

# Congresswoman Michelle Lujan Grisham's Water Innovation Summit Rio Rancho's Water Plan

Larry Webb, Utilities Division Manager  
City of Rio Rancho, NM  
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# Discussion

- History of Rio Rancho Development
- Water Management
- Wastewater Reclamation
- Reuse Applications
- Future Directions

# How We Arrived Here

## Our Start

- Amrep Development 1965
  - 90,000 Acres
  - Subdivided into Residential and Estate Lots
- City incorporated in 1981
  - Population of 10,000
- Industrial Client 1980
  - 25 Employees that Grew to over 5,000
  - 4 MGD City Water 1996
- Public Utility created in 1995
- Current Population est. 92,000

# How We Arrived Here

## Assessment of Resources and Standards

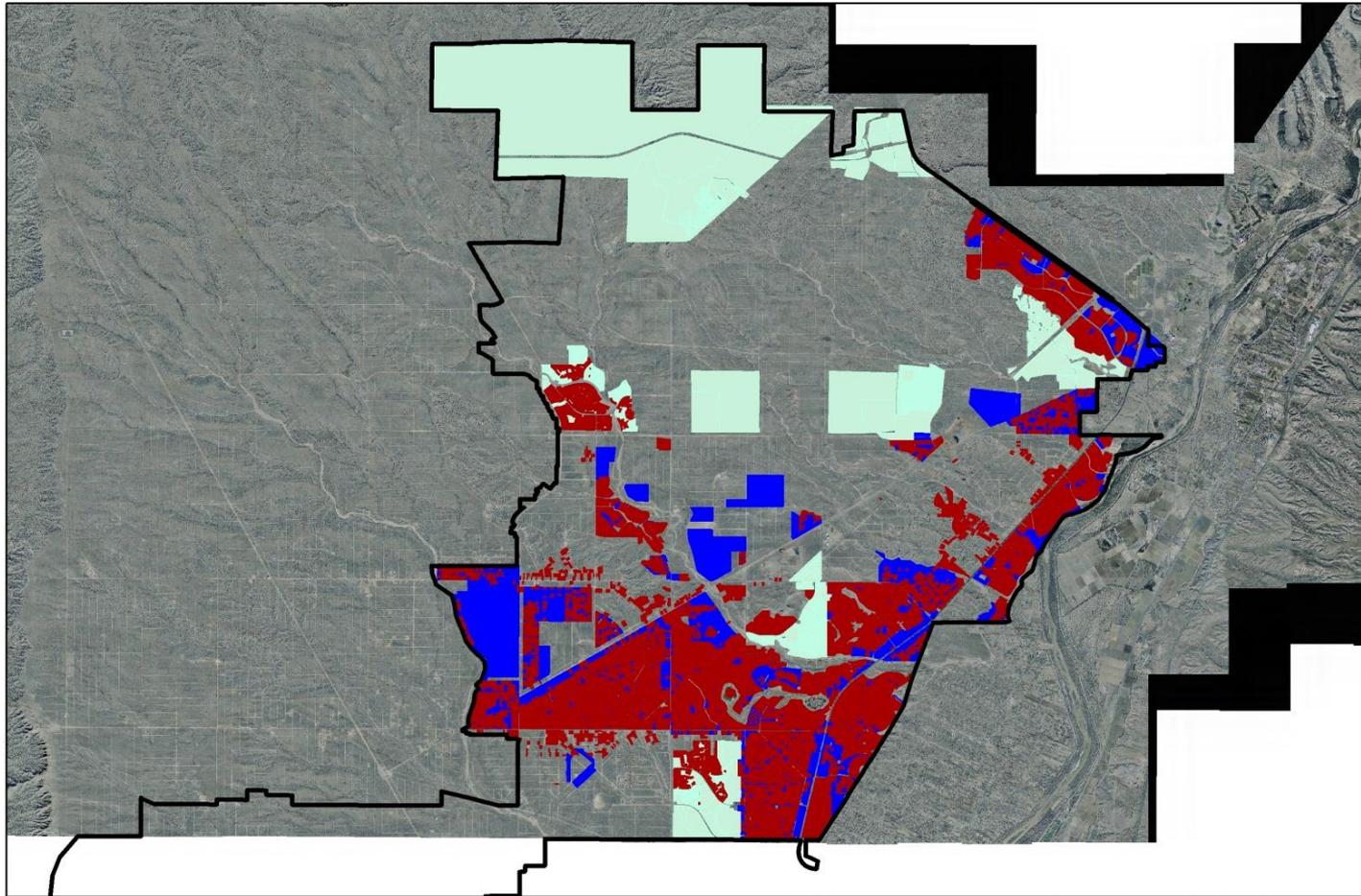
- OSE Permit Application
  - 12,000 Acre-Feet Application
  - Acquisition of Water Rights Schedule
- 2001 Governing Body Resolution
  - CWA Arsenic Treatment Requirement
  - Zero River Discharge due to Proposed Stringent Arsenic Standard
- Studies, Design, Construct New Water Reclamation Facilities

# Water Needs

- Ultimate City build out: 300,000 residents with 50,000 ac-ft/yr water requirement
- Fully appropriated surface/ groundwater flow system
- Groundwater Source Alternatives



# Currently Committed Service



NOT TO SCALE



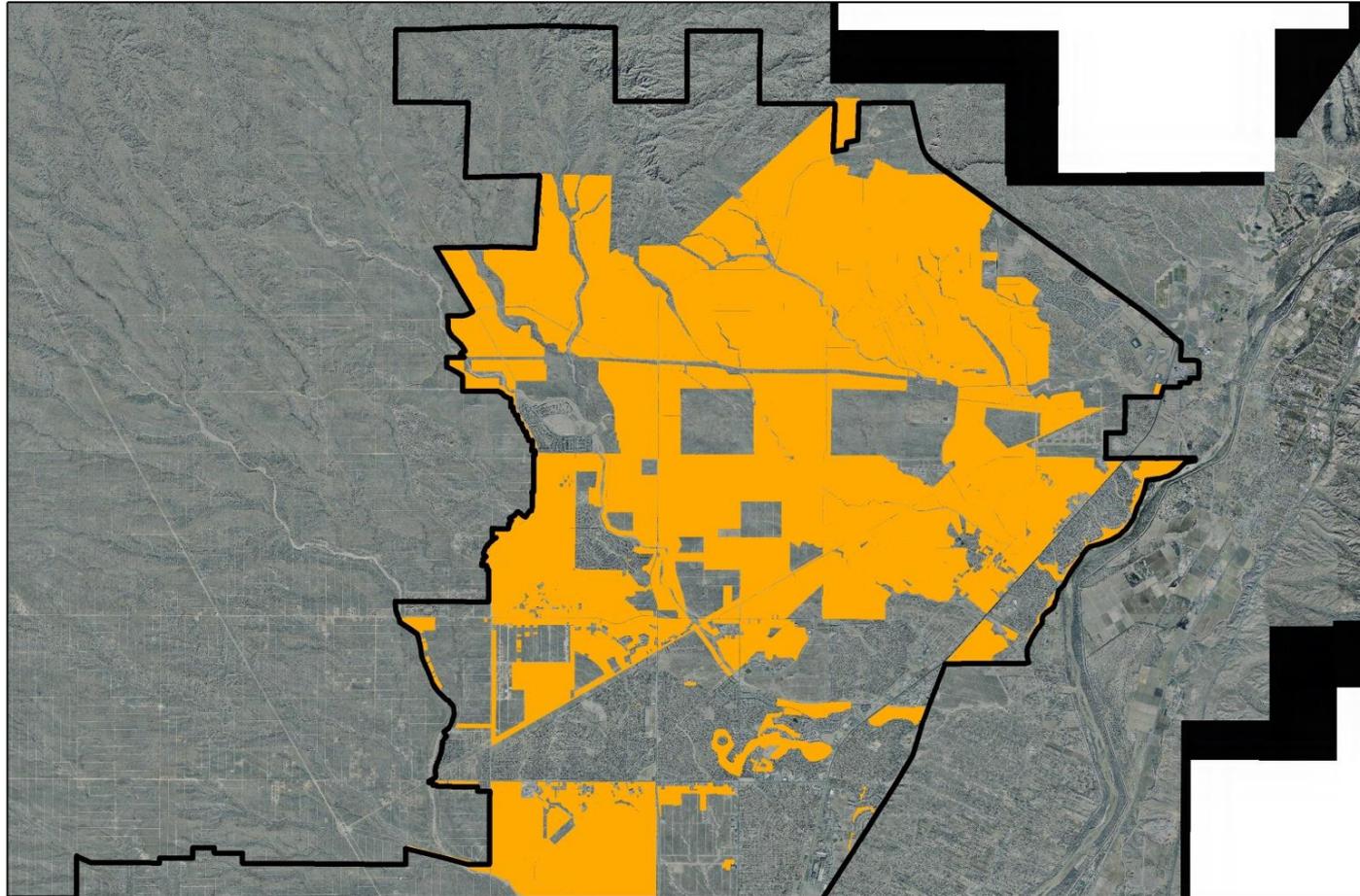
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City of Rio Rancho  
Water System Availability

Currently Committed Service

Date: 03-21-08

# Future Parcels within City Limits



NOT TO SCALE



**CITY OF RIO RANCHO**  
PUBLIC WORKS DEPARTMENT

**Bohannon & Huston**

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City of Rio Rancho  
Water System Availability

Future parcels in City :Limits

Date: 03-21-08

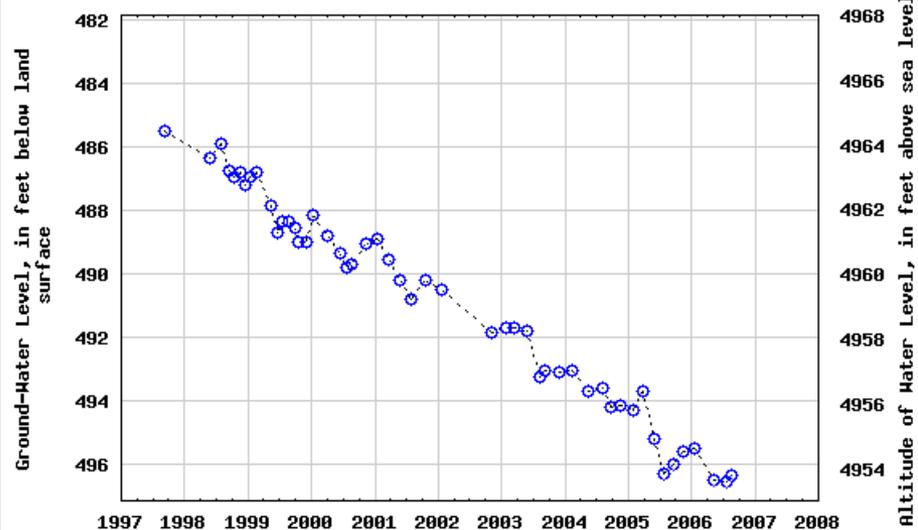
# Water Reuse and Aquifer Recharge

"The solution to our water problems is more rain."

Mark Twain



USGS 351515106410403 12N.02E.24.144B LINCOLN MIDDLE SCHOOL



# Alternative Water Sources

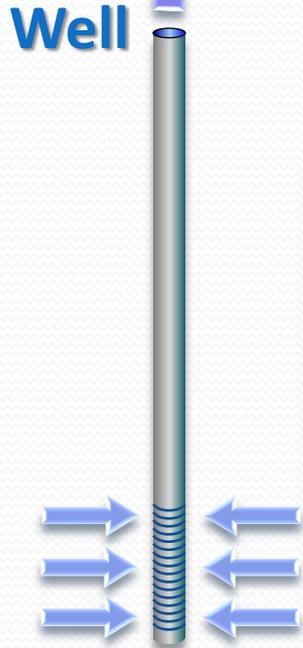
- Conservation
- Effluent Reuse
- Sandoval County Desalination
- Inter-Basin Transfers from Pecos, San Juan, Plains of Augustine Basins

# Benefits of Reuse

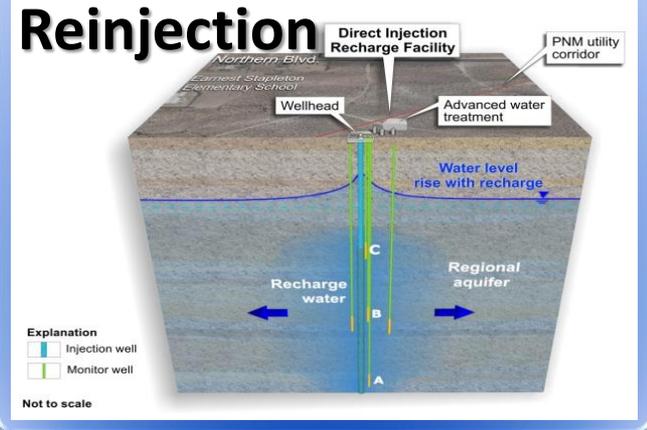
- Independent water source that is dependable & locally-controlled.
  - Rio Rancho Country Club And Cemetery Reuse Irrigation
- Reduces the demands on potable water (less pumping).
- Postpones costly investment in new water sources and treatment.
- Reduces groundwater pumping.



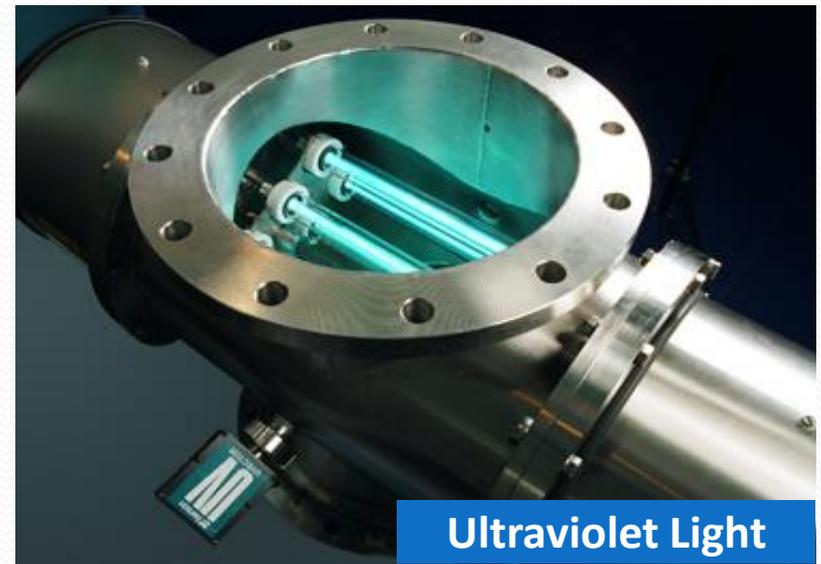
# Treated Water Options



**Treatment Plant**



# Advanced Water Treatment Evaluation



**Non-potable reuse or  
return to river**

**Aquifer injection**



Plant Influent



MBR Effluent



AOP Effluent



GAC Effluent

# Reuse Pipeline Construction



# Reuse Tank Construction



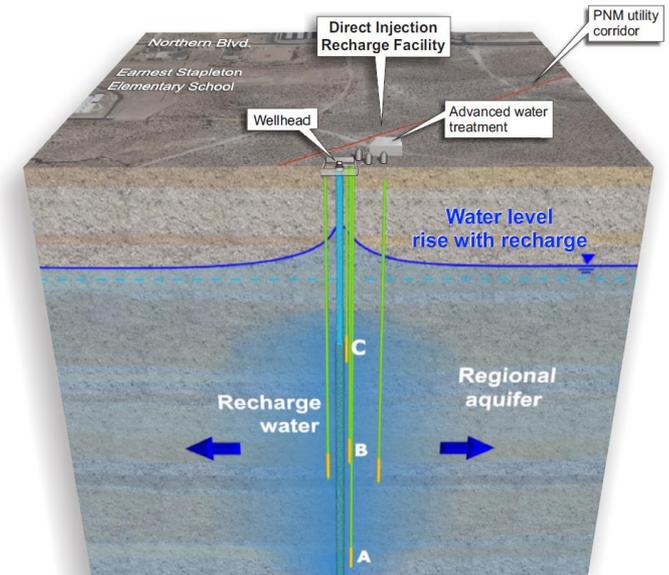
# Mariposa Water Reclamation Facility Surface Infiltration Gallery

- Manifold feeds system.
- Plastic chambers installed, shallow burial.
- Recharge capacity ~650 ac-ft/yr.



# Direct Injection Startup

- 30-days of injection at rates ranging from 0.5 to 1 mgd to establish performance.
- Monitored groundwater level and water quality trends for permitting.
- Full-scale permitting for reclaimed water source near completion.



# Injection Well Construction



# Advanced Water Treatment Facility Construction



# Advanced Water Treatment Facility Construction

