standard of 1,500 mg/L for the Rio Grande Basin.

3.1.2 Rio Grande Locations

TDS concentrations since 2003 in the Rio Grande have ranged from 126 mg/L at the Rio Grande at Albuquerque stream gage to 807 mg/L at the Rio Grande at Alameda Bridge stream gage (Figure 2b). TDS concentrations in the Rio Grande typically appear to be between 150 and 300 mg/L. No TDS concentration exceeded the New Mexico water quality standard of 1,500 mg/L for the Rio Grande Basin. Other than the greater number of outliers from outfall

sampling locations, TDS concentrations seem higher overall at Rio Grande sampling locations (more concentrations greater than 200 mg/L and no concentrations below 100 mg/L).

3.2 Total Suspended Solids and Suspended Sediment

Figure 3a shows recent total suspended solids (TSS) or suspended sediment concentrations from samples collected at the six outfall locations. Figure 3b shows recent TSS or suspended sediment concentrations from the Rio Grande within the greater Albuquerque area. Suspended solids can effectively transport sorbed chemicals such as trace elements and some organic compounds (Drever, 1997).

3.2.1 Outfall Locations

Since 2003, the TSS or suspended solids concentrations in the sampled outfall locations have ranged from not detected (less than 1 mg/L, shown as open symbols in Figure 3a for several outfall locations) to 55,300 mg/L at the Tijeras Arroyo outfall (Figure 3a). The outfalls are typically sampled during periods of high flow, which would generally be carrying higher sediment loads than lower flow (Storms et al., 2015). The TSS concentrations vary widely, but the higher sediment loads tend to be contributed by the Tijeras Arroyo, SDC, and NDC outfalls.

3.2.2 Rio Grande Locations

TSS or suspended sediment concentrations since 2003 in the Rio Grande have ranged from not detected (0.5 mg/L) at the Rio Grande at Isleta stream gage to 81,000 mg/L at the Rio Grande at Albuquerque stream gage (Figure 3b). Generally, the suspended sediment concentrations in the Rio Grande appear to range widely, between 100 and 10,000 mg/L, and likely vary based on the source and amount of stormwater contributed to each stream gage location.

3.3 Metal Concentrations

Based on data collected since 2003 from the outfalls and the Rio Grande, available sample data for dissolved and total concentrations were reviewed for the following metals: aluminum,

cadmium, chromium, lead, nickel, and zinc. Figures 4a through 9d show the total and dissolved concentrations for these selected metals.

3.3.1 Outfall Locations

The USGS report determined that stormwater from the Barelás Pump Station, San Jose Drain, and NDC outfalls generally had higher metal concentrations than the other sampled outfalls (Storms et al., 2015). Dissolved and total metal concentrations for the outfalls are presented individually in the following subsections.

3.3.1.1 Aluminum

Recent dissolved aluminum concentrations at the sampled outfall locations have ranged from 0.01 micrograms per liter ($\mu\text{g/L}$) at several outfall locations to 5,540 $\mu\text{g/L}$ at the NDC (Figure 4a). With a few exceptions, the dissolved aluminum concentrations are typically below the New Mexico water quality standard of 87 $\mu\text{g/L}$ for the Rio Grande Basin, but several high dissolved aluminum concentrations were measured, at the San Antonio Arroyo outfall in particular. Total aluminum concentrations have ranged from not detected for several outfall locations to 150,000 $\mu\text{g/L}$ at the Tijeras Arroyo outfall (Figure 4b). The total aluminum concentrations vary widely, but the higher concentrations tend to be contributed by the Tijeras Arroyo, SDC, and NDC outfalls.

3.3.1.2 Cadmium

Recent dissolved cadmium concentrations at the sampled outfall locations have ranged from 0.03 $\mu\text{g/L}$ at the SDC outfall to 2.78 $\mu\text{g/L}$ at the San Jose Drain outfall (Figure 5a). The majority of outfall sample results for dissolved cadmium have been not detected at a detection limit of 0.1 $\mu\text{g/L}$ or lower. Total cadmium concentrations have ranged from not detected at several outfall locations to 58.5 $\mu\text{g/L}$ at the SDC outfall (Figure 5b).

3.3.1.3 Chromium

Recent dissolved chromium concentrations at the sampled outfall locations have ranged from not detected (below 1 or 2 $\mu\text{g/L}$) at several outfall locations to 12.99 $\mu\text{g/L}$ at the NDC outfall (Figure 6a). With one exception, the dissolved chromium concentrations at all outfall locations

are all below 4 µg/L. Total chromium concentrations have ranged from not detected at several outfall locations to 129.57 µg/L at the Tijeras Arroyo outfall (Figure 6b).

3.3.1.4 Lead

Recent dissolved lead concentrations at the sampled outfall locations have ranged from not detected (below 2 µg/L) at all outfall locations to 6.932 µg/L at the NDC outfall (Figure 7a). A total of 11 stormwater samples had dissolved lead concentrations at or above the chronic aquatic life criterion of 2 µg/L. Total lead concentrations have ranged from 0.01 µg/L at several outfall locations to 345.66 µg/L at the SDC outfall (Figure 7b).

3.3.1.5 Nickel

Recent dissolved nickel concentrations at the sampled outfall locations have ranged from not detected (below 5 µg/L) at all outfall locations to 30.5 µg/L at the San Jose Drain (Figure 8a). Total nickel concentrations have ranged from not detected (below 5 or 15 µg/L) at several outfall locations to 244 µg/L at the Tijeras Arroyo outfall (Figure 8b).

3.3.1.6 Zinc

Recent dissolved zinc concentrations in the sampled outfall locations have ranged from not detected (below 5 µg/L) at all outfall locations to 1,380 µg/L at the Barelas Pump Station (Figure 9a). With a few exceptions, the dissolved zinc concentrations are typically below 100 µg/L. Total zinc concentrations have ranged from 0.01 to 2,060 µg/L (Figure 9b).

3.3.2 Rio Grande Locations

Available dissolved and total metal concentration data are summarized in the following subsections for several Rio Grande stream gage locations within the greater Albuquerque area. No total metals data have been collected at the Rio Grande at Albuquerque and Rio Grande at Isleta stream gage locations since prior to 2003.

3.3.2.1 Aluminum

Recent dissolved aluminum concentrations in the Rio Grande in the Albuquerque area have ranged from 1.4 µg/L at the Rio Grande at Albuquerque stream gage to 101 µg/L at the Rio Grande at Alameda Bridge stream gage (Figure 4c). With one exception, the dissolved

aluminum concentrations are all below the New Mexico water quality standard of 87 µg/L for the Rio Grande Basin. Total aluminum concentrations for the Rio Grande have ranged from 350 to 71,500 µg/L, and are typically between 1,000 and 10,000 µg/L (Figure 4d).

3.3.2.2 *Cadmium*

Recent dissolved cadmium concentrations in the Rio Grande in the Albuquerque area are typically below the detection limit (varied from 0.016 to 0.35 µg/L), and the detected concentrations have all been below 0.05 µg/L (Figure 5c). Total cadmium concentrations for the Rio Grande are typically below 0.1 µg/L, and have ranged from 0.023 to 1.78 µg/L (Figure 5d). Total cadmium concentrations appear lower for Rio Grande sampling locations than for the outfalls.

3.3.2.3 *Chromium*

Recent dissolved chromium concentrations in the Rio Grande in the Albuquerque area are typically below the detection limit (varied from 0.04 to 2.1 µg/L), and detected concentrations have been 1 µg/L or lower (Figure 6c). Total chromium concentrations for the Rio Grande have ranged from 0.5 to 29.4 µg/L (Figure 6d).

3.3.2.4 *Lead*

Recent dissolved lead concentrations in the Rio Grande in the Albuquerque area are typically below the detection limit (varied from 0.06 to 2.05 µg/L), and detected concentrations have all been below 0.3 µg/L (Figure 7c). Total lead concentrations for the Rio Grande have ranged from 0.48 to 119 µg/L (Figure 7d). Both dissolved and total lead concentrations at Rio Grande sample locations appear lower than those at outfall sample locations (Figures 7a and 7b).

3.3.2.5 *Nickel*

Recent dissolved nickel concentrations in the Rio Grande in the Albuquerque area are typically below the detection limit (varied from 0.75 to 5 µg/L), and the detected concentrations have all been below 3 µg/L (Figure 8c). Total nickel concentrations for the Rio Grande have ranged from 1.12 to 64.6 µg/L (Figure 8d).

3.3.2.6 Zinc

Recent dissolved zinc concentrations in the Rio Grande in the Albuquerque area are typically below the detection limit (varied from 0.5 to 90.6 µg/L), and detected concentrations have all been below 18 µg/L (Figure 9c). Total zinc concentrations for the Rio Grande have ranged from 4.2 to 279 µg/L (Figure 9d). Both dissolved and total zinc concentrations appear markedly lower from samples from the Rio Grande compared to those collected at the outfall locations.

3.4 Polychlorinated Biphenyl Congeners

There are 209 configurations (congeners) of PCBs that are synthetic organic compounds. Prior to their ban in 1979, PCBs were used in electrical transformers and condensers, paint, hydraulic fluid, pesticides, ink, carbonless paper, and toilet paper (U.S. EPA, 2016). The two common analytical tests for measuring PCB concentrations include the following (Storms et. al., 2015):

- EPA analytical test method 8082
 - Analyzes for aroclors
 - Laboratory detection limits of 0.3 µg/L or above

- EPA analytical test method 1668
 - Analyzes for congeners
 - Laboratory detection limits of 10 picograms per liter (pg/L) or above

Table 2 summarizes recent total PCB concentrations for samples collected from five of the six outfall locations and two Rio Grande locations. The total PCB concentration of the water samples was estimated by summing the individual congener concentrations using EPA method 1668. PCBs were not detected using EPA method 8082.

3.4.1 Outfall Locations

Recent total PCB concentrations in the sampled outfall locations have ranged from not detected at two outfall locations to 0.123699 µg/L at the North Diversion Channel (Table 2). Overall, the total PCB concentrations in stormwater are generally low, although higher concentrations are noted in the samples collected from the NDC and San Jose Drain outfall locations (Table 2).

3.4.2 Rio Grande Locations

Recent total PCB concentrations in the Rio Grande in the Albuquerque area have ranged from not detected at the Rio Grande upstream of the NDC location to 0.000276 µg/L at the Rio Grande near Isleta location (Table 2). The detected total PCB concentration was below the New Mexico and Pueblo of Isleta water quality standard of 0.014 µg/L.

3.5 Sediment Removal from Flood Control System

AMAFCA maintains the flood control system by routinely removing sediment from the many portions of the system that have been designed to capture sediment. Their currently maintained system includes the following (AMAFCA, 2015):

- 21 flood control dams
- 46 smaller flood control ponds
- 68 miles of arroyo channels
- 11 miles of underground conduit structures
- 10 miles of dikes and diversion structures
- 127 stormwater quality debris facilities

During 2015, AMAFCA removed a total of 34,976 cubic yards of sediment from their various channels, diversion structures, flood control dams, and stormwater quality facilities (Chavez, 2016) (Table 3). Approximately 46 percent of the total sediment removed by AMAFCA was taken from the SDC and Water Quality Structure during the months of January through April, July, October, and November (Table 4). The amount removed from the SDC and Water Quality Structure includes sediment collected from structures above and below the confluence of Tijeras Arroyo with the SDC. The amount of sediment removed has not been tracked separately for the two channels, but will be in the future.

In 2015, 2,735 cubic yards of sediment was removed from the NDC for several months during the spring and fall (Table 4). No sediment removal was documented during 2015 from the San Antonio Arroyo.

The Barelmas Pump Station and San Jose Drain sites are maintained by COA and do not have documented sediment removal data. The COA employs several crews that routinely check and clean more than 30,000 storm drains within the city after large storm events. The 14 pump stations and 11 dams the COA maintains are inspected each year in May and June just prior to the monsoon season.

4. Conclusions and Recommendations

Erosion of sediment during storm events is a continual and natural process—especially in the Albuquerque metropolitan area, where stormwater flows toward the Rio Grande over the alluvial fans of the Sandia Mountain foothills and mostly unmodified sandy arroyos that drain the West Mesa. The COA and AMAFCA have a comprehensive plan in place to reduce stormwater pollution to the maximum extent practicable. Many different types of detention basins have been installed within the Albuquerque MS4 system to slow down stormwater and ultimately reduce the amount of sediment reaching the Rio Grande (Figure 1). AMAFCA has designed and built over a hundred water quality structures specifically to catch debris, sediment, and trash from stormwater prior to entering the Rio Grande. Sediment collected in these detention basins and water quality structures is routinely removed as part of ongoing operation and maintenance of these facilities by COA and AMAFCA. Recently completed projects include the following:

- Black Arroyo Dam east branch channel and regional water quality facility
- Boca Negra Dam project
- Calabacillas Arroyo grade control structures 3b and 3c and bank protection project
- East Amole surge pond
- Hahn Arroyo rehabilitation project Phase I
- La Presa Project (included 80 acre-foot detention facility)
- NDC sedimentation basin

The COA has recently updated its drainage ordinance with a significant change requiring a current stormwater control permit for erosion and sediment control for all construction, demolition, clearing, and grading operations that would disturb 1 acre or more of land. The result of this ordinance requirement will be a reduction in sediment erosion from construction sites under its jurisdiction.

In Section 3, recent water quality data for TDS, TSS, metal concentrations, and PCBs from discharge outfalls were reviewed and compared with corresponding data from the Rio Grande within the greater Albuquerque area. In general, TDS and TSS concentrations detected in stormwater samples were similar to those detected in the samples collected from the Rio Grande (Figures 2a through 3b). However, while TDS concentrations from Rio Grande sampling locations exhibited less variability compared to concentrations measured at the outfalls, TDS concentrations in the Rio Grande samples also appeared typically higher, indicating that the detention ponds and other BMPs to reduce sediment loading to the river are working and do reduce the amount of contaminants making it to the river. The TSS concentrations at the outfall locations varied widely, but more sediment was frequently contributed from the Tijeras Arroyo, SDC, and NDC outfalls. Therefore, implementation of additional sediment loading reduction BMPs should be targeted in these drainage areas. Concentrations of lead, cadmium (total concentrations), and zinc appeared higher in outfall samples than in Rio Grande samples, also suggesting that system-wide progress is still possible toward removing those pollutants. PCBs using EPA method 1668 were detected at low concentrations in stormwater samples. The highest PCB concentrations were detected in stormwater from the NDC and San Jose Drain outfalls, while the lowest concentrations were from the San Antonio Arroyo outfall.

The purpose and intent of the Sediment Pollutant Load Reduction Strategy is to encourage entities to look at how to reduce pollutants attached to sediments; based on the above conclusions, this appears to already be working. It is recommended that entities continue the BMPs already in place to reduce sediment loading, and also look into additional ways to reduce sediment loading. In cooperation with other stakeholders (e.g., COA, Bernalillo County), AMAFCA is currently planning the installation of the following infrastructure and/or the implementation of the following studies to improve stormwater quality and decrease the amount of sediment reaching the Rio Grande (AMAFCA, 2015):

- Adobe Acres pump station outfall (includes 10 acre-foot pond)
- Bosque surface water quality outfall improvements for Barelás Pump Station outfall [COA lead agency on this project]
- Barr Main Canal improvements (includes series of inline detention ponds)

- Black Mesa Pump Station outfall upgrade
- Black Mesa storm drain (McCoy)
- Bobby Foster storm drain
- Calabacillas Arroyo bank monitoring and enhancement
- Calabacillas Arroyo prudent line study
- Hahn Arroyo phase II
- Hamilton Dam
- Kirtland Air Force Base 30 acre-foot south detention basin [COA lead agency on this project]
- Karsten Area restudy
- Las Ventanas Dam stormwater quality upgrades
- Marble-Arno pond and pump station [COA lead agency on this project]
- NDC Indian School water quality pond
- NDC outfall stormwater quality facility improvements
- North Fourth Street storm drain
- North Geologic Window Dam (173 acre-foot detention pond)
- Old Coors ponding area
- Pond 2149
- SDC outfall water quality improvements
- Tijeras Arroyo facility plan
- Tijeras Arroyo sediment retention structure (to collect 15,000 to 30,000 cubic yards of sediment and debris before it enters the SDC)
- Upper Snow Vista Channel improvements study
- Valle de Oro drainage and water quality infrastructure
- West I-40 diversion channel

All of these planned infrastructure improvements and studies are recommended to further reduce sediment loading and improve stormwater quality in the Albuquerque metropolitan area.

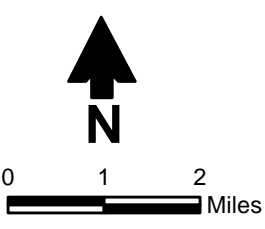
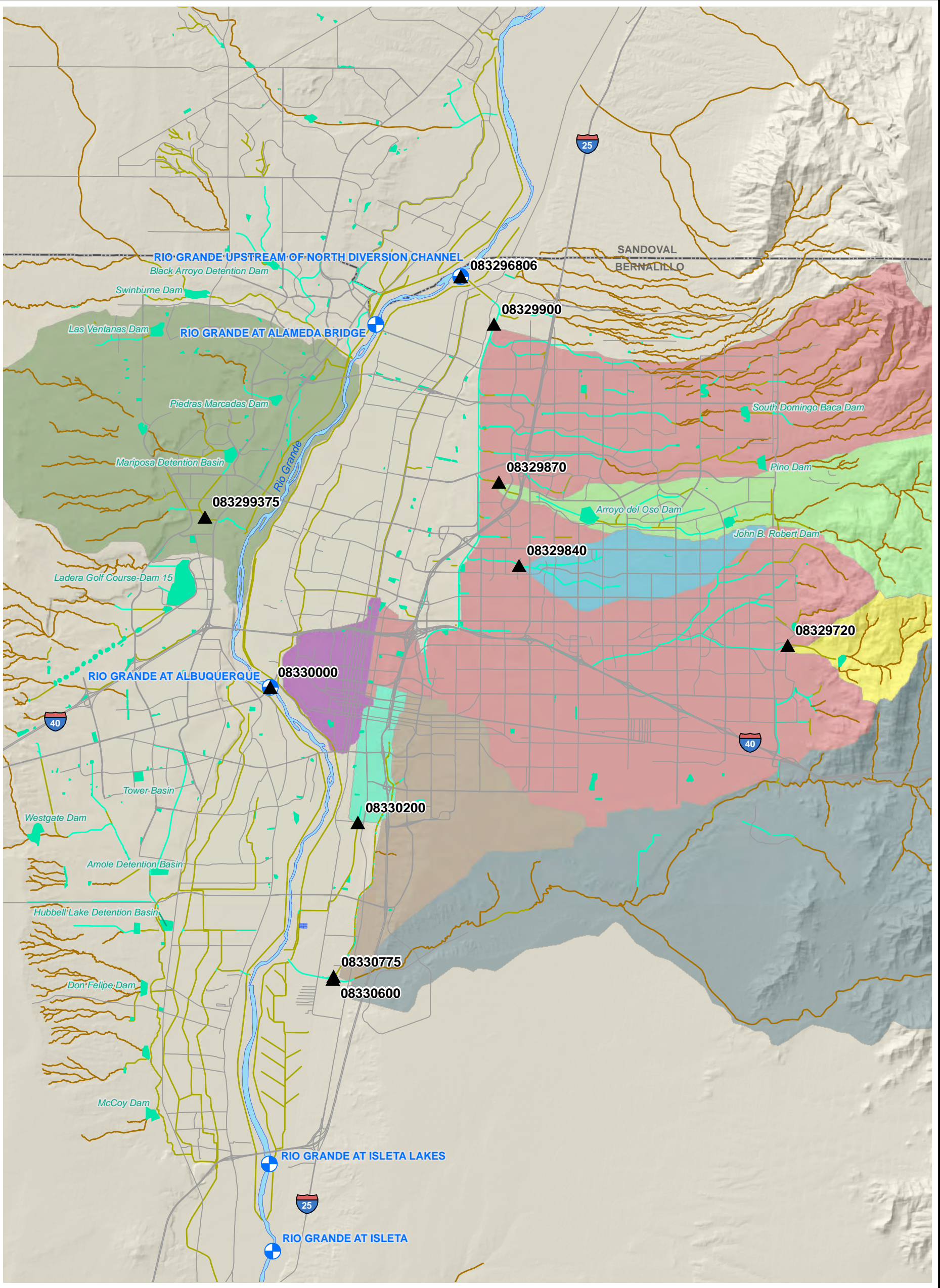
It is further recommended that the City investigate several specific areas within its jurisdiction that may be contributing excessive levels of pollutants in sediment entering the Rio Grande during stormwater discharge events. The recommended investigation would target areas within Tijeras Arroyo (upstream of the concrete-lined area) and other arroyos that are contributing higher sediment loads (e.g., top ranked locations from Table 3). Analytical analyses would be conducted to determine the presence or absence of near-surface PCB and metal concentrations in the collected sediment. In addition, sediment samples should be collected from arroyo locations upgradient of the urbanized area for an estimate of background concentrations. This additional sediment sampling within COA jurisdiction would supplement historical stormwater analytical data, and allow for comparison of PCB and metal concentrations in sediment between the various arroyos and upgradient background locations. The field and laboratory data results could then be evaluated spatially within the City's jurisdiction and compared to the results of the previous investigations summarized in this assessment report.

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Figures



Explanation

- ▲ Sample location
- ⊕ USGS stream gage
- Natural arroyo
- Concrete-lined channel
- Natural or rock-lined channel
- ◊ Detention basin

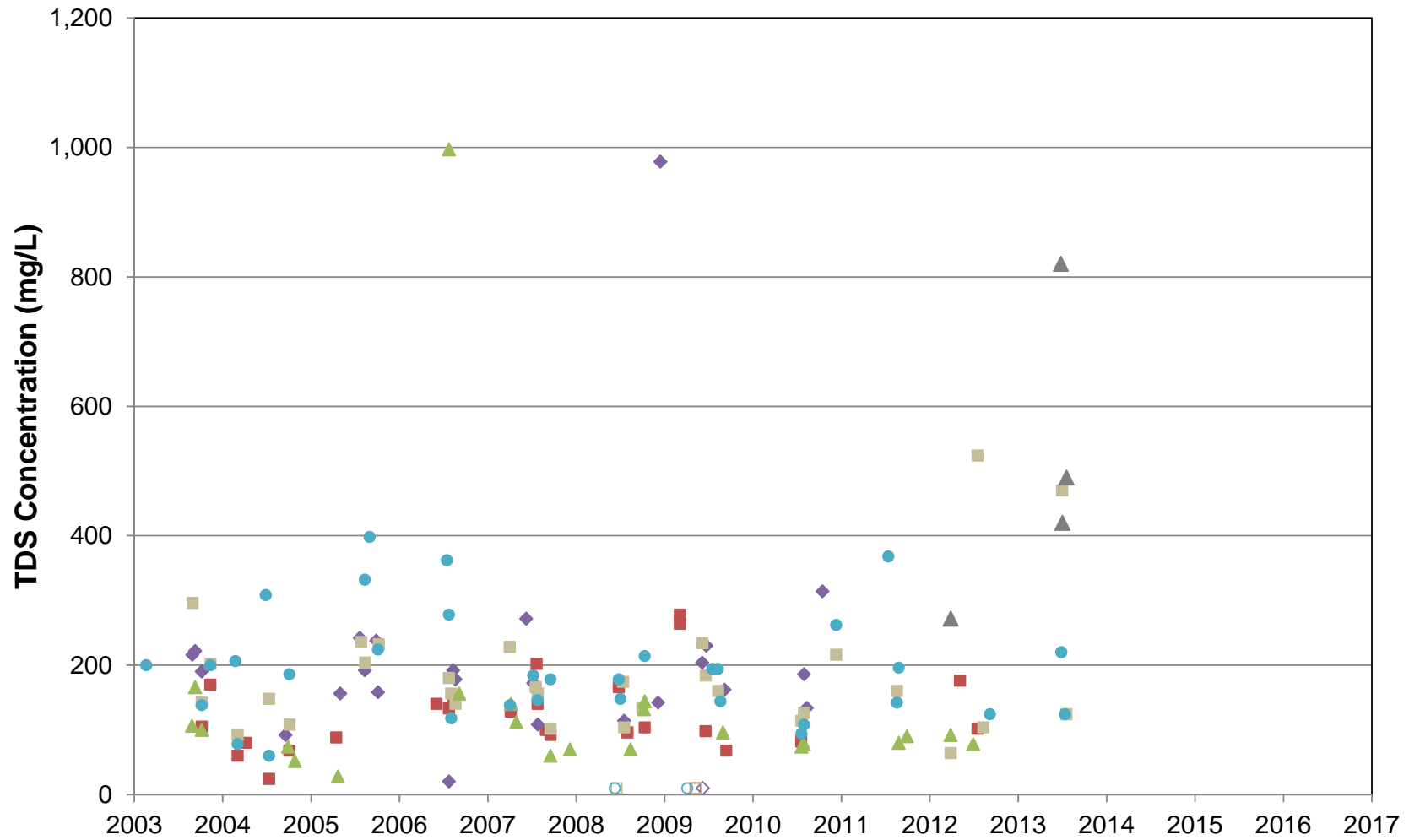
Drainage basin

- Barelas Pump Station
- Bear Arroyo
- Embudo Arroyo
- Hahn Arroyo
- North Diversion Channel

- San Antonio Arroyo
- San Jose Drain
- South Diversion Channel
- Tijeras Arroyo

Figure 1



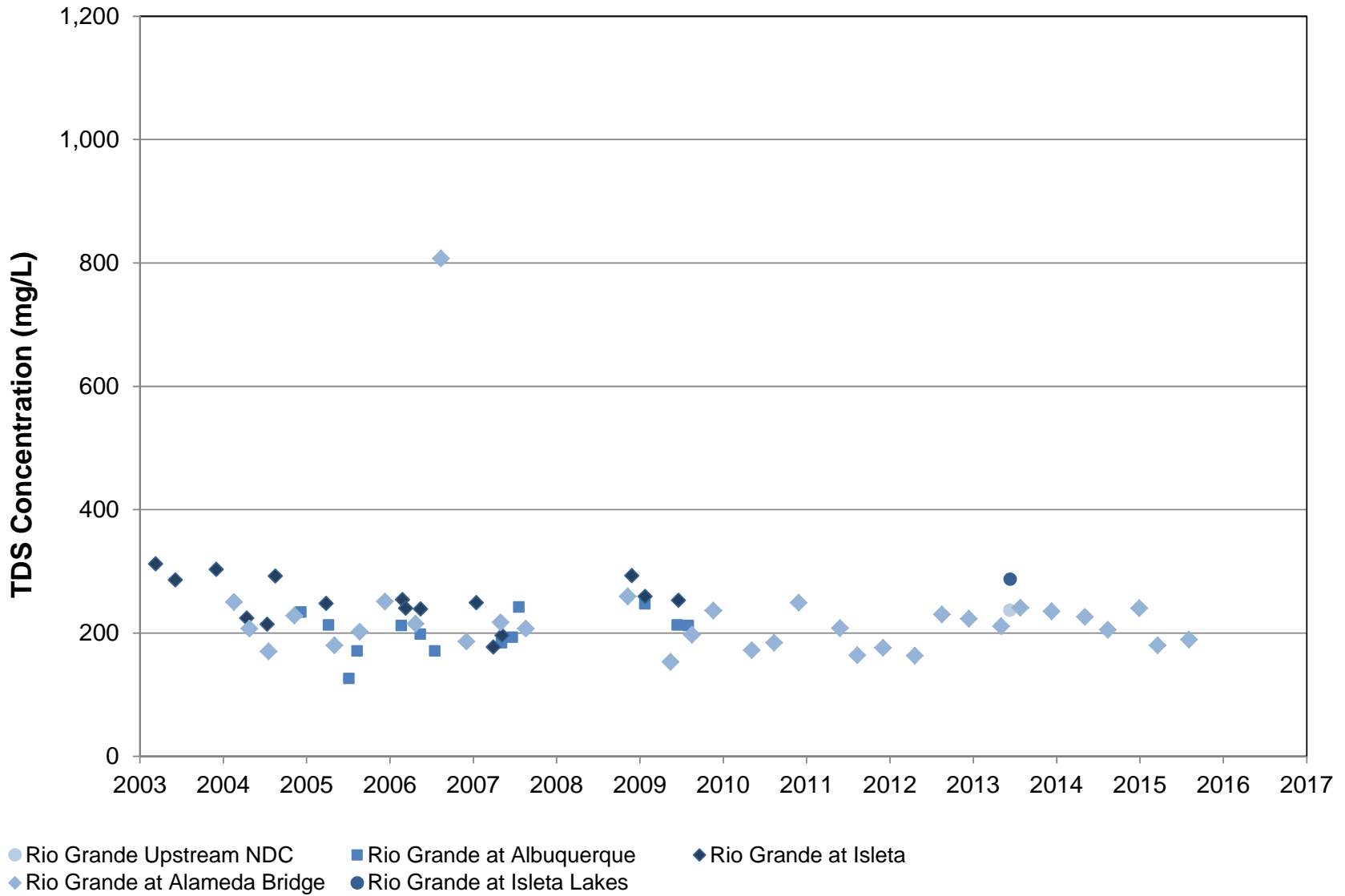


- North Diversion Channel
- San Antonio Arroyo
- Barelmas Pump Station
- San Jose Drain
- South Diversion Channel
- Tijeras Arroyo

Note: Open symbols denote non-detections (at detection limit).
Sources: Storms et al., 2015; USGS, 2016

Figure 2a





Sources: Storms et al., 2015; USGS, 2016

Figure 2b

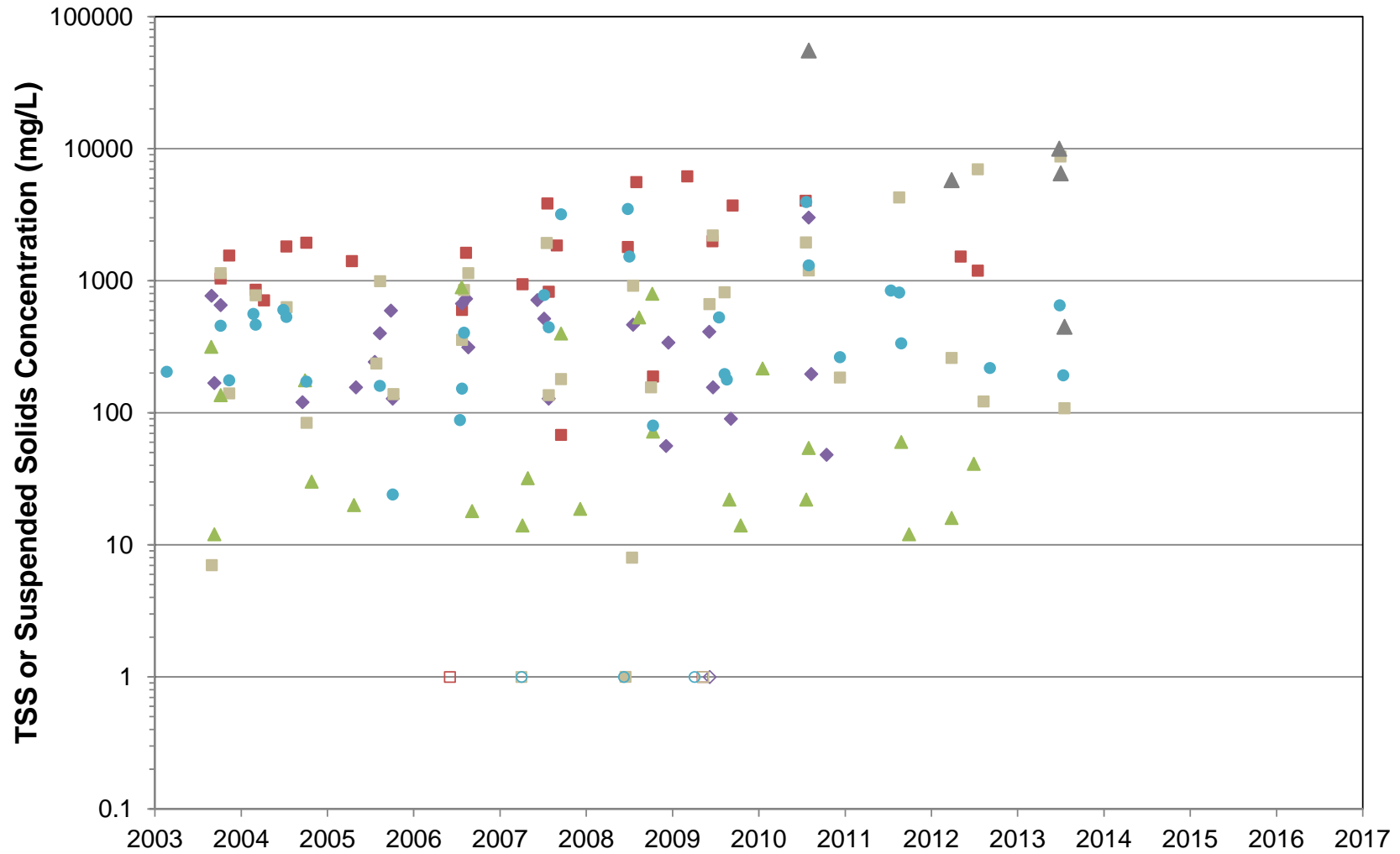


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CITY OF ALBUQUERQUE

Total Dissolved Solids, Rio Grande Locations



■ North Diversion Channel ◆ Barelas Pump Station ■ South Diversion Channel
▲ San Antonio Arroyo ● San Jose Drain ▲ Tijeras Arroyo

Note: Open symbols denote non-detections (at detection limit).
Sources: Storms et al., 2015; USGS, 2016

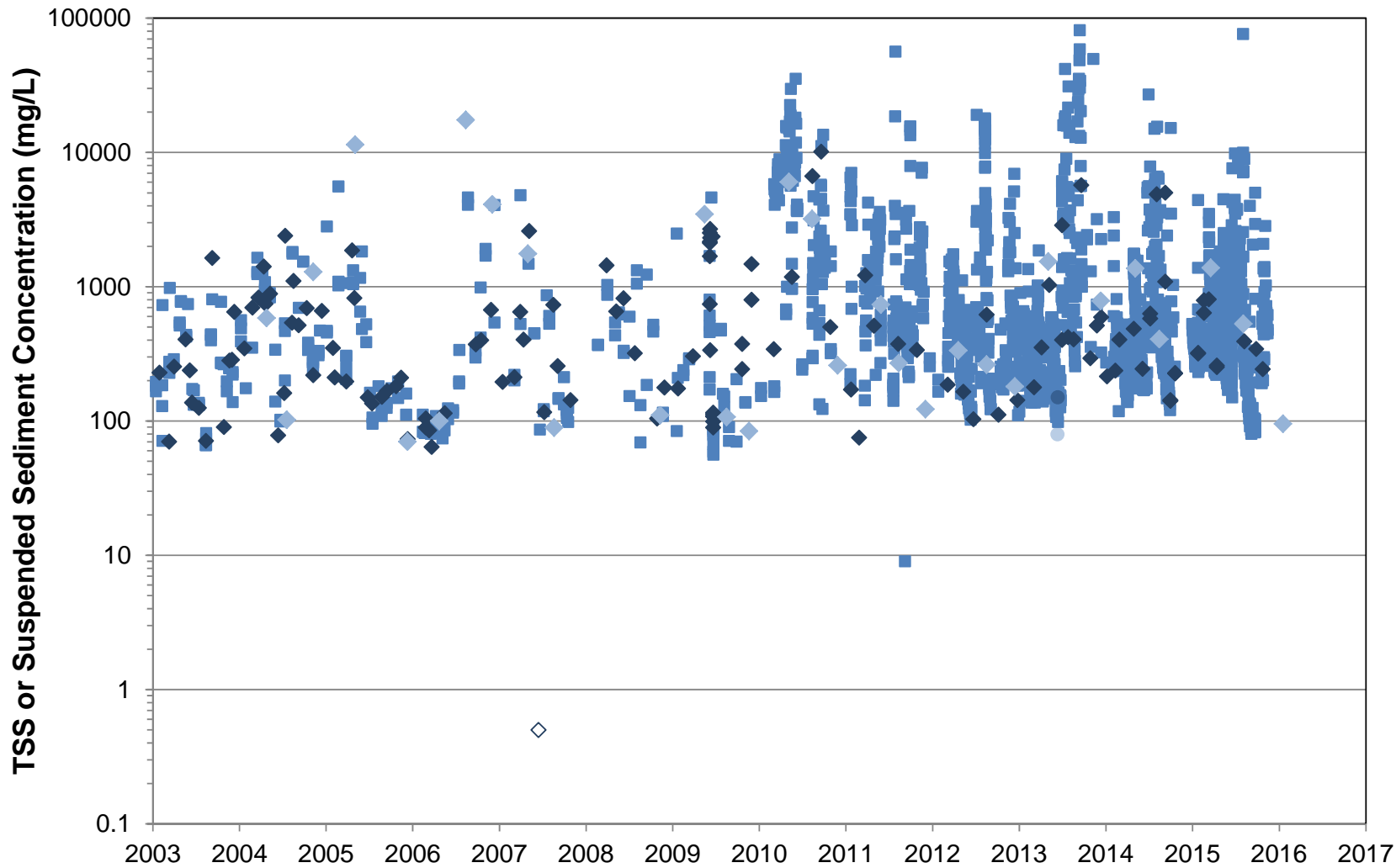
CITY OF ALBUQUERQUE
**Total Suspended Solids or Suspended Sediment
Outfall Locations**

Figure 3a



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● Rio Grande Upstream NDC ■ Rio Grande at Albuquerque ◆ Rio Grande at Isleta
◆ Rio Grande at Alameda Bridge ● Rio Grande at Isleta Lakes

Note: Open symbols denote non-detections (at detection limit).
Sources: Storms et al., 2015; USGS, 2016

CITY OF ALBUQUERQUE
**Total Suspended Solids or Suspended Sediment
Rio Grande Locations**

Figure 3b



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Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

Figure 4a



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CITY OF ALBUQUERQUE
Dissolved Aluminum, Outfall Locations



Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

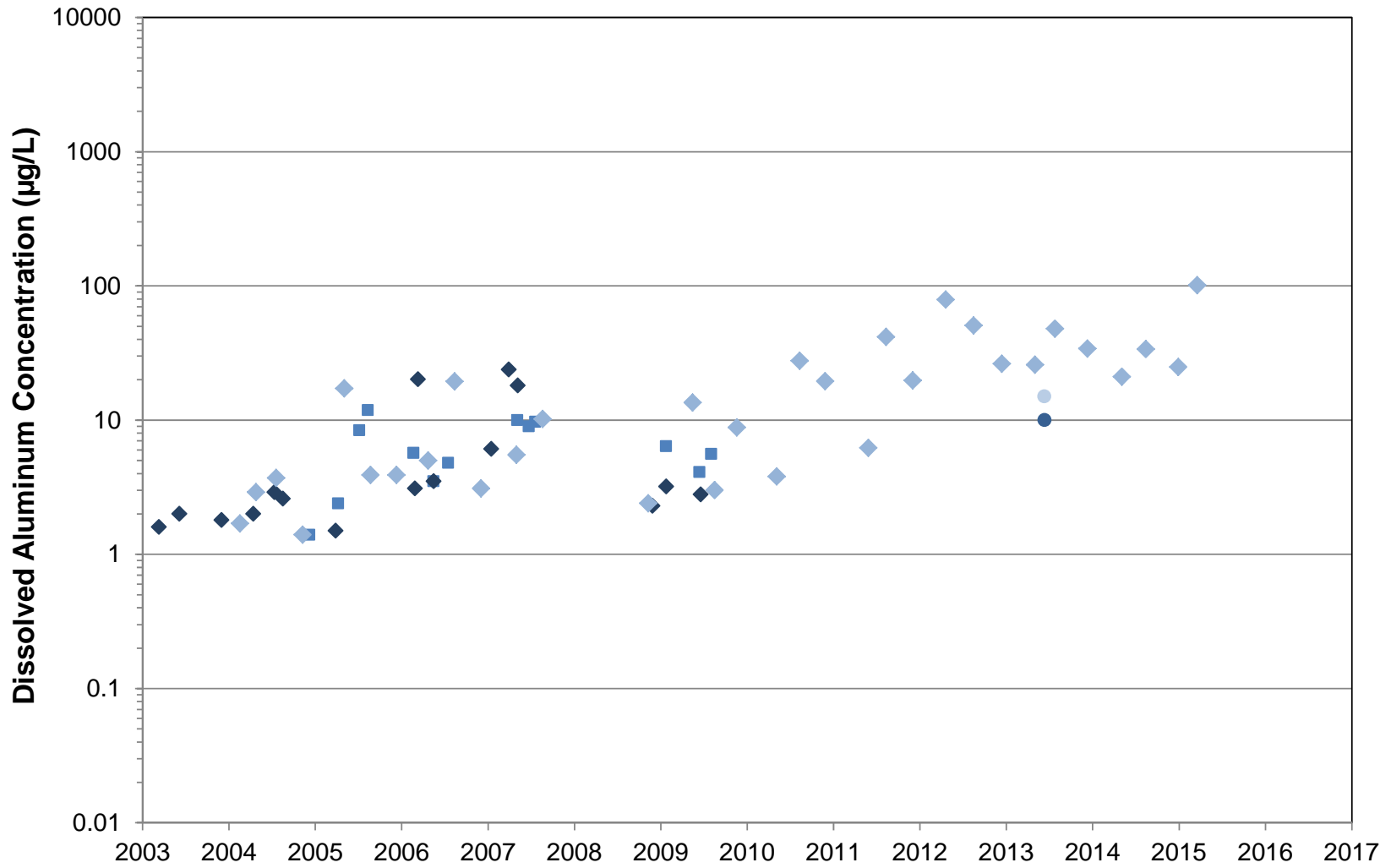
Figure 4b



Daniel B. Stephens & Associates, Inc.

9/19/16

CITY OF ALBUQUERQUE
Total Aluminum, Outfall Locations



● Rio Grande Upstream NDC ■ Rio Grande at Albuquerque ◆ Rio Grande at Isleta
◆ Rio Grande at Alameda Bridge ● Rio Grande at Isleta Lakes

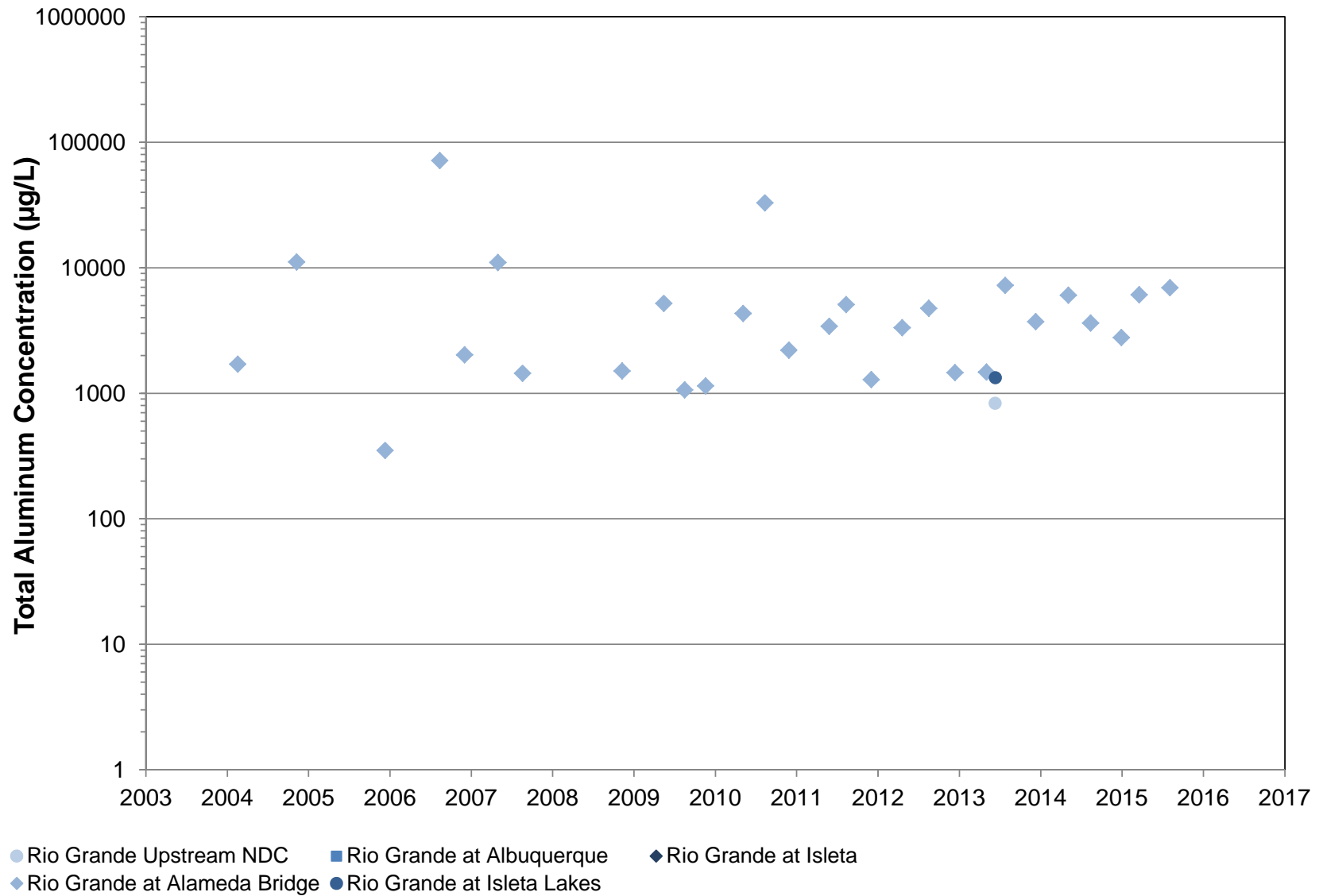
Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

Figure 4c



Daniel B. Stephens & Associates, Inc.
9/19/16

CITY OF ALBUQUERQUE
Dissolved Aluminum, Rio Grande Locations



Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

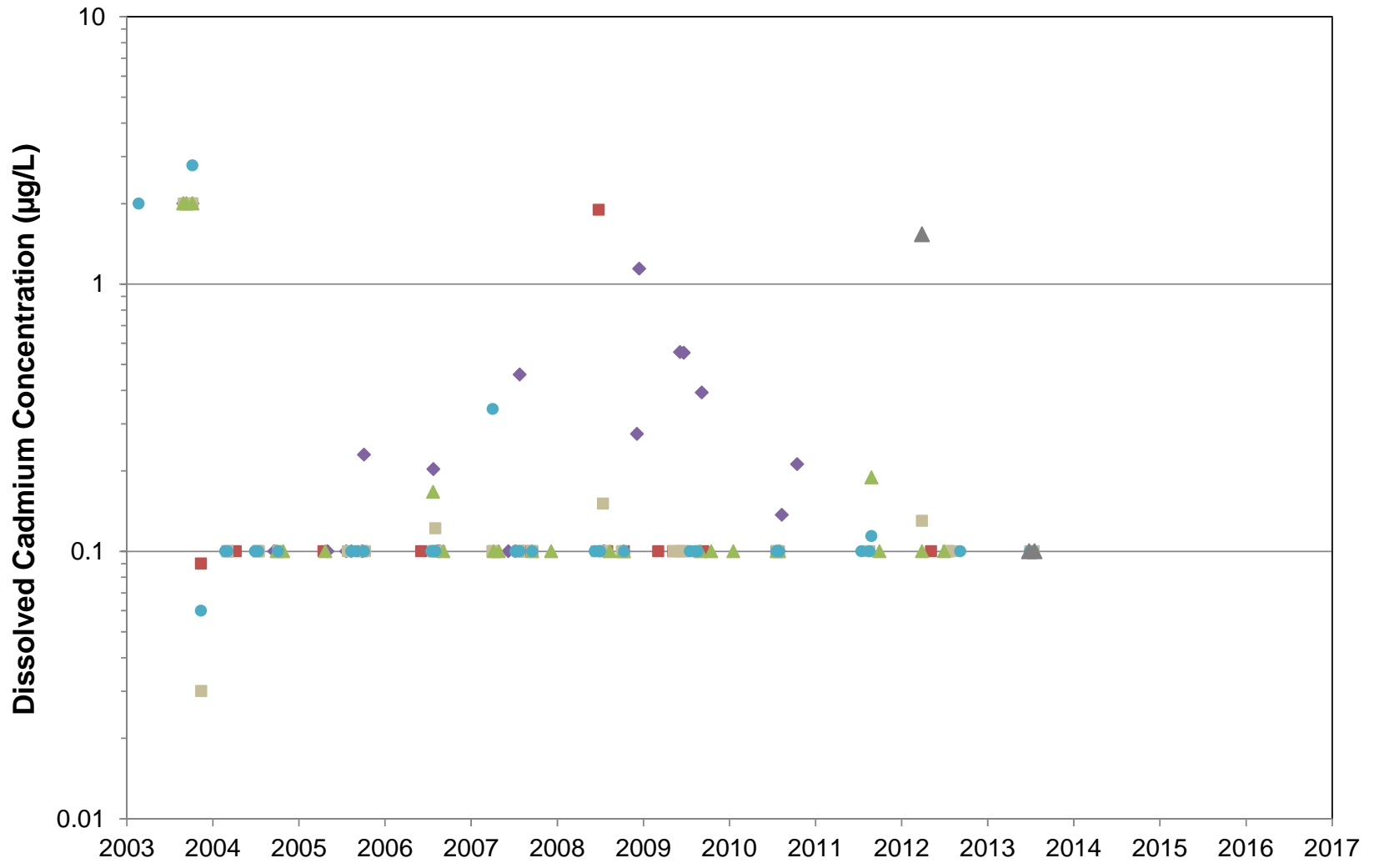
Figure 4d



Daniel B. Stephens & Associates, Inc.

9/19/16

CITY OF ALBUQUERQUE
Total Aluminum, Rio Grande Locations



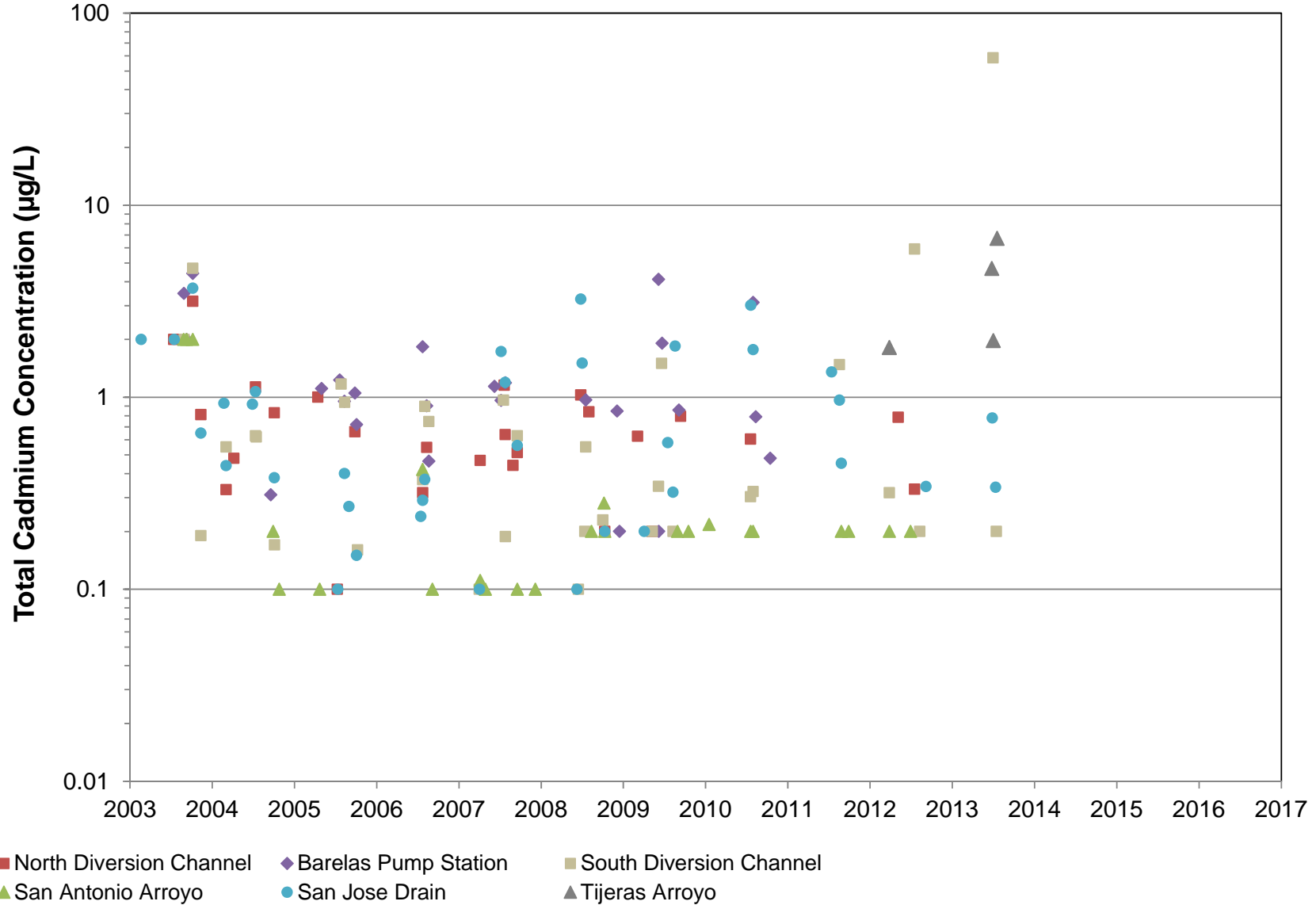
Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

Figure 5a



Daniel B. Stephens & Associates, Inc.
9/19/16

CITY OF ALBUQUERQUE
Dissolved Cadmium, Outfall Locations



Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

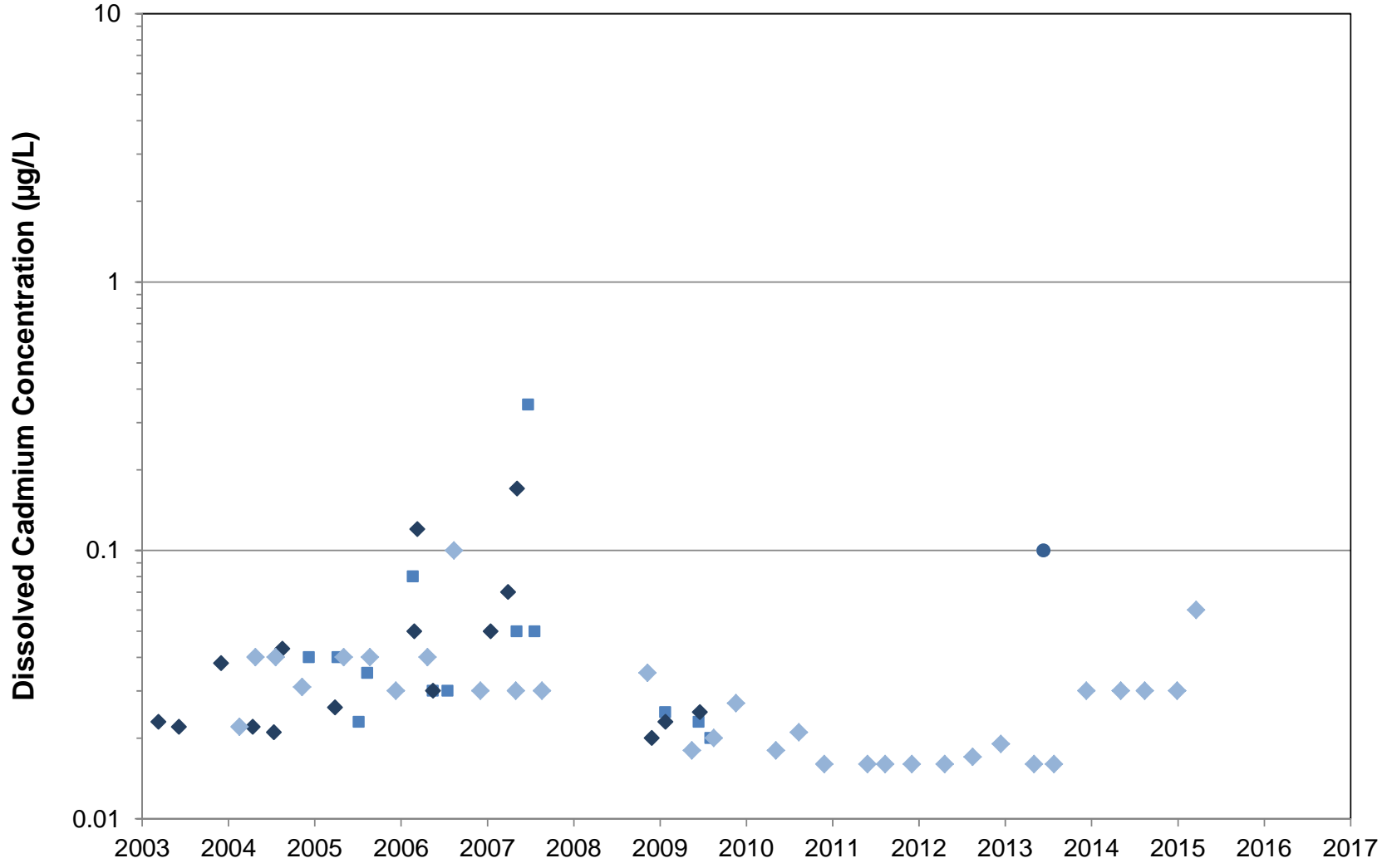
Figure 5b



Daniel B. Stephens & Associates, Inc.

9/19/16

CITY OF ALBUQUERQUE
Total Cadmium, Outfall Locations



● Rio Grande Upstream NDC ■ Rio Grande at Albuquerque ◆ Rio Grande at Isleta
◆ Rio Grande at Alameda Bridge ● Rio Grande at Isleta Lakes

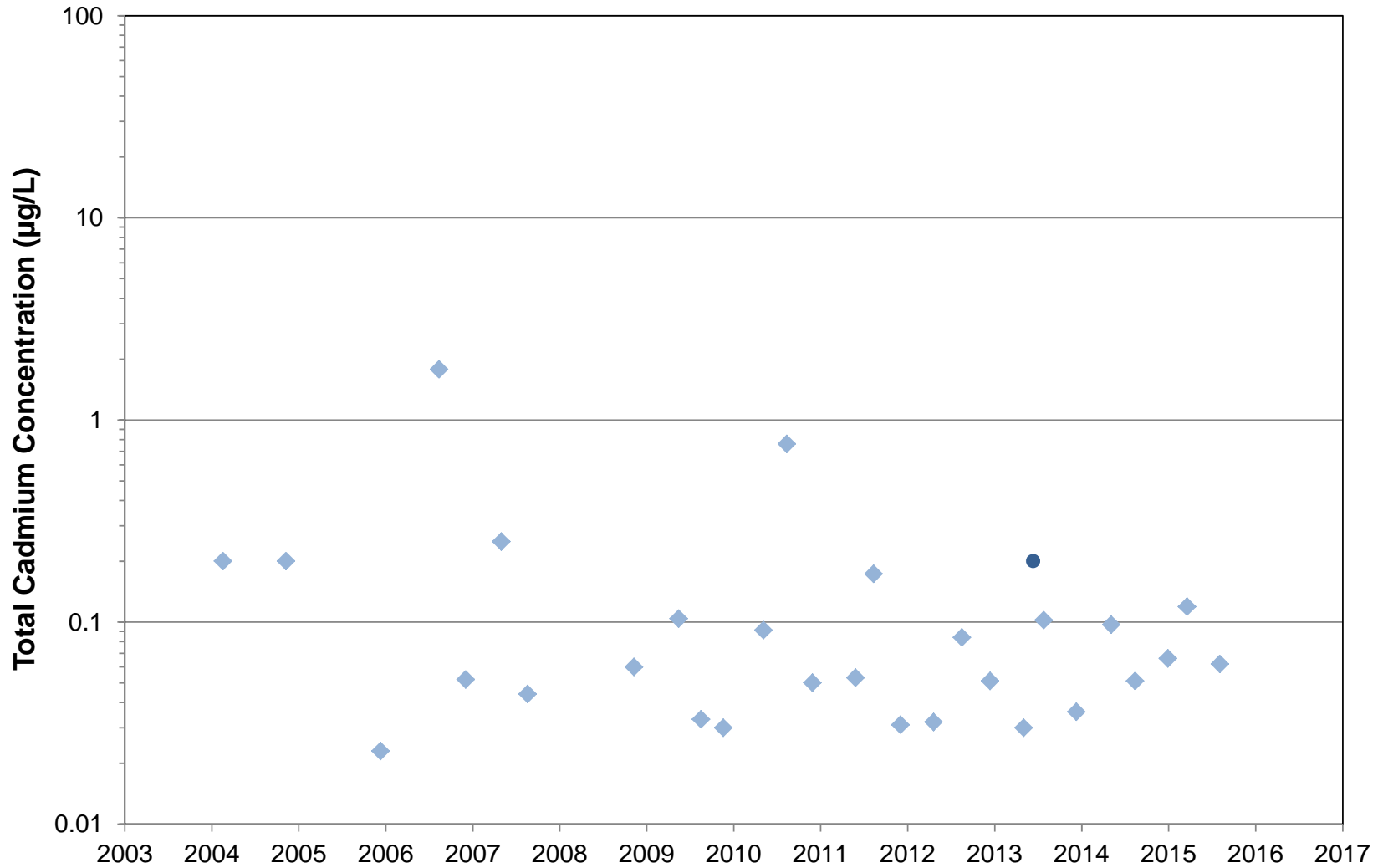
Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

Figure 5c



Daniel B. Stephens & Associates, Inc.
9/19/16

CITY OF ALBUQUERQUE
Dissolved Cadmium, Rio Grande Locations



- Rio Grande Upstream NDC ■ Rio Grande at Albuquerque ◆ Rio Grande at Isleta
- ◆ Rio Grande at Alameda Bridge ● Rio Grande at Isleta Lakes

Note: Non-detections plotted at detection limit.
 Sources: Storms et al., 2015; USGS, 2016

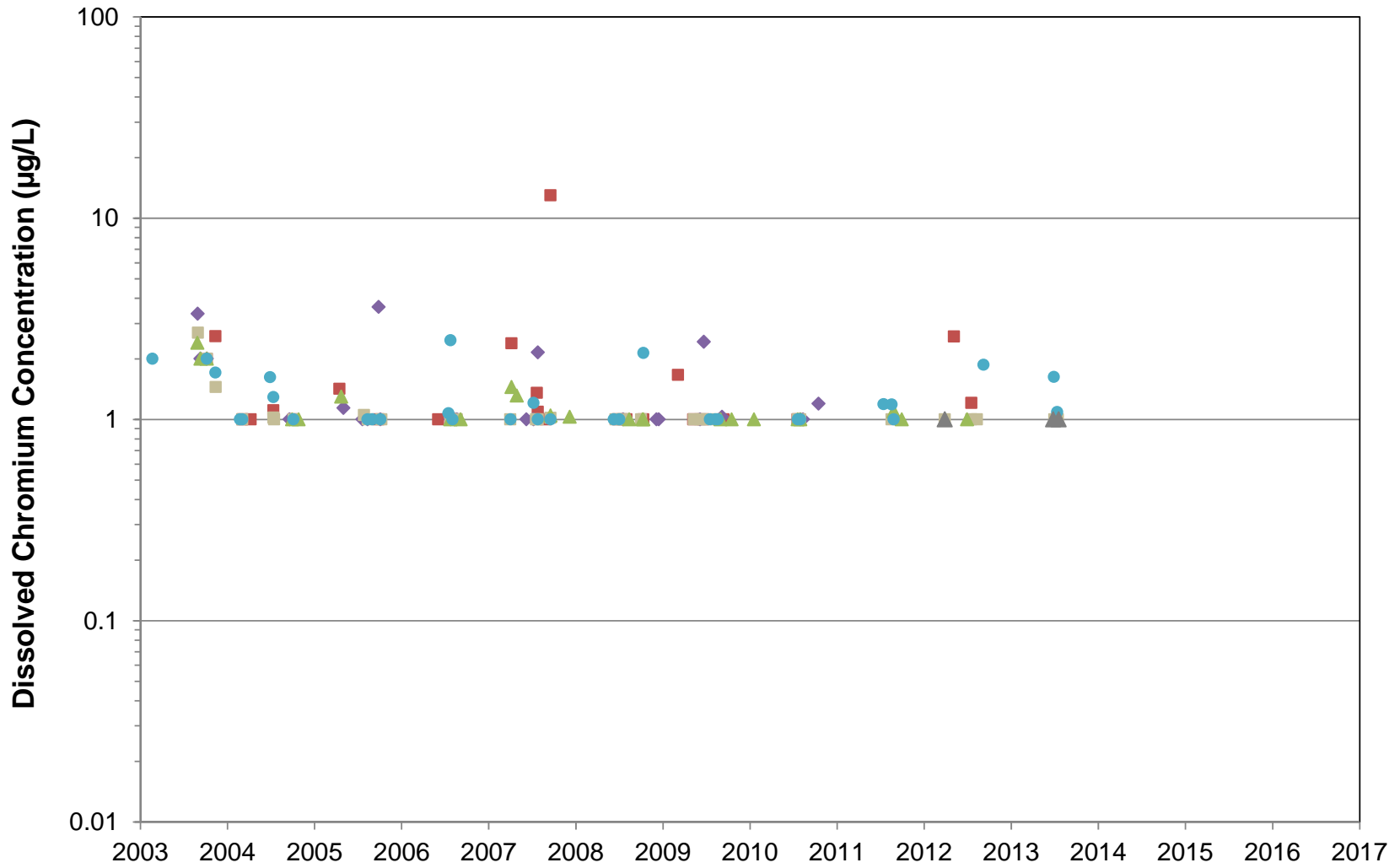
Figure 5d



Daniel B. Stephens & Associates, Inc.

9/19/16

CITY OF ALBUQUERQUE
Total Cadmium, Rio Grande Locations



■ North Diversion Channel ◆ Barelas Pump Station ■ South Diversion Channel
▲ San Antonio Arroyo ● San Jose Drain ▲ Tijeras Arroyo

Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

Figure 6a



Daniel B. Stephens & Associates, Inc.

9/19/16

CITY OF ALBUQUERQUE
Dissolved Chromium, Outfall Locations



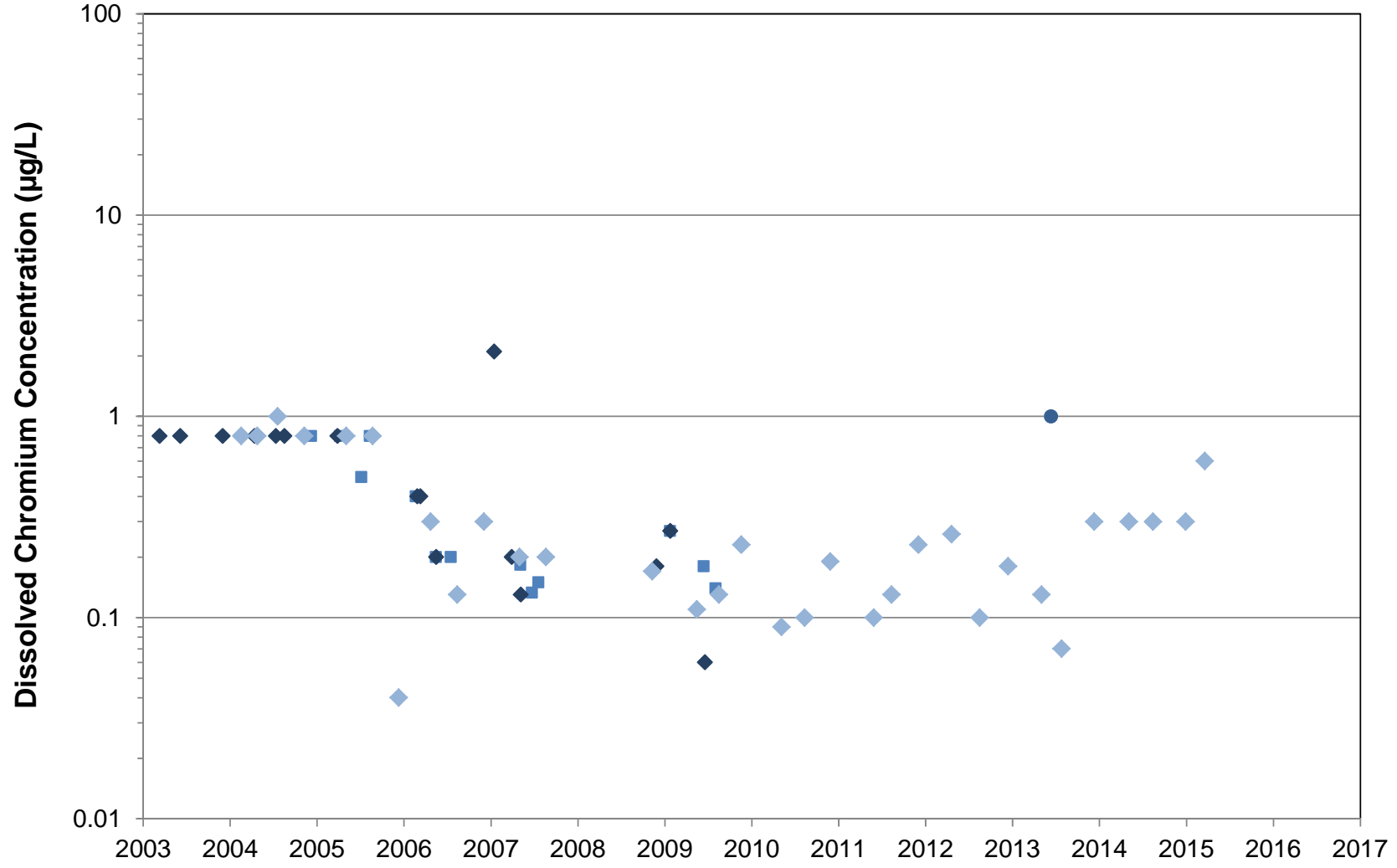
Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

Figure 6b



Daniel B. Stephens & Associates, Inc.
9/19/16

CITY OF ALBUQUERQUE
Total Chromium, Outfall Locations



● Rio Grande Upstream NDC ■ Rio Grande at Albuquerque ◆ Rio Grande at Isleta
◆ Rio Grande at Alameda Bridge ● Rio Grande at Isleta Lakes

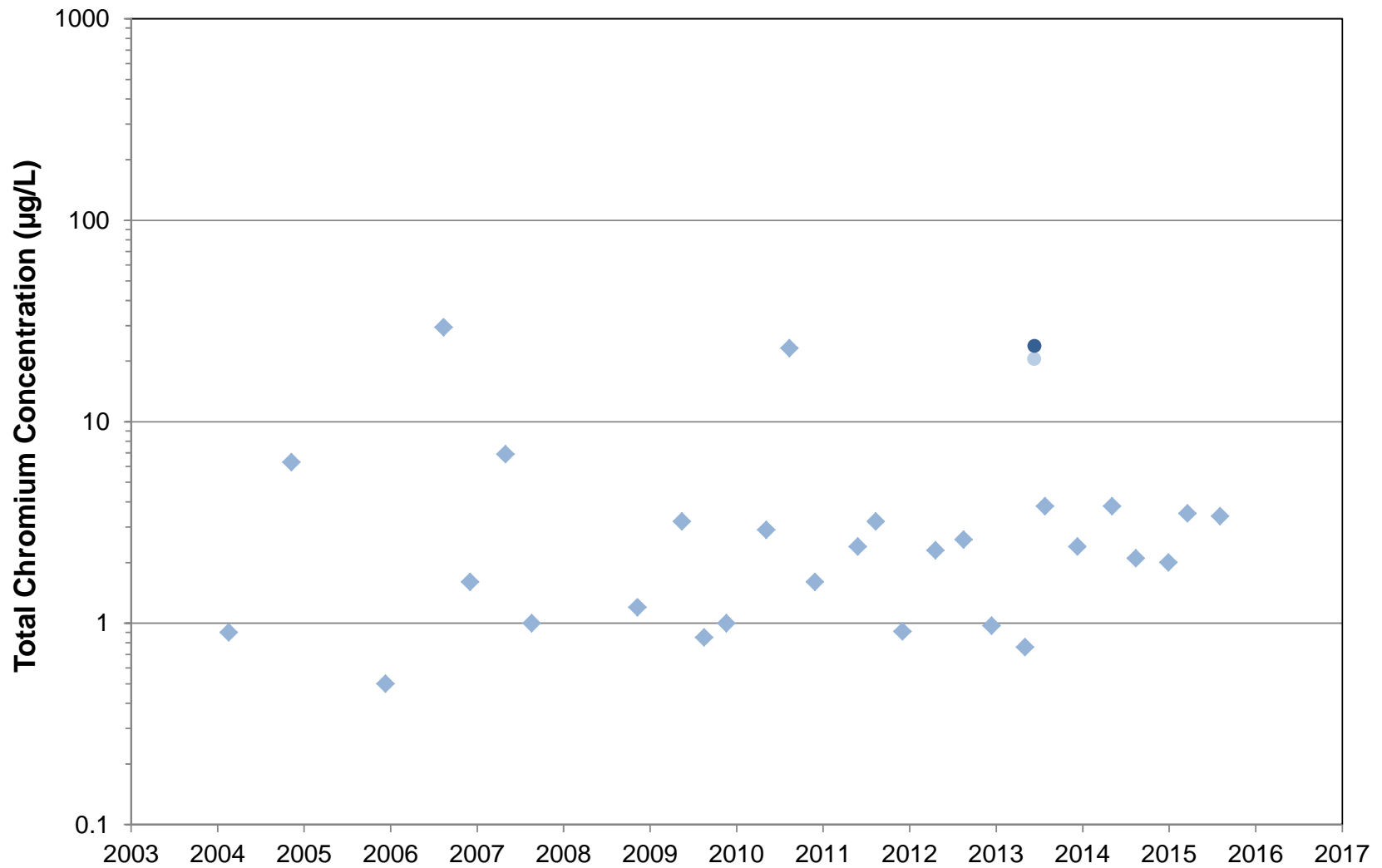
Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

Figure 6c



Daniel B. Stephens & Associates, Inc.
9/19/16

CITY OF ALBUQUERQUE
Dissolved Chromium, Rio Grande Locations



● Rio Grande Upstream NDC ■ Rio Grande at Albuquerque ◆ Rio Grande at Isleta
◆ Rio Grande at Alameda Bridge ● Rio Grande at Isleta Lakes

Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

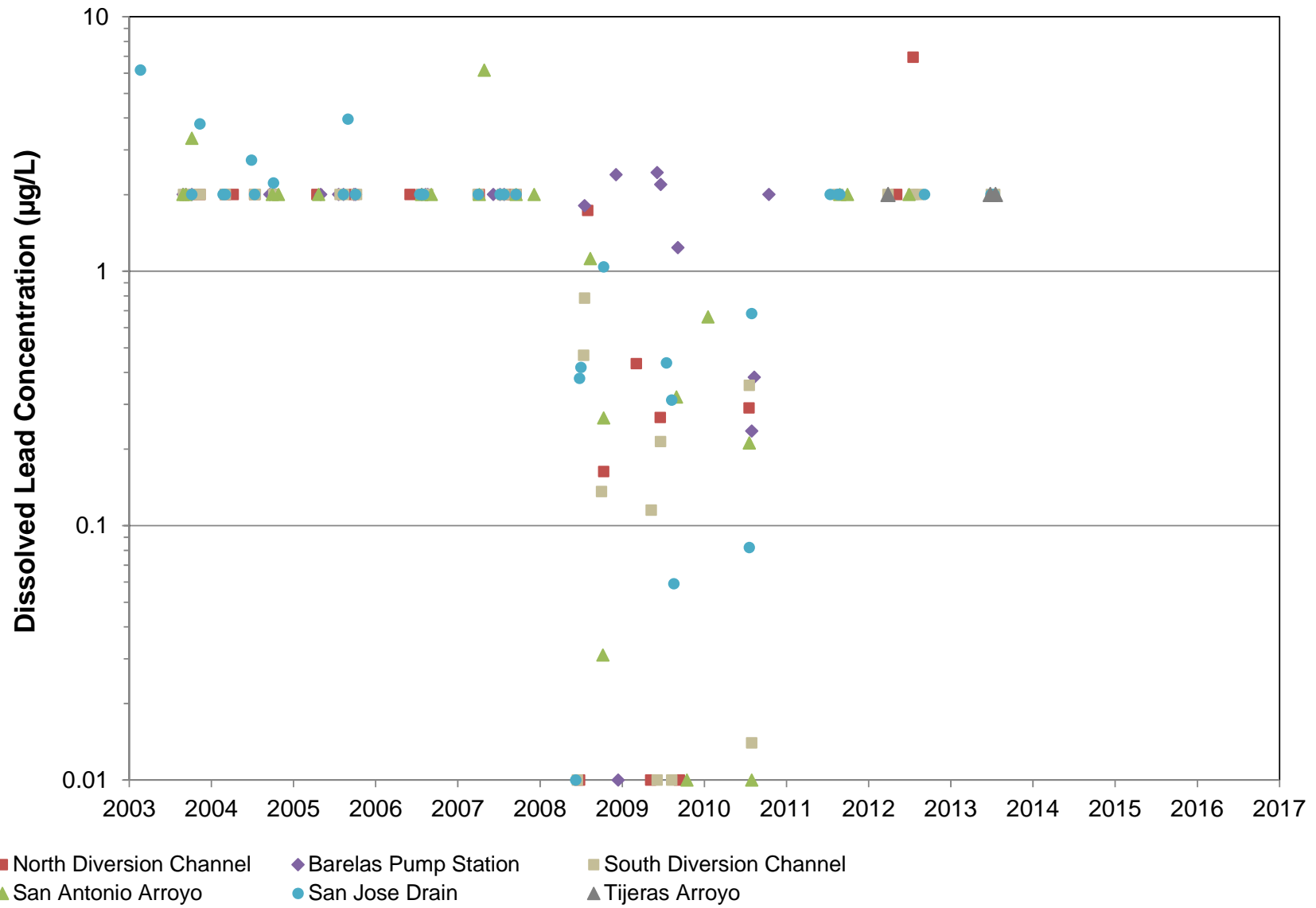
Figure 6d



Daniel B. Stephens & Associates, Inc.

9/19/16

CITY OF ALBUQUERQUE
Total Chromium, Rio Grande Locations



Note: Non-detections plotted at detection limit.
 Sources: Storms et al., 2015; USGS, 2016

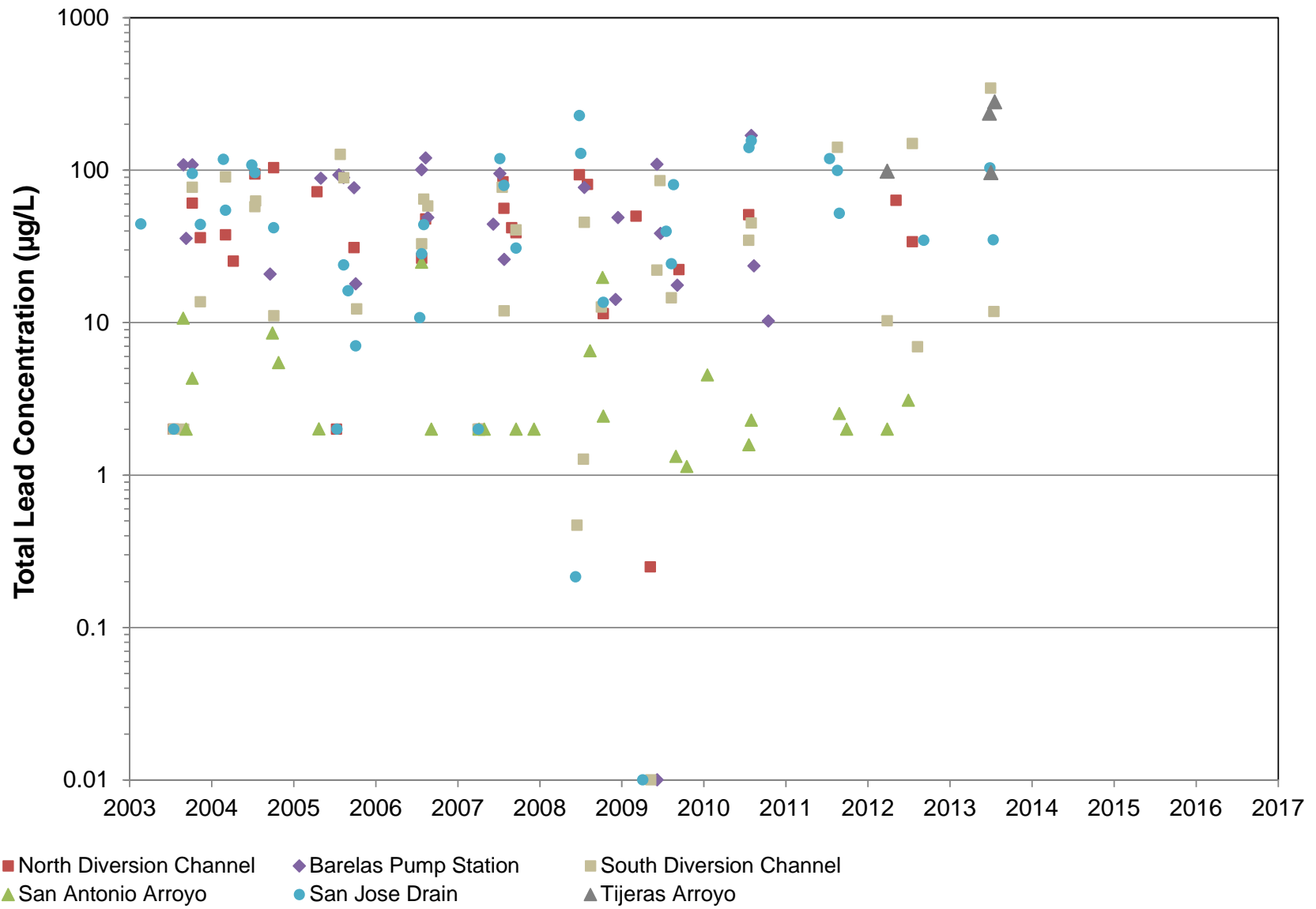
Figure 7a



Daniel B. Stephens & Associates, Inc.

9/19/16

CITY OF ALBUQUERQUE
Dissolved Lead, Outfall Locations



Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

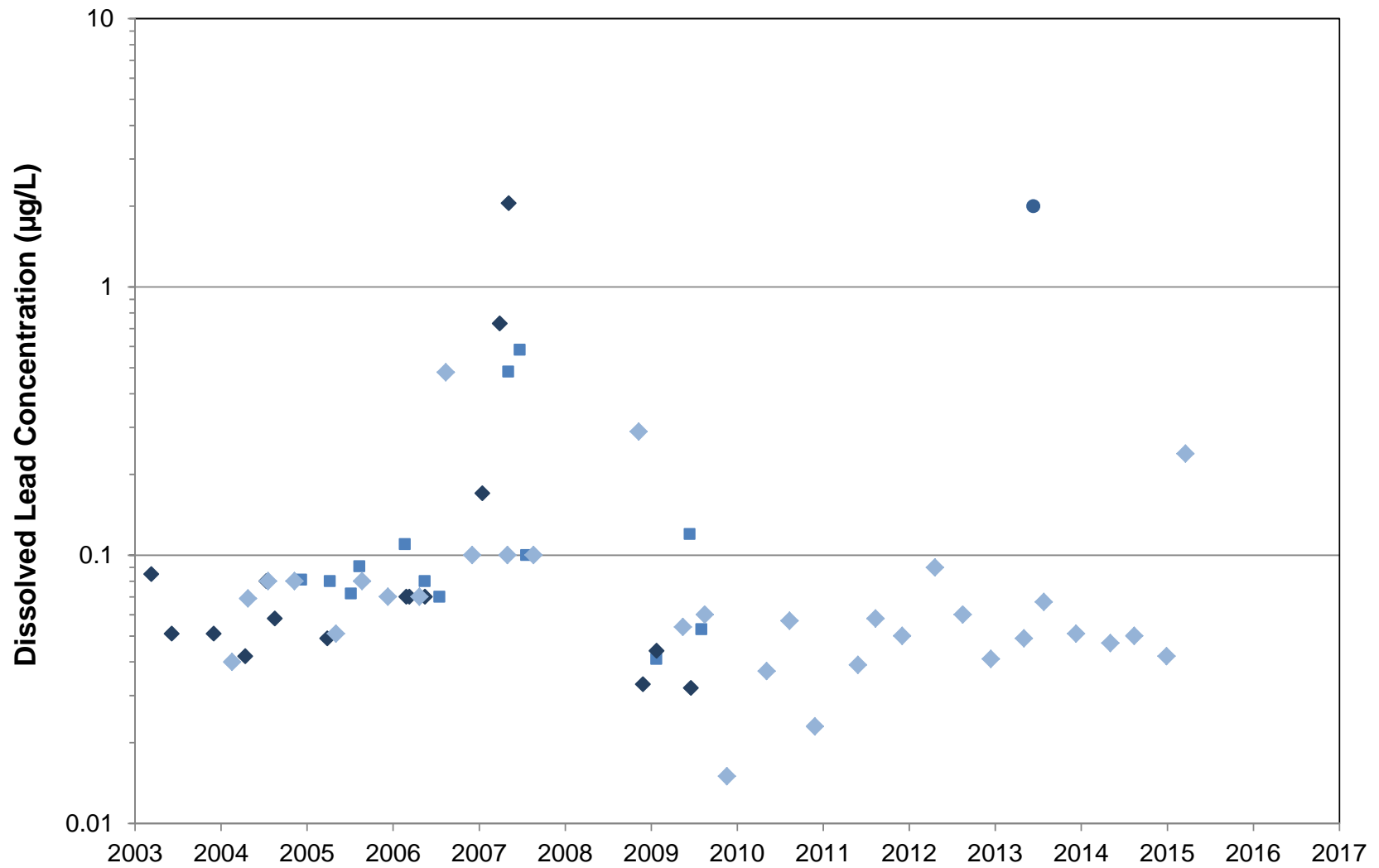
Figure 7b



Daniel B. Stephens & Associates, Inc.

9/19/16

CITY OF ALBUQUERQUE
Total Lead, Outfall Locations



● Rio Grande Upstream NDC ■ Rio Grande at Albuquerque ◆ Rio Grande at Isleta
◆ Rio Grande at Alameda Bridge ● Rio Grande at Isleta Lakes

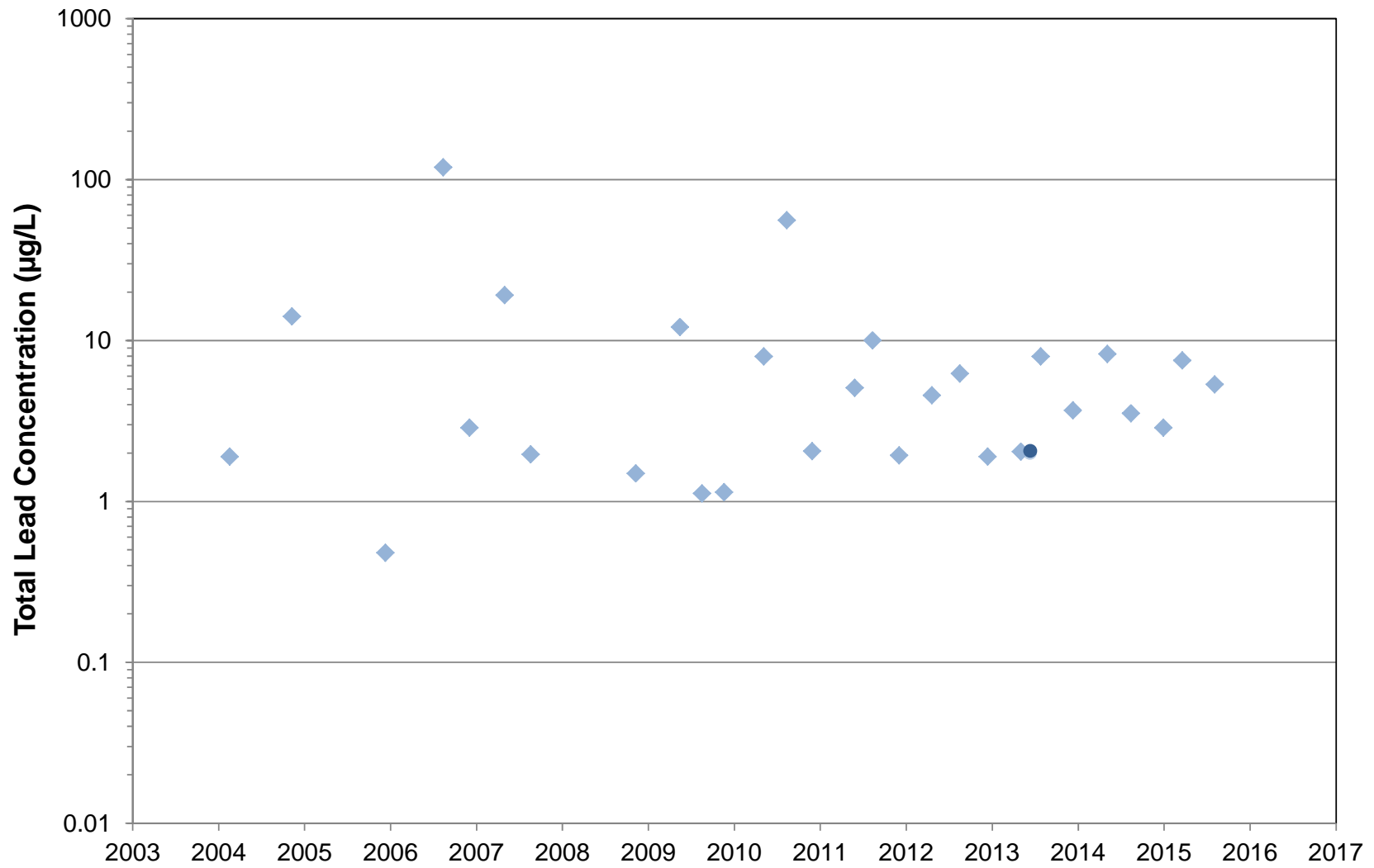
Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

Figure 7c



Daniel B. Stephens & Associates, Inc.
9/19/16

CITY OF ALBUQUERQUE
Dissolved Lead, Rio Grande Locations



● Rio Grande Upstream NDC ■ Rio Grande at Albuquerque ◆ Rio Grande at Isleta
◆ Rio Grande at Alameda Bridge ● Rio Grande at Isleta Lakes

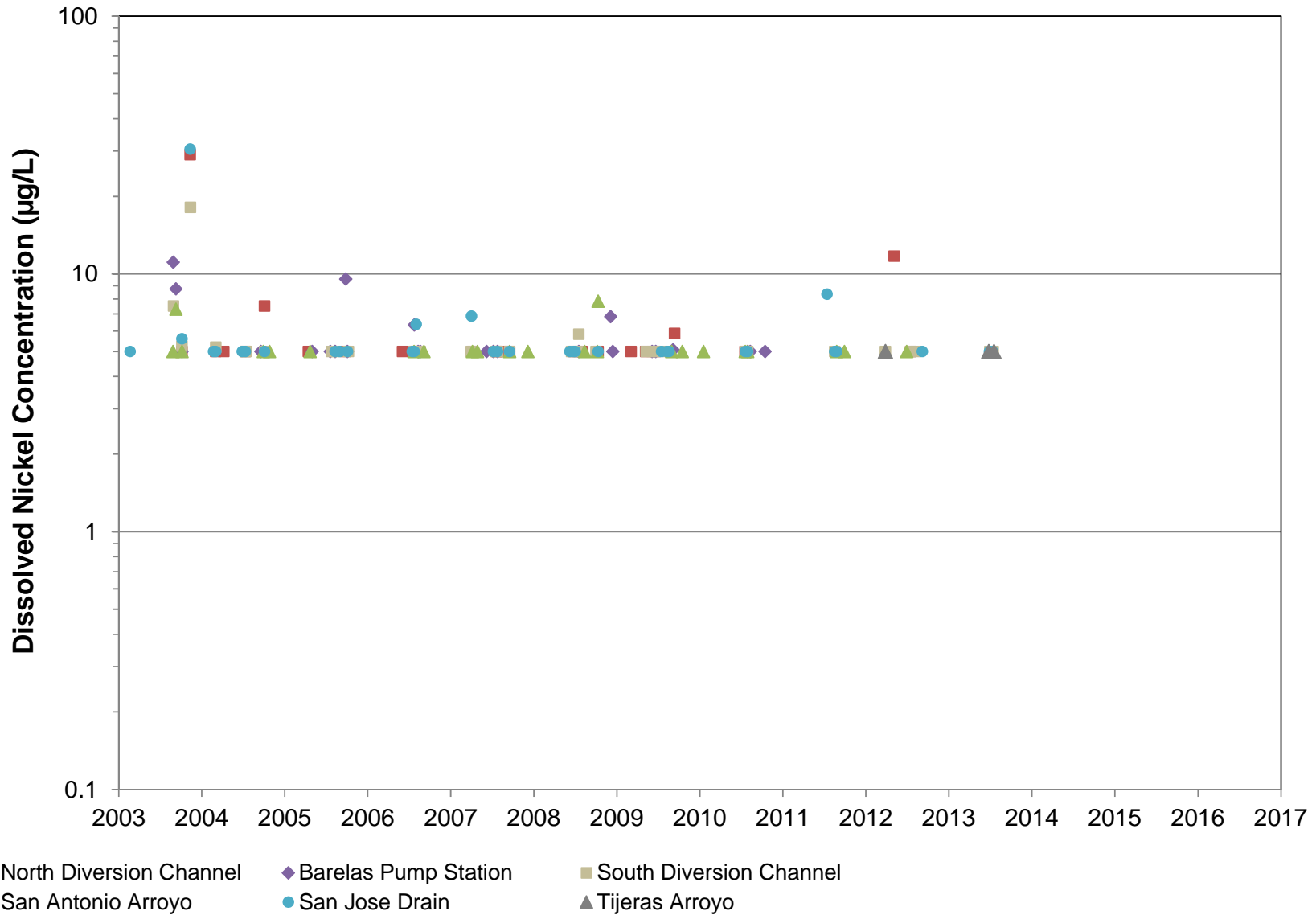
Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

Figure 7d



Daniel B. Stephens & Associates, Inc.
9/19/16

CITY OF ALBUQUERQUE
Total Lead, Rio Grande Locations



Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

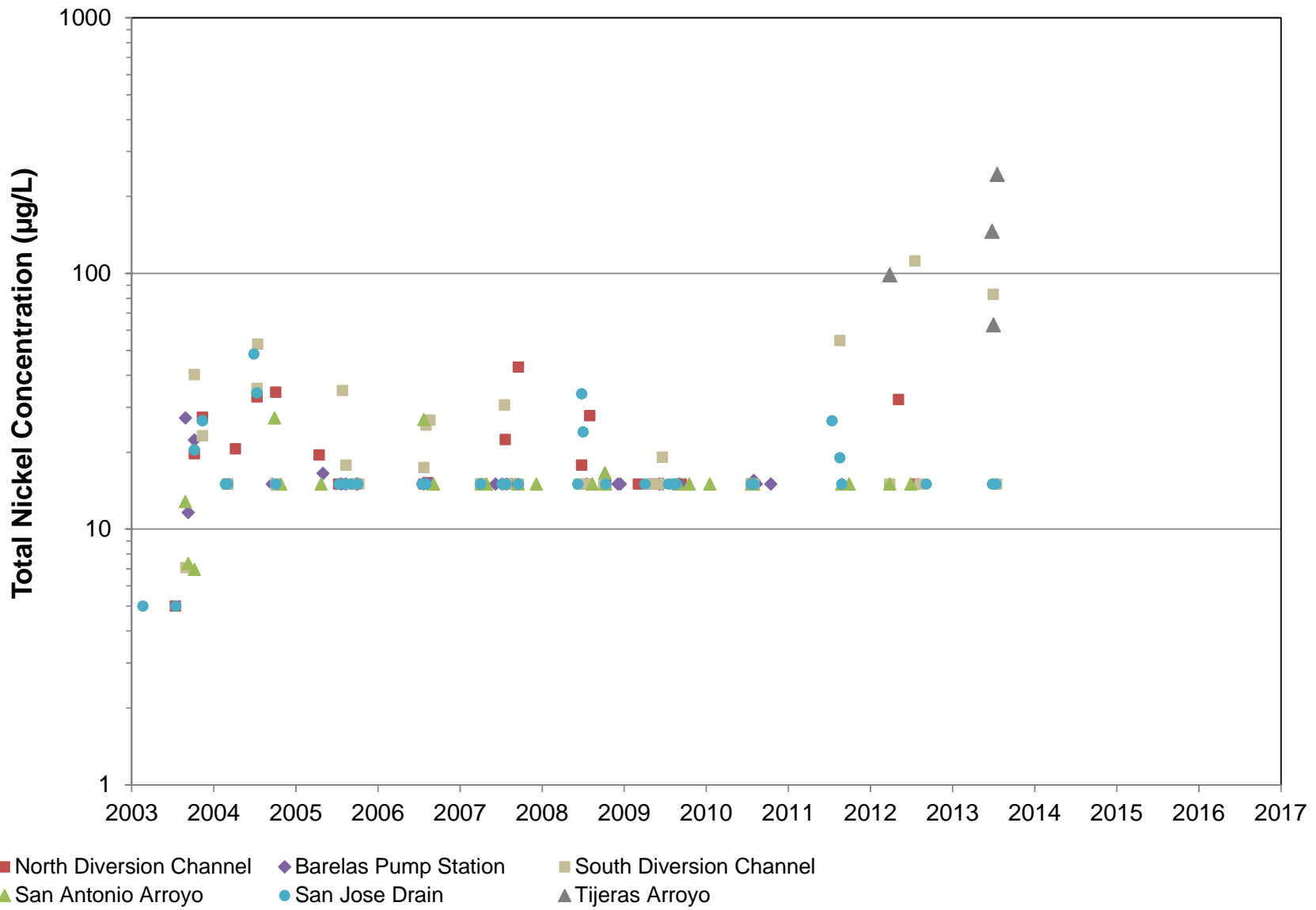
Figure 8a



Daniel B. Stephens & Associates, Inc.

9/19/16

CITY OF ALBUQUERQUE
Dissolved Nickel, Outfall Locations



Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

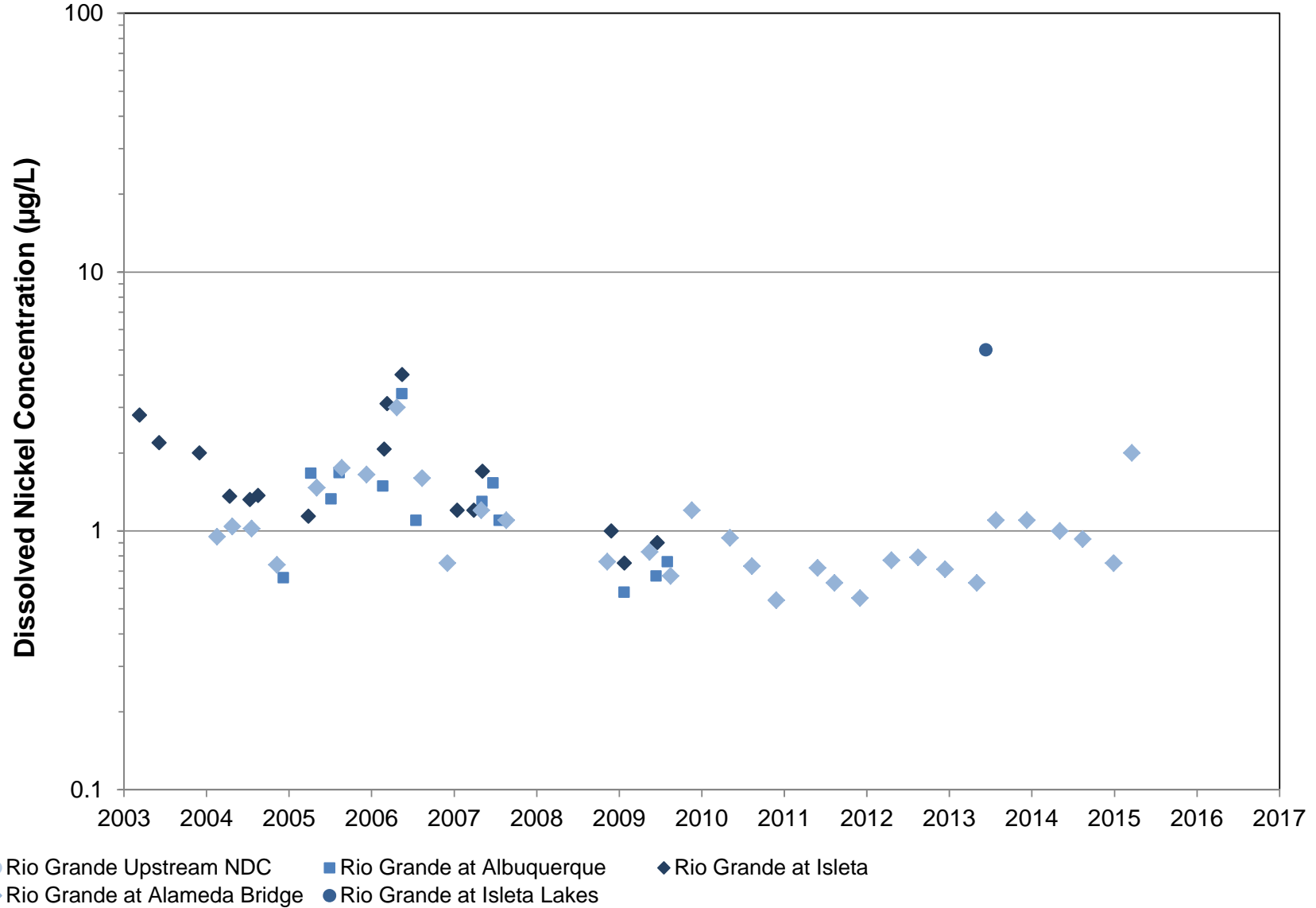
Figure 8b



Daniel B. Stephens & Associates, Inc.

9/19/16

CITY OF ALBUQUERQUE
Total Nickel, Outfall Locations



Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

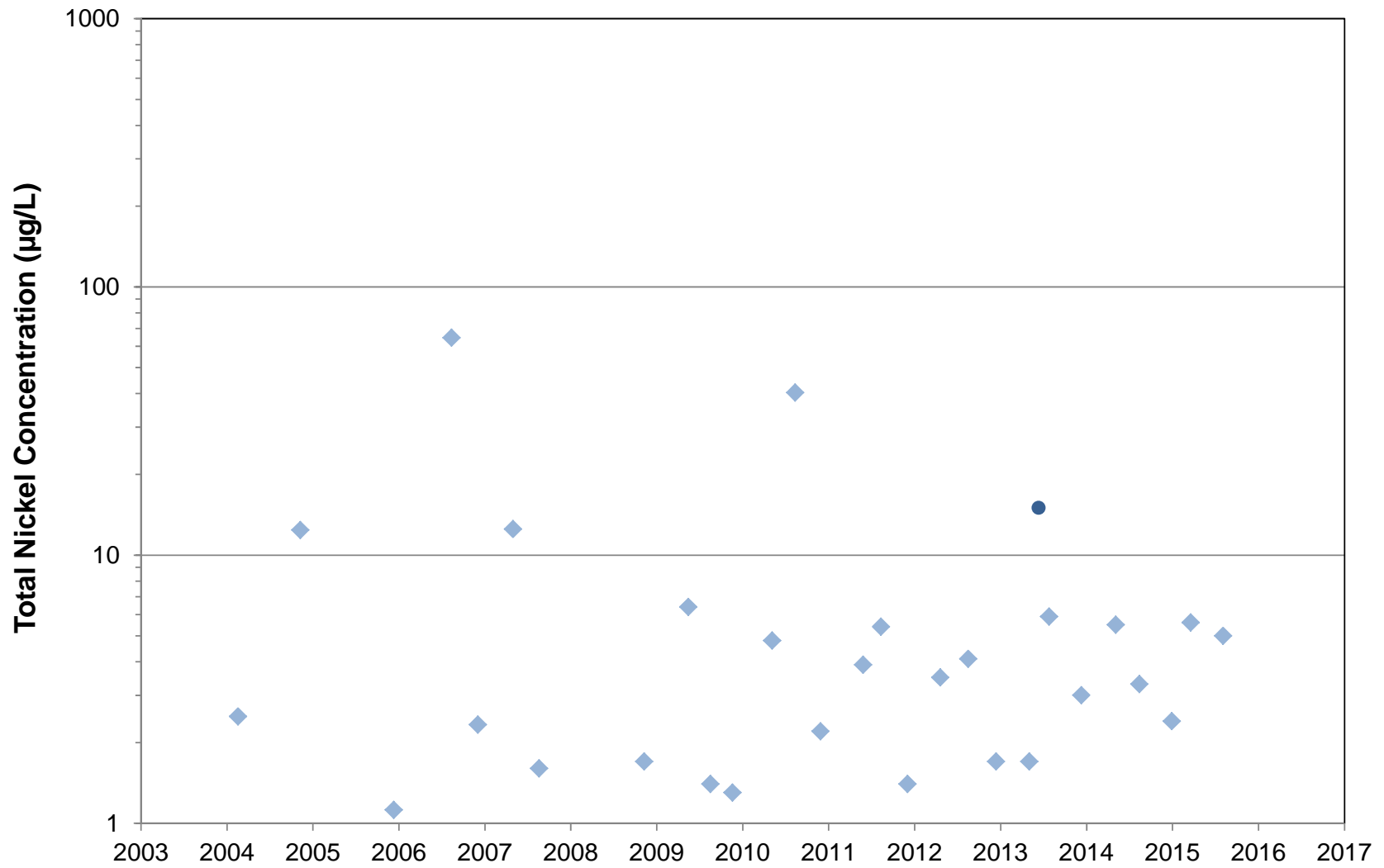
Figure 8c



Daniel B. Stephens & Associates, Inc.

9/19/16

CITY OF ALBUQUERQUE
Dissolved Nickel, Rio Grande Locations



● Rio Grande Upstream NDC ■ Rio Grande at Albuquerque ◆ Rio Grande at Isleta
◆ Rio Grande at Alameda Bridge ● Rio Grande at Isleta Lakes

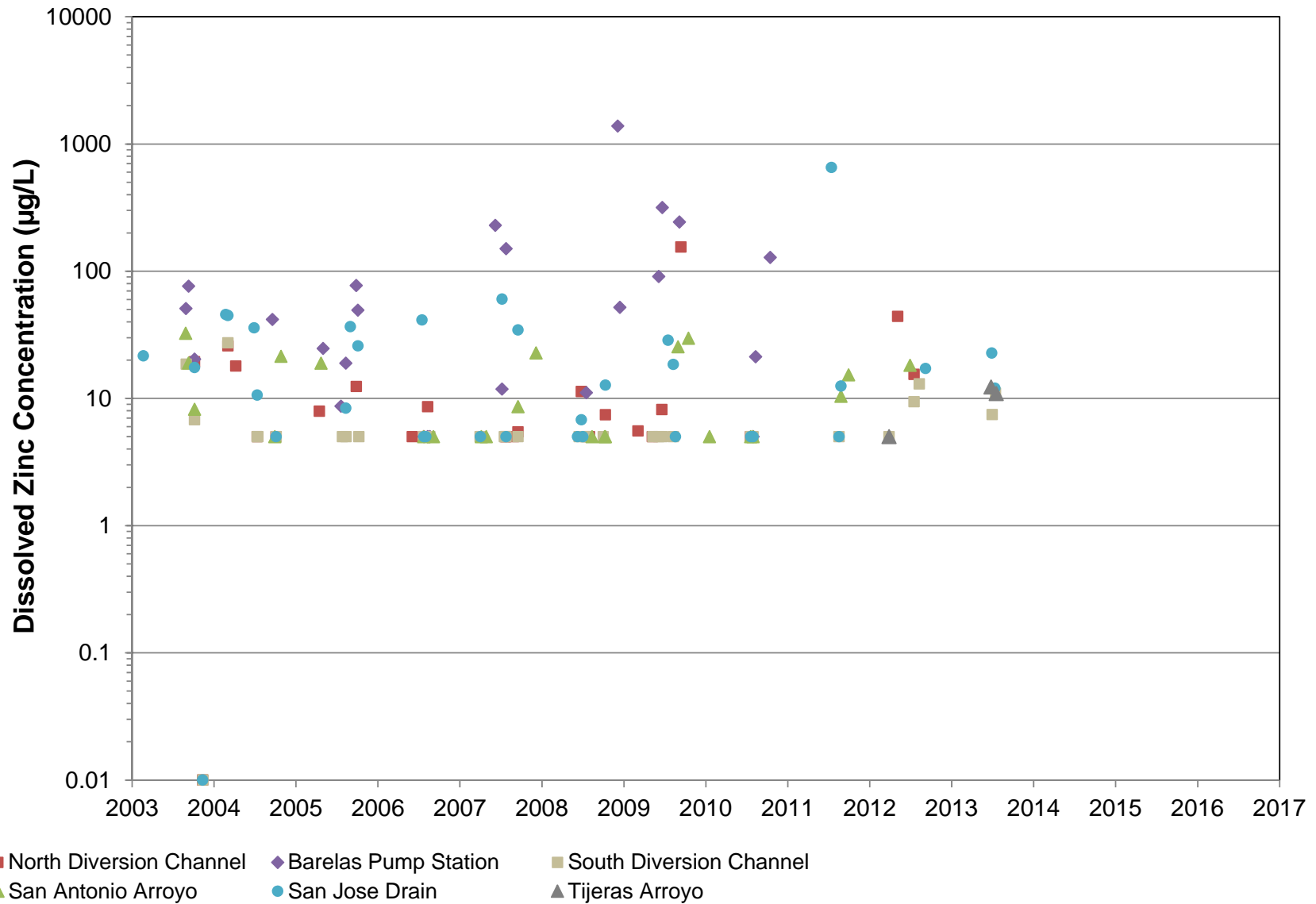
Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

Figure 8d



Daniel B. Stephens & Associates, Inc.
9/19/16

CITY OF ALBUQUERQUE
Total Nickel, Rio Grande Locations



Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

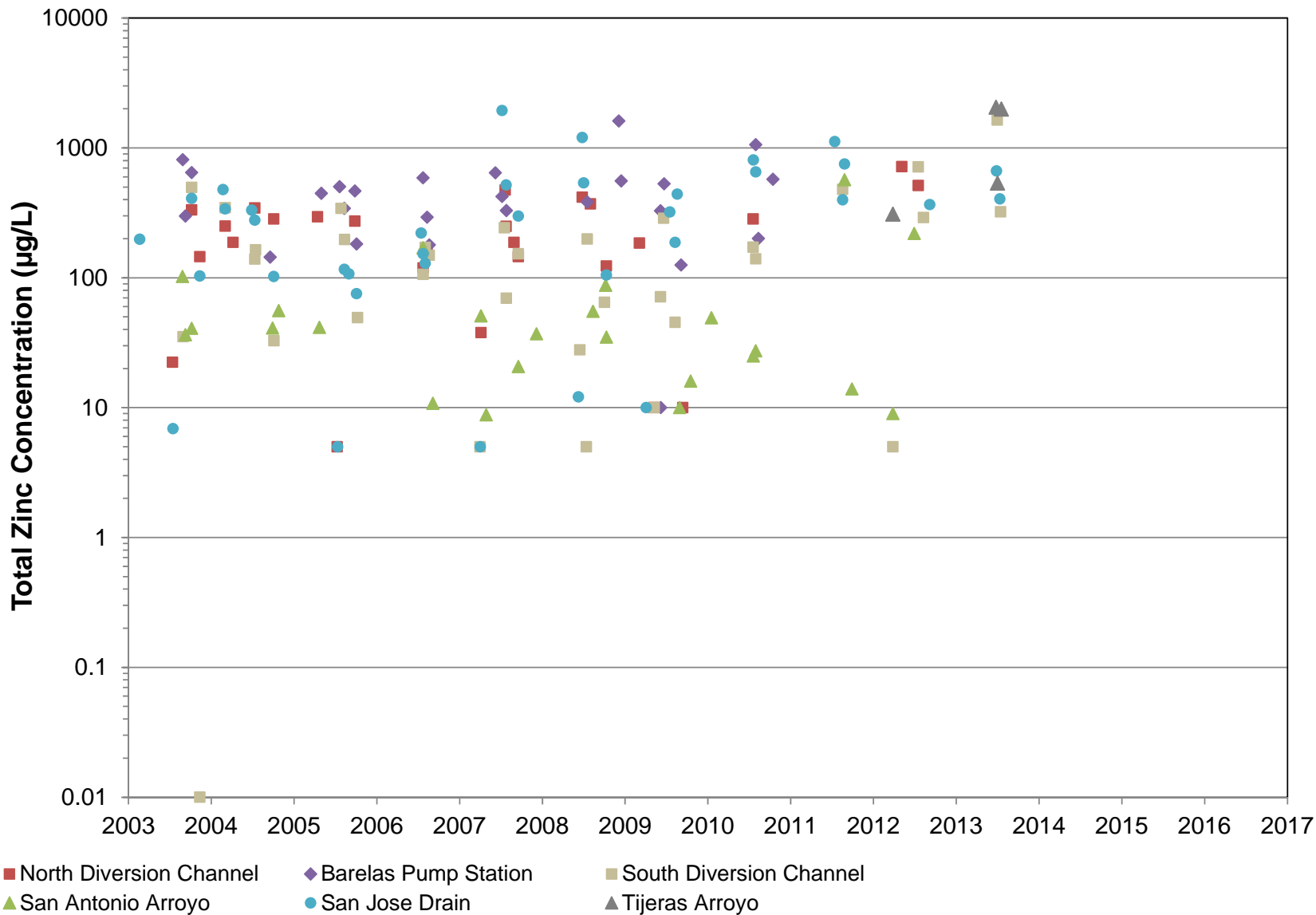
Figure 9a



Daniel B. Stephens & Associates, Inc.

9/19/16

CITY OF ALBUQUERQUE
Dissolved Zinc, Outfall Locations



Note: Non-detections plotted at detection limit.
 Sources: Storms et al., 2015; USGS, 2016

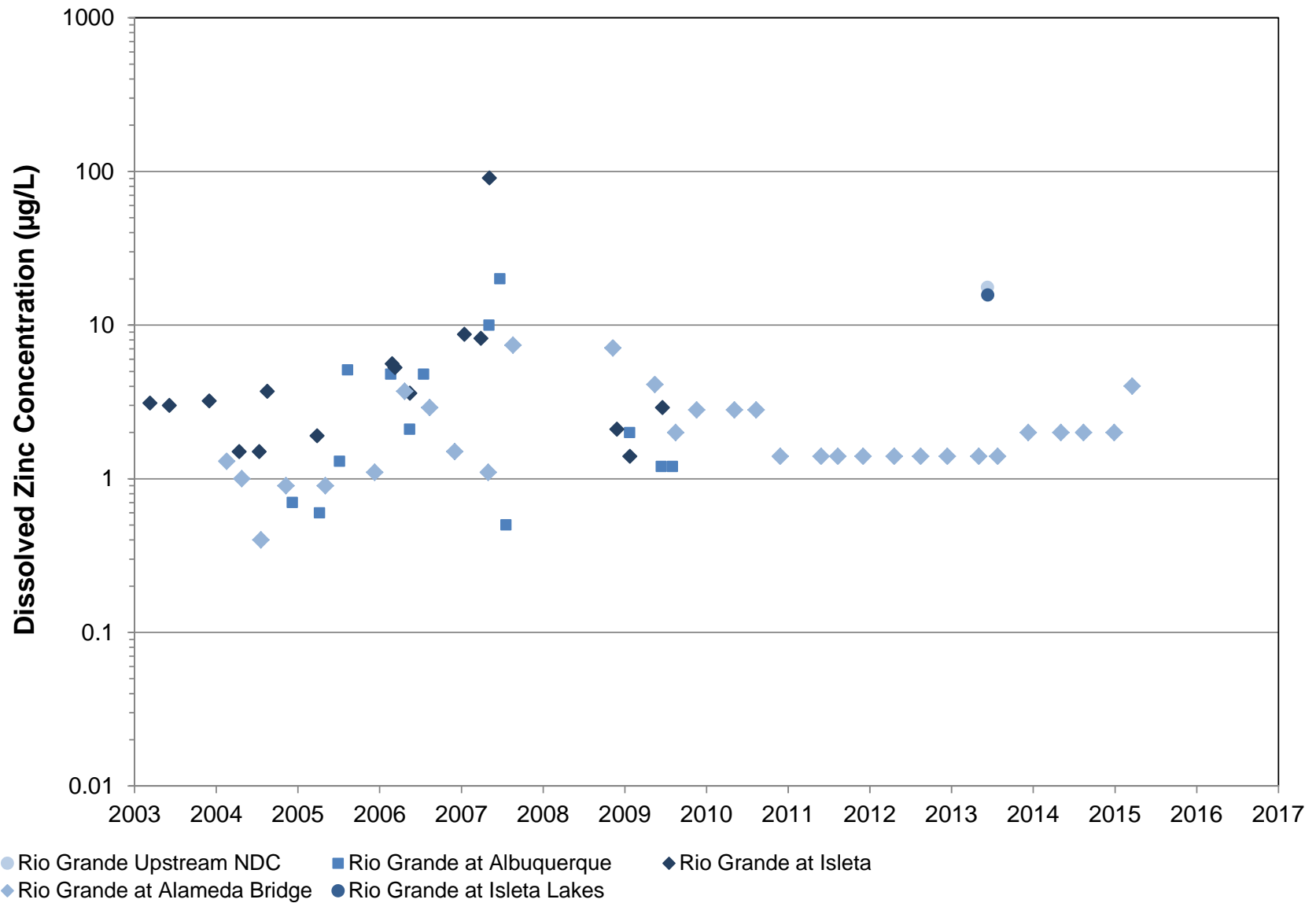
Figure 9b



Daniel B. Stephens & Associates, Inc.

9/19/16

CITY OF ALBUQUERQUE
Total Zinc, Outfall Locations



Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

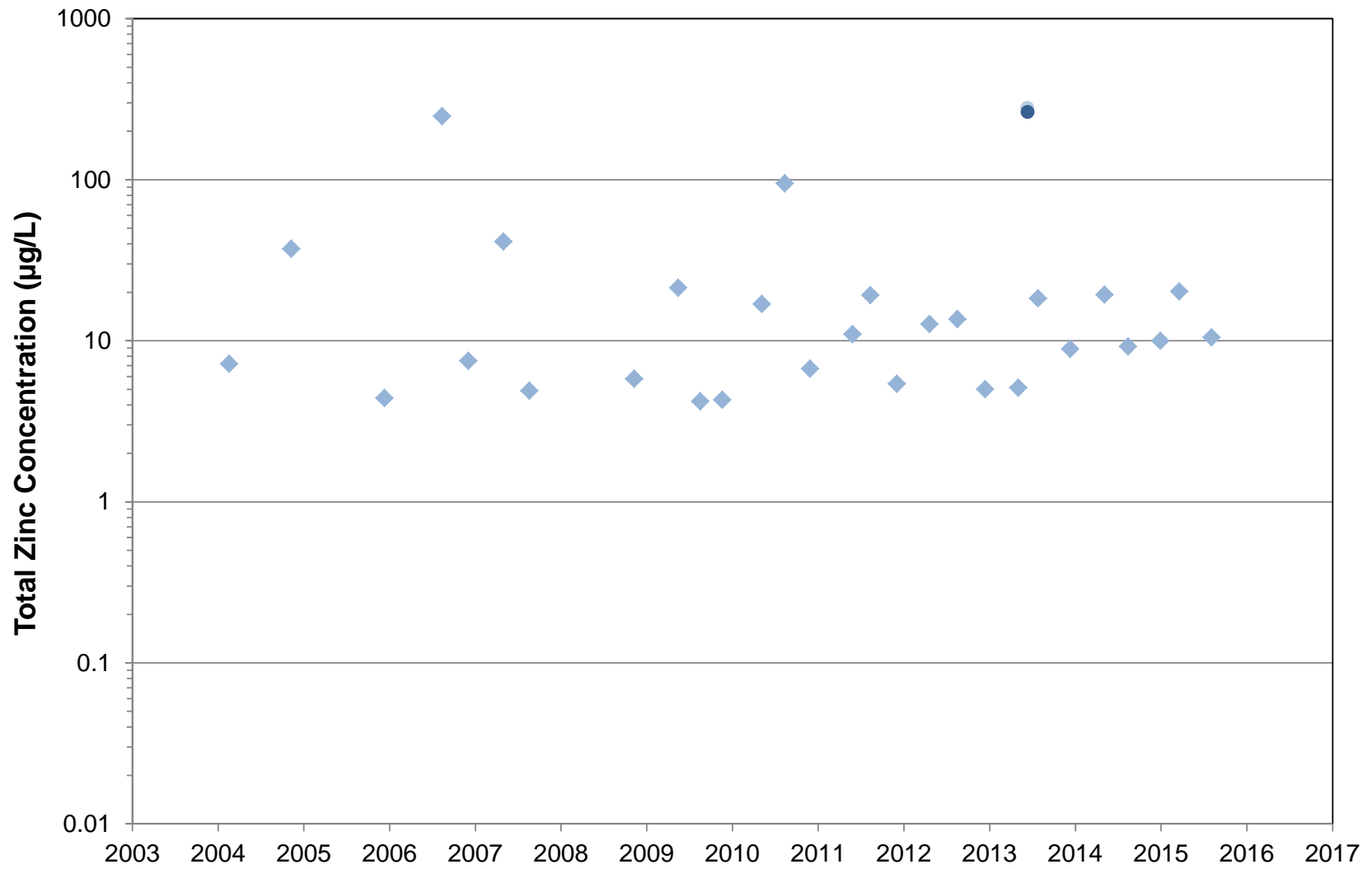
Figure 9c



Daniel B. Stephens & Associates, Inc.

9/19/16

CITY OF ALBUQUERQUE
Dissolved Zinc, Rio Grande Locations



● Rio Grande Upstream NDC ■ Rio Grande at Albuquerque ◆ Rio Grande at Isleta
◆ Rio Grande at Alameda Bridge ● Rio Grande at Isleta Lakes

Note: Non-detections plotted at detection limit.
Sources: Storms et al., 2015; USGS, 2016

Figure 9d



Daniel B. Stephens & Associates, Inc.

9/19/16

CITY OF ALBUQUERQUE
Total Zinc, Rio Grande Locations

Tables

Table 1. Outfall Water Quality Sampling Locations

Site Name	Site Number	USGS Station Number	Drainage Area (mi ²)	Land Use (%)					Station Location
				Agricultural	Commercial	Industrial	Open Space	Residential	
North Diversion Channel	UR-9900	08329900	92	36	15	4	4	41	Concrete-lined channel
San Antonio Arroyo	UR-300	083299375	31	73	1	14	1	11	Natural unlined channel
Barelas Pump Station	UR-400B	NA	4	9	34	10	12	35	Stormwater pumping station
San Jose Drain	UR-500	08330200	2	18	30	9	2	41	Concrete-lined channel
South Diversion Channel	UR-200	08330775	11	30	28	21	8	13	Natural unlined channel
Tijeras Arroyo	UR-330600	08330600	135	—	—	—	90	—	Natural unlined channel

Source: Storms et al., 2015
 USGS = U.S. Geological Survey
 mi² = Square miles
 NA = Not applicable
 — = Not provided

Table 2. Total Polychlorinated Biphenyl Concentrations

Site	Sample Date	Total PCBs ^a		Data Source
		(pg/L)	(µg/L)	
<i>Oufall Locations</i>				
North Diversion Channel	7/20/2011	123,699	0.123699	USGS
	5/11/2012	7,836	0.007836	USGS
	7/23/2012	4,607	0.004607	USGS
	7/6/2015	10,500	0.0105	MS4 Cooperative
San Antonio Arroyo	9/1/2011	1,241	0.001241	USGS
	10/5/2011	ND		USGS
	4/3/2012	134	0.000134	USGS
	7/5/2012	147	0.000147	USGS
	6/10/2015	235	0.000235	MS4 Cooperative
San Jose Drain	7/20/2011	17,580	0.01758	USGS
	8/24/2011	229	0.000229	USGS
	9/1/2011	8,888	0.008888	USGS
	9/12/2012	33,503	0.033503	USGS
	7/6/2015	6,040	0.00604	MS4 Cooperative
South Diversion Channel	8/24/2011	73	0.000073	USGS
	4/3/2012	3,632	0.003632	USGS
	7/23/2012	4,277	0.004277	USGS
	8/16/2012	233	0.000233	USGS
	7/6/2015	7,580	0.00758	MS4 Cooperative
Tijeras Arroyo	8/3/2011	ND		USGS
	4/3/2012	1,583	0.001583	USGS
	7/7/2015	7,140	0.00714	MS4 Cooperative
<i>Rio Grande Locations</i>				
Rio Grande upstream of North Diversion Channel	7/29/2011	ND		USGS
	8/18/2011	ND		USGS
	9/22/2015	ND		MS4 Cooperative
Rio Grande near Isleta	9/22/2015	276	0.000276	MS4 Cooperative

^a Sum of congeners
 pg/L = Picograms per liter
 µg/L = Micrograms per liter
 USGS = U.S. Geological Survey
 ND = Not detected

Table 3. AMAFCA Total Sediment Removal, 2015

AMAFCA Maintained Location	Rank	Sediment Removed (cubic yards)	Percent of Total (%)
Amole Dam	15	144	0.41
Bear Canyon Arroyo	28	6	0.02
Black Arroyo Dam	4	2,564	7.33
Cabezon Channel	18	117	0.33
Candelaria Inlet	27	12	0.03
Corrales Main	6	1,333	3.81
Domingo Baca Water Quality Structure	16	135	0.39
Hahn Channel	26	18	0.05
Hubbel Dam & Spillway	13	361	1.03
Kinney Dam	8	1,026	2.93
La Cueva System & Water Quality Features	24	36	0.10
Ladera System- Dams & Mirehaven	14	291	0.83
Los Padillas Spillway Diversion	25	24	0.07
Mariposa Diversion Channel	23	52	0.15
North Diversion Channel	3	2,735	7.82
North Domingo Baca Dam & Channel	2	3,803	10.87
North Domingo Baca Trailer Park Ponds	10	762	2.18
Piedras Marcadas Dam & Mid Branch PM Channel	7	1,107	3.17
Powerline Channel	19	91	0.26
Raymac Dam	9	869	2.48
Snow Vista Pond and Channel	12	486	1.39
South Diversion Channel & Water Quality Structure	1	16,127	46.11
South Domingo Baca Channel	20	76	0.22
South Pino Channel & Water Quality Facility	17	117	0.33
Southwest Valley Projects	22	52	0.15
Vineyard Channel & Water Quality Structure	21	52	0.15
West Bluff, Laurelwood Ponds & WQ Structure	11	620	1.77
West I-40 Channel & Storm Drains	5	1,960	5.60
Total		34,976	100.00

Source: Chavez, 2016

Table 4. Sediment Removed from North Diversion Channel and South Diversion Channel, 2015

Month	Sediment Removed (cubic yards)	
	North Diversion Channel	South Diversion Channel and Water Quality Structure
January	—	3,113
February	—	304
March	264	3,050
April	387	540
May	540	—
June	—	—
July	—	4,002
August	—	—
September	918	—
October	626	2,358
November	—	2,760
December	—	—
Total	2,735	16,127

Source: Chavez, 2016
 — = No removal

APPENDIX E: Water Quality Standards, TMDLs, §303(d) List, and WLA Letter

No.	Description
E-1	WLA Letter
E-2	20.6.4 NMAC: Water Quality Standards for Interstate and Intrastate Surface Waters http://water.epa.gov/scitech/swguidance/standards/wgslibrary/upload/nmwqs.pdf
E-3	Pueblo of Isleta Surface Water Quality Standards http://water.epa.gov/scitech/swguidance/standards/upload/2005_12_14_standards_wgs_library_tribes_isleta_6_wqs.pdf
E-4	U.S. EPA Approved Total Maximum Daily Loads (TMDLs) for the Middle Rio Grande Watershed, June 30, 2010 http://www.nmenv.state.nm.us/swqb/documents/swqbdocs/MAS/TMDLs/MRG/Online/USEPA-ApprovedMRG_TMDL06-30-10.pdf
E-5	Appendix A of the 2014-2016 State of New Mexico Clean Water Act §303(d)/§305(b) Integrated Report, U.S. EPA-Approved November 18, 2014 http://www.nmenv.state.nm.us/swqb/303d-305b/2014-2016/2014-2016NMList.pdf
E-6	§303(d) Integrated List Spreadsheet http://www.nmenv.state.nm.us/swqb/303d-305b/2014-2016/2014IntegratedList-ByIR_CategoryWQCC-Approved.pdf

APPENDIX E-1

CITY OF ALBUQUERQUE

Office of the Mayor/Chief Administrative Officer



September 22, 2015

Ms. Sarah Holcomb
Industrial and Stormwater Team Supervisor
Safety Liaison and Chemical Hygiene Officer
Point Source Regulation Section
Surface Water Quality Bureau, NMED
1190 S. St. Francis Dr., Santa Fe, NM 87502

Re: Request for an Aggregate Waste Load Allocation (WLA) for Permittees under National Pollutant Discharge Elimination System (NPDES) Permit No. NMR04A000

Dear Ms. Holcomb:

The purpose of this correspondence is to request an aggregate waste load allocation ("WLA") for the permittees to the National Pollutant Discharge Elimination System Permit No. NMR04A000 ("the Permit"). As you may be aware, the City of Albuquerque (COA) is an applicant and identified potential permittee to the Permit. Under the Permit, the permittees are expected to address discharges of E. coli into certain stream segments. Although the permittees may take individualized efforts to reduce Total Maximum Daily Load (TMDL) for E. coli in the Middle Rio Grande (MRG) Watershed, collective efforts are encouraged and in fact, an aggregate WLA will provide the greatest protection to the stream segments.

The COA is willing to cooperate with the other identified potential permittees to meet an aggregate TMDL for E. coli in the MRG Watershed. The COA is therefore requesting that an aggregate WLA measurable goal be issued for these segments. This aggregate TMDL will apply to Stream Segments 2105_50 and 2105.1_00, which receive discharges from Municipal Separate Storm Sewer Systems (MS4s) belonging to a number of agencies in the MRG Watershed and that have an approved TMDL for E. coli (2014 - 2016 State of New Mexico Clean Water Act §303(d)/§305(b) Integrated List). The COA understands that upon issuance of the aggregate WLA measurable goal, the COA, along with the other MRG Watershed operators, will be responsible for progress in meeting this goal as identified in our respective Stormwater Management Plans (SWMP). The permittees have determined that progress in meeting the WLA can be assessed from the sampling results of the joint monitoring plan developed by representatives from agencies within the watershed.

If the COA decides that it is no longer willing to participate in the joint monitoring plan and share a WLA, the COA will notify participating agencies by December 1st of any given year, which will be no less than six (6) months in advance of the following fiscal reporting year. At that time, the COA will also contact the New Mexico Environment Department Surface Water Quality Bureau and request an individual WLA in addition to supplying an alternative sampling plan. In addition, the COA will include a discussion of its change in monitoring strategy in an updated SWMP for the Annual Report due on December 1 per the Watershed Based Permit requirements.

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

New Mexico Environment Department – Surface Water Quality Bureau
Re: Request for Combined Waste Load Allocation NPDES Permit No. NMR04A000
September 22, 2015
Page 2

Thank you for your attention to this matter. Should you have any questions, please feel free to contact Kathy Verhage at (505) 768-3654 or via email at kverhage@cabq.gov.

Sincerely,



Robert J. Perry
Chief Administrative Officer

Electronic cc: Wilfred Gallegos, P.E.; Director, DMD
Melissa Lozoya, P.E.; Deputy Director, DMD
Ron Romero, P.E., Engineering Division Manager, DMD
Kevin Daggett, P.E., Storm Drainage Section Manager, DMD

11/4/2015 email Shared WLA

Good morning:

Below, please find the Waste Load Allocations NMED has calculated based on geographic area under the NPDES Watershed Based MS4 Permit for the Middle Rio Grande. The aggregate/combined WLA assigned to the permittees working to sample cooperatively in accordance with the permit applies to:

- Town of Bernalillo
- Village of Los Ranchos
- ESCAFCA
- SSCAFCA
- City of Albuquerque
- Village of Corrales
- City of Rio Rancho
- AMAFCA
- NMDOT
- Sandoval County
- Bernalillo County
- UNM

Kirtland AFB, Sandia Labs/DOE and EXPO NM all indicated in their NOIs that they would be sampling individually and their WLAs are indicated below. Please incorporate these numbers into your SWMPs and monitoring plans, as appropriate. If you have any questions or need more information, please let me know.

Alameda to Isleta	High	Moist	Mid	Dry	Low
	(>3360 cfs)	(929-3360 cfs)	(664-929 cfs)	(319-664 cfs)	(0-319 cfs)
Kirtland AFB	1.2E+11	3.01E+10	2.03E+10	7.46E+9	1.74E+9
Sandia Labs/DOE	2.08E+9	5.2E+8	3.5E+8	1.29E+8	2.99E+7
Combined WLA for Cooperative	2.51E+11	6.29E+10	4.22E+10	1.57E+10	3.42E+9
Total WLA	3.7308E+11	9.35E+10	6.285E+10	2.329E+10	5.19E+9
Angostura to Alameda	High	Moist	Mid	Dry	Low
	(>3360 cfs)	(929-3360 cfs)	(664-929 cfs)	(319-664 cfs)	(0-319 cfs)
EXPO NM	6.23E+08	1.56E+08	1.05E+08	3.86E+07	8.98E+06
Combined WLA for Cooperative	3.14E+11	9.09E+10	No Value	3.24E+10	1.68E+10
Total WLA	3.15E+11	9.11E+10		3.24E+10	1.68E+10

~~~~~

Sarah Holcomb  
 Industrial and Stormwater Team Supervisor

Safety Liaison & Chemical Hygiene Officer

NMED Surface Water Quality Bureau

PO Box 5469, Santa Fe, NM 87504

(505) 827-2798 (Santa Fe, Monday-Thursday)

(505) 231-2608 (Albuquerque, Friday)

The nation behaves well if it treats the natural resources as assets which it must turn over to the next generation increased, and not impaired, in value. —Theodore Roosevelt



## **APPENDIX F: SUPPORTING DOCUMENTS FOR CONSTRUCTION SITE RUNOFF CONTROL PROGRAM**

| <b>No.</b> | <b>Description</b> |
|------------|--------------------|
| Reserved   | Reserved           |

## **APPENDIX G: SUPPORTING DOCUMENTS FOR POST- CONSTRUCTION STORMWATER MANAGEMENT PROGRAM**

| <b>No.</b> | <b>Description</b> |
|------------|--------------------|
| Reserved   | Reserved           |



## **APPENDIX H: SUPPORTING DOCUMENTS FOR POLLUTION PREVENTION / GOOD HOUSEKEEPING PROGRAM**

| <b>No.</b> | <b>Description</b>                |
|------------|-----------------------------------|
| H-1        | Sample Good Housekeeping Training |

## **APPENDIX H-1**



# STORM WATER POLLUTION PREVENTION TRAINING

City of Albuquerque



## City of Albuquerque

Kevin Daggett, P.E.

Kathy Verhage, P.E.

Shellie Eaton, P.E.

## CDM Smith

Kelly Collins, C.P.G., BCES

Sarah Tuite, P.E.

January 22, 2016

# Training Overview

- Permit overview (why are we implementing the program)
- Importance of preventing storm water pollution
- Discuss City of Albuquerque's responsibilities
- Discuss your responsibilities
- Provide an overview of SWPPPs and BMPs
- Regulatory update including 2015 MSGP
- Assess effectiveness of storm water training



# Regulatory Driver

- Clean Water Act (CWA) of 1972
- EPA National Pollutant Discharge Elimination System (NPDES) for discharges into the Municipal Separate Storm Sewer System (MS4)
- 2012 Phase 1 MS4 Permit issued jointly to:
  - City of Albuquerque
  - AMAFCA
  - NMDOT
  - UNM
- Multi-Sector General Permit (MSGP) for Storm Water Discharges Associated with Industrial Activity
  - New Permit issued by EPA in June 2015
  - Few City facilities fall under the MSGP (e.g. Transit, Solid Waste)
  - Transit SWPPP and Program Revisions Completed September 2015
  - NOIs (for Transit facilities) Submitted September 2015

# Watershed-Based MS4 Permit

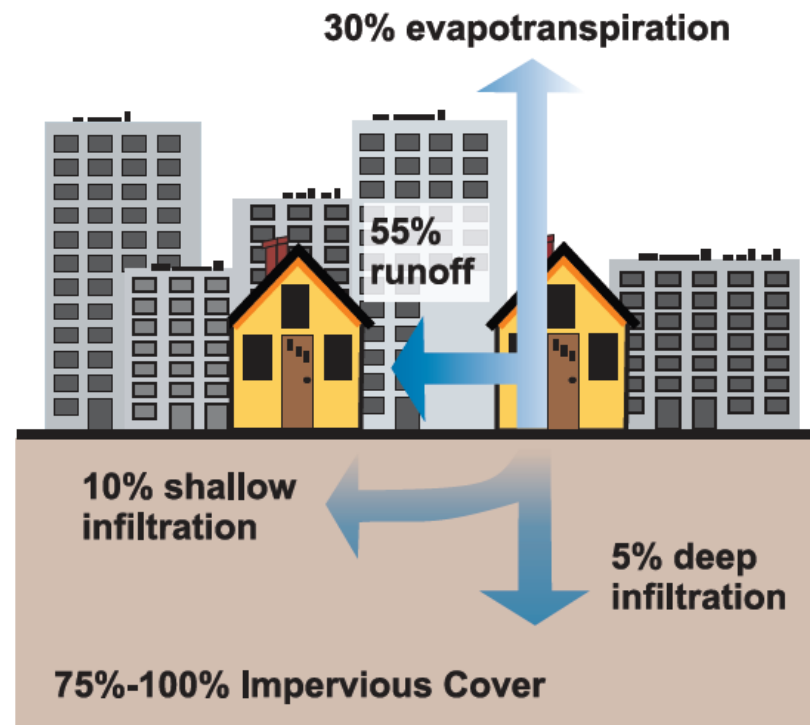
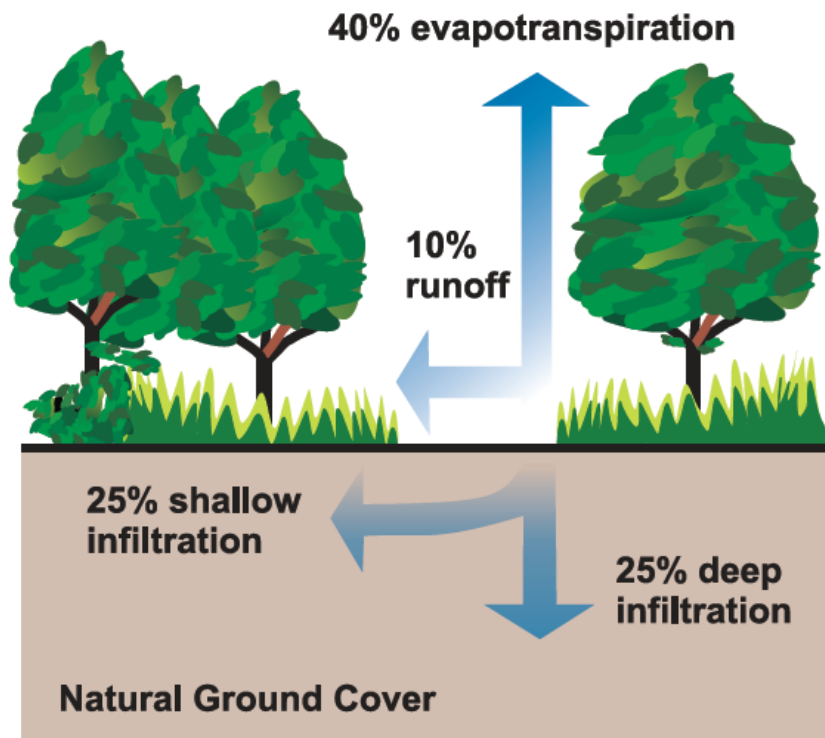
- Replaces the 2012 MS4 Permit, but similar requirements
- Defines permit area and permittees
- Requires Storm Water Management Program (SWMP)
- Authorizes discharges including non-storm water discharges
- Defines reporting and monitoring requirements
- New permit included deadlines for completing storm water program components:
  - Performed several rounds of audits of City-owned and operated facilities and of many industrial and high-risk facilities



# Updates to the Multi-Sector General Permit

- Under the new MSGP additional Threatened and Endangered species information was submitted to EPA
- Transit facilities requiring coverage under the MSGP include Transit Yale and Daytona Facilities
- All Solid Waste Facilities (landfill and transfer stations) require coverage under the MSGP
- 2015 MSGP requires online posting of SWPPPs
  - 2015 Yale and Daytona SWPPPs are now posted online
    - <https://www.cabq.gov/municipaldevelopment/our-department/street-and-storm-maintenance>
  - Solid Waste SWPPPs are also required to be posted online

# What is Storm Water?

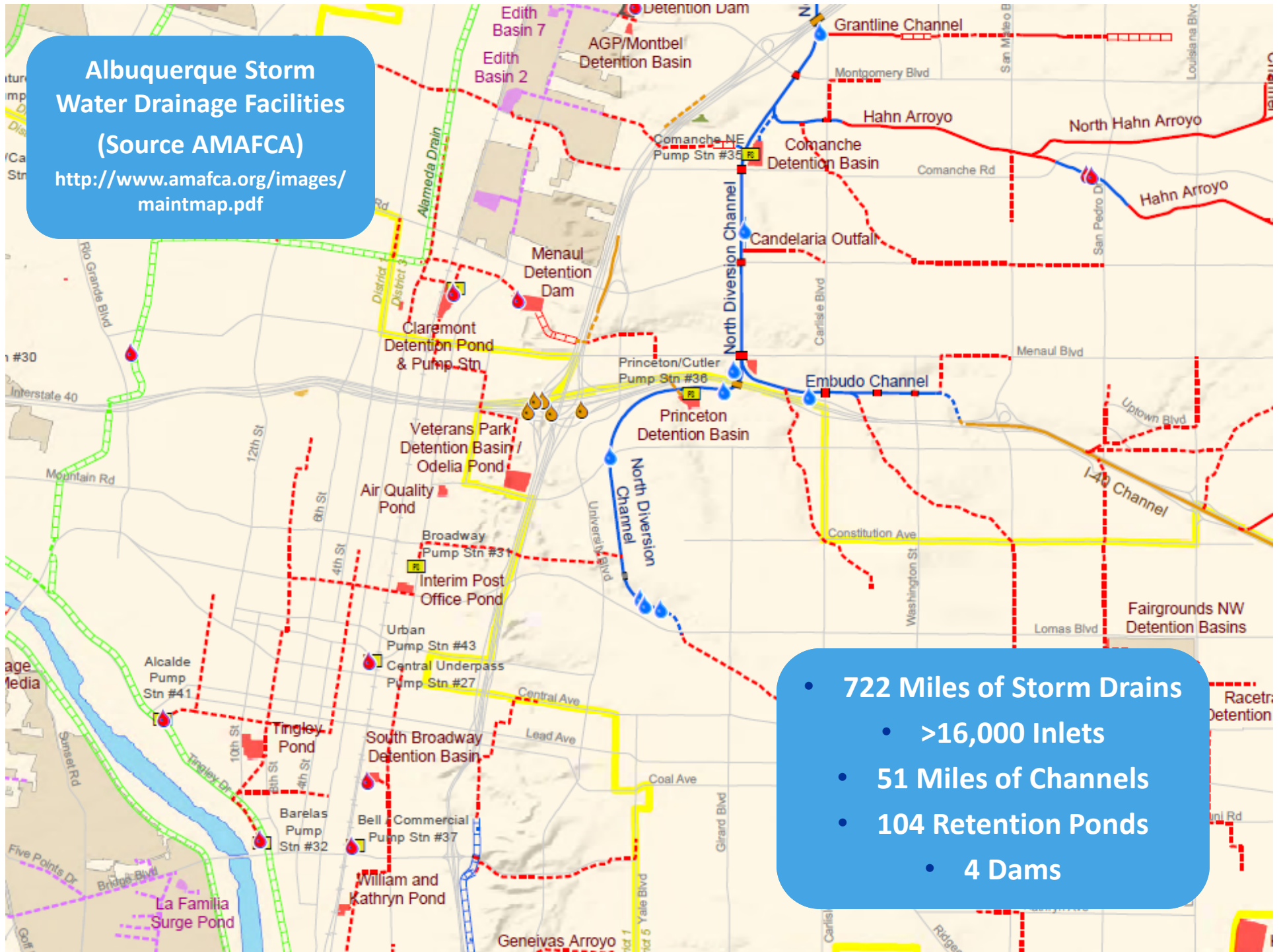


Reference: EPA 841-F-03-003



## Albuquerque Storm Water Drainage Facilities (Source AMAFCA)

<http://www.amafca.org/images/maintmap.pdf>



- 722 Miles of Storm Drains
  - >16,000 Inlets
- 51 Miles of Channels
- 104 Retention Ponds
  - 4 Dams

# Why is Storm Water Quality Important?

- Untreated storm water is discharged directly into the Rio Grande



**Nationally urban runoff is a significant source of impairment in rivers and lakes, impacting 30,000 miles of rivers (EPA, 1996).**



# Rio Grande is a Source of Drinking Water



Drinking Water Diversion  
Bladder Dam and Fish Screens



Fish Bypass

# Storm Water Pollution Sources



Oils and Fuels



Herbicides, Pesticides, and Fertilizers



Garbage and Debris



Landscaping and Pet Waste

Chemicals



Wash Waters

Birds



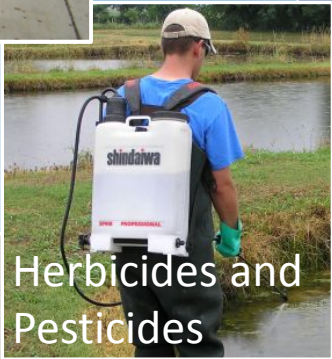
# Common Municipal Pollution Sources



Garbage and Debris



Kitchen Oils and Grease



Herbicides and Pesticides



Oil Staining



Paint / Building Materials



Ice Melt / Salt

# CABQ Responsibilities – 6 Minimum Measures

## 1. Public Outreach

[www.keeptheriogrand.org](http://www.keeptheriogrand.org)

## 2. Public Education

Water Festivals, River Exchange

## 3. Good housekeeping

City-facility storm water audits, training

## 4. Construction Storm Water

Construction site inspection, SWPPP

## 5. Post-Construction Storm Water

Plan review

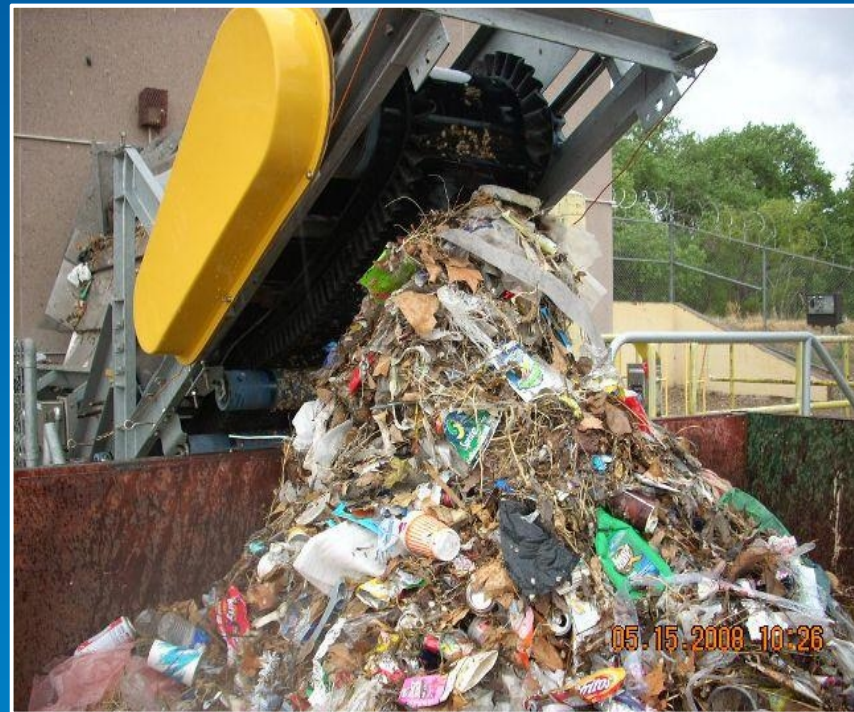
## 6. Illicit Discharge Detection and Elimination

Dry weather screening



# CABQ Responsibilities – Additional Requirements

- Storm Water Ordinance
  - Still in progress
- Industrial and High Risk Facilities
  - Completed two rounds of inspections
- Floatables Monitoring
- Water Quality Monitoring
- Storm Water Monitoring
- Endangered species protection



# CABQ Storm Water Management Section Responsibilities

- Meet all requirements of the MS4 Permit and MSGP Permit for Applicable Facilities
- Coordinate efforts with other permittees
- Act as a resource for all City Departments
- Provide adequate training to City Departments
- Review and track SWPPP implementation
- Low Impact Development





# CABQ Storm Water Management Section Responsibilities

- Develop and provide training to developers/contractors
- Inspections of construction sites, city facilities, industrial/high risk facilities
- Quarterly storm water monitoring



# CABQ Storm Water Management Section: Recent Activities

- **2010:** Many Introductory Training Sessions Provided
- **2012:** City Facility Audits
- **2013:** City Facility Training Sessions
- **2013:** Industrial Facility Audits
- **2014:** SWPPP and SPCC Plan Development
  - Pino Yards SWPPP
  - Satellite Facilities SWPPPs (Fleet, Fire, Streets, Parks and Rec)
  - Transit SWPPPs and SPCC Plans
  - Fleet SPCC Plan
- **2015:** City and Industrial Facility Inspections
- **2015:** Updated Transit SWPPP, submit NOI under MSGP 2015; monitoring at City facilities
- **2016 (future):** Solid Waste SWPPPs

# Your Responsibilities (ALL FACILITIES)

- Identify a Storm Water Quality Coordinator
  - Conduct staff training sessions, maintain records in your SWPPP and submit records to Storm Water Management Section
  - Promptly notify Storm Water Management Section of changes in facility, operations or contact information
- Implement your Storm Water Pollution Prevention Plan (SWPPP)
  - A SWPPP is recommended for all sites to meet Good Housekeeping minimum measure
  - Implement good housekeeping and best management practices
  - Perform the required quarterly inspections
  - Transit Facilities fall under MSGP Sector P, Transportation and Warehousing
  - Solid Waste falls under MSGP Sector L, Landfills, Land Application Sites, and Open Dumps; Transfer Stations fall under Sector P

# Your Responsibilities

- Manage required documentation (inspection forms, training records, any BMP modifications to the SWPPP)
  - Facilitate Site Inspections conducted by CABQ or other entities
- Additional responsibilities for MSGP Facilities:
  - NOI Submission (Due date was Sept 2015)
  - EPA Annual Report submission (first report due Jan 2017)
  - SWPPPs to be posted online
- Make sure any deficiencies noticed during your routine inspections are corrected and documented



Source: [blogspot.com](http://blogspot.com)

# Your Responsibilities (Additional for MSGP Facilities)

- Applies to Sectors L, N and P
- SWPPPs to be posted online
- All Operators must certify the SWPPP
- Additional focus on operator's role in SWPPP compliance
  - Make sure any deficiencies noticed during your routine inspections are corrected and documented



# Your Responsibilities (Additional for MSGP Facilities)

- Applies to Sector L only
- Conduct inspections once a month of
  - Storage material/waste exposed to precipitation
  - Leachate collection and treatment systems
  - Location of waste trucks entering/exiting the site
- No discharges of storm water contacting solid waste
- Benchmark sampling and effluent limitation guidelines (ELG)



# SWPPPs and BMPs

## What is a SWPPP?

- A **Storm Water Pollution Prevention Plan** or SWPPP is a plan to minimize water quality impacts of runoff to receiving waters
- Evaluates potential pollution sources and establishes appropriate controls

## What are BMPs?

- **Best Management Practices** outline controls to minimize storm water pollution from specific sources
- The SWPPP specifies the BMPs that will be implemented at the site



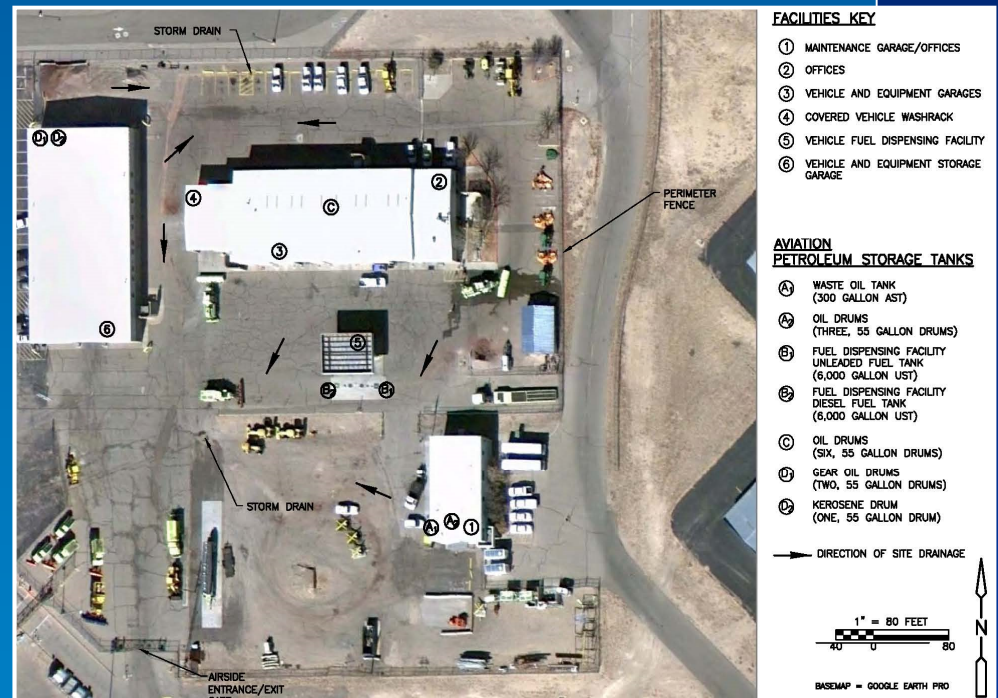
# Storm Water Pollution Prevention Plans (SWPPP)

- Facility Inventory
- Facility Assessment
- Best Management Practices
  - BMP monitoring and tracking documentation
  - BMP implementation and maintenance documentation
- Spill response plans
  - Spill response procedures
  - Safety Data Sheets (SDS)
- Training records
- Inspection, incident, and maintenance records



# Storm Water Pollution Prevention Plans (SWPPP)

- Facility Map
  - Location of storm drain inlets
  - Surface drainage patterns
  - Ponds, other drainage features, etc.
  - Location of chemical or potentially polluting materials storage
    - Include container description and volume
  - Location of spill cleanup materials



# Storm Water Pollution Prevention Plans (SWPPP)

- Inventory
  - Inventory of potential pollutants:
    - Sediment
    - Nutrients (nitrogen and phosphorous from fertilizers)
    - Bacteria (A listed impairment in the Rio Grande)
    - Oil and Grease (vehicles and equipment, restaurants, parking lots)
    - Metals (lead, zinc, cadmium, copper, nickel, chromium)
    - Organics (solvents, cleaners, sealants, paints)
    - Pesticides and herbicides
    - Gross Pollutants (trash, floatables, debris)
    - Oxygen Demanding Substances (food products, waste products, vegetative debris; A listed impairment in the Rio Grande)

# Storm Water Pollution Prevention Plans (SWPPP)

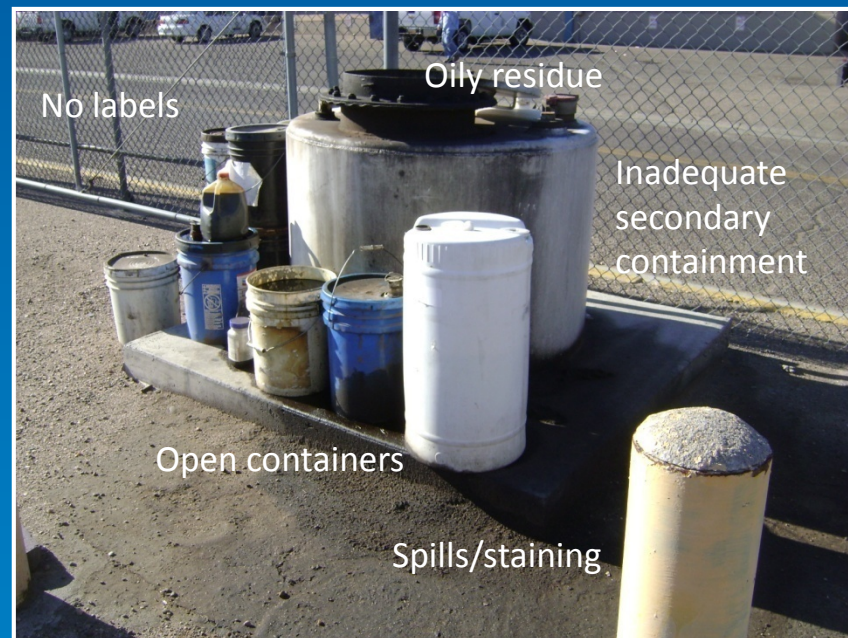
Inventory of activities that may contribute to storm water pollution:

- Vehicle/Equipment maintenance, repair, cleaning, storage, fueling and fuel storage
- Material loading/unloading and handling/storage
- Street/Sidewalk/parking lot drainage, repair, maintenance, and cleaning
- Graffiti removal
- Litter collection, control, disposal
- Solid waste collection and recycling
- Landscape, building, fountain maintenance and drainage



# Storm Water Pollution Prevention Plans (SWPPP)

- Assessment
  - What activities are you performing that have potential to cause storm water pollution?
  - Evaluate which best management practices could reduce storm water pollutant potential at your facility



# Best Management Practices

- 1.0 General City-Wide
- 2.0 Vehicle/Equipment Maintenance
- 3.0 Vehicle/ Equipment Cleaning
- 4.0 Vehicle/Equipment Storage
- 5.0 Outdoor Handling, Storage, and Disposal of Waste and Materials
- 6.0 Fuel Storage and Delivery
- 7.0 Building and Grounds Maintenance
- 8.0 Storm Water Treatment Control
- 9.0 Animal Waste

# Best Management Practices

## 1.0 General City-Wide

- Targeted Activities
  - All activities not covered by other BMPs
- Targeted Pollutants
  - Organics
  - Metals
  - Sediment
  - Anything foreign to storm water



# Best Management Practices

## 1.0 General City-Wide

- Key Approaches
  - Keep outside areas maintained
  - Store materials and equipment inside to the extent practical
  - Conduct preventative maintenance
  - Train employees/contractors in storm water pollution prevention techniques; maintain documentation
  - Conduct regular inspections
  - Document storm water pollution prevention activities
  - Maintain and post Spill Response Plans; spill kits available
  - Maintain SDSs on site



SDS Sheets in a labeled notebook.

# Best Management Practices

## 1.0 General City-Wide

- Storm Water Management Section Training
  - Today's session
  - Training materials provided for use in your Department
- Department Specific Supervisor and Staff Training
  - Annual training of ALL STAFF that handle potential storm water pollutants or perform outdoor activities
  - May use training materials provided by the Storm Water Management Section or develop your own
  - Maintain training records for **3 years**
    - Agenda
    - Sign-in sheets
    - Training assessment



# Best Management Practices

## 1.0 General Facility-Wide

- Training Topics
  - What is the SWPPP and where is it?
  - Activities covered by the SWPPP
  - Spill/leak awareness
  - Spill response procedures
  - Hazardous material storage, containment, and disposal
  - Best Management Practices
  - Conducting facility inspections
  - Non-allowable discharges (i.e. wash waters)



Straw roll installed to protect a storm drain.

# Best Management Practices

## 1.0 General Facility-Wide

- Allowable Non-Storm Water Discharges
  - Potable water
  - Lawn, landscape, irrigation water
  - Foundation and footing drains
  - Air conditioner condensate
  - Dechlorinated swimming pool discharges
  - Street washing waters (no soaps)
  - Fire fighting discharges



Irrigation water is an allowable non-storm water discharge.

# Spills Happen...Be Prepared for Cleanup



# Spills Happen...It's Expensive



- Spills are expensive to clean up!
  - Costly Clean-Up Materials
  - Labor
  - Disposal Fees
  - Hidden Administrative Costs

# Spills Happen...Contractors/Subcontractors



Spill caused by a contractor.

- Contractors / Subcontractors cause spills too!
  - Do they have appropriate clean up materials?
  - Are they trained?
  - If not, who responds for them?

# Spill Response Plans

SPILL RESPONSE PLAN

Spill Prevention

Spill Response

Emergency Contact  
Information

Material  
Inventory

Site Map

Small Spill

Large Spill

SDS

Revision  
Date

# Best Management Practices

## BMP 2.0 Vehicle/Equipment Maintenance

- Targeted Activities
  - Vehicle maintenance
  - Equipment maintenance
- Targeted Pollutants
  - Fuel
  - Oil, Grease, Lubricants
  - Solvents, Soaps, Detergents
  - Battery Acid
  - Antifreeze
  - Paint



Outdoor containers should be cleaned on a regular basis.



Secondary containment shall be provided to protect from leaks/drips.

# Best Management Practices

## BMP 2.0 Vehicle/Equipment Maintenance

- Key Approaches
  - Conduct maintenance indoors or in a covered area
  - Conduct preventative maintenance
  - Store maintenance fluids, tires, batteries, etc. appropriately
  - Use drip pans with leaky equipment
  - Drain fluids if prolonged storage is anticipated (>30 days)
  - Collect and properly dispose of all fluids



Flammable materials should be stored in well labeled flammables cabinets.



Used adsorbent should be swept and properly disposed immediately.



# Best Management Practices

## BMP 3.0 Vehicle/ Equipment Cleaning

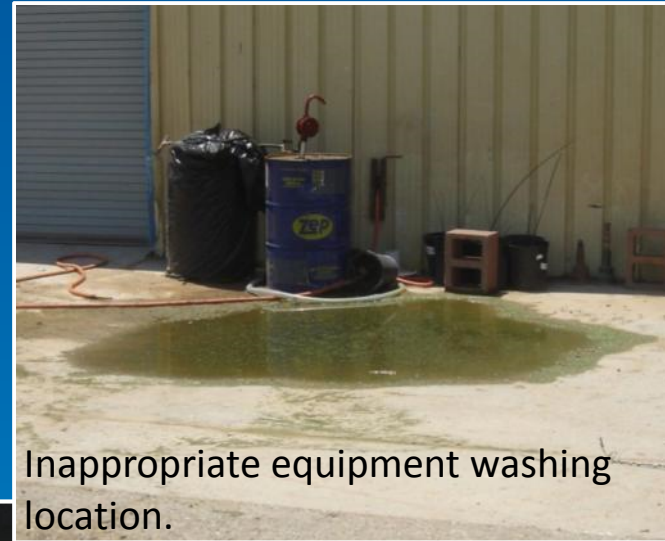
- Targeted Activities
  - Vehicle washing
  - Equipment washing
  - Equipment/parts degreasing
- Targeted Pollutants
  - Fuels
  - Oil, Grease, Lubricants
  - Solvents, Soaps, Detergents
  - Other vehicle fluids



# Best Management Practices

## BMP 3.0 Vehicle/ Equipment Cleaning

- Key Approaches
  - Use approved wash facilities draining to sanitary sewer
  - Recycle washwater or discharge appropriately
  - Maintain oil/water separators
  - Use dry washing/wiping techniques
  - Provide training
  - Dispose of soiled rags/towels appropriately



Inappropriate equipment washing location.



Oil/water separators require regular servicing.

# Best Management Practices

## BMP 4.0 Vehicle/Equipment Storage

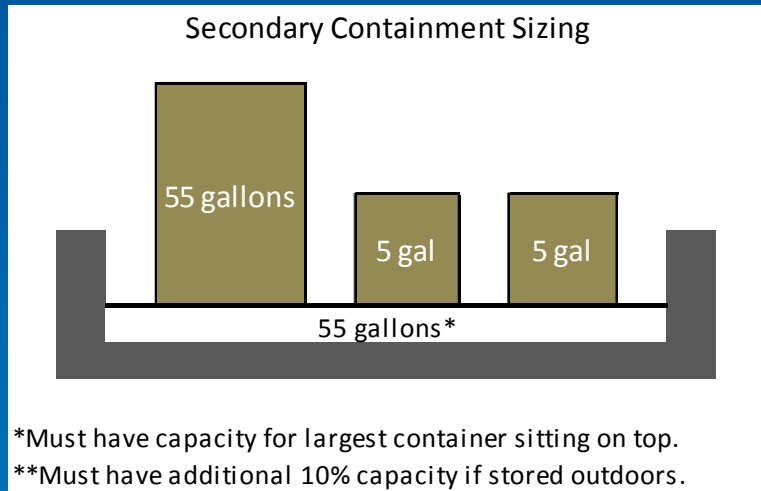
- Targeted Activities
  - Vehicle, equipment, chemical, and tire storage
- Targeted Pollutants
  - Fuels, Oils, Grease, Lubricants
  - Solvents and Soaps
  - Sidewalk/street deicers
  - Herbicides, Pesticides, Fertilizers
  - Debris
  - Tire residue and battery acid



# Best Management Practices

## BMP 4.0 Vehicle/Equipment Storage

- Key Approaches
  - Store materials indoors or under cover
  - Store drums, containers on pallets
  - Provide berms or secondary containment
  - Drain fluids before storage
  - Perform and document periodic inspections
  - Designate storage areas away from storm drains



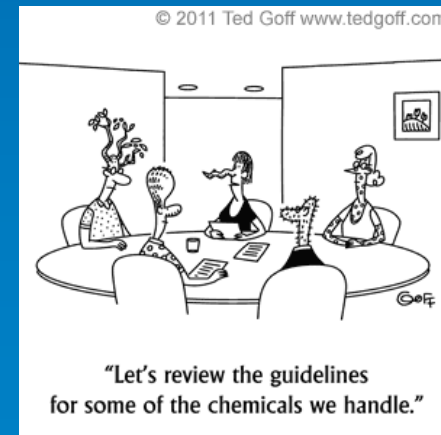
# Best Management Practices

## BMP 4.0 Vehicle/Equipment Storage

- Signage
  - Label all fluids and maintain appropriate signage
  - Label material storage areas including cabinets and lockers
  - Label Spill Kit/Cleanup Materials
  - Label SDS Book so it is easily identified



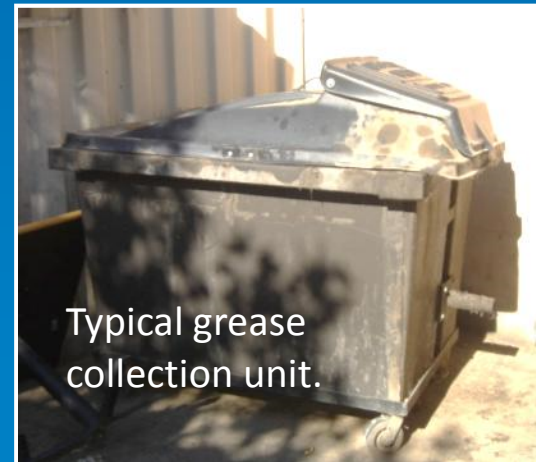
Good use of signage and secondary containment.



# Best Management Practices

## BMP 5.0 Outdoor Handling, Storage, and Disposal of Waste and Materials

- Targeted Activities
  - Disposal of spent maintenance fluids
  - Garbage/recyclables collection
  - Grease collection
- Targeted Pollutants
  - Solid waste
  - Fuels, Oils, Grease
  - Solvents
  - Soaps, Detergents
  - Pesticides
  - Battery acid



# Best Management Practices

## BMP 5.0 Outdoor Handling, Storage, and Disposal of Waste and Materials

- Key Approaches

- Conduct loading and unloading under cover
- Store materials indoors or under cover
- Store empty drums, containers, tires on pallets
- Transfer materials in paved areas, away from storm drain inlets
- Contain and absorb leaks/spills that occur during material transfer
- Provide berms or secondary containment
- Perform and document periodic inspections
- Check loading equipment regularly for leaks

Dumpsters should **always** have plugs in place.



No

Yes



# Best Management Practices

## BMP 6.0 Fuel Storage and Delivery

- Targeted Activities
  - Vehicle, and equipment fueling
  - Fuel Storage
- Targeted Pollutants
  - Petroleum hydrocarbons



Drain mats should be available to block storm drains.





# Best Management Practices

## BMP 6.0 Fuel Storage and Delivery

- Key Approaches
  - Following established procedures
  - Fueling by trained staff
  - Use absorbents or vacuum equipment for spills
  - Keep drain covers on hand during fueling activities



Fuels should be stored in flammables cabinets.

# Best Management Practices

## BMP 7.0 Building and Grounds Maintenance

- Targeted Activities
  - Building and grounds maintenance
  - Building/Pavement wash down
  - Parking area maintenance
  - Graffiti removal
  - Sidewalk, plaza sweeping
- Targeted Pollutants
  - Pesticides, herbicides, fertilizers, sediment, landscape waste, oil and grease, urea/salt for pavement anti-icing



# Best Management Practices

## BMP 7.0 Building and Grounds Maintenance

- Key Approaches
  - Pesticides, herbicides, and fertilizers
    - Limit use, pull weeds instead
    - Follow manufacturer's instructions
  - Landscaping
    - Contain and dispose of all wastes
    - Keep paved surfaces cleaned and swept
    - Eliminate pavement wash down
  - Salt
    - Keep salt storage areas appropriately covered
    - Sweep up undissolved salt

Label chemical storage areas appropriately.



Cover salt storage areas.

# Best Management Practices

## BMP 7.0 Building and Grounds Maintenance

- Key Approaches
  - Buildings
    - Eliminate building wash down
    - Dispose of mop water/scrubber water into sanitary sewer
    - Service oil/water separators regularly
  - Parking Lots
    - Implement impervious parking areas or vegetative swales where practical
    - Clean parking lots (using dry methods) and storage areas regularly
    - Provide sufficient litter receptacles
    - Clean storm drain inlets regularly



Always dispose of mop water to the sanitary sewer and **NOT** the storm drain.

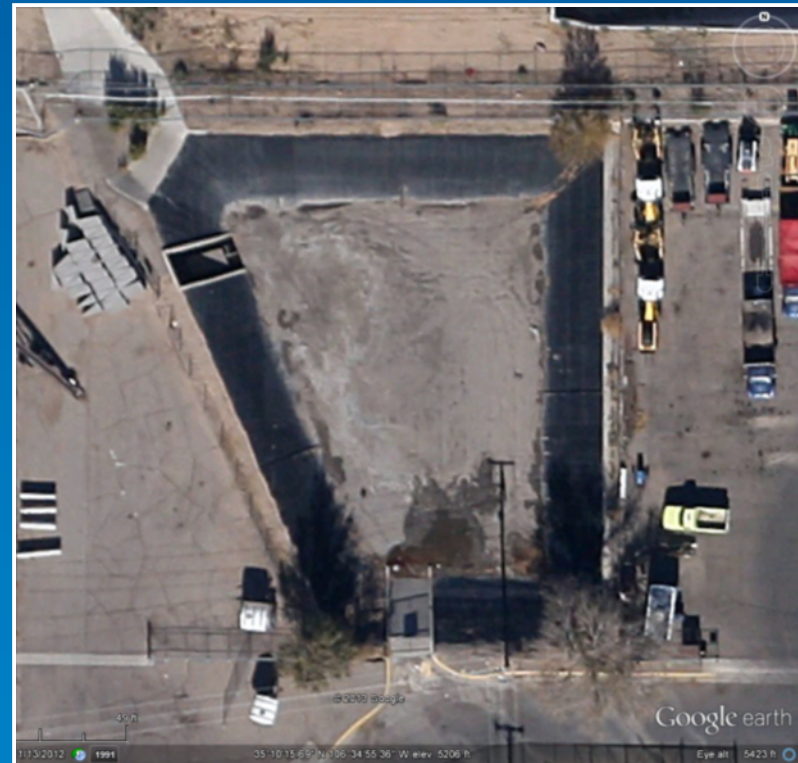


Drip pans and preventative maintenance shall be considered for oily equipment.

# Best Management Practices

## BMP 8.0 Storm Water Treatment Control

- Targeted Activities
  - Construction and maintenance of storm water treatment and control structures
    - Detention/retention ponds
    - Storm drain inlets
    - Infiltration trench
    - Swales, ditches, buffer strips
- Targeted Pollutants
  - Sediment
  - Nutrients, Organics
  - Trash, Debris
  - Bacteria
  - Oils and grease



Storm water detention pond at Pino Yards.

# Best Management Practices

## BMP 8.0 Storm Water Treatment Control

- Key Approaches
  - Inspect storm water inlets, swales, ponds regularly and after large storm events
  - Limit grass height, manage weeds
  - Remove trash, debris, sediment regularly
  - Minimize erosion with ground cover, rip rap, or concrete
  - Irrigation may be required to maintain ground cover
  - Minimize fertilizer/herbicide use
  - Unclog underdrain, outlets



Concrete storm water swale with riprap and vegetated side slopes.



Detention pond with raised outlet.

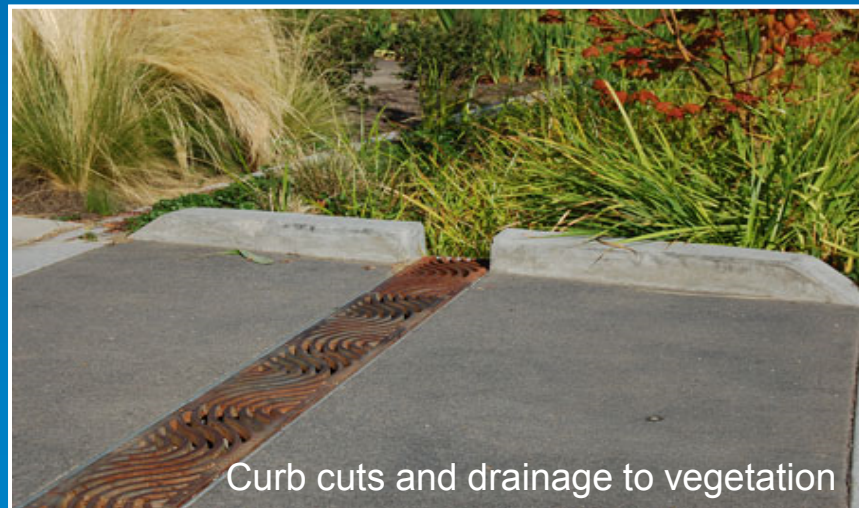
# Best Management Practices

## BMP 8.0 Storm Water Treatment Control

- Key Approaches
  - Low Impact Development in New Construction
    - Bioretention (swales, vegetated strips, open space, etc.)
- Reduce paved surfaces
- Permeable Pavement
- Storm water cisterns for storm water reuse
- Curb cuts and drainage into vegetated areas



Storm water cistern



Curb cuts and drainage to vegetation

# Best Management Practices

## BMP 9.0 Animal Waste

- Targeted Activities
  - Prevent animal waste from contacting storm water
    - Consumes oxygen in receiving water
    - Releases ammonia
    - Introduces *E. coli* and other bacteria/pathogens
    - Increase of nutrients
- Targeted Pollutants
  - Nutrients
  - Organics
  - Bacteria

**Fun Fact:**  
Just one ounce of  
dog feces contains



23 million  
microorganisms of  
bacteria. More than  
twice that of human  
waste.

Source: City of Lakeland, TN Website

[www.toonjamstudio.com](http://www.toonjamstudio.com)



# Best Management Practices

## BMP 9.0 Animal Waste

- Key Approaches
  - Sweep and clean animal handling areas regularly
  - Properly dispose of animal waste, uneaten food, and other potential pollutants
  - Wash animals in areas draining to the sanitary sewer
  - House animals in paved, covered areas if possible (use mulch if not paved)



Collection of animal bedding and waste.



Collection of pet stall wash water for disposal to sanitary sewer.

# Best Management Practices

## BMP 9.0 Animal Waste

- Key Approaches
  - Dispose of animal housing wash water to the sanitary sewer
  - Use rags, damp mops, adsorbents to clean spills
  - Dispose of spill cleanup materials properly



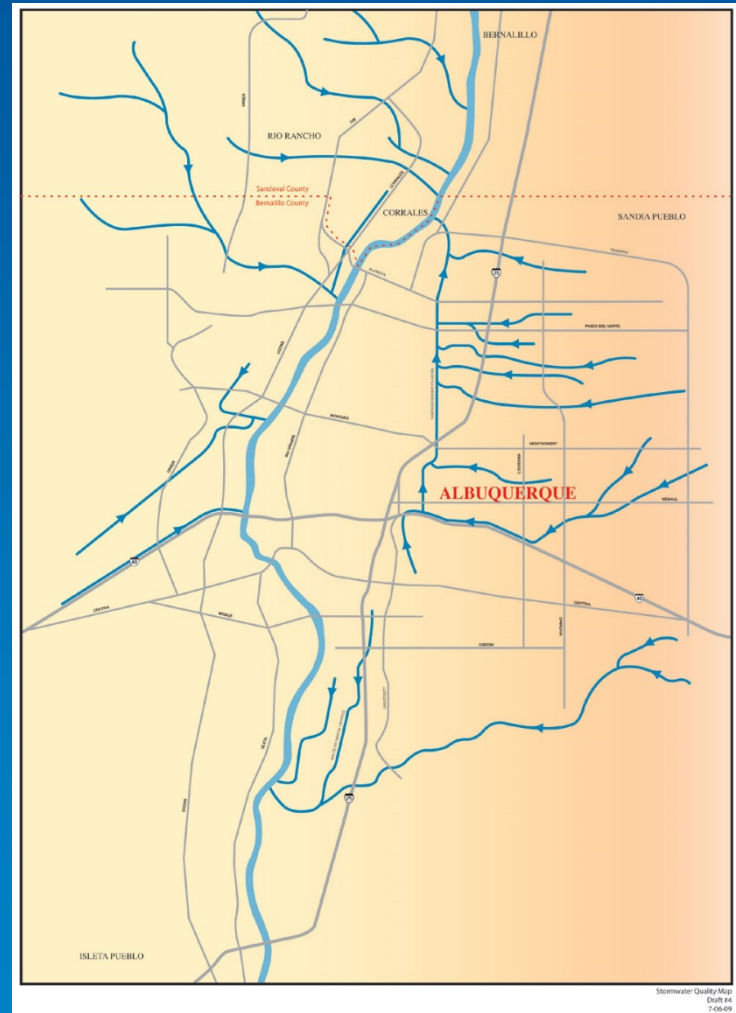
One of many CABQ dog parks.



Flamingos at the CABQ BioPark.

# Summary

- Assign a Storm Water Quality Coordinator
- Implement SWPPP & BMPs appropriate for the facility
- Conduct annual storm water pollution prevention training for employees and submit annual training records to Storm Water Management Section
- Develop and post Spill Response Plans with emergency contacts
- Have appropriate quantity of spill response materials on hand
- Conduct quarterly facility inspections
- Maintain required documentation (SWPPP, eNOI, training records, inspection forms) and submit copies to the Storm Water Management Section



# SWPPP Contact Information

- **City of Albuquerque Storm Drainage Design**
  - Kevin Daggett, P.E., Manager
    - (505) 768-2778; KDaggett@cabq.gov
  - Kathy Verhage, P.E., Senior Engineer
    - (505) 768-3654; KVerhage@cabq.gov
  - Shellie Eaton, P.E., Senior Engineer
    - (505) 768-2774; SEaton@cabq.gov
- **CDM Smith**
  - Kelly Collins, C.P.G., BCES
    - (505) 243-3200, CollinsKA@cdmsmith.com
  - Sarah Tuite, P.E.
    - (505) 243-3200; TuiteSC@cdmsmith.com
  - Rochelle Larson, P.E.
    - (505) 243-3200; LarsonRL@cdmsmith.com

# Training Assessment

You have approximately 5 minutes to complete the 10 question training assessment.

The assessment was developed to gain an understanding of the effectiveness of the training program.

The training assessment is the last page of your training handout.

# Question 1

\_\_\_\_\_ results when rain or snow melt accumulates on the ground surface faster than it can infiltrate, coalescing in drainage features (ditches, drains, or arroyos) and flowing to a receiving water without treatment.

- a) Flooding
- b) Infiltration
- c) Storm water
- d) All of the above

## Question 2

Sources of storm water pollution include:

- a) Used oil
- b) Wash water
- c) Herbicides
- d) All of the above

## Question 3

The following component is not required to be included in your facility SWPPP:

- a) Inventory of potential storm water pollutants
- b) Facility drainage map
- c) SDS sheets
- d) Employee training records
- e) Best Management Practices



## Question 4

At a minimum, storm water inspections should be conducted at your facility \_\_\_\_\_.

- a) Monthly
- b) Quarterly
- c) Bi-Annually
- d) During every rain event
- e) All of the above

## Question 5

Best Management Practices are developed for the following purposes:

- a) To meet the requirement of the MS4 permit
- b) To assist in minimizing storm water pollution by implementing both physical and non-physical controls
- c) Prevent storm water from reaching navigable waters
- d) Encourage each department to perform training

## Question 6

Under the MS4 Permit, the City is required to ensure good housekeeping at City facilities by:

- a) Employee training
- b) Routine inspections
- c) Development and implementation of a SWPPP
- d) All of the above

## Question 7

The best storage of an outdoor 55-gallon oil drum includes:

- a) Cover and secondary containment
- b) Cover only
- c) Secondary containment only
- d) Cover and wood pallet

## Question 8

You should dispose washwater from vehicle washing, equipment washing, and mop water into:

- a) Sanitary sewer drain
- b) Oil/water separator with sewer connection
- c) Allow to dry on paved surface
- d) Storm drain
- e) a or b

## Question 9

At your facility, the following documentation should be available for review:

- a) SWPPP/BMPs
- b) Training records
- c) Spill Response Plan
- d) All of the above

# Question 10

Spill response plans should be posted:

- a) Where fuel is stored and used
- b) In the main office near a telephone
- c) In all areas where hazardous materials are used or stored
- d) In the break room

Questions?

**To receive credit for attending  
today's session, please turn in  
your completed assessment on  
your way out.**

**Thank you!**



Name (please print) \_\_\_\_\_ Department \_\_\_\_\_  
Date \_\_\_\_\_

**City of Albuquerque Storm Water Management Section  
Storm Water Training Assessment  
January 2016**

**Please completely fill in the circle of the best answer.**

**Question 1:** \_\_\_\_\_ results when rain or snow melt accumulates on the ground surface faster than it can infiltrate, coalescing in drainage features (ditches, drains, or arroyos) and flowing to a receiving water without treatment.

- a)  Flooding
- b)  Infiltration
- c)  Storm water
- d)  All of the above

**Question 2:** Sources of storm water pollution include:

- a)  Used oil
- b)  Wash water
- c)  Herbicides
- d)  All of the above

**Question 3:** The following component is not required to be included in your facility SWPPP:

- a)  Inventory of potential storm water pollutants
- b)  Facility drainage map
- c)  SDS sheets
- d)  Employee training records
- e)  Best Management Practices

**Question 4:** At a minimum, storm water inspections should be conducted at your facility \_\_\_\_\_.

- a)  Monthly
- b)  Quarterly
- c)  Bi-Annually
- d)  During every rain event

**Question 5:** Best Management Practices are developed for the following purposes:

- a)  To meet the requirement of the MS4 permit
- b)  To assist in minimizing storm water pollution by implementing both physical and non-physical controls
- c)  Prevent storm water from reaching navigable waters
- d)  Encourage each department to perform training

Name (please print) \_\_\_\_\_ Department \_\_\_\_\_  
Date \_\_\_\_\_

**Question 6:** Under the MS4 Permit, the City is required to ensure good housekeeping at City facilities by:

- a)  Employee training
- b)  Routine inspections
- c)  Development and implementation of a SWPPP
- d)  All of the above

**Question 7:** The best storage of an outdoor 55-gallon oil drum includes:

- a)  Cover and secondary containment
- b)  Cover only
- c)  Secondary containment only
- d)  Cover and wood pallet

**Question 8:** You should dispose washwater from vehicle washing, equipment washing, and mop water into:

- a)  Sanitary sewer drain
- b)  Oil/water separator with sewer connection
- c)  Allow to dry on paved surface
- d)  Storm drain
- e)  a or b

**Question 9:** At your facility, the following documentation should be available for review:

- a)  SWPPP
- b)  BMPs
- c)  Spill Response Plan
- d)  All of the above

**Question 10:** Spill response plans should be posted:

- a)  Where fuel is stored and used
- b)  In the main office near a telephone
- c)  In all areas where hazardous materials are used or stored
- d)  In the break room

## **APPENDIX I: SUPPORTING DOCUMENTS FOR INDUSTRIAL AND HIGH RISK RUNOFF PROGRAM**

| <b>No.</b> | <b>Description</b>               |
|------------|----------------------------------|
| I-1        | Industrial facilities and basins |

## **APPENDIX I-1**

Industrial Facilities within COA MS4 Boundary

| Name                          | Zip        | Drainage Basin          |
|-------------------------------|------------|-------------------------|
| A JUNK YARD                   | 87107-1421 | ALAMEDA RIVERSIDE DRAIN |
| A RELIABLE ENGINE REBUILDERS  | 87102-1137 | ALAMEDA RIVERSIDE DRAIN |
| AAAA SMART START ALBUQUERQUE  | 87107-4041 | ALAMEDA RIVERSIDE DRAIN |
| ABSOLUTE POWDER COATING       | 87107-1834 | ALAMEDA RIVERSIDE DRAIN |
| ACADEMY PRINTERS              | 87107-1834 | ALAMEDA RIVERSIDE DRAIN |
| ACME IRON & METAL CO INC      | 87197-6605 | ALAMEDA RIVERSIDE DRAIN |
| ACTION SIGNS BY STUBBLEFIELD  | 87102-1064 | ALAMEDA RIVERSIDE DRAIN |
| ACTIVE INTERLOCK              | 87107-1800 | ALAMEDA RIVERSIDE DRAIN |
| ADDS CORP                     | 87107-2013 | ALAMEDA RIVERSIDE DRAIN |
| A-INTERLOCK                   | 87107-4906 | ALAMEDA RIVERSIDE DRAIN |
| A-INTERLOCK                   | 87107-5083 | ALAMEDA RIVERSIDE DRAIN |
| ALBUQUERQUE BOAT & RV STORAGE | 87114-1020 | ALAMEDA RIVERSIDE DRAIN |
| ALBUQUERQUE FENCE INC         | 87125-6868 | ALAMEDA RIVERSIDE DRAIN |
| ALBUQUERQUE PRINT BROKER      | 87107-5032 | ALAMEDA RIVERSIDE DRAIN |
| ALBUQUERQUE WINWATER WORKS CO | 87107-1752 | ALAMEDA RIVERSIDE DRAIN |
| ALL AROUND SIGNS              | 87107-1846 | ALAMEDA RIVERSIDE DRAIN |
| ALLEGRA PRINT & IMAGING       | 87107-4022 | ALAMEDA RIVERSIDE DRAIN |
| AMADOR PUBLISHERS             | 87107-5117 | ALAMEDA RIVERSIDE DRAIN |
| APODACA EARTH MOVING INC      | 87107-4120 | ALAMEDA RIVERSIDE DRAIN |
| ART WORX 4U LLC               | 87107-1362 | ALAMEDA RIVERSIDE DRAIN |
| ARTISTIC IRONWORKS            | 87107-4025 | ALAMEDA RIVERSIDE DRAIN |
| ASPEN PRINTING CO             | 87107-4720 | ALAMEDA RIVERSIDE DRAIN |
| B & D MFG CO                  | 87107-1806 | ALAMEDA RIVERSIDE DRAIN |
| B & D MFG CO                  | 87107-2108 | ALAMEDA RIVERSIDE DRAIN |
| BACKERWORKS MANUFACTURING     | 87107-1930 | ALAMEDA RIVERSIDE DRAIN |
| BAKER UTILITY SUPPLY          | 87107-4207 | ALAMEDA RIVERSIDE DRAIN |
| BARE BONES GRAPHICS           | 87107-1934 | ALAMEDA RIVERSIDE DRAIN |
| BASIC DENTAL IMPLANTS INC     | 87107-2001 | ALAMEDA RIVERSIDE DRAIN |
| BATESVILLE CASKET CO          | 87107-1624 | ALAMEDA RIVERSIDE DRAIN |
| BCT INC                       | 87107-4629 | ALAMEDA RIVERSIDE DRAIN |
| BOGUE MACHINE CO INC          | 87113-1201 | ALAMEDA RIVERSIDE DRAIN |
| BOLT CO OF NM                 | 87107-1714 | ALAMEDA RIVERSIDE DRAIN |
| BOSTON BRASS INC              | 87107-2762 | ALAMEDA RIVERSIDE DRAIN |
| BUDGET INTERLOCK              | 87107-1807 | ALAMEDA RIVERSIDE DRAIN |
| BWS ENTERPRISES ART & SIGNS   | 87107-3108 | ALAMEDA RIVERSIDE DRAIN |
| CENTURY SIGN BUILDERS         | 87102-1113 | ALAMEDA RIVERSIDE DRAIN |
| CHILDERS MACHINE & WELDING    | 87102-1068 | ALAMEDA RIVERSIDE DRAIN |
| CLARK TRUCK EQUIPMENT CO      | 87107-2262 | ALAMEDA RIVERSIDE DRAIN |
| COLLECTOR'S GUIDE             | 87107-2004 | ALAMEDA RIVERSIDE DRAIN |
| COTTONWOOD PRINTING CO        | 87113-1001 | ALAMEDA RIVERSIDE DRAIN |
| COUGAR PUBLISHING             | 87107-3464 | ALAMEDA RIVERSIDE DRAIN |
| COVENANT PRINTING             | 87107-4748 | ALAMEDA RIVERSIDE DRAIN |
| CRAFTSMAN SIGN CO             | 87107-5061 | ALAMEDA RIVERSIDE DRAIN |

Industrial Facilities within COA MS4 Boundary

| Name                           | Zip        | Drainage Basin          |
|--------------------------------|------------|-------------------------|
| CREGO BLOCK CO                 | 87107-5902 | ALAMEDA RIVERSIDE DRAIN |
| CUSTOM METAL PRODUCTS          | 87107-1868 | ALAMEDA RIVERSIDE DRAIN |
| D & H WILD GAME & CUSTOM       | 87107-3902 | ALAMEDA RIVERSIDE DRAIN |
| D & M MARINE                   | 87107-1745 | ALAMEDA RIVERSIDE DRAIN |
| DANLIN PRODUCTS                | 87107-2001 | ALAMEDA RIVERSIDE DRAIN |
| DEL SOL PUBLISHING             | 87107-3404 | ALAMEDA RIVERSIDE DRAIN |
| DENCO SALES CO                 | 87102-1115 | ALAMEDA RIVERSIDE DRAIN |
| DESERT MACHINE                 | 87107-5913 | ALAMEDA RIVERSIDE DRAIN |
| DESERT PAPER & ENVELOPE CO     | 87107-1860 | ALAMEDA RIVERSIDE DRAIN |
| DIAMOND PRESS INC              | 87107-1517 | ALAMEDA RIVERSIDE DRAIN |
| DJOPAR INDUSTRIES INC          | 87114-2293 | ALAMEDA RIVERSIDE DRAIN |
| DO PASO CORP                   | 87107-2048 | ALAMEDA RIVERSIDE DRAIN |
| DREAM SCAPES-FINE ART & MURALS | 87107-3336 | ALAMEDA RIVERSIDE DRAIN |
| DRIVE TRAIN INDUSTRIES         | 87102-1119 | ALAMEDA RIVERSIDE DRAIN |
| DURHAM SCHOOL SVC              | 87107-1823 | ALAMEDA RIVERSIDE DRAIN |
| EL PASO-LOS ANGELES LIMO EXP   | 87107-1643 | ALAMEDA RIVERSIDE DRAIN |
| EMAYA PUBLISHING               | 87107-2200 | ALAMEDA RIVERSIDE DRAIN |
| ENGINE & PERFORMANCE WAREHOUSE | 87107-2226 | ALAMEDA RIVERSIDE DRAIN |
| ERNIE'S ORNAMENTAL IRON WORKS  | 87107-2060 | ALAMEDA RIVERSIDE DRAIN |
| ETCHED GLASS DESIGNS           | 87107-4940 | ALAMEDA RIVERSIDE DRAIN |
| EXCEL PRESS                    | 87107-1711 | ALAMEDA RIVERSIDE DRAIN |
| F & S IRON WORKS LLC           | 87107-2321 | ALAMEDA RIVERSIDE DRAIN |
| FACTORY EDGE                   | 87107-1625 | ALAMEDA RIVERSIDE DRAIN |
| FIREWHEEL CASTING              | 87107-2020 | ALAMEDA RIVERSIDE DRAIN |
| FIRST IMPRESSION INC           | 87107-1928 | ALAMEDA RIVERSIDE DRAIN |
| FMH MATERIAL HANDLING          | 87107-2031 | ALAMEDA RIVERSIDE DRAIN |
| FORMULAB                       | 87107-2110 | ALAMEDA RIVERSIDE DRAIN |
| FORNEY WELDING INC             | 87102-1143 | ALAMEDA RIVERSIDE DRAIN |
| G T SPECIALTIES                | 87107-1517 | ALAMEDA RIVERSIDE DRAIN |
| GAMMON ENTERPRISES-MERCER      | 87107-1749 | ALAMEDA RIVERSIDE DRAIN |
| GEORGIA-PACIFIC CORP           | 87107-2229 | ALAMEDA RIVERSIDE DRAIN |
| GLAZTECH INDUSTRIES            | 87113-1432 | ALAMEDA RIVERSIDE DRAIN |
| GOLDEN EAGLE DESIGN            | 87107-1829 | ALAMEDA RIVERSIDE DRAIN |
| GREETINGS ETC INC              | 87102-1121 | ALAMEDA RIVERSIDE DRAIN |
| GTMO MOLDING                   | 87107-2248 | ALAMEDA RIVERSIDE DRAIN |
| H PRINTING                     | 87107-1739 | ALAMEDA RIVERSIDE DRAIN |
| HIGHWAY SUPPLY LLC             | 87113-1044 | ALAMEDA RIVERSIDE DRAIN |
| HILL-ROM                       | 87107-1628 | ALAMEDA RIVERSIDE DRAIN |
| HOBART                         | 87107-1663 | ALAMEDA RIVERSIDE DRAIN |
| ILVICINO BREWING CO            | 87107-4207 | ALAMEDA RIVERSIDE DRAIN |
| IMAGE RESOURCES INC            | 87113-1385 | ALAMEDA RIVERSIDE DRAIN |
| IMPROVE GROUP                  | 87107-4750 | ALAMEDA RIVERSIDE DRAIN |
| INK & IMAGES INC               | 87104-3090 | ALAMEDA RIVERSIDE DRAIN |

Industrial Facilities within COA MS4 Boundary

| Name                          | Zip        | Drainage Basin          |
|-------------------------------|------------|-------------------------|
| INNOVASIC SEMICONDUCTOR       | 87107-4237 | ALAMEDA RIVERSIDE DRAIN |
| ITSA ITALIAN ICE              | 87197-6864 | ALAMEDA RIVERSIDE DRAIN |
| IVB CANTEEN                   | 87107-4207 | ALAMEDA RIVERSIDE DRAIN |
| JB GRAPHICS                   | 87107-6727 | ALAMEDA RIVERSIDE DRAIN |
| JULE-ART INC                  | 87107-2117 | ALAMEDA RIVERSIDE DRAIN |
| KAEHR CORP                    | 87107-2118 | ALAMEDA RIVERSIDE DRAIN |
| KEY VISION MEDIA              | 87107-1504 | ALAMEDA RIVERSIDE DRAIN |
| KLEENRITE CHEMICAL INC        | 87107-1838 | ALAMEDA RIVERSIDE DRAIN |
| L & L ELECTRONICS             | 87107-1663 | ALAMEDA RIVERSIDE DRAIN |
| LA CUMBRE BREWING CO          | 87107-1930 | ALAMEDA RIVERSIDE DRAIN |
| LOREN KAHN PUPPET THEATRE     | 87107-3369 | ALAMEDA RIVERSIDE DRAIN |
| LOS RANCHOS FENCE             | 87107-5917 | ALAMEDA RIVERSIDE DRAIN |
| M & J SIGN CO                 | 87190-0205 | ALAMEDA RIVERSIDE DRAIN |
| M & M INDUSTRIES INC          | 87199-0473 | ALAMEDA RIVERSIDE DRAIN |
| MACY METAL FABRICATION        | 87004-1071 | ALAMEDA RIVERSIDE DRAIN |
| MANUFACTURING                 | 87107-1930 | ALAMEDA RIVERSIDE DRAIN |
| MANUFACTURING CONSULTING DSGN | 87114-2293 | ALAMEDA RIVERSIDE DRAIN |
| MECHANICAL SERVICES           | 87107-4126 | ALAMEDA RIVERSIDE DRAIN |
| METRO SIGN & LIGHTING         | 87107-6045 | ALAMEDA RIVERSIDE DRAIN |
| MIDTOWN METAL                 | 87107-2001 | ALAMEDA RIVERSIDE DRAIN |
| MONOLITH PRINTING             | 87107-1804 | ALAMEDA RIVERSIDE DRAIN |
| MOUNTAIN TOP TEES             | 87107-2103 | ALAMEDA RIVERSIDE DRAIN |
| NEW MEXICO AIR FILTER         | 87107-1555 | ALAMEDA RIVERSIDE DRAIN |
| NEW MEXICO EARTH              | 87184-0506 | ALAMEDA RIVERSIDE DRAIN |
| NEW MEXICO PRODUCTS INC       | 87113-1020 | ALAMEDA RIVERSIDE DRAIN |
| NEW MEXICO SCHOOL PRODUCTS    | 87103-2126 | ALAMEDA RIVERSIDE DRAIN |
| NOOR MANUFACTURING CO INC     | 87107-5069 | ALAMEDA RIVERSIDE DRAIN |
| NORTHERN FACTORY SALES        | 87107-2273 | ALAMEDA RIVERSIDE DRAIN |
| O C METAL SOLUTIONS           | 87107-1214 | ALAMEDA RIVERSIDE DRAIN |
| P & M CABINETS & TECHLINE     | 87199-0817 | ALAMEDA RIVERSIDE DRAIN |
| P & M TECHLINE                | 87107-2232 | ALAMEDA RIVERSIDE DRAIN |
| P P G INDUSTRIES INC          | 87107-4756 | ALAMEDA RIVERSIDE DRAIN |
| PACHECO TRUCKING INC          | 87184-0339 | ALAMEDA RIVERSIDE DRAIN |
| PAINT SHOP                    | 87107-2118 | ALAMEDA RIVERSIDE DRAIN |
| PEPSI BOTTLING GROUP          | 87107-1722 | ALAMEDA RIVERSIDE DRAIN |
| PEPSI-COLA BOTTLING CO        | 87107-1782 | ALAMEDA RIVERSIDE DRAIN |
| PRESAILEDPARTS                | 87107-3426 | ALAMEDA RIVERSIDE DRAIN |
| PRINT MART INC                | 87107-1804 | ALAMEDA RIVERSIDE DRAIN |
| PUBLISHERS CIRCULATION        | 87107-4206 | ALAMEDA RIVERSIDE DRAIN |
| R & L CARRIERS INC            | 87107-4210 | ALAMEDA RIVERSIDE DRAIN |
| RAMBLIN WOOD                  | 87107-2023 | ALAMEDA RIVERSIDE DRAIN |
| RAUPAGH MACHINE TOOL          | 87102-1059 | ALAMEDA RIVERSIDE DRAIN |
| RED HAWK                      | 87107-1751 | ALAMEDA RIVERSIDE DRAIN |

Industrial Facilities within COA MS4 Boundary

| Name                           | Zip        | Drainage Basin          |
|--------------------------------|------------|-------------------------|
| REYNALDO RIVERA SCULPTOR INC   | 87107-2805 | ALAMEDA RIVERSIDE DRAIN |
| RICCOBENE PATIO PAVERS         | 87107-5069 | ALAMEDA RIVERSIDE DRAIN |
| RTO CENTER                     | 87113-1416 | ALAMEDA RIVERSIDE DRAIN |
| SCIENTIFIC GLASS CO LTD        | 87191-6102 | ALAMEDA RIVERSIDE DRAIN |
| SCREEN IMAGES INC              | 87107-2202 | ALAMEDA RIVERSIDE DRAIN |
| SIEVERT MANUFACTURING          | 87107-5941 | ALAMEDA RIVERSIDE DRAIN |
| SIGN ART OF NEW MEXICO INC     | 87107-2265 | ALAMEDA RIVERSIDE DRAIN |
| SIGNPLEX                       | 87107-4128 | ALAMEDA RIVERSIDE DRAIN |
| SILVER CLOUD INC               | 87107-2014 | ALAMEDA RIVERSIDE DRAIN |
| SILVER DRAGON INDUSTRIES       | 87107-2709 | ALAMEDA RIVERSIDE DRAIN |
| SIMPLY ONE STOP                | 87107-1736 | ALAMEDA RIVERSIDE DRAIN |
| SOUTHWEST CUSTOM ACRYLICS      | 87107-1810 | ALAMEDA RIVERSIDE DRAIN |
| SOUTHWEST FIREPROOFING PRODUCT | 87107-4149 | ALAMEDA RIVERSIDE DRAIN |
| SOUTHWEST NATIVE GRAPHICS      | 87107-2064 | ALAMEDA RIVERSIDE DRAIN |
| SOUTHWEST OUTDOOR ELECTRIC INC | 87107-2112 | ALAMEDA RIVERSIDE DRAIN |
| SUMMIT TRADE BINDERY           | 87107-1801 | ALAMEDA RIVERSIDE DRAIN |
| SUN VALLEY FRUIT CO            | 87107-6769 | ALAMEDA RIVERSIDE DRAIN |
| SYMMETRICS INC                 | 87107-2215 | ALAMEDA RIVERSIDE DRAIN |
| TANDY LEATHER FACTORY          | 87107-2037 | ALAMEDA RIVERSIDE DRAIN |
| THETA PLATE                    | 87107-2014 | ALAMEDA RIVERSIDE DRAIN |
| THUNDERBIRD SUPPLY CO          | 87107-1827 | ALAMEDA RIVERSIDE DRAIN |
| TRADE PRINTING INC FOIL STMPNG | 87107-2064 | ALAMEDA RIVERSIDE DRAIN |
| UNIQUE SERVICES INC            | 87107-1935 | ALAMEDA RIVERSIDE DRAIN |
| US GLOVE                       | 87114-2222 | ALAMEDA RIVERSIDE DRAIN |
| UTILITY BLOCK CO INC           | 87197-6036 | ALAMEDA RIVERSIDE DRAIN |
| VBS MANUFACTURING INC          | 87113-1432 | ALAMEDA RIVERSIDE DRAIN |
| WESTERN MFG & SUPPLY CO INC    | 87102-1117 | ALAMEDA RIVERSIDE DRAIN |
| WESTERN SPORTS PUBLISHING      | 87107-1815 | ALAMEDA RIVERSIDE DRAIN |
| WHISPERING FRAGRANCE           | 87104-1815 | ALAMEDA RIVERSIDE DRAIN |
| WOOD MOULDING SPECIALTIES INC  | 87199-0908 | ALAMEDA RIVERSIDE DRAIN |
| YOURPOST                       | 87107-3135 | ALAMEDA RIVERSIDE DRAIN |
| ZEP MANUFACTURING              | 87107-1936 | ALAMEDA RIVERSIDE DRAIN |
| A & Z SPA SVC                  | 87121-6704 | AMOLE HUBBELL           |
| AAA INDUSTRY & DMSTC SEWING    | 87121-8208 | AMOLE HUBBELL           |
| AEROSPACE COMPOSITE STRUCTURES | 87121-2002 | AMOLE HUBBELL           |
| ALPHA LAB SUPPLY               | 87121-2596 | AMOLE HUBBELL           |
| AUTHENTIC NEW MEXICAN          | 87121-2002 | AMOLE HUBBELL           |
| BEAD INDULGENCES               | 87121-3649 | AMOLE HUBBELL           |
| BETTER SNACKS TINGLEY FAI      | 87121-5022 | AMOLE HUBBELL           |
| BUNZL DISTRIBUTION             | 87121-7222 | AMOLE HUBBELL           |
| COCA-COLA BOTTLING CO          | 87121-1921 | AMOLE HUBBELL           |
| COCA-COLA REFRESHMENT          | 87121-1921 | AMOLE HUBBELL           |
| HANDS UP                       | 87121-7044 | AMOLE HUBBELL           |



Industrial Facilities within COA MS4 Boundary

| Name                          | Zip        | Drainage Basin     |
|-------------------------------|------------|--------------------|
| HAYES TRUCKING                | 87121-7705 | AMOLE HUBBELL      |
| INFINITY PRO HOUSE RECORDS    | 87121-6454 | AMOLE HUBBELL      |
| LETTER PRESS SVC INC          | 87121-8459 | AMOLE HUBBELL      |
| LONGUST DISTRIBUTING          | 87121-8786 | AMOLE HUBBELL      |
| M J                           | 87121-8619 | AMOLE HUBBELL      |
| MANUFACTURED HOUSING          | 87121-7701 | AMOLE HUBBELL      |
| NAKAI TRADING CO              | 87121-2102 | AMOLE HUBBELL      |
| PRADO STEEL RULE DIE LLC      | 87121-8462 | AMOLE HUBBELL      |
| PRINT SOURCE UNLIMITED        | 87121-8106 | AMOLE HUBBELL      |
| RIO GRANDE                    | 87121-1962 | AMOLE HUBBELL      |
| SALVADOR FREIGHT BROKERAGE    | 87121-2021 | AMOLE HUBBELL      |
| SHAW INDUSTRIES INC           | 87121-2062 | AMOLE HUBBELL      |
| SONIC MILL                    | 87121-1962 | AMOLE HUBBELL      |
| SOUTHWEST GLASS & GLAZING INC | 87121-1925 | AMOLE HUBBELL      |
| SPANISH HISTORY PUBLICATIONS  | 87121-5267 | AMOLE HUBBELL      |
| WELDING & MACHINING           | 87121-7701 | AMOLE HUBBELL      |
| XUREX INC                     | 87121-8459 | AMOLE HUBBELL      |
| XUREX NANO COATINGS CORP      | 87121-2002 | AMOLE HUBBELL      |
| ADVANCED MULTIMEDIA LLC       | 87111-8218 | BEAR CANYON ARROYO |
| AIBUS DIGITAL PRINTING        | 87109-4407 | BEAR CANYON ARROYO |
| ART FRAMING CTR               | 87111-1543 | BEAR CANYON ARROYO |
| AZTEC INDUSTRIES              | 87109-3836 | BEAR CANYON ARROYO |
| BACKERWORKS MANUFACTURING LLC | 87109-3411 | BEAR CANYON ARROYO |
| BOW ARROW PUBLISHING CO       | 87109-3356 | BEAR CANYON ARROYO |
| CHARLES COON SIGN & LIGHTING  | 87111-2216 | BEAR CANYON ARROYO |
| D & D OUTDOOR SIGNS LLC       | 87111-2081 | BEAR CANYON ARROYO |
| D SIGNS                       | 87111-1464 | BEAR CANYON ARROYO |
| DAR PUBLISHING                | 87109-2921 | BEAR CANYON ARROYO |
| DEVORE AVIATION CORP-AMERICA  | 87109-3410 | BEAR CANYON ARROYO |
| EVERETT DESIGN                | 87111-6270 | BEAR CANYON ARROYO |
| HIDDEN SECRETS BOOK COVERS    | 87109-3128 | BEAR CANYON ARROYO |
| J B TECHNICAL LLC             | 87109-3375 | BEAR CANYON ARROYO |
| K2 CREATIONS INC              | 87111-1844 | BEAR CANYON ARROYO |
| LINDER PUBLISHING             | 87109-3149 | BEAR CANYON ARROYO |
| MARJ BAXTER                   | 87199-2768 | BEAR CANYON ARROYO |
| MINUTEMAN PRESS               | 87109-3558 | BEAR CANYON ARROYO |
| MOON DOG PUBLISHING           | 87109-3861 | BEAR CANYON ARROYO |
| NEW MEXICO BIG PRINTS         | 87109-3458 | BEAR CANYON ARROYO |
| NEW MEXICO KIDS MAGAZINE      | 87111-1439 | BEAR CANYON ARROYO |
| NONAGON LLC                   | 87111-8311 | BEAR CANYON ARROYO |
| ORANGE MAGNOLIA               | 87111-2222 | BEAR CANYON ARROYO |
| OTT MANUFACTURERS INC         | 87111-7234 | BEAR CANYON ARROYO |
| PENNY SAVER WANT ADS          | 87109-3468 | BEAR CANYON ARROYO |

Industrial Facilities within COA MS4 Boundary

| Name                           | Zip        | Drainage Basin      |
|--------------------------------|------------|---------------------|
| PRIMECORE SYSTEMS INC          | 87111-7806 | BEAR CANYON ARROYO  |
| PSS INC                        | 87111-6537 | BEAR CANYON ARROYO  |
| QUELL CORP                     | 87109-3412 | BEAR CANYON ARROYO  |
| SIGMA SNACKS                   | 87111-2919 | BEAR CANYON ARROYO  |
| SIGN STORE                     | 87109-4429 | BEAR CANYON ARROYO  |
| STATEWIDE PRINTING             | 87112-5380 | BEAR CANYON ARROYO  |
| STATEWIDE PRINTING             | 87109-6263 | BEAR CANYON ARROYO  |
| SUPER WHEELS MAGAZINE          | 87111-2262 | BEAR CANYON ARROYO  |
| TRULY ALIVE MAGAZINE           | 87109-3838 | BEAR CANYON ARROYO  |
| UTC AEROSPACE SYSTEMS          | 87109-4407 | BEAR CANYON ARROYO  |
| WARNEKE PAPER BOX CO           | 87111-2963 | BEAR CANYON ARROYO  |
| WESTERN AQUATIC INDUSTRIES     | 87111-6600 | BEAR CANYON ARROYO  |
| JUMEIRA BEACH MAGAZINE         | 87114-5151 | CABEZON             |
| RICK ORTIZ LLC                 | 87114-7008 | CABEZON             |
| STUMBLING STEER BREWERY        | 87114-7009 | CABEZON             |
| ALITTLE DREAMERS PUBLISHING    | 87114-5064 | CALABACILLAS        |
| CORRALES PRINTING & MAILING CO | 87114-4919 | CALABACILLAS        |
| DAN DY HOME FASHIONS OF CA     | 87114-5455 | CALABACILLAS        |
| DISCOUNT PRINTING              | 87114-5444 | CALABACILLAS        |
| FAUSTINA GLINES COMPUTER SVC   | 87114-1804 | CALABACILLAS        |
| HAPPY MOMS INK                 | 87114-5908 | CALABACILLAS        |
| M C S ENTERPRISES              | 87114-5772 | CALABACILLAS        |
| MACHINE DYNAMICS INC           | 87114-4947 | CALABACILLAS        |
| MALONE INDUSTRIES              | 87114-6079 | CALABACILLAS        |
| MCMG MULTIMEDIA PUBLISHERS     | 87114-4525 | CALABACILLAS        |
| MONDUALITY GUITARS             | 87114-1080 | CALABACILLAS        |
| OFF THE WALL PRESS             | 87114-4945 | CALABACILLAS        |
| RANDALL MACHINING              | 87114-6534 | CALABACILLAS        |
| SALLY SCHNEIDER QUILTS         | 87114-5367 | CALABACILLAS        |
| SAM'S PORTABLE SIGNS           | 87114-3898 | CALABACILLAS        |
| SEW-EZ                         | 87114-4249 | CALABACILLAS        |
| SIGNARAMA                      | 87114-6128 | CALABACILLAS        |
| SOLOMON PUBLICATIONS           | 87114-1035 | CALABACILLAS        |
| STICKER DUDE                   | 87114-5051 | CALABACILLAS        |
| WHIMSICAL RANCH                | 87114-4091 | CALABACILLAS        |
| YELLOW JACKET DESIGN STUDIO    | 87114-5362 | CALABACILLAS        |
| A B Q OLIVE OIL CO LLC         | 87114-9254 | CALABACILLAS OUTLET |
| LA BELLA VINO WINERY           | 87114-4022 | CALABACILLAS OUTLET |
| ABSOLUTELY NEON                | 87108-1016 | CAMPUS WASH         |
| ALPHA GRAPHICS                 | 87106-2719 | CAMPUS WASH         |
| AMERICAN SANDPAINTING CO       | 87108-3542 | CAMPUS WASH         |
| ART & ADVERTISING              | 87108-3503 | CAMPUS WASH         |
| BOBA TEA CO                    | 87106-1461 | CAMPUS WASH         |

Industrial Facilities within COA MS4 Boundary

| Name                           | Zip        | Drainage Basin |
|--------------------------------|------------|----------------|
| BOX OFFICE                     | 87108-2749 | CAMPUS WASH    |
| BUSINESS PRINTING SVC INC      | 87108-2723 | CAMPUS WASH    |
| CERVANTES FOOD PRODUCTS INC    | 87108-4829 | CAMPUS WASH    |
| DAILY LOBO                     | 87131-0001 | CAMPUS WASH    |
| DISCO DISPLAY HOUSE INC        | 87106-2215 | CAMPUS WASH    |
| ELECTRO MECHANICAL SVC INC     | 87108-2609 | CAMPUS WASH    |
| EQUINOX CORP                   | 87108-4438 | CAMPUS WASH    |
| FOCUS INK INC                  | 87108-2880 | CAMPUS WASH    |
| GOLDEN EAGLE TRADING CO        | 87108-1096 | CAMPUS WASH    |
| KOBOLD STUDIOS                 | 87106-1317 | CAMPUS WASH    |
| OVERDRIVE PUBLICATIONS         | 87108-2887 | CAMPUS WASH    |
| PRIME TIME PUBLISHING          | 87193-7560 | CAMPUS WASH    |
| QUALITY SCREEN PRINT INC       | 87108-1477 | CAMPUS WASH    |
| RAINBOW CASTING SVC            | 87108-2731 | CAMPUS WASH    |
| RICHMOND PRODUCTS              | 87108-2888 | CAMPUS WASH    |
| SIGN & IMAGE FACTORY           | 87106-2165 | CAMPUS WASH    |
| THIN KING PRESS                | 87108-1016 | CAMPUS WASH    |
| TWIN CITY OPTICAL              | 87108-1217 | CAMPUS WASH    |
| USA PRINTING                   | 87108-2731 | CAMPUS WASH    |
| 9 BELOW                        | 87122-1100 | DOMINGO BACA   |
| ABQ MANUFACTURING INC          | 87113-1513 | DOMINGO BACA   |
| ARTEMESIA PUBLISHING LLC       | 87122-2342 | DOMINGO BACA   |
| BADDASS MULTIMEDIA PRODUCT LLC | 87109-5188 | DOMINGO BACA   |
| CJ DESKTOP PUBLISHING          | 87109-6407 | DOMINGO BACA   |
| DYNAMIC MULTIMEDIA SVC         | 87122-2634 | DOMINGO BACA   |
| GRUET WINERY                   | 87113-1832 | DOMINGO BACA   |
| GSI                            | 87113-1622 | DOMINGO BACA   |
| LINDE GAS NORTH AMERICA LLC    | 87113-1605 | DOMINGO BACA   |
| MONSTER GILA                   | 87113-2050 | DOMINGO BACA   |
| MUNIZ AEROSPACE INC            | 87109-4655 | DOMINGO BACA   |
| NAVAJHO REFINING               | 87122-3449 | DOMINGO BACA   |
| P & M PUBLISHERS LTD           | 87122-1914 | DOMINGO BACA   |
| PRECISION TOOL & DIE MFG CORP  | 87113-1694 | DOMINGO BACA   |
| QUATRO MANUFACTURING CORP      | 87113-1668 | DOMINGO BACA   |
| RSF JOURNAL CTR                | 87109-4474 | DOMINGO BACA   |
| SANDIA VINEYARD & WINERY       | 87109-5609 | DOMINGO BACA   |
| SERJAN TECHNOLOGIES            | 87109-5138 | DOMINGO BACA   |
| SIGN PROTECTORS                | 87113-2075 | DOMINGO BACA   |
| SIGNTRONIX                     | 87109-4655 | DOMINGO BACA   |
| SUNSHINE REALTY                | 87122-1654 | DOMINGO BACA   |
| ULTRA COMMUNICATIONS INC       | 87109-6602 | DOMINGO BACA   |
| VENTURE MANUFACTURING INC      | 87109-5137 | DOMINGO BACA   |
| VERSATILE STITCHINGS           | 87109-5136 | DOMINGO BACA   |

Industrial Facilities within COA MS4 Boundary

| Name                           | Zip        | Drainage Basin |
|--------------------------------|------------|----------------|
| XILINX INC                     | 87109-5903 | DOMINGO BACA   |
| 3D-FX                          | 87110-3463 | EMBUDO ARROYO  |
| A LITTLE ARTISTIC SIGN SHOP    | 87108-2153 | EMBUDO ARROYO  |
| AAA EXPRESS PRINTING           | 87110-2953 | EMBUDO ARROYO  |
| ACCENT STAIR & SPECIALTY       | 87123-3201 | EMBUDO ARROYO  |
| ADVANCED BUSINESS DESIGN       | 87110-3814 | EMBUDO ARROYO  |
| ADVANTAGE PRINTING SPECIALISTS | 87106-1214 | EMBUDO ARROYO  |
| AEROSPACE CORP                 | 87198-0360 | EMBUDO ARROYO  |
| AFFIL INDUSTRIES INC           | 87112-2850 | EMBUDO ARROYO  |
| ALAN WHITE SIGNS LLC           | 87112-5454 | EMBUDO ARROYO  |
| ALARM COMMUNICATIONS           | 87181-0699 | EMBUDO ARROYO  |
| ALBUQUERQUE CUSTOM SCREEN PTG  | 87123-3306 | EMBUDO ARROYO  |
| ALBUQUERQUE PRINT WORKS        | 87123-1493 | EMBUDO ARROYO  |
| ALL AROUND SIGNS               | 87123-2945 | EMBUDO ARROYO  |
| ALL AROUND SIGNS & GRAPHICS    | 87112-4465 | EMBUDO ARROYO  |
| ALLIANCE FIRE PROTECTION INC   | 87123-3108 | EMBUDO ARROYO  |
| ALPHA GRAPHICS                 | 87112-3322 | EMBUDO ARROYO  |
| ALTEC                          | 87123-3247 | EMBUDO ARROYO  |
| ALWAYS A BETTER SIGN           | 87110-3817 | EMBUDO ARROYO  |
| AMERA MALL                     | 87112-2291 | EMBUDO ARROYO  |
| AMERIARK PUBLISHING CO         | 87110-2709 | EMBUDO ARROYO  |
| ANDRESON AWNINGS & CANVAS      | 87110-3802 | EMBUDO ARROYO  |
| ANDY'S SIGNS                   | 87110-6429 | EMBUDO ARROYO  |
| AUTOMOTIVE TEST SOLUTIONS      | 87123-3192 | EMBUDO ARROYO  |
| AVAILABLE MEDIA                | 87108-2024 | EMBUDO ARROYO  |
| AZCO MINING INC                | 87110-7437 | EMBUDO ARROYO  |
| BDA CUSTOM ENCLOSED TRAILERS   | 87123-3008 | EMBUDO ARROYO  |
| BIG BAR PACKAGING              | 87199-0455 | EMBUDO ARROYO  |
| BILAGAANAS                     | 87110-2952 | EMBUDO ARROYO  |
| BLUE CANYON JEWELRY            | 87123-3350 | EMBUDO ARROYO  |
| BOB GREEN SIGNS                | 87112-4455 | EMBUDO ARROYO  |
| BRIM SCOUTS MUSIC STUDIOS      | 87108-2539 | EMBUDO ARROYO  |
| BUFFALO HOGAN INC              | 87123-3289 | EMBUDO ARROYO  |
| BURMEISTER MANUFACTURING       | 87123-3334 | EMBUDO ARROYO  |
| CARRILLO SIGNS LLC             | 87108-3061 | EMBUDO ARROYO  |
| CASA TALAMANTES                | 87110-3234 | EMBUDO ARROYO  |
| CASTLE GOLD & SILVER EXCHANGE  | 87190-0492 | EMBUDO ARROYO  |
| CAVCO HOME CTR                 | 87123-2624 | EMBUDO ARROYO  |
| CHART SIGNS                    | 87123-1030 | EMBUDO ARROYO  |
| CHARTIER DOUBLE REED CO        | 87192-3344 | EMBUDO ARROYO  |
| CIRCUIT SHOP INC               | 87108-4208 | EMBUDO ARROYO  |
| CISCO SYSTEMS                  | 87110-5438 | EMBUDO ARROYO  |
| CLEANER'S BARCODE LABEL        | 87112-1651 | EMBUDO ARROYO  |

Industrial Facilities within COA MS4 Boundary

| Name                           | Zip        | Drainage Basin |
|--------------------------------|------------|----------------|
| COACH'S CHASSIS                | 87123-3334 | EMBUDO ARROYO  |
| COMPOSITE TOOLING CORP         | 87123-3343 | EMBUDO ARROYO  |
| COPYCAT                        | 87110-6325 | EMBUDO ARROYO  |
| CORPORATE IMAGE PRINTING       | 87110-3900 | EMBUDO ARROYO  |
| COSMODYNE MANUFACTURING INC    | 87123-3318 | EMBUDO ARROYO  |
| CREATED STONE                  | 87123-3305 | EMBUDO ARROYO  |
| CRESTLINE PLASTICS INC         | 87108-1635 | EMBUDO ARROYO  |
| CUFLAT                         | 87110-7729 | EMBUDO ARROYO  |
| CUSTOM SEWING & ALTERATION     | 87112-1792 | EMBUDO ARROYO  |
| D & S MILLWORKS & DESIGN       | 87112-3104 | EMBUDO ARROYO  |
| DASHSAVER                      | 87110-6701 | EMBUDO ARROYO  |
| DESERT SAGE GRAPHICS           | 87110-6815 | EMBUDO ARROYO  |
| DESIGNED POWER ASSOC           | 87112-2554 | EMBUDO ARROYO  |
| DIAMOND PUBLISHING CO          | 87108-3227 | EMBUDO ARROYO  |
| DIGIPRO SIGNS & GRAPHICS       | 87110-5149 | EMBUDO ARROYO  |
| DIGITAL ARTS LLC               | 87110-3967 | EMBUDO ARROYO  |
| DND DESIGNS                    | 87112-5733 | EMBUDO ARROYO  |
| DOCUMENT SOLUTIONS INC         | 87110-3817 | EMBUDO ARROYO  |
| DUKE CITY FIT                  | 87111-4360 | EMBUDO ARROYO  |
| DUNN-EDWARDS PAINTS            | 87112-1873 | EMBUDO ARROYO  |
| DURHAM SCHOOL SVC              | 87123-3355 | EMBUDO ARROYO  |
| ED & FELICITA'S FRY BREAD      | 87110-3357 | EMBUDO ARROYO  |
| EL SEMANARIO NEWSPAPER         | 87123-1029 | EMBUDO ARROYO  |
| ENCHANTMENT STEEL              | 87192-1397 | EMBUDO ARROYO  |
| EXCEL MANUFACTURING INC        | 87123-6303 | EMBUDO ARROYO  |
| EXCLAMATION PRINTING           | 87112-5818 | EMBUDO ARROYO  |
| EXPERIMENTAL MACHINING DESIGN  | 87123-1212 | EMBUDO ARROYO  |
| FACTORY EXPRESS INC            | 87106-1214 | EMBUDO ARROYO  |
| FASTSIGNS                      | 87112-4159 | EMBUDO ARROYO  |
| FASTSIGNS                      | 87112-2260 | EMBUDO ARROYO  |
| G & S JEWELRY MFG              | 87123-3320 | EMBUDO ARROYO  |
| GARDEN OF BEADIN NM            | 87112-3474 | EMBUDO ARROYO  |
| GINNASTA USA                   | 87123-3301 | EMBUDO ARROYO  |
| GLOBAL EXPRESS MFG LLC         | 87106-1214 | EMBUDO ARROYO  |
| GLOBAL TREAD RUBBER LLC        | 87112-2515 | EMBUDO ARROYO  |
| GOING CUSTOM                   | 87112-3231 | EMBUDO ARROYO  |
| GOLDEN FLEECE TRADING CO       | 87123-3331 | EMBUDO ARROYO  |
| GOODMAN'S PRINTING SOLUTIONS   | 87112-1553 | EMBUDO ARROYO  |
| GRAVITAS PUBLICATIONS INC      | 87110-6444 | EMBUDO ARROYO  |
| GREATER SOUTHWEST PRINTING     | 87112-2143 | EMBUDO ARROYO  |
| H Q PUBLICATION                | 87123-3303 | EMBUDO ARROYO  |
| HALBERT CUSTOM CABINET MFG INC | 87123-3213 | EMBUDO ARROYO  |
| HARTMAN PUBLISHING INC         | 87112-2837 | EMBUDO ARROYO  |

Industrial Facilities within COA MS4 Boundary

| Name                         | Zip        | Drainage Basin |
|------------------------------|------------|----------------|
| HI DESERT BUSINESS FORMS     | 87110-6639 | EMBUDO ARROYO  |
| HIGH DESERT DESIGNS          | 87110-3936 | EMBUDO ARROYO  |
| HIGH DESERT IRON WORKS       | 87123-3239 | EMBUDO ARROYO  |
| I T T INDUSTRIES INC         | 87110-4222 | EMBUDO ARROYO  |
| IJS FINDINGS                 | 87123-3204 | EMBUDO ARROYO  |
| IMAGIC DIGITAL IMAGING       | 87110-6951 | EMBUDO ARROYO  |
| INPOSITION TECHNOLOGIES      | 87110-6502 | EMBUDO ARROYO  |
| INTEGRITY SCREEN PRINTING    | 87112-3211 | EMBUDO ARROYO  |
| INTERNATIONAL CO             | 87108-2515 | EMBUDO ARROYO  |
| JODY COOK                    | 87111-2967 | EMBUDO ARROYO  |
| KAYA NATIVE CHILD            | 87112-3616 | EMBUDO ARROYO  |
| KLL INC                      | 87110-5902 | EMBUDO ARROYO  |
| KOENIG'S METALMORPHOSIS      | 87108-3017 | EMBUDO ARROYO  |
| LAMP SHOP                    | 87123-2744 | EMBUDO ARROYO  |
| LESMEN'S MUSIC               | 87110-6457 | EMBUDO ARROYO  |
| L'OCCITANE                   | 87110-2281 | EMBUDO ARROYO  |
| LONE BEAR CREATIONS          | 87110-6051 | EMBUDO ARROYO  |
| LONE STAR GOLD INC           | 87110-8172 | EMBUDO ARROYO  |
| MACH 2 MACHINING & MFG INC   | 87110-7720 | EMBUDO ARROYO  |
| MAGIC MACHINE SHOP           | 87110-3902 | EMBUDO ARROYO  |
| MANUFACTURING SERVICES       | 87111-3973 | EMBUDO ARROYO  |
| MARIA C DESIGNS INC          | 87111-5613 | EMBUDO ARROYO  |
| MARIE'S CERAMICS             | 87123-5550 | EMBUDO ARROYO  |
| MC CLINTIC RDM INC           | 87123-3246 | EMBUDO ARROYO  |
| MC GEE CO                    | 87110-3907 | EMBUDO ARROYO  |
| METAL SALES MANUFACTRNG CORP | 87112-3802 | EMBUDO ARROYO  |
| MINERALS TECHNOLOGIES INC    | 87111-3076 | EMBUDO ARROYO  |
| MINUTEMAN PRESS              | 87112-3981 | EMBUDO ARROYO  |
| MITCHELLS SEWING MACHINE CO  | 87110-3234 | EMBUDO ARROYO  |
| MM FABRICATION               | 87123-1615 | EMBUDO ARROYO  |
| MOBILE SCREEN & GLASS INC    | 87112-2839 | EMBUDO ARROYO  |
| MODEL PRODUCTS INC           | 87123-3320 | EMBUDO ARROYO  |
| MOUNTAIN STATES PUBLISHING   | 87112-4457 | EMBUDO ARROYO  |
| NEW MEXICO BREEZE LLC        | 87111-4247 | EMBUDO ARROYO  |
| NEW MEXICO PRESS SVC         | 87112-1027 | EMBUDO ARROYO  |
| NIETOS SIGN UP               | 87112-1940 | EMBUDO ARROYO  |
| PERFECTION COPIER SVC        | 87110-6726 | EMBUDO ARROYO  |
| PINON RIDGE HOMES LLC        | 87123-2622 | EMBUDO ARROYO  |
| PRECISION FABRICATION INC    | 87123-3239 | EMBUDO ARROYO  |
| PRIME TIME PUBLISHING        | 87110-4082 | EMBUDO ARROYO  |
| PRINTED IMAGE                | 87111-4374 | EMBUDO ARROYO  |
| RICE ENTERPRISES             | 87108-3647 | EMBUDO ARROYO  |
| ROCKY MOUNTAIN PRINTING CO   | 87110-2975 | EMBUDO ARROYO  |

Industrial Facilities within COA MS4 Boundary

| Name                           | Zip        | Drainage Basin |
|--------------------------------|------------|----------------|
| ROUTE 66 PONY WORKS LLC        | 87108-2143 | EMBUDO ARROYO  |
| SCORPION INDUSTRIES            | 87107-1818 | EMBUDO ARROYO  |
| SEW MUCH MORE                  | 87112-5622 | EMBUDO ARROYO  |
| SEWING BY SELENA               | 87112-3276 | EMBUDO ARROYO  |
| SHUBE'S MANUFACTURING INC      | 87123-3232 | EMBUDO ARROYO  |
| SHUBIS MANUFACTURING           | 87123-3232 | EMBUDO ARROYO  |
| SIGNARAMA                      | 87110-4614 | EMBUDO ARROYO  |
| SIGNS BY TOMORROW              | 87112-4458 | EMBUDO ARROYO  |
| SIGNS NOW                      | 87110-3817 | EMBUDO ARROYO  |
| SIGNS NOW                      | 87110-3243 | EMBUDO ARROYO  |
| SILVER CREATIONS FROM THE SW   | 87110-3615 | EMBUDO ARROYO  |
| SILVER STAR JEWELRY            | 87123-3048 | EMBUDO ARROYO  |
| SKY WEST BUCKLES & JEWELRY LTD | 87123-5223 | EMBUDO ARROYO  |
| SMITH'S ULTIMATE LININGS       | 87123-2935 | EMBUDO ARROYO  |
| SOAR CORP                      | 87110-5814 | EMBUDO ARROYO  |
| SOLAR AUTOMATION INC           | 87110-3967 | EMBUDO ARROYO  |
| SOURCE 2000 INC                | 87112-5462 | EMBUDO ARROYO  |
| SOUTHWEST BY DAY               | 87123-1669 | EMBUDO ARROYO  |
| SOUTHWEST MACHINE DESIGN       | 87112-4611 | EMBUDO ARROYO  |
| SOUTHWEST WIRE SVC             | 87123-3321 | EMBUDO ARROYO  |
| SPEEDZONE PRINT & COPY         | 87110-6639 | EMBUDO ARROYO  |
| STARLINE PRINTING INC          | 87109-4239 | EMBUDO ARROYO  |
| STATE WIDE PRINTING            | 87112-5380 | EMBUDO ARROYO  |
| STYLISTIC INK                  | 87110-6337 | EMBUDO ARROYO  |
| SUN FLIGHT PUBLISHING          | 87112-2675 | EMBUDO ARROYO  |
| SUNRAY TRADE BINDERY           | 87110-4094 | EMBUDO ARROYO  |
| SUNWEST SILVER                 | 87123-3301 | EMBUDO ARROYO  |
| SUPER WHEELS MAGAZINE          | 87112-5545 | EMBUDO ARROYO  |
| TANDY LEATHER FACTORY          | 87110-4673 | EMBUDO ARROYO  |
| TAYLOR-DODGE GRAPHICS          | 87112-3108 | EMBUDO ARROYO  |
| THEFRSHPRNTS                   | 87123-5223 | EMBUDO ARROYO  |
| THUNDER SCIENTIFIC CORP        | 87123-3199 | EMBUDO ARROYO  |
| TMI MANUFACTURING INDUSTRIES   | 87123-3287 | EMBUDO ARROYO  |
| TMMI                           | 87112-1033 | EMBUDO ARROYO  |
| TOADLAND PEWTER CASTING CO INC | 87110-3912 | EMBUDO ARROYO  |
| TRANSITIONS TO TOMORROW INC    | 87110-4230 | EMBUDO ARROYO  |
| TRI-STATE PRINTING             | 87192-0584 | EMBUDO ARROYO  |
| TRUE NORTH SOAP & CANDLE CO    | 87110-4012 | EMBUDO ARROYO  |
| TURQUOISE JEWELRY INC          | 87108-3026 | EMBUDO ARROYO  |
| ULIBARRI CONSTRUCTION          | 87123-3365 | EMBUDO ARROYO  |
| UNIVERSAL JEWELERS & TRADING   | 87108-1855 | EMBUDO ARROYO  |
| UNIVERSAL METAL SPINNING CO    | 87123-3350 | EMBUDO ARROYO  |
| URANIUM ENERGY CORP            | 87110-4181 | EMBUDO ARROYO  |

Industrial Facilities within COA MS4 Boundary

| Name                           | Zip        | Drainage Basin |
|--------------------------------|------------|----------------|
| US COTTON LLC                  | 87110-3906 | EMBUDO ARROYO  |
| USC BAG MFG LLC                | 87110-3906 | EMBUDO ARROYO  |
| WILDFLOWER PRESS               | 87196-4757 | EMBUDO ARROYO  |
| WINGS PUBLISHING LLC           | 87110-3707 | EMBUDO ARROYO  |
| WORK WEAR SAFETY SHOES         | 87110-2967 | EMBUDO ARROYO  |
| WORKSPACE DYNAMICS             | 87110-6233 | EMBUDO ARROYO  |
| ZIA TECH                       | 87110-5809 | EMBUDO ARROYO  |
| CAPTIVA GROUP                  | 87109-2231 | GRANTLINE      |
| CIMARRON ENERGY INC            | 87109-2719 | GRANTLINE      |
| G2 OFFICE FURNITURE MART       | 87109-2220 | GRANTLINE      |
| GCC OF AMERICA INC             | 87109-1130 | GRANTLINE      |
| HOMELAND RESOURCES LTD         | 87109-2770 | GRANTLINE      |
| NOVA HOMEOPATHIC THERAPEUTICS  | 87109-2416 | GRANTLINE      |
| ROBOCASTING ENTERPRISE         | 87109-2234 | GRANTLINE      |
| VAMCO                          | 87109-2233 | GRANTLINE      |
| ADVANCE CONCEPT CONSTRUCTION   | 87110-1921 | HAHN ARROYO    |
| ADVANCED SILVER CO             | 87110-1419 | HAHN ARROYO    |
| ALBUQUERQUE EYE PROSTHETICS    | 87109-1102 | HAHN ARROYO    |
| ALBUQUERQUE LASER ENGRV SVC    | 87110-2026 | HAHN ARROYO    |
| ALBUQUERQUE SIGN PRINT LTD     | 87109-1028 | HAHN ARROYO    |
| AMERICAN SIGN FRAME CO         | 87198-0017 | HAHN ARROYO    |
| AMERICOM AUTOMATION SERVES     | 87110-1293 | HAHN ARROYO    |
| AMIGO PETROLEUM CO             | 87111-2301 | HAHN ARROYO    |
| APPLE CLEANER                  | 87111-2406 | HAHN ARROYO    |
| ASSERT TEES                    | 87110-1431 | HAHN ARROYO    |
| BRENDA'S BODYWORKS             | 87110-2156 | HAHN ARROYO    |
| CASA BLANCA WEAVERS            | 87111-2760 | HAHN ARROYO    |
| CHAMPION RIBBONS               | 87110-1148 | HAHN ARROYO    |
| COMFORT FOODS                  | 87111-3588 | HAHN ARROYO    |
| CROSSWINDS WEEKLY              | 87110-1249 | HAHN ARROYO    |
| DELAMAR STREET SOAP            | 87110-8204 | HAHN ARROYO    |
| DESIGN PRINTING & DISTRIBUTION | 87109-1861 | HAHN ARROYO    |
| DIGITAL PRINTERS & IMAGING     | 87111-3548 | HAHN ARROYO    |
| DUKE CITY FLAGS & RECOVERS     | 87111-5016 | HAHN ARROYO    |
| ENGRAVING PLACE/RECOGNITION    | 87110-1910 | HAHN ARROYO    |
| FIGHTING CLOWNS DESIGNS        | 87111-4655 | HAHN ARROYO    |
| GRAY EAGLE TRADING             | 87110-8201 | HAHN ARROYO    |
| IBM                            | 87110-1813 | HAHN ARROYO    |
| INSTANT SIGNS                  | 87110-1924 | HAHN ARROYO    |
| JAMES R JOHNSON PUBLISHING     | 87110-1527 | HAHN ARROYO    |
| JUSTIN ENGRAVING & MARKING     | 87110-1924 | HAHN ARROYO    |
| KUNG FU COWBOY TEA HOUSE CAFE  | 87111-4876 | HAHN ARROYO    |
| LADY BUG SEWING                | 87110-1966 | HAHN ARROYO    |



Industrial Facilities within COA MS4 Boundary

| Name                           | Zip        | Drainage Basin    |
|--------------------------------|------------|-------------------|
| MASTERS OF INFLUENCE PUBLISHIN | 87110-3354 | HAHN ARROYO       |
| NS2G MEDIA                     | 87110-1017 | HAHN ARROYO       |
| P I AUDIO GROUP                | 87110-2329 | HAHN ARROYO       |
| PRECISION MACHINE & TUBE       | 87110-3525 | HAHN ARROYO       |
| PRINTING SERVICES              | 87107-4809 | HAHN ARROYO       |
| PUEBLO JOURNAL                 | 87110-3135 | HAHN ARROYO       |
| ROCKY MOUNTAIN PRINTING LLC    | 87110-2620 | HAHN ARROYO       |
| RS IRONWORKS                   | 87110-1965 | HAHN ARROYO       |
| SETTING SUN SOAP LLC           | 87111-5019 | HAHN ARROYO       |
| SIGN STORE                     | 87107-4809 | HAHN ARROYO       |
| SILVER FACTORY                 | 87110-1248 | HAHN ARROYO       |
| SOUTHWEST BREWING CO           | 87109-1406 | HAHN ARROYO       |
| SOUTHWEST RUBBER STAMP CO      | 87109-1459 | HAHN ARROYO       |
| STOMPER INDUSTRIES             | 87111-3461 | HAHN ARROYO       |
| SWIFT PRINTING SVC             | 87109-1604 | HAHN ARROYO       |
| THERMOGRAPHY CENTER            | 87111-2565 | HAHN ARROYO       |
| THOMAS PRESS                   | 87109-1819 | HAHN ARROYO       |
| TRU-FORM OPTICS                | 87111-3286 | HAHN ARROYO       |
| UNITS UNIQUE BY CINDY SOTELO   | 87111-4820 | HAHN ARROYO       |
| AMIGO PETROLEUM CO             | 87113-2517 | LA CUEVA          |
| BARNETT ALDON IRONWORKS        | 87113-1705 | LA CUEVA          |
| BOSQUE BREWING                 | 87113-2459 | LA CUEVA          |
| COMMAND POST PRODUCTIONS       | 87122-1315 | LA CUEVA          |
| E R GAGING MACHINE TOOLS       | 87113-1961 | LA CUEVA          |
| FASCET INDUSTRIES              | 87199-1914 | LA CUEVA          |
| HARRINGTON INDUSTRIAL PLASTICS | 87113-2460 | LA CUEVA          |
| HONEYWELL AEROSPACE            | 87113-2200 | LA CUEVA          |
| HUGH BURGESS SIGN SVC          | 87122-3888 | LA CUEVA          |
| MASTERWORKS IN WOOD LLC        | 87153-3512 | LA CUEVA          |
| MCT INDUSTRIES                 | 87113-2399 | LA CUEVA          |
| PRECISION GRINDING INC         | 87113-1543 | LA CUEVA          |
| PTM ROD DESIGN                 | 87122-4040 | LA CUEVA          |
| SANDIA HYDROGRAPHICS           | 87113-2723 | LA CUEVA          |
| FASTSIGNS                      | 87120-5808 | LA ORILLA OUTFALL |
| JOSEPH L GONZALES SCHOOL BUS   | 87120-3600 | LADERA            |
| TWISTED BEADS BY AMBER         | 87120-5619 | LADERA            |
| AFFIRMATIVE SOLUTIONS          | 87102-2355 | MID VALLEY        |
| AIKEN PRINTING                 | 87102-1483 | MID VALLEY        |
| ALIBI NEWSPAPER                | 87102-3219 | MID VALLEY        |
| ALPHA GRAPHICS                 | 87106-3807 | MID VALLEY        |
| ALPHA SOUTHWEST INC            | 87119-9263 | MID VALLEY        |
| AMERICAN CLAY ENTERPRISES LLC  | 87102-4503 | MID VALLEY        |
| AMERICOM AUTOMATION SERVES     | 87102-3118 | MID VALLEY        |

Industrial Facilities within COA MS4 Boundary

| Name                           | Zip        | Drainage Basin |
|--------------------------------|------------|----------------|
| AMTRAK-ABQ                     | 87102-3499 | MID VALLEY     |
| ARTISANS OF THE DESERT INC     | 87102-2231 | MID VALLEY     |
| ATMI FAB SVC                   | 87104-2216 | MID VALLEY     |
| AUTOMOTIVE MACHINE SVC INC     | 87102-1496 | MID VALLEY     |
| B & H WHOLESALE                | 87102-1211 | MID VALLEY     |
| BLANKLEY STUDIO                | 87104-1300 | MID VALLEY     |
| BNSF RAILWAY CO                | 87102-4511 | MID VALLEY     |
| BNSF RAILWAY CO                | 87102-1538 | MID VALLEY     |
| BRAINSTORM INDUSTRIES          | 87102-3408 | MID VALLEY     |
| BUENO FOODS                    | 87103-0293 | MID VALLEY     |
| BYE AEROSPACE INC              | 87102-3453 | MID VALLEY     |
| BYE ENERGY INC                 | 87102-3453 | MID VALLEY     |
| CHILI KONNECTION PRODUCE       | 87102-2328 | MID VALLEY     |
| CHRISTIN WOLF GALLERY          | 87104-1458 | MID VALLEY     |
| CICATRIX DESIGN                | 87102-2852 | MID VALLEY     |
| CONSTRUCTION REPORTER          | 87197-6116 | MID VALLEY     |
| CORONADO MACHINE INC           | 87102-1532 | MID VALLEY     |
| CUNNINGHAM DISTRIBUTING INC    | 87102-1225 | MID VALLEY     |
| DIVELY SCALE CO                | 87102-1422 | MID VALLEY     |
| DOWNTOWN PRINTING CO           | 87102-3076 | MID VALLEY     |
| EAGLE ROCK FOOD CO             | 87104-2113 | MID VALLEY     |
| ENDEAN SIGN CO                 | 87102-1440 | MID VALLEY     |
| ENTROPIX INDUSTRIES            | 87102-2980 | MID VALLEY     |
| EXCELL SCREEN PRINTING         | 87102-3343 | MID VALLEY     |
| FASTSIGNS                      | 87102-3307 | MID VALLEY     |
| FINGER PRINT EXPRESS & PROCESS | 87102-2107 | MID VALLEY     |
| GABBY'S HANDMADE SOAPS         | 87104-1419 | MID VALLEY     |
| GERTRUDE ZACHARY JEWELRY MFG   | 87102-1446 | MID VALLEY     |
| GOODWILL INDUSTRIES NEW MEXICO | 87102-3114 | MID VALLEY     |
| GRANDFATHER EAGLE              | 87104-1461 | MID VALLEY     |
| GRAY MOUNTAIN PRINT & COPY     | 87102-2021 | MID VALLEY     |
| IMETCO                         | 87104-2026 | MID VALLEY     |
| J J ASHE & SONS                | 87102-1626 | MID VALLEY     |
| JAGUAR PRECISION MACHINE CORP  | 87102-1447 | MID VALLEY     |
| KABANA INC                     | 87102-1231 | MID VALLEY     |
| KASDORFS MANUFACTURING INC     | 87102-1534 | MID VALLEY     |
| KATZ RONNA FINE ART            | 87102-1521 | MID VALLEY     |
| KELSEY NORRIS JEWELRY          | 87104-1061 | MID VALLEY     |
| KENJI KONDO STUDIO             | 87102-2214 | MID VALLEY     |
| LEWIS BRAKE & CLUTCH INC       | 87102-1540 | MID VALLEY     |
| LILLY BARRACK MFG              | 87102-1403 | MID VALLEY     |
| LOCKHEED MARTIN CORP           | 87102-3255 | MID VALLEY     |
| MARBLE BREWERY                 | 87102-2315 | MID VALLEY     |

Industrial Facilities within COA MS4 Boundary

| Name                           | Zip        | Drainage Basin       |
|--------------------------------|------------|----------------------|
| MONGO HEAVY DUTY               | 87102-2358 | MID VALLEY           |
| NATIONAL RESEARCH LABORATORIES | 87102-1226 | MID VALLEY           |
| NEW AT HOME MAGAZINE           | 87102-3454 | MID VALLEY           |
| NEW MEXICO BEEF JERKY & CHILE  | 87102-1428 | MID VALLEY           |
| NEW MEXICO BUSINESS WEEKLY     | 87102-3404 | MID VALLEY           |
| PETROGLYPH PRINTING            | 87193-5717 | MID VALLEY           |
| PILKINGTON NORTH AMERICA INC   | 87102-1413 | MID VALLEY           |
| PROFESSIONAL EQUIPMENT REPAIR  | 87102-1402 | MID VALLEY           |
| R & C STAGELINES INC           | 87125-6356 | MID VALLEY           |
| REYES ORNAMENTAL SUPPLY        | 87102-2324 | MID VALLEY           |
| RJR SCREEN PRINT               | 87102-1217 | MID VALLEY           |
| ROSES SOUTHWEST PAPERS INC     | 87102-4505 | MID VALLEY           |
| SANTA FE DOOR STORE INC        | 87102-4504 | MID VALLEY           |
| SAWMILL SOUND                  | 87102-1260 | MID VALLEY           |
| SILENT FALCON UAS              | 87102-3453 | MID VALLEY           |
| SILVER MOUNTAIN DESIGNS        | 87104-1448 | MID VALLEY           |
| SILVERADO-ORTIZ FASHIONS       | 87102-1417 | MID VALLEY           |
| SOUTHWEST CREATIONS CLLBRTV    | 87102-1417 | MID VALLEY           |
| SOUTHWESTERN FILM SVC          | 87102-1553 | MID VALLEY           |
| SUNWEST SILVER CO INC          | 87125-0227 | MID VALLEY           |
| SUPREME BEDDING MFR            | 87102-2342 | MID VALLEY           |
| THEFRSHPRNTS                   | 87102-3104 | MID VALLEY           |
| TILES DE SANTA FE              | 87102-2434 | MID VALLEY           |
| TIMBERWELD MANUFACTURING       | 87102-1710 | MID VALLEY           |
| TWO BROTHERS STEEL INDUSTRIES  | 87102-1288 | MID VALLEY           |
| UNIVERSITY NEW MEXICO PRESS    | 87106-4509 | MID VALLEY           |
| UNIVERSITY NEW MEXICO PRESS    | 87106-3807 | MID VALLEY           |
| VANGUARD PRINTING CO           | 87102-1456 | MID VALLEY           |
| WEEKLY ALIBI                   | 87102-3219 | MID VALLEY           |
| WMC SERVICES                   | 87102-1908 | MID VALLEY           |
| WOODSTONE INDUSTRIES           | 87102-1874 | MID VALLEY           |
| XLTSIRT.COM                    | 87104-2198 | MID VALLEY           |
| ZEON SIGNS                     | 87102-1306 | MID VALLEY           |
| ZTRON 1000 INDUSTRIES          | 87102-4135 | MID VALLEY           |
| ASSEMBLY REQUIRED              | 87120-5010 | MONTANO ROAD OUTFALL |
| JEAN GAUTREAU JEWELRY ASSEMBLY | 87120-5010 | MONTANO ROAD OUTFALL |
| SANDIA SOAP CO                 | 87120-5403 | MONTANO ROAD OUTFALL |
| SOUTHWEST PROFESSIONAL         | 87120-2379 | MONTANO ROAD OUTFALL |
| BIEN MUR TRAVEL CTR SMOKE SHOP | 87113-2154 | NORTH CAMINO         |
| CABOT SUPERIOR MICRO POWDERS   | 87113-2375 | NORTH CAMINO         |
| CLEAN INDUSTRIES               | 87113-2131 | NORTH CAMINO         |
| DIEBOLD INC                    | 87113-2208 | NORTH CAMINO         |
| FUEL CELL TECHNOLOGIES INC     | 87113-2349 | NORTH CAMINO         |

Industrial Facilities within COA MS4 Boundary

| Name                          | Zip        | Drainage Basin          |
|-------------------------------|------------|-------------------------|
| GENESIS SIGNS & GRAPHICS      | 87113-1400 | NORTH CAMINO            |
| JULMARK GROUP                 | 87113-2434 | NORTH CAMINO            |
| M R JOURNAL CTR               | 87113-2208 | NORTH CAMINO            |
| MIOX CORP                     | 87113-2104 | NORTH CAMINO            |
| MODERN SECURITY SYSTEMS CORP  | 87113-2350 | NORTH CAMINO            |
| PATTERSON DENTAL SUPPLY CO    | 87113-2313 | NORTH CAMINO            |
| WONIK QUARTZ INTL CORP        | 87113-2104 | NORTH CAMINO            |
| A-1 MASTER MOLD & CASTING SVC | 87109-5805 | NORTH DIVERSION CHANNEL |
| ALBUQUERQUES SIGN CRAFTERS    | 87113-1551 | NORTH DIVERSION CHANNEL |
| ALL TYPE PRINTING             | 87109-5842 | NORTH DIVERSION CHANNEL |
| ALPHA GRAPHICS                | 87109-4461 | NORTH DIVERSION CHANNEL |
| APRIA HEALTHCARE              | 87109-2224 | NORTH DIVERSION CHANNEL |
| ARCADIA INC                   | 87109-2107 | NORTH DIVERSION CHANNEL |
| AUTOMATION CONCEPTS INC       | 87109-2126 | NORTH DIVERSION CHANNEL |
| BOEING CO                     | 87109-5858 | NORTH DIVERSION CHANNEL |
| BRIGHT IDEAS                  | 87109-2325 | NORTH DIVERSION CHANNEL |
| BUD'S DRAPERY DEN             | 87109-2224 | NORTH DIVERSION CHANNEL |
| C G PRINTERS                  | 87107-4305 | NORTH DIVERSION CHANNEL |
| CABOT SUPERIOR MICRO POWDERS  | 87113-1846 | NORTH DIVERSION CHANNEL |
| CARE FUSION                   | 87109-4457 | NORTH DIVERSION CHANNEL |
| CHASE ERGONOMICS INC          | 87109-5806 | NORTH DIVERSION CHANNEL |
| CTS ELECTRONICS COMPONENTS    | 87113-1647 | NORTH DIVERSION CHANNEL |
| DARANT DISTRIBUTION           | 87113-1538 | NORTH DIVERSION CHANNEL |
| DARCO PRODUCTS INC            | 87113-1671 | NORTH DIVERSION CHANNEL |
| DESERT ROSE TRADING           | 87109-2106 | NORTH DIVERSION CHANNEL |
| DESIGN SILK SCREEN PRINTERS   | 87109-2316 | NORTH DIVERSION CHANNEL |
| DIVERSIFIED TOOLING CORP      | 87113-1678 | NORTH DIVERSION CHANNEL |
| DU BERRY'S GRAPHICS           | 87107-4305 | NORTH DIVERSION CHANNEL |
| DUKE CITY PLATING & BUMPER    | 87107-1940 | NORTH DIVERSION CHANNEL |
| FIVESTAR JEWELRY MFR          | 87108-1436 | NORTH DIVERSION CHANNEL |
| FORMS PLUS INC                | 87176-6141 | NORTH DIVERSION CHANNEL |
| GEM STATE DISTRIBUTORS INC    | 87109-5823 | NORTH DIVERSION CHANNEL |
| GOLD SILK INC                 | 87199-4508 | NORTH DIVERSION CHANNEL |
| GULF INDUSTRIES               | 87110-2850 | NORTH DIVERSION CHANNEL |
| HEALTH PRESS                  | 87110-2883 | NORTH DIVERSION CHANNEL |
| HT MICROANALYTICAL INC        | 87109-4410 | NORTH DIVERSION CHANNEL |
| IMM INC                       | 87109-5842 | NORTH DIVERSION CHANNEL |
| INTEGRATED MACHINING CO       | 87109-2106 | NORTH DIVERSION CHANNEL |
| INTERNATIONAL GAME TECHNOLOGY | 87113-1671 | NORTH DIVERSION CHANNEL |
| J B & SON'S MACHINING         | 87113-1666 | NORTH DIVERSION CHANNEL |
| JACOB'S WOODWORKING           | 87107-1917 | NORTH DIVERSION CHANNEL |
| JANE ASHLEIGH MONOGRAMMING    | 87110-2850 | NORTH DIVERSION CHANNEL |
| J-H SUPPLY CO                 | 87113-1460 | NORTH DIVERSION CHANNEL |

Industrial Facilities within COA MS4 Boundary

| Name                         | Zip        | Drainage Basin          |
|------------------------------|------------|-------------------------|
| KTF RESEARCH                 | 87106-2536 | NORTH DIVERSION CHANNEL |
| LAFARGE NORTH AMERICA        | 87109-5867 | NORTH DIVERSION CHANNEL |
| M H PRINTING INK CORP        | 87107-4305 | NORTH DIVERSION CHANNEL |
| MARPAC MEDICAL DEVICE MFG    | 87113-1671 | NORTH DIVERSION CHANNEL |
| MASTERCRAFT CABINETS         | 87109-2142 | NORTH DIVERSION CHANNEL |
| MATERION ADVANCED MATERIALS  | 87109-5855 | NORTH DIVERSION CHANNEL |
| MICROS SYSTEMS INC           | 87109-2202 | NORTH DIVERSION CHANNEL |
| MONTIEL'S CUSTOM PLASTICS    | 87107-1906 | NORTH DIVERSION CHANNEL |
| MPC DESIGN TECHNOLOGIES      | 87113-1665 | NORTH DIVERSION CHANNEL |
| NEW MEXICO FAMILY MAGAZINE   | 87110-2826 | NORTH DIVERSION CHANNEL |
| NEW MEXICO SHOPPING CART     | 87110-2810 | NORTH DIVERSION CHANNEL |
| OBREGON SW LLC               | 87113-1666 | NORTH DIVERSION CHANNEL |
| OFFICE MAX                   | 87109-5820 | NORTH DIVERSION CHANNEL |
| PRINT STOP                   | 87110-3141 | NORTH DIVERSION CHANNEL |
| S & N MACHINING              | 87107-1940 | NORTH DIVERSION CHANNEL |
| SAFETY FLARE INC             | 87107-1999 | NORTH DIVERSION CHANNEL |
| SENNHEISER MANUFACTURING USA | 87113-1934 | NORTH DIVERSION CHANNEL |
| SERBIN MACHINING INC         | 87113-1935 | NORTH DIVERSION CHANNEL |
| SILVER OWL INC               | 87110-2853 | NORTH DIVERSION CHANNEL |
| SIMPLEX GRINNELL             | 87109-5800 | NORTH DIVERSION CHANNEL |
| STEPHAN'S SIGN STOP          | 87113-1547 | NORTH DIVERSION CHANNEL |
| SUNDANCER JEWELRY CO         | 87109-5822 | NORTH DIVERSION CHANNEL |
| TAKACH PRESS CORP            | 87110-1620 | NORTH DIVERSION CHANNEL |
| TEAM SYNERGY                 | 87109-5833 | NORTH DIVERSION CHANNEL |
| TEIFS WALL SYSTEMS           | 87113-1542 | NORTH DIVERSION CHANNEL |
| THOMPSON MACHINE             | 87113-1671 | NORTH DIVERSION CHANNEL |
| TOLTEC INDUSTRIAL SVC GROUP  | 87113-1582 | NORTH DIVERSION CHANNEL |
| TONER STOP NEW MEXICO        | 87109-4461 | NORTH DIVERSION CHANNEL |
| TRADER PUBLISHING CO         | 87109-4461 | NORTH DIVERSION CHANNEL |
| ULTIMATE VACUUM DESIGN       | 87106-2603 | NORTH DIVERSION CHANNEL |
| VULCAN MATERIALS CO          | 87113-1054 | NORTH DIVERSION CHANNEL |
| WEST TEXAS EXPRESS           | 87109-2248 | NORTH DIVERSION CHANNEL |
| WHITE CAP INDUSTRIES         | 87109-4579 | NORTH DIVERSION CHANNEL |
| WINMER TECHNOLOGY INNOVATORS | 87109-4449 | NORTH DIVERSION CHANNEL |
| ZIA GRAPHICS EMBROIDERY      | 87110-2804 | NORTH DIVERSION CHANNEL |
| ZUNA CORP                    | 87113-1549 | NORTH DIVERSION CHANNEL |
| ALBUQUERQUE PLANT            | 87199-0820 | NORTH PINO              |
| ALBUQUERQUE PUBLISHING CO    | 87103-1138 | NORTH PINO              |
| ALPHA SEPTIC TANK CO         | 87199-2168 | NORTH PINO              |
| APPLE CANYON                 | 87191-6494 | NORTH PINO              |
| CENTZ AMERICAN GYPSUM CO     | 87113-1535 | NORTH PINO              |
| CRYOGENIC TRANSPORTATION     | 87109-5708 | NORTH PINO              |
| DEMAND PRINTING SOLUTIONS    | 87109-5534 | NORTH PINO              |

Industrial Facilities within COA MS4 Boundary

| Name                           | Zip        | Drainage Basin    |
|--------------------------------|------------|-------------------|
| EQUIPMENT SPECIALITIES CO INC  | 87154-0039 | NORTH PINO        |
| FINANCIAL NEWS                 | 87109-4343 | NORTH PINO        |
| HIP STITCH                     | 87109-4873 | NORTH PINO        |
| JLJ SIGNS                      | 87109-4638 | NORTH PINO        |
| LEGACY MEDIA INC               | 87109-4966 | NORTH PINO        |
| OGB ARCHITECTURAL MILLWORK     | 87113-1522 | NORTH PINO        |
| PANTHER HOLLOW PRESS           | 87109-6383 | NORTH PINO        |
| SCOTI'S FENCING CO INC         | 87109-4647 | NORTH PINO        |
| SEW SEW SHOP                   | 87109-5070 | NORTH PINO        |
| SOUTHWEST BLIND FACTORY        | 87109-4648 | NORTH PINO        |
| WEYERHAEUSER CO                | 87111-5888 | NORTH PINO        |
| A J DESIGNS                    | 87107-6627 | NORTH VALLEY EAST |
| ALAMEDA PRINTING CO            | 87114-1606 | NORTH VALLEY EAST |
| ALBUQUERQUE GARAGE DOOR SALES  | 87107-5445 | NORTH VALLEY EAST |
| ALBUQUERQUE THE MAGAZINE       | 87107-7000 | NORTH VALLEY EAST |
| BEETLEDOME PUBLISHING          | 87107-5711 | NORTH VALLEY EAST |
| BI RA SYSTEMS INC              | 87107-3229 | NORTH VALLEY EAST |
| BROTHERS PLATING               | 87107-6116 | NORTH VALLEY EAST |
| CABINET MANUFACTURING          | 87107-6670 | NORTH VALLEY EAST |
| CASA RONDENA WINERY            | 87107-5600 | NORTH VALLEY EAST |
| CER-COMP TOOLS & TECHNICAL     | 87107-5816 | NORTH VALLEY EAST |
| COUGAR PUBLISHING              | 87107-5853 | NORTH VALLEY EAST |
| COUNTER INTELLIGENCE           | 87114-1407 | NORTH VALLEY EAST |
| DIGITAL INFERNO                | 87107-5309 | NORTH VALLEY EAST |
| DISCOUNT PRINTING              | 87107-5436 | NORTH VALLEY EAST |
| EARTH GRAINS BAKING CO         | 87107-5028 | NORTH VALLEY EAST |
| G L CREATIONS                  | 87114-2031 | NORTH VALLEY EAST |
| GEO-GRAPHICS LETTERING & DSGN  | 87114-2016 | NORTH VALLEY EAST |
| GREEN VALLEY MEATS             | 87107-6116 | NORTH VALLEY EAST |
| G-T STAINED GLASS & TIN        | 87114-1055 | NORTH VALLEY EAST |
| IEC ALBUQUERQUE                | 87107-4925 | NORTH VALLEY EAST |
| INSITUS BIOTECHNOLOGIES        | 87107-5853 | NORTH VALLEY EAST |
| J & J PRINTING                 | 87107-5320 | NORTH VALLEY EAST |
| JOLIESSE CHOCOLATES            | 87107-6100 | NORTH VALLEY EAST |
| KNIFE GUYS                     | 87107-6670 | NORTH VALLEY EAST |
| LA ALAMETA PRESS               | 87114-2005 | NORTH VALLEY EAST |
| LAFARGE NORTH AMERICA          | 87107-7002 | NORTH VALLEY EAST |
| LITURGICAL PUBLICATIONS        | 87107-6148 | NORTH VALLEY EAST |
| LPD ENTERPRISES                | 87107-5647 | NORTH VALLEY EAST |
| MEDIA WORKS HALO BRANDED SLTNS | 87107-3244 | NORTH VALLEY EAST |
| NEW MEXICO STOCKMAN            | 87194-7127 | NORTH VALLEY EAST |
| NEXUS BREWERY                  | 87109-2203 | NORTH VALLEY EAST |
| NORTHWESTERN WOODWORK INC      | 87107-6670 | NORTH VALLEY EAST |

Industrial Facilities within COA MS4 Boundary

| Name                           | Zip        | Drainage Basin    |
|--------------------------------|------------|-------------------|
| PRINT-MART                     | 87107-6117 | NORTH VALLEY EAST |
| RAYSTEEL INC                   | 87114-1655 | NORTH VALLEY EAST |
| RESOLUTION GRAPHICS            | 87107-6830 | NORTH VALLEY EAST |
| STRUT SUPPORT & FAB LLC        | 87107-6633 | NORTH VALLEY EAST |
| SUBZERO MEDIA PRODUCTIONS      | 87114-1214 | NORTH VALLEY EAST |
| SUPERLOOPER MAGAZINE INC       | 87107-6629 | NORTH VALLEY EAST |
| TAMBRIAN LIMITED               | 87107-6624 | NORTH VALLEY EAST |
| VITAL SIGNS                    | 87107-6103 | NORTH VALLEY EAST |
| WATER SYSTEMS MANAGEMENT INC   | 87114-2115 | NORTH VALLEY EAST |
| WILSON'S DISCOUNT AXLES        | 87107-6633 | NORTH VALLEY EAST |
| WRIGHT PUBLISHING CO INC       | 87114-1131 | NORTH VALLEY EAST |
| BELLEVILLE F FACTORY           | 87114-5749 | PIEDRAS MARCADAS  |
| COON CHARLES SIGN & LIGHT      | 87114-5717 | PIEDRAS MARCADAS  |
| DYNAMITE LLC                   | 87120-5841 | PIEDRAS MARCADAS  |
| GRAHAM INDUSTRIES              | 87114-4313 | PIEDRAS MARCADAS  |
| GUSTAFSON MACHINE SVC          | 87120-2854 | PIEDRAS MARCADAS  |
| SEW CUTE TOO CUTE              | 87120-3865 | PIEDRAS MARCADAS  |
| UNDER HEDGEROW                 | 87120-5215 | PIEDRAS MARCADAS  |
| WILLIAMS PUBLISHING CO LLC     | 87120-5219 | PIEDRAS MARCADAS  |
| AMERISTAR CONSTRUCTION INC     | 87121-7136 | RAYMAC DAM        |
| CORESLAB STRUCTURES            | 87102-5002 | RIO GRANDE        |
| AMGEN INC                      | 87120-4824 | SAN ANTONIO       |
| BUILDING CONNECTIONS           | 87120-2029 | SAN ANTONIO       |
| COVENANT PRINTING              | 87120-4423 | SAN ANTONIO       |
| CUSTOM FABRICATORS INC         | 87120-2057 | SAN ANTONIO       |
| KOSKEY ENTERPRISES             | 87120-1918 | SAN ANTONIO       |
| LATINO BEATZ                   | 87120-2010 | SAN ANTONIO       |
| MAVERICK PUBLISHING            | 87120-3503 | SAN ANTONIO       |
| ROCKY MOUNTAIN BREWING CO LTD  | 87120-1918 | SAN ANTONIO       |
| SANDIA MILLWORK                | 87193-6376 | SAN ANTONIO       |
| SIMS & SHUMAKER INDUSTRIES LLC | 87120-3205 | SAN ANTONIO       |
| TEMPLETON MARKETING SVC INC    | 87120-4818 | SAN ANTONIO       |
| TIMBERLINE MACHINING           | 87120-3397 | SAN ANTONIO       |
| 2ND DEGREE MEDIA               | 87106-4740 | SAN JOSE DRAIN    |
| BAR X BRAND BEEF JERKY         | 87102-4645 | SAN JOSE DRAIN    |
| BENCHMARK BUSINESS SOLUTIONS   | 87102-4705 | SAN JOSE DRAIN    |
| BNSF RAILWAY CO                | 87102-5131 | SAN JOSE DRAIN    |
| C A SYSTEMS INC                | 87102-3944 | SAN JOSE DRAIN    |
| C H TAYLOR CO                  | 87102-5040 | SAN JOSE DRAIN    |
| CEI ENTERPRISES INC            | 87119-9156 | SAN JOSE DRAIN    |
| DUKE CITY TRANSFER & STORAGE   | 87102-4764 | SAN JOSE DRAIN    |
| DURAN STEEL FABRICATORS        | 87105-0617 | SAN JOSE DRAIN    |
| GULF STATES TRANSPORT          | 87102-5131 | SAN JOSE DRAIN    |

Industrial Facilities within COA MS4 Boundary

| Name                           | Zip        | Drainage Basin          |
|--------------------------------|------------|-------------------------|
| HOFFMAN ENTERPRISES INC        | 87105-0818 | SAN JOSE DRAIN          |
| HOWER INDUSTRIES               | 87102-4223 | SAN JOSE DRAIN          |
| KARSTEN HOMES                  | 87102-5082 | SAN JOSE DRAIN          |
| KEITH'S KREATIONS              | 87102-5070 | SAN JOSE DRAIN          |
| LATINO VOICES PUBLISHING       | 87102-3624 | SAN JOSE DRAIN          |
| LOPEZ ORNAMENTAL               | 87102-4960 | SAN JOSE DRAIN          |
| LOZOYA CUSTOM WROUGHT IRON     | 87102-4432 | SAN JOSE DRAIN          |
| MAX F CHAVEZ CUSTOM DOORS FURN | 87102-3926 | SAN JOSE DRAIN          |
| OLD DOMINION FREIGHT LINE INC  | 87102-5073 | SAN JOSE DRAIN          |
| PHOENIX FORRESTER JEWELRY      | 87102-3694 | SAN JOSE DRAIN          |
| RECYCLE WOOD YOU               | 87105-0683 | SAN JOSE DRAIN          |
| RITE-WAY PALLET MFG CO INC     | 87105-0406 | SAN JOSE DRAIN          |
| SIERRA MOUNTAIN EXPRESS        | 87102-5131 | SAN JOSE DRAIN          |
| WATERJET CUTTING INC           | 87102-5068 | SAN JOSE DRAIN          |
| WESTERN MERCANTILE INC         | 87105-5901 | SAN JOSE DRAIN          |
| WESTERN REFINING INC           | 87105-0401 | SAN JOSE DRAIN          |
| WISE RECYCLING LLC             | 87102-5011 | SAN JOSE DRAIN          |
| ZERO DEBT BOTTLING LTD CO      | 87102-3906 | SAN JOSE DRAIN          |
| A C CASTING                    | 87106-1611 | SOUTH DIVERSION CHANNEL |
| ACE REBAR INC                  | 87192-1397 | SOUTH DIVERSION CHANNEL |
| ACIM                           | 87106-3208 | SOUTH DIVERSION CHANNEL |
| ALSTATE STEEL                  | 87105-0813 | SOUTH DIVERSION CHANNEL |
| ARROW ENTERPRISES INC          | 87196-0060 | SOUTH DIVERSION CHANNEL |
| ARROWHAWK INDUSTRIES           | 87106-3157 | SOUTH DIVERSION CHANNEL |
| ATK AEROSPACE SYSTEMS          | 87106-4291 | SOUTH DIVERSION CHANNEL |
| BALL AEROSPACE & TECH CORP     | 87106-3157 | SOUTH DIVERSION CHANNEL |
| BALL AEROSPACE & TECHNOLOGIES  | 87106-4290 | SOUTH DIVERSION CHANNEL |
| CINESTAR MOTION PICTURES       | 87106-3591 | SOUTH DIVERSION CHANNEL |
| CRIANZA WINES LTD INC          | 87106-4131 | SOUTH DIVERSION CHANNEL |
| D & R TANK CO INC              | 87105-0672 | SOUTH DIVERSION CHANNEL |
| DIMESTORE COWBOYS              | 87106-4534 | SOUTH DIVERSION CHANNEL |
| DRAGON BOTANICALS INC          | 87106-2805 | SOUTH DIVERSION CHANNEL |
| ELFINART                       | 87106-3522 | SOUTH DIVERSION CHANNEL |
| ETHICON ENDO-SURGERY INC       | 87106-5605 | SOUTH DIVERSION CHANNEL |
| G S NEW MEXICO SILVER CASTING  | 87106-4351 | SOUTH DIVERSION CHANNEL |
| GOPA & TED2 INC                | 87108-3318 | SOUTH DIVERSION CHANNEL |
| HERRERA INDUSTRIES INC         | 87106-4853 | SOUTH DIVERSION CHANNEL |
| JH PACKAGING DPC               | 87106-5605 | SOUTH DIVERSION CHANNEL |
| LIBRATION SYSTEMS MANAGEMENT   | 87106-4229 | SOUTH DIVERSION CHANNEL |
| LITHEXCEL                      | 87106-3204 | SOUTH DIVERSION CHANNEL |
| M M ROGERS STUDIO              | 87106-3226 | SOUTH DIVERSION CHANNEL |
| MASHA MANUFACTURING            | 87106-2248 | SOUTH DIVERSION CHANNEL |
| MIRI TEXTILES                  | 87106-2806 | SOUTH DIVERSION CHANNEL |



Industrial Facilities within COA MS4 Boundary

| Name                          | Zip        | Drainage Basin          |
|-------------------------------|------------|-------------------------|
| NEUTRON ENERGY INC            | 87106-4276 | SOUTH DIVERSION CHANNEL |
| PICA PROGRAMS                 | 87108-3318 | SOUTH DIVERSION CHANNEL |
| RED SKY PLATING               | 87106-5224 | SOUTH DIVERSION CHANNEL |
| RED STAR INDUSTRIES           | 87106-3325 | SOUTH DIVERSION CHANNEL |
| ROBERT SALAZAR TRUCKING       | 87105-0841 | SOUTH DIVERSION CHANNEL |
| RUBEN'S MEXICAN FOOD INC      | 87106-4828 | SOUTH DIVERSION CHANNEL |
| SCHAFFER CORP                 | 87106-4275 | SOUTH DIVERSION CHANNEL |
| SKY-WAY TRADING CO INC        | 87106-2248 | SOUTH DIVERSION CHANNEL |
| SMARTE CARTE INC              | 87106-3247 | SOUTH DIVERSION CHANNEL |
| STIXON LABELS & NM PLASTICS   | 87106-5618 | SOUTH DIVERSION CHANNEL |
| STOCK COMPONENTS              | 87105-3093 | SOUTH DIVERSION CHANNEL |
| TECH 505                      | 87105-0832 | SOUTH DIVERSION CHANNEL |
| TOTAL CHARTER SVC             | 87191-6026 | SOUTH DIVERSION CHANNEL |
| TRACTOR BREWING CO            | 87106-1440 | SOUTH DIVERSION CHANNEL |
| UNM DIGITAL PRINTING          | 87131-0001 | SOUTH DIVERSION CHANNEL |
| UNM PRESS                     | 87106-4276 | SOUTH DIVERSION CHANNEL |
| U-PULL & PAY                  | 87105-7404 | SOUTH DIVERSION CHANNEL |
| US TRANSPORT & LOGISTICS      | 87105-0812 | SOUTH DIVERSION CHANNEL |
| VISUAL FX MEDIA               | 87108-3385 | SOUTH DIVERSION CHANNEL |
| XEROX                         | 87106-4256 | SOUTH DIVERSION CHANNEL |
| 21ST CENTURY BUSINESS SVC     | 87109-3513 | SOUTH PINO              |
| ALBUQUERQUE CABINETS INC      | 87109-4323 | SOUTH PINO              |
| ALBUQUERQUE WINDUSTRIAL       | 87199-3400 | SOUTH PINO              |
| APARTMENT GUIDE               | 87111-7239 | SOUTH PINO              |
| B J WELDING SVC               | 87109-4409 | SOUTH PINO              |
| BEAR SALES                    | 87199-4983 | SOUTH PINO              |
| BIMBO BAKERIES USA            | 87109-4511 | SOUTH PINO              |
| BRADY INDUSTRIES INC          | 87109-4404 | SOUTH PINO              |
| BUSINESS GRAPHICS             | 87122-1001 | SOUTH PINO              |
| CHUCK'S SNACKS & BEVERAGES    | 87111-7369 | SOUTH PINO              |
| CNC MACHINING                 | 87109-4518 | SOUTH PINO              |
| CONTINENTAL MACHINING CO INC  | 87109-4491 | SOUTH PINO              |
| CROCHET PUPPETS               | 87109-4053 | SOUTH PINO              |
| CUSTOM FABRICATORS INC        | 87109-4348 | SOUTH PINO              |
| DB BREWERY                    | 87111-5807 | SOUTH PINO              |
| DESERT SEA PUBLISHING CO      | 87109-3519 | SOUTH PINO              |
| DESIGN/DEVMNT ENGINEERING SVC | 87109-4540 | SOUTH PINO              |
| DISTAR INC                    | 87109-4581 | SOUTH PINO              |
| DOCUMENTS SOUTHWEST           | 87109-4531 | SOUTH PINO              |
| DREAM WEAVER DESIGNS LLC      | 87109-4370 | SOUTH PINO              |
| ELKAY MANUFACTURING CO        | 87109-4558 | SOUTH PINO              |
| ERICKSON ENTERPRISES          | 87109-3539 | SOUTH PINO              |
| ERVIN PUBLISHING CO           | 87109-4067 | SOUTH PINO              |

Industrial Facilities within COA MS4 Boundary

| Name                        | Zip        | Drainage Basin   |
|-----------------------------|------------|------------------|
| GE INTELLIGENT PLATFORMS    | 87109-4358 | SOUTH PINO       |
| GLEN ROSE INSTRUMENTS INC   | 87111-7371 | SOUTH PINO       |
| INTEGRAL CORP               | 87109-4514 | SOUTH PINO       |
| INTEGRITY DESIGNS MFG       | 87109-4107 | SOUTH PINO       |
| K & A WIRELESS              | 87111-6587 | SOUTH PINO       |
| KNOCKOUT METALWORX          | 87109-4311 | SOUTH PINO       |
| LONGABERGER                 | 87109-6900 | SOUTH PINO       |
| MACH 2 MACHINING & MFG      | 87109-4344 | SOUTH PINO       |
| MACHINING SOLUTIONS LLC     | 87109-4532 | SOUTH PINO       |
| MATERION CORP               | 87109-4418 | SOUTH PINO       |
| MCT STORAGE CUBE            | 87109-4645 | SOUTH PINO       |
| MOJO GRAFX                  | 87109-4544 | SOUTH PINO       |
| NW MEDIA LITERACY PROJECT   | 87109-3843 | SOUTH PINO       |
| PRESSURE KING INC           | 87111-1037 | SOUTH PINO       |
| PRINTERS PRESS INC          | 87109-4538 | SOUTH PINO       |
| REDDY ICE                   | 87109-4645 | SOUTH PINO       |
| SANDIA GRAPHICS             | 87109-4311 | SOUTH PINO       |
| SIG-A-RAMA                  | 87109-4321 | SOUTH PINO       |
| SIGNARAMA                   | 87109-4321 | SOUTH PINO       |
| SOUTHWEST CUSTOM STAINLESS  | 87109-4370 | SOUTH PINO       |
| SUCCESS IN SOCCER           | 87109-4600 | SOUTH PINO       |
| SUN COUNTRY INDUSTRIES      | 87199-3490 | SOUTH PINO       |
| TORTILLA PRESS              | 87109-4355 | SOUTH PINO       |
| TPL INC                     | 87109-4416 | SOUTH PINO       |
| UNITED OFFSET SUPPLY        | 87109-4524 | SOUTH PINO       |
| YUKON & ASSOC               | 87109-4509 | SOUTH PINO       |
| A-1 AUTO SALVAGE            | 87105-7429 | SOUTHEAST VALLEY |
| B & G TRUCK SALVAGE INC     | 87105-7618 | SOUTHEAST VALLEY |
| BROADWAY INDUSTRIES INC     | 87105-7423 | SOUTHEAST VALLEY |
| BROWN-MINNEAPOLIS TANK      | 87105-7453 | SOUTHEAST VALLEY |
| COASTAL TRANSPORT CO INC    | 87105-7425 | SOUTHEAST VALLEY |
| HUTCHENS TRUCKING CO        | 87105-7437 | SOUTHEAST VALLEY |
| J W INDUSTRIES INC          | 87105-7473 | SOUTHEAST VALLEY |
| ONATE FEED CO LLC           | 87105-7483 | SOUTHEAST VALLEY |
| PACE IRON WORKS             | 87105-7828 | SOUTHEAST VALLEY |
| TRI-TECH MACHINE TOOL CO    | 87105-7620 | SOUTHEAST VALLEY |
| WESTERN ORGANICS/GRO-WELL   | 87105-7595 | SOUTHEAST VALLEY |
| AAA CARCASS REMOVAL         | 87121-4327 | SOUTHWEST VALLEY |
| ACTION VACUUM SALES & SVC   | 87105-4717 | SOUTHWEST VALLEY |
| ADVANCED GALVANICS PMB316   | 87105-6059 | SOUTHWEST VALLEY |
| ALBERT SANCHEZ BUS CO       | 87105-7152 | SOUTHWEST VALLEY |
| ANOINTED GOD PTHFNDR ELIJAH | 87105-3152 | SOUTHWEST VALLEY |
| ARMANDO                     | 87105-6367 | SOUTHWEST VALLEY |

Industrial Facilities within COA MS4 Boundary

| Name                           | Zip        | Drainage Basin   |
|--------------------------------|------------|------------------|
| BORN FREE SCRAP METAL          | 87105-6772 | SOUTHWEST VALLEY |
| CMY INC                        | 87121-2517 | SOUTHWEST VALLEY |
| DAWN ELECTRONIC'S              | 87105-6511 | SOUTHWEST VALLEY |
| DESIGNS BY SANEL               | 87121-4233 | SOUTHWEST VALLEY |
| ESPERANZA BOOKBINDERY          | 87105-6563 | SOUTHWEST VALLEY |
| FAYS CURTAIN & DRAPERIES       | 87105-6805 | SOUTHWEST VALLEY |
| FIVE LITTLE CRANES             | 87105-6419 | SOUTHWEST VALLEY |
| FUTURISTIC SIGNS & GRAFX       | 87121-5019 | SOUTHWEST VALLEY |
| FUTURISTIC SIGNS & GRAFX       | 87105-1847 | SOUTHWEST VALLEY |
| GALLEGOS SERVICES              | 87105-7183 | SOUTHWEST VALLEY |
| HIDYN SECRETS BODY CARE        | 87105-4903 | SOUTHWEST VALLEY |
| MANUFACTURING TECHNOLOGIES INC | 87121-3422 | SOUTHWEST VALLEY |
| MOTHER NATURE GARDENS          | 87105-1609 | SOUTHWEST VALLEY |
| NELSON'S MEATS                 | 87121-3307 | SOUTHWEST VALLEY |
| P S G EMBROIDERY               | 87121-3208 | SOUTHWEST VALLEY |
| PADILLA'S CABINET SHOP         | 87105-5603 | SOUTHWEST VALLEY |
| PROGRESSIVE SCREEN PRINTING GR | 87105-7107 | SOUTHWEST VALLEY |
| PRO'S COLLISION                | 87105-2040 | SOUTHWEST VALLEY |
| QUALITY PRINTS BY VONNIE       | 87105-3729 | SOUTHWEST VALLEY |
| RALPH TRIMNELL MODEL MAKER     | 87105-3916 | SOUTHWEST VALLEY |
| SABROSO FOODS                  | 87105-3721 | SOUTHWEST VALLEY |
| SANDIA FOODS INC               | 87105-6371 | SOUTHWEST VALLEY |
| SCHAN INDUSTRY REPR & INSTALL  | 87105-4969 | SOUTHWEST VALLEY |
| SOS MOBILE IRON WORKS          | 87121-4240 | SOUTHWEST VALLEY |
| SOUTH COORS TRUCK SALVAGE      | 87121-3450 | SOUTHWEST VALLEY |
| SOUTHWEST AUTOMOTIVE PAINTS    | 87105-4679 | SOUTHWEST VALLEY |
| SUN COUNTRY SOFTWARE INC       | 87105-7046 | SOUTHWEST VALLEY |
| SUNBELT SHOWS                  | 87105-6001 | SOUTHWEST VALLEY |
| TAYLOR MADE GRAFFIX            | 87105-4539 | SOUTHWEST VALLEY |
| THIN KING PRESS                | 87105-6706 | SOUTHWEST VALLEY |
| TIERRA ENCANTADA WINERY        | 87105-3020 | SOUTHWEST VALLEY |
| ADROIT INNOVATION              | 87123-2405 | TIJERAS ARROYO   |
| AEROSPACE CORP                 | 87117-0001 | TIJERAS ARROYO   |
| AIR PRODUCTS & CHEMICALS INC   | 87123-3835 | TIJERAS ARROYO   |
| ARROW HAWK INDUSTRIES          | 87123-4537 | TIJERAS ARROYO   |
| ARTHUR'S CREATIVE METAL WORKS  | 87123-2203 | TIJERAS ARROYO   |
| ATA AEROSPACE LLC              | 87123-3353 | TIJERAS ARROYO   |
| ATG PRODUCTIONS                | 87123-1808 | TIJERAS ARROYO   |
| BICH PHAM JEWELRY MFG          | 87123-5769 | TIJERAS ARROYO   |
| CADRE                          | 87123-4405 | TIJERAS ARROYO   |
| CARLA CAVALIER JEWELRY         | 87123-9686 | TIJERAS ARROYO   |
| CVI MELLES GRIOT               | 87123-3605 | TIJERAS ARROYO   |
| D R HORTON HOMES               | 87123-2472 | TIJERAS ARROYO   |

Industrial Facilities within COA MS4 Boundary

| Name                           | Zip        | Drainage Basin     |
|--------------------------------|------------|--------------------|
| DESERT AEROSPACE LLC           | 87123-3823 | TIJERAS ARROYO     |
| ECLIPSE AVIATION               | 87106-5611 | TIJERAS ARROYO     |
| EMCORE CORP                    | 87123-3452 | TIJERAS ARROYO     |
| GENERAL ASSEMBLY ALAMEDA CO    | 87123-2344 | TIJERAS ARROYO     |
| GERARD CASKET CO INC           | 87112-6366 | TIJERAS ARROYO     |
| HEELS                          | 87123-3423 | TIJERAS ARROYO     |
| INTUITIVE MOON MEDIA LLC       | 87123-4529 | TIJERAS ARROYO     |
| ORGANIC TECHNOLOGY INTL        | 87123-2269 | TIJERAS ARROYO     |
| PRALL PUBLISHING               | 87123-2323 | TIJERAS ARROYO     |
| SERVICES ALBUQUERQUE AERO      | 87106-5606 | TIJERAS ARROYO     |
| SNAP PRECISION MACHINING & FAB | 87123-1941 | TIJERAS ARROYO     |
| T M W SEWING & DESIGN          | 87123-2373 | TIJERAS ARROYO     |
| TASTY PUFF                     | 87123-3367 | TIJERAS ARROYO     |
| TRADEWINDS PUBLISHERS          | 87112-6355 | TIJERAS ARROYO     |
| TUTORIAL PRESS INC             | 87192-0123 | TIJERAS ARROYO     |
| VIBRANTE PRESS                 | 87123-1840 | TIJERAS ARROYO     |
| WECS INC MFG & MARKETING       | 87181-1508 | TIJERAS ARROYO     |
| WESTERN CLIPPINGS VIDEO WEST   | 87123-4321 | TIJERAS ARROYO     |
| R SULLY ENGRAVING              | 87120-1001 | VISTA GRANDE       |
| ALBUQUERQUE VAULT CO           | 87121-2000 | VISTA MAGNIFICA    |
| J J & G JEWELRY CO             | 87105-1552 | VISTA MAGNIFICA    |
| KELLI MCCOY CHOCOLATES         | 87105-1125 | VISTA MAGNIFICA    |
| MARIA'S INTERIORS              | 87105-1356 | VISTA MAGNIFICA    |
| OVATION PARAMEDIA              | 87105-1339 | VISTA MAGNIFICA    |
| TRIPHAMMER INDUSTRIES          | 87105-1051 | VISTA MAGNIFICA    |
| FEDEX FREIGHT                  | 87121-8674 | WEST BLUFF OUTFALL |
| METRO FLIER SVC                | 87121-1328 | WEST BLUFF OUTFALL |
| PRESS PLAY LLC                 | 87120-1704 | WEST BLUFF OUTFALL |
| RENATA PRESS                   | 87120-1736 | WEST BLUFF OUTFALL |
| RIX LOGGING                    | 87120-6067 | WEST BLUFF OUTFALL |
| SEW WHAT CUSTOM SEWING         | 87120-3941 | WEST BLUFF OUTFALL |
| SIGNS BY K B                   | 87120-1739 | WEST BLUFF OUTFALL |
| TEMPUR PRODUCTION USA LLC      | 87120-8674 | WEST BLUFF OUTFALL |

## **APPENDIX J: SUPPORTING DOCUMENTS FOR ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM**

| <b>No.</b> | <b>Description</b>                               |
|------------|--------------------------------------------------|
| J-1        | Illicit Discharge Detection and Elimination Plan |

## **APPENDIX J-1**

# City of Albuquerque Illicit Discharge Detection and Elimination Plan

Prepared for

City of Albuquerque, New Mexico

August 8, 2016



*Daniel B. Stephens & Associates, Inc.*

6020 Academy NE, Suite 100 • Albuquerque, New Mexico 87109

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# **City of Albuquerque**

## **Illicit Discharge Detection and Elimination Plan**

### **1. Introduction**

This illicit discharge detection and elimination (IDDE) plan has been prepared for the City of Albuquerque (the City) by Daniel B. Stephens & Associates, Inc. (DBS&A). This plan is intended to assist City staff in implementing the IDDE program. It is a guidance document for staff for activities related to IDDE. This document can also be used as a training tool to ensure that all staff members follow the same procedures in responding to illicit discharge concerns.

Under the City's previous municipal separate storm sewer system (MS4) permit (NMS000101, issued by the U.S. Environmental Protection Agency [EPA] in May 2012), the City was required to implement and enforce an IDDE program. In December 2014, the EPA released the final watershed-based MS4 permit NMR04A000, which requires the permittee to continue and update their existing IDDE program.

The City's IDDE program is managed by the Stormwater Management Section of the Department of Municipal Development. The City has a stormwater quality ordinance (Appendix A) and currently conducts dry weather screening, as well as inspections of industrial and high risk facilities. The City also maps potential illicit discharge incidences based on data collected from the call center reporting system.

### **2. Permit Requirements**

Part I.D.5.e (i)(c) of the watershed-based NPDES Permit No. NMR04A000 requires the permittee to “develop and implement a plan to detect and address non-stormwater discharges, including illegal dumping, to the MS4.” As part of the plan, procedures need to be developed to determine priority areas where illicit discharges may be likely; these procedures include visual screening of outfalls during dry weather.

The primary permit requirements for the IDDE plan include the following:

- Procedures for locating priority areas likely to have illicit discharges, including field tests for selected pollutant indicators (biochemical oxygen demand [BOD], sediment [total suspended solids (TSS)], *E. coli*, oil and grease, nutrients, ammonia, potassium, and surfactants. The analytical suite may be adjusted based on visual observation (e.g., sheen, suds/foam, dirt, color, and smell), and visually screening outfalls during dry weather.
- Procedures for enforcement, including enforcement escalation procedures for recalcitrant or repeat offenders.
- Procedures for removing the source of the discharge.
- Procedures for program evaluation and assessment.
- Procedures for coordination with adjacent municipalities and/or state, tribal, or federal regulatory agencies to address situations where investigations indicate that the illicit discharge originates outside the MS4 jurisdiction.

The permit requires that the entire jurisdiction of the entity be screened at least once every 5 years, and once a year for areas identified as high priority. As defined by the permit, high priority areas include “any area where there is ongoing evidence of illicit discharges or dumping, or where there are citizen complaints on more than (5) separate events within twelve (12) months.”

## **2.1 What Is Illicit Discharge?**

Illicit discharge is defined by the Permit as “. . . any discharge to a municipal separate storm sewer that is not composed entirely of stormwater except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from firefighting activities.” Examples of illicit discharges are summarized in Table 1.

**Table 1. Potential Sources of Illicit Discharges**

| Land Use      | Generating Site                                                                                                                                                                                                                                                                                                                                                                                                             | Activity that Produces Discharge                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Residential   | <ul style="list-style-type: none"> <li>• Apartments</li> <li>• Multi-family</li> <li>• Single-family detached</li> </ul>                                                                                                                                                                                                                                                                                                    | <ul style="list-style-type: none"> <li>• Car washing</li> <li>• Driveway cleaning</li> <li>• Dumping/spills (e.g., leaf litter and RV/boat holding tank effluent)</li> <li>• Equipment washdown</li> <li>• Lawn/landscape watering</li> <li>• Septic system maintenance</li> <li>• Swimming pool discharges</li> </ul>                                                                                                                            |
| Commercial    | <ul style="list-style-type: none"> <li>• Campgrounds/RV parks</li> <li>• Car dealers/rental car companies</li> <li>• Car washes</li> <li>• Commercial laundry/dry cleaning</li> <li>• Gas stations/auto repair shops</li> <li>• Marinas</li> <li>• Nurseries and garden centers</li> <li>• Oil change shops</li> <li>• Restaurants</li> <li>• Swimming pools</li> </ul>                                                     | <ul style="list-style-type: none"> <li>• Building maintenance (power washing)</li> <li>• Dumping/spills</li> <li>• Landscaping/grounds care (irrigation)</li> <li>• Outdoor fluid storage</li> <li>• Parking lot maintenance (power washing)</li> <li>• Vehicle fueling</li> <li>• Vehicle maintenance/repair</li> <li>• Vehicle washing</li> <li>• Washdown of greasy equipment and grease traps</li> <li>• All commercial activities</li> </ul> |
| Industrial    | <ul style="list-style-type: none"> <li>• Auto recyclers</li> <li>• Beverages and brewing</li> <li>• Construction vehicle washouts</li> <li>• Distribution centers</li> <li>• Food processing</li> <li>• Garbage truck washouts</li> <li>• Marinas, boat building and repair</li> <li>• Metal plating operations</li> <li>• Paper and wood products</li> <li>• Petroleum storage and refining</li> <li>• Printing</li> </ul> | <ul style="list-style-type: none"> <li>• Industrial process water or rinse water</li> <li>• Loading and unloading area washdown</li> <li>• Outdoor material storage (fluids)</li> </ul>                                                                                                                                                                                                                                                           |
| Institutional | <ul style="list-style-type: none"> <li>• Cemeteries</li> <li>• Churches</li> <li>• Corporate campuses</li> <li>• Hospitals</li> <li>• Schools and universities</li> </ul>                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>• Building maintenance (e.g., power washing)</li> <li>• Dumping/spills</li> <li>• Landscaping/grounds care (irrigation)</li> <li>• Parking lot maintenance (power washing)</li> <li>• Vehicle washing</li> </ul>                                                                                                                                                                                           |
| Municipal     | <ul style="list-style-type: none"> <li>• Airports</li> <li>• Landfills</li> <li>• Maintenance depots</li> <li>• Municipal fleet storage areas</li> <li>• Ports</li> <li>• Public works yards</li> <li>• Streets and highways</li> </ul>                                                                                                                                                                                     | <ul style="list-style-type: none"> <li>• Building maintenance (power washing)</li> <li>• Dumping/spills</li> <li>• Landscaping/grounds care (irrigation)</li> <li>• Outdoor fluid storage</li> <li>• Parking lot maintenance (power washing)</li> <li>• Road maintenance</li> <li>• Spill prevention/response</li> <li>• Vehicle fueling</li> <li>• Vehicle maintenance/repair</li> <li>• Vehicle washing</li> </ul>                              |

Source: Brown et al., 2004

## **2.2 What Is Illicit Connection?**

Illicit Connection is defined by the permit as “. . . any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.” Some examples of illicit connections include the following:

- Sanitary sewer piping connected directly from a building to the storm sewer system
- A basement or shop floor drain that is connected to the storm sewer system
- A cross connection between the municipal sanitary sewer and the storm sewer system

## **2.3 Authorized Non-Stormwater Discharges**

The permit (U.S. EPA, 2014) includes a description of authorized non-stormwater discharges, including the following:

- Potable water sources, including routine water line flushing
- Lawn, landscape, and other irrigation waters provided all pesticides, herbicides, and fertilizers have been applied in accordance with approved manufacturing labeling and any applicable permits for discharges associated with pesticide, herbicide, and fertilizer application
- Diverted stream flows
- Rising groundwater
- Uncontaminated groundwater infiltration (as defined at 40 cfr §35.2005 (20))
- Uncontaminated pumped groundwater
- Foundation and footing drains
- Air conditioning or compressor condensate
- Springs
- Water from crawl space pumps

- Individual residential car washing
- Flows from riparian habitats and wetlands
- Dechlorinated swimming pool discharges
- Street wash waters that do not contain detergents and where no unremediated spills or leaks of toxic or hazardous materials have occurred
- Discharges or flows from firefighting activities (does not include discharges from firefighting training activities)
- Other similar occasional incidental non-stormwater discharges (e.g., non-commercial or charity car washes, etc.)

These discharges are not considered illicit, and therefore do not need to be addressed in the IDDE program.

#### ***2.4 City of Albuquerque Drainage Ordinance and Stormwater Quality Ordinance***

The City of Albuquerque drainage ordinance was updated in 2014 with changes that became effective May 12, 2014. Significant changes to the ordinance, as applicable to stormwater, are as follows:

- New development projects must manage runoff that occurs during a 90th percentile storm event (0.44 inch of precipitation).
- A stormwater control permit for erosion and sediment control is required for construction, demolition, and grading for sites of 1 acre or greater, and includes a requirement for an erosion sediment control plan and post-construction maintenance for private stormwater facilities.
- Stormwater control measures must manage first flush (i.e., stormwater runoff that occurs during the early stages of a storm equal to or less than runoff from a 90th percentile storm event) flows and control runoff generated by contributing impervious surfaces.

- A paving permit is required for paving an area larger than 2,000 square feet; paving permit applications must include a grading plan and erosion and sediment control plan if deemed necessary by the City Engineer.

The City has a stormwater quality ordinance for the purpose of regulating stormwater quality and prohibiting illicit discharges into the City's stormwater drainage facilities. The ordinance was passed by the City Council on June 20, 2016. A copy of the ordinance is provided as Appendix A.

The stormwater quality ordinance prohibits illicit discharges and includes a summary of illicit discharges and connections, as well as allowable non-stormwater discharges. The ordinance also includes enforcement actions and penalties. A stormwater engineer appointed by the Director of the Department of Municipal Development is vested with the authority to enforce the ordinance. At any facility that discharges stormwater to the City's stormwater drainage facilities, the stormwater engineer may execute sampling, metering, monitoring, and any other reasonable method to enforce compliance with the stormwater ordinance.

## ***2.5 City of Albuquerque Storm Sewer System Map***

A map of the storm drainage system in the City of Albuquerque has been developed by the City and the Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA) and is available on the AMAFCA website (<http://www.amafca.org/info/maps.html>). This map is a comprehensive map of the storm drainage system within the City and includes storm drain facilities for the City, AMAFCA, New Mexico Department of Transportation (NMDOT), Bernalillo County, the Village of Los Ranchos, the Village of Corrales, the U.S. Forest Service, and the Middle Rio Grande Conservancy District (MRGCD). Additionally, the City has a map of all stormwater detention ponds available on their website (<https://www.cabq.gov/municipaldevelopment/maps>). These maps are updated on a regular basis.

## **3. Illicit Discharge Detection Procedures**

Illicit discharges and connections are identified through citizen reporting, interdepartmental or interagency referral, or other routine MS4 inspection activities. The City relies on local citizens,



field staff, and inspections to detect potential problem areas quickly, so that they can be addressed before they cause significant water quality degradation.

### ***3.1 Illicit Discharge Reporting and Documentation***

Illicit discharges or illegal storm drain dumping can be reported to the City via telephone (505-768-3003) or online (<https://www.cabq.gov/municipaldevelopment/onlineservices/report-illegal-dumping-to-storm-drains>). Sometimes these incidences are reported to the City's information hotline (311). The information is collected by 311 and then forwarded to the appropriate City personnel. AMAFCA also has a reporting system and shares their data with the City. This system encourages residents to participate in the reporting process and gives the City information about problems like illegal dumping, spills, or strong odors. Additionally, the City's related MS4 maintenance activities provide opportunities to document and identify potential problems. A current list of reported illicit discharges is provided in Appendix B. Locations of the reported discharges are included on Figure 1.

When water quality incident reports are received, the information is entered into a database maintained by the City. The database includes information such as the date, location, and nature of the incident, as well as any action taken to address the issue. An illicit discharge incident report form (Appendix C) can also be used by staff receiving the information before it is entered into the illicit discharge tracking database.

Once recorded, incident information should be referred to the appropriate City department and/or staff person for follow-up. The permit requires that suspected significant or severe illicit discharges be investigated within 48 hours of detection, and that all other discharges be investigated as soon as practicable. IDDE problems should be referred to the Storm Drainage Section, Department of Municipal Development, for further investigation as needed. City staff or a contractor will follow the investigation procedures in Section 4 to identify the source of the problem; if the source is known, the corrective action procedures outlined in Section 5 will apply.

### **3.2 Outfall Inspections**

Visual inspections of outfalls in the City's stormwater drainage system can identify areas of obvious pollution or non-stormwater discharges. Potential problem discharges can be identified by outfalls that are flowing during dry weather (potential illicit connection) or discharges that have high turbidity, strong odors, or unusual colors.

Within the City's stormwater drainage system, there are 25 outfalls that drain to the Rio Grande, 5 of which are screened during wet weather monitoring. Following an assessment of the subwatersheds and existing industry within the Albuquerque metropolitan permit area by the City, 17 dry weather screening locations were selected for monitoring, for a total of 37 outfalls. These locations are screened annually in November and December. Outfall locations are shown on Figure 2.

The timing of outfall screening is important to consider when scheduling field days. Given the arid climate of this region, outfall inspections can be conducted during the wet or dry seasons, and should have an antecedent dry period of at least 72 hours after a rain event greater than 0.1 inch in magnitude.

Potential problems are indicated by outfalls that are flowing in dry weather and/or foul odors or discolored water in or around the outfall pipe. If an outfall with significant flow is encountered, field crews should attempt to determine the source of the flow. Groundwater should be eliminated as a potential source of the flow, if possible. When illicit discharge problems are identified, field crews should collect photographs of the issue and conduct a visual inspection of the surrounding area to identify any obvious pollution sources.

If inspection staff encounter an illicit discharge during inspection activities, the problem should be immediately referred to the appropriate personnel or response contractor for sampling. Samples should be collected and analyzed for selected pollutant indicators including BOD, sediment (TSS), *E. coli*, oil and grease, nutrients, ammonia, potassium, and surfactants, as well as field parameters including pH, electrical conductivity, temperature, and dissolved oxygen (DO). Field staff should also note any color associated with the discharge in the field notes. The analytical suite may be adjusted based on observation (e.g., sheen, suds/foam, dirt, color,

and smell). Sampling will consist of collecting a minimum of 4 grab samples spaced at a minimum interval of 15 minutes. Grab samples will be combined into a single composite sample.

The field observations will be logged in the inspection report. Staff should also complete an illicit discharge incident report form (Appendix C).

During field inspections, crews should also note whether the outfalls have maintenance issues, such as trash around the outfall or damaged infrastructure that should be brought to the attention of the Department of Municipal Development. Any observed spills or environmental hazards should be immediately reported to the Office of Emergency Management (505-833-7393), and the incident should be documented using the illicit discharge incident report form (Appendix C). The Office of Emergency Management will work with City staff or a designated contractor to clean up and properly dispose of the spilled material.

## **4. Investigation Procedures**

Potential illicit discharge problems can be found through outfall inspections or reports from staff or the public as described in Section 3.1. When a complaint is reported, the permit requires that suspected significant or severe illicit discharges be investigated within 48 hours of detection, and that all other discharges be investigated as soon as practicable. The follow-up investigation could include a site visit to look at the problem area, review of mapping information, review of past complaints or investigations at the location, or other data collection and review. Once a problem has been verified (either through an outfall inspection, site inspection, or follow-up to a reported complaint), the City will begin an illicit discharge investigation following the procedures outlined in this section.

### ***4.1 Inspection and Sampling Procedures***

During a dry weather inspection, observed flows are considered non-stormwater related. The flow may or may not be the result of an illicit discharge. Also, the absence of a flow does not indicate the absence of an illicit discharge, as these discharges can be intermittent or transitory.

Observations should be made and recorded during the dry weather inspection to determine if an intermittent or transitory pollution problem has occurred.

During dry weather field inspections, physical parameters including flow, odor, color, turbidity, and presence or absence of floatables will be documented. This information can be helpful in determining possible sources of the discharge.

A qualitative observation of flow can be made and can include descriptions such as none, trickle, moderate, or substantial. Additionally, flow rate can be estimated using one of the following methods:

- Record the amount of time it takes to fill a container of a known volume.
- Multiply cross-sectional flow area by flow velocity. Flow area can be estimated using mean depth and width. Flow velocity can be estimated using the travel time of an object floating near the surface over a known distance.

Common descriptions for odor include sewage, rancid/sour, petroleum/gas, sulfide, or other descriptors that characterize the odor. The severity of the odor (how strong the odor is) should also be recorded in the field.

Color can be a description of color type and intensity. It is also a quantitative measurement expressed in cobalt-platinum units (APHA, 1998).

Turbidity can be a qualitative descriptor (clear, slight cloudiness, cloudy, or opaque). Turbidity can be measured in the field with a portable turbidity meter. If a turbidity meter is used in the field, it is recommended that one make/model be used every time to reduce discrepancies between different units.

Floatables are a good physical indicator, and commonly include sewage, suds, and oil sheens. For the purposes of outfall monitoring, floatables do not include trash. The observation of sewage at an outfall location indicates that there is a potential sewer or septic leak, and indicates that the source for the sewage should be investigated.

The presence of suds can indicate many things. Some suds are naturally formed by the movement of water and can be turbulence related. Suds with a strong or fragrant odor can indicate the presence of laundry water or washwater.

If an oily sheen is observed, field personnel should attempt to determine the source of the sheen. Some oil sheens occur naturally, such as decomposition of organic materials (leaves, plant parts, etc.) in the water. This occurs when iron bacteria form a sheet-like film. This can be determined by looking at the sheen and seeing if it cracks when disturbed. Synthetic oil sheens predominantly swirl when disturbed. If this occurs, then the sheen is likely due to an oil source.

There may be physical indicators of illicit discharges even if no flow is present. These indicators include outfall damage, deposits/stains, abnormal vegetation, poor quality of pooled water, and benthic growth in a pipe. The field staff should note any of these conditions if encountered.

Along with the information collected by physical observation, analytical results of water quality testing for collected samples can provide additional information to assist in determining the source of the discharge.

#### **4.2 Water Quality Sampling and Testing**

During dry weather inspections, physical observations indicating a pollution problem do not always yield sufficient information to aid in source determination; therefore, water quality samples should be collected. Some parameters can be directly measured in the field using portable water quality meters. Other parameters require laboratory analysis. Table 2 lists the parameters that should be analyzed to isolate an illicit discharge.

#### **4.3 Source Tracking**

The City's current telephone and online reporting system (505-768-3003 or <https://www.cabq.gov/municipaldevelopment/onlineservices/report-illegal-dumping-to-storm-drains>) will continue to be an effective tool for locating illicit discharges. However, in situations where outfall screening and/or facility inspections identify an illicit discharge, several methods can be used to trace to the source of the illicit discharge.

**Table 2. Water Quality Analytical Methods**

| Analyte                         | Analytical Method |
|---------------------------------|-------------------|
| Dissolved oxygen                | Field             |
| Specific conductance            | Field             |
| pH                              | Field             |
| Temperature                     | Field             |
| Biochemical oxygen demand (BOD) | SM 5210 B         |
| Total suspended solids (TSS)    | SM 2540 D         |
| <i>E. coli</i>                  | SM9223B           |
| Oil and grease                  | 1664 A            |
| <i>Nutrients</i>                |                   |
| Nitrogen                        | SM 4500           |
| Phosphorus                      | SM 4500           |
| Ammonia                         | SM 4500           |
| Potassium                       | 200.7             |
| Surfactants                     | Colormetric, 5540 |

Tracing techniques include visual inspections of drainage structures and lines, dye testing, damming lines to isolate areas, video inspection, indicator monitoring, smoke testing, and optical brightener monitoring traps. Other more elaborate approaches include using remote sensing tools to identify soil moisture, water temperature, and vegetation anomalies associated with failing septic systems and tracking illegal dumping activities. The most common approach for the City will be to primarily rely upon visual inspections of the storm drains above the outfall in which an illicit discharge is suspected.

When a source of discharge is located and it is determined that the location is within another entity's jurisdiction, the cooperating entity will be contacted and informed of the discharge as soon as possible.

Some common types of discharges can be related to a known activity, and can also assist in source tracking. Some examples are provided in Table 3.

**Table 3. Common Discharges and Potential Sources**

| Observed Discharge | Potential Causes                                                   |
|--------------------|--------------------------------------------------------------------|
| Clogging sediment  | Construction activity without proper erosion and sediment controls |
|                    | Roadway sanding operations                                         |
|                    | Outdoor work areas or material storage areas                       |
| Heavy algal growth | Fertilizer leak or spill                                           |
|                    | Landscaping operations                                             |
|                    | Hydroseeding following construction                                |
|                    | Failing or leaking septic system                                   |
| Oil and grease     | Refueling operations                                               |
|                    | Vehicle or machinery maintenance activities                        |
| Suds discharge     | Power washing of buildings                                         |
|                    | Vehicle or equipment washing operations                            |
|                    | Mobile cleaning crew dumping                                       |
|                    | Laundry or cleaner                                                 |
|                    | Household graywater discharge                                      |
| Clogged grease     | Restaurant sink drain connection to stormwater system              |

#### **4.4 Site Inspection Procedures**

In addition to maintaining a hotline for citizen complaints, the City is required to have procedures in place to locate priority areas likely to have illicit discharges and to proactively conduct field assessments to check for illicit discharges and illegal connections to the City's stormwater system and receiving waterbodies.

Areas most likely to contain illicit discharges should be prioritized based on an analysis of land use and other specific information. The following types of areas are more likely to generate potentially contaminated discharges (Brown et al., 2004):

- Locations where there have been repeated problems in the past. These could include areas with water quality data or where repeated complaints have been filed.
- Older areas of a community, which typically have a higher percentage of illegal connections. Deteriorating sewer pipes can lead to wastewater leaks from the sanitary lines.

- Commercial and industrial areas that tend to have a higher percentage of illicit discharges and higher-risk land uses (e.g., outdoor washing, disposal of food wastes, car fueling, repair, and washing, parking lot power washing, and poor dumpster management).
- Areas where large volumes of hazardous solids and/or liquids are stored.

A database of facilities with a potential to be sources of illicit discharges was developed for this plan (AGIS, 2013; CDM Smith, 2013 and 2015), and these facilities have been mapped. These facilities include industrial and high risk facilities in Albuquerque that are required to have an industrial stormwater permit, and facilities that are identified using the City's zoning maps and land use codes, the North American Industry Classification System (NAICS) codes, and the Standard Industrial Classification (SIC) codes that have a risk for illicit discharge, such as automotive repair and other automotive-related businesses (Figures 3 through 14; Appendix D). Most of the industrial high priority facilities, such as manufacturers, metals, and asphalt facilities, are currently covered by the NPDES multi-sector general permit (MSGP) and are inspected as part of the City's industrial program; these facilities are not included in this plan.

Regular inspections of these high risk facilities are important to reduce the risk of illicit discharges. Inspections of non-regulated facilities (facilities not covered under the MSGP) that connect to the municipal storm drain systems can be used to assess the sites and to educate owners/operators about recommended pollution prevention practices. Site inspections are staff intensive, and therefore are best suited to facilities with high exposure potential.

The permit requires that the City screen the entire jurisdiction once every 5 years. The facilities in the database have been grouped by exposure potential (high, medium, and low) to prioritize the screening process (Appendix D). Facilities classified as having a high exposure potential will be screened first. High exposure potential facilities are based on industry type. The City has been divided into four quadrants, based on the major highways. IDDE screening will also be conducted by City quadrant (Figures 3 through 14).



High priority areas also include areas where there is evidence of ongoing dumping or illicit discharges, or where there are citizen complaints for more than 5 separate events within 12 months in a specific area.

Site inspections of the facilities include site visits and visual observations. Educational materials will be given to the facility operator(s) to provide information on what illicit discharges are and how to avoid them. Documentation of findings for each site will be recorded on the Site Inspection Audit Form (Appendix C); photographs may also be taken to record any significant findings.

#### **4.5 Follow-Up Actions**

If a potential illicit discharge is observed at a facility (i.e., improperly contained used oil drums, staining, evidence of past spills, etc.) or once the source of an illicit discharge has been identified, the property owner and/or operator should be notified of the problem, and the appropriate educational materials and/or a copy of the IDDE ordinance should be provided. The field investigation staff should complete the Site Inspection Audit Form (Appendix C); all information included on this form should be entered into the database to document the findings. If there is a potential illicit discharge observed during a facility inspection, field investigation staff may return to the facility to verify that the recommended action has been taken by the facility to mitigate the potential problem. The field investigation staff or other City staff can then begin working through the corrective action steps outlined in Section 5.

The permit also requires that complaint records for the last permit term be reviewed, and that a targeted source reduction program be developed for those illicit discharge/improper disposal incidents that have occurred more than 2 times in 2 or more years. This is an uncommon occurrence in the City (Figure 1; Appendix B). The City does actively pursue complaints and has a targeted source reduction program in place.

#### **4.6 Immediate Response Procedures**

The field crew should be prepared to take immediate action in the event of encountering one of the following situations:

- Individuals actively in the process of introducing possible illegal substances or materials to the storm drain system
- Very strong chemical odor or fumes/smoke emanating from the storm drain system
- Visible significant stream of a controlled chemical or petroleum product flowing in the storm drain system
- Any condition that poses or could pose an immediate threat to property, human health and safety, or aquatic life

If field personnel encounter any of the above situations, they should immediately contact Kathy Verhage or Kevin Daggett at the City of Albuquerque, Department of Municipal Development (505-768-3830). If it is determined to be an imminent threat to human health or the environment, 911 should be contacted and advised.

## **5. Corrective Actions**

The response by the City will vary depending on the type, location, frequency, severity, and source of illicit discharge. The City will have several options available to address a specific discharge. The preferred approach to address illicit discharge problems is to pursue voluntary compliance through property owner or responsible party education. Business operators and property owners are often not aware of the existence of illicit connections or activities on their properties that may constitute an illegal discharge. Providing the responsible party with information about the connection or operation, the environmental consequences, and suggestions on how to remedy the problem may be sufficient to secure voluntary compliance.

Education begins during the site investigation when the operation or connection is first confirmed. Property owners and operators will be informed of any problems that need to be corrected. The City will conduct follow-up site visits to verify that the recommended action has been taken by the facility. Field staff should also provide the property operator with an educational brochure describing illicit discharge violations. Field staff will remind property owners to report discharges to the proper agencies.

### **5.1 Operational Problems**

Property owners are responsible for correcting operational problems that lead to illegal discharges to the storm drainage system. Examples include moving washing activities indoors or undercover, covering material storage areas, or other operational modifications. Through outreach and education during site visits, the City can provide technical assistance to aid property owners in identifying the required modifications.

### **5.2 Structural Problems**

Most illicit connection problems will require a structural modification to correct the problem. Structural repairs can be used to redirect discharges such as sewage, industrial, and commercial cross-connections. Such cross-connections must be rerouted to an approved sanitary sewer system. Correcting structural problems is the responsibility of the property owner, though the City may provide technical assistance throughout the process.

### **5.3 Enforcement Actions**

When voluntary compliance does not produce the desired result, the City is required to pursue follow-up enforcement action.

The City has a stormwater quality ordinance for the purpose of regulating stormwater quality and prohibiting illicit discharges into the City's stormwater drainage facilities (Appendix A). The ordinance was adopted by the City on June 20, 2016. It stipulates that at any facility that discharges stormwater to the MS4, the stormwater engineer is authorized the following methods, or any other reasonable methods, to enforce compliance with the stormwater ordinance:

- At any facility that discharges stormwater to the MS4, the Stormwater Engineer shall have the right to install, or to require the installation of, such devices as are necessary to conduct sampling or metering of the discharger's operations at the expense of the City.

- The Stormwater Engineer may require any facility that is reasonably determined to have discharged a pollutant or any substance that causes, continues to cause, or will cause pollution, to conduct specified sampling, testing, analysis, and other monitoring of its stormwater discharges. The Stormwater Engineer may specify the frequency and parameters of any required sampling or monitoring.
- The Stormwater Engineer may require any facility that has been found to have violated this ordinance to install monitoring equipment as necessary at the discharger's expense. The discharger, at its own expense, shall at all times maintain the facility's sampling and monitoring equipment in a safe and operating condition. Each device used to measure stormwater flow and quality must be calibrated regularly to ensure accuracy. The Stormwater Engineer may also require monitoring of non-stormwater discharges if the Stormwater Engineer reasonably believes that such discharges violate the City's MS4 permit requirements.
- Upon written request of the Stormwater Engineer, a facility shall submit in writing the results of any sampling or monitoring undertaken pursuant to the requirements of this article.
- Facilities shall maintain the results of any monitoring and any supporting documentation undertaken for 3 years.

#### **5.4 Penalties**

The City may issue a notice of violation to any person who violates any provision of the ordinance. Any person who violates any provision of the ordinance is guilty of a petty misdemeanor and may incur the following penalties:

- Fine of not less than \$250.00 or more than \$500.00 and up to 30 days in jail for each violation. Each day in which any violation shall occur shall constitute a separate offense.
- Civil penalties for the violation of the provisions of the ordinance, including damages in an amount adequate for the City to undertake any construction remediation, cleanup, or other activity necessary to bring about compliance.

## **6. Public Education**

The permit requires the City to conduct outreach activities to educate the public and business community about water quality protection. Outreach activities focus on reducing pollutants at the source by educating the public and businesses about their ultimate impact on the environment. As part of the City's public outreach program, outreach material in print form is made available to citizens. The City is also a member of the cooperative group called The Stormwater Quality Team (<http://www.keeptheriogrand.org/stormwater-quality-team/>). The Stormwater Quality Team was formed in 2004 for the purpose of educating individuals and businesses about how to reduce stormwater pollution. One of the primary outreach campaigns is the Scoop the Poop program (<http://www.keeptheriogrand.org/scoop-the-poop-2/>) that addresses pet waste. This group also addresses residential (yard waste and household hazardous waste) and construction-related stormwater quality (low impact development [LID] and green infrastructure [GI]) issues, as well as many other outreach initiatives.

Other members of this group include co-permittees under the watershed-based permit, including AMAFCA, Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA), Eastern Sandoval County Arroyo Flood Control Authority (ESCAFCA), NMDOT, District 3, Sandoval County, Town of Bernalillo, and Village of Los Ranchos.

Illicit discharges or illegal storm drain dumping can be reported to the City via telephone (505-768-3003) or online (<https://www.cabq.gov/municipaldevelopment/onlineservices/report-illegal-dumping-to-storm-drains>). Incidents are reported to the City's information hotline, 311. The information is collected by 311 staff and then forwarded to the appropriate City personnel.

## **7. Reporting and Recordkeeping**

Tracking and documentation is a required part of the IDDE program. The City keeps a database with inspection data obtained during IDDE screening, dry weather water quality screening results, illicit discharge sampling water quality results, and illicit discharge complaint data collected by the City.

Spills reported to the complaint hotline will be recorded on an Illicit Discharge Incident report form (Appendix C). Field personnel who encounter or are involved in a spill will contact the complaint hotline or fill out an Illicit Discharge Incident report form (Appendix C). Field personnel conducting site inspections will fill out the Site Inspection Audit Form (Appendix C) for each site and photograph any significant findings as needed. Any corrective action taken for an illicit discharge incident will be tracked and recorded. All of this information will be added to the database.

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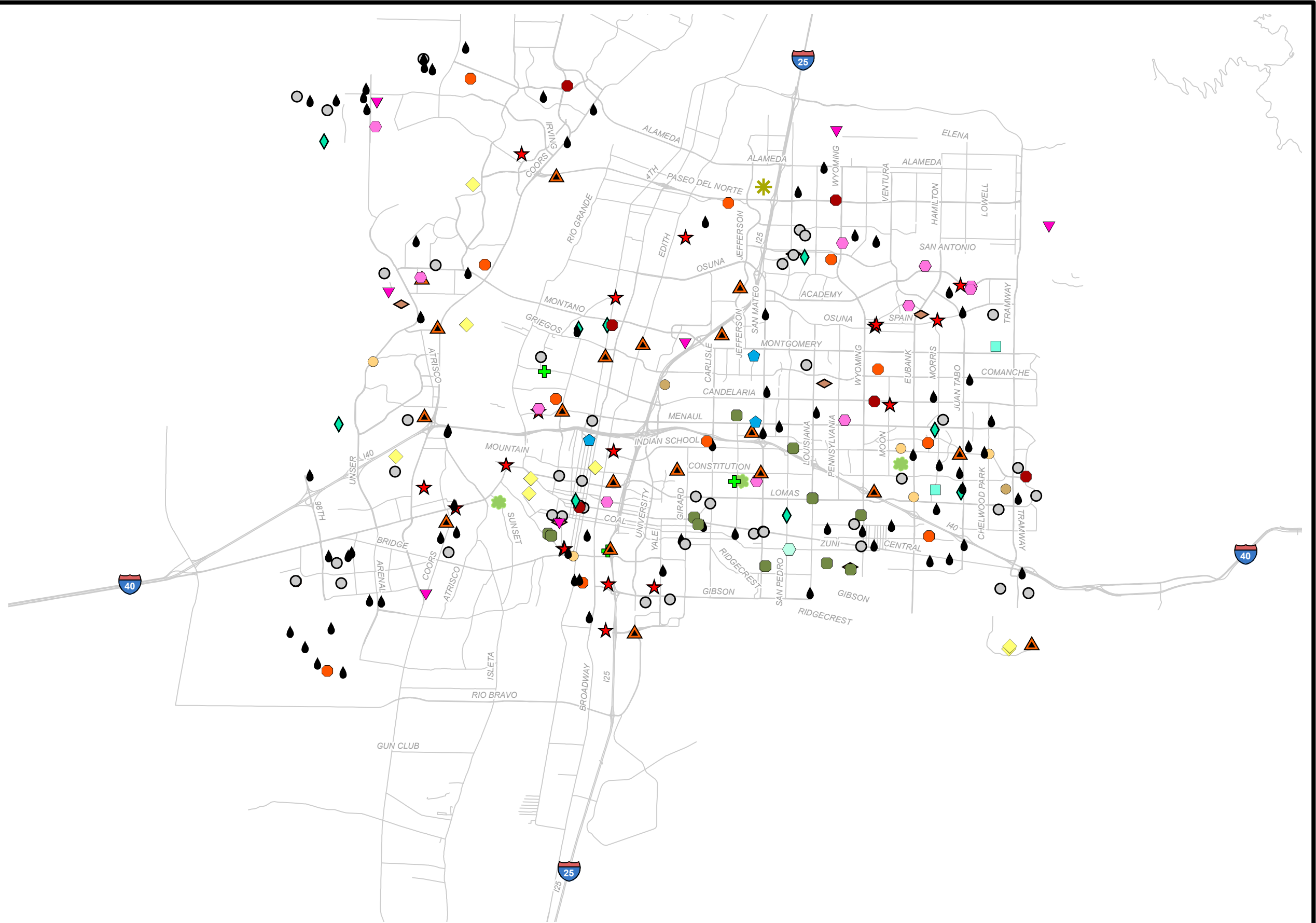
## Figures

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### Explanation

#### Illicit discharge complaint

-  Antifreeze
-  Car wash
-  Carpet cleaning
-  Colored liquid
-  Construction
-  Cross connection
-  Dirty water
-  Food
-  Foul odor
-  Grease
-  Hazardous material
-  Leaves
-  Oil
-  Paint
-  Pet waste
-  Sediment
-  Sewage
-  Swimming pool
-  Trash
-  Unknown



Source: City of Albuquerque



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8/8/2016

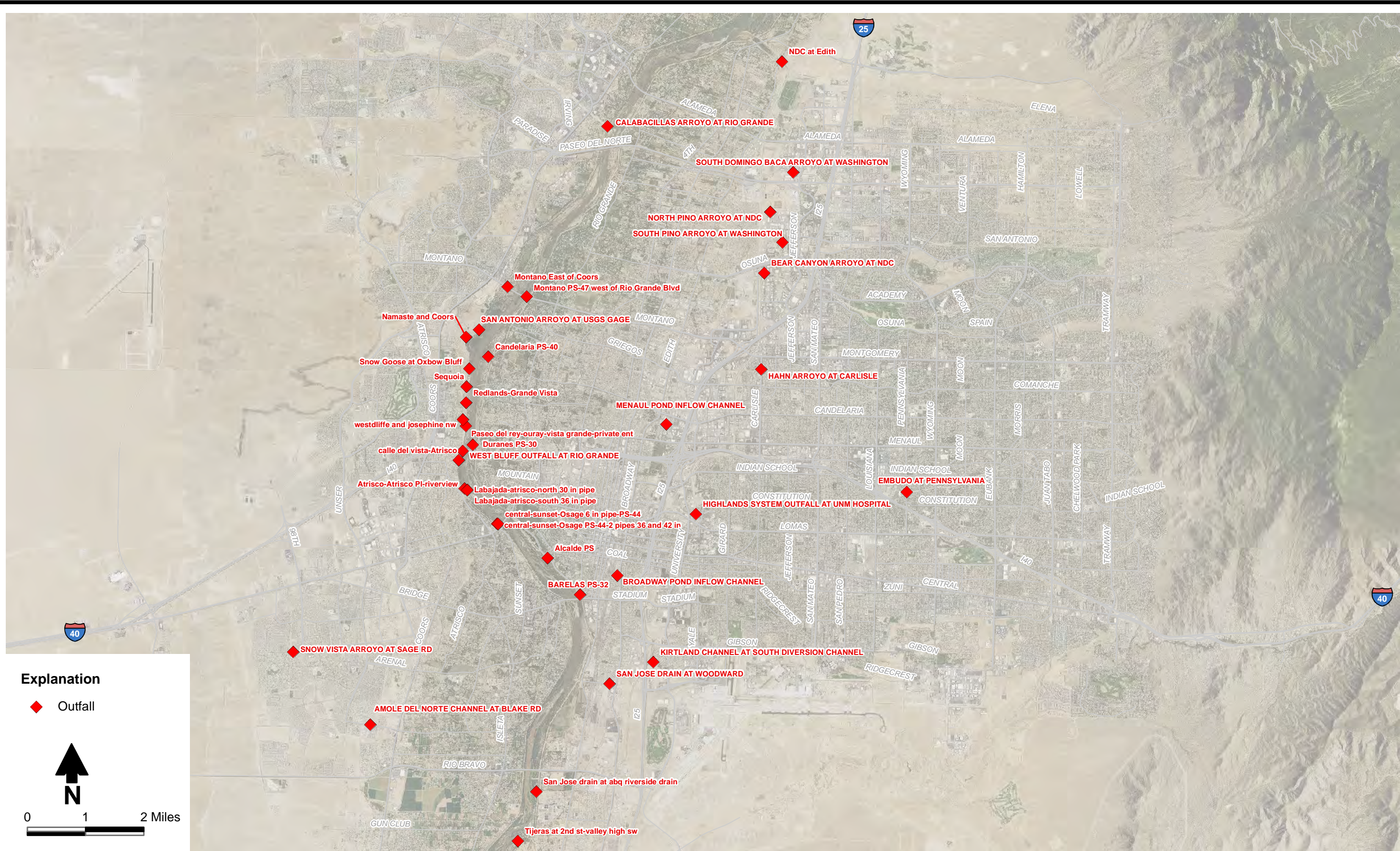
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## CITY OF ALBUQUERQUE Illicit Discharge Complaints

Figure 1



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**Explanation**

◆ Outfall














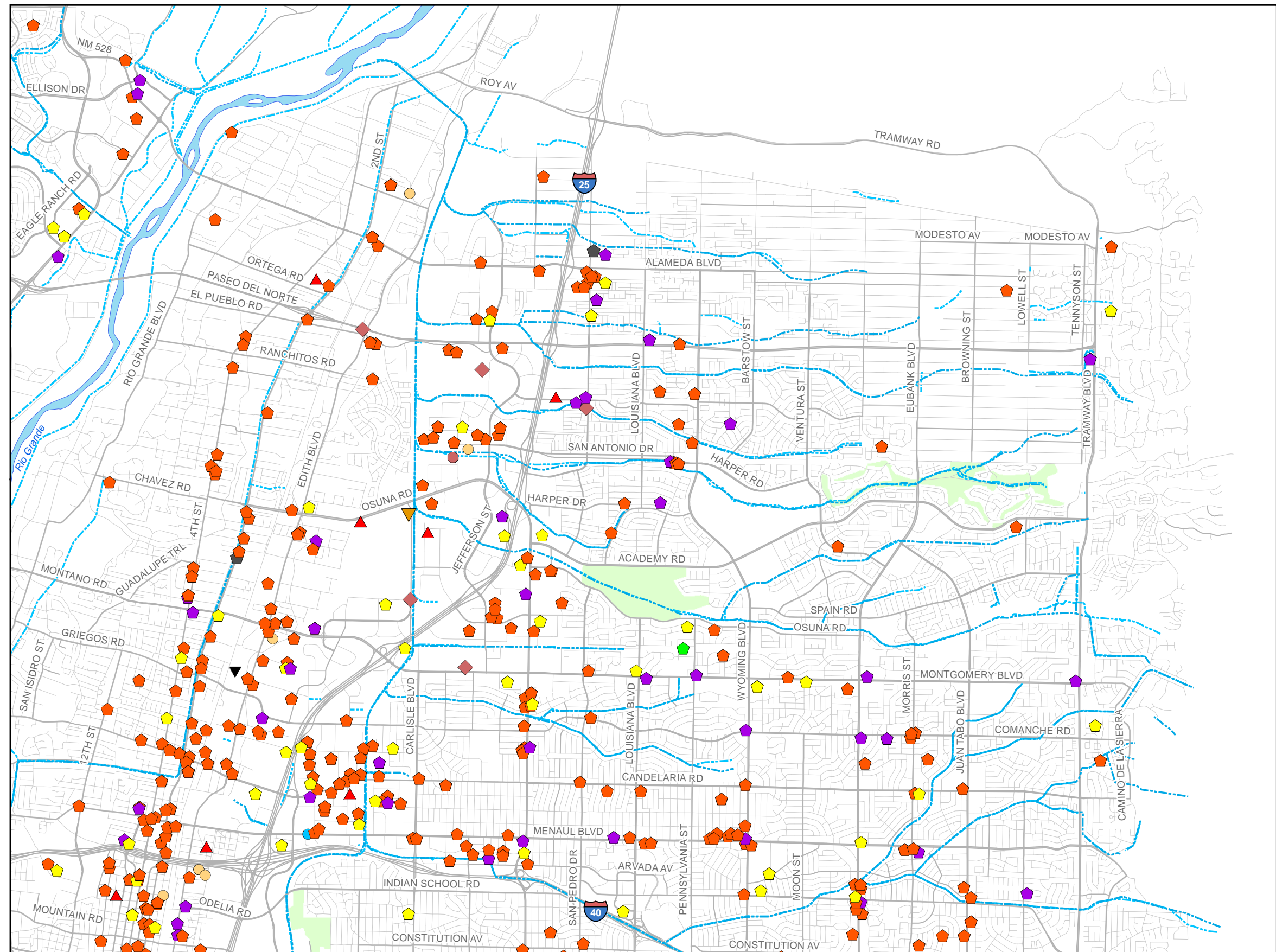
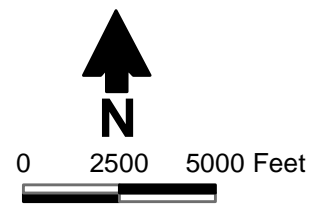
0 1 2 Miles

S:\PROJECTS\WR14.0049.01\_COA\_STORMWATER\GIS\FIGURES\FIG03\_EXPOSURE\_POTENTIAL\_H\_GROUPS\_NE.MXD 8/8/2016

### Explanation

#### Exposure potential

-  Automotive rental and leasing, without drivers
-  Automobile parking
-  Automotive repair shops
-  Automotive services, except repair
-  Asphalt paving and roofing materials and lubricants
-  Automobile salvage yards and scrap recycling facilities
-  Electronic, electrical, photographic, and optical goods
-  Glass, clay, cement, concrete, and gypsum products
-  Land transportation and warehousing
-  Manufacturer
-  Primary metals
-  Water transportation
-  Arroyo or canal
-  Golf course



Sources: AGIS (2013) and CDM Smith (2015)



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## CITY OF ALBUQUERQUE High Exposure Potential - Northeast

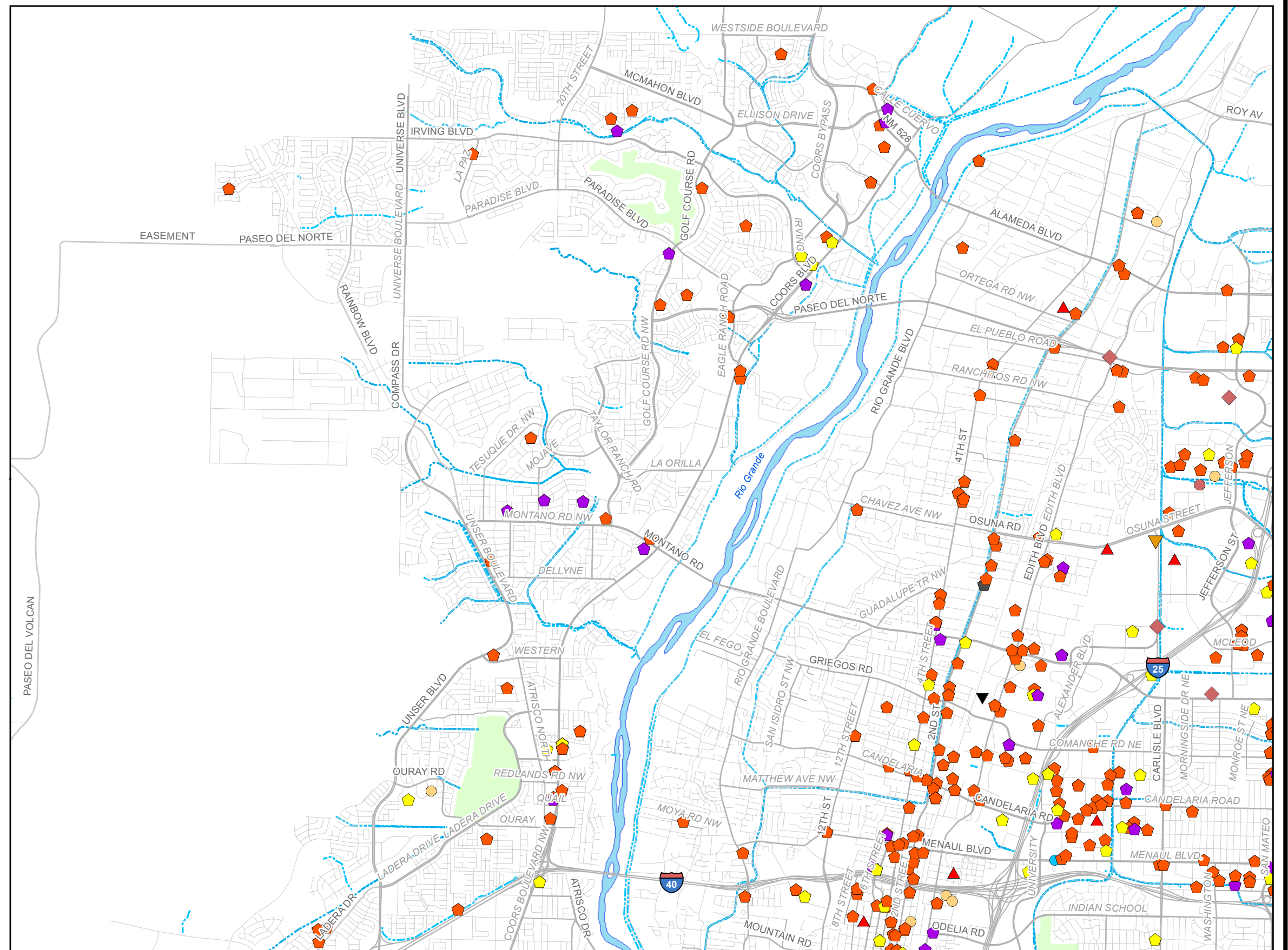
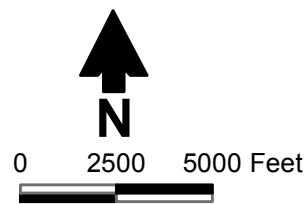
Figure 3

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### Explanation

#### Exposure potential

-  Automotive rental and leasing, without drivers
-  Automotive repair shops
-  Automotive services, except repair
-  Asphalt paving and roofing materials and lubricants
-  Automobile salvage yards and scrap recycling facilities
-  Electronic, electrical, photographic, and optical goods
-  Glass clay, cement, concrete, and gypsum products
-  Land transportation and warehousing
-  Manufacturer
-  Primary metals
-  Water transportation
-  Carwashes
-  Arroyo or canal
-  Golf course



Sources: AGIS (2013) and CDM Smith (2015)

















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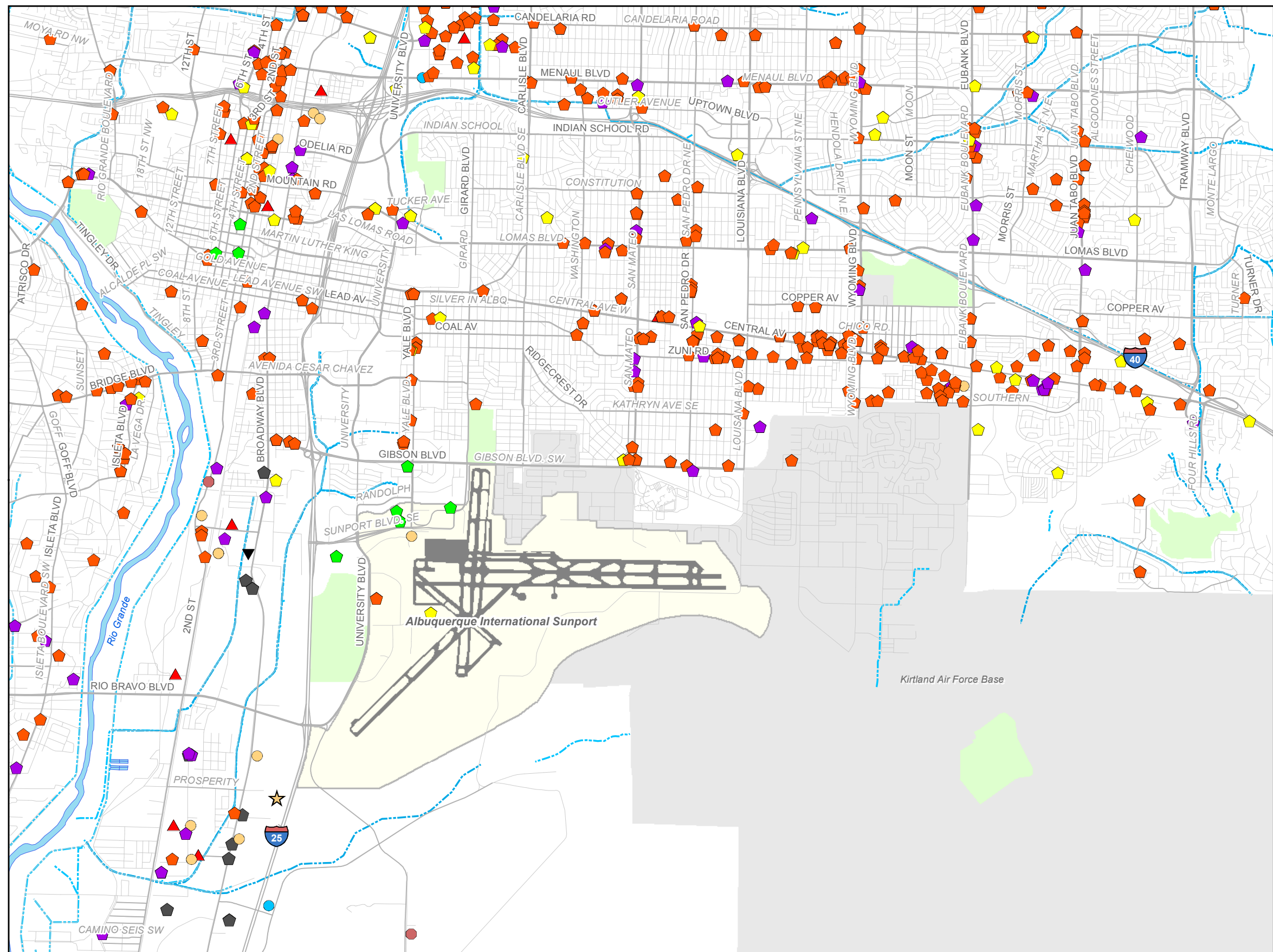
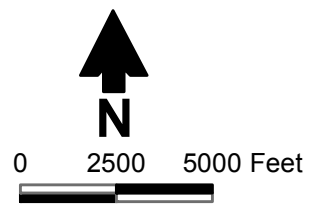
## CITY OF ALBUQUERQUE High Exposure Potential - Northwest

Figure 4

**Explanation**

Exposure potential

-  Automotive rental and leasing, without drivers
-  Automobile parking
-  Automotive repair shops
-  Automotive services, except repair
-  Asphalt paving and roofing materials and lubricants
-  Automobile salvage yards and scrap recycling facilities
-  Land transportation and warehousing
-  Manufacturer
-  Primary metals
-  Ship and boat building or repairing yards, transportation equipment, industrial or commercial machinery
-  Water transportation
-  Arroyo or canal
-  Golf course
-  Military installation


















Sources: AGIS (2013) and CDM Smith (2015)

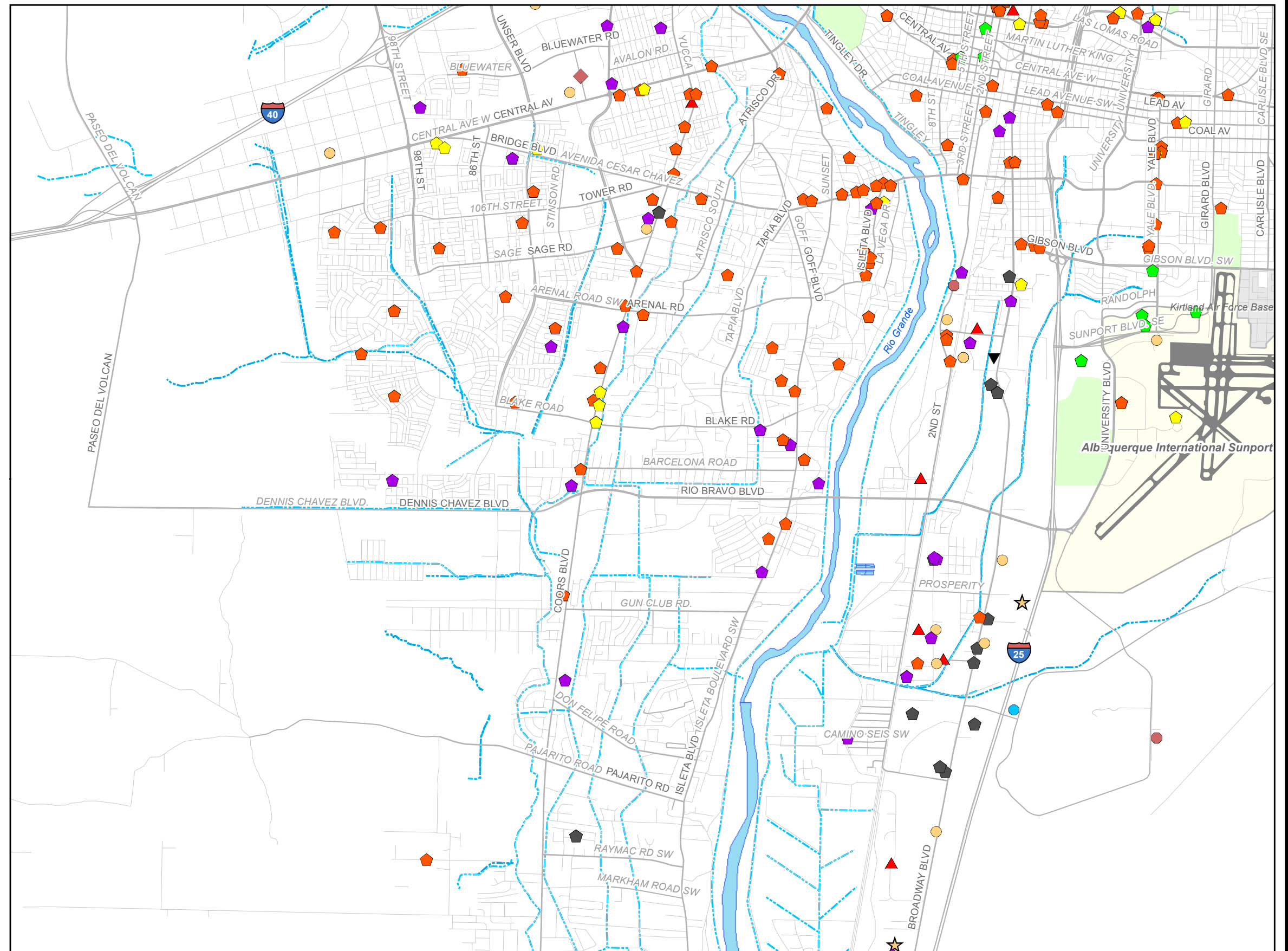
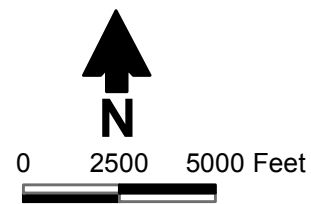


S:\PROJECTS\WR14.0049.01\_COA\_STORMWATER\GIS\FIGURES\FIG06\_EXPOSURE\_POTENTIAL\_H\_GROUPS\_SW.MXD 8/8/2016

### Explanation

#### Exposure potential

-  Automotive rental and leasing, without drivers
-  Automobile parking
-  Automotive repair shops
-  Automotive services, except repair
-  Asphalt paving and roofing materials and lubricants
-  Automobile salvage yards and scrap recycling facilities
-  Glass clay, cement, concrete, and gypsum products
-  Land transportation and warehousing
-  Manufacturer
-  Primary metals
-  Ship and boat building or repairing yards, transportation equipment, industrial or commercial machinery
-  Water transportation
-  Arroyo or canal
-  Golf course
-  Military installation



Sources: AGIS (2013) and CDM Smith (2015)
























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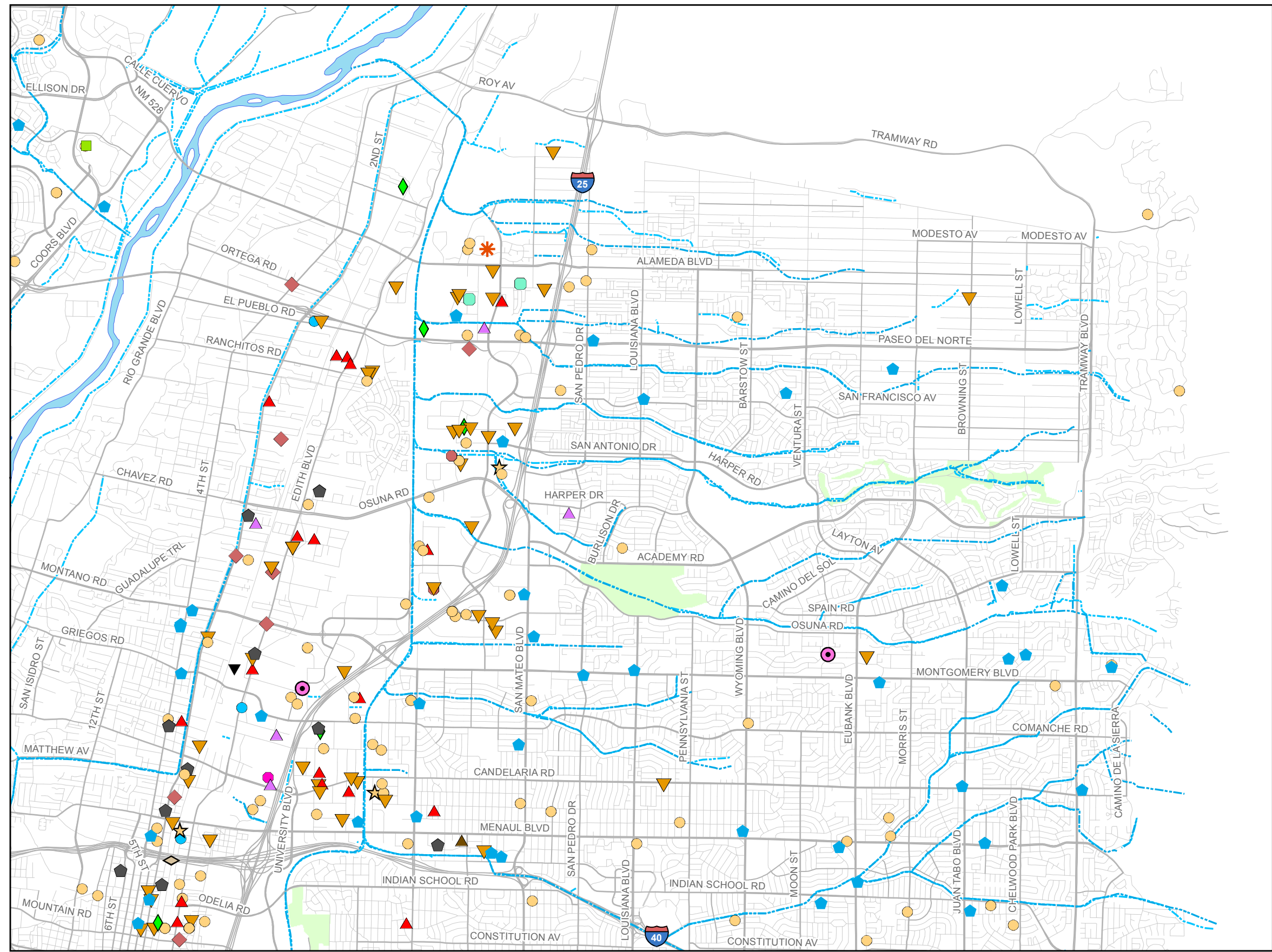
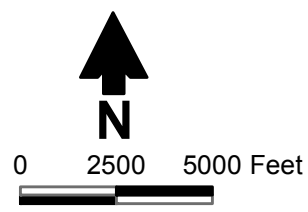
CITY OF ALBUQUERQUE  
**High Exposure Potential - Southwest**

Figure 6

**Explanation**

Exposure potential

-  Air transportation
-  Asphalt paving and roofing materials and lubricants
-  Automobile salvage yards and scrap recycling facilities
-  Chemical and allied products, rubber, miscellaneous plastic products, and misc. manufacturing industries
-  Electronic, electrical, photographic, and optical goods
-  Food and kindred products
-  Glass clay, cement, concrete, and gypsum products
-  Land transportation and warehousing
-  Laundry and supply services
-  Manufacturer
-  Mineral mining and dressing
-  Painters
-  Primary metals
-  Retail
-  Ship and boat building or repairing yards, transportation equipment, industrial or commercial machinery
-  Textile mills, apparel, and other fabric product manufacturing, leather and leather products
-  Timber products, furniture and fixtures
-  Water transportation
-  Carwashes
-  Arroyo or canal
-  Golf course
























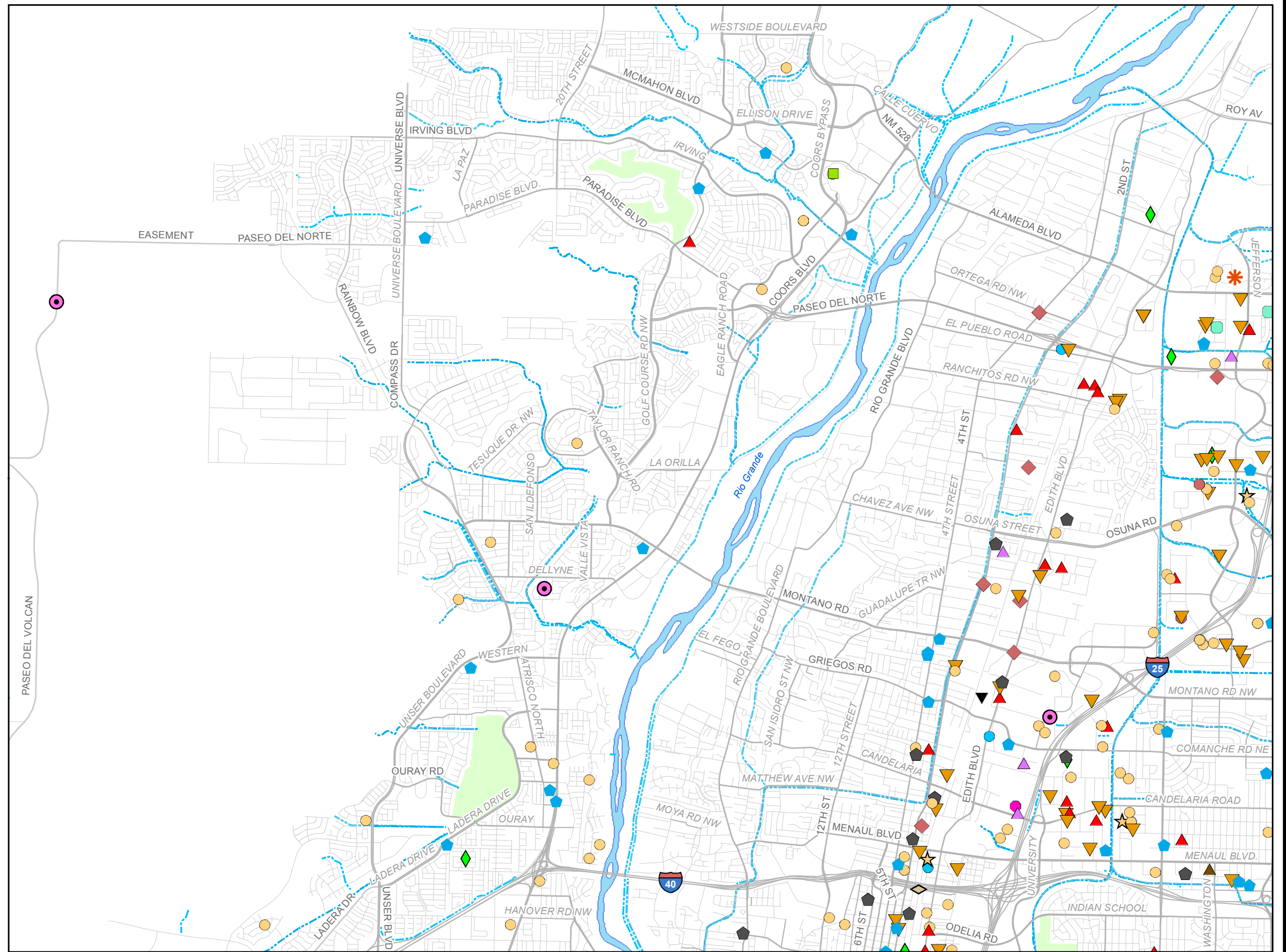
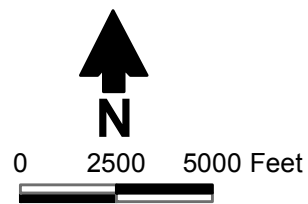
Sources: AGIS (2013) and CDM Smith (2015)

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**Explanation**

Exposure potential

-  Air transportation
-  Asphalt paving and roofing materials and lubricants
-  Automobile salvage yards and scrap recycling facilities
-  Chemical and allied products, rubber, miscellaneous plastic products, and misc. manufacturing industries
-  Electronic, electrical, photographic, and optical goods
-  Food and kindred products
-  Glass clay, cement, concrete, and gypsum products
-  Land transportation and warehousing
-  Laundry and supply services
-  Manufacturer
-  Mineral mining and dressing
-  Painters
-  Primary metals
-  Retail
-  Ship and boat building or repairing yards, transportation equipment, industrial or commercial machinery
-  Textile mills, apparel, and other fabric product manufacturing, leather and leather products
-  Timber products, furniture and fixtures
-  Water transportation
-  Carwashes
-  Arroyo or canal
-  Golf course

























Sources: AGIS (2013) and CDM Smith (2015)

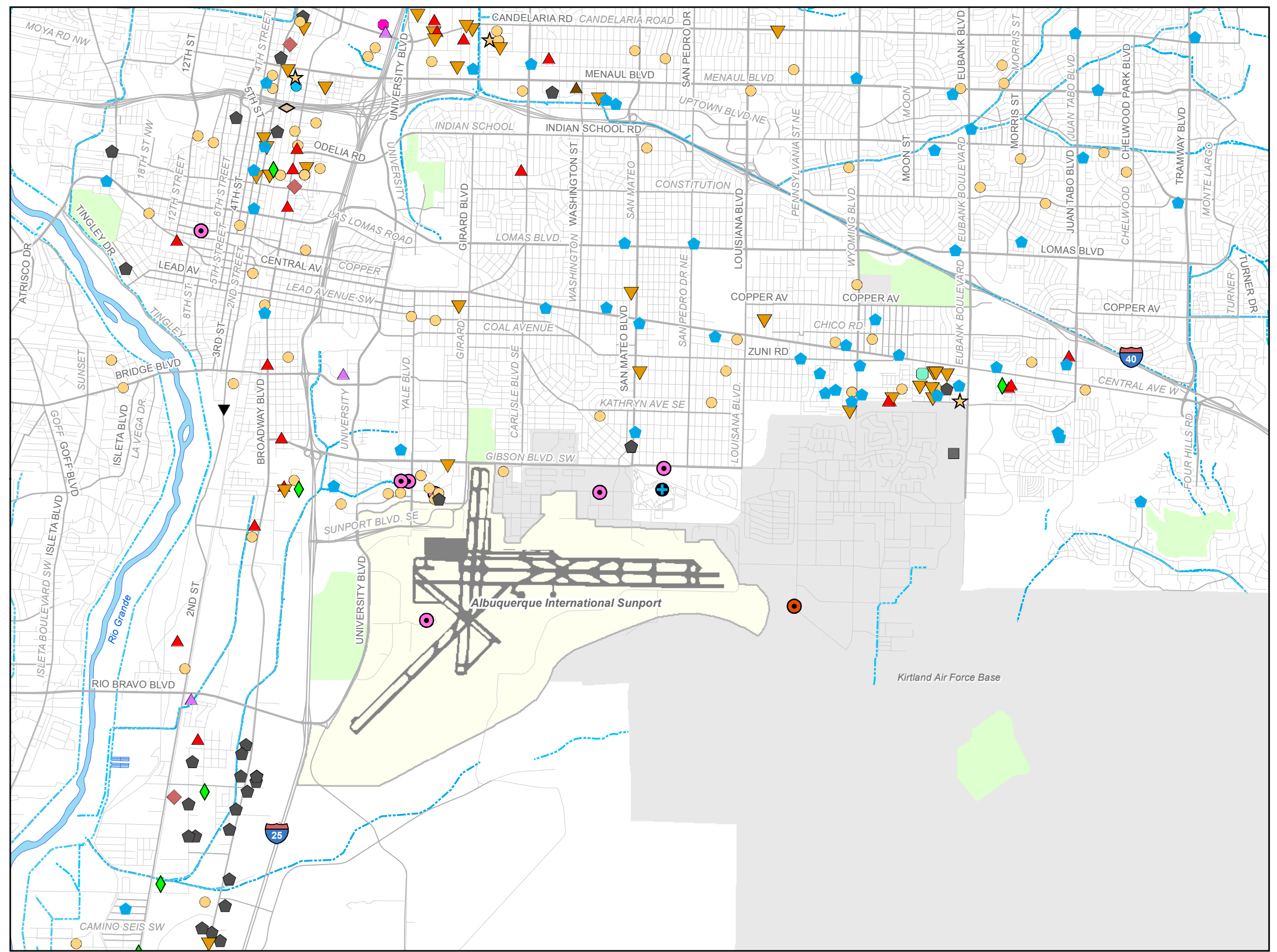
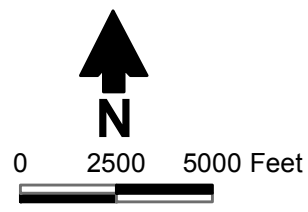
**CITY OF ALBUQUERQUE**  
**Medium Exposure Potential - Northwest**



**Explanation**

Exposure potential

-  Air transportation
-  Asphalt paving and roofing materials and lubricants
-  Automobile salvage yards and scrap recycling facilities
-  Chemical and allied products, rubber, miscellaneous plastic products, and misc. manufacturing industries
-  Electronic, electrical, photographic, and optical goods
-  Food and kindred products
-  Glass clay, cement, concrete, and gypsum products
-  Government office
-  Health care
-  Land transportation and warehousing
-  Laundry and supply services
-  Manufacturer
-  Military base
-  Painters
-  Ship and boat building or repairing yards, transportation equipment, industrial or commercial machinery
-  Textile mills, apparel, and other fabric product manufacturing, leather and leather products
-  Timber products, furniture and fixtures
-  Water transportation
-  Carwashes
-  Arroyo or canal
-  Golf course
-  Military installation



Sources: AGIS (2013) and CDM Smith (2015)













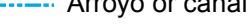
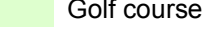
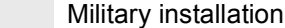
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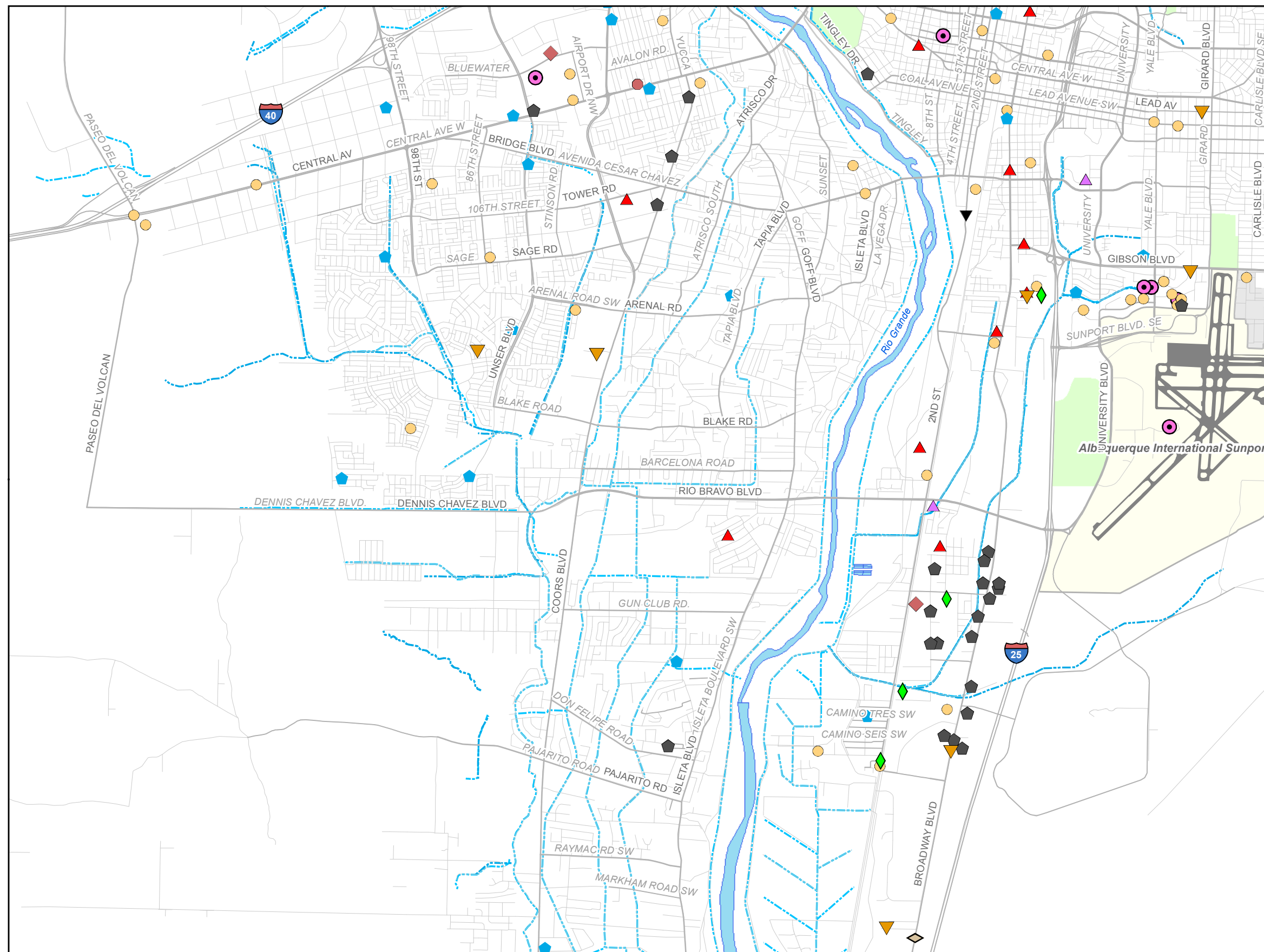
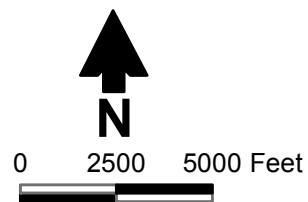


S:\PROJECTS\WR14.0049.01\_COA\_STORMWATER\GIS\FIGURES\FIG10\_EXPOSURE\_POTENTIAL\_M\_GROUPS\_SW.MXD 8/8/2016

### Explanation

#### Exposure potential

-  Air transportation
-  Asphalt paving and roofing materials and lubricants
-  Automobile salvage yards and scrap recycling facilities
-  Chemical and allied products, rubber, miscellaneous plastic products, and misc. manufacturing industries
-  Electronic, electrical, photographic, and optical goods
-  Food and kindred products
-  Glass clay, cement, concrete, and gypsum products
-  Land transportation and warehousing
-  Manufacturer
-  Primary metals
-  Timber products, furniture and fixtures
-  Carwashes
-  Arroyo or canal
-  Golf course
-  Military installation



Sources: AGIS (2013) and CDM Smith (2015)



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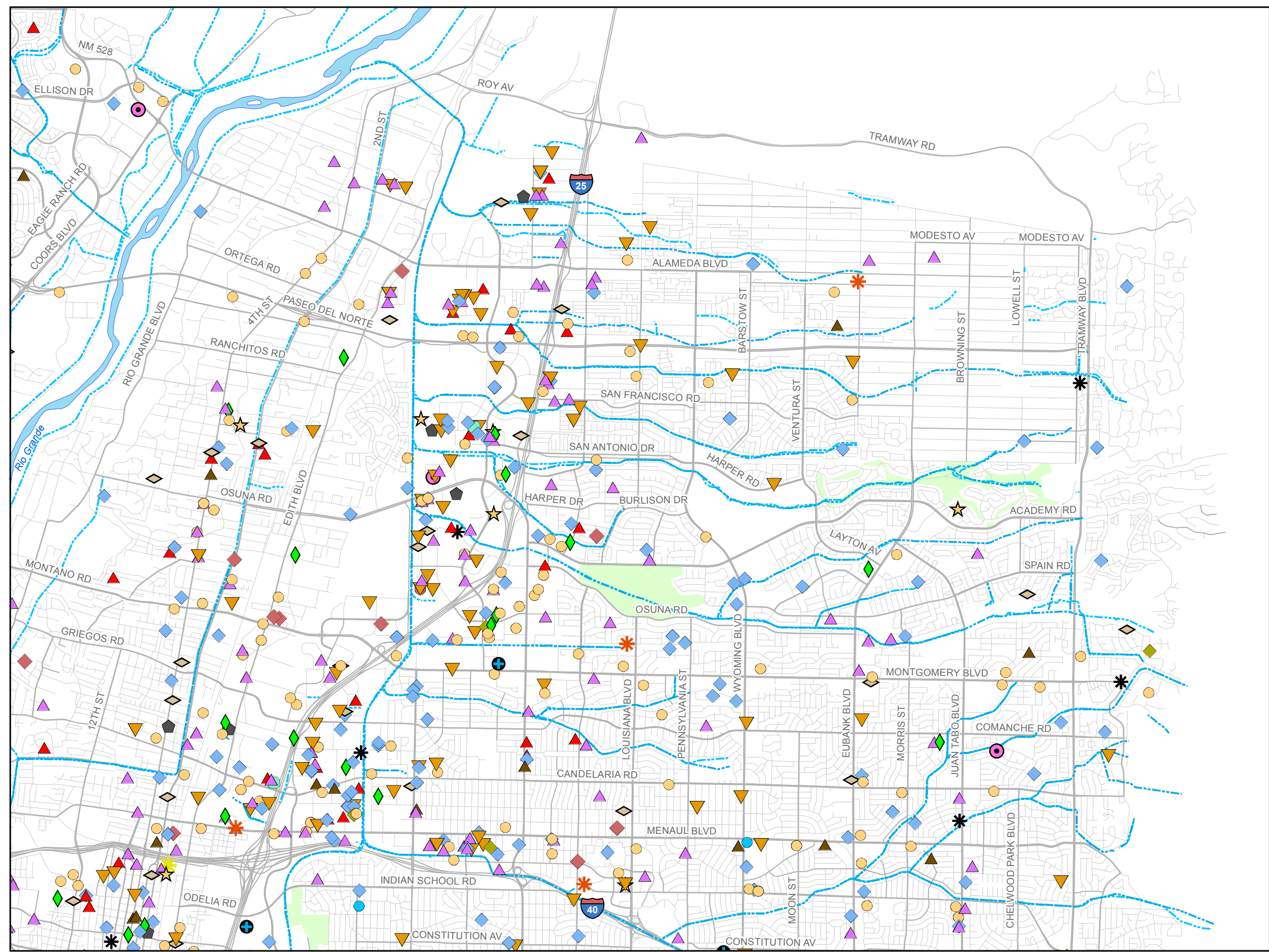
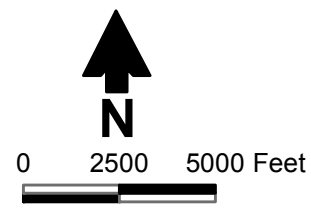
## CITY OF ALBUQUERQUE Medium Exposure Potential - Southwest

Figure 10

**Explanation**

Exposure potential

- Air transportation
- Automobile salvage yards and scrap recycling facilities
- Chemical and allied products, rubber, miscellaneous plastic products, and misc. manufacturing industries
- Electronic, electrical, photographic, and optical goods
- Food and kindred products
- Glass clay, cement, concrete, and gypsum products
- Health care
- Land transportation and warehousing
- Laundry and supply services
- Manufacturer
- Mineral mining and dressing
- Oil and gas extraction and refining
- Paper and allied products
- Primary metals
- Printing and publishing
- Ship and boat building or repairing yards, transportation equipment, industrial or commercial machinery
- Steam electric generating facilities and treatment works
- Textile mills, apparel, and other fabric product manufacturing, leather and leather products
- Timber products, furniture and fixtures
- Water transportation
- Arroyo or canal
- Golf course


























Sources: AGIS (2013) and CDM Smith (2015)

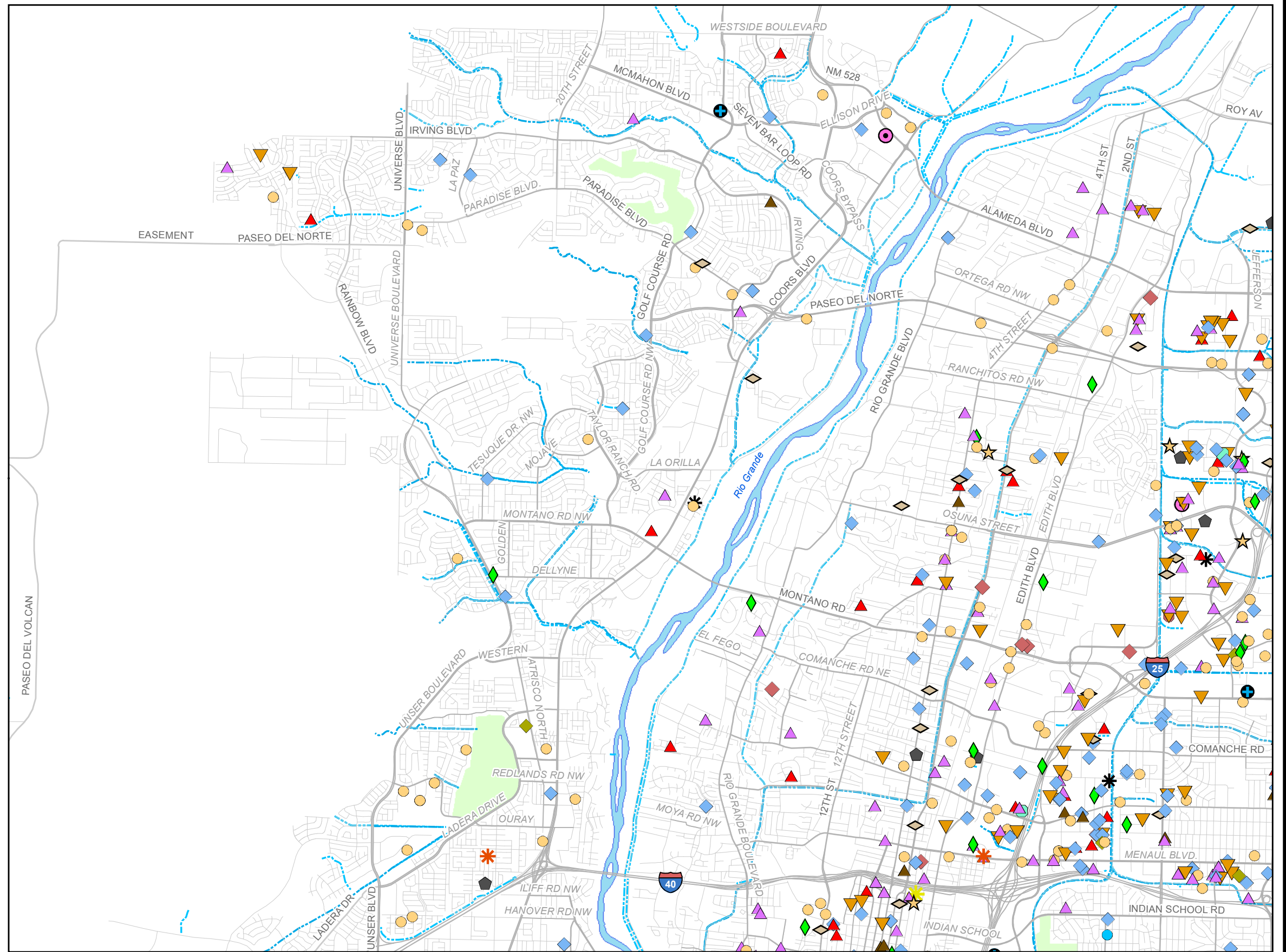
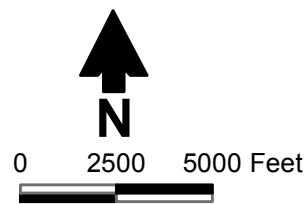
S:\PROJECTS\WR14.0049.01\_COA\_STORMWATER\GIS\FIGURES\FIG11\_EXPOSURE\_POTENTIAL\_L\_GROUPS\_NE.MXD 8/8/2016

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### Explanation

#### Exposure potential

-  Air transportation
-  Automobile salvage yards and scrap recycling facilities
-  Chemical and allied products, rubber, miscellaneous plastic products, and misc. manufacturing industries
-  Electronic, electrical, photographic, and optical goods
-  Food and kindred products
-  Glass clay, cement, concrete, and gypsum products
-  Health care
-  Land transportation and warehousing
-  Laundry and supply services
-  Manufacturer
-  Mineral mining and dressing
-  Oil and gas extraction and refining
-  Paper and allied products
-  Primary metals
-  Printing and publishing
-  Ship and boat building or repairing yards, transportation equipment, industrial or commercial machinery
-  Steam electric generating facilities and treatment works
-  Textile mills, apparel, and other fabric product manufacturing, leather and leather products
-  Timber products, furniture and fixtures
-  Water transportation
-  Carwashes
-  Arroyo or canal
-  Golf course



Sources: AGIS (2013) and CDM Smith (2015)



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## CITY OF ALBUQUERQUE Low Exposure Potential - Northwest

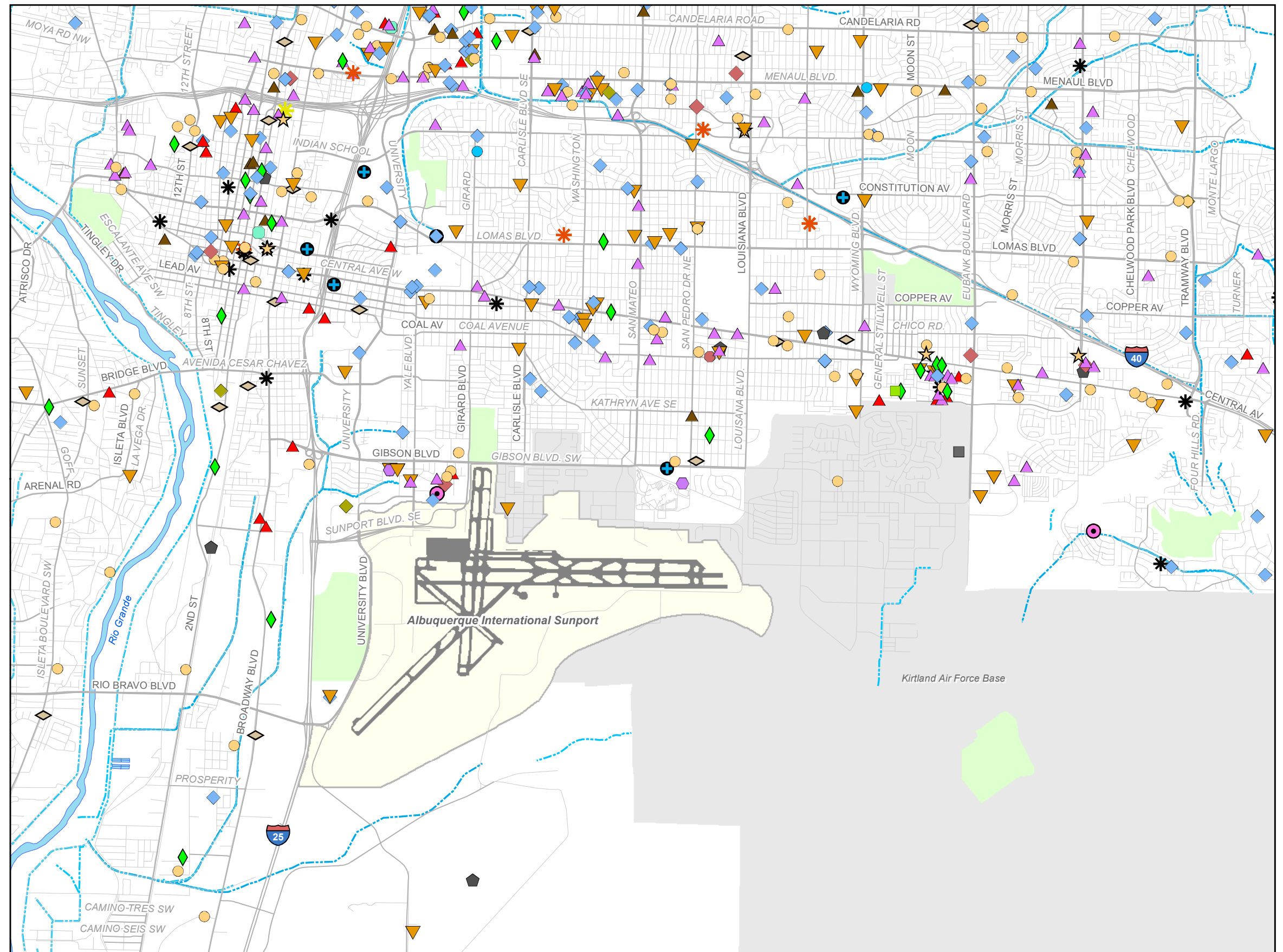
Figure 12

S:\PROJECTS\WR14.0049.01\_COA\_STORMWATER\GIS\FIGURES\FIG13\_EXPOSURE\_POTENTIAL\_L\_GROUPS\_SE.MXD 8/8/2016

### Explanation

#### Exposure potential

- Air transportation
- Automobile salvage yards and scrap recycling facilities
- Chemical and allied products, rubber, miscellaneous plastic products, and misc. manufacturing industries
- Electronic, electrical, photographic, and optical goods
- Food and kindred products
- Glass, clay, cement, concrete, and gypsum products
- Government office
- Health care
- Land transportation and warehousing
- Laundry and supply services
- Manufacturer
- Mineral mining and dressing
- Oil and gas extraction and refining
- Paper and allied products
- Primary metals
- Printing and publishing
- Research and development
- Retail
- Ship and boat building or repairing yards, transportation equipment, industrial or commercial machinery
- Steam electric generating facilities and treatment works
- Textile mills, apparel, and other fabric product manufacturing, leather and leather products
- Timber products, furniture and fixtures
- Water transportation
- Arroyo or canal
- Golf course
- Military installation



Sources: AGIS (2013) and CDM Smith (2015)























## CITY OF ALBUQUERQUE Low Exposure Potential - Southeast

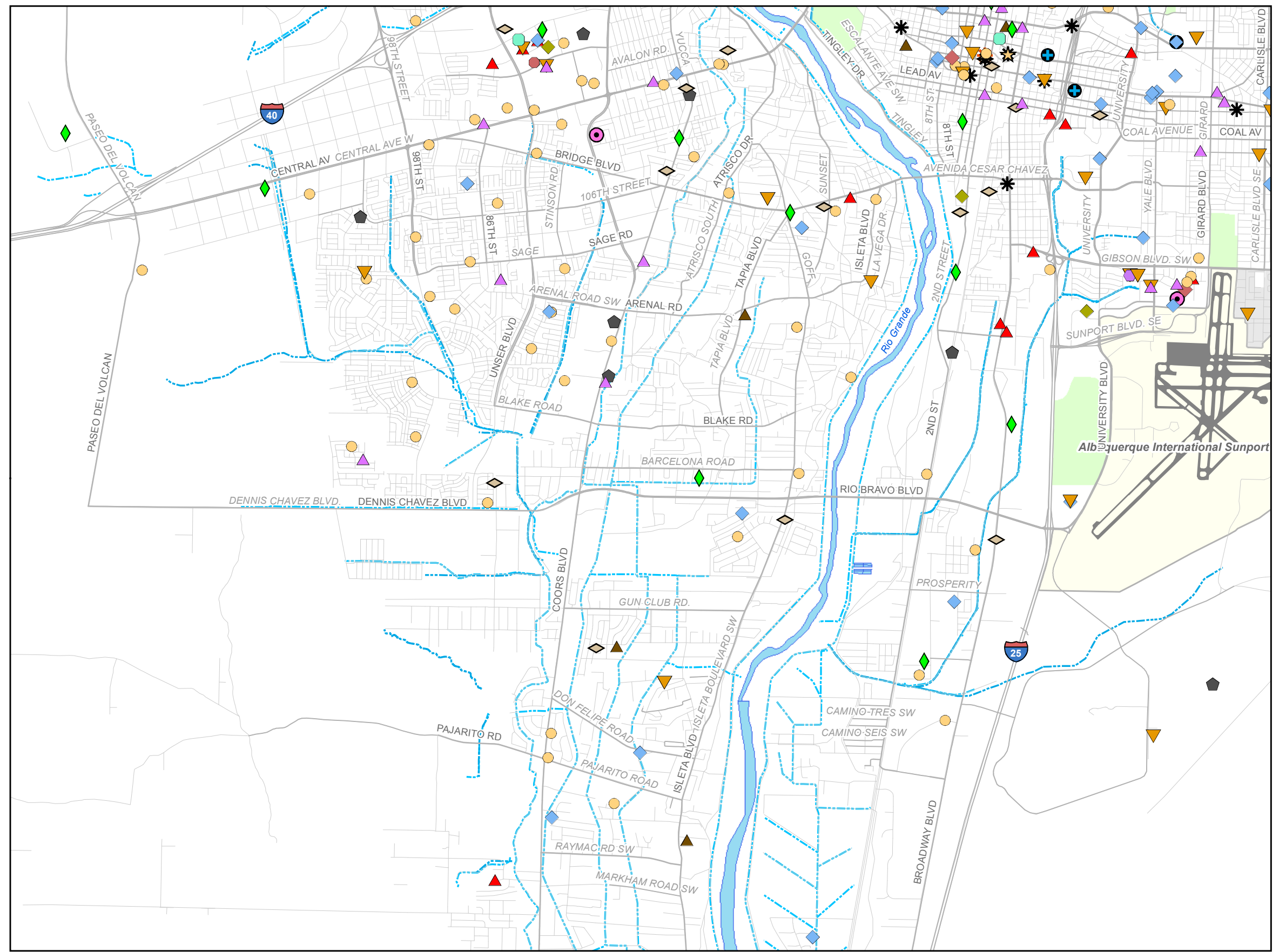
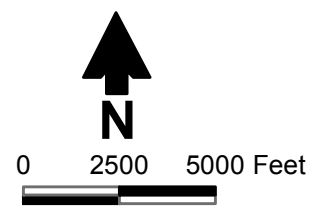


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8/8/2016  
WR14.0049

**Explanation**

Exposure potential

-  Air transportation
-  Automobile salvage yards and scrap recycling facilities
-  Chemical and allied products, rubber, miscellaneous plastic products, and misc. manufacturing industries
-  Electronic, electrical, photographic, and optical goods
-  Food and kindred products
-  Glass clay, cement, concrete, and gypsum products
-  Health care
-  Land transportation and warehousing
-  Laundry and supply services
-  Manufacturer
-  Mineral mining and dressing
-  Oil and gas extraction and refining
-  Paper and allied products
-  Primary metals
-  Printing and publishing
-  Research and development
-  Ship and boat building or repairing yards, transportation equipment, industrial or commercial machinery
-  Textile mills, apparel, and other fabric product manufacturing, leather and leather products
-  Timber products, furniture and fixtures
-  Arroyo or canal
-  Golf course
-  Military installation



Sources: AGIS (2013) and CDM Smith (2015)

**CITY OF ALBUQUERQUE**  
**Low Exposure Potential - Southwest**

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**Appendix A**  
**Stormwater Quality**  
**Ordinance**



[Bracketed/Underscored Material] - New  
[Bracketed/Strikethrough Material] - Deletion

1       **Discharge.** The introduction or addition of any pollutant, stormwater, or  
2 other substance into the MS4, or to allow, permit, or suffer any such  
3 introduction or addition that is not specifically allowed by the City of  
4 Albuquerque’s current MS4 permit.

5       **Discharger.** A person who allows, causes, permits, suffers, or threatens to  
6 cause a discharge.

7       **Illicit discharge.** Any discharge to the MS4 that is not composed entirely of  
8 stormwater except discharges pursuant to a NPDES permit or those allowed in  
9 Section 6-11-6(C).

10       **Impervious.** Surfaces that are mainly artificial structures that are the result  
11 of design, construction, and maintenance – such as pavements (roads,  
12 sidewalks, driveways and parking lots) that are covered by impenetrable  
13 materials such as asphalt, concrete, brick, and stone – and rooftops; soils  
14 compacted by urban development are also highly impervious.

15       **Industrial activity certification (IAC).** A certification submitted to the  
16 stormwater engineer showing compliance with EPA industrial activity  
17 regulations.

18       **Industrial facility.** A property that has discharges associated with  
19 industrial activity as defined by federal regulations in 40 C.F.R. 122.26(b)(14)I-  
20 XI).

21       **MS4 or municipal separate storm sewer system.** The system of  
22 conveyances owned or operated by the City or any co-permittee of the City  
23 under the Permit issued by the U.S. Environmental Protection Agency, that is  
24 designed or used for collecting, detention, storage, or conveying storm water.

25       **NPDES.** The national pollutant discharge elimination system.

26       **NPDES permit.** A permit issued by the EPA under Title 33 of the United  
27 States code that authorizes the discharge or pollutants to waters of the United  
28 States, whether the permit is applicable on an individual, group, or general  
29 basis.

30       **Parcel.** A contiguous piece of land that is under common ownership or  
31 control or that is part of a larger common plan of development or sale.



[Bracketed/Underscored Material] - New  
[Bracketed/Strikethrough Material] - Deletion

1       **Person.** An individual, corporation, organization, governmental entity,  
2 business trust, partnership, association, or other legal entity, or an agent or an  
3 employee thereof.

4       **Point source.** Any discernible and discrete conveyance, including but not  
5 limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure,  
6 container, rolling stock, concentrated animal feeding operation, landfill  
7 leachate collection system, vessel or other floating craft from which pollutants  
8 are or may be discharged. This term does not include return flows from  
9 irrigated agriculture or agricultural stormwater runoff.

10       **Pollutant.** The term “pollutant” includes but is not limited to, dredged soil,  
11 solid waste, incinerator residue, sewage, garbage, sewage sludge, filter  
12 backwash, munitions, chemical wastes, biological materials, radioactive  
13 materials, wrecked or discarded equipment, sediment, and other material, or  
14 any combination thereof discharged into the MS4 or any water of the United  
15 States.

16       **Pollution.** The alteration of the physical, chemical, or biological quality of,  
17 or the contamination of, any waters of the United States that renders the water  
18 harmful, detrimental or injurious to humans, animal life, vegetation, or  
19 property or to public health, safety, or welfare, or otherwise impairs the quality  
20 of the water.

21       **Stormwater.** Rainwater runoff, snow melt runoff, and surface runoff and  
22 drainage.

23       **Stormwater discharge associated with industrial activity.** The discharge  
24 from any conveyance which is used for collecting and conveying stormwater  
25 and which is directly related to manufacturing, processing, or raw materials  
26 storage areas at an industrial plant, (see 40 cfr 122.26(b)(14) for specifics of  
27 this definition).

28       **Stormwater engineer.** The person responsible for enforcement of this  
29 ordinance as designated through §6-11-3 ROA 1994.

30       **Stormwater control permit for erosion and sediment control or SWP.** The  
31 permit issued pursuant to the drainage control ordinance.  
32

[Bracketed/Underscored Material] - New  
[Bracketed/Strikethrough Material] - Deletion

1       **Structure.** That which is built or constructed, an edifice or building of any  
2 kind, or any piece of work, including, but not limited to, a paved surface, that  
3 is artificially built up or composed of parts joined together in some definite  
4 manner. The term does not include a street, a channel, or a public utility.

5       **Structural control.** Any structure built and maintained to prevent, reduce,  
6 or mitigate the potential of stormwater runoff contact with pollution-causing  
7 activities.

8       **Threat or Threatens.** A written or oral threat that is accompanied by a  
9 specific action to introduce a pollutant into the MS4.

10       **§6-11-3 Stormwater Engineer.** The Director of the Department of Municipal  
11 Development shall appoint a stormwater engineer who, once so appointed, is  
12 vested with the authority to enforce this ordinance and all the other powers  
13 and duties as may be provided in this Stormwater Quality Ordinance.

14       **§6-11-4 Applicability**

15       **(A)** A person who owns an industrial facility or causes a discharge is  
16 governed by this ordinance.

17       **(B)** If a parcel is located outside the corporate boundaries of the city and  
18 stormwater from any portion of the parcel drains into the MS4, then the owner  
19 of such parcel is subject to this ordinance unless the owner elects not to  
20 discharge any stormwater into the MS4.

21       **§6-11-5 Industrial Activity Certification.** At any facility with activity covered  
22 by the EPA's standard industrial codes that requires a multi-sector general  
23 permit, the operator shall submit to the city an industrial activity certification  
24 (IAC) when requested by the stormwater engineer. Upon reasonable notice,  
25 the stormwater engineer may perform site inspections of these facilities. The  
26 IAC may include any one of the following:

27       **(A)** A copy of the application for an individual permit from the EPA for  
28 stormwater discharges from industrial activity at the facility;

29       **(B)** A copy of the permit issued by the EPA for stormwater discharges  
30 from industrial activity at the facility;

31       **(C)** A copy of the notice of intent (NOI) for coverage under a multi-sector  
32 general permit for stormwater discharges associated with industrial activity

1 issued by the EPA, or a copy of the “no exposure certification” submitted to  
2 EPA;

3 (D) A statement of commitment to file an application for an individual  
4 permit from the EPA for stormwater discharges from industrial activity at the  
5 facility by a date certain agreed to by the stormwater engineer; or

6 (E) A statement of commitment to file a NOI for coverage under a  
7 general permit for stormwater discharges associated with industrial activity  
8 regulating the stormwater quality and prohibiting illicit discharges into the  
9 MS4 issued by the EPA by a date certain agreed to by the stormwater  
10 engineer.

11 **§6-11-6 Illicit Discharges and Connections.**

12 (A) **Illicit Discharge to MS4 Prohibited:** A person who commits a  
13 violation as prescribed under subsection ‘B’ below is subject to the penalties  
14 set forth in §6-11-8 and §6-11-9 of this article.

15 (B) **Violations.** No person shall:

16 (1) Attempt to introduce, introduce, or causes to be introduced  
17 into the MS4 any discharge that is not composed entirely of pollutant-free  
18 storm water;

19 (2) Leave, accumulate, discharge, or allow animal waste on a  
20 publicly owned property or on private property that will drain to the MS4;

21 (3) Allow any fluids from motor vehicles to drip or flow onto  
22 public property or into the MS4;

23 (4) Blow or otherwise cause dirt, leaves or other organic or  
24 inorganic material to move from any private property to any public property or  
25 into the MS4;

26 (5) Allow sanitary sewer overflows from private property to enter  
27 publicly owned property. Sanitary sewer overflows shall be contained to the  
28 property of origin and the owner of the property shall bear the cost of proper  
29 disposal and cleanup. Disposal and cleanup shall be initiated and completed  
30 as expeditiously as possible, and in no case shall exceed 48 hours from the  
31 time of detection;

32 (6) Allow sanitary sewer from private property to enter the MS4  
33 through an underground cross-connection of sanitary sewer pipe into storm

[Bracketed/Underscored Material] - New  
[Bracketed/Strikethrough-Material] - Deletion

[Bracketed/Underscored Material] - New  
[Bracketed/Strikethrough Material] - Deletion

- 1 sewer pipe. Should such a cross-connection be detected, the owner of the
- 2 property that is the origin of the sanitary sewer discharge shall bear the cost
- 3 of removing the cross-connection. Proper permitting must be obtained prior
- 4 to performing the work;
- 5 (7) Allow any other non-authorized, non-stormwater discharge to
- 6 enter the MS4; or
- 7 (8) Continue a discharge if:
- 8 (a) The discharge or flow in question has been determined by the
- 9 City Engineer to be a source of a pollutant or pollutants to the MS4.
- 10 (b) Written notice of such determination has been provided to the
- 11 discharger; and,
- 12 (c) The discharge has continued after the expiration of the time
- 13 given in the notice to cease the discharge.
- 14 (C) Exceptions. Notwithstanding the activities proscribed under
- 15 subsection 6-11-1(B) above, the following do not constitute violations:
- 16 (1) A discharge authorized by, and in compliance with, a current NPDES
- 17 permit (other than the City of Albuquerque's NPDES permit for discharges
- 18 from the MS4);
- 19 (2) Any discharge in compliance with a SWP if required in the Drainage
- 20 Ordinance;
- 21 (3) Any non-prohibited discharge from an exempt parcel;
- 22 (4) Any discharge or flow resulting from firefighting by the fire
- 23 department if that discharge is not reasonably expected to be a significant
- 24 source of pollutants to the MS4;
- 25 (5) Water line flushing, provided that the water is not significantly
- 26 chlorinated when reaching a receiving water;
- 27 (6) Rising ground waters;
- 28 (7) Ground water infiltration;
- 29 (8) Irrigation water from agricultural operations;
- 30 (9) Flows from riparian habitats and wetlands;
- 31 (10) Dechlorinated discharges of potable water; or
- 32 (11) Materials resulting from a spill where the discharge is necessary to
- 33 prevent loss of life; personal injury, or property damage provided that the

[Bracketed/Underscored Material] - New  
[Bracketed/Strikethrough Material] - Deletion

1 party responsible for the spill takes all reasonable steps to minimize or  
2 prevent any adverse effects to human health or the environment.

3 (12) Any stormwater flows from property in a native undisturbed state.

4 §6-11-7 Industrial Activity Discharge Permit. A person who is the  
5 owner or operator of an industrial facility that has discharges associated with  
6 industrial activity as defined by federal regulations must apply for and acquire  
7 an EPA Multi Sector General Permit. The owner or operator shall notify the  
8 stormwater engineer of such application and any federal notice of intent or  
9 notice of termination.

10 §6-11-8 Compliance and Enforcement

11 (A) *Compliance Monitoring Methods.* At any facility that discharges  
12 stormwater to the MS4, the stormwater engineer is authorized to execute the  
13 following methods, or any other reasonable methods, to enforce compliance  
14 with this stormwater ordinance:

15 (1) Install, or to require the installation of, such devices as are  
16 necessary to conduct sampling or metering of the discharger's operations at  
17 the expense of the City;

18 (2) Require any facility that is reasonably determined to have  
19 discharged a pollutant or any substance that causes, continues to cause, or  
20 will cause pollution, to conduct specified sampling, testing, analysis, and  
21 other monitoring of its stormwater discharges. The stormwater engineer may  
22 specify the frequency and parameters or any required sampling or monitoring;

23 (3) Require any facility that has been found to have violated this  
24 ordinance to install monitoring equipment as necessary at the discharger's  
25 expense. The discharger, at its own expense, shall at all times maintain the  
26 facility's sampling and monitoring equipment in a safe and operating  
27 condition. Each device used to measure storm water flow and quality must be  
28 calibrated regularly to ensure accuracy;

29 (4) Require monitoring of non-storm water discharges if the stormwater  
30 engineer reasonably believes that such discharges violate the City's MS4  
31 permit requirements;

1 (5) Upon request of the stormwater engineer, a facility shall submit in  
2 writing the results of any sampling or monitoring undertaken pursuant to the  
3 requirements of this article;

4 (6) Facility owners or operators shall maintain the results of any  
5 monitoring and any supporting documentation undertaken pursuant to this  
6 Ordinance for three (3) years; or

7 (7) All monitoring required by this Ordinance must be performed in  
8 accordance with the established methodologies and protocols of the EPA or  
9 New Mexico Environmental Department.

10 §6-11-9 Enforcement Provisions

11 (A) *Enforcement.*

12 (1) The stormwater engineer or any City police officer is hereby  
13 authorized to undertake the enforcement activities authorized by this section.

14 (2) The City may issue a Notice of Violation to any person who violates  
15 any provision of this article. The violator may be given an opportunity to  
16 respond to the Notice and propose corrective actions in a reasonable amount  
17 of time as determined by the stormwater engineer.

18 (B) *Penalties.*

19 (1) *Criminal Penalties.* Any person who violates any provision of this  
20 article is guilty of a petty misdemeanor and upon conviction thereof, shall be  
21 punished by a fine of not less than \$250.00 nor more than \$500.00 and up to  
22 thirty (30) days in jail for each violation. Each day in which any violation shall  
23 occur shall constitute a separate offense. Prosecution or conviction under  
24 this section shall not preclude any civil remedy or relief for a violation of this  
25 article. Once cited for an offense, an additional citation may be issued for  
26 each day the violation continues unless the violator has entered into an  
27 agreement with the City for mitigation, correction, and any other necessary  
28 action and is acting in conformity with the agreement and the schedule in the  
29 agreement.

30 (2) *Civil Penalties.* In addition to or instead of criminal prosecution,  
31 where applicable, the City acting through the City Attorney, is hereby  
32 authorized to file an action in a court of competent jurisdiction to:

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1 (a) Enjoin any person from violating or threatening to violate the  
2 terms, conditions and restrictions of this article;

3 (b) Enjoin the violation or threatened violation of the provisions of  
4 this Ordinance;

5 (c) Recover civil penalties for violation of the terms, conditions  
6 and restrictions of this article;

7 (d) Recover civil penalties for violation of the provisions of this  
8 Ordinance; or

9 (e) Recover damages from the owner of a parcel in an amount  
10 adequate for the City to undertake any construction remediation, cleanup, or  
11 other activity necessary to bring about compliance with this chapter. In  
12 addition to judicial remedies, such damages are recoverable through the  
13 imposition of a municipal lien on the parcel under NMSA 1978, § § 3-36-1 to 3-  
14 36-5.

15 (C) The City, acting through the City Attorney, is hereby authorized to  
16 enter into agreements in lieu of litigation to achieve compliance with the  
17 provisions of this article.

18 (D) The City's authority in §6-11-8 (A) and (B) is in addition to all  
19 provisions of these Ordinances relative to the definition of offenses and the  
20 provision of penalties for violations of such offenses.

21 §6-11-10 Private Cause of Action Prohibited. Nothing in this Ordinance  
22 shall provide for a private cause of action.

23 §6-11-11 Regulations and Forms Authorized. The stormwater engineer  
24 shall promulgate regulations and forms regarding compliance with the  
25 requirements of this article. Such regulations and forms shall be available at  
26 the office of the city engineer, the office of the stormwater engineer; and on  
27 the City website. The regulations and forms established hereunder may be  
28 amended or supplemented from time to time.

29 §6-11-12 Cumulative Effect

30 (A) This Ordinance is cumulative of other requirements imposed by  
31 Ordinances and Regulations of the City. To the extent of any inconsistency,  
32 the more restrictive provision shall govern.

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1 (B) Any authorization granted by this Ordinance does not excuse  
2 compliance with federal or state law or any other provisions of this Code or  
3 any other City ordinance relating to the activities regulated by this article.

4 §6-11-13 Remedies Not Exclusive.

5 The remedies listed in this article are not exclusive of any other remedies  
6 available under any applicable federal, state, or local law. It is within  
7 discretion of the City to seek cumulative remedies.

8 §6-11-14 Access to Facilities and Records.

9 (A) When it is necessary to make an inspection to enforce the provisions  
10 of this article or to inspect or investigate conditions related to water quality,  
11 an authorized City official may enter a building or premises at reasonable  
12 times to inspect or to perform the duties imposed by this article or to inspect  
13 or review records, reports, data, plans, or other documents relating to  
14 compliance with this article or with any NPDES storm water permit. If the  
15 building or premises is occupied, credentials must be presented to the  
16 occupant and entry requested. If the building or premises is unoccupied, the  
17 authorized City official shall first make a reasonable effort to locate the owner  
18 or other person having charge or control of the building or premises and  
19 request entry. If refused, the authorized City official shall have recourse to the  
20 remedies provided by law to secure entry.

21 (B) When, due to emergency, immediate entry is necessary to protect life  
22 or property, or when the authorized City official shall have first obtained a  
23 proper inspection warrant or other remedy provided by law to secure entry, no  
24 owner, occupant or any other person having charge, care or control of any  
25 building or premises shall fail or neglect, after proper request is made as  
26 herein provided, to promptly permit entry therein by the authorized City official  
27 for the purpose of inspection and investigation pursuant to this article or other  
28 laws relating to storm water quality.

29 (C) Any temporary or permanent obstruction to safe and easy access to  
30 a facility that is to be inspected or sampled must be promptly removed upon  
31 the written request of the authorized City official or Stormwater Engineer and  
32 may not be replaced. The cost of clearing access to the facility shall be borne  
33 by the discharger.



1       **Section 2. Severability Clause.** If any section, paragraph, sentence,  
2 clause, word or phrase of this Ordinance is for any reason held to be invalid or  
3 unenforceable by any court of competent jurisdiction, such decision shall not  
4 affect the validity of the remaining provisions of this Ordinance. The Council  
5 hereby declares that it would have passed this Ordinance and each section,  
6 paragraph, sentence, clause, word or phrase thereof irrespective of any  
7 provision being declared unconstitutional or otherwise invalid.

8       **Section 3. Compilation.** The ordinance set forth in Section 1 above shall  
9 be incorporated in and made part of the Revised Ordinances of Albuquerque,  
10 New Mexico, 1994.

11       **Section 4. Effective Date.** This Ordinance takes effect five days after  
12 publication by title and general summary.

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1 PASSED AND ADOPTED THIS 20<sup>th</sup> DAY OF June, 2016  
2 BY A VOTE OF: 9 FOR 0 AGAINST.

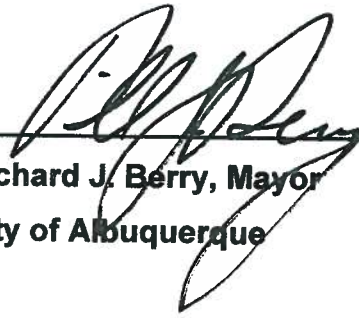
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Dan Lewis, President  
City Council

APPROVED THIS 6<sup>th</sup> DAY OF July, 2016

Bill No. C/S O-16-16



\_\_\_\_\_  
Richard J. Berry, Mayor  
City of Albuquerque

ATTEST:



\_\_\_\_\_  
Natalie Y. Howard, City Clerk

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**Appendix B**  
**Reported**  
**Illicit Discharges**

### Reported Illicit Discharges

| OBJECTID | case_311     | Address                                 | Problem                                                                                                                                                                                                                                                        | Solution                                                                                                                                                                                                                                                       | Type Category 1 | Type Category 2       | Date In    | Numb |
|----------|--------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------|------------|------|
| 6        | 8045824      | 2005 roaring fork pl nw                 | draining antifreeze into street                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                | Antifreeze      |                       | 8/29/2011  | 255  |
| 10       | 8133265      | 341 san pedro ne                        | anti freeze is leaking down the gutter from Auto clinic                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                | Antifreeze      |                       | 9/12/2011  | 256  |
| 14       | 8140200      | 5117 GRANDE NW                          | ANTIFREEZE IN THE GUTTER IN FRONT OF HOME                                                                                                                                                                                                                      | I left p2 brochurs at this neighborhood                                                                                                                                                                                                                        | Antifreeze      |                       | 9/16/2011  | 265  |
| 72       | 9679609      | JUAN TABO AND MOUNTAIN NE               | Dumpster at the Jiffy lube at the northwest corner of Juan Tabo and Mountain is leaking what appears to be antifreeze;this antifreeze is flowing all the way to Juan Tabo and Muriel                                                                           |                                                                                                                                                                                                                                                                | Antifreeze      |                       | 7/17/2012  | 310  |
| 55       | web          | 6820 Vivian NE                          | Antifreeze from vehicles                                                                                                                                                                                                                                       | unable to locate it                                                                                                                                                                                                                                            | Antifreeze      |                       | 9/17/2012  | 294  |
| 108      | web          | 417 berry nw                            | anti freeze dumped into inlet                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                | Antifreeze      |                       | 6/6/2013   | 345  |
| 120      | 11492431     | 5th and copper nw                       | antifreeze                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                | Antifreeze      |                       | 8/26/2013  | 356  |
| 174      | 12845461     | 9200 carson mesa nw                     | antifreeze                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                | Antifreeze      |                       | 8/19/2014  | 426  |
| 176      | e-mail       | 10300 menaul ne suit 8-9                | dumping antifreeze                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                | Antifreeze      |                       | 8/27/2014  | 428  |
| 150      | 12360561     | 4913 menaul ne zia auto                 | car wash                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                | Car wash        |                       | 5/5/2014   | 402  |
| 159      | e-mail       | 1909 4th st nw                          | car wash                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                | Car wash        |                       | 6/6/2014   | 411  |
| 260      | 14155875     | 4710 montgomery ne                      | car wash                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                | Car wash        |                       | 9/8/2015   | 496  |
| 5        | e-mail       | 1414 phoenix nw                         | carpet waste                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                | Carpet cleaning |                       | 8/25/2011  | 258  |
| 29       | web          | Embudo Arroyo at Birt                   | carpet cleaning waste                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                | Carpet cleaning |                       | 11/29/2011 | 271  |
| 60       | 93005789     | walter and thaxton se                   | Cano carpet cleaning co dumps their chemicals into the storm drain at this location for years.                                                                                                                                                                 |                                                                                                                                                                                                                                                                | Carpet cleaning |                       | 5/3/2012   | 298  |
| 69       | 9659669      | General Chennault and Harwood NE        | EAGLE CARPET CLEANING CO. VAN HAS BEEN SPOTTED IN NEIGHBORHOOD DUMPING CONTAMINATED WASTEWATER INTO THE GUTTER AT THIS LOCATION.THE VAN HAS BEEN SEEN DOING THIS AT THIS LOCATION 2 TIMES IN THE PAST WEEK.                                                    |                                                                                                                                                                                                                                                                | Carpet cleaning |                       | 7/12/2012  | 307  |
| 113      | 10387920     | 6200 montano plaza nw                   |                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                | Carpet cleaning |                       | 12/18/2012 | 417  |
| 86       | 10572278     | 10856 fort point ln ne                  | THE INDOOR QUALITY AIR CO. IS EMPTYING THEIR WATER WASTE FROM DUCT AND CARPET CLEANING INTO INLET DRAIN. IN THE SUMMER MONTHS THE SMELL FROM THE INLET IS HORRIBLE. HAIR AND DEBRI CAN BE SEEN ALONG THE DRAINN AREA. THIS IS HAZARDOUS TO ENVIRONMENT.        | I called the manager on this issue, she told me that they will clean up the inlet and stop dumping any wastewater into the inlet.                                                                                                                              | Carpet cleaning |                       | 1/25/2013  | 379  |
| 95       | 10767767     | 10856 fort point ln ne                  | Water waste from duct and carpet cleaning dumped into inlet drain.Citizen has made several reports on this issue.                                                                                                                                              | I warned him of taking action against the company if we receive any more calls.He agreed to this, and I give him some of pollution prevention brochures.                                                                                                       | Carpet cleaning |                       | 3/11/2013  | 368  |
| 123      | 11886831     | 10605 connemara sw                      |                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                | Carpet cleaning |                       | 12/4/2013  | 362  |
| 145      | 12182390     | 10554 vista bella pl nw                 | There was a van that dumped some items in the inlet storm drain at this location.                                                                                                                                                                              | I visit the site on 2-28-2014 and I did not see any kind of derbies on the storm inlet grates.I also spoke to the manager of this carpet cleaning CO regarding this incident, he told me that they just dumped clean water to empty their tank. I met the call | Carpet cleaning |                       | 2/28/2014  | 396  |
| 160      | 12637016     | 1901 indian plaza ne                    | carpet cleaning waste                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                | Carpet cleaning |                       | 6/24/2014  | 412  |
| 188      | 13110168     | 7321 vivian ne                          | carpet                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                | Carpet cleaning |                       | 10/27/2014 | 438  |
| 226      | 13760483     | 7900 LORRAINE NE CT SUITE G             | Carpet Cleaning                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                | Carpet cleaning |                       | 5/15/2015  | 475  |
| 252      | 14008859     | 9809 pinot noir sw                      | Carpet Cleaning                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                | Carpet cleaning |                       | 7/16/2015  | 488  |
| 78       | 9860357      | 921 Eubank NE north of Lomas            | The business has a accordian type hose and are dumping a thick black liquid down the storm drain.                                                                                                                                                              | according to the manager of A-Quality auto sale at this location (921 Eubank NE), the pumped water was from a pit for collecting storm water draining the parking lot.                                                                                         | Colored liquid  |                       | 8/23/2012  | 315  |
| 169      | 12710357     | saint joseph and unser nw               |                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                | Colored liquid  |                       | 7/23/2014  | 421  |
| 216      | media-e-mail | Embudo Arroyo at parsifal ne            |                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                | Colored liquid  |                       | 4/6/2015   | 465  |
| 32       | e-mail       | Embudo_Channel at Chilwood Park NE      | Pollution or something running in the channel on indian school between tramway and chilwood park. Wants someone to take a look.                                                                                                                                | nothing was visible in the channel and could not trace the liquid to any source                                                                                                                                                                                | Colored liquid  | Colored liquid, green | 12/9/2011  | 274  |
| 17       | 8295027      | 4th st and bridge sw                    | rosies paper has some white fluid coming from the north side of the building and is heading in to the storm drain. Not sure what the substance is.                                                                                                             | no action was necessary                                                                                                                                                                                                                                        | Colored liquid  | Colored liquid, white | 10/10/2011 | 266  |
| 79       | web          | 1104 BERNALILLO PL SE                   | concrete poured onto street and bare ground, gravel and dirt and construction debris from landscape remodel of the property across the corner dumped on the open lot. ABL Landscaping has had signs up for several weeks; the dumped concrete on the open spac |                                                                                                                                                                                                                                                                | Construction    |                       | 8/18/2012  | 316  |
| 117      | 11480390     | 1018 bernalillo pl se                   | construction                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                | Construction    |                       | 8/23/2013  | 355  |
| 127      | web          | La Bienvenida Pl - east end             | concrete                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                | Construction    |                       | 12/4/2013  | 365  |
| 186      | e-mail       | central between san pasquale and laguna | mud in the street                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                | Construction    |                       | 10/24/2014 | 436  |
| 192      | e-mail       | 6704 glenrio nw                         | construction                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                | Construction    |                       | 11/5/2014  | 442  |

**Reported Illicit Discharges**

| OBJECTID | case_311     | Address                                    | Problem                                                                                                                                                                                                                                                       | Solution                                                                                                                                                                                                                                                       | Type Category 1    | Type Category 2        | Date In    | Numb |
|----------|--------------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------|------------|------|
| 213      | 13641763     | laguna and san carlos sw                   |                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                | Construction       |                        | 3/31/2015  | 462  |
| 239      | 13979586     | 4501 cumberland nw                         | Construction                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                | Construction       |                        | 7/9/2015   | 485  |
| 241      | 13990051     | 1220 1st nw                                | Construction                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                | Construction       |                        | 7/13/2015  | 487  |
| 100      | e-mail       | 1205 high se                               | cross connection                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                | Cross connection   |                        | 2/1/2013   | 373  |
| 196      | e-mail       | 4427 avenida manana ne                     | cross connection                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                | Cross connection   |                        | 8/27/2014  | 446  |
| 202      | 13513139     | 1812 Candelaria NW                         | cross connection                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                | Cross connection   | Cross connection, odor | 2/18/2015  | 452  |
| 73       | 9780232      | 6210 INDIAN SCHOOL NE                      | Citizen wants to know the status of this issue because it is still ongoing. It's in regards to a cleaning company that works for the apartments that dumps the dirty water with contaminants into the street. Call back requested.The citizen wants this to b |                                                                                                                                                                                                                                                                | Dirty water        |                        | 8/7/2012   | 311  |
| 118      | 11388467     | lomas and kentucky ne                      | dirty water                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                | Dirty water        |                        | 8/2/2013   | 354  |
| 161      | 12538423     | 109 wellesley se                           | washing water from beer resturant smells bad                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                | Dirty water        |                        | 7/2/2014   | 414  |
| 257      | 14028320     | 1022 santa fe sw                           | Nusiance Water                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                | Dirty water        |                        | 7/23/2015  | 493  |
| 63       | 9421461      | 2709 Montclair NE                          | dumping grey water out of an rv in the drain system                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                | Dirty water        | Dirty water, grey      | 6/1/2012   | 301  |
| 67       | ph call      | 124 RICHMOND                               | THE SCHOOL CLEANING CONTRACTOR DUMPS THE DIRTY WATER IN THE MOP BUCKETS INTO STORM DRAINS                                                                                                                                                                     |                                                                                                                                                                                                                                                                | Dirty water        | Dirty water, grey      | 7/11/2012  | 305  |
| 75       | ph call      | Vantastic RV at Wyoming_Marquette          | soapy water from washing vans at this business goes to the street                                                                                                                                                                                             |                                                                                                                                                                                                                                                                | Dirty water        | Dirty water, grey      | 8/14/2012  | 313  |
| 175      | web          | 530 utah space 56                          | dumping laundry washwater to the street                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                | Dirty water        | Dirty water, grey      | 8/20/2014  | 427  |
| 208      | 13580422     | 600 San Pablo SE                           | Laundry Cleaning                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                | Dirty water        | Dirty water, grey      | 3/13/2015  | 456  |
| 223      | 13727588     | zoo at 12th st and santa fe sw             | Citizen said there is a pipe that is draining into a gutter. He is concerned this is hazardous waste from the Zoo.                                                                                                                                            |                                                                                                                                                                                                                                                                | Dirty water        | Dirty water, grey      | 4/29/2015  | 472  |
| 255      | 14029124     | 840 ortiz se apt-2                         | GREY WATER                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                | Dirty water        | Dirty water, grey      | 7/22/2015  | 491  |
| 152      | 12474076     | Zuni & Arizona SE                          | dump liquid waste from underneath the truck into storm drain.                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                | Food               | Food                   | 5/15/2014  | 404  |
| 77       | 9816078      | 8401 Pan American Frwy NE, Unit 275        | foul odor coming from drain                                                                                                                                                                                                                                   | I ASKED THE MAINTENANCE DIVISION TO CLEAN UP THIS LINE AND THEY AGREED TO DO THAT.                                                                                                                                                                             | Foul odor          | Foul odor              | 8/14/2012  | 314  |
| 89       | 10965683     | 8710 candelaria                            | pouring grease and food in gutter                                                                                                                                                                                                                             | I spooke to the resident and asked to stop dumping any thing into the storm drain and distributed brochures.                                                                                                                                                   | Grease             |                        | 4/24/2013  | 340  |
| 112      | 11207154     | 312 Central sw alley-library bar           | the alley was dry but you could see too many dried grease and food residue along the alley.                                                                                                                                                                   | I spoke to the manager of the business regarding the grease in the alley, she denied washing or dumping any grease in to the alley.i asked her to make sure that non of her employee may dump oil or grease into the alley and i gave her some of the pollutio | Grease             |                        | 6/20/2013  | 350  |
| 132      | 12091326     | 4th and hendrix                            | grease                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                | Grease             |                        | 1/29/2014  | 382  |
| 140      | e-mail nmdot | 7441 paseo del norte                       |                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                | Grease             |                        | 2/14/2014  | 390  |
| 19       | web          | indian school and monte largo              | oil at the storm inlet                                                                                                                                                                                                                                        | covered the area with oil absorbent.                                                                                                                                                                                                                           | Grease             | Grease, cooking        | 10/24/2011 | 268  |
| 201      | web          | 10420 coors bypass nw suit 103 Pei Wei din | grease overflowing from a manhole                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                | Grease             | Grease, cooking        | 2/22/2015  | 451  |
| 12       | 8148896      | 5504 payson nw                             | green waste is down many streets near Payson ct nw                                                                                                                                                                                                            | I asked the neighborhood assoc , if they have to spray again in the future, to spray in moderate and when there is no rain                                                                                                                                     | Hazardous material |                        | 9/13/2011  | 263  |
| 59       | 9265069      | 2432 Monroe NE                             | dumping waxy substance down storm drains by Fleming chemical business                                                                                                                                                                                         | the manager of Fleming co told me that the liquid was water from floor washings and no hazardous liquid was used.                                                                                                                                              | Hazardous material |                        | 4/26/2012  | 297  |
| 61       | 9280891      | 2301 Tompiro nw                            | dumping hazardous material into drain at 7 pm on Friday                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                | Hazardous Material |                        | 5/21/2012  | 299  |
| 124      | 11755467     | sunport and university                     | pesticide                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                | Hazardous Material |                        | 10/29/2013 | 360  |
| 136      | web          | 3838 bogan ne                              | Hazardous Material                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                | Hazardous Material |                        | 1/16/2014  | 386  |
| 156      | 12499582     | 5150 A-1 Edith NE                          | Hazardous Material                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                | Hazardous material |                        | 5/27/2014  | 408  |
| 168      | 12751967     | 1229 columbia ne                           | mud in the curb                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                | Hazardous material |                        | 7/23/2014  | 420  |
| 182      | web          | 5809 Jefferson NE                          | Coolent and Solvent liquids. Ongoing dumping monthly for years in back drain of enclosed yard (north side).                                                                                                                                                   | this company has MSGP, I gave the manager pollution prevention brochures.                                                                                                                                                                                      | Hazardous material |                        | 10/2/2014  | 433  |
| 207      | E-MAIL       | I-25 south at Avenida caesar chavez exit   | Hazardous Material                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                | Hazardous material |                        | 3/9/2015   | 455  |
| 215      | 13643215-136 | 1111 marron ne                             | Hazardous Material                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                | Hazardous material |                        | 4/3/2015   | 464  |
| 224      | 13750829     | 1608 ranch se                              |                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                | Hazardous material |                        | 5/4/2015   | 473  |
| 228      | 13776235     | 5135 sunningdale ne                        | Hazardous Material                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                | Hazardous Material |                        | 5/15/2015  | 477  |

### Reported Illicit Discharges

| OBJECTID | case_311      | Address                                   | Problem                                                                                                                                                                                          | Solution                                                                                                                                                                                                                                                       | Type Category 1    | Type Category 2               | Date In    | Numb |
|----------|---------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------|------------|------|
| 253      | 14009137, 140 | 55th and churchill sw                     | Hazardous Material                                                                                                                                                                               |                                                                                                                                                                                                                                                                | Hazardous material |                               | 7/20/2015  | 489  |
| 274      | 14371723      | 4500 4th nw                               |                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                | Hazardous material |                               | 11/9/2015  | 507  |
| 280      | 14422098      | 9181 Coors Blvd NW                        | Citizen states he saw someone dump about 5 gallons of gasoline and oil into the storm drain at NE end of A1 Storage units. Citizen was unclear if this was on private property or city property. |                                                                                                                                                                                                                                                                | Hazardous material |                               | 11/24/2015 | 510  |
| 284      | 14430050      | 12th st and menaul nw                     | Black sludge being dumped down the inlet grate by car wash employee                                                                                                                              |                                                                                                                                                                                                                                                                | Hazardous material |                               | 12/1/2015  | 511  |
| 172      | e-mail        | marble between edith and franciscan       | strong chemical odor                                                                                                                                                                             |                                                                                                                                                                                                                                                                | Hazardous material | Hazardous material, odor      | 8/13/2014  | 424  |
| 93       | ph call       | Embudo Arroyo Trail near Baldwin and Juan | pesticide spill                                                                                                                                                                                  |                                                                                                                                                                                                                                                                | Hazardous material | Hazardous material, pesticide | 3/21/2013  | 348  |
| 85       | e-mail        | 6124 flor de mayo nw                      |                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                | Hazardous material | Hazardous material, solvent   | 5/1/2013   | 339  |
| 16       | WEB           | 828 ADAMS NE                              | LEAVES                                                                                                                                                                                           | asked street maintenance to sweep the area                                                                                                                                                                                                                     | Leaves             | Leaves                        | 9/27/2011  | 262  |
| 264      | hot-line      | 197 sunset sw                             | Leaves                                                                                                                                                                                           |                                                                                                                                                                                                                                                                | Leaves             | Leaves                        | 9/16/2015  | 498  |
| 267      | hot line      | 1541 parsifal ne                          | dumping leaves into inlet                                                                                                                                                                        |                                                                                                                                                                                                                                                                | Leaves             | Leaves                        | 9/21/2015  | 501  |
| 4        | 7994908       | 10455 crosscut nw                         | oil in the street                                                                                                                                                                                |                                                                                                                                                                                                                                                                | Oil                |                               | 8/23/2011  | 252  |
| 1        | 7978331       | 403 vassar se                             | car leaking oil                                                                                                                                                                                  |                                                                                                                                                                                                                                                                | Oil                |                               | 8/23/2011  | 250  |
| 2        | 7985870       | 8834 thor sw                              | bucket of oil in street                                                                                                                                                                          |                                                                                                                                                                                                                                                                | Oil                |                               | 8/23/2011  | 251  |
| 3        | 7989869       | claremont and alcazar ne                  | draining vehicle fluid into storm drain                                                                                                                                                          |                                                                                                                                                                                                                                                                | Oil                |                               | 8/23/2011  | 249  |
| 8        | 8031749       | 3200 ortiz nw                             | oil                                                                                                                                                                                              |                                                                                                                                                                                                                                                                | Oil                |                               | 8/26/2011  | 253  |
| 7        | web           | 6108 cyonus nw                            | oil on the curb                                                                                                                                                                                  |                                                                                                                                                                                                                                                                | Oil                |                               | 8/28/2011  | 254  |
| 9        | 8136453       | 10616 satellite nw                        | street full of oil from parked vehicles at site address                                                                                                                                          |                                                                                                                                                                                                                                                                | Oil                |                               | 9/12/2011  | 257  |
| 15       | 8092178       | 13408 pierce arrow ne                     | oil spill at resident                                                                                                                                                                            | I covered it with oil absorbent.                                                                                                                                                                                                                               | Oil                |                               | 9/19/2011  | 264  |
| 18       | 8316101       | 8736 CALLE CALMA NE                       | vehicle leaking oil into the street                                                                                                                                                              | covered it with absorbent. nobody was home.i distributed pollution prevention brochures at this neighborhood.                                                                                                                                                  | Oil                |                               | 10/25/2011 | 267  |
| 23       | web           | 7224 Ticonderoga NE                       | Crankcase oil on asphalt from leaking vehicle parked on Ticonderoga NE 87109 street                                                                                                              | I distributed p2 brochures to this neighborhood.nobody was home.                                                                                                                                                                                               | Oil                |                               | 11/10/2011 | 270  |
| 30       | 8487790       | 6119_Celestial_NW                         | car leaking oil                                                                                                                                                                                  |                                                                                                                                                                                                                                                                | Oil                |                               | 12/6/2011  | 272  |
| 31       | 8550749       | 2250_2nd st SW                            | oil in the street                                                                                                                                                                                |                                                                                                                                                                                                                                                                | Oil                |                               | 12/9/2011  | 273  |
| 57       | 8720616       | 319 San Pablo NE                          | Oil from Changing Oil In Vehicle running down street                                                                                                                                             | all the oil spots at this apartment complex has been covered by oil absorbent.I left pollution prevention brochures at all the apartments door at this location.                                                                                               | Oil                |                               | 1/17/2012  | 295  |
| 58       | web           | 7224 Ticonderoga NE                       | Crankcase oil from badly leaking vehicle parked on City street. NM Lic plate number: 986 AFN, early 1970's Bronze colored Dodge Pickup                                                           |                                                                                                                                                                                                                                                                | Oil                |                               | 1/25/2012  | 296  |
| 45       | 8985506       | 11421Central NE                           | Freedom motors dumping oil and anti freeze into storm drain                                                                                                                                      |                                                                                                                                                                                                                                                                | Oil                |                               | 3/26/2012  | 284  |
| 80       | 10789876      | 2101 carlisle                             | oil spill in parking lot                                                                                                                                                                         |                                                                                                                                                                                                                                                                | Oil                |                               | 3/15/2013  | 367  |
| 90       | 10865860      | 110 tulane se                             | oil in the street                                                                                                                                                                                | too late, oil dried                                                                                                                                                                                                                                            | Oil                |                               | 4/2/2013   | 342  |
| 81       | 10888567      | 10912 Pecos PI SW                         | two vehicles were leaking presenting an environmental hazard as well.                                                                                                                            | I spoke with the home resident at this address on 4/16/2013 regarding the oil and antifreeze. She told me that she cleaned up all the oil and there is no oil left in open container.I noticed that the area was clean and no oil spots.                       | Oil                |                               | 4/16/2013  | 341  |
| 83       | 11007226      | 6108 celestial nw                         | oil spill and stain on street in front of this address                                                                                                                                           |                                                                                                                                                                                                                                                                | Oil                |                               | 5/7/2013   | 332  |
| 106      | 11038432      | 11909 Leah ct ne                          | oil                                                                                                                                                                                              |                                                                                                                                                                                                                                                                | Oil                |                               | 5/31/2013  | 336  |
| 107      | 11113298      | 6116 Celestial NW                         | Citizen complaint regarding vehicles spilling motor oil                                                                                                                                          | I spoke to the resident at this address on 6-4-2013, also covered the oil spots with absorbent. She told me that they fixed their car and there will be no more oil on the street and also she said that she will sweep the absorbent next day.I distributed p | Oil                |                               | 6/3/2013   | 337  |
| 111      | 11199207      | 11408 Appian Wy ne                        | Oil on street. Citizen called on this before and EHD went out put kitty litter however citizen said the oil is coming up again and wants EHD to be sent out again.                               | LAWRENCE P (706) SWEPT 6-20-2013                                                                                                                                                                                                                               | Oil                |                               | 6/20/2013  | 349  |
| 119      | 11340017      | 4709 taylor ridge nw                      | oil                                                                                                                                                                                              |                                                                                                                                                                                                                                                                | Oil                |                               | 6/25/2013  | 352  |
| 116      | 11526087      | 5807 simon cy sw                          | oil                                                                                                                                                                                              |                                                                                                                                                                                                                                                                | Oil                |                               | 9/4/2013   | 357  |
| 125      | 11792919      | 10224 lone tree sw                        | oil                                                                                                                                                                                              |                                                                                                                                                                                                                                                                | Oil                |                               | 11/7/2013  | 363  |
| 131      | 12051621, 120 | 1700 sauza sw                             | car leaking oil                                                                                                                                                                                  |                                                                                                                                                                                                                                                                | Oil                |                               | 1/30/2014  | 381  |

### Reported Illicit Discharges

| OBJECTID | case_311      | Address                              | Problem                                                                                                       | Solution                                                                                                                                                                                                                                                       | Type Category 1 | Type Category 2 | Date In    | Numb |
|----------|---------------|--------------------------------------|---------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------|------------|------|
| 130      | 12093506      | 9798 coors nw                        | oil illegal dumping                                                                                           |                                                                                                                                                                                                                                                                | Oil             |                 | 1/30/2014  | 380  |
|          | 12091432      | 2844 John SE                         | changing oil and letting the waste oil drain into the storm drain                                             | I spoke to the resident today 2/7/2014 regarding this issue, he told me that the oil spill was an accident and he already cleaned the area and took the drained oil to recycling place. I also distributed pollution prevention brochures at this neighborhood | Oil             |                 | 2/5/2014   | 387  |
| 137      |               |                                      |                                                                                                               |                                                                                                                                                                                                                                                                |                 |                 |            |      |
| 142      | 12139891      | 10427 cantacielo nw                  | oil spilled in middle of the street                                                                           | dried, no action needed                                                                                                                                                                                                                                        | Oil             |                 | 2/19/2014  | 392  |
|          | e-mail        | los altos park at copper and erbbe   | car accident caused oil spill on the sidewalk                                                                 | asked the manager to remove the polluted sand                                                                                                                                                                                                                  | Oil             |                 | 2/20/2014  | 393  |
| 143      |               |                                      |                                                                                                               |                                                                                                                                                                                                                                                                |                 |                 |            |      |
|          | 12194888      | 8243 regal mist lp sw                | Motor Oil in drive way and flowing down the street.                                                           | I spoke to the resident on 2/28/2014 regarding the oil spill on the sidewalk, she told me that the oil spill was an accident and they are going to get rid of broken car very soon and they will clean up the area. I covered the oil spots with oil absorbent | Oil             |                 | 2/27/2014  | 395  |
| 144      |               |                                      |                                                                                                               |                                                                                                                                                                                                                                                                |                 |                 |            |      |
|          | e-mail        | 121 general stilwell ne              | oil dumping on the street                                                                                     | I asked the manager to clean up the oil spots and stop dumping oil to the street. Also, I give him some brochures                                                                                                                                              | Oil             |                 | 3/27/2014  | 399  |
| 147      |               |                                      |                                                                                                               |                                                                                                                                                                                                                                                                |                 |                 |            |      |
| 149      | 12369158      | 10804 chochiti se no.27              | oil                                                                                                           |                                                                                                                                                                                                                                                                | Oil             |                 | 4/15/2014  | 401  |
| 154      | 12401063-124  | 8224 loma del norte ne               | suv leaking oil                                                                                               |                                                                                                                                                                                                                                                                | Oil             |                 | 4/24/2014  | 406  |
| 153      | 12402220      | 5600 Crownridge NW                   | oil                                                                                                           |                                                                                                                                                                                                                                                                | Oil             |                 | 4/28/2014  | 405  |
| 162      | 12586000      | 13608 covered wagon se               | oil                                                                                                           |                                                                                                                                                                                                                                                                | Oil             |                 | 7/1/2014   | 415  |
| 179      | e-mail        | 528 Juan Tabo NE                     | oil                                                                                                           |                                                                                                                                                                                                                                                                | Oil             |                 | 9/17/2014  | 431  |
|          | 12926314      | bridge and 4th st                    | motor oil has been spilled in mcdonalds parking lot going into storm drain                                    | I left pollution prevention brochures with the Autozone and McDonnell's managers.                                                                                                                                                                              | Oil             |                 | 9/17/2014  | 429  |
| 177      |               |                                      |                                                                                                               |                                                                                                                                                                                                                                                                |                 |                 |            |      |
| 181      | 13012578, 130 | Midas at 1129 juan tabo ne           | MIDAS IS POURING USED OIL NITO STORM DRAIN                                                                    |                                                                                                                                                                                                                                                                | Oil             |                 | 9/30/2014  | 432  |
| 193      | 13053894, 130 | 4351-4399 mesa grande pl se          | oil                                                                                                           |                                                                                                                                                                                                                                                                | Oil             |                 | 10/10/2014 | 443  |
| 189      |               | 101 anderson se                      | oil                                                                                                           |                                                                                                                                                                                                                                                                | Oil             |                 | 10/28/2014 | 439  |
| 191      | 13146760      | 6023 legends nw                      | oil                                                                                                           |                                                                                                                                                                                                                                                                | Oil             |                 | 11/4/2014  | 441  |
| 194      | 13219146      | 8212 calle avion ne                  | oil                                                                                                           |                                                                                                                                                                                                                                                                | Oil             |                 | 12/1/2014  | 444  |
| 195      | ph-call       | 5310 san mateo ne-franks             | engin wash                                                                                                    |                                                                                                                                                                                                                                                                | Oil             |                 | 12/8/2014  | 445  |
| 198      | 13363783      | 1041 Louisiana Blvd SE               | Construction Vehicle is leaking oil or gas on to the street                                                   |                                                                                                                                                                                                                                                                | Oil             |                 | 1/7/2015   | 448  |
| 199      | 13361197      | 1720 Avenida Real NW                 | Oil spilled from a maroon vehicle all over the street                                                         |                                                                                                                                                                                                                                                                | Oil             |                 | 1/7/2015   | 449  |
| 200      | e-mail        | 10126 Coors NW                       | There is an oil separator that needs to be cleaned out. It is discharging black fluid into the Corrales Main. |                                                                                                                                                                                                                                                                | Oil             |                 | 1/14/2015  | 450  |
| 197      | web           | 7904 Unionville Ct NW                | oil                                                                                                           |                                                                                                                                                                                                                                                                | Oil             |                 | 2/12/2015  | 447  |
| 210      | 13597114      | avenida real and kevin nw            |                                                                                                               |                                                                                                                                                                                                                                                                | Oil             |                 | 3/16/2015  | 459  |
| 211      | 13603134      | 8709 odin sw                         |                                                                                                               |                                                                                                                                                                                                                                                                | Oil             |                 | 3/18/2015  | 460  |
| 214      | 13644580      | 3213 betts ne                        |                                                                                                               |                                                                                                                                                                                                                                                                | Oil             |                 | 4/2/2015   | 463  |
| 217      | 13666359      | 11304 campo del sol ne               |                                                                                                               |                                                                                                                                                                                                                                                                | Oil             |                 | 4/9/2015   | 466  |
| 218      | 13674710      | 1305 bridle wood ne                  |                                                                                                               |                                                                                                                                                                                                                                                                | Oil             |                 | 4/10/2015  | 467  |
| 219      | 13669227      | 1309-D Dickerson Dr SE               |                                                                                                               |                                                                                                                                                                                                                                                                | Oil             |                 | 4/14/2015  | 468  |
| 221      | 13696927      | 6023 legends nw                      |                                                                                                               |                                                                                                                                                                                                                                                                | Oil             |                 | 4/17/2015  | 470  |
| 220      | 13695489      | 6608 ventana hills nw                |                                                                                                               |                                                                                                                                                                                                                                                                | Oil             |                 | 4/17/2015  | 469  |
| 227      | 13776755      | 301 wyoming ne                       | oil                                                                                                           |                                                                                                                                                                                                                                                                | Oil             |                 | 5/15/2015  | 476  |
| 229      | 13814459      | 1312 San Andres NW                   | OIL                                                                                                           |                                                                                                                                                                                                                                                                | Oil             |                 | 5/26/2015  | 478  |
| 231      | 13845448      | 6612 charwood nw                     | oil                                                                                                           |                                                                                                                                                                                                                                                                | Oil             |                 | 6/4/2015   | 479  |
| 233      | 13860009      | 7423 Junco NW                        | oil                                                                                                           |                                                                                                                                                                                                                                                                | Oil             |                 | 6/8/2015   | 481  |
| 232      | 13903604      | 2503 Georgene NE                     | oil                                                                                                           |                                                                                                                                                                                                                                                                | Oil             |                 | 6/18/2015  | 480  |
| 236      | hotline       | 10416 range sw                       | oil                                                                                                           |                                                                                                                                                                                                                                                                | Oil             |                 | 6/30/2015  | 483  |
| 234      | e-mail        | south roadway pond-716 commercial se | oil                                                                                                           |                                                                                                                                                                                                                                                                | Oil             |                 | 6/30/2015  | 482  |
| 238      |               | 13966372                             | oil                                                                                                           |                                                                                                                                                                                                                                                                | Oil             |                 | 7/7/2015   | 484  |
| 240      | 13985677      | 12216 morrow ne                      | OIL                                                                                                           |                                                                                                                                                                                                                                                                | Oil             |                 | 7/10/2015  | 486  |
| 254      | 14026825      | 1448 muriel ne                       | oil                                                                                                           |                                                                                                                                                                                                                                                                | Oil             |                 | 7/22/2015  | 490  |
| 258      | 14144175      | Desert Bluff and Desert Mesa SW      | oil on the street                                                                                             |                                                                                                                                                                                                                                                                | Oil             |                 | 8/26/2015  | 494  |

**Reported Illicit Discharges**

| OBJECTID | case_311      | Address                                          | Problem                                                                                                                          | Solution                                                                                                                                                                                                                                                      | Type Category 1 | Type Category 2 | Date In    | Numb |
|----------|---------------|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------|------------|------|
| 259      | 14169153      | 931 galeras nw                                   | oil in the gutter                                                                                                                |                                                                                                                                                                                                                                                               | Oil             |                 | 9/3/2015   | 495  |
| 265      | 14198196      | 5404 jasons wy ne                                | oil coming from property from cars spilling onto street                                                                          |                                                                                                                                                                                                                                                               | Oil             |                 | 9/16/2015  | 499  |
| 266      | 14213280      | 5700 Manual NE                                   | oil spill in the alley on the southside of manual behind the empty car lot                                                       |                                                                                                                                                                                                                                                               | Oil             |                 | 9/18/2015  | 500  |
| 270      | 14243844      | 2424 san mateo ne                                | oil                                                                                                                              |                                                                                                                                                                                                                                                               | Oil             |                 | 10/2/2015  | 504  |
| 271      | 14296005      | 11004 Hannett ne                                 | power steer fluid leaking badly                                                                                                  |                                                                                                                                                                                                                                                               | Oil             |                 | 10/12/2015 | 505  |
| 286      | 14437112      | 124 casita vista pl nw                           | Large amount of oil from vehicle                                                                                                 |                                                                                                                                                                                                                                                               | Oil             |                 | 12/1/2015  | 512  |
| 291      | 14455052      | 624 escavada sw                                  | Oil leak from commercial truck with a busted oil tank                                                                            |                                                                                                                                                                                                                                                               | Oil             |                 | 12/7/2015  | 514  |
| 287      | 14455235      | 6732 seville pl nw                               | oil leaking from gold Camry                                                                                                      |                                                                                                                                                                                                                                                               | Oil             |                 | 12/7/2015  | 513  |
| 292      | 14478009      | amole mesa and 98th st sw                        | used motor oil was dumped on the side of the road                                                                                |                                                                                                                                                                                                                                                               | Oil             |                 | 12/11/2015 | 515  |
| 293      | 14473784      | Honey comb smoke shop at Mcnight & Euba          | Oil and other chemicals thrown in the alley near dumpster belonging to Honey comb smoke shop                                     |                                                                                                                                                                                                                                                               | Oil             |                 | 12/14/2015 | 516  |
| 88       | 11094849      | 10613 Hagen to 10705 Hagen NE                    | oil-sand                                                                                                                         | 1 MILE SWEPT BY UNIT (706) LAWRENCE P.                                                                                                                                                                                                                        | Oil             | Oil-sand        | 5/28/2013  | 334  |
| 66       | 9600880       | 9921 BARRINSON DR NE                             | SPILLED PAINT GOING INTO THE STORM DRAIN                                                                                         |                                                                                                                                                                                                                                                               | Paint           |                 | 7/3/2012   | 304  |
| 141      | 12187057      | 2620 Tennessee NE                                | painters of a building allowed paints to run into gutter.                                                                        |                                                                                                                                                                                                                                                               | Paint           |                 | 2/24/2014  | 391  |
| 155      | e-mail        | 11136 malaguena ne                               | paint in the gutter                                                                                                              |                                                                                                                                                                                                                                                               | Paint           |                 | 4/24/2014  | 407  |
| 151      | ph call       | Martin Luther King at Broadway to I-25           | paint                                                                                                                            |                                                                                                                                                                                                                                                               | Paint           |                 | 5/9/2014   | 403  |
| 158      | 12537970      | 828 manzano ne                                   | paint                                                                                                                            |                                                                                                                                                                                                                                                               | Paint           |                 | 5/30/2014  | 410  |
| 164      | e-mail        | 6132 flor de mayo pl nw                          | paint                                                                                                                            |                                                                                                                                                                                                                                                               | Paint           |                 | 6/30/2014  | 413  |
| 173      | e-mail        | 6521 paradise nw                                 | paint dump into amafca channel                                                                                                   |                                                                                                                                                                                                                                                               | Paint           |                 | 8/14/2014  | 425  |
| 184      | 13070365      | 9521 avenida del oso ne                          | paint                                                                                                                            |                                                                                                                                                                                                                                                               | Paint           |                 | 10/20/2014 | 434  |
| 212      | 13640654      | 7301 union ne                                    |                                                                                                                                  |                                                                                                                                                                                                                                                               | Paint           |                 | 3/31/2015  | 461  |
| 225      | e-mail        | 11128 academy ridge ne                           | paint                                                                                                                            |                                                                                                                                                                                                                                                               | Paint           |                 | 5/12/2015  | 474  |
| 269      | 14223931      | towner and san isidro nw                         | dumping paint into the storm drain                                                                                               |                                                                                                                                                                                                                                                               | Paint           |                 | 9/23/2015  | 503  |
| 102      | 10583299      | 6723 forest hills ne south pino arroyo san pedro | Illegal dumping of pet waste into arroyo behind 6723 FOREST HILLS DR NE, Access arroyo from san pedro                            | I went to this address and nobody was home. I distributed pollution prevention brochures to all the houses along this arroyo.                                                                                                                                 | Pet Waste       |                 | 1/31/2013  | 375  |
| 114      | 11211672      | 7128 dellwood ne and south hahn arroyo           |                                                                                                                                  |                                                                                                                                                                                                                                                               | Pet Waste       |                 | 6/21/2013  | 351  |
| 21       | web           | 530 Utah st SE space# 56                         | Dog feces.                                                                                                                       | this is a private park, no trespassing allowed. I left p2 brochures                                                                                                                                                                                           | Pet Waste       | Pet Waste, Dog  | 10/4/2011  | 260  |
| 22       | 8420463       | 9920 Academy Knolls NE                           | Kay Critters Cleaners is washing down dog feces into the storm drainage. Citizen is concerned about water quality being effected | left p2 brochures at this neighborhood                                                                                                                                                                                                                        | Pet Waste       | Pet Waste, Dog  | 11/3/2011  | 269  |
| 115      | hot line call | 811 stover sw                                    | dumping dog waste into storm inlet                                                                                               |                                                                                                                                                                                                                                                               | Pet Waste       | Pet Waste, Dog  | 9/5/2013   | 358  |
| 278      | 14227366      | 6537 Cliff Rose NW                               | Report of neighbors dumping dog feces in the arroyo from their yards. Needs to be cleaned up.                                    |                                                                                                                                                                                                                                                               | Pet Waste       | Pet Waste, Dog  | 11/20/2015 | 509  |
| 146      | 12244731      | 13215 MOUNTAIN NE                                | he wants to know who would be responsible to clean up a drainage area behind his house?                                          | asked arroyo cleaning crew to clean up this channel.                                                                                                                                                                                                          | Sediment        |                 | 3/12/2014  | 397  |
| 203      | 13529603      | Alb tile and stone at 2100 Aztec ne              | draining dirty water to the street                                                                                               |                                                                                                                                                                                                                                                               | Sediment        |                 | 3/2/2015   | 453  |
| 20       | web           | South Div Channel at woodward-sunport            | sanitary line overflow into storm drain at aunport and transport st se                                                           | we asked WA to fix their line and they did it.also they made a report to epa                                                                                                                                                                                  | Sewage          |                 | 9/29/2011  | 261  |
| 36       | 8638439       | 1820 Prospect NW                                 | his sewer line collapsed and he is afraid that thesewage may be leaking into storm drain                                         |                                                                                                                                                                                                                                                               | Sewage          |                 | 12/19/2011 | 276  |
| 70       | 9673688       | MALAGUENA NE AND CARRUTHERS NE                   | an Rv dump sewerage all over the street                                                                                          |                                                                                                                                                                                                                                                               | Sewage          |                 | 7/16/2012  | 308  |
| 92       | 10860144      | 2100 high se                                     | sewage overflow                                                                                                                  | confined and fixed                                                                                                                                                                                                                                            | Sewage          |                 | 3/29/2013  | 344  |
| 91       | ph call       | 5102 central sw                                  | sewage overflow                                                                                                                  | confined the flow until the problem fixed                                                                                                                                                                                                                     | Sewage          |                 | 4/3/2013   | 343  |
| 84       | 11008157      | 7428 via desierto ne                             | strong smell of raw sewage from storm inlet                                                                                      |                                                                                                                                                                                                                                                               | Sewage          |                 | 5/3/2013   | 338  |
| 82       | 11006161      | 455 Estancia NW                                  | sewage leaking out of the line at this property and going into street                                                            |                                                                                                                                                                                                                                                               | Sewage          |                 | 5/7/2013   | 333  |
| 87       | 11110667      | New York & Central Ave                           | Urine Dumping in Street                                                                                                          | I spoke on 5-29-2013 to the resident of the mobile home unit at this park regarding the dumping urine in to the street. She told me that they just bought this mobile home and they are repairing the bathroom tiles and the white dried powder on the street | Sewage          |                 | 5/29/2013  | 335  |
| 110      | 11138699      | 1327 8th st sw                                   | sewage                                                                                                                           |                                                                                                                                                                                                                                                               | Sewage          |                 | 6/5/2013   | 346  |
| 122      | 11333418      | 715 lewis sw                                     | sewage                                                                                                                           |                                                                                                                                                                                                                                                               | Sewage          |                 | 7/29/2013  | 353  |
| 138      | web           | 1830 Buena Vista SE                              | Raw Sewage overflowing from 4 plex into parking lot and street                                                                   | it has been fixed, no action required                                                                                                                                                                                                                         | Sewage          |                 | 1/15/2014  | 388  |
| 148      | 12348825      | 507 MARTINEZ DR NE                               | sewage overflow                                                                                                                  |                                                                                                                                                                                                                                                               | Sewage          |                 | 4/14/2014  | 400  |
| 163      | web           | 5300 rawlings ne                                 | sewage odor                                                                                                                      |                                                                                                                                                                                                                                                               | Sewage          |                 | 4/24/2014  | 416  |



### Reported Illicit Discharges

| OBJECTID | case_311       | Address                                       | Problem                                       | Solution                                                                                 | Type Category 1 | Type Category 2 | Date In    | Numb |
|----------|----------------|-----------------------------------------------|-----------------------------------------------|------------------------------------------------------------------------------------------|-----------------|-----------------|------------|------|
| 157      | 12533003       | Seafood Broil at 6100 4th st nw               | sewage overflow                               |                                                                                          | Sewage          |                 | 5/29/2014  | 409  |
| 222      | 13635369       | Heights & Camino Del Sol NE                   |                                               |                                                                                          | Sewage          |                 | 3/28/2015  | 471  |
| 256      | 14014478       | 4701 golden barrel nw                         |                                               |                                                                                          | Sewage          |                 | 7/20/2015  | 492  |
| 263      | 14175211       | camino del sol north and spain ne             | citizen with RV drain sewage on to the street |                                                                                          | Sewage          |                 | 9/8/2015   | 497  |
| 272      | 14351314       | 9105 matthew ne                               | dumping rv bathroom waste on to street        |                                                                                          | Sewage          |                 | 10/30/2015 | 506  |
| 170      | 12743053       | 1102 gretta ne                                | swimminh pool discharge                       |                                                                                          | Swimming pool   |                 | 7/21/2014  | 442  |
| 171      | 12700834       | 4605 Bermuda NE                               | swimming pool                                 |                                                                                          | Swimming pool   |                 | 7/28/2014  | 423  |
| 11       | web            | Alexander and Desert Surf NE                  | trash dumped on property                      |                                                                                          | Trash           |                 | 9/2/2011   | 259  |
| 98       | web            | la ciudad and los pueblos nw                  | trash in pond                                 |                                                                                          | Trash           |                 | 2/14/2013  | 371  |
| 109      | e-mail         | 6909-6915-6917 lamar nw arroyo back yard      | dumping to arroyo                             |                                                                                          | Trash           |                 | 6/3/2013   | 347  |
| 167      | web            | bobcat bw deer and morning glory ne           | trash                                         |                                                                                          | Trash           |                 | 6/22/2014  | 419  |
| 178      | 12950936       | 1417 old coors sw                             | weed, oil                                     | the caller owns the home at this outside city limit address.he needs to call the county. | Trash           |                 | 9/15/2014  | 430  |
| 185      | web            | 7400 beverly hills ne                         | trash on the sidewalk                         | called solid waste                                                                       | Trash           |                 | 10/26/2014 | 435  |
| 209      | web            | alley south of 800 block stover and 8th st sw | trash                                         |                                                                                          | Trash           |                 | 3/14/2015  | 457  |
| 35       | 8623973        | Alley south of Central-2nd st SW              |                                               |                                                                                          | Unknown         |                 | 12/16/2011 | 275  |
| 39       | 8629744        | 6119 celestial nw                             |                                               |                                                                                          | Unknown         |                 | 12/19/2011 | 278  |
| 37       | 8639202        | San Mateo and Silver SE WalMart               |                                               |                                                                                          | Unknown         |                 | 12/19/2011 | 277  |
| 53       | 8690857        | 7306 montano nw                               |                                               |                                                                                          | Unknown         |                 | 1/3/2012   | 292  |
| 54       | 8693417        | 2512 June st ne                               |                                               |                                                                                          | Unknown         |                 | 1/6/2012   | 293  |
| 40       | 9004551        | Cherokee NW & San Isidro NW                   |                                               |                                                                                          | Unknown         |                 | 3/5/2012   | 279  |
| 41       | ph call        | 908 Alta Vista SW                             |                                               |                                                                                          | Unknown         |                 | 3/20/2012  | 280  |
| 42       | ph call        | Sundial SW                                    |                                               |                                                                                          | Unknown         |                 | 3/23/2012  | 281  |
| 43       | 9110287, 9132  | 2115 Sea Breeze NW                            |                                               |                                                                                          | Unknown         |                 | 3/26/2012  | 282  |
| 44       | 8895538        | 640 Quail Brush NW                            |                                               |                                                                                          | Unknown         |                 | 3/26/2012  | 283  |
| 46       | 9053224        | 1313 Parsifal ne                              |                                               |                                                                                          | Unknown         |                 | 3/27/2012  | 285  |
| 48       | 9123230        | 606 11th st sw                                |                                               |                                                                                          | Unknown         |                 | 3/27/2012  | 287  |
| 47       | 9122931        | 8th st and coal sw                            |                                               |                                                                                          | Unknown         |                 | 3/27/2012  | 286  |
| 51       | web            | 7501 harrier nw                               |                                               |                                                                                          | Unknown         |                 | 3/28/2012  | 290  |
| 49       | 9127166        | girard and garfield se                        |                                               |                                                                                          | Unknown         |                 | 3/28/2012  | 288  |
| 50       | 9129556        | 4th st nw and prospect                        |                                               |                                                                                          | Unknown         |                 | 3/29/2012  | 289  |
| 52       | e-mail from an | 6713 Bellrose ne                              |                                               |                                                                                          | Unknown         |                 | 4/5/2012   | 291  |
| 62       | 9375493        | 489 Timothy ct sw                             |                                               |                                                                                          | Unknown         |                 | 5/21/2012  | 300  |
| 64       | 9411909        | 5301 vista lejana ne                          |                                               |                                                                                          | Unknown         |                 | 6/7/2012   | 302  |
| 65       | 9523355        | 11th and Orchard nw                           |                                               |                                                                                          | Unknown         |                 | 6/15/2012  | 303  |
| 68       | 9622233        | 1100 PINNACLE VIEW NE                         |                                               |                                                                                          | Unknown         |                 | 7/5/2012   | 306  |
| 71       | 9678134        | 6629 HALLMARK NE                              |                                               |                                                                                          | Unknown         |                 | 7/17/2012  | 309  |
| 74       | 9790470        | 8614 central se                               |                                               |                                                                                          | Unknown         |                 | 8/8/2012   | 312  |
| 105      | 10526965       | 13001-roma-ne                                 |                                               |                                                                                          | Unknown         |                 | 1/29/2013  | 378  |
| 104      | 10598020       | 312 central sw                                |                                               |                                                                                          | Unknown         |                 | 1/31/2013  | 377  |
| 103      | 10600949       | 6809 derickson ne                             |                                               |                                                                                          | Unknown         |                 | 1/31/2013  | 376  |
| 101      | 10573387       | 501 carlisle ne                               |                                               |                                                                                          | Unknown         |                 | 2/1/2013   | 374  |
| 99       | 10651097       | 412 lomas                                     |                                               |                                                                                          | Unknown         |                 | 2/14/2013  | 372  |
| 97       | 10687320       | 12920 piru se Tijeras Arroyo                  |                                               |                                                                                          | Unknown         |                 | 2/19/2013  | 370  |
| 96       | 10726216       | 400 vermont ne                                |                                               |                                                                                          | Unknown         |                 | 2/27/2013  | 369  |
| 94       | e-mail         | 312 central sw alley                          |                                               |                                                                                          | Unknown         |                 | 3/19/2013  | 366  |
| 129      | ph call        | jefferson middle school                       |                                               |                                                                                          | Unknown         |                 | 10/21/2013 | 359  |
| 128      | web            | 6109 Equestrian NW                            |                                               |                                                                                          | Unknown         |                 | 12/2/2013  | 361  |
| 126      | 11886282       | 10605 connemara sw                            |                                               |                                                                                          | Unknown         |                 | 12/17/2013 | 364  |
| 135      | 12065395       | 5308 Central Ave SE                           |                                               |                                                                                          | Unknown         |                 | 1/27/2014  | 385  |
| 134      | 12080688       | 2509 Mesa St SE                               |                                               |                                                                                          | Unknown         |                 | 1/28/2014  | 384  |
| 133      | 12087521       | 6723 Forrest Hills Dr Ne                      |                                               |                                                                                          | Unknown         |                 | 1/29/2014  | 383  |
| 139      | web            | tijeras arroyo and 4 hills                    |                                               |                                                                                          | Unknown         |                 | 2/6/2014   | 389  |
| 204      | 12182961       | 5308 central se                               |                                               |                                                                                          | Unknown         |                 | 2/26/2014  | 394  |
| 205      | 12257562       | 1612 cullen ln ne                             |                                               |                                                                                          | Unknown         |                 | 3/14/2014  | 398  |
| 206      | 12697897       | 10559 coyote canyon pl nw                     |                                               |                                                                                          | Unknown         |                 | 7/9/2014   | 418  |
| 187      | e-mail         | 2645 baylor se                                |                                               |                                                                                          | Unknown         |                 | 10/24/2014 | 437  |
| 190      | 13146049       | 6313 belcher ne                               |                                               |                                                                                          | Unknown         |                 | 11/4/2014  | 440  |

**Appendix C**  
**Reporting Forms**

## Illicit Discharge Incident Tracking Sheet

|                                                                                    |                                                                 |                                                                 |                                                                                     |                                          |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------|
| <b>Incident ID:</b>                                                                |                                                                 |                                                                 |                                                                                     |                                          |
| <b>Responder Information</b> <i>(for hotline incidents only)</i>                   |                                                                 |                                                                 |                                                                                     |                                          |
| Call taken by:                                                                     |                                                                 |                                                                 | Call date:                                                                          |                                          |
| Call time:                                                                         |                                                                 |                                                                 |                                                                                     |                                          |
| <b>Reporter Information</b>                                                        |                                                                 |                                                                 |                                                                                     |                                          |
| Incident time:                                                                     |                                                                 |                                                                 | Incident date:                                                                      |                                          |
|                                                                                    |                                                                 |                                                                 | Precipitation (inches) in past 24-48 hrs:                                           |                                          |
| Caller contact information <i>(optional)</i> :                                     |                                                                 |                                                                 |                                                                                     |                                          |
| <b>Incident Location</b> <i>(complete one or more below)</i>                       |                                                                 |                                                                 |                                                                                     |                                          |
| Latitude and longitude:                                                            |                                                                 |                                                                 |                                                                                     |                                          |
| Stream address or outfall #:                                                       |                                                                 |                                                                 |                                                                                     |                                          |
| Closest street address:                                                            |                                                                 |                                                                 |                                                                                     |                                          |
| Nearby landmark:                                                                   |                                                                 |                                                                 |                                                                                     |                                          |
| <b>Primary Location Description</b>                                                |                                                                 | <b>Secondary Location Description:</b>                          |                                                                                     |                                          |
| <input type="checkbox"/> Stream corridor<br><i>(In or adjacent to stream)</i>      |                                                                 | <input type="checkbox"/> Outfall                                | <input type="checkbox"/> In-stream flow                                             | <input type="checkbox"/> Along banks     |
| <input type="checkbox"/> Upland area<br><i>(Land not adjacent to stream)</i>       |                                                                 | <input type="checkbox"/> Near storm drain                       | <input type="checkbox"/> Near other water source (storm water pond, wetland, etc.): |                                          |
| Narrative description of location:                                                 |                                                                 |                                                                 |                                                                                     |                                          |
| <b>Upland Problem Indicator Description</b>                                        |                                                                 |                                                                 |                                                                                     |                                          |
| <input type="checkbox"/> Dumping                                                   |                                                                 | <input type="checkbox"/> Oil/solvents/chemicals                 | <input type="checkbox"/> Sewage                                                     |                                          |
| <input type="checkbox"/> Wash water, suds, etc.                                    |                                                                 | <input type="checkbox"/> Other: _____                           |                                                                                     |                                          |
| <b>Stream Corridor Problem Indicator Description</b>                               |                                                                 |                                                                 |                                                                                     |                                          |
| Odor                                                                               | <input type="checkbox"/> None                                   | <input type="checkbox"/> Sewage                                 | <input type="checkbox"/> Rancid/Sour                                                | <input type="checkbox"/> Petroleum (gas) |
|                                                                                    | <input type="checkbox"/> Sulfide (rotten eggs);<br>natural gas  | <input type="checkbox"/> Other: Describe in "Narrative" section |                                                                                     |                                          |
| Appearance                                                                         | <input type="checkbox"/> "Normal"                               | <input type="checkbox"/> Oil sheen                              | <input type="checkbox"/> Cloudy                                                     | <input type="checkbox"/> Suds            |
|                                                                                    | <input type="checkbox"/> Other: Describe in "Narrative" section |                                                                 |                                                                                     |                                          |
| Floatables                                                                         | <input type="checkbox"/> None:                                  | <input type="checkbox"/> Sewage (toilet paper, etc)             | <input type="checkbox"/> Algae                                                      | <input type="checkbox"/> Dead fish       |
|                                                                                    | <input type="checkbox"/> Other: Describe in "Narrative" section |                                                                 |                                                                                     |                                          |
| Narrative description of problem indicators:                                       |                                                                 |                                                                 |                                                                                     |                                          |
| Suspected Violator (name, personal or vehicle description, license plate #, etc.): |                                                                 |                                                                 |                                                                                     |                                          |

City of Albuquerque  
Storm Water Pollution Prevention Inspection Form

| FACILITY INFORMATION                                    |     |        |                 |                         |          |                  |                      |
|---------------------------------------------------------|-----|--------|-----------------|-------------------------|----------|------------------|----------------------|
| INDUSTRIAL FACILITY NAME:                               |     |        |                 | FACILITY TYPE:          |          |                  |                      |
| ADDRESS:                                                |     |        |                 | FACILITY CONTACT:       |          |                  |                      |
| CITY:                                                   |     | STATE: |                 | ZIP:                    |          | PHONE:           |                      |
| CONTACT PERSON(S) AND TITLE(S):                         |     |        |                 |                         |          | EMAIL:           |                      |
| PHONE:                                                  |     |        |                 | EMAIL:                  |          |                  |                      |
| PHONE:                                                  |     |        |                 | EMAIL:                  |          |                  |                      |
| AUDITOR INFORMATION                                     |     |        |                 |                         |          |                  |                      |
| LEAD AUDITOR:                                           |     |        |                 | SITE VISIT TIME:        |          | SITE VISIT DATE: |                      |
| AUDITOR:                                                |     |        |                 |                         |          |                  |                      |
| FACILITY ACTIVITIES                                     |     |        |                 | STORED ONSITE CHEMICALS |          |                  |                      |
| Activity                                                | Yes | No     | Subcontract to: | Material                | Quantity | Container        | Stormwater Exposure? |
| <b>Maintenance</b>                                      |     |        |                 |                         |          |                  |                      |
| Equipment Maintenance                                   |     |        |                 |                         |          |                  |                      |
| Vehicle Maintenance                                     |     |        |                 |                         |          |                  |                      |
| Other Maintenance                                       |     |        |                 |                         |          |                  |                      |
| <b>Painting</b>                                         |     |        |                 |                         |          |                  |                      |
| Equipment Painting/Stripping                            |     |        |                 |                         |          |                  |                      |
| Vehicle Painting/Stripping                              |     |        |                 |                         |          |                  |                      |
| Other Painting/Stripping                                |     |        |                 |                         |          |                  |                      |
| <b>Cleaning</b>                                         |     |        |                 |                         |          |                  |                      |
| Vehicle Washing                                         |     |        |                 |                         |          |                  |                      |
| Equipment Degrease/Washing                              |     |        |                 |                         |          |                  |                      |
| Other Washing                                           |     |        |                 |                         |          |                  |                      |
| <b>Storage</b>                                          |     |        |                 |                         |          |                  |                      |
| Oil & Haz Chemical Storage                              |     |        |                 |                         |          |                  |                      |
| Vehicle Storage                                         |     |        |                 |                         |          |                  |                      |
| Equipment Storage                                       |     |        |                 |                         |          |                  |                      |
| Salt/Sidewalk Deicers                                   |     |        |                 |                         |          |                  |                      |
| <b>Handling &amp; Disposal of Waste &amp; Materials</b> |     |        |                 |                         |          |                  |                      |
| Haz-Mat/Waste Generation                                |     |        |                 |                         |          |                  |                      |
| Solid Waste Generation                                  |     |        |                 |                         |          |                  |                      |
| Pet/Animal Waste                                        |     |        |                 |                         |          |                  |                      |
| <b>Fuel Storage and Delivery</b>                        |     |        |                 |                         |          |                  |                      |
| Vehicle Fueling                                         |     |        |                 |                         |          |                  |                      |
| Equipment Fueling                                       |     |        |                 |                         |          |                  |                      |
| Fuel Storage                                            |     |        |                 |                         |          |                  |                      |
| Tanks (UST/AST)                                         |     |        |                 |                         |          |                  |                      |
| <b>Building and Grounds Maintenance</b>                 |     |        |                 |                         |          |                  |                      |
| Floor Wash Down                                         |     |        |                 |                         |          |                  |                      |
| Landscape Maintenance                                   |     |        |                 |                         |          |                  |                      |
| Pest / Weed Control                                     |     |        |                 |                         |          |                  |                      |
| Sidewalk/Pavement Anti-icing                            |     |        |                 |                         |          |                  |                      |
| <b>Other</b>                                            |     |        |                 |                         |          |                  |                      |
|                                                         |     |        |                 |                         |          |                  |                      |

**Pollutant Impacts:**

- Sediment   
 Nutrients   
 Bacteria/Viruses   
 Oil/Grease   
 Metals   
 Organics   
 Pesticides   
 Gross Pollutants   
 Vector Production   
 Oxygen Demanding Substances

**Appendix D**  
**Facility Database**

**The facility databases are provided as separate Excel files.**

## **APPENDIX K: SUPPORTING DOCUMENTS FOR CONTROL OF FLOATABLE DISCHARGES PROGRAM**

| <b>No.</b> | <b>Description</b> |
|------------|--------------------|
| Reserved   | Reserved           |

## **APPENDIX L: SUPPORTING DOCUMENTS FOR PUBLIC EDUCATION AND OUTREACH PROGRAM**

| <b>No.</b> | <b>Description</b> |
|------------|--------------------|
| Reserved   | Reserved           |



## **APPENDIX M: SUPPORTING DOCUMENTS FOR PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM**

| <b>No.</b> | <b>Description</b> |
|------------|--------------------|
| Reserved   | Reserved           |

## **APPENDIX N: SUPPORTING DOCUMENTS FOR MONITORING PROGRAM**

| <b>No.</b> | <b>Description</b>             |
|------------|--------------------------------|
| N-1        | COA Sampling Certification     |
| N-2        | Final Sampling Plan            |
| N-3        | Sampling Cooperative Agreement |

## **APPENDIX N-1**

# CITY OF ALBUQUERQUE



June 15, 2016

U.S. EPA, Region 6  
Compliance Assurance and Enforcement Division  
Water Enforcement Branch (6EN-WC)  
1445 Ross Avenue  
Dallas, Texas 75202-2733

**RE: Albuquerque Metropolitan Area Municipal Separate Storm Sewer System (MS4) Wet Weather Monitoring Site Certification, Permit No. NMR04A000**

Per Table 10, Wet Weather Monitoring Program Implementation Schedules, enclosed as Attachment 2 in the letter from EPA Region 6 dated February 10, 2016, the City of Albuquerque (COA) submits certification that the wet weather monitoring sites in the Middle Rio Grande are operational and ready for sampling. As a member of the Middle Rio Grande Stormwater MS4 Compliance Monitoring Cooperative, the COA meets the criteria for a permittee with a cooperative program and qualifies for the cooperative deadline of June 21, 2016. Copies of the Intergovernmental Agreement and Cooperative Monitoring Plan are attached. Please contact Kathy Verhage by phone at (505) 768-3654 or by email at [kverhage@cabq.gov](mailto:kverhage@cabq.gov) if you have any questions regarding the agreement or plan.

PO Box 1293

Albuquerque

## CERTIFICATION STATEMENT

New Mexico 87103 I, the undersigned, certify under penalty of law that this document, the Intergovernmental Agreement that creates the Middle Rio Grande Stormwater MS4 Compliance Monitoring Cooperative, was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my 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 my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

www.cabq.gov

  
\_\_\_\_\_  
**Robert J. Perry**  
Chief Administrative Officer

*GPS*  
*JMA*

*6/17/16*  
\_\_\_\_\_  
Date

## **APPENDIX N-2**

**City of Albuquerque**  
**Cooperative Monitoring Plan – MS4 Watershed-based permit**  
**May 5, 2016**

Per Option B of NPDES Permit No. NMR04A000 (Part III.A.1.b) participatory permittees (listed at the end of the plan description) have developed a wet weather cooperative monitoring program to assess the effect of storm water discharges on the receiving water, the Middle Rio Grande. The following sampling plan discusses the wet weather sampling, monitoring, and assessment to be conducted in accordance with the permit. Dry weather discharge screening (Part III.A.2) will be conducted by individual permittees and discussed in their respective Stormwater Management Programs (SWMP) except as noted in the plan section titled "Modification of Monitoring Plan for Exceedances". See also the attachments (presentation presented at the February 22 meeting with EPA Region 6 representatives for additional details to this plan).

Sampling must be conducted at a minimum of seven (7) events per sampling location during the permit term with at least three (3) events in the wet season and two (2) events in the dry season. Seasonal monitoring periods are the Wet Season: July 1 – October 31 and Dry Season: November 1 – June 30. Monitoring methodology for both seasons will consist of collecting a minimum of four grab samples spaced at a minimum interval of 15 minutes each. Individual grab samples for each sampling location, will be preserved and combined into a single composite sample at the laboratory.

*Qualifying Storm Event*

Due to the nature of rainfall in the middle Rio Grande Valley, the MS4s are proposing that a qualifying event be defined as a 0.25-inch or greater storm anywhere in the watershed that creates a discharge to the Rio Grande. Additionally, no antecedent dry period will be required in order to ensure that a sufficient number of qualifying events are available for sampling.

In order to determine whether or not a qualifying storm event has occurred, the MS4s may use a variety of different data sources for representative locations within the watershed to identify the qualifying storm event. Sources for determining a qualifying storm event may include, CoCoRahs, wundermap.com data, calibrated National Weather Service radar, and/or USGS weather data based on rainfall measurements taken within the watershed.

*Wet Weather Monitoring (Wet Season: July 1 – October 31/Dry Season: November 1 – June 30)*

Wet weather monitoring gathers information on the response from the receiving waters to wet weather discharges. The following parameters must be sampled:

TSS  
TDS  
COD  
BOD5  
DO  
Oil & grease  
E.coli  
pH  
total kjeldahl nitrogen  
nitrate plus nitrite

dissolved phosphorus  
ammonia plus organic nitrogen  
phosphorus  
PCBs  
gross alpha  
Tetrahydrofuran  
Benzo(a)pyrene  
Benzo(b)fluoranthene  
Benzo(k)fluoranthene  
Chrysene  
Indeno(1,2,3-cd)pyrene  
Dieldrin  
Pentachlorophenol  
Benzidine  
Benzo(a)anthracene  
Pentachlorophenol  
Dibenzofuran  
Dibenzo(a,h)anthracene  
3, 4 Benzofluoranthene  
chromium IV  
copper-dissolved  
lead-dissolved  
Bis(2-ethylhexyl)phthalate

DO, pH, conductivity, and temperature must be analyzed in the field within 15 minutes of sample collection.

#### *Sampling Locations*

**Rio Grande (NORTH)**- In stream sampling within the Rio Grande will be performed upstream of the Angostura Diversion Dam at the north end of the water shed (upstream or background)..

**Rio Grande (SOUTH)** – In stream sampling within the Rio Grande will be performed at the Isleta Bridge at the south end of the watershed and downstream of all inputs from the Urban Area to the river to provide the downstream water conditions.

These locations have been identified and are proposed to meet the permit requirements as identified in Part III.A. These up and down stream sample locations capture all inputs to the river within the Urbanized Area. See Attachment 1 for a map of sampling locations.

Locations along the ephemeral channels entering the urbanized area were not selected for sampling locations due to logistical issues with responding to storm events in a timely fashion upstream of the urbanized area. Due to the nature of the storms in the middle Rio Grande, the time frame needed to identify a storm event, mobilize manpower an upstream location would prove logistically challenging. The typical storm event is high intensity and short duration, making it challenging to obtain the needed samples. The usage of automated sampling on ephemeral, natural channels is also logistically challenging. Due to the nature of the channels, the flow path of the runoff varies along the floor of the

channel. Placement of automated sampling equipment within this type of environment is extremely challenging and can lead to loss of equipment due to the variations in flow paths.

### *Sample Collection*

The greatest difficulty the MS4s will have in sample collection are the logistics for collecting the sample(s) and getting them to the laboratory within the required holding time limitations for each sample type, particularly E.coli. In order to expedite this process, the MS4s are proposing the following actions:

1. On days where rainfall in excess of the qualifying storm event are predicted to take place within a timeframe where an in-stream sample can be collected and delivered to the laboratory in time to meet holding time requirements, the upstream sample (Angostura Diversion Dam) will be collected by noon (12:00 PM) on the day of the predicted event.
2. After collection of the upstream samples, the e-coli sample will be submitted to the laboratory for analysis and the remaining samples will be preserved as required and held until the determination can be made regarding whether or not there is a Qualifying Storm Event.
3. When a Qualifying Storm Event is anticipated within the watershed, a river staging timing methodology will be used to identify the proper time for the sample to be taken from the downstream location(s) per Table 1. For example, if it typically takes one hour for water from the North Diversion Channel to reach the Isleta Bridge sampling location, then the sample will be taken one hour after the discharge from the NDC has occurred.
4. Upon collection of the downstream sample(s) from the Isleta Bridge location, the e-coli sample(s) will be taken to a laboratory for analysis and the balance of the samples will be preserved, as required, and held until the determination can be made regarding whether or not there is a Qualifying Storm Event.
5. In the event that a Qualifying Storm Event is NOT recorded, all non-e-coli samples will be dumped and not analyzed. In the event a Qualifying Storm Event is recorded, samples (upstream and downstream) will be submitted to a laboratory for analysis.

During sample collection, the sampler shall maintain a log book recording the site conditions at the time of sampling, actions taken to collect the samples, and any other pertinent information that may be relevant to the sample event. All collected samples shall have a chain-of-custody form associated with each sample container. This chain-of-custody form shall be maintained by the sampler until the sample is delivered to the laboratory for analysis. Greater detail will be contained in the Quality Assurance Program Plan (QAPP) that will be developed for this plan.

Please see Attachment 2 for an example of the process that will be used to trigger and execute a sampling event.



| Example CoCoRaHS Rain Gages and Assumed Travel Times for Sampling Stormwater Events in Watershed |                                                          |                                                       |               |            |                                                       |             |
|--------------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------|---------------|------------|-------------------------------------------------------|-------------|
| Zonal Segments of River (north to south travel times)                                            |                                                          | Western Side of Watershed (west to east travel times) |               | Rio Grande | Eastern Side of Watershed (east to west travel times) |             |
|                                                                                                  |                                                          | 3 hours -->                                           | 1.5 hours --> |            | <-- 20 min.                                           | <-- 40 min. |
| 7.4 hours                                                                                        | Rio Grande at Angostura to Rio Grande at Alameda         | NM-SN-59                                              | NM-SN-70      |            | N/A                                                   | N/A         |
| 4.4 hours                                                                                        | Rio Grande at Alameda to Rio Grande at Central           | NM-BR-113                                             | NM-BR-144     |            | NM-BR-71                                              | NM-BR-162   |
| 5.2 hours                                                                                        | Rio Grande at Central to Rio Grande at Isleta 147 Bridge | NM-BR-159                                             | NM-BR-104     |            | NM-BR-150                                             | NM-BR-41    |

TABLE 1 – HYDROGRAPH TIMING FOR RAIN EVENTS TO SOUTHERN SAMPLING POINT

Rainfall information associated with the above Station Numbers can be obtained from the Community Collaborative Rain, Hail and Snow Network website ([www.cocorahs.org](http://www.cocorahs.org)). The Station Numbers provided in the table are for representative purposes only. The actual CoCoRaHS rainfall data utilized to confirm a Qualifying Event will be from the appropriate zone in the watershed but may not be from the exact Station Number listed in the table.

*Modification of Monitoring Plan from External Information*

In the event that supplemental information outside of sampling results indicates the possible presence of a contaminant of concern, the participatory permittees, in discussion with EPA and NMED and with their approval, may add additional sampling locations in the river to monitor any potential impact from the contaminant of concern. Samples from these supplemental sampling locations will be analyzed for the contaminant of concern identified in the external information and may be eliminated if analysis of the sample indicates the absence of the contaminant of concern. For example, if recurring illicit discharge of septage pumping is identified within a watershed, the Sampling Cooperative may add an additional monitoring location for eColi and/or nitrate immediately downstream of the discharge point to the river for the watershed.

*Response to Monitoring Results*

In the event of an exceedance, the MS4 Sampling cooperative will examine all meteorological and stream gauge data available and correlate rainfall event/timing with sampling timing to determine the most likely source location and discharge point to the river. Once the most likely source location has been determined, MS4s will cooperatively develop a pollutant-specific response plan whose elements may include a review of land use for potential sources of the specific pollutant exceeded or enhanced public outreach and education to specific user or industry groups.

In the event of rainfall in the same distribution as the storm event associated with the exceedance, additional sampling may be conducted to monitor for potential sources, if appropriate. Only the constituent(s) identified in the exceedance will be analyzed.

*Permittees Cooperating in Monitoring Program*

City of Albuquerque

Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA)

University of New Mexico (UNM)

New Mexico Department of Transportation (NMDOT)

Bernalillo County

Sandoval County

Village of Corrales

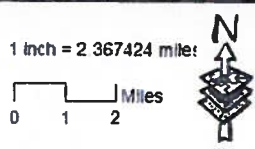
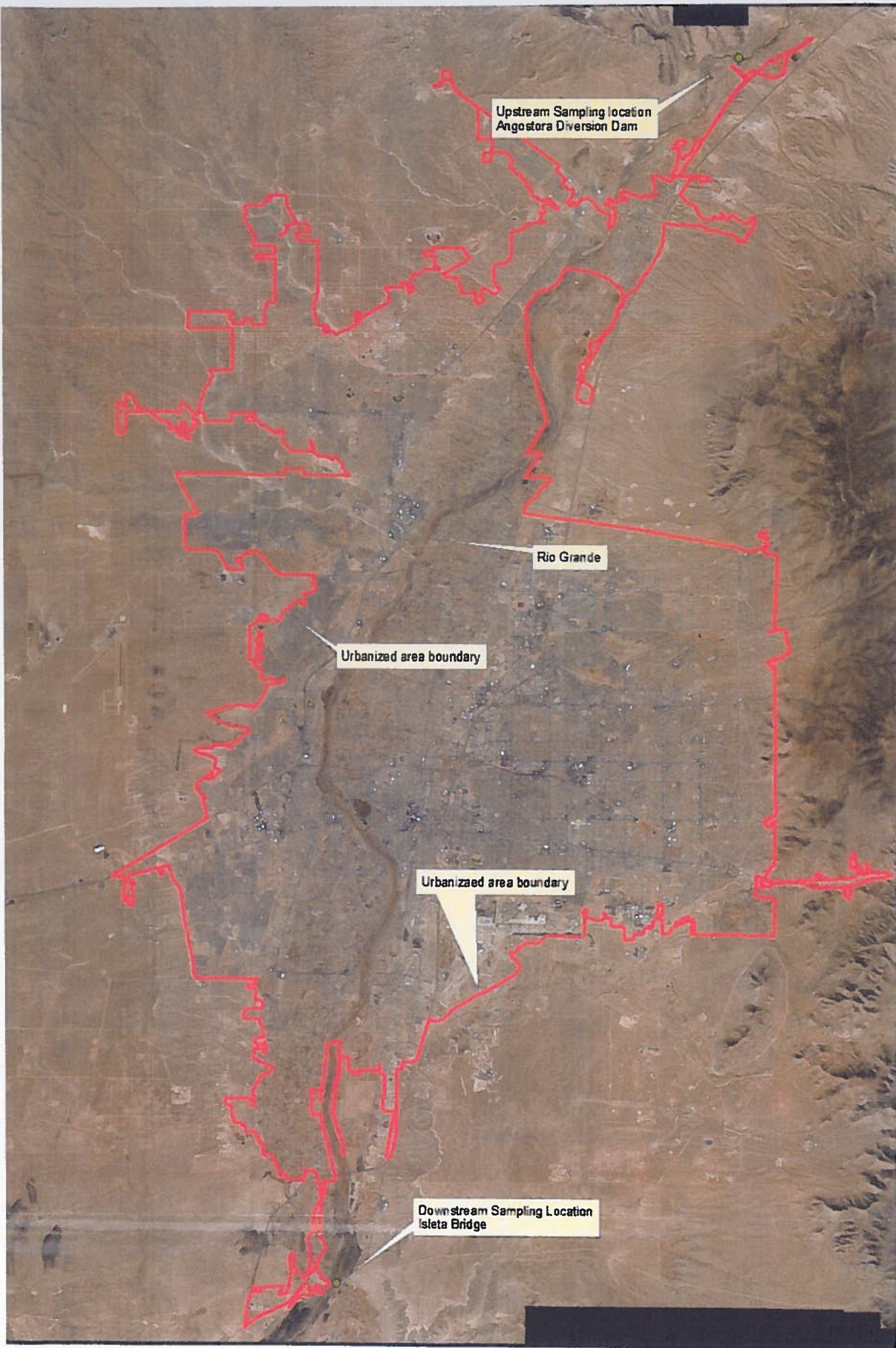
City of Rio Rancho

Los Ranchos de Albuquerque


Town of Bernalillo

Eastern Sandoval County Arroyo Flood Control Authority

Southern Sandoval County Arroyo Flood Control Authority



**WSB MS4 Sampling Locations**



Southern San Joaquin County  
Arroyo Flood Control Authority

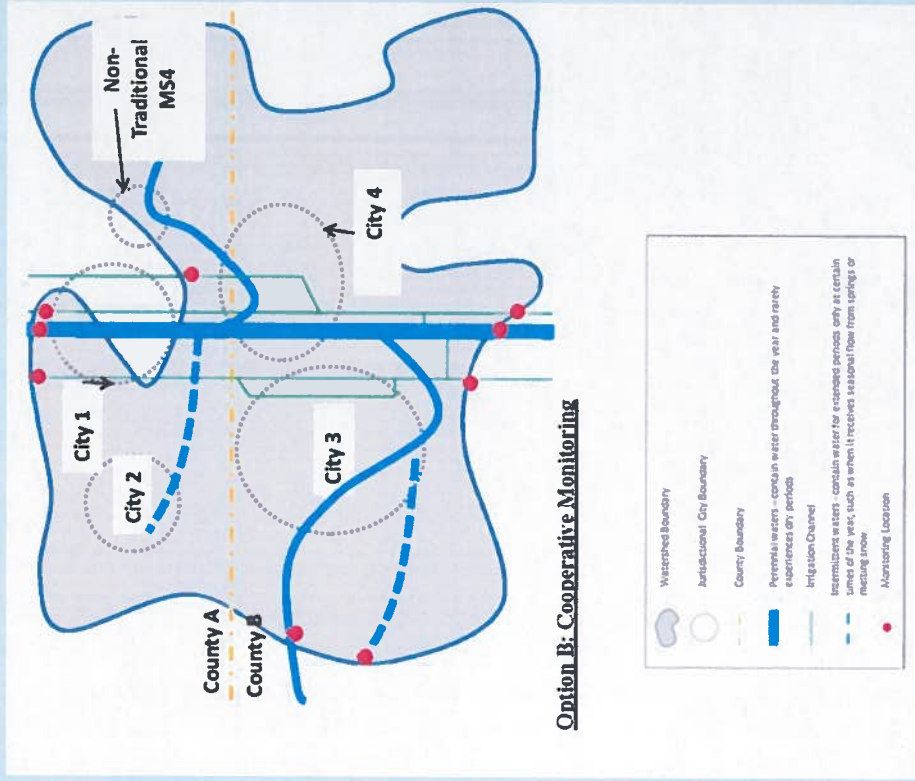
Date: November 13, 2011

Attachment 1

Middle Rio Grande  
Watershed Based Permit  
Wet-weather Monitoring Plan  
Presentation

February 22, 2016

# What we started with...



**Option B: Cooperative Monitoring**

Important points from figure for permittees:

- 1) Watershed boundary (not urbanized area boundary) is The grey blob
- 2) Identify locations on the Rio Grande that minimize (or Eliminate) MRGCD sampling. How do we do this? Go Upstream and downstream of MRGCD system
- 3) The watershed has no inputs, other than the Rio Grande Flowing in and out of the watershed boundary
- 4) Dashed lines showing "Jurisdictional City Boundaries" Were assumed to be the urbanized area

# Wet weather monitoring plan methodology and approach

- For the sake of understanding the MS4's approach, we thought that the best approach would be to walk through a real storm event
- Since local storms occur over very short periods of time, the key to being able to respond for sampling will require keen attention to local details
- The process starts by monitoring the local weather forecast
  - Two designated representatives from the Sampling Cooperative will be monitoring the forecast
  - When storms are predicted, the representatives will trigger an upstream sampling event. Since the timing of the storms are always questionable, the upstream sampling event will taken at approximately noon the day of the predicted storm
    - It is assumed by the Sampling Cooperative members that the water quality of the water at the north end of watershed will remain relatively consistent throughout the day

# Step 1: Take upstream sample



~12:00PM, take samples for:

TSS, TDS, COD, BOD5, DO, TPH/oil, E.Coli, pH, TKN

Nitrogen, Nitrate+Nitrite, dissolved phosphorous,

Ammonia+organic nitrogen, phosphorous, PCBs and gross alpha

NOTE: E.Coli to lab immediately to meet holding time req.

And hold remaining samples

## Step 2: Wait.....and act if events warrant action

- Designated representatives from the sampling cooperative monitor the weather
- At 2:45PM, radar indicates that a storm developed over northern Rio Rancho and appears to have been of sufficient magnitude to generate runoff/discharge to the Rio Grande (PLAY MOVIE)
- Based on the chart provided on page 3 of the proposed monitoring plan, the hydrograph associated with the storm event will reach the Isleta Bridge (south sampling station) 15.35 hours after the event occurred, or 6:07AM
  - 1.5 hours from storm location to outfall
  - Outfall is approximately 10 miles from Alameda Bridge or 58% of the distance from Alameda Bridge to Angostora Dam. 58% of the travel time of 7.4 hours (Angostora to Alameda) is 4.25 hours.
  - River travel time from Alameda Bridge to Central Bridge = 4.4 hours
  - River travel time from Central Bridge to Isleta Bridge = 5.2 hours
  - Total time to sample = 1.5 h + 4.25 h + 4.4 h + 5.2 h = 15.35 hours or 15 hours, 21 minutes
- Representatives confer and mobilize contractor for a 6:07AM sampling event at the south end of the watershed (Isleta Bridge)



# Step 3: Take downstream sample

6:07AM, take samples for:

TSS, TDS, COD, BOD5, DO, TPH/oil, E.Coli, pH, TKN

Nitrogen, Nitrate+Nitrite, dissolved phosphorous,

Ammonia+organic nitrogen, phosphorous, PCBs and gross alpha

NOTE: Hold all samples until storm magnitude can be verified



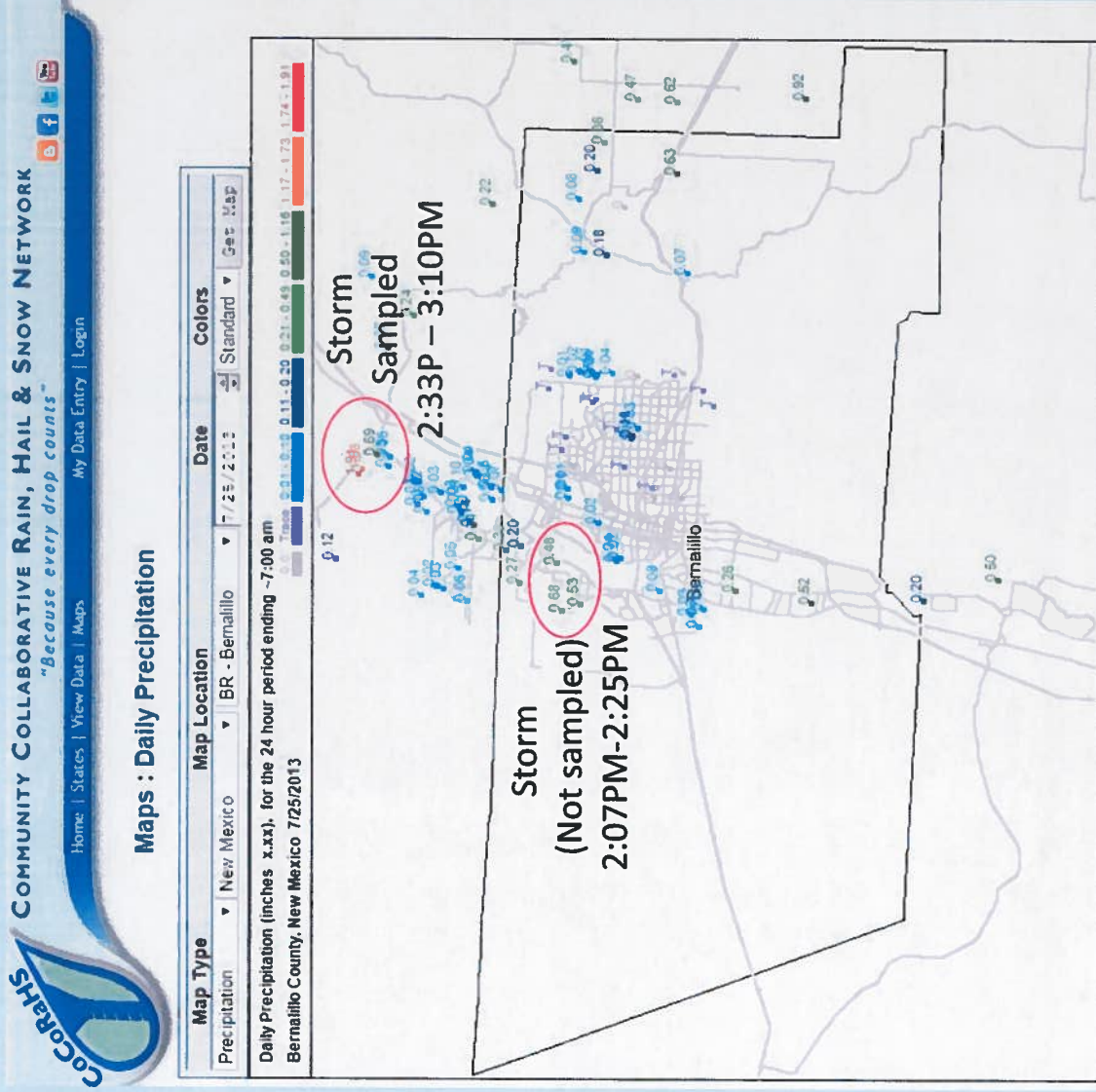
## Status

- By approximately 6:30AM, all samples have been collected at the downstream sampling location
- All other samples are held until a determination can be made on whether or not there was a qualifying rain event.
  - Holding time of 6 hours allowed for E.coli sample, so, determination of qualifying storm event must be made before ~ 12:30PM

# Step 4: Review CoCoRaHS Data

CoCoRaHS data generally starts  
Becoming available at 6:00-7:00AM  
The next day (July 25, 2013).

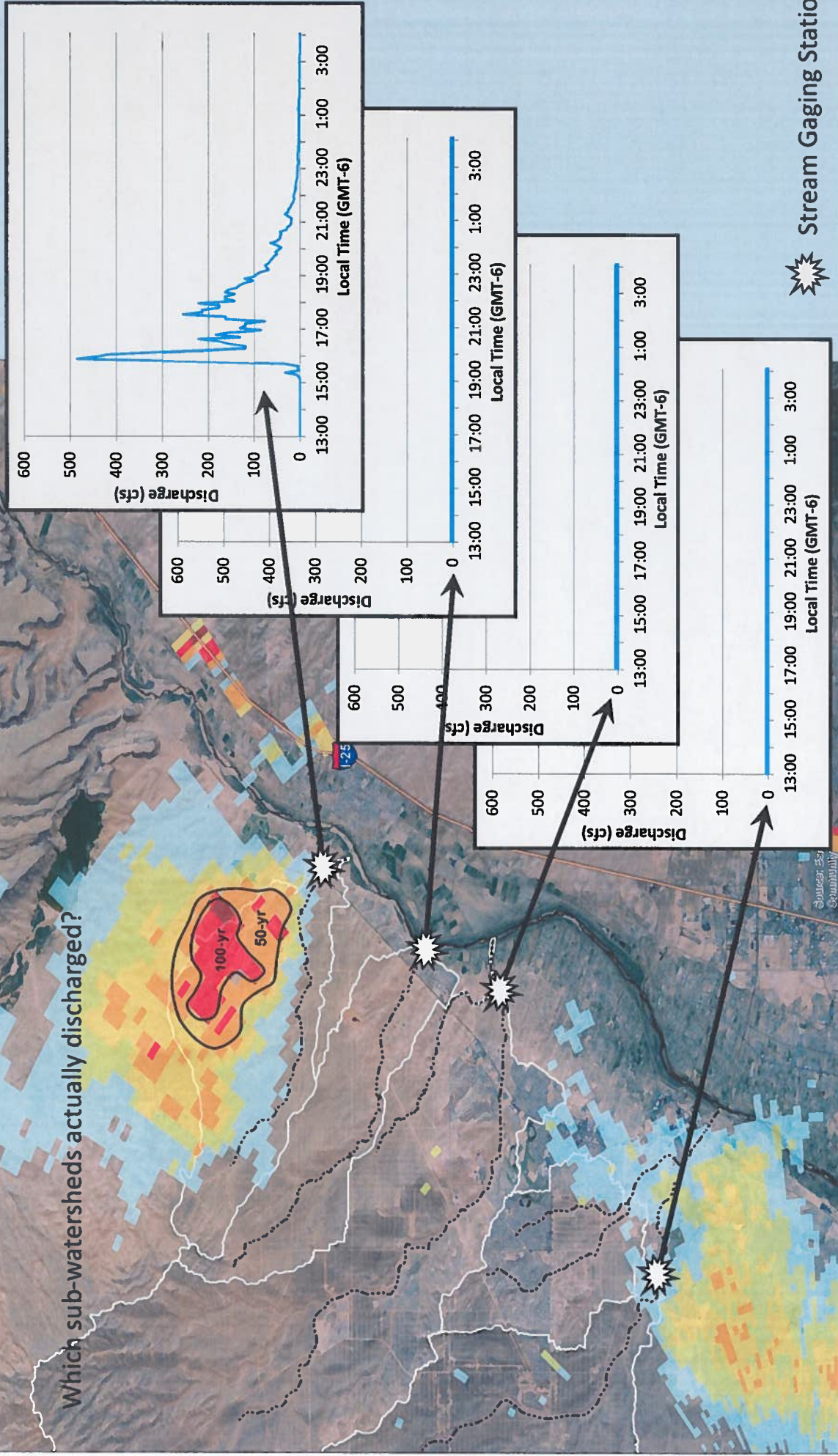
The sampled storm is determined  
To be a qualifying event (>0.25")



## Step 5: If there is an exceedance in downstream sample

- Identify which watershed discharged water to the Rio Grande during the day
- Based on downstream sampling time, the discharging sub-watersheds can be identified that match with the sampling time
- Once discharging sub-watershed is known, overlay radar data to determine most likely area where runoff originated
- Perform field investigation of area where runoff originated for potential source of contamination matching what was identified in downstream sampling

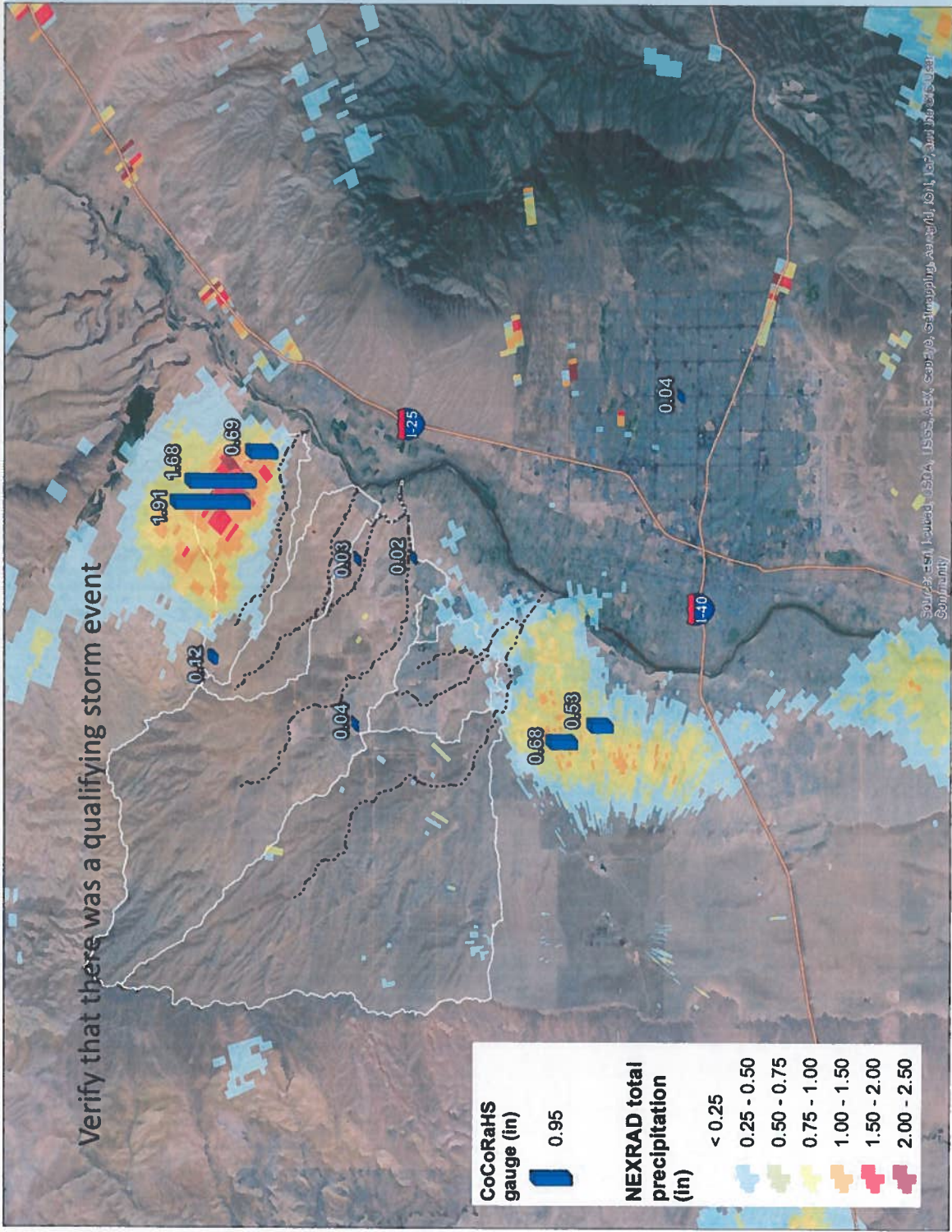
Which sub-watersheds actually discharged?



Stream Gaging Station

# Storm of July 24, 2015

Verify that there was a qualifying storm event





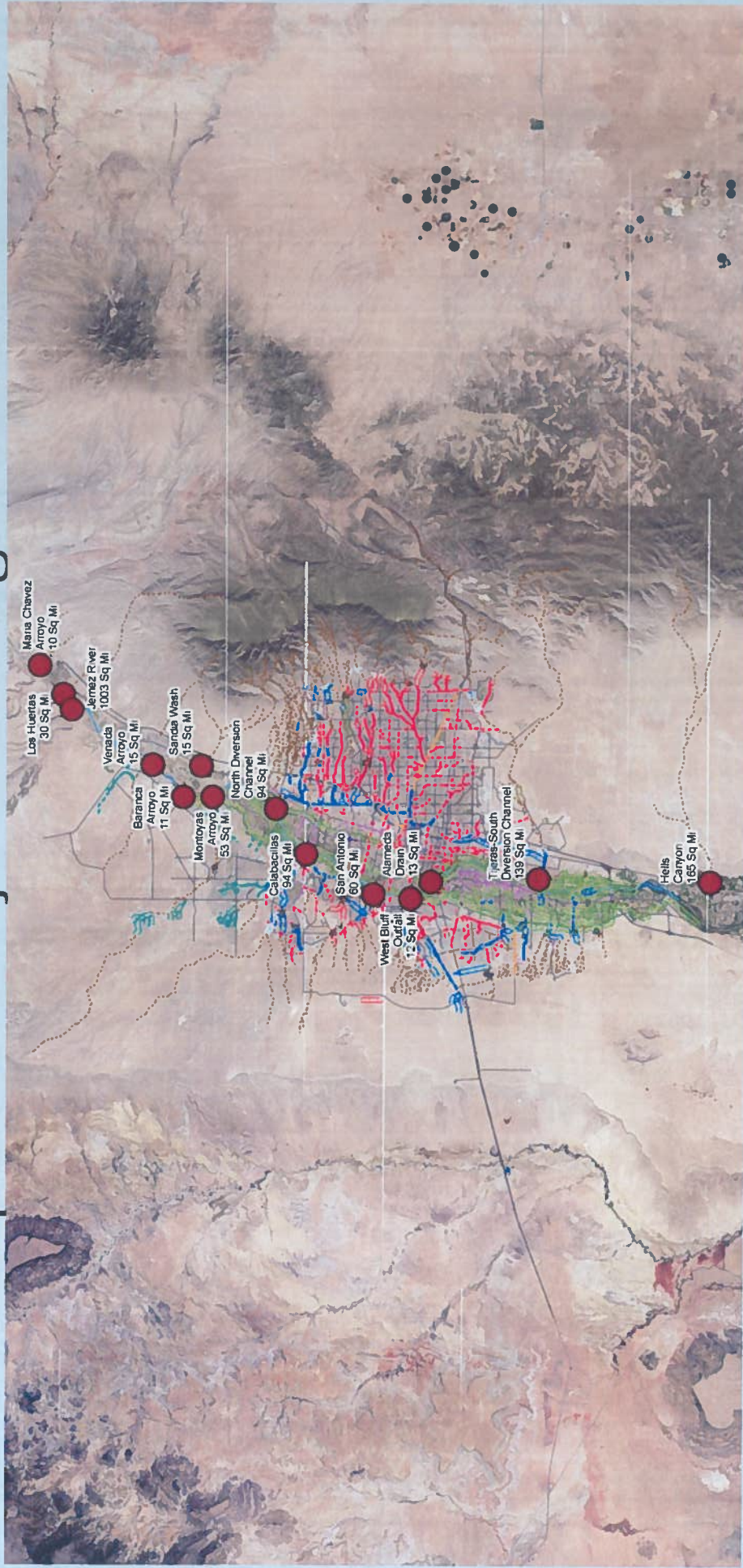
# Investigate the most likely source of the exceedance

- Pinpoint the location of the storm
- Look at land use w/in storm footprint





# Map of all major discharge locations



# Monitoring program assessment

- **Part III.A.1 – Wet weather monitoring**
  - Option B has been selected by 12 of the co-permittees
  - Proposed sampling plan matches what is proposed in Appendix D
  - Sample constituents are identical to that discussed in the Option B monitoring program
- **Part III.A.2 – Dry weather discharge screening of MS4**
  - Since dry weather discharge screening is identical to IDDE screening as no discharges occur to the Rio Grande outside of IDDE-related discharges or wet weather events.
  - No relationship could be determined between wet weather monitoring and dry weather discharge screening
- **Part III.A.3 – Floatable monitoring**
  - Floatable monitoring will most likely be performed on more of a regional basis (e.g. Rio Rancho and SSCAFCA) and is not conducive to the larger wet weather monitoring
- **Part III.A.4 – Industrial and High Risk runoff monitoring**
  - This is applicable to Class A permittees only and therefore will not be part of the larger cooperative agreement but rather may be a supplemental agreement among Class A entities
  - Since this is a Class A program only, it is not included in the wet weather cooperative monitoring program

| <b>Permit Section</b> | <b>Description of Activity</b>                                                                                                                                                                                                                                                                     | <b>Potential cooperating partners</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Part III.A.1          | Wet Weather Monitoring – collect monitoring samples within the Rio Grande to determine delta P between upstream and downstream due to stormwater influences                                                                                                                                        | <b>Watershed-wide (regional) cooperation:</b> since the river bisects the watershed and all entities ultimately discharge to the river, this effort provides an excellent opportunity for all entities to cooperate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Part III.A.2          | Dry weather screening – due to the ephemeral nature of the sub-watershed (e.g. arroyo watersheds), this effort is closely tied to IDDE screening as no discharges from arroyos to the river will exist unless influenced by a storm event (see Wet Weather Monitoring) or by an illicit discharge. | <b>Sub-regional and regional cooperation:</b> The IDDE program will be driven primarily by two mechanisms, citizen reporting of spills/dumping and/or MS4 entity observance. The vast majority of IDDE reports will be local in nature and require the cooperation of overlapping and/or adjacent entities to respond accordingly (e.g. City of Rio Rancho, Sandoval County, NMDOT, SSCAFCA, Corrales and/or Town of Bernalillo), may need to be consulted in response to an illicit discharge incident to identify appropriate jurisdiction and appropriate response. IDDE information will be shared on a regional level at the TAG with respect to best management practices in detection and response as well as in the adaptation of the wet weather monitoring plan (as needed) |
| Part III.A.3          | Floatable Monitoring – permittees shall establish locations for monitoring/assessing floatable material in discharges to and/or from their MS4.                                                                                                                                                    | <b>Sub-regional and regional cooperation:</b> Since it is impracticable to perform floatable removal and characterization within the Rio Grande, this type of activity will need to be performed in locations along ephemeral drainages. Most ephemeral drainages in the watershed serve to drain geographic areas generally confined to subset of overlapping jurisdictions. Logistically, it will be more efficient for entities contributing to ephemeral drainages to cooperatively assess floatables at priority locations. The process and best management practices associated with this activity will be discussed at the TAG and results of this activity may be shared among entities in this venue.                                                                        |
| Part III.A.4          | Industrial and High Risk runoff monitoring – Monitor runoff of stormwater from type 1 and 2 industrial facilities.                                                                                                                                                                                 | <b>Sub-regional cooperation:</b> The permit limits this activity to Phase 1 entities. These entities overlap each other in the same geographical region and generally have stormwater systems that feed into one another. These Phase 1 entities may choose to perform this operation cooperatively.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## **APPENDIX N-3**

**Middle Rio Grande Stormwater MS4 Compliance Monitoring Cooperative**

**INTERGOVERNMENTAL AGREEMENT**

**AN INTERGOVERNMENTAL AGREEMENT, CREATING THE MIDDLE RIO GRANDE MS4 COMPLIANCE MONITORING COOPERATIVE, IN SUPPORT OF COMPLIANCE EFFORTS FOR A STORMWATER DISCHARGE PERMITTING SYSTEM FOR THE MIDDLE RIO GRANDE VALLEY IN ACCORDANCE WITH THE FEDERAL CLEAN WATER ACT.**

**RECITALS**

**WHEREAS**, the United States Environmental Protection Agency (EPA), Region 6 regulates the discharge of stormwater from municipal separate storm sewer systems (MS4s) in central New Mexico through the issuance of an MS4 permit for the Middle Rio Grande valley urbanized area, under the authority of the National Pollutant Discharge Elimination System (NPDES) regulations (40CFR122); and

**WHEREAS**, the Middle Rio Grande valley urbanized area is comprised of many diverse local, state, federal and tribal entities, each with separate and distinct authority and responsibilities; and

**WHEREAS**, the Middle Rio Grande valley urbanized area entities that are eligible for authorization under NPDES General Permit No. NMR04A000 (hereinafter "MS4 Permit"), and therefore eligible to enter into this Intergovernmental Agreement (hereinafter "Agreement") in furtherance of the requirements of the MS4 Permit, are the City of Albuquerque, Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA), University of New Mexico, New Mexico Department of Transportation District 3, Bernalillo County, Sandoval County, Village of Corrales, City of Rio Rancho, Village of Los Ranchos de Albuquerque, Kirtland Air Force Base, Town of Bernalillo, State Fairgrounds/Expo New Mexico, Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA), Eastern Sandoval County Arroyo Flood Control Authority (ESCAFCA), Sandia National Laboratories/Department of Energy, Pueblo of Sandia, Pueblo of Isleta, and Pueblo of Santa Ana (collectively "Co-permittees"); and

**WHEREAS**, the proposed MS4 Permit requires each Co-permittee to obtain and report stormwater compliance monitoring results in their MS4 Annual Report; and

**WHEREAS**, the proposed MS4 Permit encourages cooperative efforts among the Co-permittees, including compliance monitoring activities, to reduce the amount of pollutants discharged with stormwater into the Rio Grande; and

**WHEREAS**, cooperation among the Co-permittees in the MS4 Permit through the Middle Rio Grande Compliance Monitoring Cooperative ("CMC"), with regard to monitoring requirements, offers the opportunity to reduce each individual Co-permittee's monitoring costs by cooperatively developing, funding, and executing a common monitoring plan without reducing the effectiveness of the monitoring plan.

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**NOW, THEREFORE, BE IT AGREED THAT:**

1. **PURPOSE.** The CMC will serve as the focal point for the development, execution, and, as needed, the amendment of the Monitoring Plan required as part of the MS4 Permit. The intent of the CMC is to attain and demonstrate permit compliance for member Co-permittees with respect to the provisions of the MS4 Permit. The Monitoring Plan will be developed cooperatively among the member Co-permittees of the CMC.

2. **ELIGIBILITY.** All Co-permittees specifically identified in the MS4 Permit are eligible to be members of the CMC.

3. **MEMBERSHIP.** The CMC will include as members all Co-permittees that have signed this Intergovernmental Agreement ("Members"). Members are expected to provide funding for the ongoing operations of the CMC and to contribute financially or materially to the benefit of the CMC, either from their own assets or through the securing of contributions from others. The Members shall elect a Chairman of the CMC. The Chairman shall be elected by a majority vote of the members.

4. **VOTING.** The CMC will be made up of one voting Member from each Co-permittee in good standing, which is defined as having paid their expected contribution, as defined in the Contribution Schedule included as Attachment 1. Attachment 1 shall be updated annually by the Fiscal Agent (See Paragraph 7) to reflect Members in good standing. Each Member will designate a staff person to represent the Member's interest on the CMC and to vote on that Member's behalf. Designation of a representative may be completed at any time and under any circumstances. Other/outside agencies may participate on the CMC by attending meetings and giving input; however, only the Members in good standing may vote on CMC decisions. Decisions of the CMC will be decided by majority vote of the Members in good standing. The CMC may take action during a meeting, by telephone, or by e-mail.

5. **TERM.** The term of this Agreement shall run from the date the MS4 Permit is issued by the EPA until the date the MS4 Permit is terminated or expires, whichever occurs first. This Agreement may be terminated in its entirety at any time upon the mutual agreement of all of the then-existing Members to this Agreement.

6. **FISCAL MATTERS.** In the first Calendar Year of this Agreement, the CMC will meet to develop a budget based on the costs for implementing the Monitoring Plan for MS4 Permit compliance. To ensure sufficient funding is available to carry out the Monitoring Plan, the budget shall equal 110% of the estimated costs associated with the Monitoring Plan, including estimated contingencies. In subsequent years, the budget will be based on the actual expenditures from the prior year's monitoring activities plus any reasonable increases identified by the CMC. Each Member shall commit funding to the CMC based on the Contribution Schedule established for that year, which Contribution Schedule shall be in a total amount of not less than the budgeted costs. In-kind contributions shall be permitted in lieu of all or a portion of

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a Members cash contribution, provided however, that participation in the CMC shall not be considered in-kind contributions. The value of in-kind contributions will be determined by the membership of the CMC by equating the value of the service to the cost that would be paid by the membership of the CMC to have the in-kind service performed by a third party (non-CMC member) contractor. The Contribution Schedule is located in Attachment 1 to this Agreement. This Contribution Schedule may be modified by the CMC annually without requiring modification to this agreement, provided however, that it shall be adopted by unanimous vote of the Members. Any funds remaining at the end of the Agreement Year will be carried into the next Calendar Year of this agreement. In such event, the CMC may either elect to retain the excess funds from the prior Calendar Year as a contingency fund, or may lower the annual contribution schedules for that year for all Members in equal proportion, based on the total amount carried forward. In the event a Member does not have the resources to provide full payment for any funds required by the Contribution Schedule, the remaining Members may agree, by unanimous vote, amend the Contribution Schedule if it is in the best interest of the CMC. Each Member's obligations under this Agreement are contingent upon sufficient appropriations being made therefor by such Member's governing body sufficient to fulfill such Member's said obligations. If such appropriations are insufficient to such Member's obligations hereunder, such Member's shall promptly notify the other Members, and this Agreement shall terminate forthwith with respect to such Member.

7. **FISCAL AGENT.** The Members shall select one (1) Co-permittee to act as Fiscal Agent for the CMC for the purposes of this Agreement. The Fiscal Agent shall act as the custodian of the CMC's funds, securities, and property. All funds will be held in a separate bank account for the purposes of this Agreement. All CMC funds shall be deposited promptly by the Fiscal Agent to the credit of the CMC. The CMC shall adhere to the Fiscal Agent's accounting and procurement procedures, provided such procedures comply with law. The Fiscal Agent shall make available to any interested Member, all records, receipts, and other documentation with respect to all matters concerning this agreement and shall have this account included in its annual audit. The Fiscal Agent shall maintain funds in accordance with all applicable state and Federal statutes. The Fiscal Agent shall be authorized on the CMC's behalf to sign checks, drafts, or other instruments for payment of money, acceptances, notes, or other evidences of indebtedness, to enter into contracts, or to execute and deliver other documents and instruments. This authority to enter into any contract or negotiated agreement shall be subject to approval by the CMC and subject to any limitations as set forth in this Agreement. Subject to the provisions of this Agreement, no loans shall be contracted on behalf of the CMC and no evidence of indebtedness shall be issued in its name unless authorized by a unanimous vote of the CMC Members. In consideration of the in-kind contributions anticipated from the Fiscal Agent, the total financial contribution requirements of the Fiscal Agent's Member agency, under any applicable agreement, shall be credited by the sum of one thousand dollars (\$1,000.00) for the term of the permit in which that Member serves as the Fiscal Agent.

8. **PAYMENTS.** The Fiscal Agent will invoice each Member for their respective participation, minus the values of any CMC approved in-kind contributions at the start of each member entity's Fiscal Year. Each Member will pay such invoices to the Fiscal Agent within

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one hundred twenty (120) days of the date of the invoice. Failure to pay invoices within 120 days of the date of the invoice shall deem the Member not in good standing status until payment is made in full. Invoices will be sent to CMC Member entities listed in Attachment 1.

9. **PARTICIPATION.** It is intended that the CMC's operation and function described in this Agreement are ongoing, subject to continued support and authorized funding by each of the Members. Each Member has the option to not participate in this Agreement in the future by sending written notice to all the other participating Members twelve (12) months prior to the Member's proposed withdrawal. This time requirement is made so that all Member Co-permittees will have the opportunity to update their Storm Water Management Plans (SWMP) to reflect the change in status of the cooperative sampling effort and obtain EPA's concurrence on the amended SWMP. In such an event, the terminating Member shall not be entitled to return of any contribution(s) made under this Agreement, and this Agreement shall remain in full force and effect by and among the remaining Members.

10. **OUTSIDE CONTRIBUTIONS.** The CMC may accept contributions from outside funding sources, to be used to support the CMC's mission. Such contributions shall not establish any voting privileges on the CMC, which privileges are reserved exclusively to eligible Members. Outside contributions shall be supplementary to the Contribution Schedule, and no Member's contribution shall be reduced based on receipt of any outside contributions except upon adoption of an amended Contribution Schedule by the Members.

11. **CONTRACTING.** Each Member agrees that a variety of contractors (e.g. sample collection, laboratory, sample results interpretation, geotechnical, etc.) may need to be hired in accordance with the State Procurement Code, in advance of any contractor taking any actions on behalf of the CMC. No contractor shall be an employee of either the Fiscal Agent or any Member of this Agreement. Responsibilities of the contractor shall be included in any resulting contract and the contractor shall only be authorized to provide approved services determined to help Member Co-permittees comply with the provisions of the MS4 permit. For procurement purposes, the CMC will form a Selection Advisory Committee ("SAC"), composed of representatives from Members in good standing. Each Member in good standing will have one representative on the SAC for the RFP process. The SAC will rank proposals and recommend the top three respondents to the Fiscal Agent for selection through the Fiscal Agent's existing procurement selection process. Upon approval, the Fiscal Agent will negotiate an agreement with the selected contractor. The CMC will provide input on scope and fees; however, final negotiations and approval will be the Fiscal Agent's responsibility. If contractor services are obtained using the procurement process set forth in this paragraph, then, with concurrence of the other members of the CMC, funds collected as part of the CMC group may be used to pay that contractor directly for services associated with execution of the monitoring plan. Contractors will be agents of the Member issuing the contract. Other Members of the CMC shall not be bound by the terms of the contract but shall be deemed third party beneficiary hereunder.

12. **ALTERNATIVE CONTRACTING.** As an alternative contracting process, and in order to leverage existing and future contracts between Contractors and Members in good



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standing of the CMC, contracts may be used, with concurrence from all Members of the CMC, that have been issued by Members to perform elements of the monitoring program. If a contractor is used that has been procured by a Member in good standing of the CMC instead of the Fiscal Agent, then, with concurrence of the other Members of the CMC, an entity that is not the Fiscal Agent for the CMC may contract to have the services performed and upon successful completion of the services, submit an invoice, with no mark-up, to the Fiscal Agent for reimbursement. Reimbursement shall only be authorized for reasonable and necessary costs. All contractor's utilized for the purposes identified in this Agreement shall be procured in accordance with the State Procurement Code. Contractors will be agents of the Member issuing the contract. Other Members of the CMC shall not be bound by the terms of the contract.

13. **EVALUATION.** The Members agree that the Stormwater Monitoring contract is an ongoing program. The effectiveness of the Stormwater Monitoring contract, with regard to permit compliance, will be evaluated by the CMC prior to annual renewal(s) or request for proposals.

14. **LIMITATION ON SAMPLING ACTIVITIES.** The contractor's scope of services will be limited to the CMC-developed and EPA approved sampling plan and associated reporting. If, in the event of an exceedence during routine monitoring events, additional investigation is required by the EPA to identify the source of a potential contaminant, the CMC may expand monitoring activities to the degree necessary to locate the likely entry point of the potential contaminants. Once the likely entry point is identified, further investigation into the source of the potential contaminant will become the responsibility of the specific Co-permittee(s) having jurisdiction at the location where the likely entry occurred. The CMC shall have no responsibility, fiscal or otherwise, to investigate potential sources of contamination outside of the river or its affiliated Middle Rio Grande Conservancy District-owned water conveyances.

15. **PARTICIPATION AFFECTED.** If any situation arises which adversely affects any Member's participation in this Agreement, said Member will immediately, and in writing, notify the other Members. Any circumstance that materially affects this Agreement will be promptly and equitably resolved by all Members and if necessary, an amendment to this Agreement shall be executed.

16. **COMPLIANCE WITH GOVERNING LAWS.** The obligations of each Member under this Agreement shall be performed in compliance with all applicable laws, statues, and ordinances. Nothing herein is intended to constitute any agreement for the Members to perform any activity in violation of the Constitution or Laws of the State of New Mexico or the Ordinances of any Co-permittee that is a Member of this Agreement.

17. **SEVERABILITY.** If any clause or provision of this Agreement is illegal, invalid or unenforceable, under present or future laws effective during the term of this Agreement, then and in that event, it is the intention of the Members hereto that the remainder of this Agreement shall not be affected thereby.

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18. **NO RIGHTS CREATED.** It is specifically agreed among the Members that this Agreement does not, and is not intended to, create in the public, or any member thereof, any rights whatsoever, such as but not limited to, the rights of a third Party beneficiary, and does not authorize anyone not a Member of this Agreement to maintain a suit for wrongful death or any other claim whatsoever.

19. **LIABILITY.** As among the Members, each shall be solely responsible for any and all liability from personal injury, including death, or damage to property, arising from any negligent or intentional act or failure to act of the respective Member, its officials, agents, contractors or employees pursuant to this Agreement. Liabilities of each Member shall be subject to the immunities and limitation of the New Mexico Tort Claims Act, §§41-4-1, et seq., NMSA, 1978, and any amendments thereto. By entering into this Agreement, all public agencies and its "public employees" as defined in the New Mexico Tort Claims Act, do not waive sovereign immunity, do not waive any defense and/or do not waive any limitation of liability pursuant to law. No provision in this Agreement modifies and/or waives any provision of the New Mexico Tort Claims Act.

20. **AMENDMENT.** This Agreement may only be altered or amended upon written approval by a majority of the CMC Members.

21. **DATE OF EFFECTIVENESS.** Regardless of the date when this Agreement is signed by each Permittee, this agreement shall not become effective for each Permittee until that Permittee has received official notification from the Environmental Protection Agency that they have received coverage under NPDES General Permit No. NMR04A000.

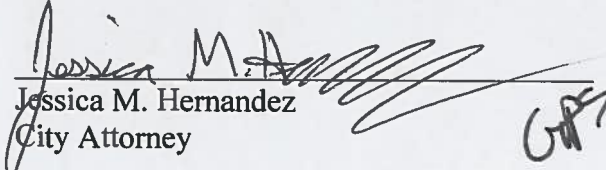
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EACH ENTITY WILL EXECUTE AGREEMENT INDIVIDUALLY. SIGNATURE PAGES  
WILL BE CONSOLIDATED INTO SINGLE DOCUMENT

**City of Albuquerque**

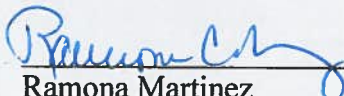
Approved as to Form

  
\_\_\_\_\_  
Jessica M. Hernandez  
City Attorney

6/15/16  
\_\_\_\_\_  
Date

Purchasing Approval

:

  
\_\_\_\_\_  
Ramona Martinez  
Chief Procurement Officer

6/16/16  
\_\_\_\_\_  
Date

Recommended By:

  
\_\_\_\_\_  
Melissa Lozoya  
Director, Department of Municipal Development

6/16/16  
\_\_\_\_\_  
Date

Approved By

  
\_\_\_\_\_  
Robert J. Perry  
Chief Administrative Officer

6/17/16  
\_\_\_\_\_  
Date

Date for of beginning of Fiscal Year: July 1

ATTACHMENT 1

CONTRIBUTION SCHEDULE

# ATTACHMENT 1

## Sampling Cooperative Cost Allocation Determination (CAD) Tool

28-Apr-16

| Number | Participant                          |      |    |               | ENTITY PAYMENT | FISCAL AGENT CREDIT (\$1k) |
|--------|--------------------------------------|------|----|---------------|----------------|----------------------------|
| 1      | City of Albuquerque                  |      |    | \$ 132,000.00 | \$45,600.00    |                            |
| 2      | AMAFCA                               | 1.38 | \$ | 45,574.50     | \$14,400.00    | \$(1,000.00)               |
| 3      | UNM                                  | 0.43 | \$ | 14,319.39     | \$13,600.00    |                            |
| 4      | NMDOT                                | 0.41 | \$ | 13,553.53     | \$3,900.00     |                            |
| 5      | Bernalillo County                    | 0.12 | \$ | 3,865.56      | \$19,600.00    |                            |
| 6      | Sandoval County                      | 0.59 | \$ | 19,549.95     | \$15,100.00    |                            |
| 7      | Village of Corrales                  | 0.46 | \$ | 15,094.20     | \$1,400.00     |                            |
| 8      | City of Rio Rancho                   | 0.04 | \$ | 1,393.20      | \$14,000.00    |                            |
| 9      | Los Ranchos de Albuquerque           | 0.42 | \$ | 13,997.46     | \$1,000.00     |                            |
| 10     | Town of Bernalillo                   | 0.02 | \$ | 705.79        | \$1,000.00     |                            |
| 11     | ESCAFCA                              | 0.03 | \$ | 903.81        | \$500.00       |                            |
| 12     | SSCAFCA                              | 0.01 | \$ | 338.88        | \$2,900.00     |                            |
|        | Ratio Check (Sum = Weighting Factor) | 0.08 | \$ | 2,703.72      | \$132,000.00   |                            |
|        |                                      | 4.00 |    |               |                |                            |

## APPENDIX O: DELEGATION OF AUTHORITY

| <b>No.</b> | <b>Description</b>                 |
|------------|------------------------------------|
| O-1        | COA Delegation of Authority Letter |

## **APPENDIX O-1**

# CITY OF ALBUQUERQUE

*Office of the Mayor/Chief Administrative Officer*



September 15, 2015

U.S. Environmental Protection Agency, Region 6  
Water Enforcement Branch (6EN-WC)  
1445 Ross Avenue Suite 1200  
Dallas, TX 75202-2733

**Re: Delegation of Signatory Authority for City of Albuquerque, National Pollutant Discharge Detection and Elimination System (NPDES) Permits**

To Whom It May Concern:

As the Chief Administrative Officer (CAO) of the City of Albuquerque (COA), in accordance with Federal Regulations 40 CFR 122.22(b), I hereby delegate the following positions to be Certifying Officials for the purposes of reporting under the COA's federal permits with the U.S. Environmental Protection Agency. These federal permits include: (1) General Permit NMR04A000 for its Municipal Separate Storm Sewer System (MS4); (2) Multi-Sector General Permit (MSGP) NMR05000 for its Transit and Solid Waste Facilities and; (3) Construction General Permit (CGP) for COA public projects.

PO Box 1293

**Chief Administrative Officer**

Albuquerque

- Annual Report for the Municipal Separate Storm Sewer System (MS4) Permit
- Requests for changes to the COA's Storm Water Management Program (SWMP)

New Mexico 87103

**Engineering Division Manager**

[www.cabq.gov](http://www.cabq.gov)

- Data Monitoring Reports (DMRs) for the MS4 Permit
- Certification of Storm Water Pollution Prevention Plans (SWPPPs) and Annual Reports for general facilities as needed under the MSGP
- Certification of eNOIs general facilities as needed under the MSGP

**Transit Director**

- Data Monitoring Reports (DMRs) for Transit facilities
- Certification of Storm Water Pollution Prevention Plans (SWPPPs) and Annual Reports under the MSGP for Transit facilities
- Certification of eNOIs under the MSGP for Transit facilities

**Solid Waste Director**

- Data Monitoring Reports (DMRs) for Solid Waste Facilities
- Certification of Storm Water Pollution Prevention Plans (SWPPPs) and Annual Reports under the MSGP for Solid Waste Facilities
- Certification of eNOIs under the MSGP

**Department of Municipal Development (DMD) Construction Management Managers**

- Certification of SWPPPs for DMD and Capital Implementation Program (CIP) projects under the CGP
- Certification of eNOIs for DMD and CIP projects under the CGP

**Parks & Recreation (Parks) Construction Managers, Supervisors, or Superintendents**

- Certification of SWPPPs for CIP and Parks projects under the CGP
- Certification of eNOIs for CIP and Parks projects under the CGP

**DMD and Parks Construction Managers, Supervisors, Superintendents, or Inspectors**

- Construction Site Inspection Forms for DMD, CIP, and Parks projects under the CGP

This letter designates positions of signatory authority rather than naming specific individuals who hold the designated positions. The COA has chosen this method of delegating signatory authority to ensure consistency in meeting permit requirements during staff changes.

I understand the role and responsibilities of the COA as they relate to the MS4 permit and have selected individuals in these positions because of their understanding and knowledge of the permit requirements, including stormwater certification for construction personnel.

Best Regards,



Robert J. Perry  
Chief Administrative Officer

Electronic cc: Wilfred Gallegos, P.E.; Director, DMD  
Melissa Lozoya, P.E.; Deputy Director, DMD  
Bryan Wolfe, P.E., Construction Services Division Manager, DMD  
David Harrison, P.E., Construction Services Section Manager, DMD  
Ron Romero, P.E., Engineering Division Manager, DMD  
Ralph Saiz, Construction Manager, Parks Construction Division, DMD  
Keith Reed, P.E., Deputy Director, Parks  
Bruce Rizzieri, Director, Transit  
John Soladay, Director, Solid Waste  
Jill Holbert, Associate Director, Solid Waste



## APPENDIX P: MS4 TECHNICAL ADVISORY GROUP

| No. | Description                                                                       |
|-----|-----------------------------------------------------------------------------------|
| P-1 | Middle Rio Grande Stormwater MS4 Technical Advisory Group memorandum of Agreement |

## **APPENDIX P-1**

## **Middle Rio Grande Stormwater MS4 Technical Advisory Group**

### **MEMORANDUM OF AGREEMENT**

#### **A COOPERATIVE AGREEMENT, CREATING THE MIDDLE RIO GRANDE MS4 TECHNICAL ADVISORY GROUP, IN SUPPORT OF COMPLIANCE EFFORTS FOR A STORMWATER DISCHARGE PERMITTING SYSTEM FOR THE MIDDLE RIO GRANDE VALLEY IN ACCORDANCE WITH THE FEDERAL CLEAN WATER ACT.**

**WHEREAS**, the United States Environmental Protection Agency (EPA), Region 6 regulates the discharge of stormwater from municipal separate storm sewer systems (MS4s) in New Mexico through the issuance of an MS4 permit for the Middle Rio Grande valley urbanized area under the authority of the National Pollutant Discharge Elimination System (NPDES) regulations (40CFR122); and

**WHEREAS**, the Middle Rio Grande area is comprised of many diverse local, state, federal and tribal entities, each with separate and distinct authority and responsibilities; and

**WHEREAS**, the Middle Rio Grande area entities potentially eligible for authorization under the proposed NPDES General Permit No. NMR04A000 (hereinafter “MS4 Permit”), and therefore are eligible to enter into this Memorandum of Agreement (hereinafter “Agreement”) in furtherance of the requirements of the MS4 Permit, are the City of Albuquerque, Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA), University of New Mexico, New Mexico Department of Transportation District 3, Bernalillo County, Sandoval County, Village of Corrales, City of Rio Rancho, Los Ranchos de Albuquerque, Kirtland Air Force Base, Town of Bernalillo, State Fairgrounds/Expo New Mexico, the Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA), the Eastern Sandoval County Arroyo Flood Control Authority (ESCAFCA), Sandia National Laboratories/Department of Energy, Pueblo of Sandia, Pueblo of Isleta, and Pueblo of Santa Ana (collectively “Stormwater Management Entities”); and

**WHEREAS**, the proposed MS4 Permit encourages cooperative efforts among separate local, state, federal and Tribal governments to reduce the amount of pollutants discharged with stormwater from the Middle Rio Grande urbanized area MS4s; and

**WHEREAS**, continued cooperation among the Stormwater Management Entities in the MS4 Permit offers an enhanced opportunity for each entity to remain aware of the requirements in the MS4 Permit and facilitate compliance with conditions of the permit;

#### **NOW, THEREFORE, BE IT AGREED THAT:**

1. The signatories to this Agreement (hereinafter collectively referred to as “Parties” and individually referred to as “Party”) support and encourage a cooperative commitment to assist one another with technical issues regarding compliance with the MS4 Permit and agree to form the Middle Rio Grande MS4 Technical Advisory Group (MS4TAG).

2. The purpose of the MS4TAG will be to exchange technical information regarding compliance with the MS4 Permit, exchange ideas among Parties regarding compliance efforts, and exchange information regarding illicit discharges detected within each Party's jurisdiction. The MS4TAG shall have no binding financial authority and shall be strictly advisory in nature.

3. Nothing in this Agreement shall be construed as obligating a Party to this agreement to expend funds for any purpose, and no Party shall be required to contribute any funds in order to participate in this Agreement. In the event the Parties determine that any joint expenditure of funds among multiple Parties becomes necessary in order to comply with the requirements of the MS4 Permit, a separate agreement shall be entered into between the affected Parties regarding any and all such expenditures at that time.

4. The term of this Agreement shall run from the date the MS4 Permit is issued by the EPA until the date the MS4 Permit is terminated or expires, whichever occurs first. This Agreement may be terminated in its entirety at any time upon the mutual agreement of all of the then-existing Parties to this Agreement. In the event any Party wishes to withdraw from this Agreement without terminating the other Parties' interests in this Agreement, withdrawal shall become effective upon ninety (90) days prior written notice to the other Parties. Withdrawal shall fully and completely terminate that Party's interest in and obligations under this Agreement. Following any Party's withdrawal, this Agreement shall continue in full force and effect as to all remaining Parties to the extent possible.

5. This Agreement does not address the "Public Education and Outreach" or "Cooperative Sampling" sections of the MS4 Permit. Any MS4TAG efforts regarding either of these sections of the MS4 Permit under this Agreement shall be strictly in furtherance of the spirit of cooperation intended among the Parties. Each Party acknowledges its obligations under the "Public Education and Outreach" and "Cooperative Sampling" sections of the MS4 Permit are separate and apart from its activities under this Agreement, and a separate agreement will be required for any collaboration among the Parties with respect to those permit requirements.

6. The Parties will appoint two (2) Co-Coordiators from among the Parties, one of which must be from a Party located within the Bernalillo County geographical area and one of which must be from a Party located within the Sandoval County geographical area. Appointment of a Co-Coordinator shall be by majority vote of the voting Parties, with only those Parties located in the county of Bernalillo voting on the Co-Coordinator from that area, and only those Parties located in the county of Sandoval voting on the Co-Coordinator from that area. Co-Coordiators must be appointed annually in each subsequent permit year, or earlier if the position becomes vacant for any reason. For the New Mexico Department of Transportation District 3, which operates stormwater management facilities in both counties, for the purposes of this section, they shall select one county affiliation in year one of the agreement and alternate affiliations in subsequent years of this Agreement. The Co-Coordiators will be expected to coordinate the Parties' efforts under this Agreement, including facilitating meetings of the MS4TAG at least monthly for the first year of the MS4 Permit. In years two through five of the permit, the frequency of meetings may be reduced to quarterly with additional meetings called as necessary to discuss issues regarding MS4 Permit compliance.

7. Each Party shall be entitled to one (1) vote on any action items.
8. This Agreement creates no obligations on behalf of any Party to any other Party to this Agreement, including for any requirements imposed or determinations made by EPA. The Parties acknowledge and agree that each shall at all times remain individually liable for full compliance with the requirements of the MS4 Permit, including EPA's determination regarding the implementation schedule.
9. This Agreement may be modified in writing at any time upon the mutual agreement of the Parties.
10. Parties can be added at any time during the life of this Agreement. A potential future Party's submittal of a signature page to the Co-Coordiators and approval by the Co-Coordiators shall add the Party to the Agreement.

MIDDLE RIO GRANDE STORMWATER  
MS4 TECHNICAL ADVISORY GROUP  
FINAL

10-07-13

Approved as to Form:

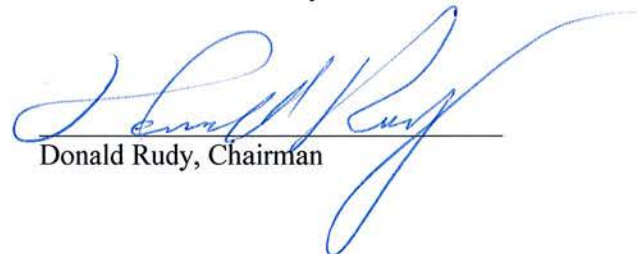


\_\_\_\_\_  
Bernard P. Metzgar  
SSCAFCA Attorney

Date: 10/04/13

Southern Sandoval County Arroyo  
Flood Control Authority

Date: 10/18/13



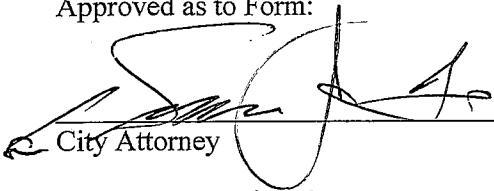
\_\_\_\_\_  
Donald Rudy, Chairman

MIDDLE RIO GRANDE STORMWATER  
MS4 TECHNICAL ADVISORY GROUP  
FINAL DRAFT

9-30-13

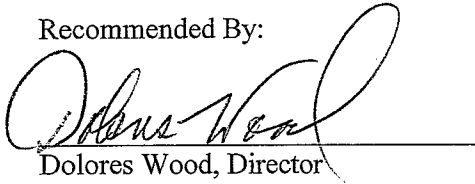
**City of Rio Rancho**

Approved as to Form:

  
\_\_\_\_\_  
City Attorney

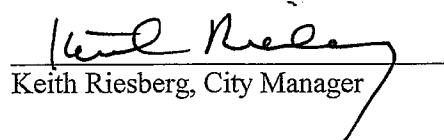
Date: 10/4/13

Recommended By:

  
\_\_\_\_\_  
Dolores Wood, Director

Date: 11.4.13

Approved By:

  
\_\_\_\_\_  
Keith Riesberg, City Manager

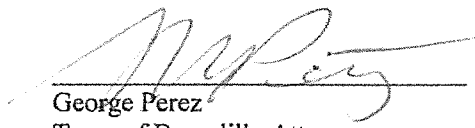
Date: 11/1/13

MIDDLE RIO GRANDE STORMWATER  
MS4 TECHNICAL ADVISORY GROUP  
FINAL DRAFT

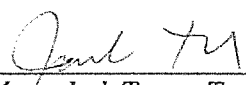
9-30-13

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Approved as to Form:

  
George Perez  
Town of Bernalillo Attorney

Date: 10/15/2013

  
Mayor Jack Torres, Town of Bernalillo


Date: 10/14/13

Attest:   
Ida Fierro, Town Clerk

Date: 10/14/13



**VILLAGE OF CORRALES**

By:  10.08.13  
Philip Gasteyer, Mayor Date

Attest:

 10-08-2013  
Juan Reyes, Village Clerk Date

*IN WITNESS WHEREOF*, the undersigned have caused this Agreement to be executed.

**Albuquerque Metropolitan Arroyo  
Flood Control Authority**

Date: 10/24/2013

  
\_\_\_\_\_  
Tim Eichenberg  
Chair of the Board of Directors

Attest:

  
\_\_\_\_\_  
Bruce Thomson  
Secretary/Treasurer

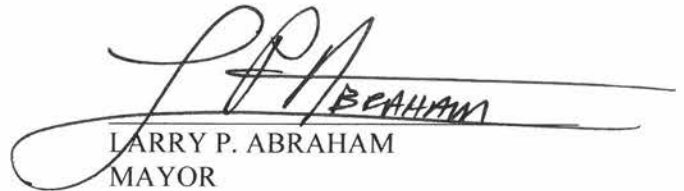
Date: 10/24/13

MIDDLE RIO GRANDE STORMWATER  
MS4 TECHNICAL ADVISORY GROUP  
FINAL

10-07-13

VILLAGE OF LOS RANCHOS DE ALBUQUERQUE

Date: November 14, 2013

  
LARRY P. ABRAHAM  
MAYOR

(SEAL)

  
STEHANIE DOMINGUEZ  
VILLAGE CLERK

MIDDLE RIO GRANDE STORMWATER  
MS4 TECHNICAL ADVISORY GROUP  
FINAL

10-07-13

Accepted on behalf of:

U.S. DEPARTMENT OF ENERGY  
NATIONAL NUCLEAR SECURITY ADMINISTRATION  
SANDIA FIELD OFFICE

By:



Geoffrey L. Beausoleil  
Manager

Date

14 NOV 2013

MIDDLE RIO GRANDE STORMWATER  
MS4 TECHNICAL ADVISORY GROUP  
FINAL

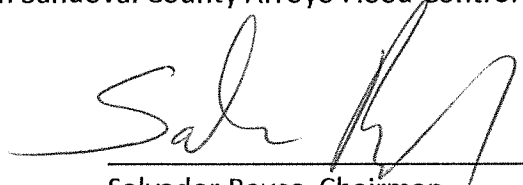
Approved as to Form:

  
\_\_\_\_\_  
Bernard P. Metzgar  
ESCAFCA Attorney

Date: 11/14/13

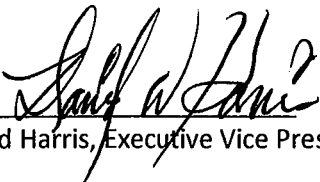
Eastern Sandoval County Arroyo Flood Control Authority

Date: NOV. 19, 2013

  
\_\_\_\_\_  
Salvador Reyes, Chairman

UNIVERSITY OF NEW MEXICO

Approved by:

 Date: 12/17/13  
David Harris, Executive Vice President

Recommended by:

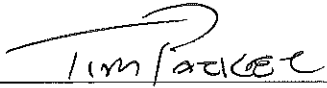
 Date: 12-10-13  
Carla P. Domenici, Director  
Safety and Risk Services Department

MIDDLE RIO GRANDE STORMWATER  
MS4 TECHNICAL ADVISORY GROUP  
FINAL

10-07-13

**New Mexico Department of Transportation**

Approved By:

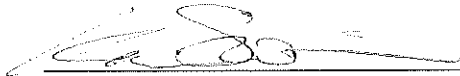


\_\_\_\_\_  
Timothy L. Parker, M.S., P.E.  
NMDOT District Three Engineer

Date: \_\_\_\_\_

12/22/13

Approved As To Form Only:



\_\_\_\_\_  
Ken Swain, Assistant General Counsel  
Office of the General Counsel

Date: \_\_\_\_\_

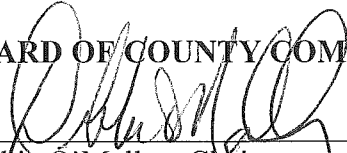
12/18/2013

BERNALILLO COUNTY

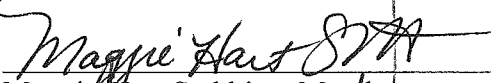
Motion to: Approve a Memorandum of Agreement (MOA) joining the County with other local entities participating in the Middle Rio Grande MS4 Technical Advisory Group (MS4TAG).

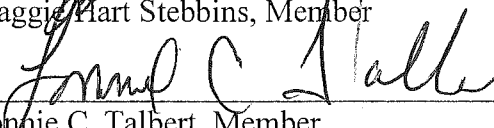
Approved this 28<sup>th</sup> day of January, 2014

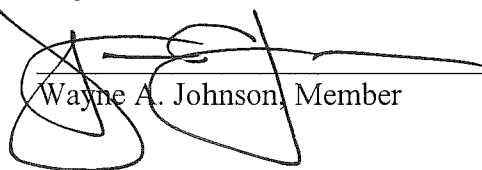
BOARD OF COUNTY COMMISSIONERS

  
Debbie O'Malley, Chair


  
Art De La Cruz, Vice Chair

  
Maggie Hart Stebbins, Member

  
Lonnie C. Talbert, Member

  
Wayne A. Johnson, Member

APPROVED AS TO FORM:

  
County Attorney

Date: 1/28/14

ATTEST:

  
Maggie Toulouse Oliver, County Clerk

Date: 1/28/14





MIDDLE RIO GRANDE STORMWATER  
MS4 TECHNICAL ADVISORY GROUP  
FINAL

10-07-13

Approved as to Form:

  
\_\_\_\_\_  
Patrick F. Trujillo  
Sandoval County Attorney

Date: 1/27/2014

Sandoval County

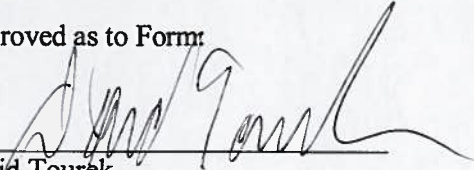
Date: 2/6/2014

  
\_\_\_\_\_  
Phillip Rios, County Manager

MIDDLE RIO GRANDE STORMWATER  
MS4 TECHNICAL ADVISORY GROUP  
FINAL

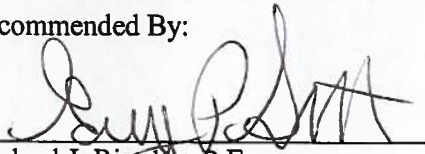
10-07-13

Approved as to Form:

  
\_\_\_\_\_  
David Tourek  
City Attorney

Date: 2/24/14

Recommended By:

  
\_\_\_\_\_  
Michael J. Riordan, P.E.  
Director, Department of Municipal Development

Date: 2/26/14

Approved By:

  
\_\_\_\_\_  
Robert J. Perry  
Chief Administrative Officer

Date: 3/4/14