



# MS4 WATERSHED BASED PERMITTING PILOT MIDDLE RIO GRANDE, NEW MEXICO



Nelly Smith  
Environmental Engineer  
EPA Region 6

Sarah Holcomb  
Environmental Scientist  
New Mexico Environment Department



# NELLY



# SARAH



**“All calculations based on  
experience elsewhere fail  
in New Mexico.”**

**Lew Wallace, Territorial Governor  
of New Mexico (1827-1905)**

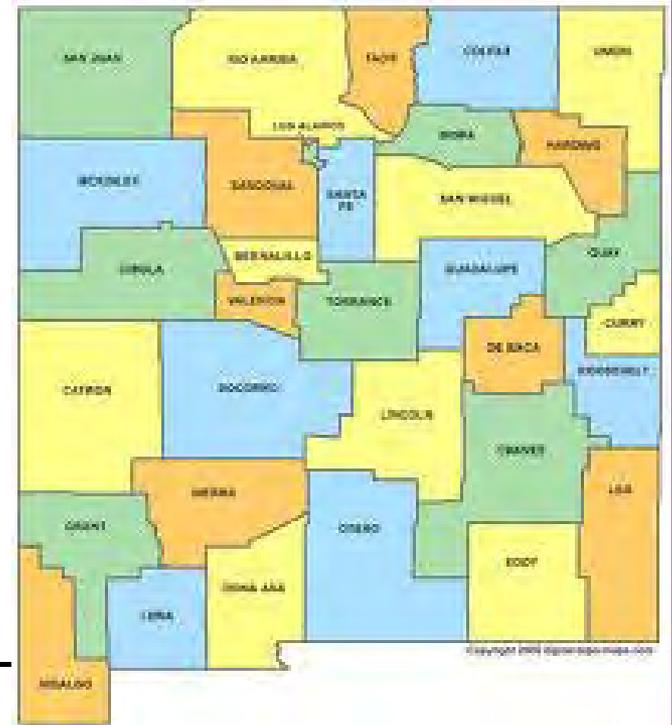


# THE LAND OF ENCHANTMENT



# STATS ABOUT MRG

- Rainfall - 9.47 inches/year
  - Monsoon - July-October
- Population - 794,125 people in Bernalillo/Sandoval Counties
- Albuquerque was founded in 1706 -  
At an elevation of 5312 feet,  
Albuquerque is home to about a  
third of the state's population, and  
is 181 square miles.
- New Mexico is one of 4 states  
without NPDES Primacy



# CURRENT ALBUQUERQUE AREA MS4S

- One Phase 1 permit -
  - City of Albuquerque
  - NM Dept of Transportation
  - University of New Mexico
  - AMAFCA (Albuquerque Metro Arroyo Flood Control Authority)
- Nine Phase 2 entities -
  - Kirtland Air Force Base
  - NM Dept. of Transportation
  - City of Rio Rancho
  - Village of Los Ranchos de Albuquerque
  - Village of Corrales
  - Town of Bernalillo
  - Bernalillo County
  - Sandoval County
  - SSCAFCA (Southern Sandoval County Arroyo Flood Control Authority)



# CURRENT MS4 STATUS

- **Albuquerque Phase 1:**
  - 1<sup>st</sup> permit was issued in December 1, 2003
  - Reissuance proposed in June 2010 (working on response to comments). Permit designated to allow transition to the watershed-based MS4 permit
  - 2009 EPA Audit
- **Albuquerque Phase 2s:**
  - Started permitting process in 2007
  - KAFB received coverage immediately
  - NMDOT, Rio Rancho, Los Ranchos, Bernalillo County, and SSCAFCA received their coverage in May 2011.
  - Need to reissue GP in June 2012, will use watershed-based MS4 permit pilot



# MARCH 2010...

## *In a galaxy far, far away...*

- The MS4 permittees in the MRG have a conference call with EPA.
- EPA Region 6 announces that they've nominated and received HQ approval for the area for a permitting pilot.

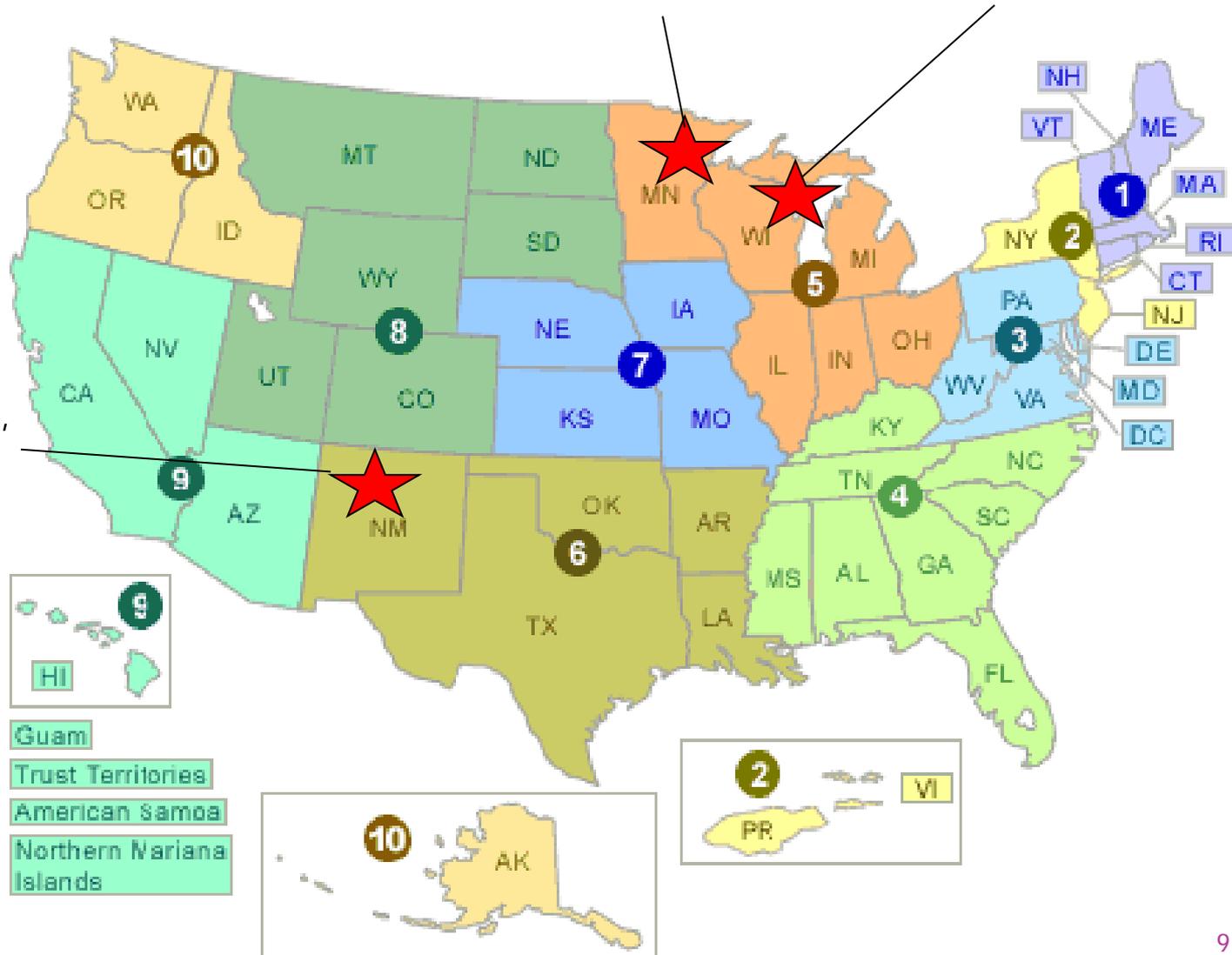


- After some initial discussions, the group and its purpose slowly started to take shape.
- Why the MRG?
  - Existing Interagency Forum (MRG Water Quality Workgroup has met since 1999.)
  - Existing Watershed Restoration Action Strategy (WRAS)
  - Challenging political landscape - Semi arid region
  - TMDLs/303d listed pollutants

# EPA WATERSHED-BASED MS4 PILOTS

Ramsey Washington Watershed District

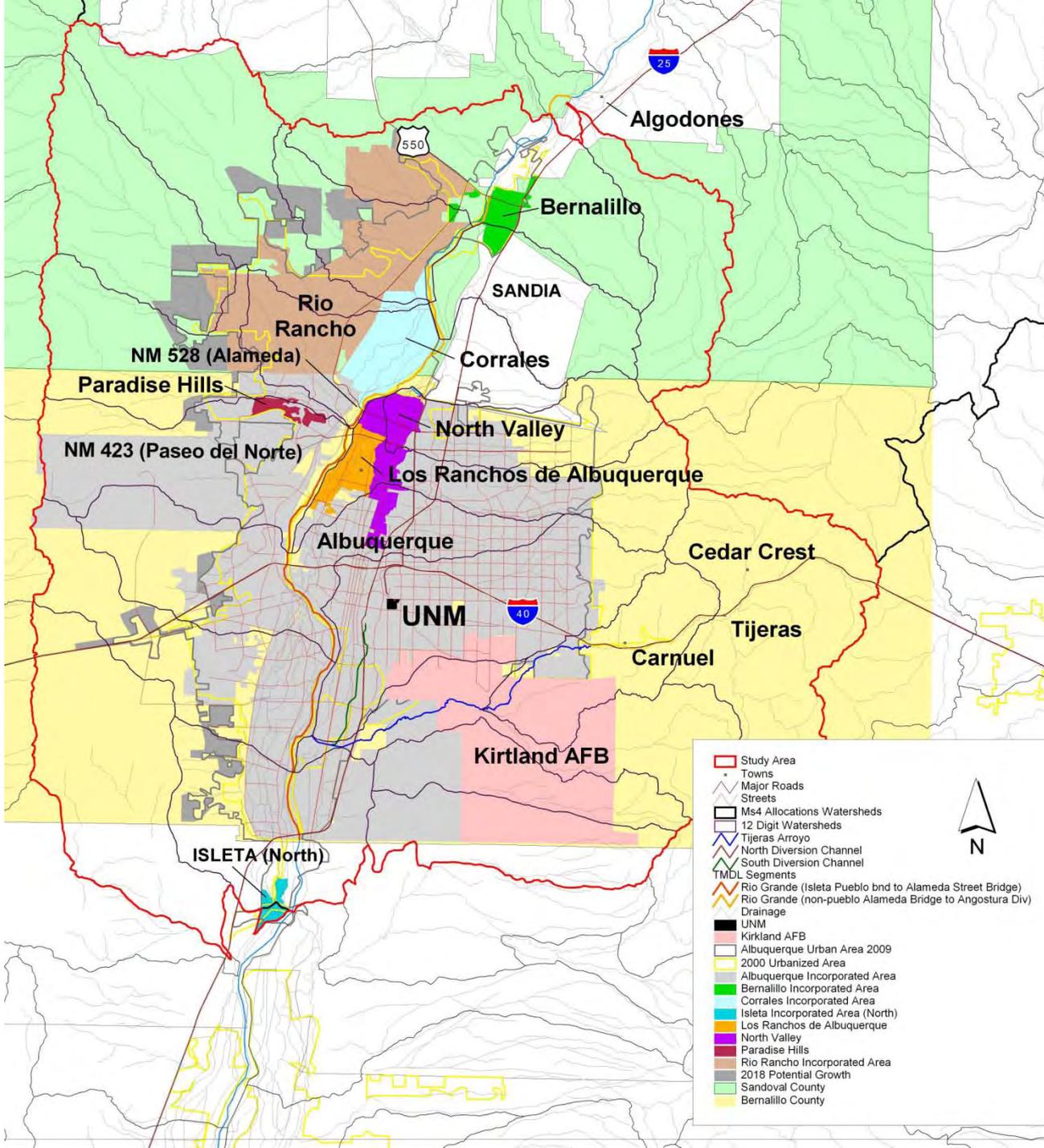
Milwaukee Metro Watershed



# PILOT OBJECTIVES

- Incorporate important core documents
  - 2010 TMDL for E. coli and planned future TMDLs
  - WRAS developed by Ciudad SWCD, 2008
- Include unregulated areas outside the urbanized area boundary
  - Estimate stormwater contributions
  - Use EPA Residual Designation Authority, if necessary
- Implement arid-appropriate GI/LID approaches
  - Address Water Rights issues with the State Engineer
- Institute a comprehensive, cooperative monitoring program
- Address other concerns:
  - Discharges to drinking water supply areas
  - Discharges to Tribal waters
  - Endangered and threatened species/habitats





**Boundaries**

**12 digit HUCs**

**Projected UA  
out to 2018**

**EPA's Residual  
Designation  
Authority**

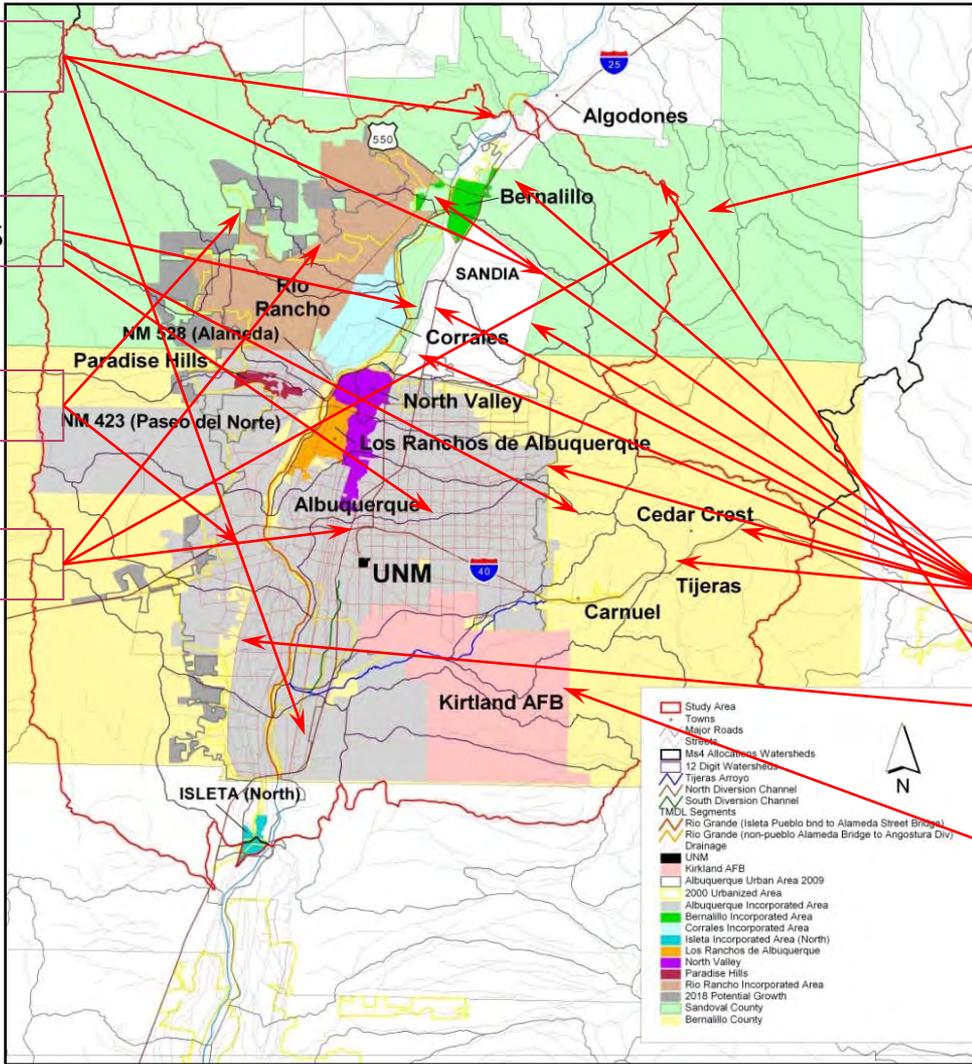
**MRGCD**

3 Tribal Entities

Urbanized Areas

2 Counties

3 Flood Control



Watershed Boundary

Watershed bounded by Angostura diversion, Isleta Pueblo, Sandia Mountains, and Rio Puerco Drainage.

8 Municipalities

Rural Areas

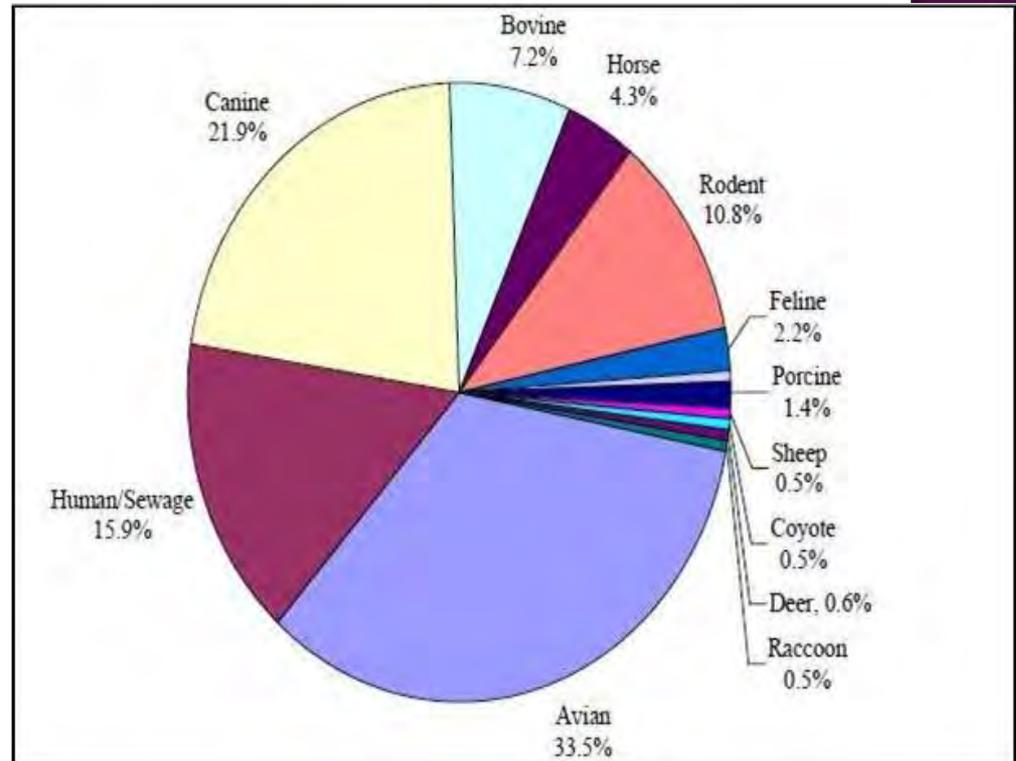
Federal Facilities

# Permittees

- City of Albuquerque
- City of Rio Rancho
- Bernalillo County
- Sandoval County
- UNM Dept. of Safety, Health and Environmental Affairs
- AMAFCA (ABQ Metro Arroyo Flood Control Authority)
- SSCAFCA (Southern Sandoval County Arroyo Flood Control Authority)
- ESCAFCA (East Sandoval County Arroyo Flood Control Authority)
- NM Department of Transportation District III
- Town of Bernalillo
- Village of Tijeras
- Village of Carnuel (Bern Co) \*
- Los Ranchos de Albuquerque
- Village of Corrales
- Village of Placitas (Sandoval County) \*
- Pueblo of Sandia \*
- Pueblo of Isleta \*
- Pueblo of Santa Ana \*
- State Fairgrounds/EXPO NM
- Sandia National Labs/USDOE
- Kirtland AFB
- [MRGCD]

# TMDL

- MRG fecal coliform TMDL (2002)
- MRG Microbial Source Tracking Study (2005)
- WQS changed in 2005
- MRG *E. coli* TMDL (2010)
- 2013 TMDL for DO and PCBs?



**Scoop the Poop**  
Keep the **RIO** Grand

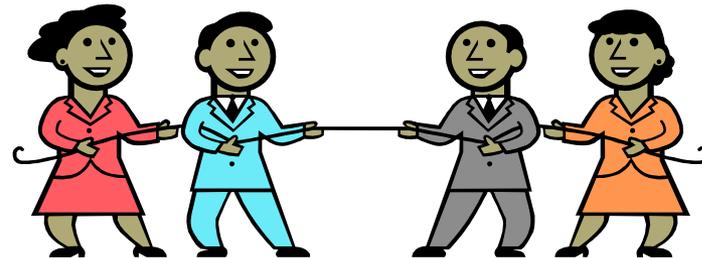
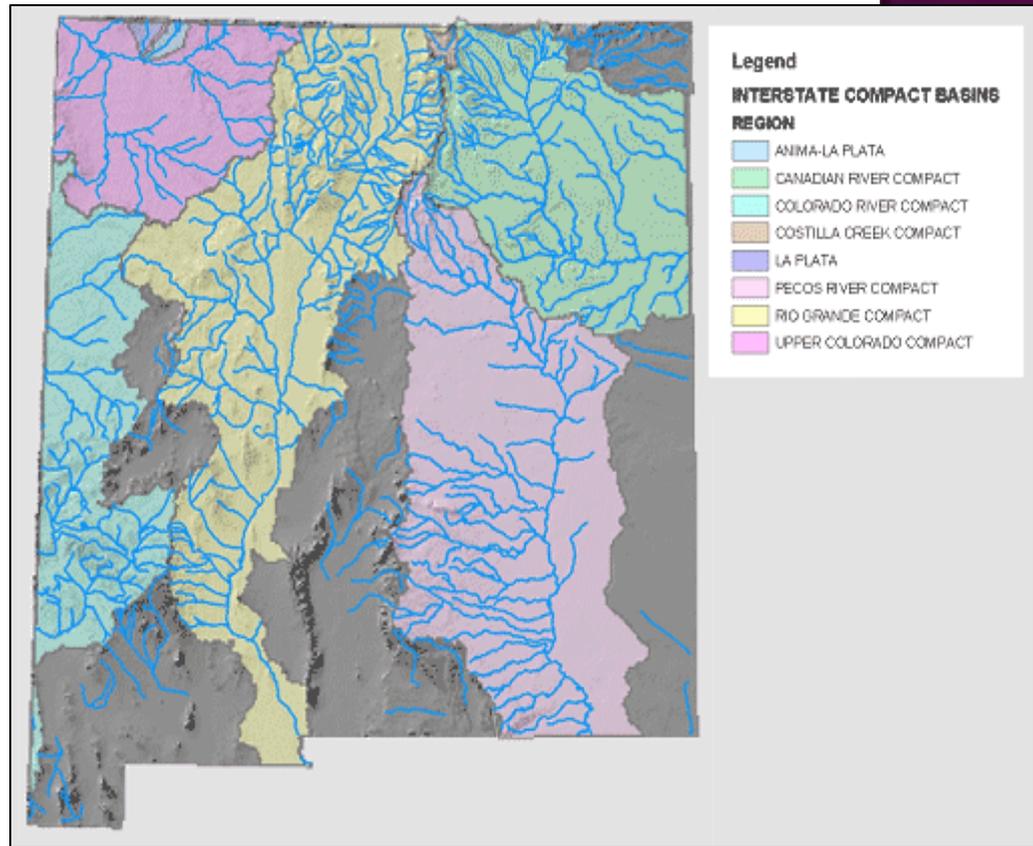


**ABQ area MRG also impaired for temperature, PCBs in fish tissue, and dissolved oxygen; Nutrients in Las Huertas Creek and Tijeras Arroyo.**



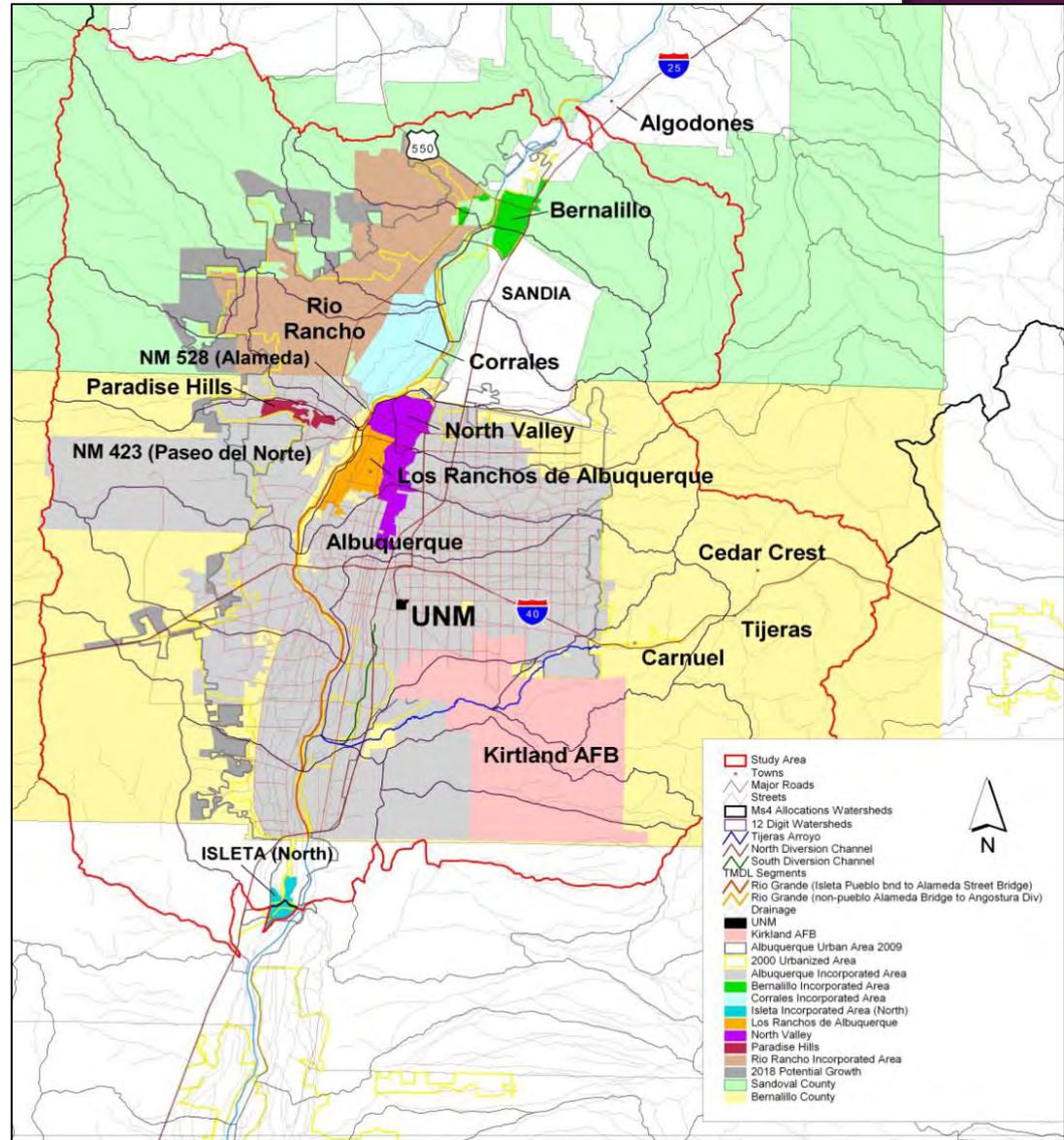
# WATER RIGHTS

- Compact Obligations – 8 interstate compacts NM must comply with, plus Mexico.
- Surface runoff is part of NM's water supply.
- All surface water in NM is fully appropriated.
- Impoundments
  - 19.26.2.15 NMAC
- Rainwater harvesting



# UNREGULATED AREAS

- Baseline Study
- Determine 303(d) pollutants coming into the watershed



# Other Issues

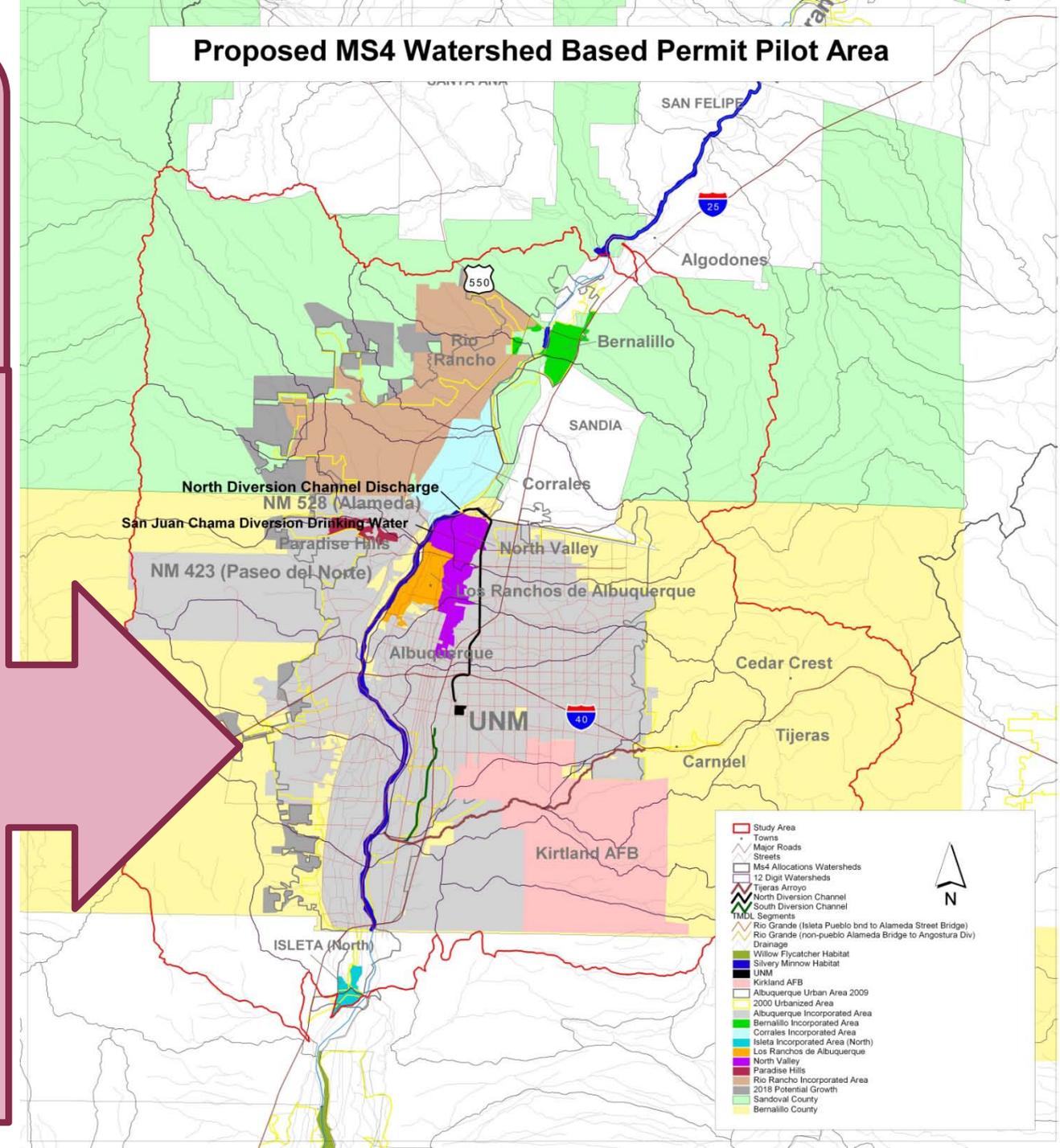
Drinking water

Endangered Species

Tribal waters

Aquifer ReInjection

## Proposed MS4 Watershed Based Permit Pilot Area



# MORE ISSUES:

## ◎ COOPERATION!

- Funding agreements
- Sampling/Baseline Study
- Green Infrastructure/Water Rights
- Enforcement/Ordinances
- Stormwater Utility?
- Equity amongst permittees
- Storm Water Management Program (SWMP)



# MRG STAKEHOLDER PROCESS

- Collaboration between permittees and EPA to write an MS4 permit tailored to MRG
- Funding for permit planning effort
  - No federal funding to date
  - Stakeholders' representatives paid by participating entities
  - CWA 604(b) grant acquired by Ciudad SWCD for meeting facilitation services.
- MRG WBP Permittees' Stakeholder Group
  - 20 local, state, federal and tribal entities
  - Several facilitated planning meetings over 18 months
  - Several face to face meetings with EPA R6 Permits.
  - 14 presentations given to city councils, county commissions, etc. by NMED

# OUTCOMES

- Defined watershed boundaries
- Drafted letter of agency inclusion for EPA signatures
- Agreed on watershed “menu-based” permit format
- Agreed on basis for equitable cost sharing through estimated pollutant impact
  - Drainage area
  - Impervious percentage (or modeled peak discharge)
  - Population density

# PERMIT

❖ Alternatives for establishing permittee sectors ("categories")

➤ **Capacity-based sectors**

- $Capacity \cong MS4 \text{ experience} \times \text{Rulemaking authority}$
- EPA Region 6 determines capacity ratings
- Any jurisdiction can negotiate capacity rating with EPA Region 6

Capacity	MS4 experience	Rulemaking authority	Examples
High	High	Yes	COA, KAFB
Mod-High	Moderate	Yes	BC, RR, Corrales
Mod-Low	Low	Yes	ESCAFCA, Tijeras, MRGCD, Tribes
Low	Low	No	NMDOT, UNM, SNL

➤ **Impact-based sectors**

- $Impact \cong \text{Discharge area} \times \text{Impervious percentage} \times \text{Population density (with LID/GI adjustment?)}$
- Factors derived from GIS and census data
- Stakeholders and EPA Region 6 agree on modeling approach
- Final sector definitions based on numerical impact ratings (task for CRADA?)

Impact	Discharge area	Impervious percent	Population density	Example
High	Large	High	High	COA
Mod-High	Large	Low	Low	Sandoval Cty
	Small	High	High	SNL
Mod-Low	Small	Low	High	Corrales
	Small	High	High	Bernalillo
Low	Small	Low	Low	Tijeras

❖ Possible Sector-Based SWMP Requirements

Rating	Compliance Strategies			Monitoring		
	Basic	Enhanced	Advanced	River	Outfalls	Industries
High	✓	✓	✓	✓	✓	✓
Mod-High	✓	✓		✓	✓	
Mod-Low	✓	✓		✓		
Low	✓			✓		

➤ **Compliance strategies examples**

- **Basic:** Small resource commitment
  - 6 minimum measures only
  - 1-3 [?] strategies per measure (defined in permit)
- **Enhanced:** Moderate resource commitment
  - "Basic" + 1-3 [?] additional strategies per measure
  - Additional strategies chosen from menu (or proposed to/approved by EPA Regions 6)
- **Advanced:** High resource commitment
  - "Enhanced" + 1-3 [?] additional strategies per measure
  - Additional strategies chosen from menu (or proposed to/approved by EPA Regions 6)
  - Additional measures (defined in permit) and strategies (e.g. industry outreach program)

○ Issuance Goal: July 2012

○ General Permit

- Each jurisdiction submits an NOI
- Joint SWMP (Or two? Or more?)
- Joint and Individual Actions on 6 Minimum Measures
- Monitoring Requirements most likely carried over from traditional Phase 1/Phase 2.

# NEXT STEPS

- ◉ Determine nature of involvement for Tribes, MRGCD
  - EPA R6 consultations/residual designation authority
  - November 2011-July 2012
- ◉ Propose compliance and monitoring strategies for basic, enhanced and advanced categories
  - Stakeholders' facilitated consensus
  - November 2011-July 2012
- ◉ Develop equitable cost-sharing algorithm
  - February - August 2012
- ◉ UNM Grad Student Professional Project
  - What will it take to develop an MOU?
  - November 2011 - April 2012

# Questions?



Nelly Smith  
214-665-7109  
[smith.nelly@epa.gov](mailto:smith.nelly@epa.gov)

Sarah Holcomb  
505-222-9587  
[sarah.holcomb@state.nm.us](mailto:sarah.holcomb@state.nm.us)