



Overview of the Watershed-Based MS4 Stormwater Permit

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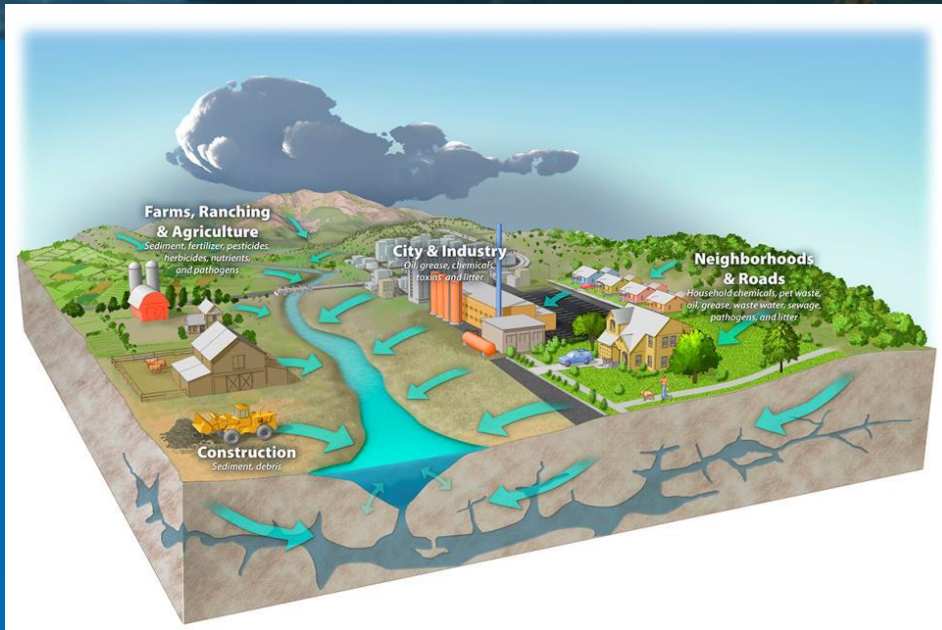
Watersheds: Point Sources



Point sources come from a single discrete source and can include wastewater treatment facilities and industrial sources.



Watersheds: Non-Point Sources



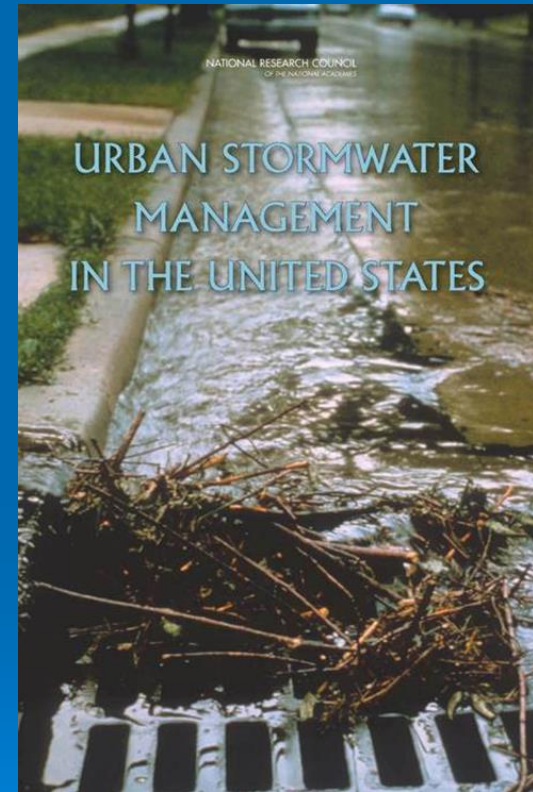
Non-point sources of pollution in stormwater include:

- Fertilizers and pesticides from agricultural and residential areas
- Oil and grease and other chemicals from urban runoff, energy production
- Sediment from construction sites, agriculture, eroding stream banks
- Nutrients and bacteria from pet waste, wildlife, sewer line leaks, wastewater spills, septic systems



Stormwater Management

- ◆ National Academy of Sciences/National Research Council commissioned by USEPA in 2006
- ◆ *Urban Stormwater Management in the United States* issued in 2009; problems cited in the report:
 - ◆ Information on BMP longevity and performance
 - ◆ Varying requirements on monitoring
 - ◆ Lack of resources
 - ◆ Land use/water quality functions decoupled
 - ◆ Financial support



Watershed-based Permitting

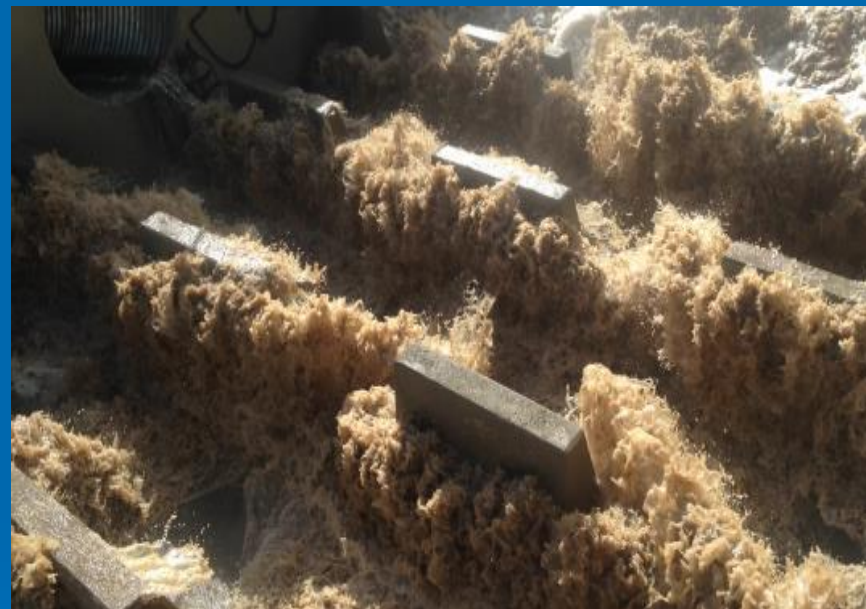
Why watershed-based permitting?

- ◆ Addresses all stressors within the hydrologically-defined drainage basin (watershed)
- ◆ More environmentally effective results
- ◆ Reduced cost of improving the nation's waters
- ◆ More effective implementation of watershed-based plans and TMDLs



Middle Rio Grande Watershed-based MS4 Permit

- ◆ New Mexico is one of four states that does not have primacy of the NPDES program.
- ◆ USEPA Region 6 issues all NPDES permits and conducts all NPDES-related enforcement in New Mexico.
- ◆ The New Mexico watershed-based permit for the Middle Rio Grande MS4s (NMR04A000) was issued in December 2014.



Watershed-based Permitting Pilot Projects

- ◆ In 2010, USEPA Headquarters designated:
 - ◆ Ramsey Washington Watershed District, Minnesota
1 entity, established in 1975 under the Minnesota Watershed District Act
 - ◆ Milwaukee Metro Watershed, Wisconsin
1 entity, created in 1982 by the Wisconsin legislature
 - ◆ Middle Rio Grande, New Mexico
18 entities, no oversight governmental body
- ◆ Draft small system MS4 permit for New Mexico was published in 2015



Middle Rio Grande Watershed-based MS4 Permit

- ◆ Class A Permittees:
 - ◆ City of Albuquerque
 - ◆ Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA)
 - ◆ University of New Mexico (UNM)
 - ◆ New Mexico Department of Transportation (NMDOT), District 3



Middle Rio Grande Watershed-based MS4 Permit

◆ Class B Permittees:

- ◆ Bernalillo County
- ◆ Sandoval County
- ◆ Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA)
- ◆ City of Rio Rancho
- ◆ Village of Corrales
- ◆ Los Ranchos de Albuquerque
- ◆ Kirtland Air Force Base (KAFB)
- ◆ Town of Bernalillo
- ◆ State Fair Grounds/Expo NM
- ◆ NMDOT District 3



Middle Rio Grande Watershed-based MS4 Permit

◆ Class C Permittees:

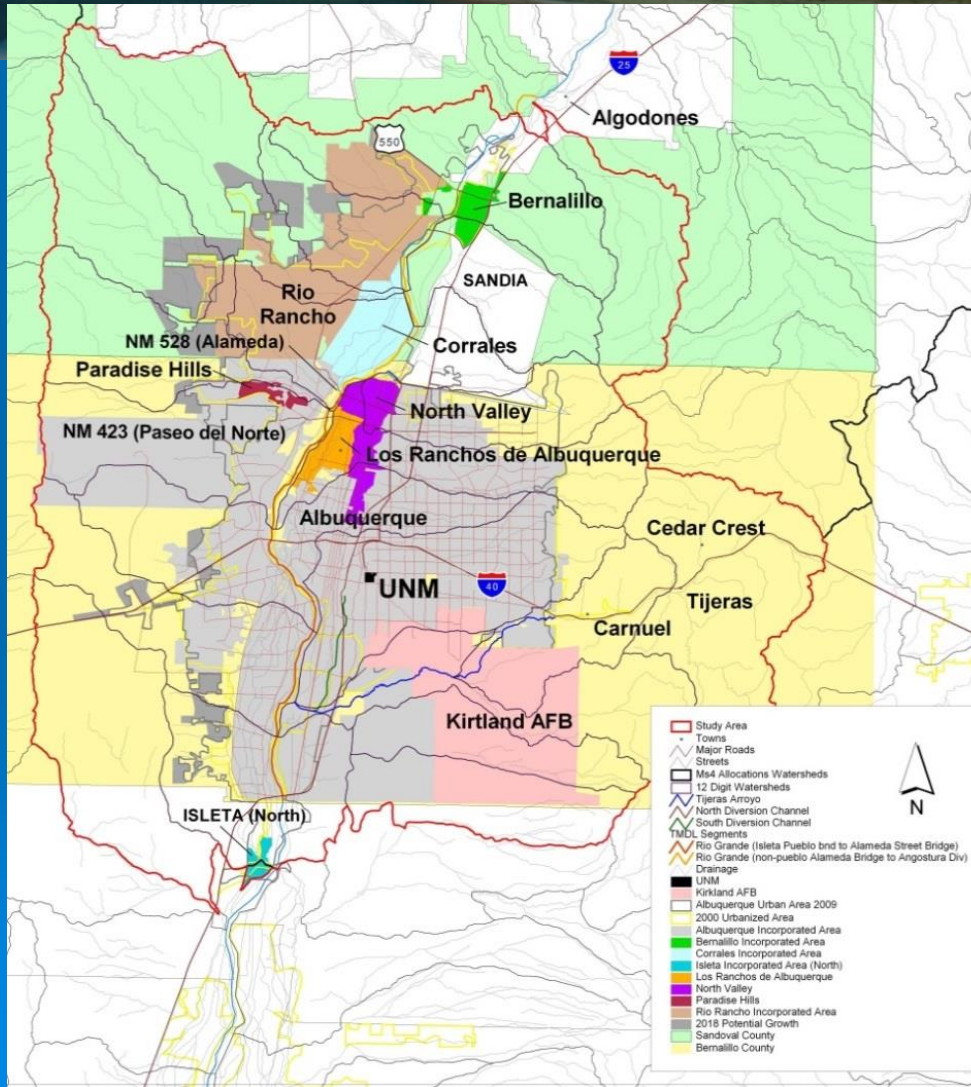
- ◆ Eastern Sandoval County Arroyo Flood Control Authority
- ◆ Sandia Labs and the Department of Energy (DOE)

◆ Class D Permittees:

- ◆ Pueblo of Sandia
- ◆ Pueblo of Isleta
- ◆ Pueblo of Santa Ana



Middle Rio Grande Watershed-based MS4 Permit



Middle Rio Grande Watershed-based MS4 Permit

- ◆ General Permit Requirements:
 - ◆ Special Conditions
 - ◆ Compliance with water quality standards
 - ◆ Discharges to impaired waters with and without TMDLs
 - ◆ ESA requirements for addressing dissolved oxygen and sediment pollutant loads
 - ◆ Stormwater Management Program (SWMP)
 - ◆ Control Measures
 - ◆ Monitoring and Assessment



Middle Rio Grande Watershed-based MS4 Permit

- ◆ SWMP Control Measures:
 - ◆ Construction site stormwater runoff control
 - ◆ Post-construction stormwater management in new development and redevelopment
 - ◆ Pollution prevention/good housekeeping
 - ◆ Industrial and high risk runoff (COA and AMAFCA only)
 - ◆ Illicit discharges and improper disposal
 - ◆ Control of floatables discharges
 - ◆ Public education and outreach
 - ◆ Public involvement and participation



MRG Watershed-based MS4 Permit Control Measures

- ◆ Construction Site Stormwater Runoff Control
 - ◆ The permittee must develop, revise, implement, and enforce a program to reduce pollutants in any stormwater runoff to the MS4 from construction activities that result from all construction activities with land disturbances equal to or greater than one acre, including sites which disturb less than one acre but are part of a larger common plan of development.
 - ◆ The permittee must develop 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.
 - ◆ Evaluate site plans for construction projects for opportunities to incorporate 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.



MRG Watershed-based MS4 Permit Control Measures

- ◆ Post-Construction Stormwater Management in New Development and Redevelopment
 - ◆ The permittee must develop, revise, implement, and enforce a program to reduce pollutants in any stormwater runoff to the MS4 from new development and redevelopment projects with land disturbances equal to or greater than one acre, including sites which disturb less than one acre but are part of a larger common plan of development.
 - ◆ The permittee must implement and enforce an ordinance or other regulatory mechanism to address post-construction runoff from new 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 (0.65") associated with new development sites and 80th percentile storm event discharge volume (0.48") associated with redevelopment sites.



MRG Watershed-based MS4 Permit Control Measures

- ◆ Post-Construction Stormwater Management in New Development and Redevelopment , cont.
 - ◆ Ensure implementation of post-construction structural controls
 - ◆ Develop procedures for:
 - ◆ Education program for project developers
 - ◆ Site inspections and enforcement for O&M of BMPs
 - ◆ Assess all existing codes, ordinances, planning documents and other applicable regulations, for impediments to the use of GI/LID/ Sustainable practices.
 - ◆ Implement stormwater management practices that protect and enhance groundwater recharge as allowed under the applicable water rights laws.



MRG Watershed-based MS4 Permit Control Measures

- ◆ Illicit Discharges and Improper Disposal
 - ◆ The permittee must develop, revise, implement, and enforce a program to detect and eliminate illicit discharges entering the MS4.
 - ◆ The permittee must develop an ordinance or other regulatory mechanism to prohibit non-stormwater discharges into the MS4 and implement appropriate enforcement procedures and actions.
 - ◆ Develop and implement an Illicit Discharge Detection and Elimination (IDDE) plan.
 - ◆ Develop an education program to promote, publicize, and facilitate public reporting of illicit connections or discharges, distribution of outreach materials, and establish a hotline for reporting illicit discharges.
 - ◆ Investigate suspected significant/severe illicit discharges, review complaint records and develop a targeted source reduction program.
 - ◆ Screen the entire jurisdiction once every 5 years and high priority areas at least once per year.



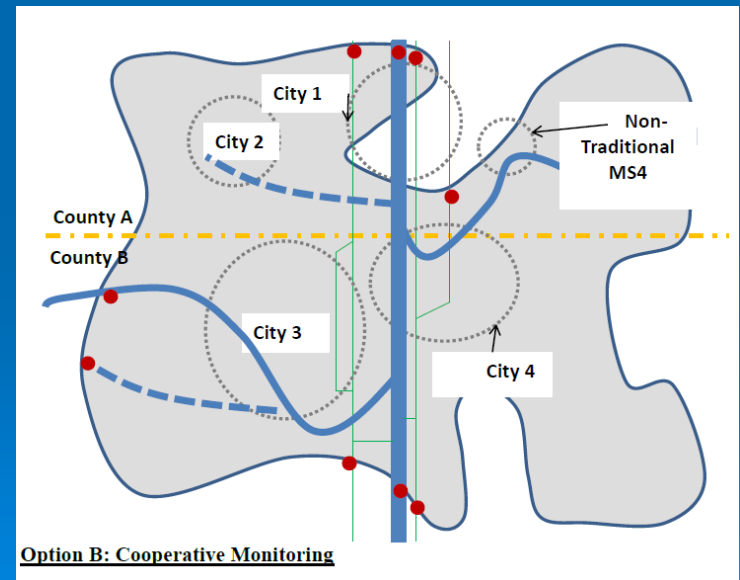
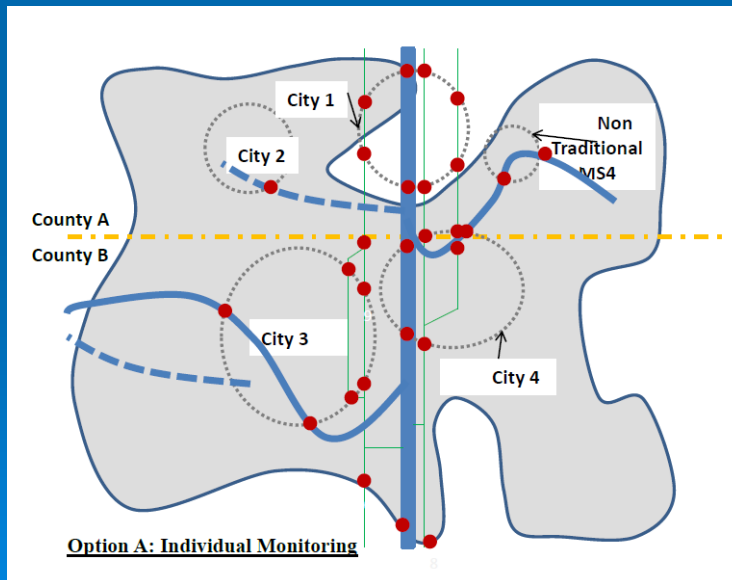
MRG Watershed-based MS4 Permit Control Measures

- ◆ Control of Floatables Discharges
 - ◆ develop, update, and implement a program to address and control floatables in discharges into the MS4.
 - ◆ Estimate annual volume of floatables and trash removed and characterize the floatable type.
- ◆ Public Education and Outreach
 - ◆ Develop, revise, implement, and maintain an education and outreach program.
- ◆ Public Involvement and Participation
 - ◆ Develop, implement, and maintain a public involvement and participation plan.



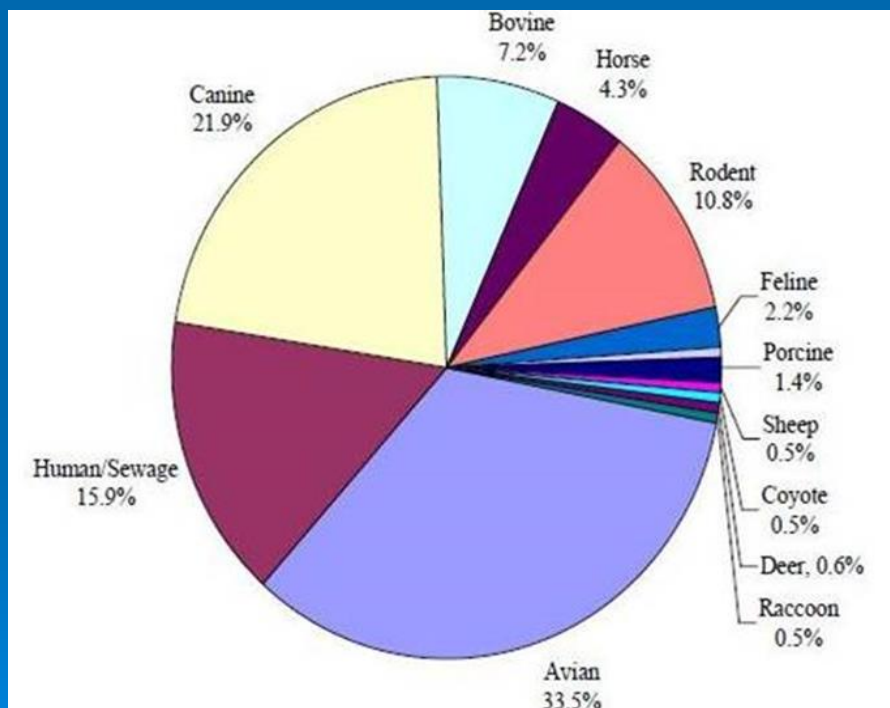
Middle Rio Grande Watershed-Based Permit

- ◆ Wet weather monitoring
 - ◆ Significant permit incentive for MS4s to cooperate on monitoring



Middle Rio Grande Watershed-Based Permit

◆ TMDL for E. coli



Impairments per the 303(d) list include:

- ◆ DO
- ◆ Gross alpha
- ◆ PCBs
- ◆ Temperature



Middle Rio Grande Watershed-Based Permit

- ◆ Wet weather monitoring
 - ◆ Other permit-required parameters that must be monitored for:
 - ◆ TSS
 - ◆ TDS
 - ◆ COD
 - ◆ BOD5
 - ◆ Oil and grease
 - ◆ Additional parameters from previous monitoring whose mean values are above a water quality standard (Phase 1 permittees only)
 - Phosphorus
 - Phosphorus, total
 - Ammonia, total
 - TKN
 - pH



Middle Rio Grande Watershed-based MS4 Permit

◆ Assessment

- ◆ Annual report due December 1st each year and includes:
 - ◆ Status of SWMP implementation
 - ◆ Any revisions to the SWMP
 - ◆ Performance assessment as related to measurable goals set in SWMP
 - ◆ Summary of monitoring data
 - ◆ Annual expenditures (Class A permittees only)



Middle Rio Grande Watershed-Based Permit

Cooperation

- ◆ Natural collaborations
 - ◆ Cities/towns/villages, counties, and flood control authorities/NMDOT occupy same geographical area.
 - ◆ Phase 1 (Class A) Permittees.
 - ◆ Pre-existing collaborative efforts from previous permits.



Middle Rio Grande Watershed-Based Permit

- ♦ Exchange of information between entities - the Technical Advisory Group (TAG)
 - ♦ An agreement where the participating entities cooperate and exchange information
 - ♦ Complexity
 - ♦ No money could be required
 - ♦ Needed to be a non-binding obligation
 - ♦ Allows entities to be part of the group and exchange information
 - ♦ Fourteen signatories to the TAG.
 - ♦ All levels of government represented (except Tribal).
 - ♦ TAG started meeting in early 2014 and monthly since the permit was issued.



Middle Rio Grande Watershed-Based Permit

- ◆ Stormwater Quality Team (SWQT)
 - ◆ Prior to the Watershed Based (WSB) Permit, several of the MS4s formed a collaboration for outreach and education, the SWQT.
 - ◆ The SWQT continued to operate and opened up its membership to other MS4s covered in the WSB Permit.
 - ◆ Requires financial contribution for each member.
 - ◆ Provides education and outreach on permit required topics.
 - ◆ Currently there are 9 members of the SWQT, membership is open.



Middle Rio Grande Watershed-Based Permit

- ◆ The TAG formed a working group, the Compliance Monitoring Cooperative (CMC), to develop a monitoring plan.
 - ◆ 12 MS4s are currently cooperating on wet weather monitoring.
 - ◆ The TAG worked with NMED and EPA to develop the wet weather monitoring plan.

