

### Existing Inventory

The Utilities Division of the Public Works Department served an estimated 28,891 residential and non-residential wastewater customers as of December 31, 2014. Average daily treatment in thousands of gallons for calendar year 2014 was 4,765. Annual wastewater treatment for 2014 was over 1.74 billion gallons.

The Utilities Division operates and maintains:

- 5 Wastewater Treatment Plants (WWTPs)
- 26 Lift Stations
- 368 Miles of Wastewater line

### Current Capacity and Condition of Assets and Infrastructure

#### *Wastewater Treatment Plants:*

The wastewater system inventory includes 5 treatment plants of varying age, condition, and treatment capacities. The largest plant is WWTP #2 capable of treating 5.5 million gallons per day while the smallest is WWTP #3 capable of treating 0.8 million gallons per day. Taken together the total capacity of all treatment plants is approximately 8.6 million gallons per day. The current actual average daily gallons treated are approximately 4.6 million gallons per day. The city discharges into the Rio Grande at two locations under an Office of State Engineer (OSE) water permit and two National Pollution Discharge Elimination System (NPDES) permits.

Expansion of WWTP #6 from a 0.6 million gallons per day to a 1.2 million gallons per day treatment facility was completed in July 2013. The project also included a new 4,000 gallon per minute booster station, approximately 29,000 linear feet of reuse water line to WWTP #2, and a 3 million gallon recycled water storage tank. The expansion increased treatment capacity at WWTP #6, while the pump station, reuse line, and storage tank will provide recycled water for irrigation and aquifer recharge purposes. The ICIP contains plans to expand and retrofit WWTPs #1 and #3 to Membrane Bio Reactor (MBR) facilities in 2016 and 2020, respectively

#### *Reuse and Aquifer Recharge:*

The WWTP #6 Phase 1 Expansion and the Aquifer Recharge Demonstration projects include construction of recycled water storage tanks, pumping capacity, reuse lines, and water treatment and direct injection wells in support of the city's water reuse and aquifer recharge initiatives. The series of subprojects began in 2006 and continues with construction of a recycled water storage tank at WWTP #6 and an advanced water treatment facility and related infrastructure near the Loma Colorado subdivision. The initiative will result in widespread delivery of reuse water to strategic locations for irrigation, industrial uses, and aquifer replenishment. The city was awarded \$3.8 million dollars from the New Mexico Finance Authority (NMFA) Water Trust Board to complete the Advanced Water Treatment Facility (AWTF) in FY2016. The recycled water tank will also be completed in FY2016 utilizing utility net revenue. The city has recently received permits for direct injection from the New Mexico Environment Department and Office of the State Engineer.

#### *Lift Stations and Sewer lines:*

The city operates 26 lift stations responsible for moving wastewater to treatment plants within the force main sewer line system. The wastewater system also includes 368 miles of gravity sewer line. The ICIP contains various projects for lift station replacement, relocation, and/or capital repair, mostly notably relocation and expansion of Lift Station#10 currently under design. The new lift station will be constructed to divert additional wastewater flows from WWTP#2 to WWTP#1 providing relief for WWTP#2.

### Capital Repair and Maintenance Programs/Activities

WWTP #2 has undergone a significant rebuild of the aeration basins to ensure continued compliance with the New Mexico Environmental Department (NMED) and Environmental Protection Agency (EPA) regulations. Additional work to WWTP #2 will continue upon the completion of the Cabezon Water Reclamation Facility (WWTP 6) and the Effluent Booster Station/Tank.

Lift station #10 (LS 10) replacement near the intersection of Southern Blvd. and New Mexico Highway 528 is currently under construction anticipated to be completed in 2015. The new Lift Station 10 will divert wastewater from Southern Boulevard to WWTP#1 located on Sara Road or WWTP#2 on Industrial Park Loop.

**Indicators**

| Indicator                                       | Calendar Year |       |       |       |       |
|---|---------------|-------|-------|-------|-------|
|   | 2010          | 2011  | 2012  | 2013  | 2014  |
| Average Daily Sewage Treated (1,000 of gallons) | 4,489         | 4,546 | 4,469 | 4,641 | 4,765 |

**Wastewater Utility Infrastructure and Capital Improvement Plan Development**

The Utilities Division updates its capital improvement plan concurrent with the annual budget process by which current year capital appropriations are requested pursuant to established departmental priorities for maintaining, expanding, and/or improving wastewater infrastructure and assets. Various departmental plans guide development of the ICIP, including those detailed below. Additionally, asset replacement needs, such as equipment and renovations are also included in the department's overall ICIP. Beginning in Fiscal Year 2014, the Wastewater ICIP has focused on capital needs and financing for non-growth related improvements in accordance with the recent series of wastewater rate increases first authorized by the Governing Body in January 2013. The current capital program plans for capital investment necessary to maintain the system at its current size and level of service provision. Notwithstanding, growth related projects have been included in the ICIP as deferred items until such a time when new growth necessitates such improvements and funding is identified.

*Wastewater Master Plan*

The city is currently calibrating and updating the wastewater basin information to continually build a more accurate model of existing capacities and future capacity needs. T

*Asset Management Plan:*

The purpose of the Asset Management Plan is to document the current state of system assets, and plans for their repair and/or replacement in order to minimize life cycle costs and provide for an

acceptable level of service. The Utilities Division is currently finalizing a five year project detailing the status and asset management plans of water and wastewater system equipment. The asset management program will provide an evaluation and decision making mechanism for repair and replacement of assets that considers the risk of asset failure, the cost effectiveness of operations, and the condition and age of assets.

**Developer Contributions**

The city's Impact Fee Plan and Ordinance, adopted in 2005 establishes a standard level of service stated as average and peak day demand for a single family equivalent (SFE) connector service unit. SFE is a standard measure of use attributable to an individual unit of development and is defined as having the average water use characteristics of a customer with a 5/8" water meter. Customers with a 5/8" water meter constitute approximately eighty eight percent (88%) of all accounts.

Standard Level of Service-Wastewater Utility

|                           |                           |
|---------------------------|---------------------------|
| <b>Average Day Demand</b> |                           |
| Average Daily Flow        | 175 gallons per day (gpd) |
| <b>Peak Day Demand</b>    |                           |
| Peak Hourly Flow          | 525 gpd                   |

Developers are assessed impact fees or provide physical improvements in lieu of impact fees valued at \$2,298 for a 5/8" meter; \$3,447 for a 3/4" meter; \$5,745 for a 1" meter; \$11,490 for a 1 1/2' meter; and \$18,384 for a 2" meter. System level infrastructure improvements are accepted by the city in exchange for impact fee credits granted to developers via

development agreements. There are a significant number of wastewater impact fee credits outstanding and the city currently accepts credits for forty five (45%) of assessments generated by annual development activity. Nineteen percent (19%) of assessments generated by annual development activity are collected as revenue, while thirty six percent (36%) represent foregone resources due to the impact fee moratorium. . Effective September 22,

2012 through September 22, 2014, impact fees were reduced by 50 percent (50%) for residential construction and by 100 percent (100%) for non-residential construction. The amount of estimated foregone wastewater impact fees during this period was \$1,853,129. The city would have received these impact fees in the form of either assessment revenue or credits.

Developer Improvements and Dedications since Fiscal Year 2010 include:

- Northern Meadows (Unit 19): 1.23 miles of sewer line
- High Range III: 1.15 miles of sewer line
- Paseo Vulcan Crossing: 0.15 miles of sewer line
- Diamond Ridge: 1.54 miles of sewer line
- Cabezon Tract 1A: 0.34 miles of sewer line
- Cabezon Commons Tract 11: 0.22 miles of sewer line
- Loma Colorado Realignment: 0.26 miles of sewer
- Joiner Plaza: 0.26 miles of sewer line and 1 lift station
- Cielo Norte I and II: 1.16 miles of sewer line
- Plaza @ Enchanted Hills: 0.25 miles of sewer line
- UNM/Sandoval County Regional Medical Center: 0.254 miles of sewer line
- The Village at Rio Rancho: 0.47 miles of sewer line

### Funding Sources

Wastewater Utility capital projects are funded through various sources, including:

- Utility Bond and Loan Proceeds
- State and County Grants
- Utility Net Revenues
- Wastewater Impact Fees
- Environmental Gross Receipts Tax Revenue

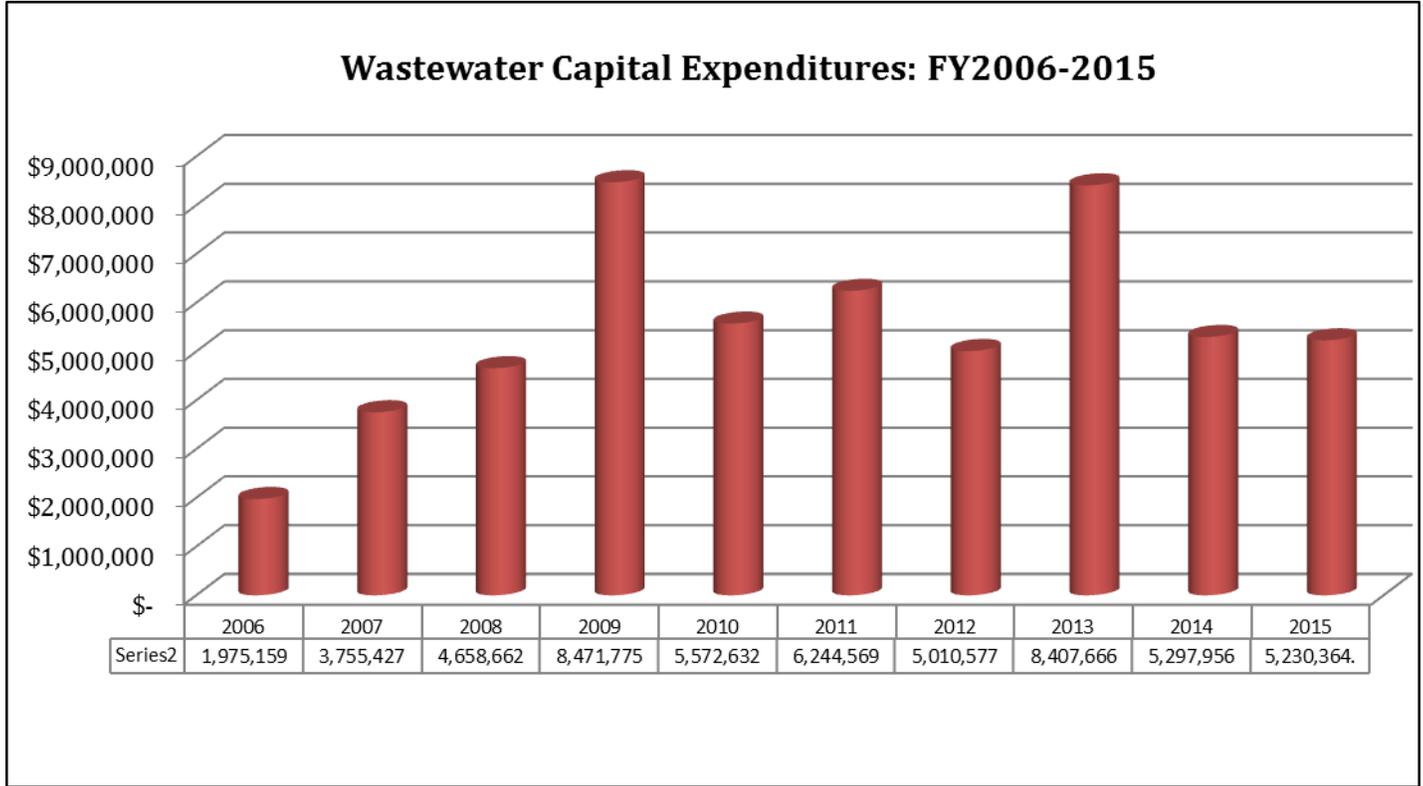
Capital spending for wastewater utility infrastructure topped \$8.5 million in Fiscal Year 2009, and that level of capital investment was nearly matched in 2013 due to the ongoing expansion of Wastewater Treatment Plant #6 to a 1.2 million gallon per day facility. Construction of WWTP#6 continued in Fiscal Years 2014 and 2015, accounting for sixty five percent (65%) of total capital expenditures. In recent years, an otherwise waning investment in wastewater capital assets has been propped up by the \$25 million New Mexico Environment Department (NMED) loan for this expansion project. The wastewater capital program has been historically, and continues to be heavily supported by debt financing pledging the net revenues of the system. Aside from the NMED Loan, the city has not issued debt to support the Joint Utility capital program since 2009 due to revenue capacity constraints. Effective February 1, 2013, water rates increased by eight and eight tenths percent (8.8%) annually to provide sufficient funds for rising operating and maintenance costs, and to support non-growth related capital projects. On May 22, 2013 the Governing Body amended the increase for Fiscal Year 2014 to seven and eight tenths percent (7.8%) effective July 1, 2013 (O16, Enactment 13-13). In Fiscal Year 2015, the third of five scheduled rate increases took effect July 1, 2014 (O11, Enactment 14-09), maintaining the seven and eight tenths percent (7.8%) increase through Fiscal Year 2017. Bolstered by these revenue enhancements, the Utility enterprise anticipates issuing new debt in calendar years

**Capital Improvement Plan  
Utilities-Wastewater**



**FY16**

2015 and 2016 for wastewater improvements. Significant cash financing for water projects in the approximate amount of \$6.5 million was appropriate in FY2016.



**FY2016-FY2021: ICIP Summary**

| Rank Priority | Fund/Project No.             | Project Title   | Project to Date | 2016 Budget | 2016 Additional Spending Anticipated | 2016 Total   | 2017         | 2018         | 2019 | 2020         | 2021 | Funding Requested: FY16-FY21 | Funding Source                   | Funding Source                   | Funding Source | Funding Source | Total Funding         |
|---------------|------------------------------|---|-----------------|-------------|--------------------------------------|--------------|--------------|--------------|------|--------------|------|------------------------------|----------------------------------|----------------------------------|----------------|----------------|-----------------------|
|               |                              |   |                 |             |                                      |              |              |              |      |              |      |                              | (A)                              | (B)                              | (C)            | (D)            | (A) + (B) + (C) + (D) |
| 1             | WW0673;<br>WW0928;<br>WW1389 | WWTP#6 Expansion, Effluent Tank and Pump Station and Reuse Line to WWTP#2-Phase I | \$ 16,787,736   | \$ -        | \$ 8,927,379                         | \$ 8,927,379 | \$ -         | \$ -         | \$ - | \$ -         | \$ - | \$ 8,927,379                 | Utility Funds Operating Revenues | Utility Loan Proceeds            |                |                |                       |
|               |                              |   |                 |             |                                      |              |              |              |      |              |      |                              | \$ 37,815                        | \$ 8,889,564                     |                |                | \$ 8,927,379          |
| 2             | WW1494                       | Retrofit WWTP#1 into 1.5MGD MBR Facility  | \$ -            | \$ -        | \$ 3,370,259                         | \$ 3,370,259 | \$ 6,419,828 | \$ 3,209,914 | \$ - | \$ -         | \$ - | \$ 13,000,000                | Utility Funds Operating Revenues | Utility Bond Proceeds            |                |                |                       |
|               |                              |   |                 |             |                                      |              |              |              |      |              |      |                              | \$ 160,345                       | \$ 12,839,655                    |                |                | \$ 13,000,000         |
| 3             | WW1251;<br>WW1490            | Significant Rebuild and Repair WWTP 1, 2A, 2B, and 3; Lift Stations 4 and 8       | \$ 1,034,505    | \$ -        | \$ 255,493                           | \$ 255,493   | \$ -         | \$ -         | \$ - | \$ -         | \$ - | \$ 255,493                   | Utility Funds Operating Revenues |                                  |                |                |                       |
|               |                              |   |                 |             |                                      |              |              |              |      |              |      |                              | \$ 255,493                       |                                  |                |                | \$ 255,493            |
| 4             | N/A                          | New Warehouse, Laboratory, and Office Complex at WWTP#2                           | \$ -            | \$ -        | \$ 3,000,000                         | \$ 3,000,000 | \$ -         | \$ -         | \$ - | \$ -         | \$ - | \$ 3,000,000                 | To Be Determined                 |                                  |                |                |                       |
|               |                              |   |                 |             |                                      |              |              |              |      |              |      |                              | \$ 3,000,000                     |                                  |                |                | \$ 3,000,000          |
| 5             | N/A                          | Replace Membrane Filters at WWTPs   | \$ -            | \$ -        | \$ -                                 | \$ -         | \$ -         | \$ -         | \$ - | \$ 1,000,000 | \$ - | \$ 1,000,000                 | Utility Funds Operating Revenues |                                  |                |                |                       |
|               |                              |   |                 |             |                                      |              |              |              |      |              |      |                              | \$ 1,000,000                     |                                  |                |                | \$ 1,000,000          |
| 6             | N/A                          | Lift Stations 15, 21, and 22 Upgrades   | \$ -            | \$ -        | \$ -                                 | \$ -         | \$ 500,000   | \$ 2,000,000 | \$ - | \$ -         | \$ - | \$ 2,500,000                 | To Be Determined                 |                                  |                |                |                       |
|               |                              |   |                 |             |                                      |              |              |              |      |              |      |                              | \$ 2,500,000                     |                                  |                |                | \$ 2,500,000          |
| 7             | N/A                          | NM 528 Relief Force Main from Willow Creek to Lift Station 15                     | \$ -            | \$ -        | \$ -                                 | \$ -         | \$ 300,000   | \$ 1,200,000 | \$ - | \$ -         | \$ - | \$ 1,500,000                 | To Be Determined                 |                                  |                |                |                       |
|               |                              |   |                 |             |                                      |              |              |              |      |              |      |                              | \$ 1,500,000                     |                                  |                |                | \$ 1,500,000          |
| 8             | WA0770;<br>WW1496;<br>WW1650 | Aquifer Storage Demo/Direct Injection (Advanced Water Treatment)                  | \$ 9,324,726    | \$ 26,480   | \$ 5,102,961                         | \$ 5,129,441 | \$ -         | \$ -         | \$ - | \$ -         | \$ - | \$ 5,129,441                 | State Grants                     | Utility Funds Operating Revenues |                |                |                       |
|               |                              |   |                 |             |                                      |              |              |              |      |              |      |                              | \$ 3,840,000                     | \$ 1,289,441                     |                |                | \$ 5,129,441          |

**FY2016-FY2021: ICIP Summary**

| Rank Priority | Fund/Project No. | Project Title  | Project to Date | 2016 Budget | 2016 Additional Spending Anticipated | 2016 Total   | 2017       | 2018       | 2019         | 2020         | 2021       | Funding Requested: FY16-FY21 | Funding Source                   | Funding Source    | Funding Source         | Funding Source | Total Funding         |
|---------------|------------------|--|-----------------|-------------|--------------------------------------|--------------|------------|------------|--------------|--------------|------------|------------------------------|----------------------------------|-------------------|------------------------|----------------|-----------------------|
|               |                  |  |                 |             |                                      |              |            |            |              |              |            |                              | (A)                              | (B)               | (C)                    | (D)            | (A) + (B) + (C) + (D) |
| 9             | WW1495           | Recycled Water Storage Tank (Loma Colorado Terminal Effluent Reuse Tank) | \$ 119,277      | \$ -        | \$ 2,523,290                         | \$ 2,523,290 | \$ -       | \$ -       | \$ -         | \$ -         | \$ -       | \$ 2,523,290                 | Utility Funds Operating Revenues | Impact Fees-Water | Impact Fees-Wastewater |                |                       |
|               |                  |  |                 |             |                                      |              |            |            |              |              |            |                              | \$ 1,100,326                     | \$ 214,419        | \$ 1,208,545           |                | \$ 2,523,290          |
| 10            | Fund 512         | Vehicles and Heavy Machinery   | \$ 560,354      | \$ 388,630  | \$ 23,037                            | \$ 411,667   | \$ 108,000 | \$ 25,000  | \$ 26,000    | \$ 45,000    | \$ 45,000  | \$ 660,667                   | Utility Funds Operating Revenues |                   |                        |                |                       |
|               |                  |  |                 |             |                                      |              |            |            |              |              |            |                              | \$ 660,667                       |                   |                        |                | \$ 660,667            |
| 11            | Fund 501         | Major Equipment for Wastewater Treatment                                 | \$ 26,163       | \$ 139,569  | \$ -                                 | \$ 139,569   | \$ 47,000  | \$ 31,500  | \$ 51,250    | \$ 84,000    | \$ 52,500  | \$ 405,819                   | Utility Funds Operating Revenues |                   |                        |                |                       |
|               |                  |  |                 |             |                                      |              |            |            |              |              |            |                              | \$ 405,819                       |                   |                        |                | \$ 405,819            |
| 12            | WW1632           | SCADA Improvements   | \$ 109,682      | \$ 108,700  | \$ -                                 | \$ 108,700   | \$ 100,000 | \$ 100,000 | \$ 100,000   | \$ 100,000   | \$ 100,000 | \$ 608,700                   | Utility Funds Operating Revenues |                   |                        |                |                       |
|               |                  |  |                 |             |                                      |              |            |            |              |              |            |                              | \$ 608,700                       |                   |                        |                | \$ 608,700            |
| 13            | N/A              | Install/Replace Sanitary Sewer lines                                     | \$ -            | \$ -        | \$ -                                 | \$ -         | \$ 700,000 | \$ 725,000 | \$ 1,125,509 | \$ 1,144,052 | \$ 460,000 | \$ 4,154,561                 | To Be Determined                 |                   |                        |                |                       |
|               |                  |  |                 |             |                                      |              |            |            |              |              |            |                              | \$ 4,154,561                     |                   |                        |                | \$ 4,154,561          |
| 14            | N/A              | Broadmoor / Chessmen Sewer Line Repair                                   | \$ -            | \$ -        | \$ -                                 | \$ -         | \$ -       | \$ 414,359 | \$ -         | \$ -         | \$ -       | \$ 414,359                   | To Be Determined                 |                   |                        |                |                       |
|               |                  |  |                 |             |                                      |              |            |            |              |              |            |                              | \$ 414,359                       |                   |                        |                | \$ 414,359            |
| 15            | N/A              | Security Wall @ WWTP#2   | \$ -            | \$ -        | \$ -                                 | \$ -         | \$ 350,000 | \$ -       | \$ -         | \$ -         | \$ -       | \$ 350,000                   | Utility Funds Operating Revenues |                   |                        |                |                       |
|               |                  |  |                 |             |                                      |              |            |            |              |              |            |                              | \$ 350,000                       |                   |                        |                | \$ 350,000            |
| 16            | WW0887           | Septic Dump Station  | \$ 200,193      | \$ -        | \$ -                                 | \$ -         | \$ -       | \$ -       | \$ -         | \$ -         | \$ -       | \$ 3,968,475                 | \$ 3,968,475                     |                   |                        |                |                       |
|               |                  |  |                 |             |                                      |              |            |            |              |              |            |                              | \$ 3,968,475                     |                   |                        |                | \$ 3,968,475          |

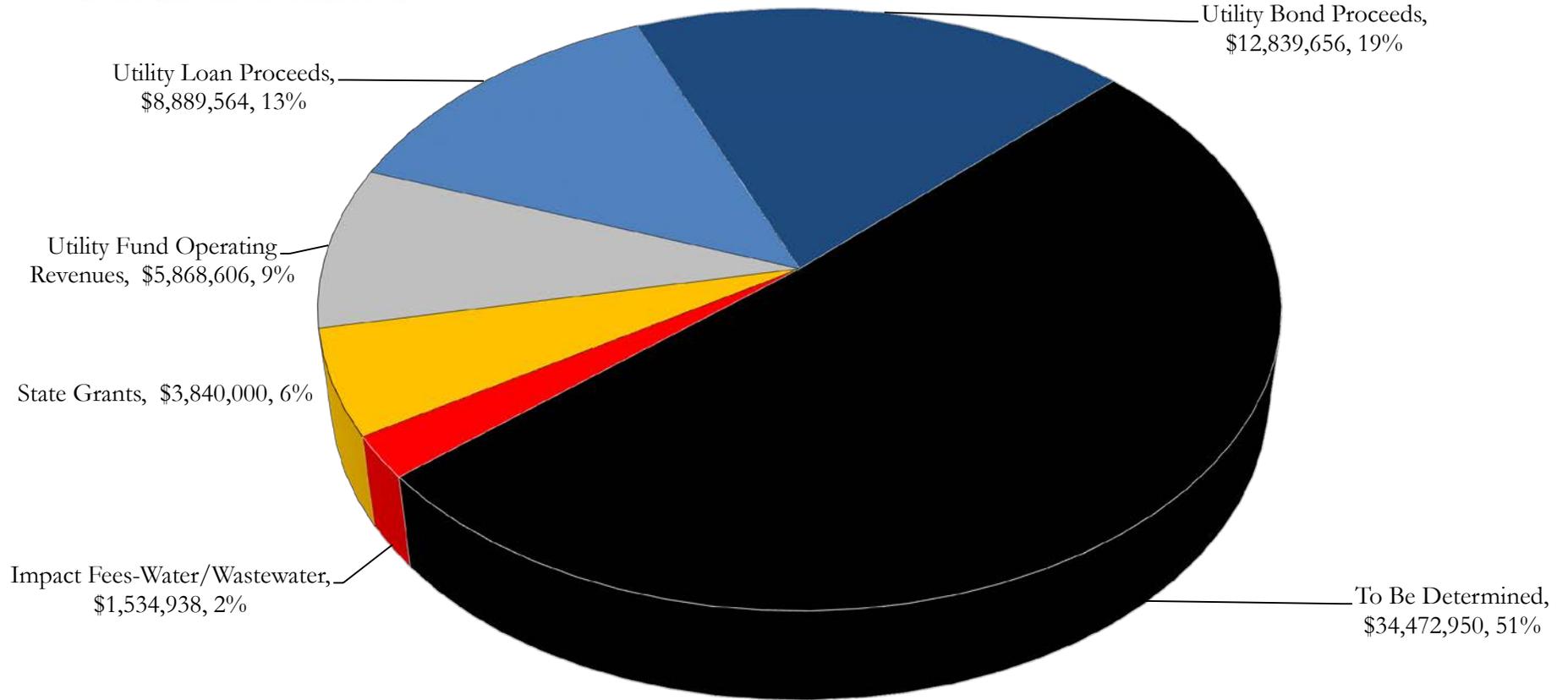


2016-2021 Infrastructure and Capital Improvement Plan  
**Utilities-Wastewater**

**FY2016-FY2021: ICIP Summary**

| Rank Priority | Fund/Project No. | Project Title   | Project to Date | 2016 Budget | 2016 Additional Spending Anticipated | 2016 Total | 2017 | 2018 | 2019 | 2020         | 2021          | Funding Requested: FY16-FY21 | Funding Source         | Funding Source   | Funding Source | Funding Source | Total Funding         |
|---------------|------------------|---|-----------------|-------------|--------------------------------------|------------|------|------|------|--------------|---------------|------------------------------|------------------------|------------------|----------------|----------------|-----------------------|
|               |                  |   |                 |             |                                      |            |      |      |      |              |               |                              | (A)                    | (B)              | (C)            | (D)            | (A) + (B) + (C) + (D) |
| 17            | N/A              | Retrofit WWTP#3 into 1.5MGD MBR Facility                              | \$ -            | \$ -        | \$ -                                 | \$ -       | \$ - | \$ - | \$ - | \$ 2,700,000 | \$ 13,500,000 | \$ 16,200,000                | To Be Determined       |                  |                |                |                       |
|               |                  |   |                 |             |                                      |            |      |      |      |              |               |                              | \$ 16,200,000          |                  |                |                | \$ 16,200,000         |
| 18            | WW1183; WW1493   | Montoya's Arroyo Sewer Upgrade-Phase 5 (Northern Blvd. to Cherry Rd.) | \$ 1,808,308    | \$ -        | \$ 47,529                            | \$ 47,529  | \$ - | \$ - | \$ - | \$ 200,000   | \$ 2,000,000  | \$ 2,247,529                 | Impact Fees-Wastewater | To Be Determined |                |                |                       |
|               |                  |   |                 |             |                                      |            |      |      |      |              |               |                              | \$ 47,529              | \$ 2,200,000     |                |                | \$ 2,247,529          |
| 19            | WW1501           | Industrial Park Loop Sewer Line                                       | \$ -            | \$ -        | \$ 600,000                           | \$ 600,000 | \$ - | \$ - | \$ - | \$ -         | \$ -          | \$ 600,000                   | Impact Fees-Wastewater | To Be Determined |                |                |                       |
|               |                  |   |                 |             |                                      |            |      |      |      |              |               |                              | \$ 64,445              | \$ 535,555       |                |                | \$ 600,000            |

**TOTALS**    \$ 29,970,944    \$ 663,379    \$ 23,849,948    \$ 24,513,327    \$ 8,524,828    \$ 7,705,773    \$ 1,302,759    \$ 5,273,052    \$ 20,125,975    \$ 67,445,714    \$ 67,445,714



|                                 | FY16                 | FY17                | FY18                | FY19                | FY20                | FY21                 | TOTAL                |
|---------------------------------|----------------------|---------------------|---------------------|---------------------|---------------------|----------------------|----------------------|
| Impact Fees-Water/Wastewater    | \$ 1,534,938         |                     |                     |                     |                     |                      | \$ 1,534,938         |
| State Grants                    | \$ 3,840,000         |                     |                     |                     |                     |                      | \$ 3,840,000         |
| Utility Fund Operating Revenues | \$ 3,503,356         | \$ 605,000          | \$ 156,500          | \$ 177,250          | \$ 1,229,000        | \$ 197,500           | \$ 5,868,606         |
| Utility Loan Proceeds           | \$ 8,889,564         |                     |                     |                     |                     |                      | \$ 8,889,564         |
| Utility Bond Proceeds           | \$ 3,209,914         | \$ 6,419,828        | \$ 3,209,914        |                     |                     |                      | \$ 12,839,656        |
| To Be Determined                | \$ 3,535,555         | \$ 1,500,000        | \$ 4,339,359        | \$ 1,125,509        | \$ 4,044,052        | \$ 19,928,475        | \$ 34,472,950        |
| <b>TOTAL</b>                    | <b>\$ 24,513,327</b> | <b>\$ 8,524,828</b> | <b>\$ 7,705,773</b> | <b>\$ 1,302,759</b> | <b>\$ 5,273,052</b> | <b>\$ 20,125,975</b> | <b>\$ 67,445,714</b> |

**WASTEWATER  
PROJECTS UNDER CONSIDERATION**

| <b>Rank</b> | <b>Project Name</b>  | <b>Fiscal Year(s)</b> | <b>Project Estimate</b> |
|-------------|--|-----------------------|-------------------------|
| 20          | Sludge De-Watering Building @ WWTP#2                             | 2018-2019             | \$ 5,111,394            |
| 21          | Lift Station #16 (Gateway South) New Well, Pumps with Flow Meter | 2019-2020             | \$ 180,000              |
| 22          | Barranca Sewer Line-Phase II-Idalia Rd. to City Center           | 2019-2020             | \$ 4,000,000            |
| 23          | WWTP#2 Expansion and Retrofit                                    | 2020-2021             | \$ 38,677,361           |
| 24          | Southern and Unser Sanitary Sewer (SAS) Diversion                | 2020                  | \$ 1,471,288            |
| 25          | Northern Blvd. Phase B-Unser to 30th St. Sanitary Sewerline      | 2020                  | \$ 370,887              |
| 26          | Paseo Gateway Wastewater Line                                    | 2019-2020             | \$ 4,145,744            |
|             |  |                       |                         |
|             | <b>TOTAL</b>   |                       | <b>\$ 53,956,674</b>    |

### 1. PROJECT INFORMATION

|                       |  |                       |  |                              |                         |
|-----------------------|--|-----------------------|--|------------------------------|-------------------------|
| Project Title         | WWTP #6 Equipment Expansion, Effluent Tank and Pump Station, Reuse Line to WWTP #2, Cabezon Switchover, and Lift Station 10 Relocation | Requesting Department | Dept. of Public Works/Utilities Administration | Department Rank Priority No. | 1                       |
| Project Category      | Utilities-Wastewater   | CIP Year              | FY2006   | Project No.:                 | WW0928; WW0673; WW1389  |
| Estimated Useful Life | Greater than 25 Years  | District Location     | Multiple Districts                             | Project Request Status       | Revised Project Request |

### 2. PROJECT DESCRIPTION AND SCOPE

The project consists of 1. Expansion of Wastewater Treatment Plant (WWTP) #6 from 0.6 Million Gallon per Day (MGD) to 1.2 MGD (COMPLETE); 2. A new 6 MGD Booster Station and new 3 MG effluent storage tank; 3. Approximately 29,000 feet of 12" and 18" transmission mains extending generally north and east from WWTP#6 to WWTP#2; and, 4. Relocation of Lift Station 10 currently located on Southern Boulevard & New Mexico Highway 528.

### 3. PROJECT JUSTIFICATION

The WWTP#6 expansion will increase treatment capacity while the pump station and transmission lines will deliver reuse water from WWTP#6 (located in the Cabezon subdivision) to the WWTP#2 site. Reuse water treated at WWTP#6 will provide irrigation water for various city parks, the Rio Rancho Sports Complex, the Cabezon subdivision, and the Chamisa Hills Country Club, therefore reducing the city's potable water demand. At a future time, WWTP#6 will also be the prime source of water for the city's direct injection program which will replenish ground water supplies. A new Lift Station 10 will be constructed to divert wastewater to reduce the flow to WWTP #2, thus providing hydraulic and solids loading relief at WWTP #2. The additional capacity will allow WWTP #2 to be more readily able to handle the increased flow that will be seen by the City Center development until WWTP #2 can be expanded. The diverted flow will then be routed for treatment to WWTP #1.

### 4. PROJECT HISTORY AND STATUS

The WWTP#6 expansion project received categorical exclusion for environmental clearance in July 2009, while the effluent line environmental assessment was completed in November 2009. The city closed on a Clean Water State Revolving Fund Loan in June 2009 with the NMED in the amount of \$25M to fully fund the project and design commenced in February 2010. Construction of the 27th Street reuse line from WWTP#6 to the intersection of 27th Street and Southern Blvd. was completed in September 2010 (\$407,238) and construction of the Phase I-Reuse line in the Montoyas Arroyo was completed in December 2011 (\$693,227). Construction of Phase II-Reuse line through the Chamisa Greens Golf Course was completed in June 2012 (\$1,833,588) and construction of the WWTP#6 plant expansion was completed in November 2013 (\$5,380,573). Construction of the 9,200' reuse line from the Montoyas Arroyo to the Loma Colorado direct injection site just south of Eagle Ridge Middle School (WA0770) was completed in June 2013 (\$1,833,588). Construction of the Reuse Booster Station and Storage Tank commenced in January 2014 and was substantially completed in April 2015 (\$4,705,868). Lastly, design of the Lift Station 10 Relocation project was completed in June 2015 and a location has been identified and property acquired. Construction is expected to commence in Summer 2015.

### 5. CAPITAL COSTS

| PHASE                      | SOURCE(S) OF COST INFO | PRIOR YEARS          | FY16                | FY17        | FY18        | FY19        | FY20        | FY21        | TOTAL                |
|----------------------------|------------------------|----------------------|---------------------|-------------|-------------|-------------|-------------|-------------|----------------------|
| Planning and Feasibility   |                        |                      |                     |             |             |             |             |             | \$ -                 |
| Pre Design and Env. Review | Recent City project    | \$ 57,359            |                     |             |             |             |             |             | \$ 57,359            |
| Land Acq./ROW              | Recent City project    | \$ 420,292           |                     |             |             |             |             |             | \$ 420,292           |
| Design and Specifications  | Recent City project    | \$ 2,900,293         | \$ 160,178          |             |             |             |             |             | \$ 3,060,472         |
| Construction               | Recent City project    | \$ 13,204,989        | \$ 8,755,020        |             |             |             |             |             | \$ 21,960,010        |
| Construction Management    | Recent City project    | \$ 22,558            |                     |             |             |             |             |             | \$ 22,558            |
| Equipment/ Vehicle         |                        |                      |                     |             |             |             |             |             | \$ -                 |
| Other                      | Recent City project    | \$ 182,244           | \$ 12,180           |             |             |             |             |             | \$ 194,424           |
| <b>TOTAL</b>               |                        | <b>\$ 16,787,736</b> | <b>\$ 8,927,379</b> | <b>\$ -</b> | <b>\$ 25,715,115</b> |

### 6. PROPOSED SOURCES OF FUNDING

| REVENUE SOURCE                   | EXPENDITURE FUND                | PRIOR YEARS          | FY16                | FY17        | FY18        | FY19        | FY20        | FY21        | TOTAL                |
|----------------------------------|---------------------------------|----------------------|---------------------|-------------|-------------|-------------|-------------|-------------|----------------------|
| Impact Fees-Wastewater           | 555 Wastewater Impact Fees Fund | \$ 443,561           |                     |             |             |             |             |             | \$ 443,561           |
| Utility Funds Operating Revenues | 552 Effluent Fund               | \$ 233,741           | \$ 37,815           |             |             |             |             |             | \$ 271,555           |
| Utility Loan Proceeds            | 576-NMED Loan WWTP6             | \$ 16,110,434        | \$ 8,889,564        |             |             |             |             |             | \$ 24,999,998        |
| <b>TOTAL</b>                     |                                 | <b>\$ 16,787,736</b> | <b>\$ 8,927,379</b> | <b>\$ -</b> | <b>\$ 25,715,115</b> |

**1. PROJECT INFORMATION**

|                       |  |                       |  |                              |                         |
|-----------------------|--|-----------------------|--|------------------------------|-------------------------|
| Project Title         | Retrofit WWTP #1 into 1.5 MGD MBR Facility | Requesting Department | Dept. of Public Works/Utilities Administration | Department Rank Priority No. | 2                       |
| Project Category      | Utilities-Wastewater                       | CIP Year              | FY2014   | Project No.:                 | WW1494                  |
| Estimated Useful Life | Greater than 25 Years                      | District Location     | Council District 5                             | Project Request Status       | Revised Project Request |

**2. PROJECT DESCRIPTION AND SCOPE**

The project involves rebuilding WWTP #1 located on Sara Rd. in Council District 5 to a Membrane Bioreactor (MBR) plant. The existing process basins will be converted into aeration tanks and MBR tanks, headworks facility, and a blower building will be added.

**3. PROJECT JUSTIFICATION**

Upgrading the WWTP #1 to an MBR facility will increase the effluent water quality, increase treatment capacity, improve operation stability and decrease odor emitted from the plant.

**4. PROJECT HISTORY AND STATUS**

WWTP#1 was built circa 1971. Building an MBR plant at the WWTP #1 site will: 1. Enable the city to treat more wastewater in a smaller area, and 2. Produce 1A quality recycled water. WWTP #1 facilities are structurally unsound due to the age of the plant. WWTP #1 was permitted and constructed as a 1 MGD plant however currently is only able to process 0.6 MGD. Building an MBR plant will ensure that the facility will continue to meet current and future NMED and EPA permit compliance. Preliminary design and development of a request for proposals for a design/build delivery option is in progress.

**5. CAPITAL COSTS**

| PHASE                      | SOURCE(S) OF COST INFO | PRIOR YEARS | FY16         | FY17         | FY18         | FY19 | FY20 | FY21 | TOTAL         |
|----------------------------|------------------------|-------------|--------------|--------------|--------------|------|------|------|---------------|
| Planning and Feasibility   |                        |             |              |              |              |      |      |      | \$ -          |
| Pre Design and Env. Review |                        |             |              |              |              |      |      |      | \$ -          |
| Land Acq./ROW              |                        |             |              |              |              |      |      |      | \$ -          |
| Design and Specifications  | Cost Consultant        |             | \$ 160,345   |              |              |      |      |      | \$ 160,345    |
| Construction               | Cost Consultant        |             | \$ 3,209,914 | \$ 6,419,828 | \$ 3,209,914 |      |      |      | \$ 12,839,655 |
| Construction Management    |                        |             |              |              |              |      |      |      | \$ -          |
| Equipment/ Vehicle         |                        |             |              |              |              |      |      |      | \$ -          |
| Other                      |                        |             |              |              |              |      |      |      | \$ -          |
| <b>TOTAL</b>               |                        | \$ -        | \$ 3,370,259 | \$ 6,419,828 | \$ 3,209,914 | \$ - | \$ - | \$ - | \$ 13,000,000 |

**6. PROPOSED SOURCES OF FUNDING**

| REVENUE SOURCE        | EXPENDITURE FUND | PRIOR YEARS | FY16         | FY17         | FY18         | FY19 | FY20 | FY21 | TOTAL         |
|-----------------------|------------------|-------------|--------------|--------------|--------------|------|------|------|---------------|
| Utility Funds         | 550 CIF          |             | \$ 160,345   |              |              |      |      |      | \$ 160,345    |
| Operating Revenues    | Wastewater Fund  |             | \$ 3,209,914 | \$ 6,419,828 | \$ 3,209,914 |      |      |      | \$ 12,839,655 |
| Utility Bond Proceeds |                  |             |              |              |              |      |      |      | \$ -          |
|                       |                  |             |              |              |              |      |      |      | \$ -          |
|                       |                  |             |              |              |              |      |      |      | \$ -          |
| <b>TOTAL</b>          |                  | \$ -        | \$ 3,370,259 | \$ 6,419,828 | \$ 3,209,914 | \$ - | \$ - | \$ - | \$ 13,000,000 |

**1. PROJECT INFORMATION**

|                       |  |                       |  |                              |                         |
|-----------------------|--|-----------------------|--|------------------------------|-------------------------|
| Project Title         | Significant Rebuild and Repair for WWTP #2A and 2B | Requesting Department | Dept. of Public Works/Utilities Administration | Department Rank Priority No. | 3                       |
| Project Category      | Utilities-Wastewater                               | CIP Year              | FY2012   | Project No.:                 | WW1251; WW1490          |
| Estimated Useful Life | Greater than 25 Years                              | District Location     | Council District 4                             | Project Request Status       | Revised Project Request |

**2. PROJECT DESCRIPTION AND SCOPE**

The project includes baffle repair, influent line repair, mixer repairs, diffuser repairs, air manifold system modification and ultra-violet system repairs/upgrades to WWTP#2A and 2B. The project also includes a new 16" effluent line that will convey flows from WWTP#1 and WWTP#6 to the effluent outfall at WWTP#2.

**3. PROJECT JUSTIFICATION**

Due to the age and capacity of WWTP #2, a significant amount of capital repair is needed to handle not only the existing flows but also the expected increase in flows to the treatment plant in the future. A similar and successful rebuild was previously completed on a portion of the WWTP #2 treatment process and it is expected that this project will have equal success relative to increasing capacity and reducing operation and maintenance issues. The new 16" effluent line connection will allow the effluent from WWTP #6 and WWTP #1 to bypass the UV disinfection process at WWTP #2, resulting in an increase in capacity for disinfection of the effluent from WWTP #2.

**4. PROJECT HISTORY AND STATUS**

Rebuild work at WWTP#2A and 2B commenced in Fiscal Year 2012 and continues through Fiscal Year 2016. Rebuild work is currently on hold at this time due to the construction of the Cabezon Reuse Tank and Booster Station at WWTP#6. WWTP #2A is receiving an additional 1.2 MGD and cannot be taken down at this time. The 16" effluent line has been substantially completed and discharge permitting from NMED is pending.

**5. CAPITAL COSTS**

| PHASE                      | SOURCE(S) OF COST INFO | PRIOR YEARS         | FY16              | FY17        | FY18        | FY19        | FY20        | FY21        | TOTAL               |
|----------------------------|------------------------|---------------------|-------------------|-------------|-------------|-------------|-------------|-------------|---------------------|
| Planning and Feasibility   |                        |                     |                   |             |             |             |             |             | \$ -                |
| Pre Design and Env. Review |                        |                     |                   |             |             |             |             |             | \$ -                |
| Land Acq./ROW              |                        |                     |                   |             |             |             |             |             | \$ -                |
| Design and Specifications  | Recent City project    | \$ 50,539           | \$ 3,051          |             |             |             |             |             | \$ 53,590           |
| Construction               | Recent City project    | \$ 983,966          | \$ 252,442        |             |             |             |             |             | \$ 1,236,408        |
| Construction Management    |                        |                     |                   |             |             |             |             |             | \$ -                |
| Equipment/ Vehicle         |                        |                     |                   |             |             |             |             |             | \$ -                |
| Other                      |                        |                     |                   |             |             |             |             |             | \$ -                |
| <b>TOTAL</b>               |                        | <b>\$ 1,034,505</b> | <b>\$ 255,493</b> | <b>\$ -</b> | <b>\$ 1,289,998</b> |

**6. PROPOSED SOURCES OF FUNDING**

| REVENUE SOURCE                   | EXPENDITURE FUND | PRIOR YEARS         | FY16              | FY17        | FY18        | FY19        | FY20        | FY21        | TOTAL               |
|----------------------------------|------------------|---------------------|-------------------|-------------|-------------|-------------|-------------|-------------|---------------------|
| Utility Funds Operating Revenues | 501 Utilities    | \$ 1,034,505        | \$ 255,493        |             |             |             |             |             | \$ 1,289,998        |
|                                  |                  |                     |                   |             |             |             |             |             | \$ -                |
|                                  |                  |                     |                   |             |             |             |             |             | \$ -                |
|                                  |                  |                     |                   |             |             |             |             |             | \$ -                |
|                                  |                  |                     |                   |             |             |             |             |             | \$ -                |
| <b>TOTAL</b>                     |                  | <b>\$ 1,034,505</b> | <b>\$ 255,493</b> | <b>\$ -</b> | <b>\$ 1,289,998</b> |

**1. PROJECT INFORMATION**

|                       |   |                       |  |                              |                         |
|-----------------------|---|-----------------------|--|------------------------------|-------------------------|
| Project Title         | New Warehouse, Laboratory, and Office Complex at WWTP#2 | Requesting Department | Dept. of Public Works/Utilities Administration | Department Rank Priority No. | 4                       |
| Project Category      | Utilities-Wastewater                                    | CIP Year              | FY2016   | Project No.:                 | TBD                     |
| Estimated Useful Life | Greater than 25 Years                                   | District Location     | Council District 5                             | Project Request Status       | Revised Project Request |

**2. PROJECT DESCRIPTION AND SCOPE**

The project consists of design and construction of a new warehouse with additional equipment storage space, a new laboratory, and office space at WWTP#2. Fleet Maintenance is also anticipated to operate/co-locate at this site. The project includes land acquisition for site expansion.

**3. PROJECT JUSTIFICATION**

Elevated treatment levels and population growth have put a strain on plant capacity at WWTP#2 as well as wastewater utility operating resources working from the site. The project is physically located in District 5, however will benefit multiple districts whose wastewater flows are conveyed to WWTP#2. The project is anticipated to allow fleet maintenance to move/co-locate to the site from its existing leased facility on 29th Street.

**4. PROJECT HISTORY AND STATUS**

WWTP #2 was built circa 1980. This facility does not have a warehouse; the parts distribution center for WWTP #2 are small temporary buildings. WWTP #2 was expanded in 1999 with NMED loan funds.

**5. CAPITAL COSTS**

| PHASE                      | SOURCE(S) OF COST INFO | PRIOR YEARS | FY16         | FY17 | FY18 | FY19 | FY20 | FY21 | TOTAL        |
|----------------------------|------------------------|-------------|--------------|------|------|------|------|------|--------------|
| Planning and Feasibility   |                        |             |              |      |      |      |      |      | \$ -         |
| Pre Design and Env. Review |                        |             |              |      |      |      |      |      | \$ -         |
| Land Acq./ROW              |                        |             |              |      |      |      |      |      | \$ -         |
| Design and Specifications  | Other                  |             | \$ 300,000   |      |      |      |      |      | \$ 300,000   |
| Construction               | Other                  |             | \$ 2,700,000 |      |      |      |      |      | \$ 2,700,000 |
| Construction Management    |                        |             |              |      |      |      |      |      | \$ -         |
| Equipment/Vehicle          |                        |             |              |      |      |      |      |      | \$ -         |
| Other                      |                        |             |              |      |      |      |      |      | \$ -         |
| <b>TOTAL</b>               |                        | \$ -        | \$ 3,000,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 3,000,000 |

**6. PROPOSED SOURCES OF FUNDING**

| REVENUE SOURCE   | EXPENDITURE FUND | PRIOR YEARS | FY16         | FY17 | FY18 | FY19 | FY20 | FY21 | TOTAL        |
|------------------|------------------|-------------|--------------|------|------|------|------|------|--------------|
| To Be Determined |                  |             | \$ 3,000,000 |      |      |      |      |      | \$ 3,000,000 |
|                  |                  |             |              |      |      |      |      |      | \$ -         |
|                  |                  |             |              |      |      |      |      |      | \$ -         |
|                  |                  |             |              |      |      |      |      |      | \$ -         |
|                  |                  |             |              |      |      |      |      |      | \$ -         |
| <b>TOTAL</b>     |                  | \$ -        | \$ 3,000,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 3,000,000 |

**1. PROJECT INFORMATION**

|                       |                                   |                       |  |                              |                         |
|-----------------------|-----------------------------------|-----------------------|--|------------------------------|-------------------------|
| Project Title         | Replace Membrane Filters at WWTPs | Requesting Department | Dept. of Public Works/Utilities Administration | Department Rank Priority No. | 5                       |
| Project Category      | Utilities-Wastewater              | CIP Year              | Recurring Capital Need                         | Project No.:                 | NA                      |
| Estimated Useful Life | 10 Years                          | District Location     | Multiple Districts                             | Project Request Status       | Revised Project Request |

**2. PROJECT DESCRIPTION AND SCOPE**

Replace Wastewater Membrane Filters at the Cabezon Water Reclamation Facility (1.2 MGD capacity) and Mariposa Water Reclamation Facility (0.25 MGD capacity) in Fiscal Year 2020.

**3. PROJECT JUSTIFICATION**

The project is necessary to ensure continued compliance with the City of Rio Rancho's National Pollution Discharge Elimination System (NPDES) permit issued by the Environmental Protection Agency (EPA). The Zenon Membrane Filters which produce a very high quality of effluent degrade over time and needs to be replaced prior to any potential violations or major failures.

**4. PROJECT HISTORY AND STATUS**

The Cabezon and Mariposa Water Reclamation Facilities were completed in March 2006 and Membrane lifetime are estimated to be 10 years. Capital transers from the Utility Operating Fund have been included in the Utility Five Year Financial Plan when all membranes will need to be replaced.

**5. CAPITAL COSTS**

| PHASE                      | SOURCE(S) OF COST INFO | PRIOR YEARS | FY16 | FY17 | FY18 | FY19 | FY20         | FY21 | TOTAL        |
|----------------------------|------------------------|-------------|------|------|------|------|--------------|------|--------------|
| Planning and Feasibility   |                        |             |      |      |      |      |              |      | \$ -         |
| Pre Design and Env. Review |                        |             |      |      |      |      |              |      | \$ -         |
| Land Acq./ROW              |                        |             |      |      |      |      |              |      | \$ -         |
| Design and Specifications  |                        |             |      |      |      |      |              |      | \$ -         |
| Construction               |                        |             |      |      |      |      |              |      | \$ -         |
| Construction Management    |                        |             |      |      |      |      |              |      | \$ -         |
| Equipment/ Vehicle         |                        |             |      |      |      |      |              |      | \$ -         |
| Other                      | Other                  |             |      |      |      |      | \$ 1,000,000 |      | \$ 1,000,000 |
| <b>TOTAL</b>               |                        | \$ -        | \$ - | \$ - | \$ - | \$ - | \$ 1,000,000 | \$ - | \$ 1,000,000 |

**6. PROPOSED SOURCES OF FUNDING**

| REVENUE SOURCE                   | EXPENDITURE FUND        | PRIOR YEARS | FY16 | FY17 | FY18 | FY19 | FY20         | FY21 | TOTAL        |
|----------------------------------|-------------------------|-------------|------|------|------|------|--------------|------|--------------|
| Utility Funds Operating Revenues | 550 CIF Wastewater Fund | \$ -        | \$ - | \$ - | \$ - | \$ - | \$ 1,000,000 | \$ - | \$ 1,000,000 |
|                                  |                         |             |      |      |      |      |              |      | \$ -         |
|                                  |                         |             |      |      |      |      |              |      | \$ -         |
|                                  |                         |             |      |      |      |      |              |      | \$ -         |
| <b>TOTAL</b>                     |                         | \$ -        | \$ - | \$ - | \$ - | \$ - | \$ 1,000,000 | \$ - | \$ 1,000,000 |

**1. PROJECT INFORMATION**

|                       |                                  |                       |  |                              |                         |
|-----------------------|----------------------------------|-----------------------|--|------------------------------|-------------------------|
| Project Title         | Aquifer Storage/Direct Injection | Requesting Department | Dept. of Public Works/Utilities Administration | Department Rank Priority No. | 8                       |
| Project Category      | Utilities-Wastewater             | CIP Year              | FY2007   | Project No.:                 | WA0770; WA1496; WW1650  |
| Estimated Useful Life | Greater than 25 Years            | District Location     | Council District 4                             | Project Request Status       | Revised Project Request |

**2. PROJECT DESCRIPTION AND SCOPE**

The project involves the construction of a subsurface injection system which will recharge aquifers that supply water to the city. This system includes the direct injection site, injection well, monitoring system, surface infrastructure for the direct injection system, two miles of pipeline from the Sports Complex to Loma Colorado and a partially buried reuse storage tank.

**3. PROJECT JUSTIFICATION**

The population growth in the city has increased the demand for potable and non-potable water. The city has acquired and continues to purchase water rights to help meet this demand, though it is slow and expensive. In order to protect this valuable resource, a water reuse program will be implemented to augment the water supply. Water will be put in aquifers by means of direct injection.

**4. PROJECT HISTORY AND STATUS**

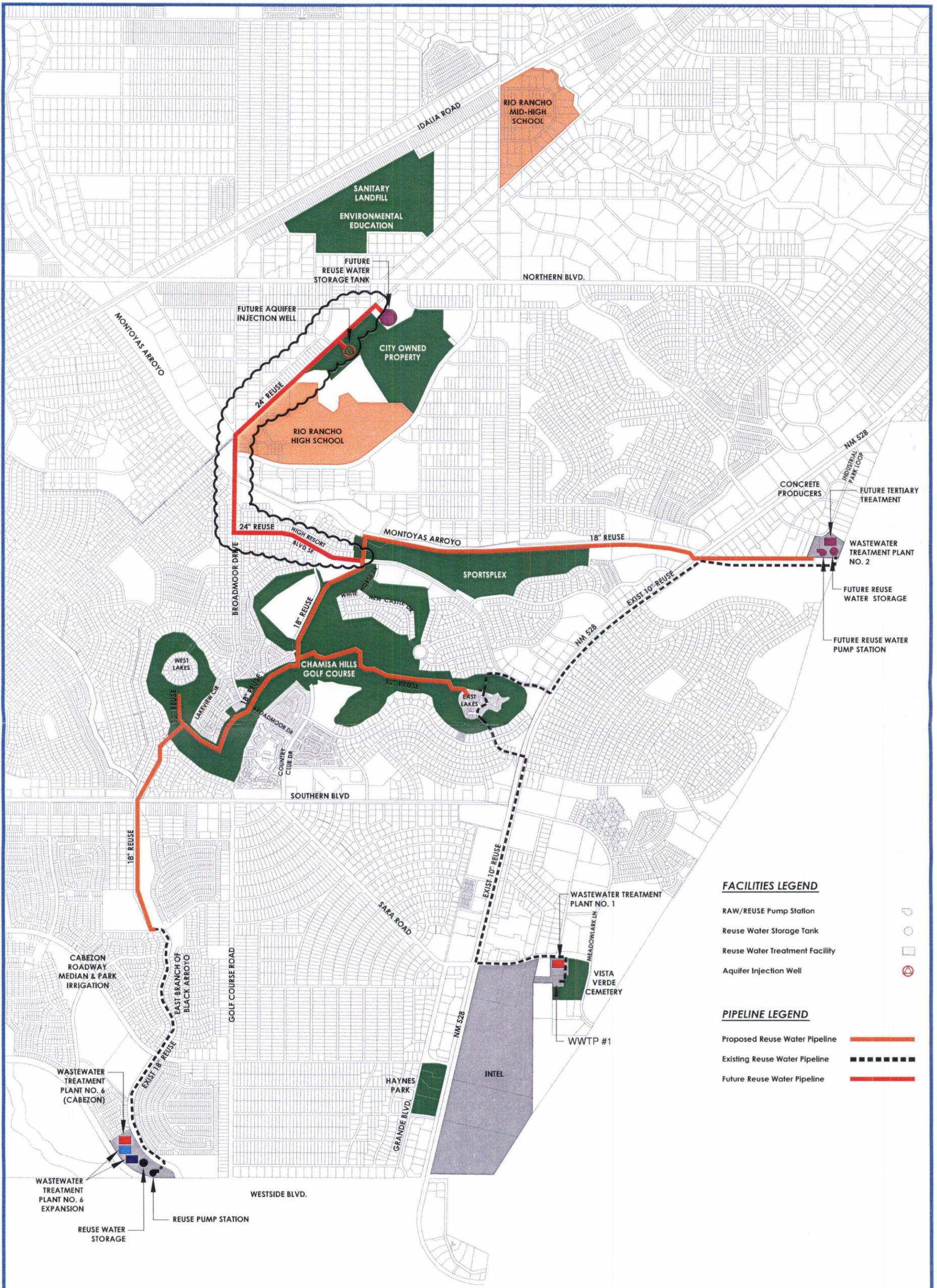
Construction of the Mariposa recharge system was completed in December 2008. The direct injection site, injection well, and monitoring system are also in place, completed in 2010 and 2011. Additional potable water testing at the Loma Colorado injection well site was completed in November 2012 and permitting and design of the full scale treatment site will continue into Fiscal Year 2016. Construction of a 6,000 sq. ft. building that will house future treatment equipment, steel storage tanks, and yard piping at the Loma Colorado site, and the last segment of a reuse pipeline from the area of the Sports Complex to the Loma Colorado site were substantially completed in late Spring 2013. The remaining phase of the advanced water treatment facility is estimated to cost an additional \$5.1 million, while the 3 million gallon reuse storage tank to be located at the Loma Colorado direct injection site will cost an additional \$2.6 million. The city anticipates a grant and loan financing package through the Water Trust Board administered by the New Mexico Finance Authority (NMFA).

**5. CAPITAL COSTS**

| PHASE                     | SOURCE(S) OF COST INFO | PRIOR YEARS         | FY16                | FY17        | FY18        | FY19        | FY20        | FY21        | TOTAL                |
|---------------------------|------------------------|---------------------|---------------------|-------------|-------------|-------------|-------------|-------------|----------------------|
| Land Acq./ROW             |                        |                     |                     |             |             |             |             |             | \$ -                 |
| Design and Specifications | Actual                 | \$ 2,333,670        | \$ 17,929           |             |             |             |             |             | \$ 2,351,599         |
| Construction              | Cost Consultant        | \$ 6,530,070        | \$ 5,085,032        |             |             |             |             |             | \$ 11,615,102        |
| Construction Management   |                        | \$ 397,155          |                     |             |             |             |             |             | \$ 397,155           |
| Equipment/Vehicle         | Actual                 | \$ 26,601           |                     |             |             |             |             |             | \$ 26,601            |
| Other                     | Actual                 | \$ 37,230           | \$ 26,480           |             |             |             |             |             | \$ 63,710            |
| <b>TOTAL</b>              |                        | <b>\$ 9,324,726</b> | <b>\$ 5,129,441</b> | <b>\$ -</b> | <b>\$ 14,454,167</b> |

**6. PROPOSED SOURCES OF FUNDING**

| REVENUE SOURCE                   | EXPENDITURE FUND                | PRIOR YEARS         | FY16                | FY17        | FY18        | FY19        | FY20        | FY21        | TOTAL                |
|----------------------------------|---------------------------------|---------------------|---------------------|-------------|-------------|-------------|-------------|-------------|----------------------|
| State Grants                     | 552 Effluent Fund               | \$ 5,336,454        | \$ 3,840,000        |             |             |             |             |             | \$ 9,176,454         |
| County Grants                    | 552 Effluent Fund               | \$ 1,500,000        |                     |             |             |             |             |             | \$ 1,500,000         |
| Utility Funds Operating Revenues | 552 Effluent Fund               | \$ 140,339          | \$ 1,289,441        |             |             |             |             |             | \$ 1,429,779         |
| Impact Fees-Wastewater           | 555 Wastewater Impact Fees Fund | \$ 134,997          |                     |             |             |             |             |             | \$ 134,997           |
| Utility Bond Proceeds            | 574-2009 UT Refunding Fund      | \$ 1,752,937        |                     |             |             |             |             |             | \$ 1,752,937         |
| Utility Loan Proceeds            | 552 Effluent Fund               | \$ 460,000          |                     |             |             |             |             |             | \$ 460,000           |
| <b>TOTAL</b>                     |                                 | <b>\$ 9,324,726</b> | <b>\$ 5,129,441</b> | <b>\$ -</b> | <b>\$ 14,454,167</b> |



**FACILITIES LEGEND**

- RAW/REUSE Pump Station
- Reuse Water Storage Tank
- Reuse Water Treatment Facility
- Aquifer Injection Well

**PIPELINE LEGEND**

- Proposed Reuse Water Pipeline
- Existing Reuse Water Pipeline
- Future Reuse Water Pipeline



**REUSE WATER DISTRIBUTION SYSTEM AND PHASING**

DATE: 9-30-2010

PREPARED BY:  
**WILSON & COMPANY**  
 2600 The American Rd. SE, Ste. 100  
 Rio Rancho, New Mexico 87124  
 505-898-8021



**1. PROJECT INFORMATION**

|                       |                              |                       |  |                              |                         |
|-----------------------|------------------------------|-----------------------|--|------------------------------|-------------------------|
| Project Title         | Vehicles and Heavy Equipment | Requesting Department | Dept. of Public Works/Utilities Administration | Department Rank Priority No. | 10                      |
| Project Category      | Utilities-Wastewater         | CIP Year              | Recurring Capital Need                         | Fund/Project No.:            | 512-0000-505-7015       |
| Estimated Useful Life | Greater than 25 Years        | District Location     | Multiple Districts                             | Project Request Status       | Revised Project Request |

**2. PROJECT DESCRIPTION AND SCOPE**

Vehicles and heavy equipment will be purchased for use in wastewater utility operations. Vehicle and equipment acquisitions planned for Fiscal Year 2016 include one (1) replacement truck, one (1) gator, one (1) skid steer loader, and a truck mounted CCTB inspection system for the Wastewater division. Vehicles and equipment on order in FY2015 total \$23,037 for a Wastewater truck replacement. This item has been included in the FY2016 capital expenditure plan as a roll over item.

**3. PROJECT JUSTIFICATION**

Vehicles and heavy equipment must be purchased on an annual basis to replace existing aging equipment. Replacement vehicles and heavy equipment purchases are necessary when the repair costs exceed the cost benefit of purchasing new equipment. A detailed vehicle acquisition schedule has been developed by the Utility Department and the annual cost has been incorporated into the Utility Enterprise's 5 Year Financial Plan.

**4. PROJECT HISTORY AND STATUS**

Heavy equipment and new vehicles are needed to repair water main breaks, service line leaks along with other routine maintenance needs.

**5. CAPITAL COSTS**

| PHASE                      | SOURCE(S) OF COST INFO | PRIOR YEARS       | FY16              | FY17              | FY18             | FY19             | FY20             | FY21             | TOTAL               |
|----------------------------|------------------------|-------------------|-------------------|-------------------|------------------|------------------|------------------|------------------|---------------------|
| Planning and Feasibility   |                        |                   |                   |                   |                  |                  |                  |                  | \$ -                |
| Pre Design and Env. Review |                        |                   |                   |                   |                  |                  |                  |                  | \$ -                |
| Land Acq./ROW              |                        |                   |                   |                   |                  |                  |                  |                  | \$ -                |
| Design and Specifications  |                        |                   |                   |                   |                  |                  |                  |                  | \$ -                |
| Construction               |                        |                   |                   |                   |                  |                  |                  |                  | \$ -                |
| Construction Management    |                        |                   |                   |                   |                  |                  |                  |                  | \$ -                |
| Equipment/Vehicle          | Other                  | \$ 560,354        | \$ 411,667        | \$ 108,000        | \$ 25,000        | \$ 26,000        | \$ 45,000        | \$ 45,000        | \$ 1,221,021        |
| Other                      |                        |                   |                   |                   |                  |                  |                  |                  | \$ -                |
| <b>TOTAL</b>               |                        | <b>\$ 560,354</b> | <b>\$ 411,667</b> | <b>\$ 108,000</b> | <b>\$ 25,000</b> | <b>\$ 26,000</b> | <b>\$ 45,000</b> | <b>\$ 45,000</b> | <b>\$ 1,221,021</b> |

**6. PROPOSED SOURCES OF FUNDING**

| REVENUE SOURCE                   | EXPENDITURE FUND    | PRIOR YEARS       | FY16              | FY17              | FY18             | FY19             | FY20             | FY21             | TOTAL               |
|----------------------------------|---------------------|-------------------|-------------------|-------------------|------------------|------------------|------------------|------------------|---------------------|
| Utility Funds Operating Revenues | 512 Ut Eq Repl Fund | \$ 560,354        | \$ 411,667        | \$ 108,000        | \$ 25,000        | \$ 26,000        | \$ 45,000        | \$ 45,000        | \$ 1,221,021        |
|                                  |                     |                   |                   |                   |                  |                  |                  |                  | \$ -                |
|                                  |                     |                   |                   |                   |                  |                  |                  |                  | \$ -                |
|                                  |                     |                   |                   |                   |                  |                  |                  |                  | \$ -                |
|                                  |                     |                   |                   |                   |                  |                  |                  |                  | \$ -                |
| <b>TOTAL</b>                     |                     | <b>\$ 560,354</b> | <b>\$ 411,667</b> | <b>\$ 108,000</b> | <b>\$ 25,000</b> | <b>\$ 26,000</b> | <b>\$ 45,000</b> | <b>\$ 45,000</b> | <b>\$ 1,221,021</b> |

Utilities Department  
FY16 ICIP Fleet Vehicle and Heavy Equipment Detail

| Rank | Vehicle # | Vehicle Type                   | Assignment                  | Year | Mileage      | 2016           | 2017           | 2018           | 2019           | 2020           | 2021             |
|------|-----------|--------------------------------|-----------------------------|------|--------------|----------------|----------------|----------------|----------------|----------------|------------------|
| 1    | New       | Ditch Witch FX20 Vacuum System | Transmission & Distribution | N/A  | N/A          | 28,481         |                |                |                |                |                  |
| 2    | UT124     | Chevy 1500                     | Wastewater Treatment        | 2004 | 173,423      | 26,000         |                |                |                |                |                  |
| 3    | UT97      | John Deere Gator               | Wastewater Treatment        | 1999 | 3512.8 Hrs   | 13,809         |                |                |                |                |                  |
| 4    | UT104     | Bobcat Skid Steer Loader       | Wastewater Treatment        | 1993 | 2095.1 Hrs   | 73,821         |                |                |                |                |                  |
| 5    | UT110     | GMC Cargo Van Truck Mounted    | Wastewater Treatment        | 1999 | 18,615       | 275,000        |                |                |                |                |                  |
| 6    | New       | Chevy 1500                     | Water Production            | N/A  | N/A          | 23,677         |                |                |                |                |                  |
| 7    | UT145     | Chevrolet Colorado             | Water Production            | 2006 | 173,522      | 23,677         |                |                |                |                |                  |
| 8    | New       | 3/4 Ton Pick-up Truck          | Water Production            | N/A  | N/A          | 23,677         |                |                |                |                |                  |
| 9    | EN20      | Ford F-250 Truck               | Engineering                 | 2007 | 122,794      |                | 30,000         |                |                |                |                  |
| 10   | CS152     | Ford Ranger                    | Utility Services            | 2006 | 123,611      |                | 26,000         |                |                |                |                  |
| 11   | UT118     | Ford F-250 Truck               | Wastewater Treatment        | 2002 | 117,253      |                | 30,000         |                |                |                |                  |
| 12   | UT102     | Kenworth Truck Tractor         | Wastewater Treatment        | 1989 | 86,015       |                | 50,000         |                |                |                |                  |
| 13   | UT124     | Chevy 1500                     | Wastewater Treatment        | 2004 | 173,423      |                | 28,000         |                |                |                |                  |
| 14   | UT35A     | 12CY Dump Truck                | Transmission & Distribution | 1997 | 39,117       |                | 120,000        |                |                |                |                  |
| 15   | UT142     | Ford F150                      | Transmission & Distribution | 2005 | 212,837      |                | 26,000         |                |                |                |                  |
| 16   | UT145     | Chevy Colorado                 | Water Production            | 2006 | 151,066      |                |                | 26,000         |                |                |                  |
| 17   | UT26      | Ford F-250 Truck               | Transmission & Distribution | 1997 | 180,257      |                |                | 30,000         |                |                |                  |
| 18   | UT27      | Ford F-250 Truck               | Transmission & Distribution | 1997 | 206,859      |                |                | 30,000         |                |                |                  |
| 19   | UT118     | Ford F-150 Truck               | Wastewater Treatment        | 2002 | 117,253      |                |                | 25,000         |                |                |                  |
| 20   | UT36      | Chevy 1500                     | SCADA                       | 2008 | 88,173       |                |                | 25,000         |                |                |                  |
| 21   | UT124     | Chevy 1500                     | Water Production            | 2004 | 120,125      |                |                | 25,000         |                |                |                  |
| 22   | UT146     | Ford F-350 Truck               | Water Production            | 2006 | 136,699      |                |                | 50,000         |                |                |                  |
| 23   | UT147     | Ford F-350                     | Water Production            | 2006 | 107,751      |                |                |                | 45,000         |                |                  |
| 24   | UT163     | Dodge Dakota                   | Transmission & Distribution | 2006 | 134,395      |                |                |                | 25,000         |                |                  |
| 25   | UT142     | Ford F-150 Truck               | Transmission & Distribution | 2005 | 170,690      |                |                |                | 26,000         |                |                  |
| 26   | UT157A    | Chevy S10                      | Wastewater Treatment        | 1995 | 58,443       |                |                |                | 26,000         |                |                  |
| 27   | UT35      | John Deere Backhoe             | Transmission & Distribution | 1996 | 5774 Hrs     |                |                |                | 90,000         |                |                  |
| 28   | UT135-1   | Ford F-350                     | Wastewater Treatment        | 2005 | 125,552      |                |                |                |                | 45,000         |                  |
| 29   | CS23      | Ford Ranger                    | Utility Services            | 2008 | 108,193      |                |                |                |                | 30,000         |                  |
| 30   | CS29      | Ford Ranger                    | Utility Services            | 2008 | 113,221      |                |                |                |                | 30,000         |                  |
| 31   | UT134     | GAP-VAX                        | Transmission & Distribution | 2004 | 46,103       |                |                |                |                |                | 400,000          |
| 32   | CS137     | Ford Ranger                    | Utility Services            | 2005 | 128,764      |                |                |                |                |                | 30,000           |
| 33   | UT11      | Ford F-450 Truck               | Water Production            | 2002 | 175,887      |                |                |                |                |                | 53,000           |
| 34   | UT12      | Dodge 1500 Pick-up Truck       | Water Production            | 2001 | 111,602      |                |                |                |                |                | 26,000           |
| 35   | UT90      | Ford F800 Vactor               | Transmission & Distribution | 1993 | 257,996      |                |                |                |                |                | 400,000          |
| 36   | UT122     | Chvrolet 1500 Truck            | Water Production            | 2004 | 177,847      |                |                |                |                |                | 26,000           |
| 37   | UT127     | Ford F550 Truck                | Transmission & Distribution | 2004 | 126,765      |                |                |                |                |                | 65,000           |
| 38   | UT138     | Ford F-250 Truck               | Wastewater Treatment        | 2005 | 115,595      |                |                |                |                |                | 45,000           |
| 39   | UT141     | Ford E-250 Cargo Van           | SCADA                       | 2005 | 108,228      |                |                |                |                |                | 38,000           |
| 40   | UT154     | Ford F-350 Truck               | Transmission & Distribution | 2007 | 103,396      |                |                |                |                |                | 38,000           |
| 41   | UT156     | Ford Ranger                    | Water Production            | 2007 | 113,110      |                |                |                |                |                | 45,000           |
|      |           |                                |                             |      | <b>TOTAL</b> | <b>488,142</b> | <b>310,000</b> | <b>211,000</b> | <b>212,000</b> | <b>588,000</b> | <b>683,000</b>   |
|      |           |                                |                             |      |              |                |                |                | <b>FY16-21</b> |                | <b>2,492,142</b> |
|      |           |                                |                             |      | Water        | 99,512         | 202,000        | 186,000        | 186,000        | 543,000        | 638,000          |
|      |           |                                |                             |      | Wastewater   | 388,630        | 108,000        | 25,000         | 26,000         | 45,000         | 45,000           |
|      |           |                                |                             |      | Total        | 488,142        | 310,000        | 211,000        | 212,000        | 588,000        | 683,000          |

### Wastewater Treatment Projects

#### **Aquifer Storage Demonstration (WA0770), Advanced Water Treatment (WW1496), and Recycled Water Storage Tank (WW1495)**



Project expenditures to date for the Aquifer Storage Demonstration and Advanced Water Treatment projects total \$9.3 million. Various subprojects have been completed in support of advanced water treatment for aquifer recharge with high quality reclaimed water sources, including construction of the injection well at Loma Colorado in June 2011. Additional potable water testing at the Loma Colorado injection well site was completed in November 2012 and permitting and design of the full scale treatment site continue in Fiscal Year 2016. Construction of a 6,000 sq. ft. building that will house future treatment equipment,

steel storage tanks, and yard piping at the Loma Colorado site, and the last segment of a reuse pipeline from the area of the Sports Complex to the Loma Colorado site were substantially completed in late spring 2013. The remaining phase of the advanced water treatment facility involves equipping at an estimated cost of \$5.1 million. Staff anticipates a grant and loan financing package through the Water Trust Board administered by the New Mexico Finance Authority. A related project involves construction of a 3 million gallon ground storage reservoir located near the Loma Colorado site that will hold incoming recycled water pumped from the reclamation facility. Design is in progress and the project is fully funded by a combination of utility operating sources, and water and wastewater impact fees.

#### **Wastewater Treatment Plant (WWTP) #6 Expansion and Reuse Line to WWTP#2 (WW0673, WW0928, and WW1389)**

In September 2009, the city entered into a loan agreement with the New Mexico Environment Department (NMED) in the principal amount of \$25 million for the expansion of and construction of reuse facilities at WWTP#6. The project consists of expansion of the wastewater treatment plant from 0.6 million gallons per day to 1.2 million gallons per day, a new 6 Million Gallon Per Day (MGD) booster station, a new 3 MGD effluent storage tank, and approximately 29,000 linear feet of 12" and 18" transmission line extending generally north and east from WWTP#6 to WWTP#2. The expansion will increase treatment capacity at WWTP#6 while the booster station and transmission lines will deliver reuse water from WWTP#6 to the WWTP#2 site, providing irrigation water for various city parks, the Rio Rancho Sports Complex, the Cabezon subdivision, and the Club Rio Rancho Country Club. Treated effluent water will

also be used for direct injection activities related to the aquifer recharge project described above. Constructions of various segments of the reuse pipeline from WWTP#6 to WWTP#2 have been completed including:

- WWTP#6 to the intersection of 27<sup>th</sup> Street and Southern Blvd.: September 2010
- Phase I reuse line with the Montoyas Arroyo from Sports Complex Dam to WWTP#2: December 2011
- Club Rio Rancho reuse line: June 2012



Construction of an expanded WWTP#6 facility and installation of the membrane filtration system was substantially completed in July 2013 and bid letting for the reuse tank and booster station occurred in late 2013. Construction of the tank and booster station was substantially completed in April 2015, and the switchover of irrigation service connections at several parks and medians in the Cabezon area are in progress. The project also involves relocation of Lift Station No. 10. Construction is expected to commence in summer 2015. In addition to the \$25 million NMED loan, the project is funded through wastewater impact fees (\$386,205), and utility operating fund sources (\$77,133).

**Significant Rebuild of WWTP#2A and 2B (WW1251) and WWTP#2 Effluent Line Upgrade (WW1490)**



The project includes baffle repair, influent line upgrade, mixer rebuild, diffuser rebuild, air manifold system modification and ultra violet system upgrades to WWTP#2A. Work commenced in Fiscal Year 2012, however is currently on hold pending completion of the Cabezon Reuse Tank and Booster Station project. A new 16" effluent line was also completed in February 2015 to convey flows from WWTP#1 and WWTP#6 to the effluent outfall at WWTP#2. Discharge permitting from the New Mexico Environment Department is currently pending. Both projects were funded by utility operating sources.

**Rebuild of WWTP#1 (WW1494)**

Preliminary engineering analysis is currently in progress for the WWTP#1 Rebuild project which will convert the plant into a 1.5 MGD Membrane Bioreactor. Rebuilding the plant will expand the city's treatment capacity, improve effluent water quality, and decrease odor emitted from the plant. Design is funded by utility operating fund sources. Bond proceeds in the amount of \$13 million are anticipated for construction activities to commence in 2016.

**Sewer Lines**

**Los Montoyas Arroyo Sewer line Phase III (WW1183) and Phase IV (WW1492)**

Phase III consisted of installation of new 30" and 36" sanitary sewer pipe to replace the existing 15" pipe that was capped and abandoned in place. Phase III construction from the Sports Complex Dam to approximately 500 feet east of Broadmoor Boulevard was completed in February 2013 at a cost of \$1,320,667. A related developer

managed project involved expansion of the sewer interceptor from the termination point of Phase III to Idalia Road to serve developments northwest of Northern and Broadmoor Boulevards. At the time the developer segment of the line was completed, staff commenced Phase IV which extends from Idalia Road to Northern Boulevard to connect to an existing sewer line. Phase IV improvements were completed in January 2015 and were funded by wastewater impact fees and utility operating sources totaling \$535,170.



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