Conjunctive Management Well Location Analysis

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Conjunctive Management Plan

- Protection of Local Resources: Groundwater will only be used as a back-up supply to the BDD.

- Reliability of Supply: Having diverse supply insures public welfare

- Acequia Protection: Plan affirms County Policy of protection of acequia water rights

- Optimization of Public Assets: The proposed multi-year rolling average reduces the purchase of water rights

Well Suitability Analysis

- Team Effort

- Mapped Based

- Allows for flexibility and ease of analysis
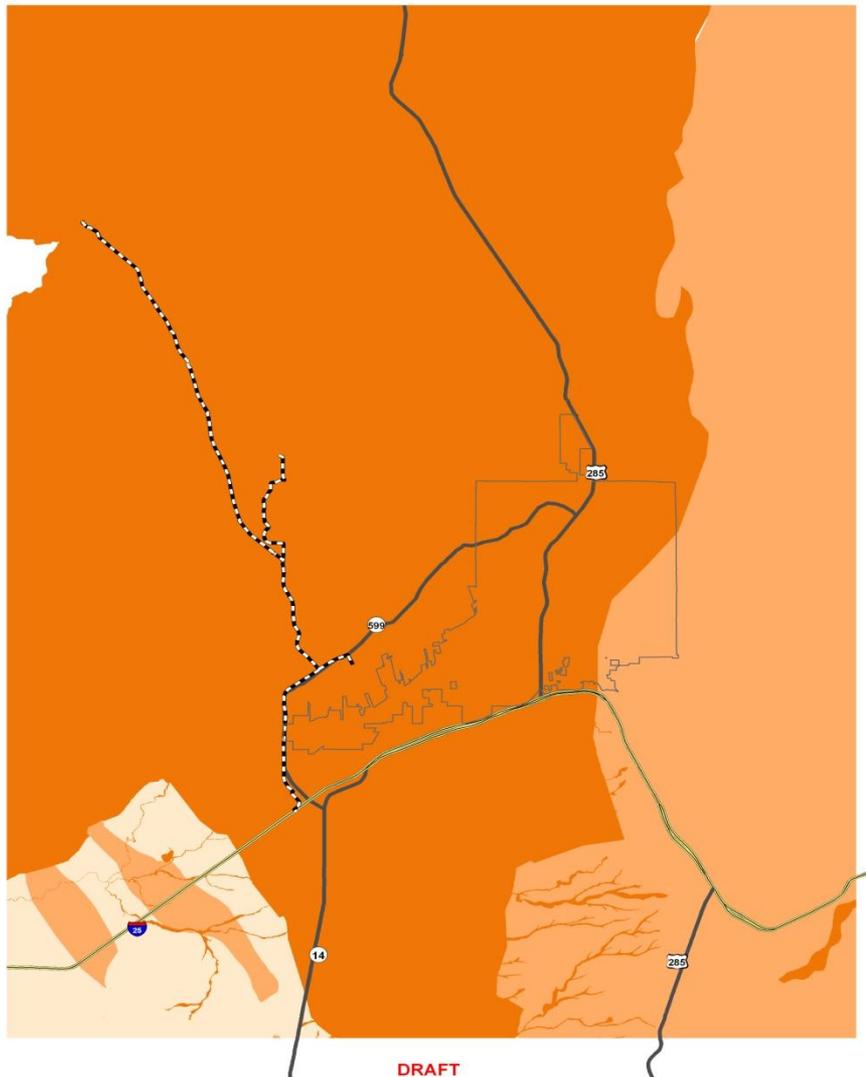
- Can be used as a template County wide

Factor 1 :
Areas of Favorable Hydrogeology

DRAFT

Legend
- Low Suitability
- Moderate Suitability
- High Suitabiltiy
- City of Santa Fe
- BDD PIPELINES

Miles
0 0.5 1   2

Factor 1 : Favorable Hydrogeology

Geology Based

High Suitability = Tesuque Formation

Moderate Suitability = Pre-Cambrian Granite and Permian Limestone
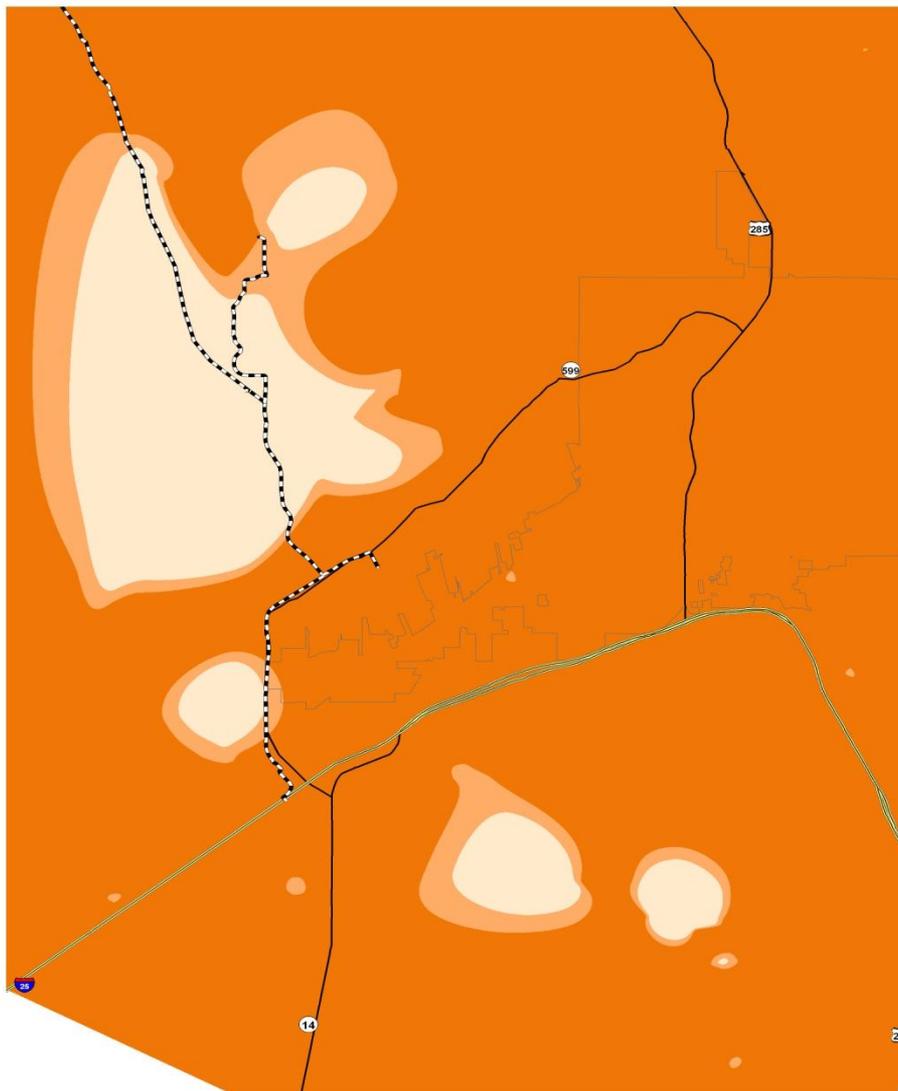
Low Suitability = Espinaso or Galisteo Formations

Factor 2 : Arsenic Contamination

Water Fair Data and NMBGMR Analysis

High Suitability = Less than MCL

Moderate Suitability = Within Margin of Error of MCL

Low Suitability = Exceeds MCL

DRAFT   Factor 2 :
Proximity to Areas of Existing
Arsenic Groundwater Contamination
Miles
0   0.5   1   2

Legend
Low Suitability
Moderate Suitabiliy
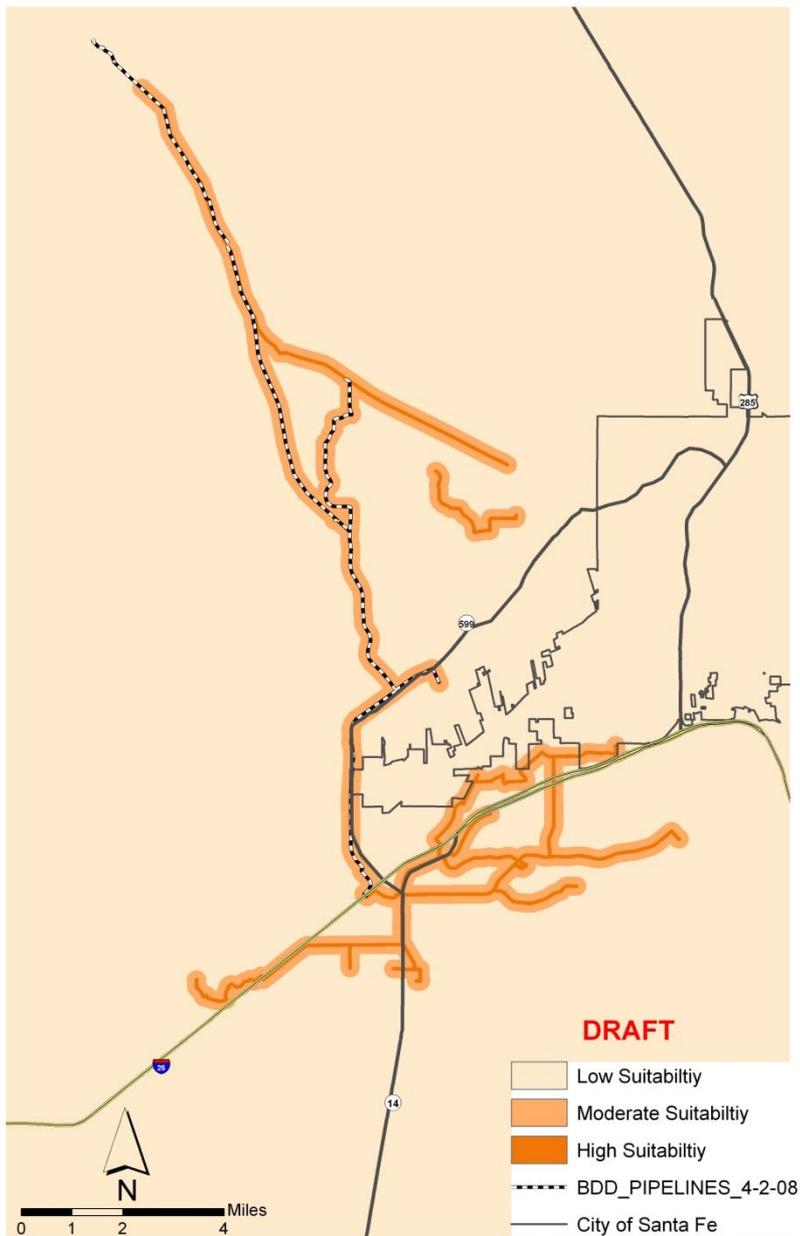High Suitability
City of Santa Fe
BDD PIPELINES

Factor 3: Proximity to Major Water Lines

Ranks distance to major water lines

High Suitability = Less than 200 feet to water line

Moderate Suitability = 200 to 1000 feet to water line

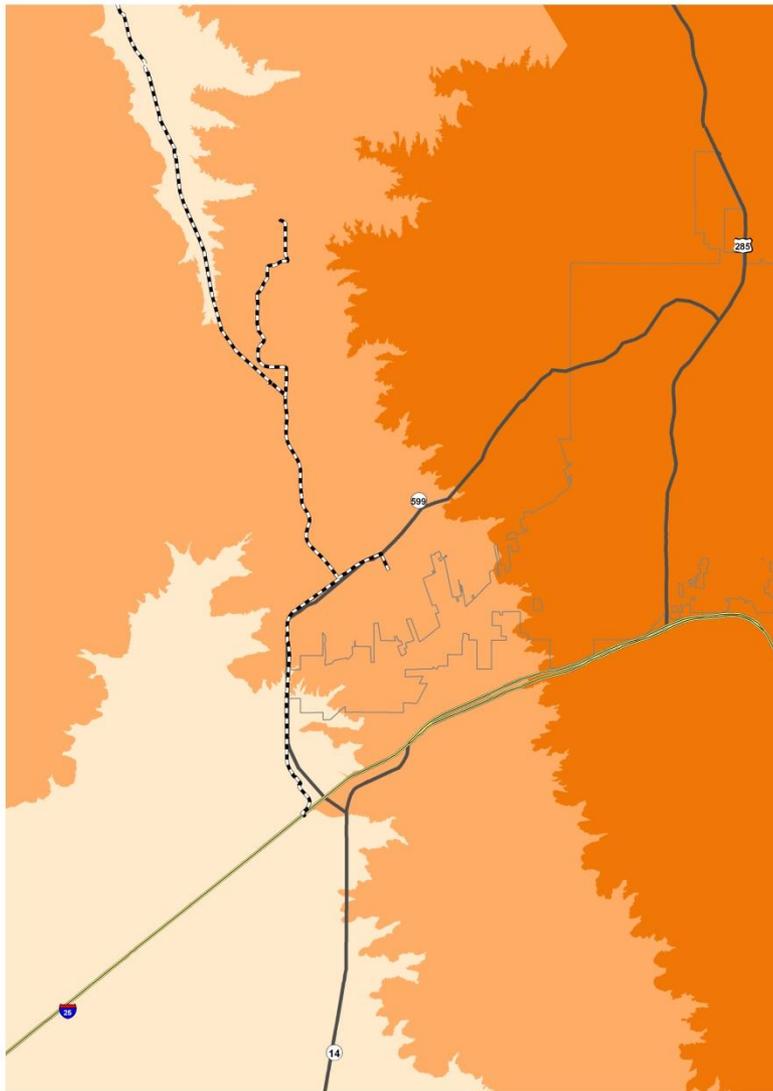**Low Suitability** = Greater than 1000 feet to water line

DRAFT Factor 4:
Feasibility of Pressure Zones

Legend
Pressure Zones
Low Suitabiltiy
Moderate Suitabiltiy
High Suitabiltiy
City of Santa Fe

Miles
0 0.5 1 2

N

Factor 4: Pressure Zones

Ranks feasibility of well locations within utility pressure zones

High Suitability = Pressure Zones 1 - 6

Moderate Suitability = Pressure Zones 7 & 8
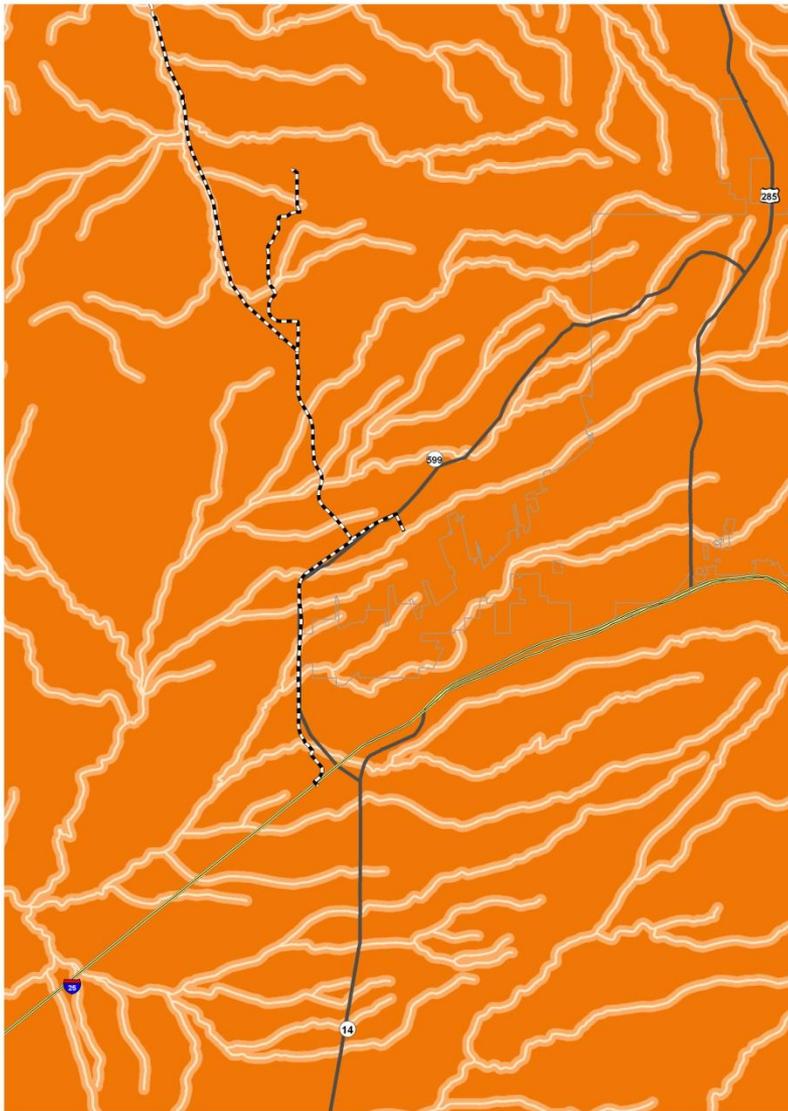
Low Suitability = Pressure Zones 9 - 11

Factor 5: Drainages

Ranks proximity to major drainages

High Suitability = Greater than 500 feet

Moderate Suitability = 100 to 500 feet
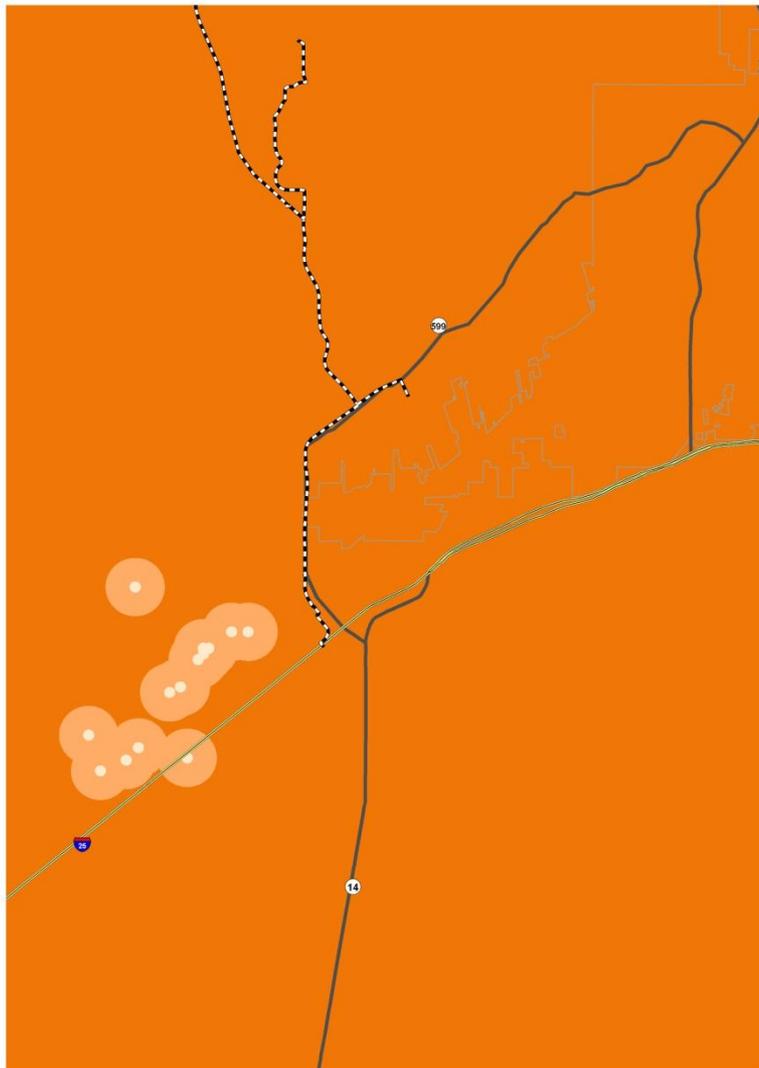
Low Suitability = Less than 100 feet

Factor 6: Springs

Ranks proximity to springs

High Suitability = Greater than ½ mile from spring

Moderate Suitability = 500 feet to ½ mile from spring

Low Suitability = Less than 500 feet from spring

DRAFT Factor 6:
Proximity to Springs

Legend
Springs
Low Suitability
Moderate Suitability
High Suitability
City of Santa Fe
BDD PIPELINES

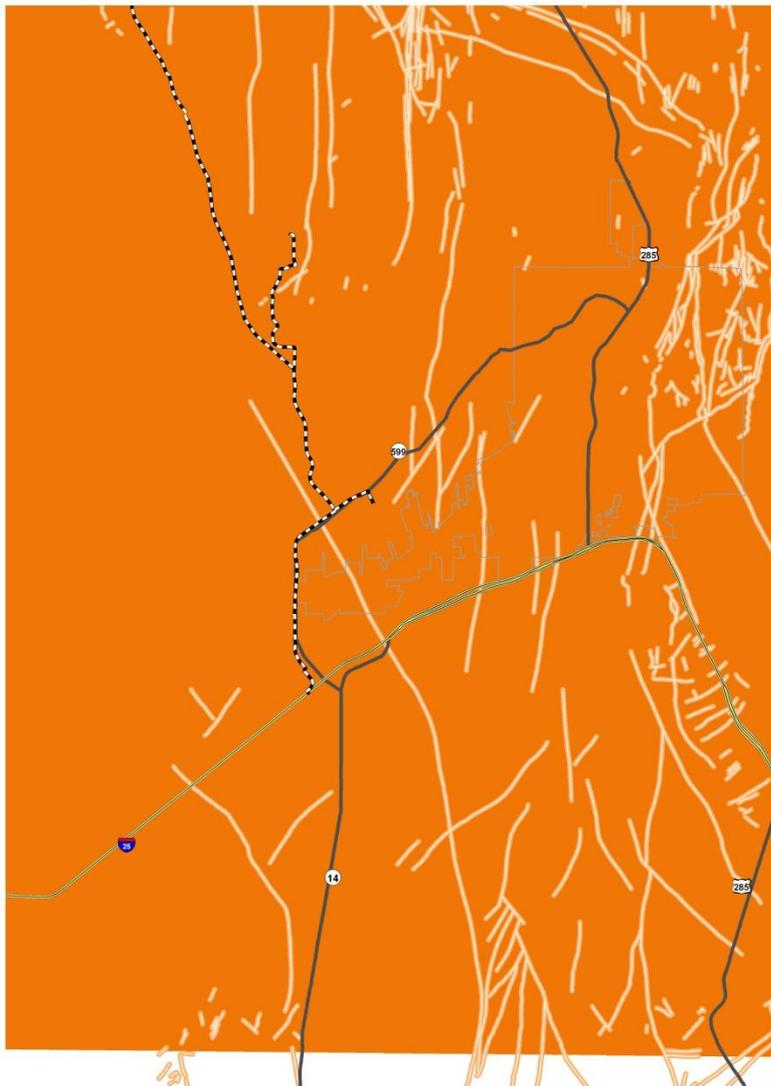Miles
0 0.3 0.6   1.2

N

Factor 7:
Proximity to Faults

Factor 7: Faults

Ranks proximity to known faults

High Suitability = Greater than 300 feet from fault

Moderate Suitability = 100 feet to 300 feet from fault

Low Suitability = Less than 100 feet from fault

DRAFT Factor 8:
Areas of Aquifer Decline

Legend
- Low Suitability
- Moderate Suitability
- High Suitability
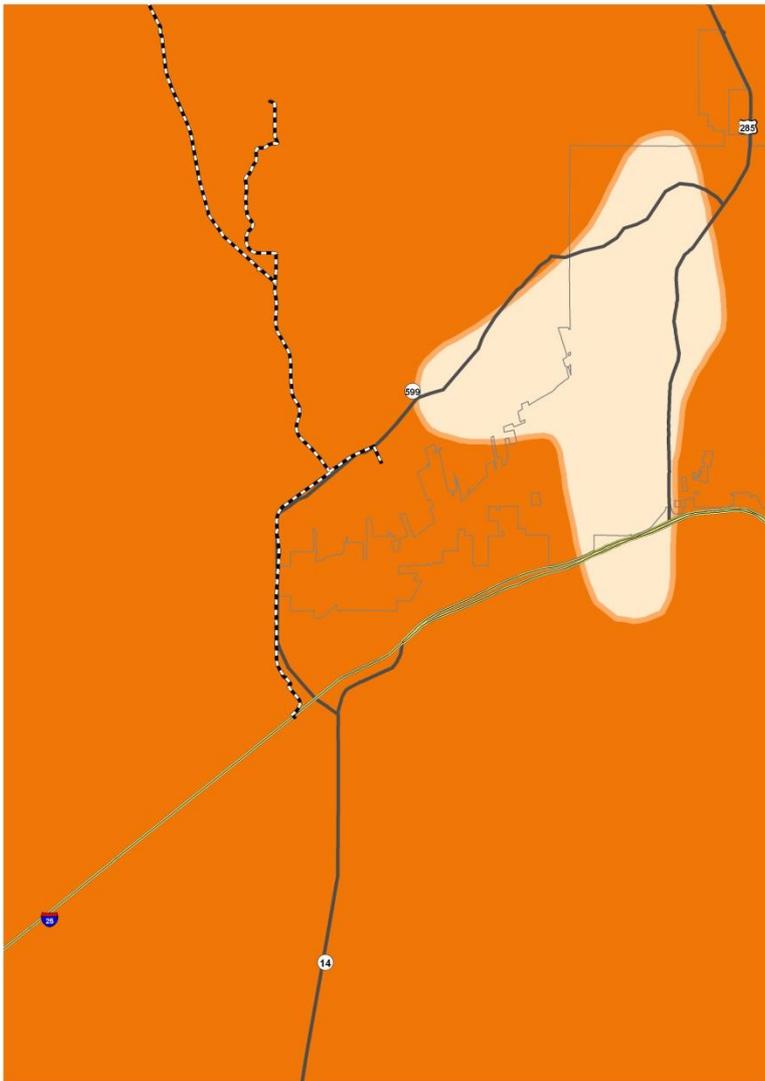- City of Santa Fe
- BDD PIPELINES

Miles
0 0.3 0.6 1.2

N

Factor 8: Aquifer Decline

Ranks proximity to NMBGMR estimated aquifer decline

High Suitability = Greater than ½ mile

Moderate Suitability = 500 feet to ½ mile

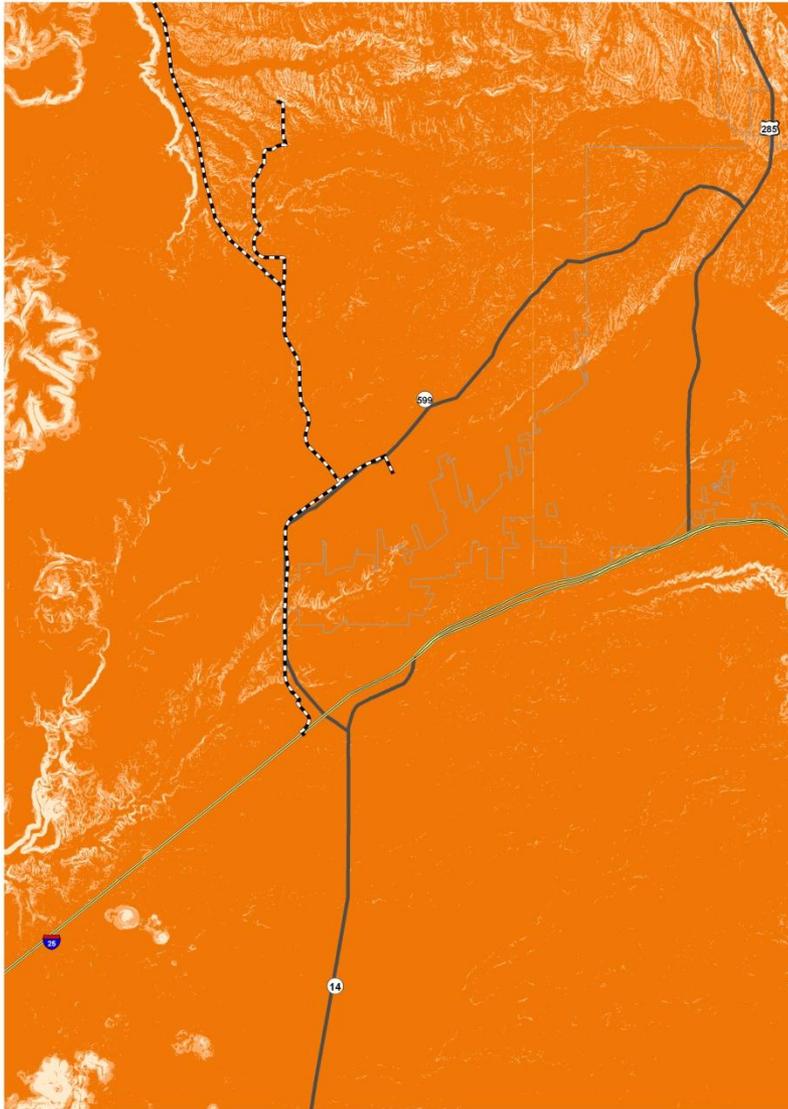**Low Suitability** = Less than 500 feet

Factor 9: Slope

Ranks Percent Grade

High Suitability = 0 to 15%

Moderate Suitability = 15 to 33%

Low Suitability = Greater than 33% grade

Factor 10: Distribution Potential

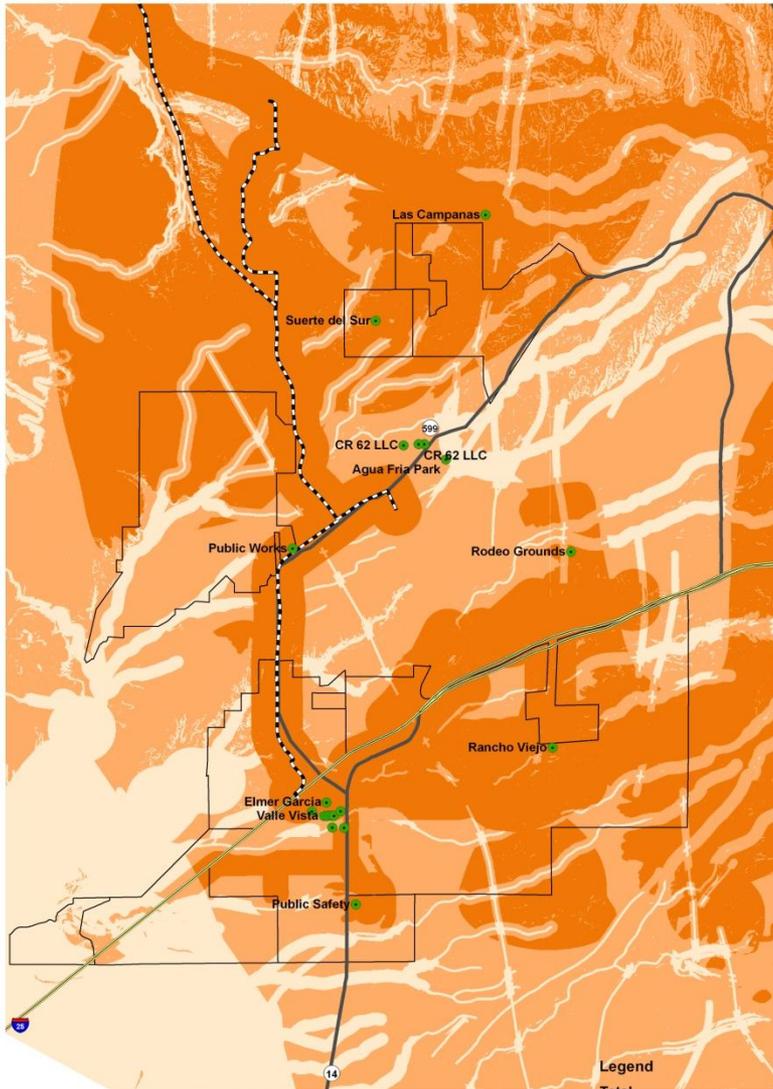Ranks the ability to serve the utility within a 2000 foot buffer

High Suitability = Can serve all utility

Moderate Suitability = Can Serve portion of Utility

Low Suitability = Can not easily serve utility

DRAFT
Factor 10: Distribution Potential

Miles
0   1   2   4

N

Legend

Distribution Potential

Low Suitability

Moderate Suitability

High Suitability

City of Santa Fe
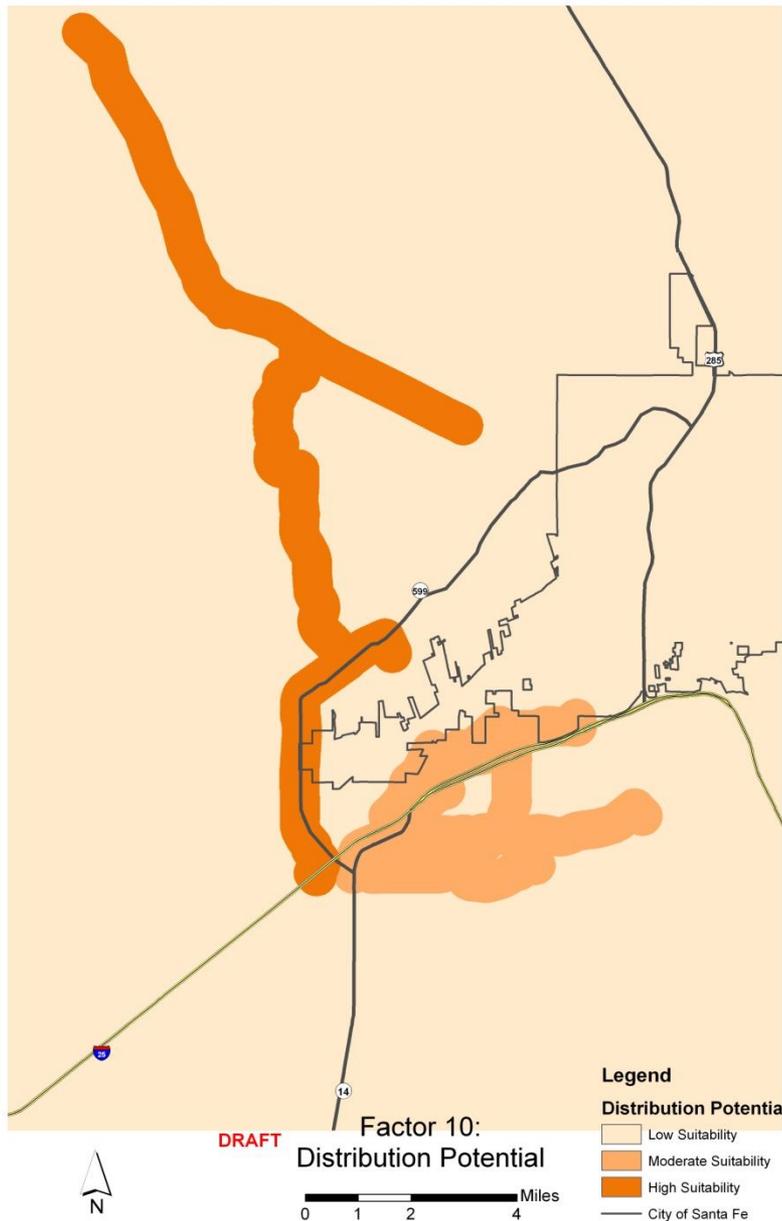
DRAFT Total:
All Factors Added Together

Legend
Total
- Low Suitability
- Moderate Suitabiltiy
- High Suitabiltiy
- ● Potential Well Locations
- Service Area
- BDD Pipe Lines

0 0.5 1 2 Miles

N

Total : All Factors

All Factors were added together and grouped by natural jenks into 3 groups

High Suitability = Dark Orange

Moderate Suitability = Medium Orange

Low Suitability = Cream

Next Steps:

5 Public Hearing will be held to seek input

•Wednesday, September 23rd 6:00 pm to 8:00 pm at the Nancy Rodriquez Center (1 Prairie Dog Loop)

•Thursday, September 24th 6:00 pm to 8:00 pm at the Eldorado Senior Center (14 Avenida Torreon)

•Monday, September 28th 6:00 pm to 8:00 pm at the Rodeo Grounds Extension Office (3229 Rodeo Rd.)

•Tuesday, September 29th 6:00 pm to 8:00 pm at the Santa Fe County Edgewood Satellite Office (1916 Old US 66, Edgewood)

•Wednesday, September 30th 6:00 pm to 8:00 pm at the Pojoaque Satellite Office (West Gutierrez, Suite 9, Pojoaque Center)

Next Steps:

• **The map based methodology will be finalized**

• **The top ranked areas will be evaluated for ability of land acquisition**
- **County Property**
- **Private Property with offers from Land Owners to acquire**
- **Compile list of Property Owners to Contact**

• **Once Areas are estimated an analysis of nearby wells and cost will be preformed.**

• **Top Locations based on cost, time factors and estimated impacts to nearby wells will be presented to the BCC on October 27th, 2009**