Current Status on Wastewater Project

- Preliminary Engineering Report (PER)
  - FINAL PER has been reviewed and approved by the NM Environment Department in 2010

- Environmental Information Document
  - Started July 2012
  - Funding in $50,000 provided by Bernalillo County
  - Marron and Associates will provide an overview of this status
2010 Population

- A - North of NM 333
- B - South of I-40
- C - Between I-40 & NM 333

Legend
- Orange: Tijeras Force Main
- Pink: A - North of NM 333
- Blue: B - South of I-40
- Purple: C - Between I-40 and NM 333

CARNUEL WASTEWATER IMPROVEMENTS PRELIMINARY ENGINEERING REPORT

FIGURE V-1
Study Areas

Legend
- Orange: Tijeras Force Main
- Pink: A - North of NM 333
- Blue: B - South of I-40
- Purple: C - Between I-40 and NM 333

2010 Population

- 579, 26%
- 651, 29%
- 1,000, 45%
# Evaluation of Alternates

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Capital Cost</th>
<th>O &amp; M Costs</th>
<th>Customer Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1- Option 1 (Gravity service with 2 Lift Stations)</td>
<td>$6.7 million</td>
<td>$53,000</td>
<td>Low</td>
</tr>
<tr>
<td>A1- Option 2 (Gravity service with 1 Lift Station)</td>
<td>$8.4 million</td>
<td>$28,000</td>
<td>Low</td>
</tr>
<tr>
<td>A2 (Low Pressure Service)</td>
<td>$3.7 million</td>
<td>$19,000</td>
<td>High</td>
</tr>
<tr>
<td>B1 (Gravity service with Lift Stations C and D)</td>
<td>$7.8 million</td>
<td>$49,000</td>
<td>Low</td>
</tr>
<tr>
<td>B2 (Low Pressure System for Area B, south of I-40)</td>
<td>$3.0 million</td>
<td>$19,000</td>
<td>High</td>
</tr>
<tr>
<td>C1 (Gravity Service)</td>
<td>$4.4 million</td>
<td>$31,000</td>
<td>Low</td>
</tr>
<tr>
<td>C2 (Low Pressure System)</td>
<td>$1.7 million</td>
<td>$19,000</td>
<td>High</td>
</tr>
</tbody>
</table>
Proposed Project

Area A: $6.7 M
Area B: $7.8 M
Area C: $1.7 M
## Proposed Project

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<tr>
<td>C2 (Low Pressure System)</td>
<td>$1.7 million</td>
<td>$19,000</td>
<td>High</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$16.2 million</strong></td>
<td><strong>$121,000</strong></td>
<td>2 Low/1 High</td>
</tr>
</tbody>
</table>
Proposed Project Detail

- **Area A** – For Area A, Alternate A1, Option 1, a gravity collection system, is recommended, draining to a proposed lift station (Lift Station A) located north of I-40, near the crossing of NM 333 and I-40. Lift station A would discharge to the Tijeras Force Main, located in the median for NM 333. A second lift station (Lift Station B) will be required for the east end of Area A because the topography does not allow gravity flow to the proposed extension along NM 333. This lift station would discharge to the Tijeras force main, to avoid pumping the sewage twice (through both Lift Stations A and B).

- **Area B** – For Area B, Alternate B1, a gravity system is recommended. The western portion of Area A would collect at a lift station (Lift Station D) to be located south of NM 333, discharging to the Tijeras force main at that location. The eastern portion of Area B would collect at a lift station (Lift Station C) and would discharge to a force main crossing I-40 at the Coyote Springs bridge and discharging to the Tijeras force main in NM 333.

- **Area C** – For Area C, Alternate C2, a low pressure system with individual grinder pumps is recommended. The low pressure system for the area would discharge to the Tijeras force main at a location between NM 333 and I-40.
Proposed Phasing

Phase 1: $1.7 M
Phase 2: $5.4 M
Phase 3: $1.3 M
Phase 4: $4.2 M
Phase 5: $3.6 M
Proposed Phasing Detail

- **Phase 1**: Low pressure system for Area C. This area was prioritized based on the density of population and age of structures and septic tanks. This phase would include installation of low pressure main lines. Public easements need to be established for those main lines. The low pressure system would connect to the existing Tijeras force main at several locations.

- **Phase 2**: Gravity system for majority of Area A, with Lift Stations A connecting to the Tijeras force main in the median of NM 333. The main gravity collector for this area would parallel NM 333 on the north side of the roads allowing immediate service for those lots with frontage along NM 333. Area A has the most residents and the swellings are concentrated along roadways, many of which are public and or are covered by the blanket easement.

- **Phase 3**: Lift Station B and gravity sewer for eastern portion of Area A. Some public ROW is available in this area. The Lift Station would discharge to the Tijeras force main at a location near Alejandro Road.

- **Phase 4**: Lift Station D and gravity sewer for the western portion of Area B.

- **Phase 5**: Gravity sewer and a lift station for the eastern portion of Area B. This project includes crossing the Coyote Springs Bridge and a force main discharging to the Tijeras force main at Coyote Springs.
Environmental Review

Marron & Associates
Lead Agencies

- Albuquerque Bernalillo County Water Utility Authority
- NM Environment Department
Applicable Laws & Guidance

- National Environmental Policy Act
- National Historic Preservation Act
- Clean Water Act
- Endangered Species Act
- Agency guidance
Environmental Issues

- Land Use
- Floodplains
- Wetlands
- Cultural Resources
- Biological Resources
- Water Quality
- Coastal Resources
Environmental Issues

- Socioeconomics & Environmental Justice
- Climate & Air Quality
- Noise
- Visual Impacts
- Other Resources
- Cumulative Impacts
Environmental Commitments

- Physical Resource Measures
- Biological Resource Measures
- Threatened and Endangered Species Measures
- Socioeconomic/Environmental Justice Measures
- Cultural Resource Measures
- Environmentally Sensitive Areas
- Other Resources
Agency and Public Involvement

- Agency Coordination
- Public Scoping Meeting
- Public Hearing
- Availability of Documents
Public Sanitary Sewer Requirements & Financial Costs

Water Authority
Public sanitary sewer system within 200 feet of the property line

- Any new structure that generates wastewater must connect to the public sanitary sewer system prior to the structure being occupied.
- Any lot that has a structure that generates wastewater must connect to the public sanitary sewer system within one year of the system being available.
Exceptions for existing structures

A failing septic system must be abandoned and the structure must be connected to sewer within 30 days of the septic system's failure.

Within 30 days of the ownership of the property changing, the structure shall be connected to sewer unless owner can prove system is in good operating condition and buyer enters into a maintenance agreement.

Septic systems that were installed prior to the public sanitary sewer system becoming available and meet the requirements of Section 42-508, Performance standards, without a variance, are not required to connect to the sewer system until the system fails.
Abandonment of Septic System

- Required under County Code - Sec. 42-506(C)
  - Must be abandoned within 30 days of the discontinuance of use
- Estimated Cost ~ $1,000
- Process involves pumping out the entire tank and collapsing the entire tank; a clean fill soil is then used to backfill the void
- Possible to use vacated septic tank for graywater system pending BCEH permit
- Possible to use vacated septic tank for rainwater harvesting pending BCEH inspection
Connection Costs

- Construction the service line or lateral from the house to the sewer system - about $500

Low Pressure System Additional Costs

- Grinder pumping systems and appurtenances – about $4,500
  - 10 year mean life on pump
- Electrical upgrades – about $1,000
Connection Costs

- Sanitary Sewer Connection Charge is called the Utility Expansion Charge (UEC)
- UEC residential cost is $2,074
  - UEC is adjusted annually based on inflation rate
- UEC can be financed with the Water Authority over a period of 10 years at an interest rate of 7% per annum with a 5% down payment ($104)

- Average Sewer Residential Monthly Rate: $17.56
## Summary of Connection Costs

<table>
<thead>
<tr>
<th>Type</th>
<th>Gravity System</th>
<th>Low Pressure System</th>
</tr>
</thead>
<tbody>
<tr>
<td>UEC (Residential)</td>
<td>$2,074</td>
<td>$2,074</td>
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<tr>
<td>Service Line Installation</td>
<td>$500</td>
<td>$500</td>
</tr>
<tr>
<td>Septic Tank Abandonment</td>
<td>$1,000</td>
<td>$1,000</td>
</tr>
<tr>
<td>Grinder Pump System</td>
<td>--</td>
<td>$4,500</td>
</tr>
<tr>
<td>Electrical Upgrades</td>
<td>--</td>
<td>$1,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$3,574</strong></td>
<td><strong>$9,074</strong></td>
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</tbody>
</table>
Financial Assistance

- Bernalillo County’s Partners in Improving and Protecting the Environment (PIPE)
- PIPE program covers plumbing costs for connection to sanitary sewer lines, and abandonment of septic tank
- Qualification for the PIPE program is based on the number of persons residing in your household and the total combined incomes of all persons in the household
- You must own the property, have resided in the house for the past year and the Total Full Value of the property may not exceed $185,100
- Call 848-1524 for more information
- Website: www.bernco.gov/PIPE
Questions & Comments

For more project information, go to www.abcwua.org/carnuell