

Existing Inventory

The Utilities Department served an estimated 33,003 residential and non-residential water customers as of December 31, 2015. Average daily production in thousands of gallons for calendar year 2015 was 9,470. Annual water produced for 2015 was 10,608 acre-feet or 3.46 billion gallons.

The Utilities Department operates and maintains:

- 17 Production Wells
- 10 Booster Pump Stations
- 19 Storage Tanks (Storage Capacity: 44 million gallons)
- 1 Reverse Osmosis System
- 10 Arsenic Treatment Facilities, and;
- 571 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. Fourteen wells are in active production status and the city produced 10,608 acre feet of water in calendar year 2015. 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 has been spent between 2005 and 2011 to design, construct, and equip 10 arsenic treatment facilities at various wells throughout the city. Full production at all sites began in fall of 2010. The estimated annual operating cost of these arsenic treatment facilities is \$700,000.

Water lines

The water distribution system consists of approximately 571 miles of water line of various sizes ranging from 6 inches to 24 inches in diameter. In Fiscal Year 2016 there were 40 water main breaks compared with 31 in FY2015 and 41 in FY2014. Data on the location, size and type of water mains will be transferred from the Geographic Information System (GIS) into the Utilities' computerized maintenance management system in Fiscal Year 2017. Once the transfer is complete this information will be used to prioritize and issue work orders, and for overall management of horizontal assets. Utilities Department staff will continue to request funding for regular and full assessment of horizontal infrastructure.

Repair and Maintenance Programs/Activities

The Utilities Department 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 \$741,293 annually, and 79 percent (79%) of manual read meters have been replaced with AMR units since 2006. Expenditures for well repair over the last three years have averaged \$404,355 annually, with work occurring most recently at Wells 3, 9 10 and 14.

Beginning in Fiscal Year 2014, the Utilities Department significantly expanded the water service line replacement program utilizing a \$1,075,000 state capital outlay appropriation and nearly \$275,000 of utility net operating revenue to replace 534 service lines. An additional investment of utility net operating revenue in the amount of \$1.7 million was made in Fiscal Year 2015 to replace 895 service lines as part of Phase 2. State capital outlay and utility net operating revenue were again combined for Phase 3 in the total amount of \$2.2 million to replace 1,106

Capital Improvement Plan

Utilities-Water



FY17

service lines in Fiscal Year 2016. To date approximately 2,535 water service line replacements have been completed and an additional 600 are in process. 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. The Fiscal Year 2017 Budget includes \$1 million for Phase 5 water service line replacement.

Indicators

Indicator	Calendar Year				
	2011	2012	2013	2014	2015
Annual Water Production (acre-feet, 1 acre foot equals 325,851 gallons.)	13,617	14,675	12,739	11,628	10,608
Annual Water Production (1,000 of gallons)	4,437,020	4,781,312	4,151,110	3,789,076	3,456,696
System Wide Gallons per Capita per Day (1,000 gallons)	141.77	159.34	136.31	122.64	111.86
Single Family Residential Gallons per Capita per Day (1,000 gallons)	78.32	79.70	71.90	68.33	65.68
Real Loss in gallons per Connection per Day	23	33	30	37	32
Water Main Breaks per Calendar Year (5 year leak report)	38	35	42	38	31
Water Service Leaks per Calendar Year (5 year leak report)	950	790	786	728	674

Indicator Analysis

Peak Day Demand to Capacity: Maximum water production capacity with all wells operating is approximately 32.3 million gallons per day. The peak day demand for the city in 2015 was 17.5 million gallons or 54 percent (54%) of maximum production. Currently, a number of wells are out of service and/or under repair for various reasons and the city has approximately 21.6 to 32.3 million gallons per day functional production capacity available. The peak day demand of 17.5 million gallons was between fifty four percent (54%) and eighty one percent (81%) 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 four 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 Re-drill Well 13 project in Fiscal Year 2014 and will commence Phase 1 of construction activities in Fiscal Year 2017. The city is currently contemplating debt financing to equipment Well 13 once drilling has been completed.

System-wide Gallons per Capita per Day has decreased nine percent (9%) from 2014 due to declining consumption in the single family residential, city irrigation, commercial irrigation, and industrial customer classes. The data marks the third year of declining consumption and a departure from the previous growth trend in the early part of the decade 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 630 in 2015.

Water Main breaks have become more frequent since 2008. Thirty two main breaks occurred in 2008, while an average of thirty four 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 Department 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 Department 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 with 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 Department 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 operational considerations and needs in making decisions regarding system operations and prioritization of capital projects. The Utilities Department 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 Department has finalized a five year project detailing the status and asset management plans of water and wastewater system equipment. The next step is to populate the model with the original cost of the asset as well as the replacement cost. 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

<u>Average Day Demand</u>	
Average Day Demand	340 gallons per day (gpd)
<u>Peak Day Demand</u>	
Peak Day to Ave. Day Ratio	2.20
Peak Day Demand	750 gpd
<u>Peak Hour Demand</u>	
Peak Hour to Ave. Day Ratio	3.30
Peak Hour Demand	1,120 gpd
<u>Storage Requirements</u>	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 3/4” meter; \$8,160 for a 1” meter; \$16,320 for a 1 1/2’ 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 seventy six (76%) of assessments generated by annual development activity. Twenty four (24%) of assessments generated by annual development activity are collected as revenue. City staff, with the assistance of a consultant, is currently reviewing and updating impact fees. A final report and recommendation will be presented to the Governing Body in Fiscal Year 2017.

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
- Cielo Norte 3 and 4: 0.38 miles of water line
- Loma Colorado Commercial Area: 0.24 miles of water line
- Solcito Phase I: 0.77 miles of water line

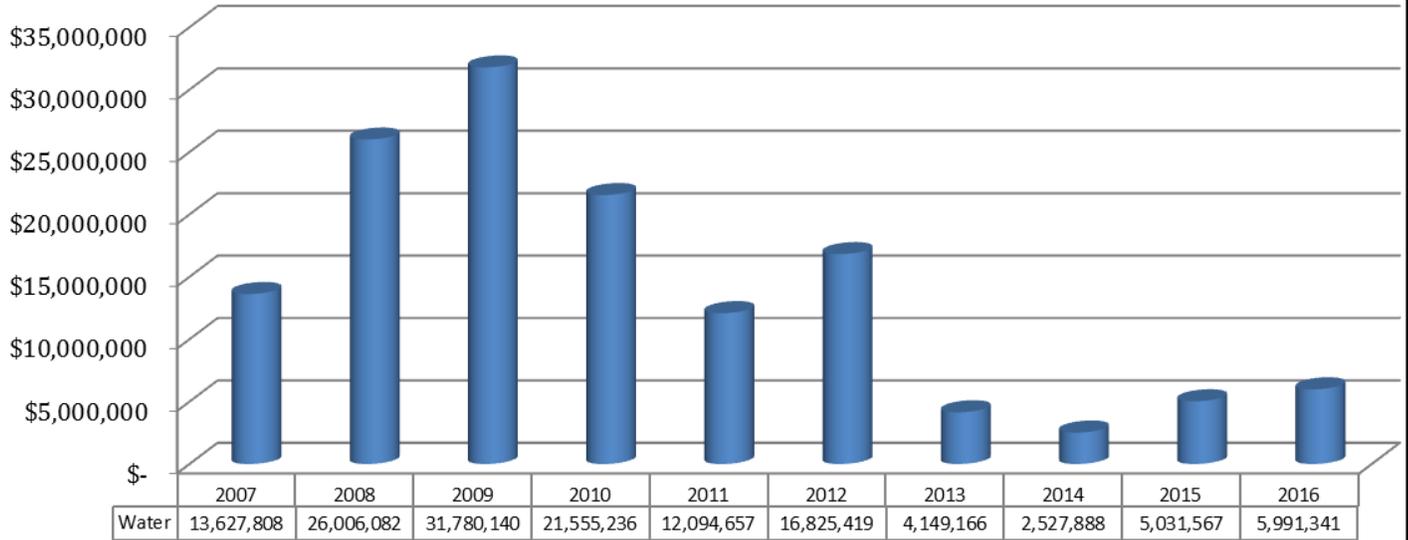
Funding Sources

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

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

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 has rebounded during that last two fiscal years increasing one hundred percent (100%) and twenty percent (20%) year over year, respectively. 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 through FY2014 was 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 significantly 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 enterprise issued \$25 million in new debt in FY2017 for rebuild of Wastewater Treatment Plant 1 into a membrane bioreactor plant. Significant cash financing for water projects in the approximate amount of \$4.2 million has been programmed in the ICIP through FY2022.

Water Capital Expenditures: FY2007-2016



FY2017-FY2022: ICIP Summary

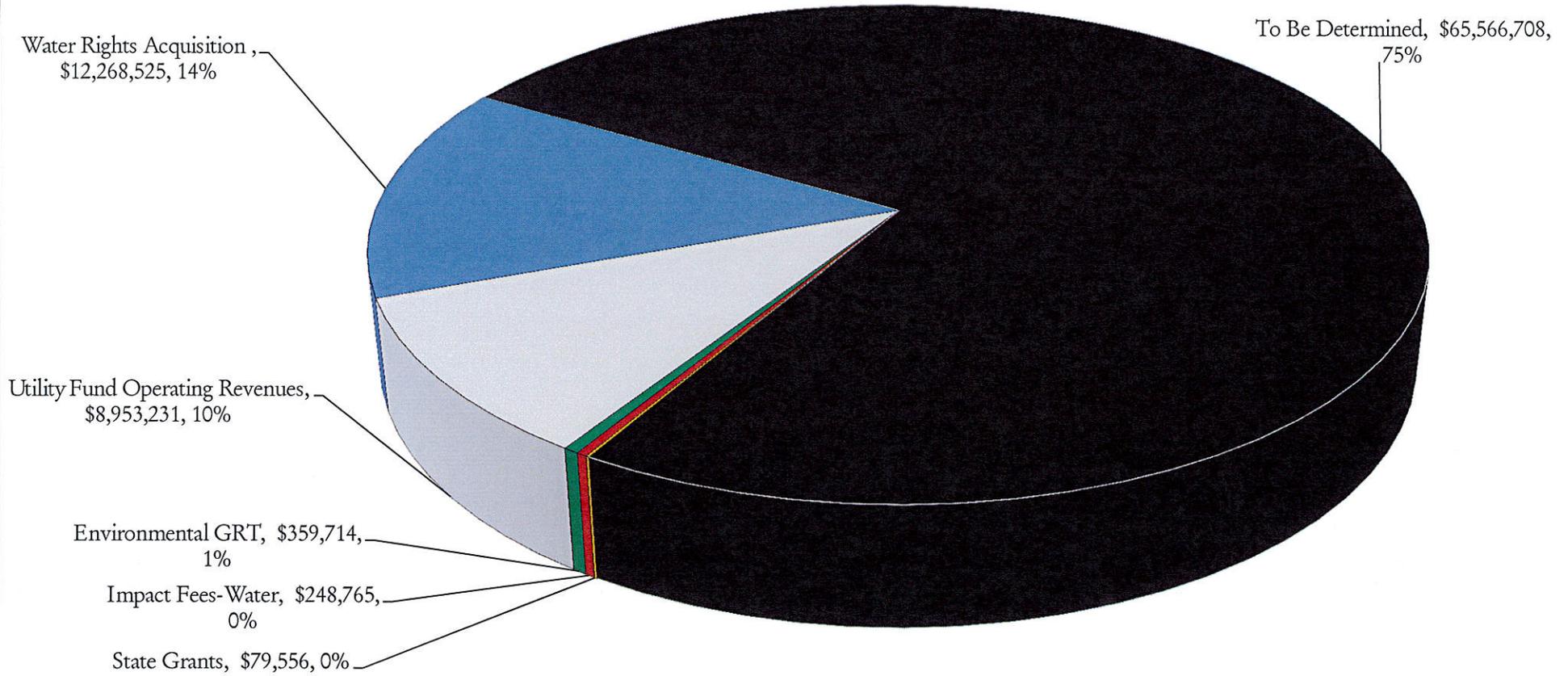
Rank Priority	Fund/Project No.	Project Title	Project To Date	2017 Budget	2017 Additional Funding Anticipated	2017 Total	2018	2019	2020	2021	2022	Funding Requested: FY17-FY22	Funding Source	Funding Source	Funding Source	Funding Source	Total Funding
													(A)	(B)	(C)	(D)	(A)+(B)+(C)+(D)
1	WA1493	Booster Station and Transmission Line from Tank 8 to Tank 13	\$ 342,664	\$ -	\$ 3,303,168	\$ 3,303,168	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,303,168	Utility Fund Operating Revenues	Environmental GRT Revenues			
													\$ 2,943,454	\$ 359,714			\$ 3,303,168
2	WA1598; WA1636; WA1769	Water Rights Acquisitions	\$ 37,797,949	\$ 1,204,532	\$ 2,891,351	\$ 4,095,883	\$ 1,606,671	\$ 1,619,269	\$ 1,633,204	\$ 1,648,483	\$ 1,665,015	\$ 12,268,525	Water Rights Acquisition Fee				
													\$ 12,268,525				\$ 12,268,525
3	WA1492	Redrill Well # 13 and Equip for Arsenic Removal	\$ 106,582	\$ 1,313,737	\$ 1,760,182	\$ 3,073,919	\$ 10,970,000	\$ -	\$ -	\$ -	\$ -	\$ 14,043,919	Utility Fund Operating Revenues	Impact Fees-Water	State Capital Outlay Appropriation	To Be Determined	
													\$ 2,745,597	\$ 248,765	\$ 79,556	\$ 10,970,000	\$ 14,043,918
4	WA1634; WA1764	Renovate/Paint Water Storage Tanks	\$ -	\$ 581,000	\$ 411,502	\$ 992,502	\$ 1,264,000	\$ 1,569,000	\$ 1,782,000	\$ 2,007,000	\$ 2,306,000	\$ 9,920,502	Utility Fund Operating Revenues	To Be Determined			
													\$ 992,502	\$ 8,928,000			\$ 9,920,502
5	WA1765	Variable Frequency Drive (VFD) at Well 14	\$ -	\$ 550,000	\$ -	\$ 550,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 550,000	Utility Fund Operating Revenues				
													\$ 550,000				\$ 550,000
6	N/A	Variable Frequency Drive (VFD) at Well 8	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 550,000	\$ -	\$ -	\$ -	\$ 550,000	To Be Determined				
													\$ 550,000				\$ 550,000
7	N/A	Variable Frequency Drive (VFD) at Well 9	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 550,000	\$ -	\$ -	\$ 550,000	To Be Determined				
													\$ 550,000				\$ 550,000

FY2017-FY2022: ICIP Summary

Rank Priority	Fund/Project No.	Project Title	Project To Date	2017 Budget	2017 Additional Funding Anticipated	2017 Total	2018	2019	2020	2021	2022	Funding Requested: FY17-FY22	Funding Source	Funding Source	Funding Source	Funding Source	Total Funding	
													(A)	(B)	(C)	(D)	(A)+(B)+(C)+(D)	
8	N/A	Land Purchase for Transmission and Distribution Line Break Staging Area	\$ -	\$ -	\$ -	\$ -	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ 300,000	To Be Determined					
													\$ 300,000					\$ 300,000
9	N/A	New Pressure Reducing Valves	\$ 158,766	\$ -	\$ -	\$ -	\$ 560,000	\$ 408,000	\$ 416,160	\$ 212,242	\$ 221,242	\$ 1,817,644	To Be Determined					
													\$ 1,817,644					\$ 1,817,644
10	WA1643; WA1756; WA1766	Well Site Security	\$ 238,158	\$ 185,000	\$ -	\$ 185,000	\$ 178,880	\$ 186,035	\$ 193,477	\$ 201,216	\$ 209,264	\$ 1,153,872	Utility Fund Operating Revenues	To Be Determined				
													\$ 185,000	\$ 968,872				\$ 1,153,872
11	WA1635; WA1767	SCADA Improvements	\$ 387,283	\$ 75,000	\$ 6,777	\$ 81,777	\$ 78,000	\$ 81,120	\$ 84,365	\$ 87,739	\$ 91,249	\$ 504,250	Utility Fund Operating Revenues	To Be Determined				
													\$ 81,777	\$ 422,473				\$ 504,250
12	Fund 512	Vehicles and Heavy Equipment	\$ 1,503,694	\$ 212,700	\$ -	\$ 212,700	\$ 229,000	\$ 136,000	\$ 161,000	\$ 490,000	\$ 593,000	\$ 1,821,700	Utility Fund Operating Revenues	To Be Determined				
													\$ 212,700	\$ 1,609,000				\$ 1,821,700
13	N/A	New Well 9 Water Storage Tank and Tank 9 Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ 718,750	\$ 4,525,000	\$ -	\$ -	\$ -	\$ 5,243,750	To Be Determined					
													\$ 5,243,750					\$ 5,243,750
14	WA1768	Install/Replace Waterlines	\$ 279,203	\$ 1,000,000	\$ 500,000	\$ 1,500,000	\$ 700,000	\$ 900,000	\$ 1,400,000	\$ 650,000	\$ 900,000	\$ 6,050,000	Utility Fund Operating Revenues	To Be Determined				
													\$ 1,000,000	\$ 5,050,000				\$ 6,050,000

FY2017-FY2022: ICIP Summary

Rank Priority	Fund/Project No.	Project Title	Project To Date	2017 Budget	2017 Additional Funding Anticipated	2017 Total	2018	2019	2020	2021	2022	Funding Requested: FY17-FY22	Funding Source	Funding Source	Funding Source	Funding Source	Total Funding
													(A)	(B)	(C)	(D)	(A)+(B)+(C)+(D)
15	Fund 501	Major Equipment for Water Production, Treatment, and Distribution	\$ 141,212	\$ 31,000	\$ -	\$ 31,000	\$ 124,500	\$ 30,500	\$ 105,000	\$ 66,000	\$ 49,000	\$ 406,000	Utility Fund Operating Revenues	To Be Determined			
													\$ 31,000	\$ 375,000			\$ 406,000
16	N/A	Redrill and Equip Well # 9	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 412,000	\$ 17,219,969	\$ 17,631,969	To Be Determined				
													\$ 17,631,969				\$ 17,631,969
17	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
18	WA1755	Sodium Hypochlorite System at Wells 3, 9, 19	\$ -	\$ 184,200	\$ -	\$ 184,200	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 184,200	Utility Fund Operating Revenues				
													\$ 184,200				\$ 184,200
19	WA1776	Booster 12 HVAC	\$ -	\$ 27,000	\$ -	\$ 27,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 27,000	Utility Fund Operating Revenues				
													\$ 27,000				\$ 27,000
TOTALS			\$ 40,955,510	\$ 5,364,169	\$ 8,872,980	\$ 14,237,149	\$ 16,729,801	\$ 10,004,924	\$ 6,325,206	\$ 8,924,680	\$ 31,254,739	\$ 87,476,498					\$ 87,476,498



	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	TOTAL
State Grants	\$ 79,556						\$ 79,556
Impact Fees-Water	\$ 248,765						\$ 248,765
Environmental GRT	\$ 359,714						\$ 359,714
Utility Fund Operating Revenues	\$ 8,953,231						\$ 8,953,231
Water Rights Acquisition	\$ 4,095,883	\$ 1,606,671	\$ 1,619,269	\$ 1,633,204	\$ 1,648,483	\$ 1,665,015	\$ 12,268,525
To Be Determined	\$ 500,000	\$ 15,123,130	\$ 8,385,655	\$ 4,692,002	\$ 7,276,197	\$ 29,589,724	\$ 65,566,708
TOTAL	\$ 14,237,149	\$ 16,729,801	\$ 10,004,924	\$ 6,325,206	\$ 8,924,680	\$ 31,254,739	\$ 87,476,498

**WATER
PROJECTS UNDER CONSIDERATION**

Rank	Project Name	Fiscal Year(s)	Project Estimate
20	Lincoln Avenue Waterline Improvements	2021	\$ 300,000
21	New Replacement Well House-Well 8	2019-2020	\$ 2,000,000
22	Waterline Extension from Paseo Gateway to Enchanted Hills including 4MGPaseo Gateway Water Tank	2019-2020	\$ 3,873,680
23	Land Purchases for Future Utilities	2019-2020	\$ 2,500,000
24	New Replacement Well House-Well 2	2021	\$ 2,000,000
25	Equip Well # 18 to Monitor Static Water Level	2021	\$ 180,000
26	Drill Well S-25 and Equip for 3,000 gpm	2022	\$ 16,940,000
27	Upgrade Enchanted Hills East Booster Station	2022	\$ 1,694,055
28	Equip Well Site S-27, including Arsenic Treatment, Water Quality Treatment, and new Transmission Main	2022	\$ 12,000,000
	TOTAL		\$ 41,487,735

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1. PROJECT INFORMATION

Project Title	Booster Station and Transmission Line from Tank 8 to Tank 13	Requesting Department	Dept. of Utilities	Department Rank Priority No.	1
Project Category	Utilities-Water	CIP Year	FY2014	Project No.:	WA1493
Estimated Useful Life	Greater than 25 Years	District Location	Council District 1	Project Request Status	Revised Project Request

2. PROJECT DESCRIPTION AND SCOPE

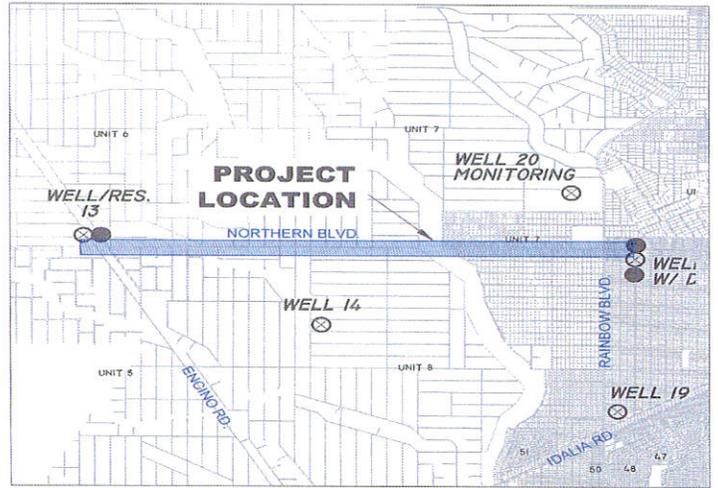
The project consists of installing a new 4 Million Gallon Per Day (MGD) booster station and 18" transmission line between Tank 8 to Tank 13. This includes all necessary appurtenances, including but not limited to air relief valves and pits.

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, including homes located on or near Northern and Rainbow Boulevards, 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. 3 to No. 1 due to its upgraded importance with the increasing size of communities in the area that would benefit from this project. Design was completed in December 2015. Construction commenced in May to be completed in spring 2017.



5. CAPITAL COSTS

PHASE	SOURCE(S) OF COST INFO	PRIOR YEARS	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL
Design and Specifications	City contract or price agreement	\$ 286,008	\$ -						\$ 286,008
Construction	City contract or price agreement	\$ 35,723	\$ 2,917,734						\$ 2,953,457
Construction Management	City contract or price agreement	\$ 20,933	\$ 143,332						\$ 164,265
Other			\$ 242,102						\$ 242,102
TOTAL		\$ 342,664	\$ 3,303,168	\$ -	\$ 3,645,831				

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL
Utility Funds Operating Revenues	540-CIF Water Operations	\$ 306,941	\$ 2,943,454						\$ 3,250,394
Environmental GRT Revenues	260-EGRT Fund	\$ 35,723	\$ 359,714						\$ 395,437
									\$ -
TOTAL		\$ 342,664	\$ 3,303,168	\$ -	\$ 3,645,831				

1. PROJECT INFORMATION					
Project Title	Water Rights Acquisitions	Requesting Department	Dept. of Utilities	Department Rank Priority No.	2
Project Category	Utilities-Water	CIP Year	Recurring Capital Need	Project No.:	WA1598; WA1636; WA1769
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 over 55 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 5,060 acre feet toward both permit requirements. As such, the city has satisfied its obligation under the 2003 permit for the first four periods: 2008-2012, 2013-2017, 2018-2022, 2023-2027.

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 (\$4.8M), and three (3) New Mexico Finance Authority Loans (\$19.2M). A total of \$37.8M has been spent to acquire approximately 2,456 acre feet since Fiscal Year 2009. This is the equivalent of the planned annual water usage of 9,823 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 outstanding 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	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL
Planning and Feasibility									\$ -
Pre Design and Env. Review									\$ -
Land Acq./ROW									\$ -
Design and Specifications									\$ -
Construction									\$ -
Construction Management									\$ -
Water Rights Acquisition	Recent City project	\$37,797,949	\$ 4,095,883	\$ 1,606,671	\$ 1,619,269	\$ 1,633,204	\$ 1,648,483	\$ 1,665,015	\$50,066,474
TOTAL		\$37,797,949	\$ 4,095,883	\$ 1,606,671	\$ 1,619,269	\$ 1,633,204	\$ 1,648,483	\$ 1,665,015	\$50,066,474

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY17	FY18	FY19	FY20	FY21	FY22	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	\$10,602,133							\$10,602,133
Water Rights Acquisition Fee	542-Water Rights Acquisition Fund	\$ 4,835,618	\$ 4,095,883	\$ 1,606,671	\$ 1,619,269	\$ 1,633,204	\$ 1,648,483	\$ 1,665,015	\$17,104,143
Enterprise Fund Loan Proceeds	542-Water Rights Acquisition Fund	\$19,168,941							\$19,168,941
TOTAL		\$37,797,949	\$ 4,095,883	\$ 1,606,671	\$ 1,619,269	\$ 1,633,204	\$ 1,648,483	\$ 1,665,015	\$50,066,474

1. PROJECT INFORMATION

Project Title	Redrill Well #13 and Equip for Arsenic Removal	Requesting Department	Dept. of Utilities	Department Rank Priority No.	3
Project Category	Utilities-Water	CIP Year	FY2014	Project No.:	WA1492
Estimated Useful Life	Greater than 25 Years	District Location	Outside City Limits	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 and construction is anticipated to commence in Summer 2016. The equipping portion of the Well 13 project is tentatively planned for Fiscal Years 2018 and 2019 contingent upon identification of funding.

5. CAPITAL COSTS

PHASE	SOURCE(S) OF COST INFO	PRIOR YEARS	FY17	FY18	FY19	FY20	FY21	FY212	TOTAL
Planning and Feasibility									\$ -
Pre Design and Env. Review									\$ -
Land Acq./ROW	City contract or price agreement	\$ 66,168	\$ -						\$ 66,168
Design and Specifications	City contract or price agreement	\$ 47,965	\$ 198,368	\$ 1,000,000					\$ 1,246,334
Construction	Cost Consultant		\$ 2,875,550	\$ 9,970,000					\$12,845,550
Construction Management									\$ -
Equipment/ Vehicle									\$ -
Other									\$ -
TOTAL		\$ 114,134	\$ 3,073,919	\$10,970,000	\$ -	\$ -	\$ -	\$ -	\$14,158,052

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY17	FY18	FY19	FY20	FY21	FY212	TOTAL
Utility Funds Operating Revenues	540-CIF Water Operations	\$ 93,689	\$ 2,745,597						\$ 2,839,287
Impact Fees-Water	555 Wastewater Impact Fees	\$ -	\$ 248,765						\$ 248,765
State Capital Outlay Appropriation	540-CIF Water Operations	\$ 20,444	\$ 79,556						\$ 100,000
To Be Determined				\$10,970,000					\$10,970,000
									\$ -
TOTAL		\$ 114,134	\$ 3,073,918	\$10,970,000	\$ -	\$ -	\$ -	\$ -	\$14,158,052

1. PROJECT INFORMATION

Project Title	Renovate/Repaint Water Storage Tanks	Requesting Department	Dept. of Utilities	Department Rank Priority No.	4
Project Category	Utilities-Water	CIP Year	Recurring Capital Need	Project No.:	WA1634; WA1764
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 2017. 2017: Tank 3, 2018: Tank 12, 2019: Tank 6A, 2020: Tank 6B, 2021: Tank 8, and 2022: Tank 8A. 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. 5 water tanks are inspected per year by a tank inspection consultant.

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	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL
Planning and Feasibility									\$ -
Pre Design and Env. Review									\$ -
Land Acq./ROW									\$ -
Design and Specifications									\$ -
Construction Other		\$ -	\$ 992,502	\$ 1,264,000	\$ 1,569,000	\$ 1,782,000	\$ 2,007,000	\$ 2,306,000	\$ 9,920,502
Construction Management									\$ -
Equipment/Vehicle									\$ -
Other									\$ -
TOTAL		\$ -	\$ 992,502	\$ 1,264,000	\$ 1,569,000	\$ 1,782,000	\$ 2,007,000	\$ 2,306,000	\$ 9,920,502

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL
Utility Funds Operating Revenues	540-CIF Water Operations		\$ 992,502						\$ 992,502
To Be Determined				\$ 1,264,000	\$ 1,569,000	\$ 1,782,000	\$ 2,007,000	\$ 2,306,000	\$ 8,928,000
									\$ -
									\$ -
TOTAL		\$ -	\$ 992,502	\$ 1,264,000	\$ 1,569,000	\$ 1,782,000	\$ 2,007,000	\$ 2,306,000	\$ 9,920,502

1. PROJECT INFORMATION

Project Title	New Variable Frequency Drive (VFD) Well 14	Requesting Department	Dept. of Public Works/Utilities Administration	Department Rank Priority No.	5
Project Category	Utilities-Water	CIP Year	FY2017	Project No.:	WA1765
Estimated Useful Life	10 Years	District Location	Outside City Limits	Project Request Status	New Project Request

2. PROJECT DESCRIPTION AND SCOPE

A variable frequency drive (VFD), HVAC, and potentially a new line shaft water pump will be installed at Well 14.

3. PROJECT JUSTIFICATION

Well 14 has been a historically unreliable well. The VFD is intended to make the well more reliable and allow water production staff to control the flow from the well site. An HVAC will be required to cool the VFD. It is anticipated that adding the VFD at Well 14 will assist with: a) reduce electrical costs because the pump can be started at a much low current, b) filter the electricity to ensure proper operation of the pump, and c) allow operators to control the amount of water pumped.

4. PROJECT HISTORY AND STATUS

City contractors have replaced Well 14 numerous times in a relatively short period of time. The standing recommended from city contractors is a lineshaft at approximately 1,000 gallons per minute connected to a VFD to make the well more reliable. Utilities staff agrees with the approach with the goal of having a more reliable source of water.

5. CAPITAL COSTS

PHASE	SOURCE(S) OF COST INFO	PRIOR YEARS	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL
Planning and Feasibility									\$ -
Pre Design and Env. Review									\$ -
Land Acq./ROW									\$ -
Design and Specifications	Other		\$ 50,000						\$ 50,000
Construction	Other		\$ 500,000						\$ 500,000
Construction Management									\$ -
Equipment/ Vehicle									\$ -
Other									\$ -
TOTAL		\$ -	\$ 550,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 550,000

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL
Utility Fund Operating Revenues	540-CIF Water Operations	\$ -	\$ 550,000						\$ 550,000
									\$ -
									\$ -
									\$ -
TOTAL		\$ -	\$ 550,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 550,000

1. PROJECT INFORMATION

Project Title	New Variable Frequency Drive (VFD) Well 8	Requesting Department	Dept. of Utilities	Department Rank Priority No.	6
Project Category	Utilities-Water	CIP Year	FY2019	Project No.:	TBD
Estimated Useful Life	10 Years	District Location	Council District 1	Project Request Status	New Project Request

2. PROJECT DESCRIPTION AND SCOPE

A variable frequency drive (VFD), HVAC, and potentially a new line shaft water pump will be placed at Well 8.

3. PROJECT JUSTIFICATION

Well 8 has become an unreliable well in the last few years. The VFD is intended to make the well more reliable and allow water production staff to control the flow from the well site. An HVAC unit will be required to cool the VFD. It is anticipated that adding the VFD at Well 8 will assist with: a) reducing electrical costs because the pump can be started at a much low current, b) filter the electricity to ensure proper operation of the pump, and c) allow operators to control the amount of water pumped.

4. PROJECT HISTORY AND STATUS

City contractors have replaced the Well 8 pump numerous times in a relatively short period of time. The standing recommended from city contractors is a lineshaft pump and motor connected to a VFD to make the well more reliable. The Utilities Department agrees with the approach to have a more reliable source of water.

5. CAPITAL COSTS

PHASE	SOURCE(S) OF COST INFO	PRIOR YEARS	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL
Planning and Feasibility									\$ -
Pre Design and Env. Review									\$ -
Land Acq./ROW									\$ -
Design and Specifications	Other				\$ 50,000				\$ 50,000
Construction	Other				\$ 500,000				\$ 500,000
Construction Management									\$ -
Equipment/ Vehicle									\$ -
Other									\$ -
TOTAL		\$ -	\$ -	\$ -	\$ 550,000	\$ -	\$ -	\$ -	\$ 550,000

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL
To Be Determined					\$ 550,000				\$ 550,000
									\$ -
									\$ -
TOTAL		\$ -	\$ -	\$ -	\$ 550,000	\$ -	\$ -	\$ -	\$ 550,000

1. PROJECT INFORMATION

Project Title	New Variable Frequency Drive (VFD) Well 9	Requesting Department	Dept. of Utilities	Department Rank Priority No.	7
Project Category	Utilities-Water	CIP Year	FY2020	Project No.:	TBD
Estimated Useful Life	10 Years	District Location	Outside City Limits	Project Request Status	Revised Project Request

2. PROJECT DESCRIPTION AND SCOPE

A variable frequency drive (VFD), HVAC, and potentially a new submersible water pump will be placed at Well 9.

3. PROJECT JUSTIFICATION

Well 9 has become an unreliable well in the last few years. The VFD is intended to make the well more reliable and allow water production to control the flow from the well site. An HVAC will be required to cool the VFD. It is anticipated that adding the VFD at Well 9 will assist with: a) reduce electrical costs because the pump can be started at a much low current, b) filter the electricity to ensure proper operation of the pump, and c) allow operators to control the amount of water pumped.

4. PROJECT HISTORY AND STATUS

City contractors have replaced Well 9 numerous times in a relatively short period of time. The standing recommended from city contractors is a submersible pump connected to a VFD to make the well more reliable. The Utilities Department agrees with this approach to have a more reliable source of water.

5. CAPITAL COSTS

PHASE	SOURCE(S) OF COST INFO	PRIOR YEARS	FY17	FY18	FY19	FY20	FY21	FY21	TOTAL
Planning and Feasibility									\$ -
Pre Design and Env. Review									\$ -
Land Acq./ROW									\$ -
Design and Specifications	Other					\$ 50,000			\$ 50,000
Construction	Other					\$ 500,000			\$ 500,000
Construction Management									\$ -
Equipment/ Vehicle									\$ -
Other									\$ -
TOTAL			\$ -	\$ -	\$ -	\$ 550,000	\$ -	\$ -	\$ 550,000

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY17	FY18	FY19	FY20	FY21	FY21	TOTAL
To Be Determined	540-CIF Water Operations					\$ 550,000			\$ 550,000
									\$ -
									\$ -
									\$ -
TOTAL			\$ -	\$ -	\$ -	\$ 550,000	\$ -	\$ -	\$ 550,000

1. PROJECT INFORMATION

Project Title	Land Purchase for Transmission and Distribution Line Break Staging Area	Requesting Department	Dept. of Utilities	Department Rank Priority No.	8
Project Category	Utilities-Water	CIP Year	FY2018	Project No.:	TBD
Estimated Useful Life	Greater than 25 Years	District Location	To Be Determined	Project Request Status	Revised Project Request

2. PROJECT DESCRIPTION AND SCOPE

Purchase a new property for the purpose of placing water saturated soil removed from water line breaks throughout the city. The water saturated soil is replaced with clean dry soil during line repair work for proper roadway compaction.

3. PROJECT JUSTIFICATION

Wastewater Treatment Plant 1 will no longer will be a viable location for soil storage in the near future due to space constraints and access restrictions. A new location will be needed for the wet and dry soil for water line break repairs.

4. PROJECT HISTORY AND STATUS

The project is tentatively planned in FY2018 upon identification of funding.

5. CAPITAL COSTS

PHASE	SOURCE(S) OF COST INFO	PRIOR YEARS	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL
Planning and Feasibility									\$ -
Pre Design and Env. Review									\$ -
Land Acq./ROW	Other			\$ 240,000					\$ 240,000
Design and Specifications	Other			\$ 40,000					\$ 40,000
Construction	Other			\$ 20,000					\$ 20,000
Construction Management									\$ -
Equipment/ Vehicle									\$ -
Other									\$ -
TOTAL		\$ -	\$ -	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ 300,000

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL
To Be Determined				\$ 300,000					\$ 300,000
									\$ -
									\$ -
									\$ -
									\$ -
TOTAL		\$ -	\$ -	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ 300,000

1. PROJECT INFORMATION

Project Title	New Pressure Reducing Valves	Requesting Department	Dept. of Utilities	Department Rank Priority No.	9
Project Category	Utilities-Water	CIP Year	Recurring Capital Need	Project No.:	TBD
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. The following 5 year schedule was established in Fiscal Year 2017. FY2018: Veranda PRV, Cabezon PRV, Grande Dr./Sara Rd. PRV; FY2019: Star Heights PRV, Vera Cruz Rd., FY2020: Unit 17-Pasilla Rd., River's Edge II-Riverside Drive; FY2021: River's Edge I-Sandia Vista Rd.; FY2022: Bismark Hills/Glen Hills (Enchanted Hills)

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	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL
Planning and Feasibility									\$ -
Pre Design and Env. Review									\$ -
Land Acq./ROW									\$ -
Design and Specifications			\$ -	\$ 100,800	\$ 73,440	\$ 74,909	\$ 38,204	\$ 39,824	\$ 327,176
Construction Other		\$ 158,766	\$ -	\$ 459,200	\$ 334,560	\$ 341,251	\$ 174,038	\$ 181,418	\$ 1,649,234
Construction Management									\$ -
Equipment/Vehicle									\$ -
Other									\$ -
TOTAL		\$ 158,766	\$ -	\$ 560,000	\$ 408,000	\$ 416,160	\$ 212,242	\$ 221,242	\$ 1,976,410

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL
Utility Funds Operating Revenues	540-CIF Water Operations	\$ 158,766							\$ 158,766
To Be Determined				\$ 560,000	\$ 408,000	\$ 416,160	\$ 212,242	\$ 221,242	\$ 1,817,644
									\$ -
									\$ -
									\$ -
TOTAL		\$ 158,766	\$ -	\$ 560,000	\$ 408,000	\$ 416,160	\$ 212,242	\$ 221,242	\$ 1,976,410

1. PROJECT INFORMATION

Project Title	Well Site Security	Requesting Department	Dept. of Utilities	Department Rank Priority No.	10
Project Category	Utilities-Water	CIP Year	FY2016	Project No.:	WA1643; WA1756; WA1766
Estimated Useful Life	Greater than 25 Years	District Location	Multiple Districts	Project Request Status	Revised Project Request

2. PROJECT DESCRIPTION AND SCOPE

Well Site Security involves various physical hardening and electronic improvements to water facilities.

3. PROJECT JUSTIFICATION

Well Site Security is intended to enhance protection of the drinking water system.

4. PROJECT HISTORY AND STATUS

Improvements to the water system have been continuously made to try and ensure protection of the water system. The project is ongoing to keep the system up to date for employee and public safety. Most recently, surveillance systems were installed at Wells 6, 8, and 10 in FY2015.

5. CAPITAL COSTS

PHASE	SOURCE(S) OF COST INFO	PRIOR YEARS	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL
Planning and Feasibility									\$ -
Pre Design and Env. Review									\$ -
Land Acq./ROW									\$ -
Design and Specifications	Other		\$ 32,000	\$ 33,280	\$ 34,611	\$ 35,996	\$ 37,435	\$ 38,933	\$ 212,255
Construction	Other	\$ 238,158	\$ 153,000	\$ 145,600	\$ 151,424	\$ 157,481	\$ 163,780	\$ 170,331	\$ 1,179,774
Construction Management									\$ -
Equipment/ Vehicle									\$ -
Other									\$ -
TOTAL		\$ 238,158	\$ 185,000	\$ 178,880	\$ 186,035	\$ 193,477	\$ 201,216	\$ 209,264	\$ 1,392,029

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL
Utility Funds Operating Revenues	540-CIF Water Operations	\$ 238,158	\$ 185,000						\$ 423,158
To Be Determined				\$ 178,880	\$ 186,035	\$ 193,477	\$ 201,216	\$ 209,264	\$ 968,872
									\$ -
									\$ -
TOTAL		\$ 238,158	\$ 185,000	\$ 178,880	\$ 186,035	\$ 193,477	\$ 201,216	\$ 209,264	\$ 1,392,029

1. PROJECT INFORMATION

Project Title	SCADA Improvements	Requesting Department	Dept. of Public Works/Utilities Administration	Department Rank Priority No.	11
Project Category	Utilities-Water	CIP Year	Recurring Capital Need	Project No.:	WA1635; WA1767
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 and 2017.

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

\$504,250 in expenditures are planned through Fiscal Year 2022.

5. CAPITAL COSTS

PHASE	SOURCE(S) OF COST INFO	PRIOR YEARS	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL
Planning and Feasibility									\$ -
Pre Design and Env. Review									\$ -
Land Acq./ROW									\$ -
Design and Specifications									\$ -
Construction	Other	\$ 387,283	\$ 81,777	\$ 78,000	\$ 81,120	\$ 84,365	\$ 87,739	\$ 91,249	\$ 891,533
Construction Management									\$ -
Equipment/Vehicle									\$ -
Other									\$ -
TOTAL		\$ 387,283	\$ 81,777	\$ 78,000	\$ 81,120	\$ 84,365	\$ 87,739	\$ 91,249	\$ 891,533

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL
Utility Funds Operating Revenues	540-CIF Water Operations	\$ 318,966	\$ 81,777						\$ 400,743
Impact Fees-Water	545 Water Impact Fees Fund	\$ 24,216							\$ 24,216
Utility Bond Proceeds	572-2007 UT Bond Construction	\$ 44,101							\$ 44,101
To Be Determined				\$ 78,000	\$ 81,120	\$ 84,365	\$ 87,739	\$ 91,249	\$ 422,473
TOTAL		\$ 387,283	\$ 81,777	\$ 78,000	\$ 81,120	\$ 84,365	\$ 87,739	\$ 91,249	\$ 891,533

1. PROJECT INFORMATION

Project Title	Vehicles and Heavy Equipment	Requesting Department	Dept. of Public Works/Utilities Administration	Department Rank Priority No.	12
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 2017 include four (4) replacement pick up trucks, a new forklift, new dump trailer, and new pick up truck for a new water conservation specialist.

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	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL
Planning and Feasibility									\$ -
Pre Design and Env. Review									\$ -
Land Acq./ROW									\$ -
Design and Specifications									\$ -
Construction									\$ -
Construction Management									\$ -
Equipment/Vehicle	Other	\$ 1,503,694	\$ 212,700	\$ 229,000	\$ 136,000	\$ 161,000	\$ 490,000	\$ 593,000	\$ 3,325,394
Other									\$ -
TOTAL		\$ 1,503,694	\$ 212,700	\$ 229,000	\$ 136,000	\$ 161,000	\$ 490,000	\$ 593,000	\$ 3,325,394

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY17	FY18	FY19	FY20	FY21	FY22	TOTAL
Utility Funds Operating Revenues	512 Ut Eq Repl Fund	\$ 1,503,694	\$ 212,700						\$ 1,716,394
To Be Determined				\$ 229,000	\$ 136,000	\$ 161,000	\$ 490,000	\$ 593,000	\$ 1,609,000
									\$ -
									\$ -
									\$ -
TOTAL		\$ 1,503,694	\$ 212,700	\$ 229,000	\$ 136,000	\$ 161,000	\$ 490,000	\$ 593,000	\$ 3,325,394

Utilities Department
FY2017 ICIP Fleet Vehicle and Heavy Equipment Detail

Rank	Vehicle #	Vehicle Type	Assignment	Year	Mileage	2017	2018	2019	2020	2021	2022
1	UT102	Kenworth Tractor Truck	Wastewater Treatment	1989	69,468	185,000					
2	UT142	Ford F150	Transmission & Distribution	2005	232,921	28,000					
3	UT163	Dodge Dakota	Transmission & Distribution	2006	142,121	28,000					
4	UT36	Chevy 1500	SCADA	2008	98,451	35,700					
5	UT118	Ford F-150 Truck	Wastewater Treatment	2002	124,007	28,000					
6	UT156	Ford Ranger	Water Production	2007	128,064	34,000					
7	New	Covered Trailer	Wastewater Treatment	2016	N/A	9,800					
8	New	Fork Lift	Transmission & Distribution	2016	N/A	51,000					
9	New	14x14 Dump Trailer	Transmission & Distribution	2016	N/A	8,000					
10	New	14' Dump Trailer	Transmission & Distribution	2016	N/A	8,400					
11	New	Ford F150	Environmental Management	2016	N/A	28,000					
12	UT11	Ford F-450 Truck	Water Production	2002	178,101		53,000				
13	EN20	Ford F-250 Truck	Engineering	2007	189,272		30,000				
14	CS152	Ford Ranger	Utility Services	2006	138,068		26,000				
15	UT35A	12CY Dump Truck	Transmission & Distribution	1997	39,117		120,000				
16	UT145	Chevy Colorado	Water Production	2006	156,558			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	UT146	Ford F-350 Truck	Water Production	2006	153,264			50,000			
20	UT147	Ford F-350	Water Production	2006	119,796				45,000		
21	UT157A	Chevy S10	Wastewater Treatment	1995	58,443				26,000		
22	UT35	John Deere Backhoe	Transmission & Distribution	1996	5774 Hrs				90,000		
23	UT135-1	Ford F-350	Wastewater Treatment	2005	141,799					45,000	
24	CS23	Ford Ranger	Utility Services	2008	127,918					30,000	
25	CS29	Ford Ranger	Utility Services	2008	124,176					30,000	
26	UT134	GAP-VAX	Transmission & Distribution	2004	48,493					400,000	
27	CS137	Ford Ranger	Utility Services	2005	142,459					30,000	
28	UT12	Dodge 1500 Pick-up Truck	Water Production	2001	127,019						26,000
29	UT90	Ford F800 Vactor	Transmission & Distribution	1993	258,958						400,000
30	UT122	Chvrolet 1500 Truck	Water Production	2004	187,496						26,000
31	UT127	Ford F550 Truck	Transmission & Distribution	2004	126,765						65,000
32	UT138	Ford F-250 Truck	Wastewater Treatment	2005	122,943						45,000
33	UT141	Ford E-250 Cargo Van	SCADA	2005	108,228						38,000
34	UT154	Ford F-350 Truck	Transmission & Distribution	2007	105,798						38,000
					TOTAL	443,900	229,000	136,000	161,000	535,000	638,000
										FY2017-2022	2,142,900
					Water	212,700	229,000	136,000	161,000	490,000	593,000
					Wastewater	231,200	-	-	-	45,000	45,000
					Total	443,900	229,000	136,000	161,000	535,000	638,000

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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 was completed in April 2016. Land acquisition, design, and re-drilling activities are funded by a combination of utility operating fund sources (\$1.2 million), water impact fees (\$248,765), and a 2014 state capital outlay appropriation (\$100,000). The Fiscal Year 2017 Budget includes an additional appropriation of utility operating fund sources in the amount of \$1,313,737 in anticipation of construction activities tentatively planned for summer 2016. The project is necessary to replace production capacity lost from the failure of Well 13 in 2013. Funds for the equipping of the well site are to be determined at this time.

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 and construction was completed in summer 2015 utilizing utility operating fund sources (\$1,980,863). 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.



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, including homes located on or near Northern and Rainbow Boulevards in the event of failures at Well sites 9 and/or 13. Design was completed in December 2015 and construction commenced in May 2016. The project is funded by a combination of environmental gross receipts tax revenue (\$395,437) and utility operating sources (\$3,250,395).

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 over 55 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-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 5,060 acre feet toward both permit requirements. As such, the city has satisfied its obligation under the 2003 permit for the first four periods: 2008-2012, 2013-2017, 2018-2022, and 2023-2027. 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 of 2011, and April 2015. The balance of capital funds at year end FY2016 available for purchase of additional water rights is \$2.9 million, while estimated recurring revenue from the water rights acquisition fee available through Fiscal Year 2022 is \$9.4 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 2016 a total of \$121,478.54 was expended for a new ditch FX20 vacuum system, and four (4) pickup trucks used by the customer service and water production divisions. The Fiscal Year 2017 Budget includes an amount of \$212,7700 for Water vehicles and heavy equipment and \$231,200 for Wastewater vehicles and heavy equipment. The Utility Five Year Financial Plan does not include utility operating fund transfers for vehicle and equipment acquisition from Fiscal Year 2018 through Fiscal Year 2021 due to lack of funding.