

### Existing Inventory

The Utilities Division of the Public Works Department served an estimated 32,439 residential and non-residential water customers as of December 31, 2014. Average daily production in thousands of gallons for calendar year 2014 was 10,381. Annual water produced for 2014 was 11,628 acre-feet or 3.79 billion gallons.

The Utilities Division operates and maintains:

- 17 Production Wells
- 8 Booster Pump Stations
- 18 Storage Tanks (Storage Capacity: 41 million gallons)
- 1 Reverse Osmosis System
- 10 Arsenic Treatment Facilities, and;
- 568 Miles of Water line

### Current Capacity and Condition of Assets and Infrastructure

#### *Production Wells*

The water system inventory includes 17 production wells of varying age, condition, and production capacities. Fifteen wells are in active production status and the city produced an estimated 11,628 acre-feet of water in calendar year 2014. Any number of wells at different locations may be under repair at any given time. The significance of wells under repair depends on location and time of year the well breaks down. Well ages generally range from 1969 through 2004 with most wells drilled in the 1980's and 1990's. The conditions of the wells vary from site to site.

#### *Arsenic Treatment Facilities*

In 2003 the U.S. Environmental Protection Agency (EPA) adopted a regulation changing the arsenic standard of 50 micrograms per liter to 10 micrograms per liter of arsenic allowed in drinking water. The EPA action prompted the city to invest in water treatment systems to remove arsenic from the groundwater to meet the Safe Drinking Water Act beginning in 2005. An estimated \$45.4 million was spent between 2005 and 2011 to design, construct, and equip 10 arsenic treatment facilities at various wells through the city. Full production at all sites began in fall of 2010. The estimated annual

operating cost of these arsenic treatment facilities is \$1.5 million.

#### *Water lines*

The water distribution system consists of approximately 568 miles of water line of various sizes ranging from 6 inches to 24 inches in diameter. In Fiscal Year 2015 there were 31 water main breaks compared 41 in FY2014 and 36 in FY2013. The last major 24 line break occurred at the intersection Northern Boulevard and Unser Boulevard. The cost of emergency repairs was approximately \$718,000, including large sections of asphalt damage that are replaced as a result of main breaks. The Utilities operator, OMI, will begin inventory of horizontal assets (i.e. pipe and other underground infrastructure) in the near future to determine the location, size, and type of water mains. Utilities staff also continues to request funding on a recurring basis for regular and full assessment of horizontal infrastructure.

### Repair and Maintenance Programs/Activities

The Utilities Division annually undertakes three major repair and maintenance programs: well repair, meter replacements, and service line replacements. Beginning in Fiscal Years 2014 and 2015 respectively, meter replacements and well repair were reclassified as repair and maintenance expenses in the budget to accurately reflect the non-capital nature of annual activities related to installation of automatic meter readers "AMRs," and repair of well casings, motors, and pumps. Expenditures for meter replacement and AMR activities over the last three years averaged \$773,454 annually, and 75 percent (75%) of outdated meters have been replaced with AMR units since 2006. Expenditures for well repair over the last three years have averaged \$451,208 annually, with work occurring most recently at Wells 2, 6, 8, and 9.

In Fiscal Year 2014, the Utilities Division significantly expanded the water service line replacement program utilizing a \$1 million state capital outlay appropriation and more than \$2 million of utility revenue to contract replacement of 1,307 lines. In FY2015 state capital outlay and utility revenue were again combined in the amount of \$2.4 million to contract replacement of additional 1,150

# Capital Improvement Plan

## Utilities-Water



FY16

lines. The FY2016 Budget includes an amount of \$1 million in utility revenue for replacement of an additional 500 lines and the city anticipates receiving another \$300,000 in state capital outlay for an estimated 650 lines. The service line replacement program is a long term project involving replacement of approximately 15,000 lines in older established

parts of the city. The estimated cost of the project totals \$22.5 million.

### Indicators

Indicator	Calendar Year				
	2010	2011	2012	2013	2014
Annual Water Production (acre-foot, 1 acre foot equals 325,851 gallons.)	13,563	13,617	14,675	12,739	11,628
Annual Water Production (1,000 of gallons)	4,419,667	4,437,020	4,781,312	4,151,110	3,789,076
System Wide Gallons per Capita per Day (1,000 gallons)	145.64	141.77	159.34	136.31	122.64
Single Family Residential Gallons per Capita per Day (1,000 gallons)	79.14	78.32	79.70	71.90	68.33
Non-Revenue Water Ratio Percent	9.3%	8.1%	10.9%	13.3%	15%
Water Main Breaks per Calendar Year (5 year leak report)	37	38	35	42	38
Water Service Leaks per Calendar Year (5 year leak report)	954	950	790	786	728

### Indicator Analysis

**Peak Day Demand to Capacity:** Maximum water production capacity with all wells operating is approximately 33.3 million gallons per day. The peak day demand of the city in 2014 was 18.7 million gallons or 56 percent (56%) of maximum production. Currently, a number of wells are out of service and/or under repair for various reasons and the city has approximately 29.5 to 30.6 million gallons per day functional production capacity available. The peak day demand of 18.7 million gallons was between sixty three percent (63%) and sixty one percent (61%) of the current functional production capacity. The peak demand to capacity ratio has decreased since 2012 due to a decline in the peak demand over the last three years. The ratio can be affected by changes in the annual peak day demand brought about by population growth or decline, changes in weather patterns or drought conditions, and water conservation initiatives. The ratio is also affected by fluctuations in system capacity if an active well is out of production or additional well facilities are brought online. The city is at or near the point at which new wells and replacement wells must be completed in order to sustain a reliable water system for existing residents and to accommodate future growth in the resident population and new businesses. Future well failures, depending on the location, can potentially trigger a shortage of water and water rationing in the worst case scenario. The city began design of the Redrill Well 13 project in Fiscal Year 2014 and plans to pursue debt financing for construction in 2015 and 2016.

System Wide Gallons per Capita per Day has decreased ten percent (10%) from 2013 primarily due to industrial customers using 201 million gallons less in 2014 than in 2013. Industrial consumption was down sixty two percent (62%) decrease in 2013 and eighty two percent (82%) in 2014 year over year. Commercial and commercial

irrigation consumption was also down a combined 39 million gallons, or five and five tenths percent (5.5%) from 2013. This decrease follows a seven percent (7%) decline from 2012. These data mark a departure from previous years' growth trend in consumption which was presumably driven by prolonged drought conditions, especially for the commercial irrigation customer class. Water conservation behavior and recent wet weather appear to have had an impact on consumption levels over the last two years.

The Utilities Department continues to pursue important water conservation initiatives including installation of automatic meter reading (AMR) water meters, provide water use evaluations requested by customers, and engage in educational outreach, namely the annual Children's Water Festival. Water use evaluations requested by residents have increased from 109 in 2008 to 625 in 2014.

Water Main breaks have become more frequent since 2008. Thirty two main breaks occurred in 2008, while an average of forty main breaks have occurred during the last two years. The overall trend has shown an increase in main breaks as a combination of age, pipe material, and increase in the size of the area served by the water distributions system contribute to the overall increase in main breaks.

### **Water Utility Infrastructure and Capital Improvement Plan (ICIP) 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 water 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 ICIP. Beginning in Fiscal Year 2014, the Water ICIP has focused on capital needs and financing for non-growth related improvements in accordance with the recent series of water 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.

#### *Water Model:*

The Utilities Division utilizes a water system model to evaluate service outcomes, make decisions regarding the reliability of the system, and to determine water availabilities for new development. The model is updated periodically by staff for new information about the water system, including

changes in capacity and demand. A prudent water system operation requires redundancy in the event of unforeseen circumstances, such as a facility failure, to ensure uninterrupted service to customers (both domestic and commercial service), and fire protection.

#### *Electric Optimization Study*

In FY2015 the Utilities Division and the private operator, OMI, worked with Bohannon Huston Incorporated (BHI) to evaluate the Electrical Optimization Study for the water system. The study's initial findings indicated the additional capital required for optimal savings would take many years to break even due to the large capital costs. As development continues and additional storage is built, it is anticipated that many of the city's supply sites will be able to be operated more efficiently in the future. The information from the study will be used by the city in conjunction with other capital planning and operation considerations and needs in making decisions regarding system operations and prioritization of capital projects. The Utilities Division and Bohannon Huston will continue to work with OMI to refine and optimize any future capital projects and feasible operational modifications to save energy and money.

#### *Water Master Plan*

The Water Master Plan was originally developed in 1998 and updated in 2011 as the City Limits Ultimate Development Water System Master Plan by BHI. BHI used the existing water system model as the

basis for the study. Using projections based on current water use by land usage, the study indicated the city will need 56,000+ acre-feet of water to serve the current city limits at full build-out. By way of comparison the city currently has 26,420 acre-feet of pumping permits from the Office of the State Engineer.

*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-Water Utility

<b><u>Average Day Demand</u></b>	
Average Day Demand	340 gallons per day (gpd)
<b><u>Peak Day Demand</u></b>	
Peak Day to Ave. Day Ratio	2.20
Peak Day Demand	750 gpd
<b><u>Peak Hour Demand</u></b>	
Peak Hour to Ave. Day Ratio	3.30
Peak Hour Demand	1,120 gpd
<b><u>Storage Requirements</u></b>	800 gallons

Developers are assessed impact fees or provide physical improvements in lieu of impact fees valued at \$3,264 for a 5/8” meter; \$4,896 for a ¾” meter; \$8,160 for a 1” meter; \$16,320 for a 1 ½” meter; and \$26,112 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 water impact fee credits outstanding and the city currently accepts credits for thirty six (36%) of assessments generated by annual development activity. Twenty eight (28%) of assessments generated by annual development activity are collected as revenue, while thirty six percent (36%) represents 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 water impact fees during this period was \$2,627,614. The city would have received these impact fees in the form of either assessment revenue or credits.

Developer contributions and dedications since Fiscal Year 2010 include:

- Northern Meadows (Unit 19): 1.34 miles of water line
- High Range III: 1.29 miles of water line
- Paseo Vulcan Crossing: 0.12 miles of water line
- Diamond Ridge: 1.79 miles of water line
- Cabezon Tract 1A: 0.21 miles of water line
- Cabezon Commons Tract 11: 0.26 miles of water line
- Loma Colorado Realignment: 0.26 miles of water line
- Loma Colorado Water Infrastructure: 0.53 miles of water line
- Joiner Plaza: 0.07 miles of water line
- Cielo Norte I: 1.03 miles of water line
- Cielo Norte II: 0.36 miles of water line
- Plaza @ Enchanted Hills: 0.47 miles of water line
- Gateway Park: 0.072 miles of water line
- Life Spire Senior Living Facility: 0.078 miles of water line
- Loma Colorado Tract 9B: 0.33 miles of water line
- Loma Colorado Prado I&II: 0.31 miles of water line
- Rachel Matthews Corporate Office: 0.036 miles of water line
- UNM/Sandoval County Regional Medical Center: 1.703 miles of water line
- Unser Pavilion: 0.13 miles of water line
- The Village at Rio Rancho: 0.47 miles of water line

### **Funding Sources**

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

- Utility Bond and Loan Proceeds
- Utility Net Revenues
- Federal and State Grants
- Water Impact Fees
- Environmental Gross Receipts Tax Revenue
- Water Rights Acquisition Fee

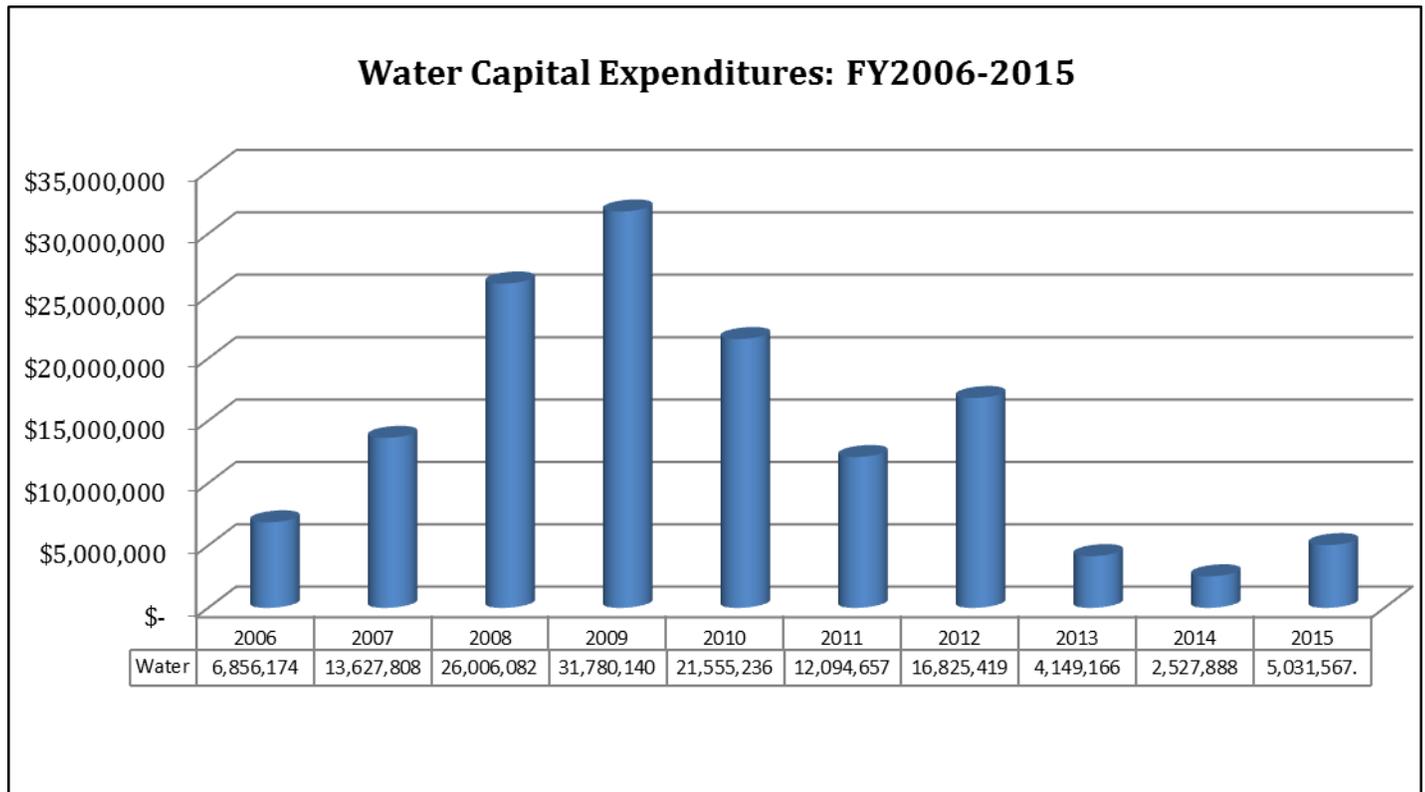
Capital spending for water utility infrastructure topped \$31.8 million in Fiscal Year 2009 however had declined to merely eight percent (8%) of its 2009 peak by Fiscal Year 2014. The level of capital spending rebounded in Fiscal Year 2015 to \$5,031,567, an increase of one hundred percent (100%) year over year. Through Fiscal Year 2011, the capital program was heavily supported by several bond issues pledging the net revenues of the system. These bond issues supported improvements, upgrades, and expansion of the system initially acquired in 1995 from the private sector. The decrease in annual capital investment is due in part to the city having not issued system bonds for capital improvements since 2009. Increase operating costs, due in part to 10 new arsenic treatment facilities coming online in 2010, have severely limited the system's debt capacity however recent rate increases have provided some financial flexibility. 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

**Capital Improvement Plan  
Utilities-Water**



**FY16**

enterprise anticipates issuing new debt in calendar years 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 Funding 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	WA1533; WA1598 WA1636	Water Rights Acquisitions	\$ 32,748,137	\$ 1,775,881	\$ 6,165,284	\$ 7,941,165	\$ 1,707,050	\$ 1,708,889	\$ 1,707,190	\$ 1,706,296	\$ 1,712,479	\$ 16,483,068	Water Rights Acquisition Fee	Utility Loan Proceeds			
													\$ 12,277,489	\$ 4,205,579			\$ 16,483,068
2	WA0910; WA1475	New 3 MG Tank @ Enchanted Hills West	\$ 1,788,588	\$ -	\$ 292,666	\$ 292,666	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 292,666	Utility Fund Operating Revenues				
													\$ 292,666				\$ 292,666
3	WA1493	Booster Station and Transmission Line from Tank 8 to Tank 13	\$ 99,419	\$ -	\$ 3,519,138	\$ 3,519,138	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,519,138	Utility Fund Operating Revenues	Environmental GRT Revenues			
													\$ 3,123,701	\$ 395,437			\$ 3,519,138
4	WA1492	Redrill Well #13 and Equip for Arsenic Removal	\$ 77,866	\$ -	\$ 3,055,467	\$ 3,055,467	\$ 6,648,667	\$ 3,988,000	\$ -	\$ -	\$ -	\$ 13,692,134	Utility Fund Operating Revenues	Impact Fees-Water	State Capital Outlay Appropriation	To Be Determined	
													\$ 1,322,134	\$ 248,765	\$ 100,000	\$ 12,021,235	\$ 13,692,134
5	WA1634	Renovate/Paint Water Storage Tanks	\$ -	\$ 411,502	\$ -	\$ 411,502	\$ 423,847	\$ 436,562	\$ 449,659	\$ 463,149	\$ 477,044	\$ 2,661,764	Utility Fund Operating Revenues				
													\$ 2,661,764				\$ 2,661,764
6	N/A	Redrill Well #4 or #5 and Equip for 1,500 gpm with Arsenic Treatment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,150,000	\$ 8,000,000	\$ -	\$ -	\$ 11,150,000	To Be Determined				
													\$ 11,150,000				\$ 11,150,000
7	WA1543	New Pressure Reducing Valves	\$ 158,766	\$ -	\$ -	\$ -	\$ 200,000	\$ 505,000	\$ 205,000	\$ 210,000	\$ -	\$ 1,120,000	Utility Fund Operating Revenues				
													\$ 1,120,000				\$ 1,120,000
8	WA1635	SCADA Improvements	\$ 387,283	\$ 100,000	\$ -	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 600,000	Utility Fund Operating Revenues				
													\$ 600,000				\$ 600,000



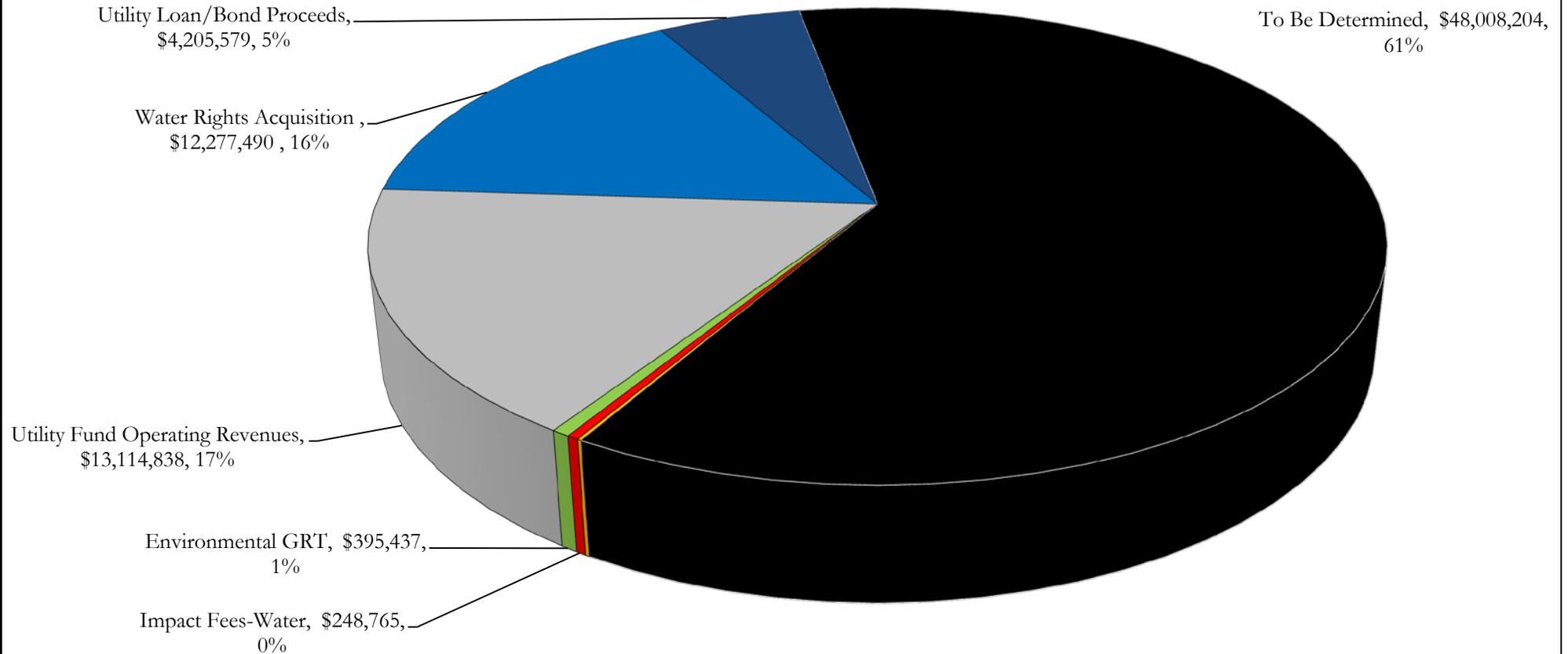
2016-2021 Infrastructure and Capital Improvement Plan  
**Utilities-Water**

**FY2016-FY2021: ICIP Summary**

Rank Priority	Fund/Project No.	Project Title	Project To Date	2016 Budget	2016 Additional Funding 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	Fund 512	Vehicles and Heavy Equipment	\$ 1,382,215	\$ 99,512	\$ 25,138	\$ 124,650	\$ 202,000	\$ 186,000	\$ 186,000	\$ 543,000	\$ 638,000	\$1,879,650	Utility Fund Operating Revenues					\$ 1,879,650
10	N/A	Redrill and Equip Well #9	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 412,000	\$ 17,219,969	\$ 17,631,969	To Be Determined					\$ 17,631,969
11	WA1491	Install/Replace Waterlines	\$ 279,203	\$ -	\$ -	\$ -	\$ 945,000	\$ 3,100,000	\$ 945,000	\$ 1,215,000	\$ 1,000,000	\$7,205,000	To Be Determined					\$ 7,205,000
12	WA1430; WA1532; WA1643	Well Site Security	\$ 159,603	\$ 138,082	\$ 50,000	\$ 188,082	\$ 133,778	\$ 137,791	\$ 141,925	\$ 146,183	\$ 150,568	\$ 898,328	Utility Fund Operating Revenues					\$ 898,328
13	Fund 501; WA1427	Major Equipment for Water Production, Treatment, and Distribution	\$ 33,085	\$ 127,314	\$ 3,533	\$ 130,847	\$ 49,000	\$ 73,000	\$ 24,250	\$ 98,000	\$ 41,500	\$ 416,597	Utility Fund Operating Revenues					\$ 416,597
14	N/A	Land Water Distribution Water Line Break Spills Staging Area Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 800,000	\$ -	\$ -	\$ -	\$ 800,000	Utility Fund Operating Revenues					\$ 800,000

**TOTALS**    \$ 37,114,165    \$ 2,652,291    \$ 13,111,226    \$ 15,763,517    \$ 10,409,342    \$ 14,185,242    \$ 11,759,025    \$ 4,893,627    \$ 21,339,560    \$ 78,350,313

\$ 78,350,313



	FY16	FY17	FY18	FY19	FY20	FY21	TOTAL
State Grants	\$ 100,000						\$ 100,000
Impact Fees-Water	\$ 248,765						\$ 248,765
Environmental GRT	\$ 395,437						\$ 395,437
Utility Fund Operating Revenues	\$ 5,693,582	\$ 1,108,625	\$ 2,238,353	\$ 1,106,834	\$ 1,560,332	\$ 1,407,112	\$ 13,114,838
Water Rights Acquisition	\$ 3,735,586	\$ 1,707,050	\$ 1,708,889	\$ 1,707,191	\$ 1,706,295	\$ 1,712,479	\$ 12,277,490
Utility Loan/Bond Proceeds	\$ 4,205,579						\$ 4,205,579
To Be Determined	\$ 1,384,568	\$ 7,593,667	\$ 10,238,000	\$ 8,945,000	\$ 1,627,000	\$ 18,219,969	\$ 48,008,204
<b>TOTAL</b>	<b>\$ 15,763,517</b>	<b>\$ 10,409,342</b>	<b>\$ 14,185,242</b>	<b>\$ 11,759,025</b>	<b>\$ 4,893,627</b>	<b>\$ 21,339,560</b>	<b>\$ 78,350,313</b>

**WATER  
PROJECTS UNDER CONSIDERATION**

<b>Rank</b>	<b>Project Name</b>	<b>Fiscal Year(s)</b>	<b>Project Estimate</b>
15	Lincoln Avenue Waterline Improvements	2016	\$ 285,000
16	Equip Well Site S-27, including Arsenic Treatment, Water Quality Treatment, and new Transmission	2018-2019	\$ 15,680,000
17	New 4MG Tank 17B	2019-2020	\$ 2,229,579
18	Land Purchases for Future Utilities	2016-2021	\$ 2,693,805
19	Equip Well #18 to Monitor Static Water Level	2020	\$ 125,000
20	Southern Blvd. Waterline, Finish Well 19 line near Puesta del Sol School	2019	\$ 400,000
21	Drill Well S-25 and Equip for 3,000 gpm	2020-2021	\$ 16,940,000
22	Waterline Extension from Paseo Gateway to Enchanted Hills including 4MGPaseo Gateway	2019-2021	\$ 3,873,680
23	New 4MG Tank 6C	2020-2021	\$ 3,361,867
24	New Replacement Well House-Well 8	2019-2020	\$ 1,650,000
25	Upgrade Enchanted Hills East Booster Station	2021	\$ 1,694,055
26	Drill New Well (Hydrogeology Design)	2021	\$ 250,000
27	Redrill Well #1	2021	\$ 250,000
28	New Replacement Well House-Well 2	2019-2020	\$ 1,650,000
	<b>TOTAL</b>		<b>\$ 51,082,986</b>

**1. PROJECT INFORMATION**

Project Title	Water Rights Acquisitions	Requesting Department	Dept. of Public Works/Utilities Administration	Department Rank Priority No.	1
Project Category	Utilities-Water	CIP Year	Recurring Capital Need	Project No.:	WA1533; WA1598; WA1636
Estimated Useful Life	Greater than 25 Years	District Location	Multiple Districts	Project Request Status	Revised Project Request

**2. PROJECT DESCRIPTION AND SCOPE**

Water Rights Acquisition to satisfy Office of the State Engineer (OSE) 1979 and 2003 permit requirements and to accommodate future growth.

**3. PROJECT JUSTIFICATION**

The city's acquisition liability is approximately 16,000 acre feet within the next 50 years under two (2) OSE permits authorizing diversion (pumping) of up to 24,000 acre feet per year. The 2003 OSE permit requires acquisition of 728 acre feet of water rights every five (5) year period through 2063, beginning at a time when the city reaches 12,000 acre feet of annual consumption (reached in December 2007). The 1979 permit requirement will vary according to water model results of how the city's water consumption affects the Rio Grande River. To date, the city has acquired and applied approximately 4,719 acre feet toward both permit requirements. As such, the city has satisfied its obligation under the 2003 permit for the first three periods, 2008-2012, 2013-2017, 2018-2022, and has satisfied approximately 50 percent of its obligation for the 2023-2027 accounting period.

**4. PROJECT HISTORY AND STATUS**

Acquisition of water rights since Fiscal Year 2009 has been funded through a combination of Utility Operating Transfers (\$3.2M), Utility Bond Proceeds (\$10.6M), Water Rights Acquisition Fees (\$4M), and two (2) New Mexico Finance Authority Loans (\$14.9M). A total of \$32.8M has been spent to acquire approximately 2,249 acre feet since Fiscal Year 2009. This is the equivalent of the planned annual water usage of 8,998 single family households, assuming desert southwest water conservation norms (1/4 acre foot per year). On February 11, 2015, the Governing Body authorized execution and delivery of a loan agreement in the amount of \$4,292,192 for the bulk purchase of approximately 300 acre fee of water rights toward the city's 2023-2027 obligation. Water rights acquisition fee revenue not required to pay annual debt service for the three (3) water rights loans will accumulate for future water rights purchases and opportunities for bulk purchases are always being sought by the city.

**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									\$ -
Water Rights Acquisition	Recent City project	\$ 32,748,137	\$ 7,941,165	\$ 1,707,050	\$ 1,708,889	\$ 1,707,190	\$ 1,706,296	\$ 1,712,479	\$ 49,231,204
<b>TOTAL</b>		<b>\$ 32,748,137</b>	<b>\$ 7,941,165</b>	<b>\$ 1,707,050</b>	<b>\$ 1,708,889</b>	<b>\$ 1,707,190</b>	<b>\$ 1,706,296</b>	<b>\$ 1,712,479</b>	<b>\$ 49,231,204</b>

**6. PROPOSED SOURCES OF FUNDING**

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY16	FY17	FY18	FY19	FY20	FY21	TOTAL
Utility Funds Operating Revenues	542-Water Rights Acquisition Fund	\$ 3,191,257							\$ 3,191,257
Utility Bond Proceeds	572 (07) and 573 (08) Utility Bond Construction Funds	\$ 10,602,133							\$ 10,602,133
Water Rights Acquisition Fee	542-Water Rights Acquisition Fund	\$ 4,001,191	\$ 3,735,586	\$ 1,707,050	\$ 1,708,889	\$ 1,707,190	\$ 1,706,296	\$ 1,712,479	\$ 16,278,680
Enterprise Fund Loan Proceeds	542-Water Rights Acquisition Fund	\$ 14,953,556	\$ 4,205,579						\$ 19,159,135
<b>TOTAL</b>		<b>\$ 32,748,137</b>	<b>\$ 7,941,165</b>	<b>\$ 1,707,050</b>	<b>\$ 1,708,889</b>	<b>\$ 1,707,190</b>	<b>\$ 1,706,296</b>	<b>\$ 1,712,479</b>	<b>\$ 49,231,204</b>

**1. PROJECT INFORMATION**

Project Title	New 3 MG Tank @ Enchanted Hills West	Requesting Department	Dept. of Public Works/Utilities Administration	Department Rank Priority No.	2
Project Category	Utilities-Water	CIP Year	FY2014	Project No.:	WA0910; WA1475
Estimated Useful Life	Greater than 25 Years	District Location	Council District 3	Project Request Status	Revised Project Request

**2. PROJECT DESCRIPTION AND SCOPE**

Revise the 2010 construction plans and specifications, and construct a 3 Million Gallon (MG) welded steel water reservoir tank at the Enchanted Hills 12W site.

**3. PROJECT JUSTIFICATION**

The present 2 Million Gallon storage tank has a water leak and has been sealed temporarily. The city needs to revise the plans and specifications for the new 3 Million Gallon water tank and bid, as soon as possible, in order to drain and properly repair the present water tank.

**4. PROJECT HISTORY AND STATUS**

In 2010, Bohannon-Huston completed the plans and specification for a new Enchanted Hills Tank 12 West located adjacent to the existing 2 Million Gallon Enchanted Hill 12 storage tank. The new 3 Million Gallon water tank will be the second water storage tank at this site. The plans have been reviewed by the Public Works Department, who made the determination that a few changes needed to be added to the design, including details for the tank bulkhead door, addition of conduit up the tank staircase, addition of an antenna, and possible changes to site piping. A task order was issued for the construction plan revisions in September 2013 and design was finalized in June 2014. Construction commenced in October 2014 to be substantially completed in July 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									\$ -
Land Acq./ROW									\$ -
Design and Specifications	Recent City project	\$ 136,587	\$ 1,350						\$ 137,938
Construction	Cost Consultant	\$ 1,526,122	\$ 235,508						\$ 1,761,630
Construction Management	Cost Consultant	\$ 125,880	\$ 55,808						\$ 181,687
<b>TOTAL</b>		<b>\$ 1,788,588</b>	<b>\$ 292,666</b>	<b>\$ -</b>	<b>\$ 2,081,255</b>				

**6. PROPOSED SOURCES OF FUNDING**

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY16	FY17	FY18	FY19	FY20	FY21	TOTAL
Impact Fees-Water	545 Water Impact Fees Fund	\$ 97,214							\$ 97,214
Utility Fund Operating Revenues	540-CIF Water Operations	\$ 1,691,375	\$ 292,666						\$ 1,984,041
									\$ -
									\$ -
<b>TOTAL</b>		<b>\$ 1,788,588</b>	<b>\$ 292,666</b>	<b>\$ -</b>	<b>\$ 2,081,255</b>				

### 1. PROJECT INFORMATION

Project Title	Booster Station and Transmission Line from Tank 8 to Tank 13	Requesting Department	Dept. of Public Works/Utilities Administration	Department Rank Priority No.	3
Project Category	Utilities-Water	CIP Year	FY2014	Project No.:	WA1493
Estimated Useful Life	Greater than 25 Years	District Location	Council District 2	Project Request Status	Revised Project Request

### 2. PROJECT DESCRIPTION AND SCOPE

The project consists of installing a new 4 Million Gallon Per Day (MGD) booster station and 18" transmission line between Tank 8 to Tank 13. This includes all necessary appurtenances, including but not limited to air relief valves and pits.

### 3. PROJECT JUSTIFICATION

The booster station at Tank 8 and the transmission line will provide a source of water to Tank 13 and the communities in upper Zone 8 should Well 9 and Well 13 fail. This provides redundancy to the communities in upper Zone 8. Well 13 is currently non operational and needs to be redrilled. There is an urgent need for the booster station in the immediate term since it can be completed much sooner than the redrilling of Well 13.

### 4. PROJECT HISTORY AND STATUS

The need for a booster station at Tank 8 and transmission line to Tank 13 has been known for some time. This is a revised project request. As such, it has risen in priority rank within the Water facility category from No. 14 to No. 3 due to its upgraded importance with the increasing size of communities in the area that would benefit from this project. Design is in progress to be completed in Fall 2015. Construction will commence thereafter.



### 5. CAPITAL COSTS

PHASE	SOURCE(S) OF COST INFO	PRIOR YEARS	FY16	FY17	FY18	FY19	FY20	FY21	TOTAL
Design and Specifications	Cost Consultant	\$ 99,419	\$ 166,157						\$ 265,576
Construction	Cost Consultant		\$ 3,352,981						\$ 3,352,981
Construction Management									\$ -
Other									\$ -
<b>TOTAL</b>		<b>\$ 99,419</b>	<b>\$ 3,519,138</b>	<b>\$ -</b>	<b>\$ 3,618,557</b>				

### 6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY16	FY17	FY18	FY19	FY20	FY21	TOTAL
Utility Funds Operating Revenues	540-CIF Water Operations	\$ 99,419	\$ 3,123,701						\$ 3,223,120
Environmental GRT Revenues	260-EGRT Fund	\$ -	\$ 395,437						\$ 395,437
									\$ -
<b>TOTAL</b>		<b>\$ 99,419</b>	<b>\$ 3,519,138</b>	<b>\$ -</b>	<b>\$ 3,618,557</b>				

### 1. PROJECT INFORMATION

Project Title	Redrill Well #13 and Equip for Arsenic Removal	Requesting Department	Dept. of Public Works/Utilities Administration	Department Rank Priority No.	4
Project Category	Utilities-Water	CIP Year	FY2014	Project No.:	WA1492
Estimated Useful Life	Greater than 25 Years	District Location	Council District 1	Project Request Status	Revised Project Request

### 2. PROJECT DESCRIPTION AND SCOPE

Redrill Well 13 to an approximate depth of 2,400 feet and equip the well site to produce 750 gallons per minute (gpm) or more with Arsenic Treatment.

### 3. PROJECT JUSTIFICATION

Well 13 redrill is necessary to replace production capacity lost from the failure of Well 13 in 2013. Well replacement is necessary to ensure adequate water resources to existing and future residents. Well 13 is critical to the citywide water distribution and supply system as it is located at a high elevation and feeds down into the water distribution system to populated areas of the city.

### 4. PROJECT HISTORY AND STATUS

Well 13 was drilled in 1987 and operated until approximately 2013 when the casing developed a hole and sand pumping caused the city to discontinue use of the well. The city received a state capital outlay appropriation in Fiscal Year 2015 in the amount of \$100,000 to "plan, design, construct, and equip" Well 13. Planning and design for the re-drilling portion of the project is in progress. Construction and equipping Well 13 is tentatively planned for Fiscal Years 2017 and 2018 contingent upon identification of funding.

### 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		\$ 66,030	\$ -						\$ 66,030
Design and Specifications	Cost Consultant	\$ 11,836	\$ 555,467	\$ 666,667					\$ 1,233,971
Construction	Cost Consultant		\$ 2,500,000	\$ 5,982,000	\$ 3,988,000				\$ 12,470,000
Construction Management	Cost Consultant								\$ -
Equipment/Vehicle									\$ -
Other									\$ -
<b>TOTAL</b>		<b>\$ 77,866</b>	<b>\$ 3,055,467</b>	<b>\$ 6,648,667</b>	<b>\$ 3,988,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 13,770,000</b>

### 6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY16	FY17	FY18	FY19	FY20	FY21	TOTAL
Utility Funds Operating Revenues	540-CIF Water Operations	\$ 77,866	\$ 1,322,134						\$ 1,400,000
Impact Fees-Water	555 Wastewater Impact Fees Fund	\$ -	\$ 248,765						\$ 248,765
State Capital Outlay Appropriation			\$ 100,000						\$ 100,000
To Be Determined			\$ 1,384,568	\$ 6,648,667	\$ 3,988,000				\$ 12,021,235
									\$ -
<b>TOTAL</b>		<b>\$ 77,866</b>	<b>\$ 3,055,467</b>	<b>\$ 6,648,667</b>	<b>\$ 3,988,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 13,770,000</b>

**1. PROJECT INFORMATION**

Project Title	Renovate/Repaint Water Storage Tanks	Requesting Department	Dept. of Public Works/Utilities Administration	Department Rank Priority No.	5
Project Category	Utilities-Water	CIP Year	Recurring Capital Need	Project No.:	WA1634
Estimated Useful Life	16-25 Years	District Location	Multiple Districts	Project Request Status	Revised Project Request

**2. PROJECT DESCRIPTION AND SCOPE**

The project involves renovation/repainting of existing water storage tanks at varying locations. The following 5 year schedule was established in Fiscal Year 2016. 2016: Tank 9, 2017: Tank 12, 2018: Tank 6A, 2019: Tank 8A, 2020: Tank 13, and 2021: Tank 3. Renovating existing tanks extends the useful life of the tanks.

**3. PROJECT JUSTIFICATION**

Asset preservation is required in order to ensure the city receives the maximum use over the lifetime of the steel reservoirs. Storage tanks are located throughout the city and will benefit multiple council districts.

**4. PROJECT HISTORY AND STATUS**

The city operates and maintains 18 steel reservoirs. This project is ongoing and will occur annually contingent upon availability of funding.

**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	Other		\$ 411,502	\$ 423,847	\$ 436,562	\$ 449,659	\$ 463,149	\$ 477,044	\$ 2,661,764
Construction Management									\$ -
Equipment/Vehicle									\$ -
Other									\$ -
<b>TOTAL</b>		\$ -	\$ 411,502	\$ 423,847	\$ 436,562	\$ 449,659	\$ 463,149	\$ 477,044	\$ 2,661,764

**6. PROPOSED SOURCES OF FUNDING**

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY16	FY17	FY18	FY19	FY20	FY21	TOTAL
Utility Funds Operating Revenues	540-CIF Water Operations		\$ 411,502	\$ 423,847	\$ 436,562	\$ 449,659	\$ 463,149	\$ 477,044	\$ 2,661,764
									\$ -
									\$ -
									\$ -
<b>TOTAL</b>		\$ -	\$ 411,502	\$ 423,847	\$ 436,562	\$ 449,659	\$ 463,149	\$ 477,044	\$ 2,661,764

**1. PROJECT INFORMATION**

Project Title	Redrill Well #4 or #5 and Equip for 1,500 gpm with Arsenic Treatment	Requesting Department	Dept. of Public Works/Utilities Administration	Department Rank Priority No.	6
Project Category	Utilities-Water	CIP Year	FY2018	Project No.:	TBD
Estimated Useful Life	Greater than 25 Years	District Location	Council District 1	Project Request Status	Revised Project Request

**2. PROJECT DESCRIPTION AND SCOPE**

Redrill Well 4 or Well 5 to an approximate depth of 1,000 feet and equip the well site to produce 1,500 gallons per minute (gpm) with Arsenic Treatment.

**3. PROJECT JUSTIFICATION**

Well 4 or 5 redrill is necessary to replace production capacity (approximately 3.5 million gallons per day) lost from the failure of wells 4 and 5. Well replacement is necessary to ensure adequate water resources and redundancy to existing and future residents in the Corrales Heights and Unit 16 East neighborhoods.

**4. PROJECT HISTORY AND STATUS**

Well 4 was drilled in 1969 and operated with good quality water until approximately 2005 when the casing developed a hole and sand pumping caused the city to discontinue use of the well. Well 5 was drilled in 1969 and was used until the 1990's when well failure occurred.

**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				\$ 650,000				\$ 650,000
Construction	Other				\$ 2,500,000	\$ 8,000,000			\$ 10,500,000
Construction Management									\$ -
Equipment/Vehicle									\$ -
Other									\$ -
<b>TOTAL</b>		\$ -	\$ -	\$ -	\$ 3,150,000	\$ 8,000,000	\$ -	\$ -	\$ 11,150,000

**6. PROPOSED SOURCES OF FUNDING**

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY16	FY17	FY18	FY19	FY20	FY21	TOTAL
To Be Determined					\$ 3,150,000	\$ 8,000,000			\$ 11,150,000
									\$ -
									\$ -
<b>TOTAL</b>		\$ -	\$ -	\$ -	\$ 3,150,000	\$ 8,000,000	\$ -	\$ -	\$ 11,150,000

**1. PROJECT INFORMATION**

Project Title	New Pressure Reducing Valves	Requesting Department	Dept. of Public Works/Utilities Administration	Department Rank Priority No.	7
Project Category	Utilities-Water	CIP Year	Recurring Capital Need	Project No.:	WA1543
Estimated Useful Life	Greater than 25 Years	District Location	Multiple Districts	Project Request Status	Revised Project Request

**2. PROJECT DESCRIPTION AND SCOPE**

The project involves installation of new pressure reducing valves (PRVs) to aid in the function of the city's water distribution system at a rate of one per year. The following 5 year schedule was established in Fiscal Year 2016. 2017: Southern Blvd. (Veranda Area); 2018: Vera Cruz Rd., Unit 17-Pasilla Rd. and Inca/Rainbow Blvd.; 2019: River's Edge II-Riverside Drive; 2020: River's Edge I-Sandia Vista Rd.

**3. PROJECT JUSTIFICATION**

The project is ongoing to install new pressure reducing valves, allowing the city's water operation and maintenance staff to transfer water between pressure zones to benefit multiple districts.

**4. PROJECT HISTORY AND STATUS**

The project is ongoing and will occur annually contingent upon availability of funding. The PRV at 9th Avenue and Loma Colorado Blvd. was completed by a developer in 2015. A new 8" water line and PRV at the Well 19 site was completed in April 2015 to address the motor failure of Well 14 in February 2015 which caused low water pressure and loss of fire flow protection in Zone 6.

**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	City contract or price agreement	\$ 158,766		\$ 200,000	\$ 505,000	\$ 205,000	\$ 210,000	\$ -	\$ 1,278,766
<b>TOTAL</b>		<b>\$ 158,766</b>	<b>\$ -</b>	<b>\$ 200,000</b>	<b>\$ 505,000</b>	<b>\$ 205,000</b>	<b>\$ 210,000</b>	<b>\$ -</b>	<b>\$ 1,278,766</b>

**6. PROPOSED SOURCES OF FUNDING**

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY16	FY17	FY18	FY19	FY20	FY21	TOTAL
Utility Funds Operating Revenues	540-CIF Water Operations	\$ 158,766		\$ 200,000	\$ 505,000	\$ 205,000	\$ 210,000	\$ -	\$ 1,278,766
									\$ -
									\$ -
									\$ -
<b>TOTAL</b>		<b>\$ 158,766</b>	<b>\$ -</b>	<b>\$ 200,000</b>	<b>\$ 505,000</b>	<b>\$ 205,000</b>	<b>\$ 210,000</b>	<b>\$ -</b>	<b>\$ 1,278,766</b>

**1. PROJECT INFORMATION**

Project Title	SCADA Improvements	Requesting Department	Dept. of Public Works/Utilities Administration	Department Rank Priority No.	8
Project Category	Utilities-Water	CIP Year	Recurring Capital Need	Project No.:	WA1635
Estimated Useful Life	Greater than 25 Years	District Location	Multiple Districts	Project Request Status	Revised Project Request

**2. PROJECT DESCRIPTION AND SCOPE**

SCADA improvements will be constructed to improve well automation. The project involves fiber optic and communications equipment upgrade at Wells 8 and 10 in Fiscal Year 2016.

**3. PROJECT JUSTIFICATION**

The improvements made to the SCADA and well security systems are an important step in controlling the operations of existing wells for more efficient delivery of water to customers.

**4. PROJECT HISTORY AND STATUS**

This project is a revised project request and has retained its priority rank of No. 8 within the Water facility category. \$600,000 in expenditures are planned through Fiscal Year 2020.

**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	Other	\$ 387,283	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 987,283
Construction Management									\$ -
Equipment/Vehicle									\$ -
Other									\$ -
<b>TOTAL</b>		<b>\$ 387,283</b>	<b>\$ 100,000</b>	<b>\$ 987,283</b>					

**6. PROPOSED SOURCES OF FUNDING**

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY16	FY17	FY18	FY19	FY20	FY21	TOTAL
Utility Funds Operating Revenues	540-CIF Water Operations	\$ 318,966	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 918,966
Impact Fees-Water	545 Water Impact Fees Fund	\$ 24,216							\$ 24,216
Utility Bond Proceeds	572-2007 UT Bond Construction Fund	\$ 44,101							\$ 44,101
<b>TOTAL</b>		<b>\$ 387,283</b>	<b>\$ 100,000</b>	<b>\$ 987,283</b>					

**1. PROJECT INFORMATION**

Project Title	Vehicles and Heavy Equipment	Requesting Department	Dept. of Public Works/Utilities Administration	Department Rank Priority No.	9
Project Category	Utilities-Water	CIP Year	Recurring Capital Need	Fund/Project No.:	512-0000-505-7015
Estimated Useful Life	10 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 water utility operations. Vehicle and equipment acquisitions planned for Fiscal Year 2016 include a new Ditch Witch Vacuum Truck, one (1) replacement and two (2) new trucks for the Water Production division. Vehicles and equipment on order in FY15 total \$25,138 for a Utility Customer Service 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	\$ 1,382,215	\$ 124,650	\$ 202,000	\$ 186,000	\$ 186,000	\$ 543,000	\$ 638,000	\$ 3,261,865
Other									\$ -
<b>TOTAL</b>		<b>\$ 1,382,215</b>	<b>\$ 124,650</b>	<b>\$ 202,000</b>	<b>\$ 186,000</b>	<b>\$ 186,000</b>	<b>\$ 543,000</b>	<b>\$ 638,000</b>	<b>\$ 3,261,865</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	\$ 1,382,215	\$ 124,650	\$ 202,000	\$ 186,000	\$ 186,000	\$ 543,000	\$ 638,000	\$ 3,261,865
									\$ -
									\$ -
									\$ -
<b>TOTAL</b>		<b>\$ 1,382,215</b>	<b>\$ 124,650</b>	<b>\$ 202,000</b>	<b>\$ 186,000</b>	<b>\$ 186,000</b>	<b>\$ 543,000</b>	<b>\$ 638,000</b>	<b>\$ 3,261,865</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

**1. PROJECT INFORMATION**

Project Title	Re-Drill Well 9 and Equip for 2,400 ac-ft./yr, 4MG Tank and Transmission Line from Main St. to Northern Blvd.	Requesting Department	Dept. of Public Works/Utilities Administration	Department Rank Priority No.	10
Project Category	Utilities-Water	CIP Year	FY2020	Project No.:	TBD
Estimated Useful Life	Greater than 25 Years	District Location	Council District 1	Project Request Status	Revised Project Request

**2. PROJECT DESCRIPTION AND SCOPE**

Redrill Well 9 and equip the well site to potentially produce 2,000 gallons per minute (gpm) with Arsenic Treatment, 4 million gallon water storage tank, land acquisition, and approximately 19,000 linear feet of water line to City Center Tank.

**3. PROJECT JUSTIFICATION**

Redrill Well 9 to replace the existing well due to poor well design. Well 9 was not drilled straight (dog leg) and the pumps often have electrical issues or mechanical issues due to the well design. Well replacement is necessary to ensure adequate water resources to existing and future residents. Well 9 is critical to the citywide water distribution and supply system as it is located at a high elevation and feeds down into the water distribution system to populated areas of the city.

**4. PROJECT HISTORY AND STATUS**

Well 9 was drilled in 1987. Well 9 was not drilled straight (dog leg) and pumps often have electrical or mechanical issues due to the poor well design. One pump and motor broke off circa 2012, and is currently located at the bottom of the well. The pump and motor typically do not last more than two or three years due to the poor design of the well. Often, the dog leg will pull the electric cord out of the motor during the installation of a new pump and motor.

**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	Other						\$ 62,000		\$ 62,000
Design and Specifications	Other						\$ 350,000		\$ 350,000
Construction	Other							\$ 17,219,969	\$ 17,219,969
Construction Management									\$ -
Equipment/ Vehicle									\$ -
Other									\$ -
<b>TOTAL</b>		\$ -	\$ -	\$ -	\$ -	\$ -	\$ 412,000	\$ 17,219,969	\$ 17,631,969

**6. PROPOSED SOURCES OF FUNDING**

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY16	FY17	FY18	FY19	FY20	FY21	TOTAL
To Be Determined		\$ -	\$ -	\$ -	\$ -	\$ -	\$ 412,000	\$ 17,219,969	\$ 17,631,969
									\$ -
									\$ -
									\$ -
<b>TOTAL</b>		\$ -	\$ -	\$ -	\$ -	\$ -	\$ 412,000	\$ 17,219,969	\$ 17,631,969

**Water Production Projects**

**Re-drill Well 13 (WA1492)**

Land adjacent to the current well site was acquired in March 2014 for the Well 13 Re-drill project and planning and design for the re-drilling portion of the project is in progress. Land acquisition and design is funded by utility operating fund sources, while funds for construction activities to occur in Fiscal Years 2016 and 2017 are to be determined at this time. The project is necessary to replace production capacity lost from the failure of Well 13 in 2013. The city has also received a state capital outlay appropriation in the amount of \$100,000 to plan, design, construct, and equip the well.

**Storage, Transmission, and Distribution Projects**

**Enchanted Hills West-Tank 12W (WA1475)**

Design updates to the 2010 construction plans for the project were completed in June 2014. Construction commenced in October 2014 to be completed substantially completed in July 2015 utilizing utility operating fund sources (\$1,954,041). The existing 2 million gallon tank has a leak and has been sealed temporarily until a time it can be renovated. The new 3 million gallon tank will play an important role in maintaining the integrity of city's ability to store and distribute water to customers in the Enchanted Hill area. The tank will also provide additional capacity to accommodate future growth in the area.



**Idaho Creek Road Water Line (WA1491)**

The project consisted of construction of approximately 1,220 linear feet of 8" water main and connection to existing water lines at Western Hills Drive and Green Lake Road. The existing 8" main was abandoned in place and approximately 16 water service lines were replaced. New asphalt was laid within the project area and a new concrete curb ramp at Western Hills Drive and Idaho Creek Road was constructed. The project was completed in May 2015 and was funded by utility operating fund sources at a cost of \$279,203.

### **Booster Station and Transmission Line from Tank 8 to Tank 13 (WA1493)**

The project consists of construction of a new 4 million gallon per day (MGD) booster station and 16” transmission line from Tank 8 to Tank 13. The booster station and transmission will provide a source of water to communities in upper zone 8 in the event of failures at Well sites 9 and/or 13. Design is in progress to be completed in fall 2015 and construction will commence thereafter. The project is funded by a combination of environmental gross receipts tax revenue (\$395,437) and utility operating sources (\$3,223,120) at an estimated cost of \$3,618,557.

### **Other Major Water Projects**

#### **Water Rights Acquisition (UT0922, WA0833, WA1145, WA1244, WA1348, WA1431, and WA1533)**

The city’s water rights acquisition liability is approximately 16,000 acre feet within the next 50 years under two Office of State Engineer (OSE) permits authorizing diversion of up to 24,000 acre feet per year. The 2003 OSE permit requires acquisition of 728 acre feet of water rights every five (5) year period through 2063, beginning at a time when the city reaches 12,000 acre feet of annual consumption (reached in December 2007). The 1979 permit requirement will vary according to water model results of how the city's water consumption affects the Rio Grande River. To date, the city has acquired and applied approximately 4,719 acre feet toward both permit requirements. As such, the city has satisfied its obligation under the 2003 permit for the first three periods, 2008-2012, 2013-2017, and 2018-2022. Acquisition of water rights has been funded through a combination of utility operating revenues, utility bond proceeds, water rights acquisition fees, and three water rights loans entered into in January and December 2011, and April 2015. The balance of capital funds, including loan proceeds, available for purchase of additional water rights is \$6.2 million, while estimated recurring revenue from the water rights acquisition fee available through Fiscal Year 2021 is \$10.3 million.

#### **Vehicle and Heavy Equipment Replacement (512-0000-505-7015)**



Vehicle and heavy equipment acquisition is funded by utility operating fund transfers. In Fiscal Year 2015 a total of \$494,845 was expended for a street sweeper, backhoe loader, tandem trailer, air compressor, and pickup trucks used by the SCADA, customer service, and transmission and distribution divisions. The Fiscal Year 2016 Budget includes an amount of \$99,512 for Water vehicles and heavy equipment and \$388,630 for Wastewater vehicles and heavy equipment. The Utility Five Year Financial Plan also includes \$1.32 million in utility operating fund transfers for vehicle and equipment acquisition from Fiscal Year 2017 through Fiscal Year 2020.

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