New Mexico Aquifer Storage And Recovery

Middle Rio Grande Water Assembly Forum on Aquifer Recharge, Storage, and Recovery

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Presenters:
Robert J. George, Domestic Waste Team Leader
George Schuman, GWQB Permitting Manager
New Mexico Environment Department Ground Water Quality Bureau

Presentation Outline

- The Benefits and Limitations of ASR
- Water Quality Regulation of ASR
- Albuquerque and Rio Rancho Projects
- Constituents of Interest for ASR

Aquifer Storage and Recovery Technology: ***Benefits***

- Store surplus supplies in aquifer for later recovery
- Source water could be surface, potable, industrial or reclaimed domestic ww
- Large storage capacity and minimal loss under good conditions
- Environmental barrier to contaminant transport

Aquifer Storage and Recovery Technology: ***Limitations***

- Energy intensive
- Not suitable for all formations
- Potential for leaching of contaminants
- Technology ranges from simple to exotic….so do complications
- Uncertainty

Ground Water Discharge Permits

- Ground water discharges are permitted under 20.6.2 NMAC, Water Quality Control Commission (WQCC) Regulations
- A Discharge Permit is intended to protect ground water for present and future use (i.e., no exceedance of the WQCC ground water standards shall result from the discharge)
- Degradation, up to the standard, is allowed

ASR Permitting

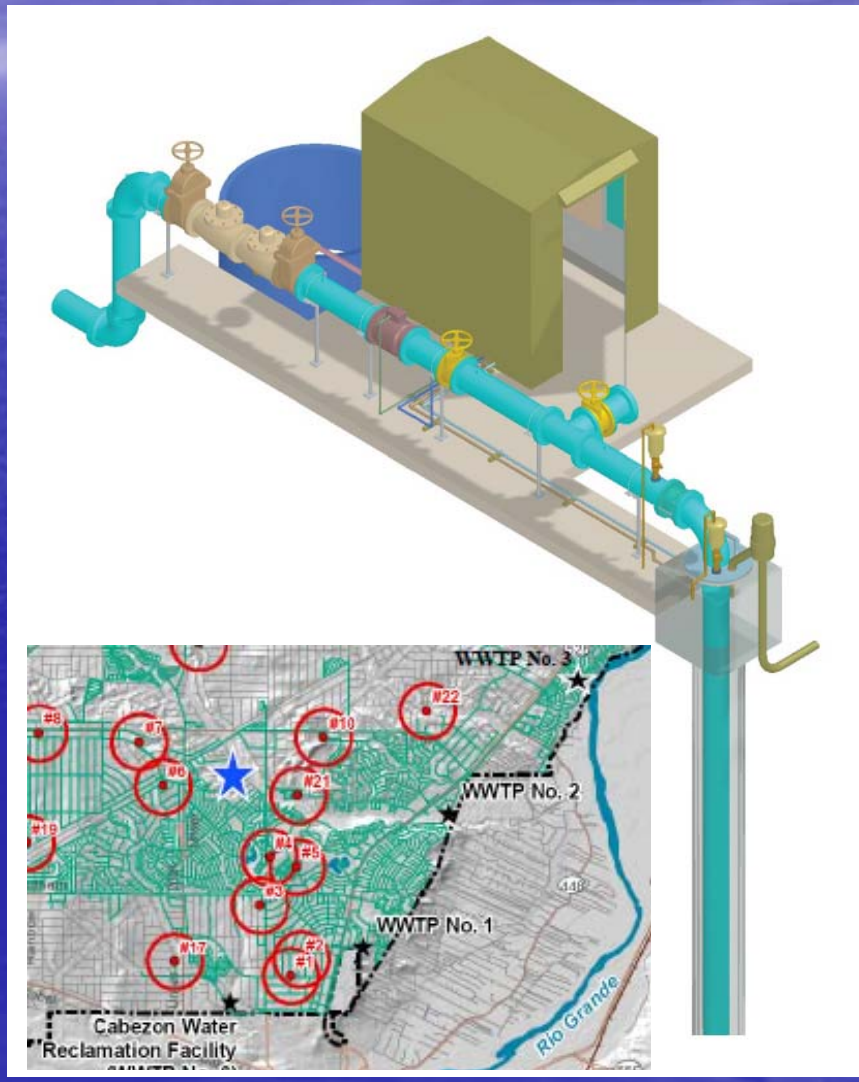
- Under most circumstances, ASR projects are regulated under ground water Discharge Permits
- Underground Injection Control (UIC) regulations impose an additional standard
- No exceedances of WQCC ground water standards ***OR*** of the State's primary drinking water MCLs can occur in ground water

Albuquerque-Bernalillo County Large Scale Injection Project

- Injection of potable water from the ABCWUA's treatment plant into the Rio Grande Aquifer
- Main concern is for TTHM occurrence and/or leaching
- Because facility is regulated under the NM Drinking Water Rules, NMED determined that a ground water Discharge Permit is not required

Rio Rancho Direct Injection

- Pilot project using potable water
- Ultimate source water intended to be highly treated reclaimed wastewater
- Ongoing permitting with OSE and NMED
- Exploring advanced water treatment methods



Constituents of Interest for ASR

- Standard organic and inorganic constituents
- Bacteria, Protozoa, viruses
- Disinfection Byproducts
- Emergent Contaminants (unregulated)

Summary & Conclusions

- NM will likely have a number of operational ASR projects within the next few years
- The permitting approach for these projects is fairly developed
- NMED will continue to evaluate the proposed projects and work with municipalities as projects are implemented
- Public participation is critical