Existing Inventory

The Utilities Division of the Public Works Department currently serves an estimated 32,306 residential and non-residential water customers. Average daily production in thousands of gallons for calendar year 2012 was 13,101. Annual water produced for 2012 was 14,675 acre-feet or 4.78 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;
- 563 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. Seventeen wells are in active production status and the city produced an estimated 14,675 acre feet of water in Calendar Year 2012. 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
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 in 2003. 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 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.

Water lines
The water distribution system includes approximately 563 miles of water line of various sizes. The water distribution system has water line sizes which typically range from 6 inches to 24 inches in diameter.

Repair and Maintenance Programs/Activities

Well repair and maintenance are perpetually included in the ICIP. Any number of wells may be in need of repair during a fiscal year. Costs typically range from $250,000 per year to $500,000 per year depending on how many wells are in need of repair. Booster Stations are constructed to move water from one area of the city, where possible, to other areas of the city when wells are out of service. Although boosters are not a source of water, they are a very useful tool in maintaining redundancy throughout the water system.

Indicators

Indicator	Calendar Year 2008	2009	2010	2011	2012
Population (Census Projection)	76,762	79,723	82,574	88,071	89,320
Annual Water Production (acre-feet, 1 acre foot equals 325,851 gallons.)	13,095	12,545	13,563	13,617	14,675
Annual Water Production (1,000 of gallons)	4,267,022	4,087,804	4,419,521	4,437,117	4,781,262
Per Account Water Production (1,000 of gallons)	149.12	137.25	145.64	141.77	148
Single Family Residential Gallons Per Capita per Day	79.18	78.05	78.95	78.13	79.5
Non-Revenue Water Ratio Percent	16.6	15.8	13.1	12.8	16.2
Water Main Breaks per Calendar Year	32	52	35	43	34
Water Service Leaks per Calendar Year	694	664	954	950	790

Indicator Analysis
Capacity to Peak Demand: The capacity to peak demand ratio has decreased due to additional population and can be dramatically affected if an active well is out of production. The city is at or near the point at which new wells and replacement wells must start being completed for a reliable water system for existing residents and for any of the anticipated additional growth of the city population or business. Maximum water production capacity with all wells operating is approximately 33 million gallons per day. The current peak day demand of the city in 2012 is 22.1 million gallons per day or 67 percent of maximum production. Currently, a number of wells are under repair for various reasons and the city had approximately 28.2 million gallons a day production capacity available. The 22.1 million gallon peak day demand is 78 percent of current production capacity. Future well failures, depending on the location, can potentially trigger a shortage of water and water rationing in various areas.

Per Account Water Production has increased four and four tenths percent (4.4%) from 2011 primarily due to an industrial customer using 159 million gallons of water more in 2012 compared to 2011. Prolonged and continued drought conditions also caused commercial irrigation to increase. 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 2012.

Water Main breaks have become more frequent since 2008. Thirty two main breaks occurred in 2008. Thirty four main breaks occurred in 2012. 2009 and 2011 had over forty water main breaks. 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.

Water Model:
Over the years, the city has developed a water system model to evaluate the existing water system. The city uses the model to ensure new and existing developments have adequate water supply and fire protection. A prudent water system operation requires redundancy in the event of an unforeseen event, such as a facility failure, to ensure uninterrupted service to the customers (both domestic and commercial service) plus fire protection.
More recently, Bohannan Huston Incorporated (BHI) has been tasked with an Electric Optimization Study to evaluate whether adequate water supply and pumping capacity are available in the existing water system such that wells can be operated during off-peak hours to reduce electric costs. Findings and recommendations of this study are being finalized in 2013.

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 base 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 plan 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 4 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

Average Day Demand	
Average Day Demand	340 gallons per day (gpd)
Peak Day Demand	
Peak Day to Ave. Day Ratio	2.20
Peak Day Demand	750 gpd
Peak Hour Demand	
Peak Hour to Ave. Day Ratio	3.30
Peak Hour Demand	1,120 gpd
Storage Requirements	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. There are a significant number of water impact fee credits outstanding and the city currently collects revenue on approximately thirty percent (30%) of assessments generated by annual development activity.

Developer contributions and dedications since Fiscal Year 2010 include:

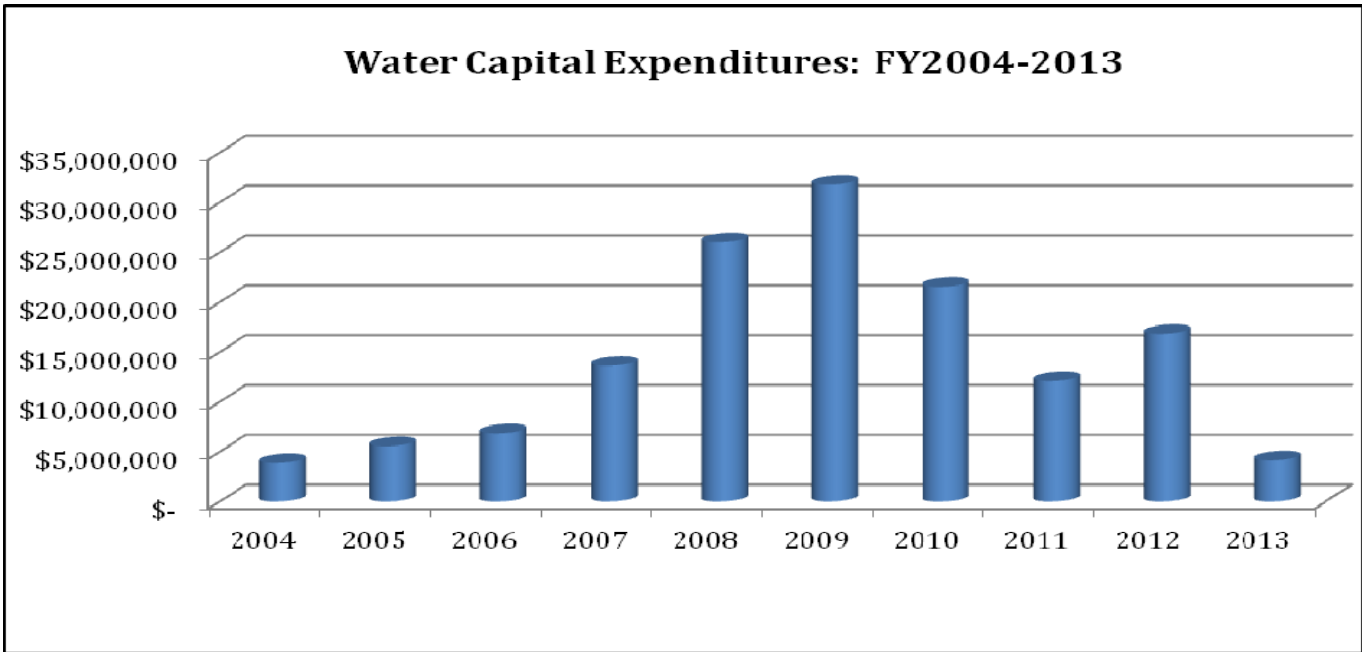
- Northern Meadows (Unit 19): 1.34 miles of water line
- High Range III: 1.29 miles of water line
- Paseo Vulcan Crossing: 0.12 miles of water line
- Diamond Ridge: 1.79 miles of water line
- Cabezon Tract 1A: 0.21 miles of water line
- Cabezon Commons Tract 11: 0.26 miles of water line

- 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

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 thirteen percent (13%) of its 2009 peak by Fiscal Year 2013. Through Fiscal Year 2011, the capital program was heavily supported by several bond issues pledging the net revenues of the system. These bond issues were primarily related to 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 in support of the capital program 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. 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). The Utility enterprise anticipates issuing new bonds in calendar year 2014. Additional fiscal relief is anticipated upon final maturity of debt associated with the initial system acquisition in 2022. Most recently, the city has focused on acquisition of water rights through a mix of cash and debt financing supported by the Water Rights Acquisition Fee first imposed on system users beginning in July 2010.

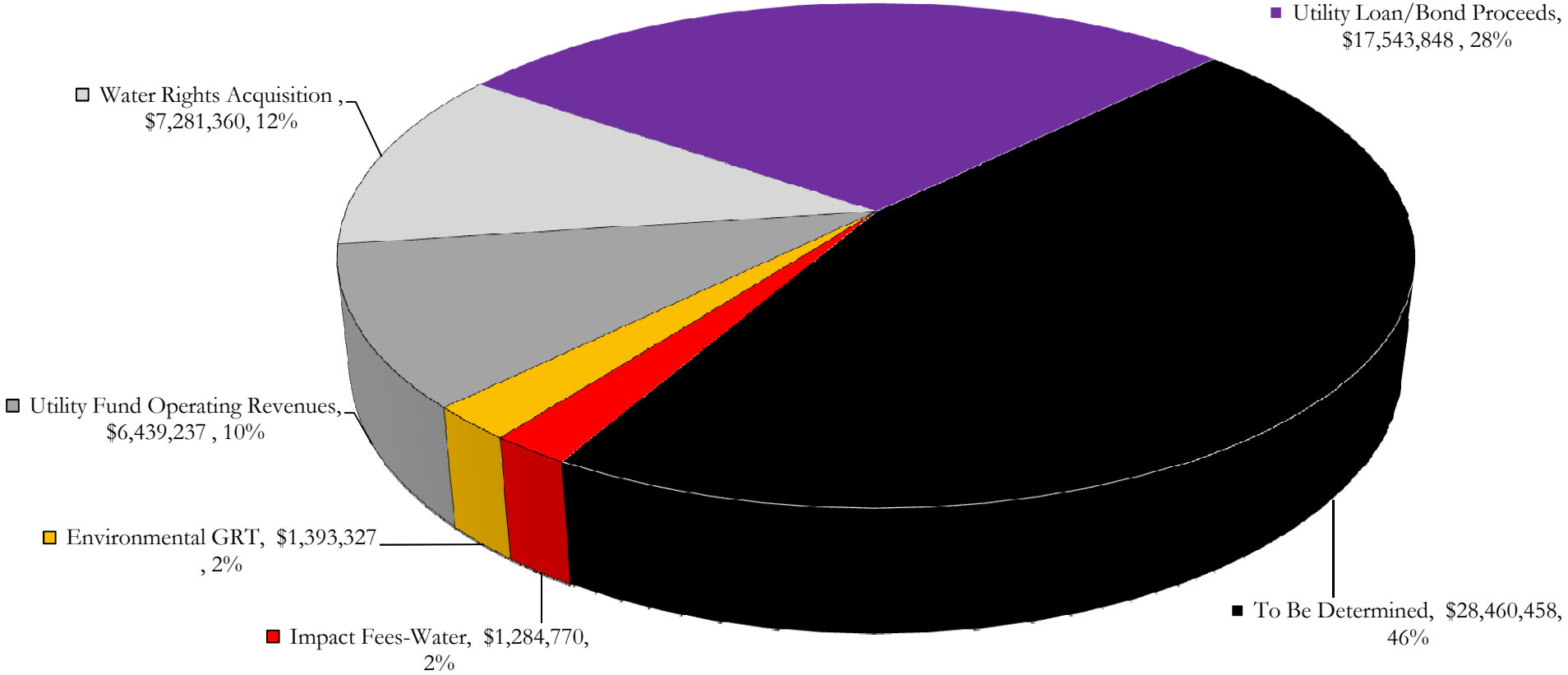
FY2014-FY2019: ICIP Summary

Rank Priority	Fund/ Project No.	Project Title	Project To Date	2014 Budget	2014 Additional Funding Anticipated	2014 Total	2015	2016	2017	2018	2019	Funding Requested: FY14-FY19	Funding Source (A)	Funding Source (B)	Funding Source (C)	Funding Source (D)	Total Funding: FY14-FY19 (A)+(B)+ (C)+ (D)
1	WA1244; WA1348; WA1431	Water Rights Acquisitions	$ 29,863,164	$ 1,446,024	$ 1,482,977	$ 2,929,001	$ 1,103,962	$ 1,114,181	$ 1,125,583	$ 1,138,153	$ 1,147,001	**$ 8,557,882**	Water Rights Acquisition Fee	Utility Loan Proceeds			
													$ 7,281,361	$ 1,276,520			**$ 8,557,882**
2	WA1243; WA1346; WA1429	Repair / Rehab Wells	$ 573,211	$ 503,751	$ 576,476	$ 1,080,227	$ 518,864	$ 534,430	$ 550,463	$ 566,977	$ 583,986	**$ 3,834,947**	Environmental GRT Revenues	Utility Fund Operating Revenues			
													$ 1,393,327	$ 2,441,620			**$ 3,834,947**
3	N/A	Redrill Well #4 or #5 and Equip for 1,500 gpm with Arsenic Treatment	$ -	$ -	$	$	$ 412,000	$ 2,000,000	$ 2,892,500	$ 4,000,000	$ -	**$ 9,304,500**	Utility Bond Proceeds	Impact Fees-Water	To Be Determined		
													$ 5,304,500	$ 102,235	$ 3,897,766		**$ 9,304,500**
4	WA1366	New Pressure Reducing Valves	$ -	$ -	$ - 180,250	$ - 180,250	$ 185,658	$ 191,227	$ 196,964	$ 202,872	$ 208,959	**$ 1,165,929**	Utility Fund Operating Revenues	Utility Loan Proceeds	To Be Determined		
													$ 100,000	$ 754,098	$ 311,831		**$ 1,165,929**
5	WA1347; WA1421	SCADA Improvements	$ 87,250	$ 180,000	$ 79,735	$ 259,735	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	**$ 759,735**	Utility Fund Operating Revenues	Impact Fees-Water			
													$ 739,972	$ 19,763			**$ 759,735**
6	WA1357	Renovate/Paint Water Storage Tanks	$	$ -	$ 508,807	$ 508,807	$ 401,502	$ 413,547	$ 425,953	$ 438,732	$ 451,894	**$ 2,640,437**	Utility Fund Operating Revenues	Utility Loan Proceeds			
													$ 119,000	$ 2,521,437			**$ 2,640,437**
7	Fund 512	Vehicles and Heavy Equipment	$ - 301,535	$ 300,821	$ 348,082	$ 648,903	$ 350,000	$ 100,000	$ 100,000	$ 375,000	$ 100,000	**$ 1,673,903**	Utility Fund Operating Revenues				
													$ 1,673,903				**$ 1,673,903**
8	N/A	Install/Replace Waterlines Concurrent with Roadway Projects	$	$ -	$ 1,152,325	$ 1,152,325	$ 1,186,895	$ 1,222,501	$ 1,259,176	$ 1,296,951	$ 1,335,860	**$ 7,453,708**	Utility Loan Proceeds				
													$ 7,453,708				**$ 7,453,708**
9	Fund 501; WA1427	Major Equipment for Water Production, Treatment, and Distribution	$ - -	$ 161,900	$ -	$ 161,900	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	**$ 411,900**	Utility Fund Operating Revenues				
													$ 411,900				**$ 411,900**

FY2014-FY2019: ICIP Summary

Rank Priority	Fund/ Project No.	Project Title	Project To Date	2014 Budget	2014 Additional Funding Anticipated	2014 Total	2015	2016	2017	2018	2019	Funding Requested: FY14-FY19	Funding Source (A)	Funding Source (B)	Funding Source (C)	Funding Source (D)	Total Funding: FY14-FY19 (A)+(B)+ (C)+ (D)
10	WA1430	Well Site Security	$ -	$ 160,000	$ -	$ 160,000	$ 126,099	$ 129,882	$ 133,779	$ 137,792	$ 141,926	**$ 829,478**	Utility Fund Operating Revenues				
													$ 829,478				**$ 829,478**
11	WA1211	Southern Blvd. Waterline, Finish Well 19 line near Puesta del Sol School	$ -	$ -	$ 400,000	$ 400,000	$ -	$ -	$	$	$	**$ 400,000**	Utility Fund Operating Revenues	Impact Fees-Water	To Be Determined		
													$ 123,364	$ 44,511	$ 232,125		**$ 400,000**
12	WA1065; WA1068; WA1245	Waterline Extension from Paseo Gateway to Enchanted Hills including 4MGPaseo Gateway Water Tank.	$ 575,801	$	$ 200,000	$ 200,000	$ 2,317,936	$ 673,680	$ -	$ -	$ -	**$ 3,191,616**	Impact Fees-Water	To Be Determined			
													$ 418,673	$ 2,772,943			**$ 3,191,616**
13	N/A	Lincoln Avenue Waterline Improvements	$ -	$ - -	$ 233,585	$ 233,585	$ -	$ -	$ - -	$ -	$ -	**$ 233,585**	Utility Loan Proceeds				
													$ 233,585				**$ 233,585**
14	N/A	Booster Station and Transmission Line from Tank 8 to Tank 13	$	$	$	$	$ 936,000	$ 5,476,487	$ -	$ -	$ -	**$ 6,412,487**	Impact Fees-Water	To Be Determined			
													$ 304,456	$ 6,108,032			**$ 6,412,487**
15	WA0793	Equip Well Site S-27, including Arsenic Treatment, Water Quality Treatment, and new Transmission Main	$ - 3,961,136	$ - -	$ - -	$ - -	$ -	$ -	$ 7,089,745	$ 8,443,148	$ - -	**$ 15,532,893**	Impact Fees-Water	To Be Determined			
													$ 9,574,209	$ 5,958,684			**$ 15,532,893**
		TOTALS	**$ 35,362,096**	**$ 2,752,496**	**$ 5,162,237**	**$ 7,914,733**	**$ 7,688,916**	**$ 12,005,936**	**$ 13,924,164**	**$ 16,749,625**	**$ 4,119,626**	**$ 62,403,000**					**$ 62,403,000**

2014-2019 ICIP Financing Summary
Utilities-Water



	FY14	FY15	FY16	FY17	FY18	FY19	TOTAL
Impact Fees-Water	$ 264,273	$ 416,246	$ 197,560	$ 202,221	$ 204,470	$ -	**$ 1,284,770**
Environmental GRT	$ 377,082	$ 171,098	$ 180,803	$ 218,182	$ 223,081	$ 223,081	**$ 1,393,327**
Utility Fund Operating Revenues	$ 2,256,284	$ 973,865	$ 733,509	$ 716,060	$ 1,006,688	$ 752,831	**$ 6,439,237**
Water Rights Acquisition	$ 1,652,480	$ 1,103,962	$ 1,114,181	$ 1,125,583	$ 1,138,153	$ 1,147,001	**$ 7,281,360**
Utility Loan/Bond Proceeds	$ 3,132,489	$ 2,130,147	$ 3,756,048	$ 4,707,629	$ 1,875,683	$ 1,941,852	**$ 17,543,848**
To Be Determined	$ 232,125	$ 2,893,598	$ 6,023,835	$ 6,954,489	$ 12,301,550	$ 54,861	**$ 28,460,458**
TOTAL	**$ 7,914,733**	**$ 7,688,916**	**$ 12,005,936**	**$ 13,924,164**	**$ 16,749,625**	**$ 4,119,626**	**$ 62,403,000**

WATER PROJECTS UNDER CONSIDERATION			
Rank	**Project Name**	**Fiscal Year(s)**	**Project Estimate**
16	Land Purchases for Future Utilities	2014-2019	$ 2,539,063
17	Equip Well #18 to Monitor Static Water Level	2017	$ 125,000
18	Re-Drill Well 9 and Equip for 2,400 ac-ft./yr, 4MG Tank and Transmission Line from Main St.	2015-2017	$ 17,631,969
19	New 4MG Tank 6C	2015-2016	$ 2,229,579
20	New 4MG Tank 17B	2015-2016	$ 2,229,579
21	New 3 MG Tank @ Enchanted Hills West	2016-2018	$ 3,203,945
22	Upgrade Enchanted Hills East Booster Station	2016-2017	$ 1,694,055
23	Drill Well S-25 and Equip for 3,000 gpm	2016-2018	$ 16,027,648
24	Enclose #8 Well House	2017-2018	$ 500,000
25	Redrill Well #1	2019	$ 100,000
	TOTAL		**$ 46,280,838**

1. PROJECT INFORMATION

Project Title	Water Rights Acquisitions	Requesting Department	Dept. of Public Works/Utilities	Department Rank Priority	1
Project Category	Utilities-Water	CIP Year	Recurring Capital Need	Project No.:	WA1244; WA1348; WA1431
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 4,398.64 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.

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 ($2.5M), and two (2) New Mexico Finance Authority Loans ($13.6M). A total of $29.9M has been spent to acquire 2,017 acre feet since Fiscal Year 2009. This is the equivalent of the planned annual water usage of 8,068 single family households, assuming desert southwest water conservation norms. On January 9, 2013, the Governing Body voted to increase the Water Rights Acquisition Fee to $6 (O35, 12-34), and subsequently authorized submission of a loan application to the New Mexico Finance Authority (R9, 12-008) in the amount of $4.86M for bulk purchase of an additional 400 acre feet of water rights toward the City's 2023-2027 obligation. The bulk purchase deal fell through in March 2013 and the planned loan will not be pursued at this time. Water rights acquisition fee revenue 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	FY14	FY15	FY16	FY17	FY18	FY19	TOTAL
Planning and Feasibility									$ -
Pre Design and Env. Review									$ -
Land Acq./ROW									$ -
Design and Specifications									$ -
Construction									$ -
Construction Management									$ -
Water Rights Acquisition	Other	$ 29,863,164	$ 2,929,001	$ 1,103,962	$ 1,114,181	$ 1,125,583	$ 1,138,153	$ 1,147,001	$ 38,421,046
TOTAL		**$ 29,863,164**	**$ 2,929,001**	**$ 1,103,962**	**$ 1,114,181**	**$ 1,125,583**	**$ 1,138,153**	**$ 1,147,001**	**$ 38,421,046**

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY14	FY15	FY16	FY17	FY18	FY19	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	$ 2,464,687	$ 1,652,480	$ 1,103,962	$ 1,114,181	$ 1,125,583	$ 1,138,153	$ 1,147,001	$ 9,746,048
Enterprise Fund Loan Proceeds	542-Water Rights Acquisition Fund	$ 13,605,087	$ 1,276,520	$ -	$ -	$ -	$ -	$ -	$ 14,881,608
TOTAL		**$ 29,863,164**	**$ 2,929,001**	**$ 1,103,962**	**$ 1,114,181**	**$ 1,125,583**	**$ 1,138,153**	**$ 1,147,001**	**$ 38,421,046**

1. PROJECT INFORMATION

Project Title	Repair / Rehab Wells	Requesting Department	Dept. of Public Works/Utilities	Department Rank Priority	2
Project Category	Utilities-Water	CIP Year	Recurring Capital Need	Project No.:	WA1243; WA1346; WA1429
Estimated Useful Life	10 Years	District Location	Multiple Districts	Project Request Status	Revised Project Request

2. PROJECT DESCRIPTION AND SCOPE

Repair / Rehab Wells in all Council Districts as needed. All aging wells older than 10 years are eligible.

3. PROJECT JUSTIFICATION

Annual repair/rehabilitation of wells and/or pump replacement in order to maintain delivery of water to the citizens at current minimum standard level of service. The estimated cost increase is 3% per year.

4. PROJECT HISTORY AND STATUS

The project is ongoing to replace and repair existing wells and/or pumps as they fail or wear out. Rehabilitation work to aging wells in Fiscal Years 2012 and 2013 has included Wells 9, 10A, 13, 14, 16, and 21. The project is a revised project request. As revised, the project retains it priority ranking within the Water facility category at No. 2, and $3,637,101 in expenditures are planned through Fiscal Year 2019.

5. CAPITAL COSTS

PHASE	SOURCE(S) OF COST INFO	PRIOR YEARS	FY14	FY15	FY16	FY17	FY18	FY19	TOTAL
Planning and Feasibility									$ -
Pre Design and Env. Review									$ -
Land Acq./ROW									$ -
Design and Specifications									$ -
Construction									$ -
Construction Management									$ -
Equipment/ Vehicle									$ -
Equipment Repair	City contract or price agreement	$ 573,211	$ 1,080,227	$ 518,864	$ 534,430	$ 550,463	$ 566,977	$ 583,986	$ 4,408,157
TOTAL		**$ 573,211**	**$ 1,080,227**	**$ 518,864**	**$ 534,430**	**$ 550,463**	**$ 566,977**	**$ 583,986**	**$ 4,408,157**

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY14	FY15	FY16	FY17	FY18	FY19	TOTAL
Environmental GRT Revenues	260-EGRT Fund	$ 209,414	$ 377,082	$ 171,098	$ 180,803	$ 218,182	$ 223,081	$ 223,081	$ 1,602,741
Utility Funds Operating Revenues	540-CIF Water Operations	$ 363,797	$ 703,145	$ 347,766	$ 353,627	$ 332,281	$ 343,896	$ 360,905	$ 2,805,417
									$ -
									$ -
TOTAL		**$ 573,211**	**$ 1,080,227**	**$ 518,864**	**$ 534,430**	**$ 550,463**	**$ 566,977**	**$ 583,986**	**$ 4,408,157**

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	Department Rank Priority	3
Project Category	Utilities-Water	CIP Year	FY2015	Project No.:	N/A
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 lost from the failure of wells 4 and 5. Well replacement is necessary to ensure adequate water resources to existing and future residents.

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	FY14	FY15	FY16	FY17	FY18	FY19	TOTAL
Planning and Feasibility									$ -
Pre Design and Env. Review									$ -
Land Acq./ROW									$ -
Design and Specifications	Cost Consultant			$ 412,000					$ 412,000
Construction	Cost Consultant				$ 2,000,000	$ 2,892,500	$ 4,000,000		$ 8,892,500
Construction Management	Cost Consultant								$ -
Equipment/ Vehicle									$ -
Other									$ -
TOTAL		**$ -**	**$ -**	**$ 412,000**	**$ 2,000,000**	**$ 2,892,500**	**$ 4,000,000**	**$ -**	**$ 9,304,500**

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY14	FY15	FY16	FY17	FY18	FY19	TOTAL
Utility Loan Proceeds		$ -	$ -	$ 412,000	$ 2,000,000	$ 2,892,500	$ -	$ -	$ 5,304,500
Impact Fees-Water	545 Water Impact Fees Fund	$ -	$ -	$ -	$ -	$ -	$ 102,235	$ -	$ 102,235
To Be Determined		$ -	$ -	$ -	$ -	$ -	$ 3,897,766	$ -	$ 3,897,766
									$ -
									$ -
TOTAL		**$ -**	**$ -**	**$ 412,000**	**$ 2,000,000**	**$ 2,892,500**	**$ 4,000,000**	**$ -**	**$ 9,304,500**

1. PROJECT INFORMATION

Project Title	New Pressure Reducing Valves	Requesting Department	Dept. of Public Works/Utilities	Department Rank Priority	4
Project Category	Utilities-Water	CIP Year	Recurring Capital Need	Project No.:	WA1366
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.

3. PROJECT JUSTIFICATION

The project is ongoing to install new pressure reducing values, 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 a revised project request. As revised, the project is ranked No. 4 within the Water facility category, and $1.1M in expenditures is planned through Fiscal Year 2019. Recent PRV installations have included the Eastlake Drive and NM HWY 528 PRV completed in Fiscal Year 2009 (TD0727: $126,985).

5. CAPITAL COSTS

PHASE	SOURCE(S) OF COST INFO	PRIOR YEARS	FY14	FY15	FY16	FY17	FY18	FY19	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	$ -	$ 180,250	$ 185,658	$ 191,227	$ 196,964	$ 202,872	$ 208,959	$ 1,165,929
TOTAL		**$ -**	**$ 180,250**	**$ 185,658**	**$ 191,227**	**$ 196,964**	**$ 202,872**	**$ 208,959**	**$ 1,165,929**

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY14	FY15	FY16	FY17	FY18	FY19	TOTAL
Utility Funds Operating Revenues	540-CIF Water Operations	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ 100,000
Utility Loan Proceeds		$ -	$ 80,250	$ 129,750	$ 120,000	$ 130,000	$ 140,000	$ 154,098	$ 754,098
To Be Determined		$ -	$ -	$ 55,908	$ 71,227	$ 66,964	$ 62,872	$ 54,861	$ 311,831
									$ -
									$ -
TOTAL		**$ -**	**$ 180,250**	**$ 185,658**	**$ 191,227**	**$ 196,964**	**$ 202,872**	**$ 208,959**	**$ 1,165,929**

1. PROJECT INFORMATION

Project Title	SCADA Improvements	Requesting Department	Dept. of Public Works/Utilities Administration	Department Rank Priority	5
Project Category	Utilities-Water	CIP Year	Recurring Capital Need	Project No.:	WA1347; WA1421
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. This project involves camera and DVR installations for Wells #2,4,7,8,19,21, and 22. Communications nodes will be installed at 7 locations for existing SCADA installations. Additional 144 single mode fiber-optic cable will also be installed with conduit.

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. As such, the project has risen to No. 5 in priority rank within the Water facility category and $759,735 in expenditures are planned through Fiscal Year 2019.

5. CAPITAL COSTS

PHASE	SOURCE(S) OF COST INFO	PRIOR YEARS	FY14	FY15	FY16	FY17	FY18	FY19	TOTAL
Planning and Feasibility									$ -
Pre Design and Env. Review									$ -
Land Acq./ROW									$ -
Design and Specifications									$ -
Construction	Cost Consultant	$ 87,250	$ 259,735	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 846,985
Construction Management									$ -
Equipment/ Vehicle									$ -
Other									$ -
TOTAL		**$ 87,250**	**$ 259,735**	**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 846,985**

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY14	FY15	FY16	FY17	FY18	FY19	TOTAL
Utility Funds Operating Revenues	540-CIF Water Operations	$ 87,250	$ 239,972	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 827,222
Impact Fees-Water	545 Water Impact Fees Fund		$ 19,763	$ -	$ -	$ -	$ -	$ -	$ 19,763
									$ -
TOTAL		**$ 87,250**	**$ 259,735**	**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 846,985**

1. PROJECT INFORMATION

Project Title	Renovate/Repaint Water Storage Tanks	Requesting Department	Dept. of Public Works/Utilities	Department Rank Priority	6
Project Category	Utilities-Water	CIP Year	Recurring Capital Need	Project No.:	WA1357
Estimated Useful Life	10 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. 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	FY14	FY15	FY16	FY17	FY18	FY19	TOTAL
Planning and Feasibility									$ -
Pre Design and Env. Review									$ -
Land Acq./ROW									$ -
Design and Specifications									$ -
Construction	City contract or price agreement	$ -	$ 508,807	$ 401,502	$ 413,547	$ 425,953	$ 438,732	$ 451,894	$ 2,640,437
Construction Management									$ -
Equipment/ Vehicle									$ -
Other									$ -
TOTAL		**$ -**	**$ 508,807**	**$ 401,502**	**$ 413,547**	**$ 425,953**	**$ 438,732**	**$ 451,894**	**$ 2,640,437**

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY14	FY15	FY16	FY17	FY18	FY19	TOTAL
Utility Funds Operating Revenues	501 Utilities	$ -	$ 119,000	$ -	$ -	$ -	$ -	$ -	$ 119,000
Utility Loan Proceeds			$ 389,808	$ 401,502	$ 413,547	$ 425,953	$ 438,732	$ 451,894	$ 2,521,437
									$ -
									$ -
									$ -
TOTAL		**$ -**	**$ 508,808**	**$ 401,502**	**$ 413,547**	**$ 425,953**	**$ 438,732**	**$ 451,894**	**$ 2,640,437**

1. PROJECT INFORMATION

Project Title	Vehicles and Heavy Equipment	Requesting Department	Dept. of Public Works/Utilities	Department Rank Priority	7
Project Category	Utilities-Water	CIP Year	Recurring Capital Need	Fund/Project No.:	512-0000-505-7015
Estimated Useful Life	Greater than 25 Years	District Location	Multiple Districts	Project Request Status	Revised Project Request

2. PROJECT DESCRIPTION AND SCOPE

Vehicles and heavy equipment will be purchased for use in water utility operations. Vehicle and equipment acquisitions planned for Fiscal Year 2014 include a 12 yard dump body, a hydro excavator, an extended backhoe, a new 14' dump trailer, and two (2) replacement trucks for the Transmission and Distribution Department.

3. PROJECT JUSTIFICATION

Vehicles and heavy equipment must be purchased on an annual basis to replace existing aging equipment. New vehicles and heavy equipment purchases are necessary when the repair costs exceed the cost of purchasing new equipment.

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	FY14	FY15	FY16	FY17	FY18	FY19	TOTAL
Planning and Feasibility									$ -
Pre Design and Env. Review									$ -
Land Acq./ROW									$ -
Design and Specifications									$ -
Construction									$ -
Construction Management									$ -
Equipment/ Vehicle	Other	$ 301,535	$ 648,903	$ 350,000	$ 100,000	$ 100,000	$ 375,000	$ 100,000	$ 1,975,438
Other									$ -
TOTAL		**$ 301,535**	**$ 648,903**	**$ 350,000**	**$ 100,000**	**$ 100,000**	**$ 375,000**	**$ 100,000**	**$ 1,975,438**

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY14	FY15	FY16	FY17	FY18	FY19	TOTAL
Utility Funds Operating Revenues	512 Ut Eq Repl Fund	$ 301,535	$ 648,903	$ 350,000	$ 100,000	$ 100,000	$ 375,000	$ 100,000	$ 1,975,438
									$ -
									$ -
									$ -
									$ -
TOTAL		**$ 301,535**	**$ 648,903**	**$ 350,000**	**$ 100,000**	**$ 100,000**	**$ 375,000**	**$ 100,000**	**$ 1,975,438**

1. PROJECT INFORMATION

Project Title	Install and Replace Water Lines	Requesting Department	Dept. of Public Works/Utilities	Department Rank Priority	8
Project Category	Utilities-Water	CIP Year	Recurring Capital Need	Project No.:	N/A
Estimated Useful Life	Greater than 25 Years	District Location	Multiple Districts	Project Request Status	Revised Project Request

2. PROJECT DESCRIPTION AND SCOPE

Old water lines will be replaced depending on condition and funding. Numerous repairs are made on an annual basis to the existing system.

3. PROJECT JUSTIFICATION

The physical integrity of water lines degrades over time and leaks can develop. Replacing these lines is necessary to maintain proper flow characteristics. Also, community development results in greater water demand and can require installation of new pipes with larger diameters.

4. PROJECT HISTORY AND STATUS

Water Main breaks have become more frequent since 2008. Thirty two main breaks occurred in 2008. Thirty four main breaks occurred in 2012. 2009 and 2011 had over forty water main breaks. 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.

5. CAPITAL COSTS

PHASE	SOURCE(S) OF COST INFO	PRIOR YEARS	FY14	FY15	FY16	FY17	FY18	FY19	TOTAL
Planning and Feasibility									$ -
Pre Design and Env. Review									$ -
Land Acq./ROW									$ -
Design and Specifications									$ -
Construction	Cost Consultant	$ -	$ 1,152,325	$ 1,186,895	$ 1,222,501	$ 1,259,176	$ 1,296,951	$ 1,335,860	$ 7,453,708
Construction Management									$ -
Equipment/ Vehicle									$ -
Other									$ -
TOTAL		**$ -**	**$ 1,152,325**	**$ 1,186,895**	**$ 1,222,501**	**$ 1,259,176**	**$ 1,296,951**	**$ 1,335,860**	**$ 7,453,708**

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY14	FY15	FY16	FY17	FY18	FY19	TOTAL
Utility Funds Operating Revenues	540-CIF Water Operations	$ -	$ -						$ -
Utility Loan Proceeds			$ 1,152,325	$ 1,186,895	$ 1,222,501	$ 1,259,176	$ 1,296,951	$ 1,335,860	$ 7,453,708
									$ -
									$ -
									$ -
TOTAL		**$ -**	**$ 1,152,325**	**$ 1,186,895**	**$ 1,222,501**	**$ 1,259,176**	**$ 1,296,951**	**$ 1,335,860**	**$ 7,453,708**

1. PROJECT INFORMATION

Project Title	Major Equipment for Water Production, Treatment, and Distribution	Requesting Department	Dept. of Public Works/Utilities	Department Rank Priority	9
Project Category	Utilities-Water	CIP Year	Recurring Capital Need	Project No.:	WA1427; Fund 501
Estimated Useful Life	10 Years	District Location	Multiple Districts	Project Request Status	Revised Project Request

2. PROJECT DESCRIPTION AND SCOPE

Major Equipment for Water Production, Treatment, and Distribution facilities in all Council Districts as needed. FY14 major equipment items include: GPS Base Station: $25,100; Turbidity Meters for Wells 10 and 17: $25,000; Rapid Mixers for Arsenic Treatment Facilities: $50,000; Truck Mounted Vac-Tron: $46,800; and Trench Box for Service Line Replacement Crews: $15,000.

3. PROJECT JUSTIFICATION

The GPS Base Station will enable the city to measure sewer and water lines to sub centimeter accuracy in order to evaluate system capacities. The City will save $7,200 annually due to discontinuation of the current service arrangement with the City of Albuquerque. Rapid Mixers used to mix water treatment chemicals must be replaced due to excess wear and age. The Vac-Tron will be used to properly clean and maintain vaults at arsenic treatment facilities and pressure reducing valve vaults throughout the City. This equipment is critical to maintaining the utility system in good repair. The trench box will be utilized by crews repairing and replacing water service and sewer laterals. This equipment is necessary for safety reasons.

4. PROJECT HISTORY AND STATUS

The project is ongoing to replace and/or repair existing equipment necessary as they fail or wear out. $411,900 in expenditures are planned through Fiscal Year 2019.

5. CAPITAL COSTS

PHASE	SOURCE(S) OF COST INFO	PRIOR YEARS	FY14	FY15	FY16	FY17	FY18	FY19	TOTAL
Planning and Feasibility									$ -
Pre Design and Env. Review									$ -
Land Acq./ROW									$ -
Design and Specifications									$ -
Construction									$ -
Construction Management									$ -
Equipment/ Vehicle									$ -
Equipment Repair	City contract or price agreement	$ -	$ 161,900	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 411,900
TOTAL		**$ -**	**$ 161,900**	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 411,900**

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY14	FY15	FY16	FY17	FY18	FY19	TOTAL
Utility Fund Operating Revenues		$ -	$ 161,900	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 411,900
									$ -
									$ -
									$ -
TOTAL		**$ -**	**$ 161,900**	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 50,000**	**$ 411,900**

1. PROJECT INFORMATION

Project Title	Well Site Security	Requesting Department	Dept. of Public Works/Utilities	Department Rank Priority	10
Project Category	Utilities-Water	CIP Year	Recurring Capital Need	Project No.:	WA1430
Estimated Useful Life	10 Years	District Location	Multiple Districts	Project Request Status	Revised Project Request

2. PROJECT DESCRIPTION AND SCOPE

Equip well sites as necessary to protect the citizens water supply.

3. PROJECT JUSTIFICATION

Well site security is necessary to protect the water supply. The estimated cost increase is 3% per year.

4. PROJECT HISTORY AND STATUS

The project is ongoing to adequately protect the water supply. $829,478 in expenditures is planned through Fiscal Year 2019.

5. CAPITAL COSTS

PHASE	SOURCE(S) OF COST INFO	PRIOR YEARS	FY14	FY15	FY16	FY17	FY18	FY19	TOTAL
Planning and Feasibility									$ -
Pre Design and Env. Review									$ -
Land Acq./ROW									$ -
Design and Specifications									$ -
Construction									$ -
Construction Management									$ -
Equipment/ Vehicle									$ -
Equipment Repair	City contract or price agreement	$ -	$ 160,000	$ 126,099	$ 129,882	$ 133,779	$ 137,792	$ 141,926	$ 829,478
TOTAL		**$ -**	**$ 160,000**	**$ 126,099**	**$ 129,882**	**$ 133,779**	**$ 137,792**	**$ 141,926**	**$ 829,478**

6. PROPOSED SOURCES OF FUNDING

REVENUE SOURCE	EXPENDITURE FUND	PRIOR YEARS	FY14	FY15	FY16	FY17	FY18	FY19	TOTAL
Utility Fund Operating Revenues	540-CIF Water Operations	$ -	$ 160,000	$ 126,099	$ 129,882	$ 133,779	$ 137,792	$ 141,926	$ 829,478
									$ -
									$ -
									$ -
TOTAL		**$ -**	**$ 160,000**	**$ 126,099**	**$ 129,882**	**$ 133,779**	**$ 137,792**	**$ 141,926**	**$ 829,478**

Water Production and Treatment Projects

Rehabilitation of Wells (WA1243 and WA1346)

Well rehabilitation is a recurring capital maintenance activity to repair and replace wells and/or pump equipment as they fail or wear out. Rehabilitation work to aging wells in Fiscal Year 2013 included Wells 9, 10, 13, 14, 16 and 21 at a total cost of $361,613. Well rehabilitation projects are funded by a combination of Environmental Gross Receipts Tax revenue and Utility Operating Fund transfers.

Storage, Transmission, and Distribution Projects

City Center Booster Station (WA1041)

Construction of a 3,000 gallon per minute (gpm) booster pump station and approximately 2,400 linear feet of 20" transmission line from 26th St to 30th St. was substantially completed in January 2013. The total cost of the project was $2.4 million. The project will allow the Utility Department flexibility in allocating water resources to planned development in the Central Business District, including the UNM West Campus, the Sandoval County Regional Medical Center, and the CNM Campus. Project funds included a special one time State Capital Outlay Appropriation ($403,213), Utility Operating Fund transfers ($456,109), Water Impact Fees ($999,315), Utility Bond and Loan Proceeds ($297,693), and Environmental Gross Receipts Tax revenue ($206,542).

Other Major Water Projects

Water Rights Acquistion (UT0922, WA0833, WA1145, WA1244, and WA1348)

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 4,398.64 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 since Fiscal Year 2009 has been funded through a combination of Utility Operating Transfers ($3.2 million), Utility Bond Proceeds ($10.6 million), Water Rights Acquisition Fees ($2.5 million), and two (2) New Mexico Finance Authority Loans ($13.6 million). A total of $29.9 million has been spent to acquire 2,017 acre feet since Fiscal Year 2009 (July 1, 2008). This is the equivalent of the planned annual water usage of 8,068 single family households, assuming desert southwest water conservation norms. The balance of capital funds available for purchase of additional water rights is $1,482,977, while estimated recurring revenue from the water rights acquisition fee available through Fiscal Year 2019 is $7 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 2013, seven (7) replacement trucks were acquired for the Customer Service, SCADA, Water Production, and Transmission and Distribution Departments at a total cost of $189,689. A 14’ dump truck for the Transmission and Distribution Department was also acquired at a cost of $111,846. Vehicle and equipment acquisitions planned for Fiscal Year 2014 include a 12 yard dump body, a hydro excavator, an extended backhoe, a new 14’ dump trailer, and two (2) replacement trucks for the Transmission and Distribution Department.

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