

Capital Improvement Plan



Little Rock
Wastewater

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Capital Improvement Plan

Capital Improvement Plan Budget Policy

A budget will be prepared for all capital expenditures contemplated, including active construction projects carried over for the succeeding year, projects and capitalized purchases planned for the succeeding year, and all projects for which a commitment of funds are to be made even though the actual expenditure will not occur in the succeeding year.

This budget is used for projecting anticipated capital requirements and becomes a vital element in LRW's Operating Plan.

The initial capital budget will be prepared within each division of LRW, assimilated and reviewed by Finance staff, and submitted for approval to the Manager of Engineering Services and the Chief Executive Officer.

Subsequent to the CEO's approval, the Capital Budget will be incorporated into LRW's Operating Plan and submitted to LRSSC for approval.

Upon approval, all proposed expenditures included in the Capital Budget will be classified as "Planned Expenditures." Any capital expenditure proposed during the course of the plan year which are not included in the approved capital budget, will be classified as "Unplanned Expenditures."

Expenditures equal to or greater than \$5,000 on construction projects or purchases of new equipment are hereby defined as capital expenditures. Expenditures equal to or greater than \$5,000 on work, equipment parts, or a combination of the two, that add discernible life to an existing depreciated asset are also defined capital expenditures. In general, expenses associated with additions, replacements, reconstructions, improvements, or betterments qualify as capital expenditures.

Due to state procurement laws and the nature of capital improvement expenditures, it generally takes more than one fiscal year to complete most capital improvement projects. Therefore many projects carry over from year to year before they are completed and placed into service. LRW does not award a project contract unless it is fully funded. However, many large projects have multiple year and/or multiple phase construction periods. LRW uses several benchmarks of efficiency to ensure capital budget integrity. These include timely completion clauses, aggressive efforts to minimize change orders, and tracking the progress of the overall **Capital Improvement Plan (CIP)**.

The following is a typical schedule for the development of a CIP budget:

- January 1 – fiscal year begins.
- July and August – division heads formulate their capital budget requests for the upcoming budget year and the following four years.

- September and October – department supervisors submit their budget requests, which are then combined into the first draft of the overall LRW budget. The Finance staff is responsible for combining all for the departments' O&M and Capital requests, budget revenues, and other expenditures.
- October and November – the CEO, division managers, and directors review the submitted budgets and establish priorities based on a strategic weighing scale, need, and availability of funds. Any changes resulting from the management reviews are made at that time.
- November – one or more members of the LRSSC, serving on the Budget Subcommittee, review the budget document with LRW staff. Any revisions resulting from the Budget Subcommittee's review are made at that time. The budget is presented at the regularly scheduled November or December LRSSC meeting. The budget for the coming year is considered for approval at that time.

2012 Capital Improvement Plan Overview

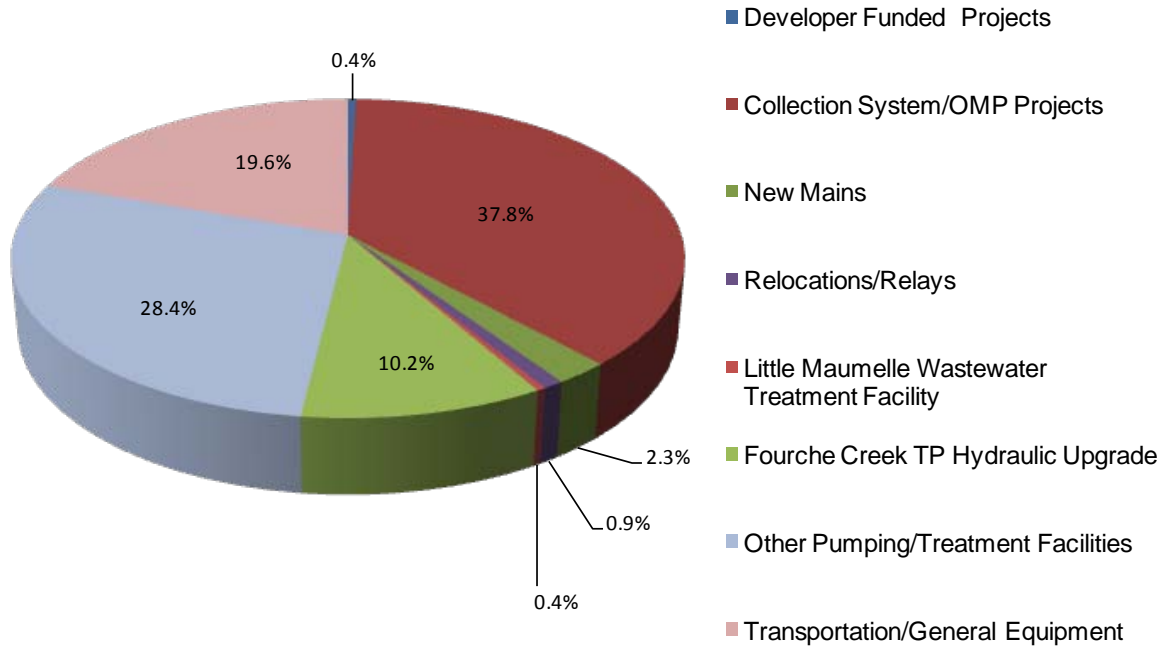
The 2012 Capital Improvement Plan is composed of carry-over projects from 2011, planned capital projects for 2012, and the capital forecast through 2018. The year 2012 represents year ten of a 15-year implementation plan outlined in the System Evaluation and Capacity Assurance Plan (SECAP) which was completed in 2002 and adopted as part of the Sierra Club Settlement Agreement dated September 12, 2001. In 2006, ADEQ and LRW signed a Consent Administrative Order (CAO) to address sanitary sewer overflows. The deadline to complete all the requirements of the CAO was set at January 1, 2016. In 2010, RJN Group was selected to provide LRW with an update to the SECAP report. The scope of services provided by RJN Group included flow monitoring, a hydraulic model update, an evaluation of pumping and treatment facilities, an evaluation of alternatives, and developing an updated CIP plan as a result of the analysis. In 2011, the deadline to complete the requirements of the CAO was extended three years to December 31, 2018. The seven-year plan contained in the 2012 budget represents the capital expenditures required to meet the goals of the SECAP plan from both the study completed in 2002 and the updated study performed in 2010 by December 31, 2018.

Capital projects carried over into 2012 have planned net expenditures of \$8,133,300. Carry-over expenditures are dominated by wastewater collection, transmission, and treatment improvements driven by the SECAP. These projects, along with the remodel of the laboratory and the repair of the digester at the Fourche Creek Wastewater Treatment Facility, represent 94.2% of the carry-over amount. Collection system work by in-house crews, in-house engineering services, and equipment make up the remainder. In addition to the carryover projects, net expenditures of \$3,038,300 are proposed for new capital projects and purchases. Collection system maintenance contracts, minor treatment facility projects, vehicles, and equipment make up the proposed capital budget for 2012. Total net expenditures of \$11,171,600 are planned for 2012.

The 2012 Capital Operating Plan can be found on pages 110 through 122. Project narratives for sewer pumping facilities, sewer treatment facilities, transportation, and general plant projects are located on pages 124 through 133. These narratives give a

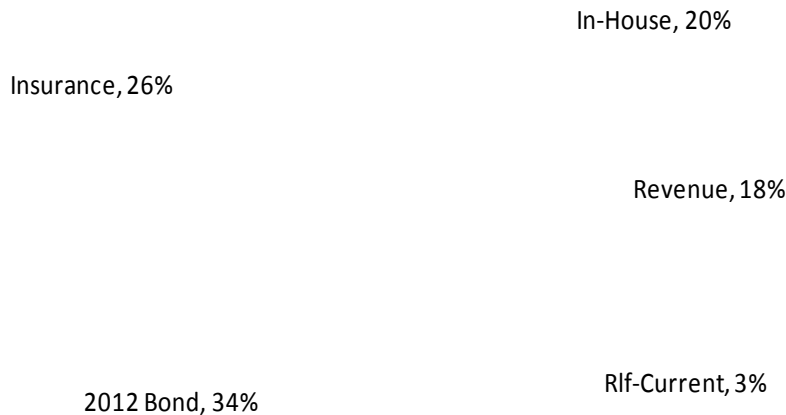
brief description of the project and provide justification for the investment in infrastructure or equipment. The Strategic Capital Operating Plan provides a summary of the long term capital improvement plan and can be found on page 123.

2012 Capital Improvement Plan



Funding for planned 2012 expenditures is composed of existing revolving loans, revenues, and a planned bond issue totaling \$35,886,000. At the end of 2011, all current bond funds are expected to be expended and all current RLF loans will be expended early 2012.

2012 CIP Financing Plan



Comments on major projects included in this year's request are as follows:

Little Maumelle Wastewater Treatment Facility

The new treatment facility was placed online in July 2011. A one year warranty period follows this milestone date. This year's budget allocates \$40,000 for the completion of the engineering services related to warranty work. The project is expected to complete mid-year 2012.

	Forecast <u>12/31/2011</u>	2012 <u>Budget</u>	Project <u>Total</u>
ROW & Land Acquisition	919,851	0	919,851
Construction - Inhouse	115,742	0	115,742
Construction - Contracted - Access Road	1,739,969	0	1,739,969
Construction - Contracted - LMPS	4,554,837	0	4,554,837
Construction - Contracted - Conveyance	16,048,423	0	16,048,423
Construction - Contracted - Roads	402,844	0	402,844
Construction - Contracted - Utilities	293,928	0	293,928
Construction - Contracted - Plant	46,612,516	0	46,612,516
SSSES	107,552	0	107,552
Engineering Fees - Design/Bid Phase	4,888,196	0	4,888,196
Engineering Fees - Construction Phase	5,136,602	40,000	5,176,602
Machinery & Equipment	80,066	0	80,066
Project Performance	12,527	0	12,527
Capitalized Interest/Administration	377,418	0	377,418
STAG Grant	(477,900)	0	(477,900)
	<u>80,812,571</u>	<u>40,000</u>	<u>80,852,571</u>

Little Rock Wastewater has made a commitment to operate and maintain the Little Maumelle Wastewater Treatment Facility with existing staff to lessen the impact on rate payers. The annual costs to operate the facilities associated with this project is \$812,420. An increase of 2.04% in rates is needed to support the operation of these facilities. This increase equates to approximately \$.57 per month for an average domestic customer. The total costs to operate and maintain these facilities over their estimated useful lives is approximately \$61,258,000.

Little Maumelle Wastewater Treatment Facility Annual Operating Costs								
Asset	Energy/ Utilities	Fuel/ Chemical	Repair/ Replacement	NPDES/ Analytical	Grit Disposal/ Contracts	Supplies/ Materials	Insurance	Total
LMPS	\$68,899	\$10,000	\$23,050	\$0	\$0	\$0	\$0	\$101,949
LMWWTP	\$333,548	\$5,000	\$36,396	\$195,627	\$25,600	\$50,700	\$15,000	\$661,871
Conveyance	\$0	\$0	\$48,600	\$0	\$0	\$0	\$0	\$48,600
Total	\$402,447	\$15,000	\$108,046	\$195,627	\$25,600	\$50,700	\$15,000	\$812,420

Fourche Creek Wastewater Treatment Facility Hydraulic Upgrade

The direct discharge of certain industrial wastes to the primary digestion units (called co-digestion) of the Fourche Creek Wastewater Treatment Facility is an acceptable means of treatment for such wastes. Within 2011, LRW directed Sage V Foods flows from the biological treatment units to the primary digesters. With the acceptance of this industrial flow to the primary digesters, biogas production will increase and excessive methane gas will be produced. LRW staff has concluded it would be prudent to develop a facility plan for handling the increased gas production and addressing future flows from industrial users. The 2012 budget allocates \$1,140,000 for a facility plan and the construction of recommended improvements to the digester complex. The project is forecasted to complete in 2013 at a total cost of \$20,072,800. The 2013 forecast provides \$1,210,000 to complete the Sage V Foods modification and add additional supplemental digester heat. This project will be partially funded through available funds and partially funded with the 2012 sewer revenue bond issue.

Fourche Creek Wastewater Treatment Facility Hydraulic Upgrade

	Forecasted 12/31/2011	2012 Budget	2013 Forecast	Project Total
ROW & Land Acquisition	153	0	0	153
Construction - Inhouse	42,262	0	0	42,262
Electrical Feed Relocation	242,324	0	0	242,324
Disinfection Contract	6,147,519	0	0	6,147,519
Secondary Clarification	7,143,890	0	0	7,143,890
Supplemental Digester Heat	4,778	200,000	210,000	414,778
Sage V Foods Modification	0	700,000	1,000,000	1,700,000
Additional Engineering Fees	50,000	200,000	0	250,000
Preliminary Engineering	633,421	0	0	633,421
Design/Bid Phase Engineering	2,084,711	0	0	2,084,711
Construction Phase Engineering	1,368,133	40,000	0	1,408,133
Administration	5,594	0	0	5,594
	17,722,785	1,140,000	1,210,000	20,072,785

The annual increase in costs to operate the facilities associated with this project is expected to be \$160,764. An increase of .40% in rates is needed to support the operation of the expanded facilities. This increase equates to approximately \$.11 per month for an average domestic customer. The total cost to operate and maintain these facilities over their estimated useful lives is approximately \$12,121,909.

Fourche Creek Wastewater Treatment Plant Hydraulic Upgrade								
Annual Operating Costs								
Asset	Energy/ Utilities	Fuel/ Chemical	Repair/ Replacement	NPDES/ Analytical	Grit Disposal/ Contracts	Supplies/ Materials	Insurance	Total
FCWWTP	\$67,273	\$18,000	\$0	\$6,587	\$0	\$63,504	\$5,400	\$160,764

The annual principal and interest costs for the sewer revenue bond required to complete the construction of this project is estimated at \$162,427. An increase in rates of approximately .41% is needed to support this debt with an effective date of 1/1/2012.

This increase equates to \$0.11 per month for an average domestic customer. The impact on future rates for the annual operation, maintenance, and construction is shown in the table below.

Annual Operations/Maintenance	Percent Increase on Current Rates	Effective Date of Increase	Monthly Impact on Average Domestic Customer	Annual Principal/Interest	Percent Increase on Current Rates	Monthly Impact on Average Domestic Customer	Effective Date of Increase
\$160,764	0.40%	1/1/2019	\$0.11	\$162,427	0.41%	\$0.11	1/1/2016

Fourche Creek Wastewater Treatment Facility Digester #3 Repair

On April 28, 2011, a welding incident at Fourche Creek Wastewater Treatment Facility caused methane in Primary Digester number 3 to ignite. Following the incident, LRW staff investigated the digester and determined that the structure was damaged. Staff then filed an insurance claim to fully investigate the extent of damage. The insurance company hired an engineering firm to investigate. The firm determined that the structure's roof slab was damaged and recommended replacement. This project calls for the replacement of the roof and supporting columns as well as the replacement of any equipment damaged in the incident. This project is forecasted to complete by the end of 2012.

	Forecast 12/31/2011	2012 Budget	Project Total
Construction & Engineering Fees	100,000	3,000,000	3,100,000
	100,000	3,000,000	3,100,000

This project is to repair and place back in service an existing asset. No additional costs are anticipated to operate and maintain the structure once it is complete. Additionally, the damage to this digester was the result of an accident and is covered by LRW's property insurance so the total cost to fund the construction of this project is equivalent to the deductible of \$50,000.

Collection System Rehabilitation Capacity Assurance Projects

Collection system rehabilitation and capacity assurance projects scheduled over the next seven years are shown below on Table I. The majority of the projects have been extracted from the 15-year capital improvement plan outlined in the SECAP report and the SECAP update completed in 2010. The total cost of work scheduled for 2012 is \$2,343,000. The 7-year forecast includes over \$130,856,000 for collection system rehabilitation and capacity assurance projects. An \$18,000,000 State Revolving Loan (RLF 8) acquired in 2007 will be completed in 2012. The remaining funds of approximately \$377,000 will fund some linework construction on Jimmerson West OMP.

The forecasted annual project costs for the collection system rehabilitation capacity assurance projects through 2018 are shown in the table below.

Collection System and Capacity Assurance Projects

<u>Year</u>	<u>Project</u>	<u>Description</u>	<u>(1,000.0)</u>
2012	4060300	Allsop North/Country Club Rehabilitation	50.0
	4070600	Leawood OMP	35.0
	4070700	Echo Valley OMP	30.0
	4070800	Pleasant Valley OMP	30.0
	4080100	Granite Mountain OMP	20.0
	4080200	Lower Swaggerty OMP	50.0
	4080300	Subbasin 30100 OMP	25.0
	4083100	Jimmerson West OMP	377.0
	4102700	District 84 OMP	33.0
	4102800	Upper Coleman OMP	53.1
	4102900	District 119 OMP	38.5
	4112200	Leslie Circle Mainline - SECAP	181.5
	4112300	West Markham Mainline - SECAP	458.3
	4112600	Roselawn Cemetery Relay - SECAP	293.3
	4112700	17th Street Relay - SECAP	5.0
	4112900	Fairpark Relay - SECAP	130.0
	4113400	Bishop St. Relay - SECAP - R14	259.5
	4113500	Victory St. Relay - SECAP	21.6
	4113600	Rodney Parham Relay - SECAP	25.3
	4113700	Markham to Rodney Parham Relay - SECAP	114.0
	4120300	42" Force Main Inspection	5.0
	4120600	3I078 to 3L080 42" to 60" - R3	2.2
	4120700	Rebsamen Collector/Murry Park 10090	4.4
	4120800	17th Street Pipe Burst - R15	13.5
	4120900	Sherrill Heights 11000	2.5
	4121000	3K059 - Diversion - R21	1.0
	4121100	River Ridge P.S. 11200	3.5
	4121200	Rebsamen Collector/Commercial 10050	2.2
	4121300	Rebsamen Collector/Harbor 10060	7.2
	4121400	Overlook/Pinnacle Point 10070	16.6
	4121500	Rebsamen Collector/Golf Course 10080	3.2
	4121600	Boyle Park Mainline - R24	36.2
	4121700	48" Cross Connection (16K) - R29	7.5
	4121800	Rebsamen Collector/Alltell 10040	7.9
		2012 Total	2,343.0
2013	4060300	Allsop North/Country Club Rehabilitation	2,560.5
	4070600	Leawood OMP	1,494.9
	4070700	Echo Valley OMP	938.9

	4070800	Pleasant Valley OMP	880.2
	4073300	Allsop Park Outfall	926.4
	4073400	Country Club Outfall	1,449.8
	4080200	Lower Swaggerty OMP	1,535.0
	4083100	Jimmerson West OMP	1,109.6
	4084600	Longfellow SB-11400	5.3
	4101500	Rose Creek East OMP	10.5
	4101800	Rose Creek Central OMP	13.1
	4101900	Rose Creek West OMP	15.8
	4110300	Mabelvale OMP	14.3
	4110500	Quapaw North OMP	12.0
	4110600	Walnut Valley OMP	23.7
	4120300	42" Force Main Inspection	413.4
	4120700	Rebsamen Collector/Murry Park 10090	15.4
	4120900	Sherrill Heights 11000	11.4
	4121100	River Ridge P.S. 11200	10.6
	4121200	Rebsamen Collector/Commercial 10050	6.1
	4121300	Rebsamen Collector/Harbor 10060	20.9
	4121400	Overlook/Pinnacle Point 10070	47.2
	4121500	Rebsamen Collector/Golf Course 10080	8.8
	4121800	Rebsamen Collector/Alltell 10040	22.1
		2013 Total	11,545.9
2014	4060300	Allsop North/Country Club Rehabilitation	4,339.5
	4070600	Leawood OMP	3,105.3
	4070700	Echo Valley OMP	2,202.8
	4070800	Pleasant Valley OMP	2,066.3
	4073300	Allsop Park Outfall	972.7
	4073400	Country Club Outfall	1,522.3
	4080200	Lower Swaggerty OMP	3,141.6
	4083100	Jimmerson West OMP	1,187.0
	4110300	Mabelvale OMP	15.0
	4110500	Quapaw North OMP	12.9
	4120300	42" Force Main Inspection	434.1
		2014 Total	18,999.5
2015	4060300	Allsop North/Country Club Rehabilitation	2,174.1
	4070600	Leawood OMP	1,826.4
	4070700	Echo Valley OMP	973.1
	4070800	Pleasant Valley OMP	970.4
	4080100	Granite Mountain OMP	1,335.2

	4080200	Lower Swaggerty OMP	1,435.4
	4080300	Subbasin 30100 OMP	1,314.4
	4084600	Longfellow SB-11400	1,410.7
	4101500	Rose Creek East OMP	2,226.4
	4101800	Rose Creek Central OMP	2,824.4
	4101900	Rose Creek West OMP	3,293.4
	4110400	Barrow OMP	68.3
	4110600	Walnut Valley OMP	2,791.6
	4110800	Foreman Lake OMP	15.1
	4110900	Hall High South OMP	50.0
	4111300	Springer Blvd Relay-SECAP R1	63.2
	4112000	Brodie Creek Crossing - SECAP - R2	237.5
	4112400	University Avenue Relay - SECAP - R7	583.8
	4113000	Rose Creek East Relay - SECAP - R13	505.4
	4114900	Walton Heights - Basin 11600 OMP	1,649.3
	4120400	Grassy Flat Main - R27	875.2
	4120500	36th Street to Mabelvale Pike Outfall - R22	971.7
	4120600	3I078 to 3L080 42" to 60" - R3	25.3
	4120700	Rebsamen Collector/Murry Park 10090	339.0
	4120800	17th Street Pipe Burst - R15	156.6
	4120900	Sherrill Heights 11000	250.6
	4121000	3K059 - Diversion - R21	7.3
	4121100	River Ridge P.S. 11200	344.7
	4121200	Rebsamen Collector/Commercial 10050	133.7
	4121300	Rebsamen Collector/Harbor 10060	453.8
	4121400	Overlook/Pinnacle Point 10070	1,040.9
	4121500	Rebsamen Collector/Golf Course 10080	194.0
	4121600	Boyle Park Mainline - R24	419.6
	4121700	48" Cross Connection (16K) - R29	86.8
	4121800	Rebsamen Collector/Alltell 10040	488.0
		2015 Total	31,535.3
2016	4084400	Mabelvale Pike (East of University) SB-40701	1,301.8
	4084500	Meadowcliff SB-40702	1,952.7
	4084700	Quapaw South SB-20401	2,017.8
	4110400	Barrow OMP	4,801.1
	4120500	36th Street to Mabelvale Pike Outfall - R22	5,158.0
	4121900	Mainline Improvements for Modeled Overflows and Growth	951.9
		2016 Total	16,183.3
2017	4084200	Chicot SB-40704	410.1

	4084300	Cloverdale SB-40703	1,161.9
	4084400	Mabelvale Pike (East of University) SB-40701	1,366.9
	4084500	Meadowcliff SB-40702	2,050.3
	4102700	District 84 OMP	3,066.0
	4102800	Upper Coleman OMP	5,557.5
	4102900	District 119 OMP	3,767.1
	4110300	Mabelvale OMP	2,365.3
	4110500	Quapaw North OMP	1,995.6
	4110800	Foreman Lake OMP	1,252.1
	4110900	Hall High South OMP	3,987.4
	4120500	36th Street to Mabelvale Pike Outfall - R22	4,971.3
	4121900	Mainline Improvements for Modeled Overflows and Growth	5,053.2
		2017 Total	37,004.7
2018	4084200	Chicot SB-40704	2,728.6
	4084300	Cloverdale SB-40703	3,609.5
	4084400	Mabelvale Pike (East of University) SB-40701	287.0
	4084500	Meadowcliff SB-40702	861.1
	4121900	Mainline Improvements for Modeled Overflows and Growth	5,305.9
	4180300	Upper Country Club Outfall - R19	452.3
		2018 Total	13,244.4

The collection system and capacity assurance projects are to repair, replace and increase the capacity of existing collection system infrastructure. The cleaning and inspection maintenance schedule will remain the same resulting in no increase in operations costs as a result of these improvements and no impact on future rates to support the maintenance activity.

The projects currently designed or in design will be funded with in-house construction crews, engineering staff, and State Revolving Loan (RLF 10) to be issued in 2013 in the amount of \$37,211,000. The remaining projects identified in the 7- year forecast will be funded through a State Revolving Loan issue in 2015 (RLF 11) totaling \$34,192,000 and in 2016 (RLF 12) totaling \$56,363,300. The rate increases needed to support the total increase in costs related to these projects are listed in the table below.

Loan	Operations/ Maintenance	Principal/ Interest	Total Increase in Costs	Percent Increase on Current Rates	Monthly Impact on Average Domestic Customer	Effective Date of Increase
RLF 10	0	2,661,266	2,661,266	6.74%	\$1.87	1/1/2016
RLF 11	0	2,445,352	2,445,352	6.19%	\$1.72	1/1/2018
RLF 12	0	4,031,005	4,031,005	10.21%	\$2.83	1/1/2019

Trenchless Sewerline Rehabilitation

Trenchless sewer line rehabilitation is for the renewal of structurally deteriorated line segments that contribute to non-capacity overflows. Trenchless methods include Cured in Place Pipe (CIPP) and Pipe Bursting. Sewer line segments are identified through Sewer System Overflow (SSO) follow-up inspections and routine collection system inspections by LRW crews. The line segments slated for trenchless rehabilitation are typically located in areas where replacement by reconstruction is costly due to site restrictions. Lines identified by LRW as needing rehabilitation are added to the GLES (General Engineering Study) list of projects. Each line segment is evaluated and a ranking value is assigned based on criteria established by LRW. Utilizing the GLES list and ranking system, line segments are scheduled for rehabilitation.

LRW is entering the ninth year of using annual contracts for trenchless rehabilitation of existing sewer lines. For 2012, \$1,600,000 has been budgeted for trenchless rehabilitation work. LRW is continuing to see the value and results of the annual maintenance contracts as the number of non-capacity overflows continues to drop as well as the number of emergency calls due to line failures. LRW is projecting that \$2,000,000 will be needed each year from 2012 to 2018 for rehabilitation of sewer lines by trenchless methods as the lines are identified and added to the GLES list.

The Trenchless Sewerline Rehabilitation projects are to repair or rehabilitate existing collection system infrastructure. The cleaning and maintenance schedule will not change as a result of this work so no increases are expected in operations costs. These projects are projected to be funded through sewer revenues with the exception of the work scheduled to complete in 2012. The funds to complete the 2012 work is included in the 2012 sewer revenue bond issue.

The rate increases needed to support the total increase in costs related to these projects are listed in the table below.

	Operations/ Maintenance	Revenue/ Bond Funded Capital	Total Increase in Costs	Percent Increase on Current Rates	Monthly Impact on Average Domestic Customer	Effective Date of Increase
Bond	0	112,504	112,504	0.28%	\$0.08	1/1/2012
Revenue	0	2,000,000	2,000,000	5.07%	\$1.40	1/1/2013

In-House Sewerline Rehabilitation and Construction

LRW utilizes a process for identifying sewer lines within the collection system that may need to be rehabilitated or replaced. This process is the GLES or Engineering Study process. It is a method developed by LRW and used extensively by Engineering Services to identify and rank sewer lines that need to be rehabilitated, replaced or relocated to maintain the integrity of the LRW sewage collection system. The GLES process relies on communication between Engineering Services, Cleaning/Inspection, and Construction/Maintenance to be effective. Sewer lines that may need attention are identified through field investigation and a numerical value is calculated based on field

assessment criteria. This numerical value represents the condition of the sewer line and is used to rank the sewer lines (i.e. higher the number means more critical). These sewer lines are assigned to Engineering Services for evaluation to determine the best method to address the problem(s) with the sewer line. The sewer line may be rehabilitated utilizing one of our annual maintenance contracts or reconstructed using LRW In-House construction crews. For 2012, it was decided to use in-house crews to construct some overflow mitigation projects. This enables LRW continue work on eliminating capacity overflows until new State Revolving Loans are issued in 2013, 2015, and 2016.

For 2012 the budget for sewerline rehabilitation and construction completed by LRW's capital crews totals \$2,100,000. A summary of this work is listed below.

Short Main Extensions/Manhole New	\$ 5,000
New Mains @ Utility Cost	\$ 250,000
Replacement Mains @ Utility Cost	\$ 261,500
Overflow Mitigation Projects	\$1,483,500
Relocation Projects	<u>\$ 100,000</u>
Total	\$2,100,000

The collection system and capacity assurance projects are to repair and replace existing collection system infrastructure. These projects will be constructed using LRW construction crews. Little Rock Wastewater currently has the rates in place to fund the personnel and material costs for this work. The cleaning and inspection schedule will not change as a result of the completion of these projects so no increases are expected in operating costs with no additional impact on sewer rates.

Transportation Equipment

In 2012, LRW anticipates replacing the backhoes and trackhoes purchased on the backhoe buy-back plan. That total amount budgeted for transportation equipment in 2012 is \$683,308. In 2012, LRW will receive \$378,000 for the buy-back of the equipment purchased in 2011. The net cost to the Utility for the purchase of the new equipment is estimated at \$305,308 and will be funded with available funds. No increase in operating costs is expected as a result of the purchase of this equipment.

General Plant

The total amount budgeted for general plant facilities and equipment in 2012 is \$1,509,200. Of that amount \$142,800 is requested to upgrade current software applications and install new applications. The Environmental Assessment Division is requesting \$1,296,300 to remodel the existing laboratory and replace aging laboratory equipment. The remaining \$70,100 is to upgrade the air supply and exhaust system in the Engine Generator Building, replace aging air compressors, and replace air conditioning units at the Clearwater Maintenance and Adams Field Treatment facilities.

These projects are to replace existing assets so no additional operating costs are forecasted to maintain these assets. These projects are expected to be funded with available funds and a 2012 bond issue.

The annual principal and interest costs to remodel the FCWTF laboratory is estimated at \$88,248. An increase in future rates of approximately .22% is needed to support this debt with an effective date of 1/1/2012. This increase equates to \$.06 per month for an average domestic customer. The impact on rates for the annual operation, maintenance and construction is shown in the table below.

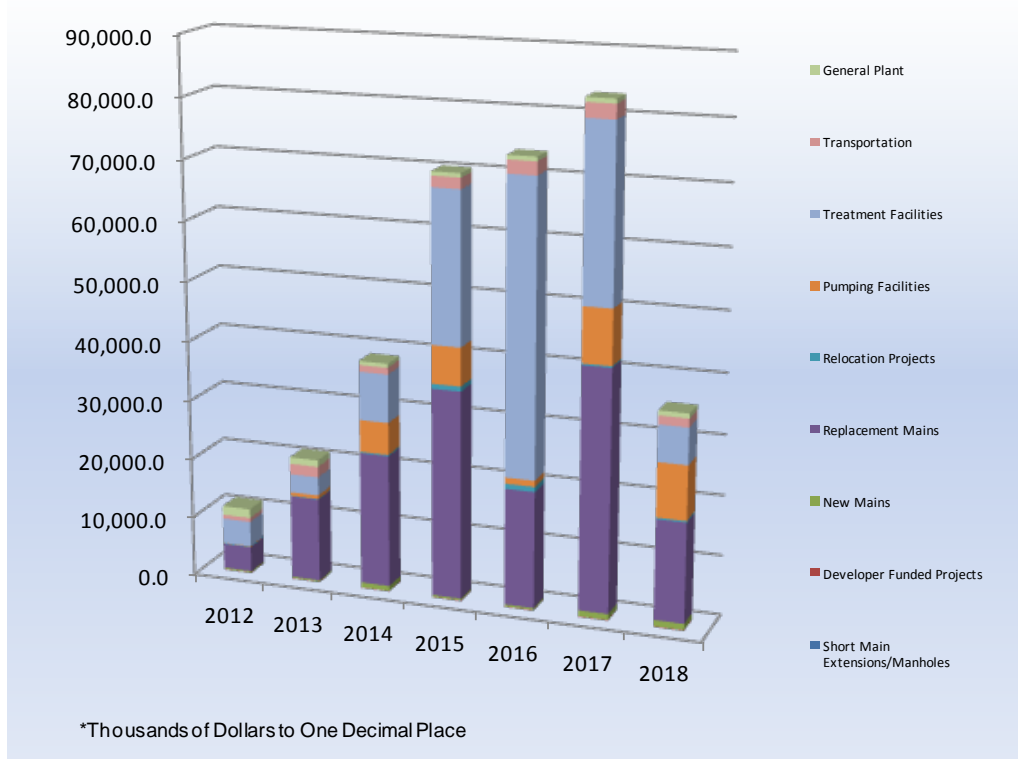
FCWTF Laboratory Remodel

Annual Operations/Maintenance	Percent Increase on Current Rates	Effective Date of Increase	Annual Principal/Interest	Percent Increase on Current Rates	Monthly Impact on Average Domestic Customer	Effective Date of Increase
\$0	0.00%	1/1/2012	\$88,248	0.22%	\$0.06	1/1/2012

Strategic Capital Operating Plan

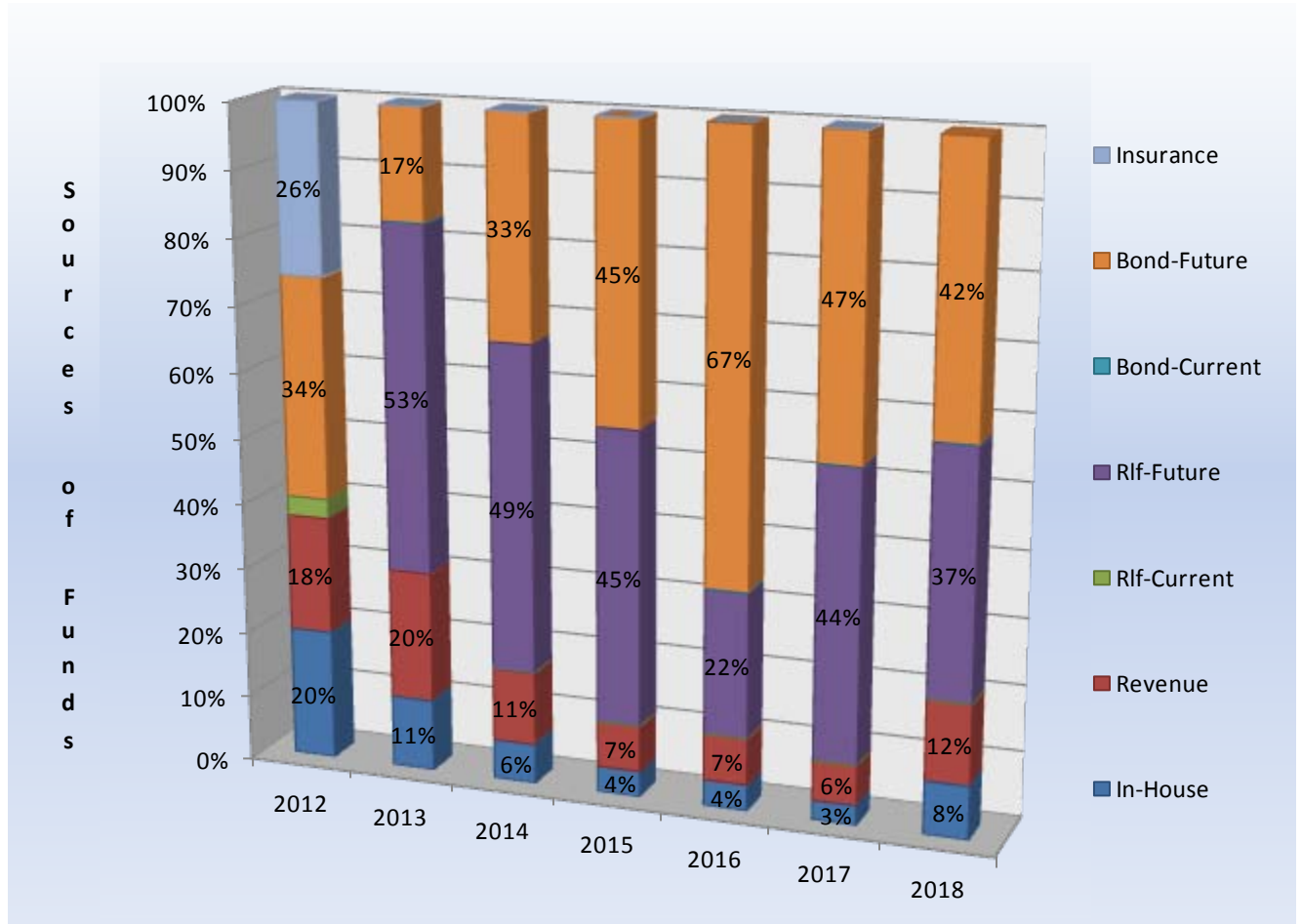
The Little Rock Wastewater capital strategic plan (shown on page 123) includes projects from 2012 through 2018 adjusted by an annual inflation allowance of 5%. Net expenditures of approximately \$333,355,700 are forecasted to be completed through 2018.

Strategic Capital Operating Plan



Of the \$333,355,700 forecasted through 2018 over \$17,670,000 will be completed by in-house construction crews, \$30,326,000 from revenues, \$332,000 from current State Revolving Loans, \$127,627,700 from future State Revolving Loans, \$3,000,000 from insurance, and \$154,400,000 from proposed sewer revenue bonds.

Project Funding Comparison



Comments on major projects from 2012 through 2018 are as follows:

Cantrell Road Pump Station Upgrade

The Cantrell Road Pump Station was placed in service in 1967. Structurally the facility is in good condition. Mechanically and electrically, the pump station components are in need of replacement. Two bar screens were installed in 1986. Two of the original pumps from 1967 were replaced in 1986. A portion of the switchgear is original while some components were replaced or added in 1986. The station does not have back-up power generation. With portions of the equipment at 44 years old and the remaining at 25 years, the reliability of equipment and availability of replacement parts have and will be an issue. This project calls for the replacement of all mechanical and electrical equipment, and installation of back-up power. The Cantrell Road Pump Station

Upgrade is schedule to begin construction in 2013 and be completed by the end of 2015. This project is estimated to cost \$7,950,728 and will funded by a sewer revenue bond issue in 2012.

	Forecast <u>2012</u>	Forecast <u>Thru 2018</u>	Project <u>Total</u>
Row & Land Acquisition	0	167,385	167,385
Construction	0	6,929,406	6,929,406
Engineering Fees	0	819,181	819,181
Capitalized Interest/Administration	0	34,756	34,756
	<u>0</u>	<u>7,950,728</u>	<u>7,950,728</u>

The annual estimated costs to operate and maintain this facility is projected to be \$47,204. An increase in rates of approximately .12% is needed to support the operational costs with an effective date of 1/1/2016. This increase equates to approximately \$.03 per month for an average domestic customer. The total cost of operations over its useful life is estimated to be \$3,560,000.

Little Rock Wastewater New and Upgraded Facilities Annual Operating Costs							
Energy/ Utilities	Fuel/ Chemical	Repair/ Replacement	NPDES/ Analytical	Grit Disposal/ Contracts	Supplies/ Materials	Insurance	Total
\$0	\$42,139	\$5,065	\$0	\$0	\$0	\$0	\$47,204

The annual principal and interest costs for the sewer revenue bond required to construct this pump station is estimated at \$559,053. An increase in rates of approximately 1.42% is needed to support this debt with an effective date of 1/1/2012. This increase equates to approximately \$.39 per month for an average domestic customer. The impact on rates for the annual operation, maintenance, and construction is shown in the table below.

Annual Operations/ Maintenance	Percent Increase on Current Rates	Effective Date of Increase	Monthly Impact on Average Domestic Customer	Annual Principal/ Interest	Percent Increase on Current Rates	Monthly Impact on Average Domestic Customer	Effective Date of Increase
\$47,204	0.12%	1/1/2016	\$0.03	\$559,053	1.42%	\$0.39	1/1/2012

Cantrell Road Pump Station Force Main

The Cantrell Road Pump Station Force Main was placed in service in 1967. Current technology does not allow for the inspection of an active force main. Therefore, the structural condition of the main is unknown. Design life for similar structures can be 50 years. This project calls for the installation of a new force main and the inspection and rehabilitation of the existing force main after the new main is placed in service. This project is expected to begin construction in 2013 and be completed by the end of 2015.

This project is estimated to cost \$3,161,106 and will be funded by a sewer revenue bond issue in 2012.

	Forecast 2012	Forecast Thru 2018	Project Total
Row & Land Acquisition	0	66,253	66,253
Construction	0	2,749,114	2,749,114
Engineering Fees	0	328,427	328,427
Capitalized Interest/Administratio	0	17,312	17,312
	<u>0</u>	<u>3,161,106</u>	<u>3,161,106</u>

The estimated costs to operate and maintain this force main is approximately \$23,635. An increase in rates of approximately .06% is needed to support the operation of this facility with an effective date of 1/1/2016. This increase equates to approximately \$.02 per month for an average domestic customer. The total cost to operate and maintain this facility over its useful life is estimated at \$1,782,000.

Little Rock Wastewater New and Upgraded Facilities Annual Operating Costs							
Energy/ Utilities	Fuel/ Chemical	Repair/ Replacement	NPDES/ Analytical	Grit Disposal/ Contracts	Supplies/ Materials	Insurance	Total
\$0	\$23,635	\$0	\$0	\$0	\$0	\$0	\$23,635

The annual principal and interest costs for the sewer revenue bond required to construct this pump station is estimated at \$222,272. An increase in rates of approximately .56% is needed to support this debt with an effective date of 1/1/2012. This increase equates to approximately \$.16 per month for an average domestic customer. The impact on rates for the annual operation, maintenance, and construction is shown in the table below.

Annual Operations/ Maintenance	Percent Increase on Current Rates	Effective Date of Increase	Monthly Impact on Average Domestic Customer	Annual Principal/ Interest	Percent Increase on Current Rates	Monthly Impact on Average Domestic Customer	Effective Date of Increase
\$23,635	0.06%	1/1/2016	\$0.02	\$222,272	0.56%	\$0.16	1/1/2012

Cantrell Road Area In-Line Storage

This four million gallon in-line storage facility will alleviate overflows generated from wet weather flows in the Jimmerson and Cantrell Road areas of the City. In addition, this storage facility will allow the pumping capacity at the Cantrell Road Pump Station to remain the same, which is essential to eliminate further overflows downstream of the pump station along the Riverfront portion of the City. This project is expected to begin construction in 2016 and be completed by the end of 2018. The project is estimated at \$16,987,523 and will be funded by a sewer revenue bond issue in 2016.

	Forecast <u>2012</u>	Forecast <u>Thru 2018</u>	Project <u>Total</u>
Row & Land Acquisition	0	357,964	357,964
Construction	0	14,809,365	14,809,365
Engineering Fees	0	1,746,106	1,746,106
Capitalized Interest/Administration	0	74,088	74,088
	<u>0</u>	<u>16,987,523</u>	<u>16,987,523</u>

The estimated costs to operate and maintain this inline storage facility is \$25,826. An increase in rates of approximately .07% is needed to support the operational costs with an effective date of 1/1/2019. This increase equates to approximately \$.02 per month for an average domestic customer. The total operational cost over its useful life is estimated at \$1,782,000.

Little Rock Wastewater New and Upgraded Facilities Annual Operating Costs							
Energy/ Utilities	Fuel/ Chemical	Repair/ Replacement	NPDES/ Analytical	Grit Disposal/ Contracts	Supplies/ Materials	Insurance	Total
\$0	\$0	\$25,826	\$0	\$0	\$0	\$0	\$25,826

The annual principal and interest costs for the sewer revenue bond required to construct this inline storage facility is estimated at \$1,183,949. An increase in rates of approximately 3.00% is needed to support this debt with an effective date of 1/1/2016. This increase equates to approximately \$.83 per month for an average domestic customer. The impact on rates for the annual operation, maintenance, and construction is shown in the table below.

Annual Operations/ Maintenance	Percent Increase on Current Rates	Effective Date of Increase	Monthly Impact on Average Domestic Customer	Annual Principal/ Interest	Percent Increase on Current Rates	Monthly Impact on Average Domestic Customer	Effective Date of Increase
\$25,826	0.07%	1/1/2019	\$0.02	\$1,183,949	3.00%	\$0.83	1/1/2016

Peak Flow Pump Station – Additional Pump

The Peak Flow Pump Station was designed with an empty pump position so the capacity of the station could be readily increased when storage becomes available. The increased capacity of the station will reduce the occurrence of sanitary sewer overflows in the Fourche Creek vicinity with additional storage at either BFI or an additional basin at the Peak Flow Attenuation Facility. The project is scheduled to start in 2014 and complete by the end of 2015. It is estimated to cost \$1,203,695 and will be funded by a sewer revenue bond issued in 2012.

	Forecast <u>2012</u>	Forecast <u>Thru 2018</u>	Project <u>Total</u>
Row & Land Acquisition	0	0	0
Construction	0	1,077,893	1,077,893
Engineering Fees	0	120,152	120,152
Capitalized Interest/Administration	0	5,650	5,650
	<u>0</u>	<u>1,203,695</u>	<u>1,203,695</u>

The estimated costs to operate and maintain this pump is \$18,909. An increase in rates of approximately .05% is needed to support the operations with an effective date of 1/1/2016. This increase equates to approximately \$.01 per month for an average domestic customer. The total cost of operations for this pump over its useful life is estimated at \$1,426,000.

Annual Operating Costs							
Energy/ Utilities	Fuel/ Chemical	Repair/ Replacement	NPDES/ Analytical	Grit Disposal/ Contracts	Supplies/ Materials	Insurance	Total
\$0	\$12,156	\$6,753	\$0	\$0	\$0	\$0	\$18,909

The annual principal and interest costs for the sewer revenue bond required to purchase and install this pump is estimated at \$84,637. An increase in rates of approximately .21% is needed to support this debt with an effective date of 1/1/2012. This increase equates to approximately \$.06 per month for an average domestic customer. The impact on rates for the annual operation, maintenance, and construction is shown in the table below.

Annual Operations/ Maintenance	Percent Increase on Current Rates	Effective Date of Increase	Monthly Impact on Average Domestic Customer	Annual Principal/ Interest	Percent Increase on Current Rates	Monthly Impact on Average Domestic Customer	Effective Date of Increase
\$18,909	0.05%	1/1/2016	\$0.01	\$84,637	0.21%	\$0.06	1/1/2012

Jamison Pump Station Upgrade

The Jamison Road Pump Station was constructed in 1993. The station consists of five submersible pumps which include two 25 hp and three 150 hp pumps. There are two grinders and screens - one on each of the inlet channels. Dry weather flow at the station is approximately 2 mgd. Peak pumping capacity is approximately 16 mgd. Overall the wet well, valve vault, and building structure are in good condition and the station is functioning as designed. No changes are immediately required but the SECAP recommended installing back-up power, painting the ferrous surfaces at the station, and replacing the grinders with a mechanical bar screen when maintenance of the grinders becomes an issue. This project is expected to begin construction in 2016 and be completed by the end of 2018. The project is estimated to be \$2,184,269 and will be

funded by a sewer revenue bond issue in 2016. It is scheduled to begin in 2016 and be completed by the end of 2018. The estimated cost to complete the project is \$2,184,269 and will be funded by a sewer revenue bond issue in 2016.

	Forecast 2012	Forecast Thru 2018	Project Total
Row & Land Acquisition	0	45,651	45,651
Construction	0	1,897,151	1,897,151
Engineering Fees	0	231,408	231,408
Capitalized Interest/Administration	0	10,059	10,059
	0	2,184,269	2,184,269

The annual costs to operate and maintain this pump station is estimated at \$51,581. An increase in rates of approximately .13% is needed to support the operation of this facility with an effective date of 1/1/2019. This increase equates to approximately \$.04 per month for an average domestic customer. The total cost of operations over useful life of the pump station is estimated at \$3,889,000.

Little Rock Wastewater New and Upgraded Facilities Annual Operating Costs							
Energy/ Utilities	Fuel/ Chemical	Repair/ Replacement	NPDES/ Analytical	Grit Disposal/ Contracts	Supplies/ Materials	Insurance	Total
\$0	\$46,046	\$5,535	\$0	\$0	\$0	\$0	\$51,581

The annual principal and interest costs for the sewer revenue bond required to upgrade the pump station is estimated at \$152,233. An increase in rates of approximately .39% is needed to support this debt with an effective date of 1/1/2016. This increase equates to approximately \$.11 per month for an average domestic customer. The impact on rates for the annual operation, maintenance, and construction is shown in the table below.

Annual Operations/ Maintenance	Percent Increase on Current Rates	Effective Date of Increase	Monthly Impact on Average Domestic Customer	Annual Principal/ Interest	Percent Increase on Current Rates	Monthly Impact on Average Domestic Customer	Effective Date of Increase
\$51,581	0.13%	1/1/2019	\$0.04	\$152,233	0.39%	\$0.11	1/1/2016

Adams Field and Mabelvale Pike Storage

These peak flow storage basins are interconnected with the entire service area of LRW. The trunk system of sanitary sewer lines are dependent on one another and the storage volumes and locations are vital in eliminating large overflows that occur within the trunk system. These storage options are also much more cost effective than to up-size a

majority of the interceptor network and use those upgrades to store excess wet weather flows.

	Forecast <u>2012</u>	Forecast <u>Thru 2018</u>	Project <u>Total</u>
Row & Land Acquisition	0	1,652,008	1,652,008
Construction	0	68,327,469	68,327,469
Engineering Fees	0	7,816,201	7,816,201
Capitalized Interest/Administration	0	132,549	132,549
	<u>0</u>	<u>77,928,227</u>	<u>77,928,227</u>

The annual estimated costs to operate and maintain this wastewater storage facility is approximately \$159,335. An increase in rates of approximately .40% is needed to support the operational costs with an effective date of 1/1/2019. This increase equates to approximately \$.11 per month for an average domestic customer. The total cost of operations over its useful life is estimated at \$12,014,000.

Little Rock Wastewater New and Upgraded Facilities Annual Operating Costs							
Energy/ Utilities	Fuel/ Chemical	Repair/ Replacement	NPDES/ Analytical	Grit Disposal/ Contracts	Supplies/ Materials	Insurance	Total
\$9,075	\$116,348	\$2,865	\$0	\$1,195	\$11,941	\$17,911	\$159,335

The annual principal and interest costs for the sewer revenue bond required for construction is estimated at \$5,436,843. An increase in rates of approximately 13.77% is needed to support this debt with an effective date of 1/1/2012 and 1/1/2015. This increase equates to approximately \$3.81 per month for an average domestic customer. The impact on rates for the annual operation, maintenance, and construction is shown in the table below.

Annual Operations/ Maintenance	Percent Increase on Current Rates	Effective Date of Increase	Monthly Impact on Average Domestic Customer	Annual Principal/ Interest	Percent Increase on Current Rates	Monthly Impact on Average Domestic Customer	Effective Date of Increase
\$159,335	0.40%	1/1/2019	\$0.11	\$234,417	0.59%	\$0.16	1/1/2012
\$0	0.00%	n/a	\$0.00	\$5,202,426	13.18%	\$3.65	1/1/2015

Rock Creek Storage

A 7 million gallon in-line storage facility is essential to store wet weather flows generated along the Rock Creek Interceptor and the western portion of the City. This storage allows for considerable cost savings by not having to upgrade the entire length of sewer that makes up the Rock Creek Interceptor. This project is expected to begin construction in 2012 and be completed by the end of 2018. The total cost is estimated at \$26,489,701 and will be funded by sewer revenue bonds issued in 2012 and 2016.

	Forecast <u>2012</u>	Forecast <u>Thru 2018</u>	Project <u>Total</u>
Row & Land Acquisition	0	561,582	561,582
Construction	0	23,202,329	23,202,329
Engineering Fees	0	2,712,545	2,712,545
Capitalized Interest/Administration	0	13,245	13,245
	<u>0</u>	<u>26,489,701</u>	<u>26,489,701</u>

The annual estimated costs to operate and maintain this wastewater storage facility is approximately \$25,826. An increase in rates of approximately .07% is needed to support the operation of this facility with an effective date of 1/1/2019. This increase equates to approximately \$.02 per month for an average domestic customer. The total cost of operations over its useful life is estimated at \$1,947,000.

Little Rock Wastewater New and Upgraded Facilities Annual Operating Costs							
Energy/ Utilities	Fuel/ Chemical	Repair/ Replacement	NPDES/ Analytical	Grit Disposal/ Contracts	Supplies/ Materials	Insurance	Total
\$0	\$0	\$25,826	\$0	\$0	\$0	\$0	\$25,826

The annual principal and interest costs for the sewer revenue bond required to construct this storage facility is estimated at \$1,853,769. An increase in rates of approximately 4.70% is needed to support this debt with an effective date of 1/1/2012 and 1/1/2016. This increase equates to approximately \$1.30 per month for an average domestic customer. The impact on rates for the annual operation, maintenance, and construction is shown in the table below.

Annual Operations/ Maintenance	Percent Increase on Current Rates	Effective Date of Increase	Monthly Impact on Average Domestic Customer	Annual Principal/ Interest	Percent Increase on Current Rates	Monthly Impact on Average Domestic Customer	Effective Date of Increase
\$25,826	0.07%	1/1/2019	\$0.02	\$858,509	2.17%	\$0.60	1/1/2012
\$0	0.00%	n/a	\$0.00	\$995,260	2.53%	\$0.70	1/1/2016

Fourche Creek Wastewater Treatment Facility Phase III - Rehabilitation

Recent improvements to the Fourche Creek Wastewater Treatment Facility increased the hydraulic capacity of the plant from 36 million gallons per day (MGD) to 45 MGD. This level of hydraulic throughput was needed to address the hydraulic improvements at the Arch Street Pump Station. However, in the 2008 Facility Plan for the plant, the ultimate hydraulic throughput of the plant was placed at 52 MGD to allow for anticipated growth in the industrial port complex. The budget allocates \$13,322,100 in future years for the construction of additional hydraulic improvements and other capital improvements at the Fourche Treatment Facility. This project is scheduled to begin in

2016 and be completed by the end of 2017. The total cost is estimated at \$13,322,092 and will be funded by a sewer revenue bond issue in 2016.

	Forecast 2012	Forecast Thru 2018	Project Total
Row & Land Acquisition	0	0	0
Construction	0	11,893,807	11,893,807
Engineering Fees	0	1,428,285	1,428,285
Capitalized Interest/Administration	0	0	0
	<u>0</u>	<u>13,322,092</u>	<u>13,322,092</u>

The annual estimated costs to operate and maintain the expansion of this plant is \$625,193. An increase in rates of approximately 1.58% is needed to support the operation of this facility with an effective date of 1/1/2019. This increase equates to approximately \$.44 per month for an average domestic customer. The total cost of operations over its useful life is estimated at \$47,140,000.

Little Rock Wastewater New and Upgraded Facilities Annual Operating Costs							
Energy/ Utilities	Fuel/ Chemical	Repair/ Replacement	NPDES/ Analytical	Grit Disposal/ Contracts	Supplies/ Materials	Insurance	Total
\$151,260	\$0	\$55,052	\$295,904	\$38,722	\$76,690	\$7,565	\$625,193

The annual principal and interest costs for the sewer revenue bond required to complete this project is estimated at \$928,486. An increase in rates of approximately 2.35% is needed to support this debt with an effective date of 1/1/2016. This increase equates to approximately \$.65 per month for an average domestic customer. The impact on rates for the annual operation, maintenance, and construction of the Fourche Creek Wastewater Treatment Facility Phase III is shown in the table below.

Annual Operations/ Maintenance	Percent Increase on Current Rates	Effective Date of Increase	Monthly Impact on Average Domestic Customer	Annual Principal/ Interest	Percent Increase on Current Rates	Monthly Impact on Average Domestic Customer	Effective Date of Increase
\$625,193	1.58%	1/1/2019	\$0.44	\$928,486	2.35%	\$0.65	1/1/2016

Impact of Capital Improvements on Sewer Rates

The major wastewater collection, pumping, and treatment projects scheduled to be completed by 2018 will increase operating costs significantly. The increases in operating costs do not include increases in labor since LRW has made a commitment to operate the new facilities with existing personnel. A table reflecting those increases along with the increases in current rates by facility is shown below.

Table 2
Operating Costs Summary by Project

Project	Annual Operations/ Maintenance	Percent Increase on Current Rates	Effective Date of Increase	Monthly Impact on Average Domestic Customer
LMWWTF	\$812,420	2.04%	1/1/2012	\$0.57
FCWWTF	\$160,764	0.40%	1/1/2013	\$0.11
Cantrell Road PS Upgrade	\$47,204	0.12%	1/1/2017	\$0.03
Cantrell Road PS Force Main	\$23,635	0.06%	1/1/2016	\$0.02
Cantrell Road Area In-Line Storage	\$25,826	0.07%	1/1/2019	\$0.02
Peak Flow Pump Station Additional Pump	\$18,909	0.05%	1/1/2016	\$0.01
Jamison Pump Station Upgrade	\$51,581	0.13%	1/1/2019	\$0.04
Adams Field and Mabelvale Pike Storage	\$159,335	0.40%	1/1/2019	\$0.11
Rock Creek Storage	\$25,826	0.07%	1/1/2017	\$0.02
FCWWTF Phase III	\$625,193	1.58%	1/1/2019	\$0.44
	\$1,950,693	4.92%		\$1.37

In addition to the increases in operating and maintenance costs as a result of the completion of new facilities and the upgrade of existing facilities, there is a major impact on depreciation expense for the years 2012 through 2018. The increase in depreciation for the seven year period totals \$50,784,868. The estimated depreciation by asset type is shown in Table 3.

Table 3
Estimated Annual Depreciation Expense

	2012	2013	2014	2015	2016	2017	2018
General Equipment	\$78,567	\$654,522	\$1,229,162	\$1,552,766	\$1,981,361	\$2,469,583	\$2,966,231
Pumping/Treatment	\$1,460,200	\$4,060,268	\$4,061,638	\$4,076,109	\$4,778,573	\$4,789,664	\$7,070,922
Collection System	\$261,047	\$368,507	\$471,886	\$1,094,798	\$1,825,414	\$2,476,971	\$3,056,679
Total	\$1,799,814	\$5,083,297	\$5,762,686	\$6,723,673	\$8,585,348	\$9,736,218	\$13,093,832

Little Rock wastewater anticipates issuing approximately sewer revenue bonds totaling \$166,666,000 and revolving loans totaling 127,766,300 through 2018. The impact of the annual principal and interest payments on rates is shown in Table 4 below. A narrative on debt service projections can be found in the Financial Plan beginning on page 47.

Table 4
Annual Principal/Interest Costs by Project

Project	Annual Principal/Interest	Percent Increase on Current Rates	Monthly Impact on Average Domestic Customer	Effective Date of Increase
FCWWTF	\$162,427	0.41%	\$0.11	1/1/2012
Collection System Projects	\$2,661,266	6.74%	\$1.87	1/1/2016
Collection System Projects	\$2,445,352	6.19%	\$1.72	1/1/2018
Collection System Projects	\$4,031,005	10.21%	\$2.83	1/1/2019
Trenchless Sewerline Rehabilitation	\$112,504	0.28%	\$0.08	1/1/2012
FCWWTF Labortary Improvements	\$88,248	0.22%	\$0.06	1/1/2012
Cantrell Road PS Upgrade	\$559,053	1.42%	\$0.39	1/1/2012
Cantrell Road PS Force Main	\$222,272	0.56%	\$0.16	1/1/2012
Cantrell Road Area In-Line Storage	\$1,183,949	3.00%	\$0.83	1/1/2016
Peak Flow Pump Station Additional Pump	\$84,637	0.21%	\$0.06	1/1/2016
Jamison Pump Station Upgrade	\$152,233	0.39%	\$0.11	1/1/2016
Adams Field and Mabelvale Pike Storage	\$5,202,426	13.18%	\$3.65	1/1/2015
Adams Field and Mabelvale Pike Storage	\$234,417	0.59%	\$0.16	1/1/2012
Rock Creek Storage	\$858,509	2.17%	\$0.60	1/1/2012
Rock Creek Storage	\$995,266	2.52%	\$0.70	1/1/2016
FCWWTF Phase III	\$928,486	2.35%	\$0.65	1/1/2016
	\$19,922,050	50.44%	\$13.98	

The capital improvement projects forecasted to be funded through revenues are the Pipe Maintenance Contracts and the general/transportation projects for the period 2013 through 2018. The impact on sewer rates for the revenue funded projects is shown in Table 5 below.

Table 5
Revenue Funded Projects

Project	Revenue Funded Capital	Percent Increase on Current Rates	Monthly Impact on Average Domestic Customer	Effective Date of Increase
Annual Trenchless Projects	\$2,000,000	5.07%	\$1.40	1/1/2013
Average General/Transportation	\$2,190,000	5.55%	\$1.54	1/1/2013
	\$4,190,000	10.62%	\$2.94	

A narrative on Customer Impacts can be found in the Financial Plan beginning on page 52. A discussion of sewer rates, comparisons of LRW rates with other cities, and The Medial Household Affordability Index is included in this section

2012 CAPITAL OPERATING PLAN

(\$1,000)

PROJECT NUMBER	PROJECT DESCRIPTION		FORECAST 2011	CARRY-OVER 2012	NEW 2012	TOTAL 2012
100000	Short Main Extensions/ Manholes and Epoxy Manhole Rehab	GROSS	0.0	0.0	5.0	5.0
		A & C	0.0	0.0	0.0	0.0
		NET	0.0	0.0	5.0	5.0
200000	Construction Deposit Projects	GROSS	1,797.3	0.0	1,248.0	1,248.0
		A & C	(1,734.6)	0.0	(1,200.0)	(1,200.0)
		NET	62.7	0.0	48.0	48.0
300000	New Mains at Utility Cost	GROSS	698.4	55.9	194.1	250.0
		A & C	0.0	0.0	0.0	0.0
		NET	698.4	55.9	194.1	250.0
400000	Replacement Mains at Utility Cost	GROSS	2,481.1	2,344.4	1,875.0	4,219.4
		A & C	(41.3)	0.0	0.0	0.0
		NET	2,439.8	2,344.4	1,875.0	4,219.4
500000	Relocation Projects	GROSS	183.8	0.0	100.0	100.0
		A & C	(101.4)	0.0	0.0	0.0
		NET	82.4	0.0	100.0	100.0
600000	Wastewater Pumping Facilities	GROSS	0.0	0.0	75.0	75.0
		A & C	0.0	0.0	0.0	0.0
		NET	0.0	0.0	75.0	75.0
700000	Wastewater Treatment Facilities	GROSS	8,276.3	4,269.7	12.0	4,281.7
		A & C	0.0	0.0	0.0	0.0
		NET	8,276.3	4,269.7	12.0	4,281.7
800000	Transportation Equipment	GROSS	378.7	0.0	683.3	683.3
		A & C	0.0	0.0	0.0	0.0
		NET	378.7	0.0	683.3	683.3
900000	General Plant	GROSS	207.8	1,463.3	45.9	1,509.2
		A & C	0.0	0.0	0.0	0.0
		NET	207.8	1,463.3	45.9	1,509.2
TOTALS	Gross Expenditures Advances & Contributions Net Expenditures		14,023.4	8,133.3	4,238.3	12,371.6
			(1,877.3)	0.0	(1,200.0)	(1,200.0)
			12,146.1	8,133.3	3,038.3	11,171.6

CAPITAL OPERATING PLAN
SHORT MAIN EXTENSIONS/MANHOLES AND EPOXY MANHOLE REHAB
CONSTRUCTION DEPOSIT PROJECTS
Thousands of Dollars to One Decimal Place

PROJECT NUMBER	PROJECT DESCRIPTION	CARRYOVERS GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)				NEW GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)			
		PRIOR	2012	BEYOND	TOTAL	PRIOR	2012	BEYOND	TOTAL
1120000	Short Main Extensions/Manholes and Epoxy Manhole Rehab	0.0	0.0	0.0	0.0	0.0	5.0	0.0	5.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2120000	Construction Deposit Projects	0.0	0.0	0.0	0.0	0.0	1,248.0	0.0	1,248.0
		0.0	0.0	0.0	0.0	0.0	(1,200.0)	0.0	(1,200.0)
TOTAL	GROSS EXPENDITURES	0.0	0.0	0.0	0.0	0.0	1,253.0	0.0	1,253.0
	ADVANCES & CONTRIBUTIONS	0.0	0.0	0.0	0.0	0.0	(1,200.0)	0.0	(1,200.0)
	NET EXPENDITURES	0.0	0.0	0.0	0.0	0.0	53.0	0.0	53.0

CAPITAL OPERATING PLAN
NEW MAINS AT UTILITY COST
Thousands of Dollars to One Decimal Place

PROJECT NUMBER	PROJECT DESCRIPTION	CARRYOVERS GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)				NEW GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)			
		PRIOR	2012	BEYOND	TOTAL	PRIOR	2012	BEYOND	TOTAL
3071900	3420 Lamar	18.3	47.3	0.0	65.6	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3073100	6621 Waverly	7.0	8.6	0.0	15.6	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3120000	New Mains @ Utility Cost - Inhouse	0.0	0.0	0.0	0.0	0.0	194.1	0.0	194.1
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	GROSS EXPENDITURES	25.3	55.9	0.0	81.2	0.0	194.1	0.0	194.1
	ADVANCES & CONTRIBUTIONS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	NET EXPENDITURES	25.3	55.9	0.0	81.2	0.0	194.1	0.0	194.1

CAPITAL OPERATING PLAN
REPLACEMENT MAINS AT UTILITY COSTS

Thousands of Dollars to One Decimal Place

PROJECT NUMBER	PROJECT DESCRIPTION	CARRYOVERS GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)				NEW GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)			
		PRIOR	2012	BEYOND	TOTAL	PRIOR	2012	BEYOND	TOTAL
4060300	Allsop North/Country Club Rehabilitation	370.9 0.0	50.0 0.0	9,074.2 0.0	9,495.1 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4070600	Leawood OMP	368.0 0.0	35.0 0.0	6,426.6 0.0	6,829.6 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4070700	Echo Valley OMP	420.9 0.0	30.0 0.0	4,114.8 0.0	4,565.7 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4070800	Pleasant Valley OMP	420.5 0.0	30.0 0.0	3,916.9 0.0	4,367.4 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4073300	Allsop Park Outfall	317.9 0.0	0.0 0.0	1,899.0 0.0	2,216.9 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4073400	Country Club Outfall	402.1 0.0	0.0 0.0	2,972.2 0.0	3,374.3 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4080100	Granite Mountain OMP	156.5 0.0	20.0 0.0	1,335.2 0.0	1,511.7 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4080200	Lower Swaggerty OMP	457.9 0.0	50.0 0.0	6,112.0 0.0	6,619.9 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4080300	Subbasin 30100 OMP	130.5 0.0	25.0 0.0	1,314.4 0.0	1,469.9 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4080400	2400 Broadway	6.7 0.0	68.1 0.0	0.0 0.0	74.8 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4083100	Jimmerson West OMP	501.6 0.0	377.0 0.0	2,296.7 0.0	3,175.3 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4084200	Chicot SB-40704	37.5 0.0	0.0 0.0	3,138.7 0.0	3,176.2 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4084300	Cloverdale SB-40703	40.2 0.0	0.0 0.0	4,771.4 0.0	4,811.6 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4084400	Mabelvale Pike (East of University) SB-40701	47.2 0.0	0.0 0.0	2,955.8 0.0	3,003.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4084500	Meadowcliff SB-40702	246.2 0.0	0.0 0.0	4,864.2 0.0	5,110.4 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4084600	Longfellow SB-11400	89.3 0.0	0.0 0.0	1,416.0 0.0	1,505.3 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4084700	Quapaw South SB-20401	144.1 0.0	0.0 0.0	2,017.8 0.0	2,161.9 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4091700	Greenland Cv Relay	21.0 0.0	46.2 0.0	0.0 0.0	67.2 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4101500	Rose Creek East OMP	138.7 0.0	0.0 0.0	2,236.9 0.0	2,375.6 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4101800	Rose Creek Central OMP	86.8 0.0	0.0 0.0	2,837.5 0.0	2,924.3 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0

CAPITAL OPERATING PLAN
REPLACEMENT MAINS AT UTILITY COSTS

Thousands of Dollars to One Decimal Place

PROJECT NUMBER	PROJECT DESCRIPTION	CARRYOVERS GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)				NEW GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)			
		PRIOR	2012	BEYOND	TOTAL	PRIOR	2012	BEYOND	TOTAL
4101900	Rose Creek West OMP	157.0 0.0	0.0 0.0	3,309.2 0.0	3,466.2 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4102700	District 84 OMP	11.3 0.0	33.0 0.0	3,066.0 0.0	3,110.3 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4102800	Upper Coleman OMP	26.6 0.0	53.1 0.0	5,557.5 0.0	5,637.2 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4102900	District 119 OMP	16.1 0.0	38.5 0.0	3,767.1 0.0	3,821.7 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4110300	Mabelvale OMP	1.8 0.0	0.0 0.0	2,394.6 0.0	2,396.4 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4110400	Barrow OMP	9.3 0.0	0.0 0.0	4,869.4 0.0	4,878.7 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4110500	Quapaw North OMP	6.6 0.0	0.0 0.0	2,020.5 0.0	2,027.1 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4110600	Walnut Valley OMP	0.0 0.0	0.0 0.0	2,815.4 0.0	2,815.4 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4110800	Foreman Lake OMP	2.5 0.0	0.0 0.0	1,267.3 0.0	1,269.8 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4110900	Hall High South OMP	14.8 0.0	0.0 0.0	4,037.4 0.0	4,052.2 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4111300	Springer Blvd Relay-SECAP R1	9.3 0.0	0.0 0.0	63.2 0.0	72.5 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4112000	Brodie Creek Crossing - SECAP - R2	6.0 0.0	0.0 0.0	237.5 0.0	243.5 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4112200	Leslie Circle Mainline - SECAP	19.8 0.0	181.5 0.0	0.0 0.0	201.3 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4112300	West Markham Mainline - SECAP	8.2 0.0	458.3 0.0	0.0 0.0	466.5 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4112400	University Avenue Relay - SECAP - R7	15.3 0.0	0.0 0.0	583.8 0.0	599.1 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4112600	Roselawn Cemetery Relay - SECAP	4.4 0.0	293.3 0.0	0.0 0.0	297.7 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4112700	17th Street Relay - SECAP	102.4 0.0	5.0 0.0	0.0 0.0	107.4 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4112900	Fairpark Relay - SECAP	7.7 0.0	130.0 0.0	0.0 0.0	137.7 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4113000	Rose Creek East Relay - SECAP - R13	13.1 0.0	0.0 0.0	505.4 0.0	518.5 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4113400	Bishop St. Relay - SECAP - R14	4.1 0.0	259.5 0.0	0.0 0.0	263.6 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
4113500	Victory St. Relay - SECAP	3.6	21.6	0.0	25.2	0.0	0.0	0.0	0.0

CAPITAL OPERATING PLAN
REPLACEMENT MAINS AT UTILITY COSTS

Thousands of Dollars to One Decimal Place

PROJECT NUMBER	PROJECT DESCRIPTION	CARRYOVERS GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)				NEW GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)			
		PRIOR	2012	BEYOND	TOTAL	PRIOR	2012	BEYOND	TOTAL
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4113600	Rodney Parham Relay - SECAP	1.1	25.3	0.0	26.4	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4113700	Markham to Rodney Parham Relay - SECAP	2.2	114.0	0.0	116.2	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4114900	Walton Heights - Basin 11600 OMP	0.1	0.0	1,649.3	1,649.4	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4120000	Replacement Mains @ Utility Cost - Inhous	0.0	0.0	0.0	0.0	0.0	162.1	0.0	162.1
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4120100	2012 CIPP Annual Maintenance Contract	0.0	0.0	0.0	0.0	0.0	800.0	0.0	800.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4120200	2012 Pipeburst Annual Maintenance Contract	0.0	0.0	0.0	0.0	0.0	800.0	0.0	800.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4120300	42" Force Main Inspection	0.0	0.0	0.0	0.0	0.0	5.0	847.6	852.6
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4120400	Grassy Flat Main - R27	0.0	0.0	0.0	0.0	15.2	0.0	875.2	890.4
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4120500	36th Street to Mabelvale Pike Outfall - R22	0.0	0.0	0.0	0.0	0.0	0.0	11,101.0	11,101.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4120600	3I078 to 3L080 42" to 60" - R3	0.0	0.0	0.0	0.0	5.8	2.2	25.3	33.3
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4120700	Rebsamen Collector/Murry Park 10090	0.0	0.0	0.0	0.0	0.0	4.4	354.5	358.9
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4120800	17th Street Pipe Burst - R15	0.0	0.0	0.0	0.0	0.0	13.5	156.6	170.1
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4120900	Sherrill Heights 11000	0.0	0.0	0.0	0.0	0.0	2.5	262.0	264.5
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4121000	3K059 - Diversion - R21	0.0	0.0	0.0	0.0	0.0	1.0	7.3	8.3
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4121100	River Ridge P.S. 11200	0.0	0.0	0.0	0.0	0.0	3.5	355.3	358.8
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4121200	Rebsamen Collector/Commercial 10050	0.0	0.0	0.0	0.0	0.0	2.2	139.8	142.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4121300	Rebsamen Collector/Harbor 10060	0.0	0.0	0.0	0.0	0.0	7.2	474.7	481.9
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4121400	Overlook/Pinnacle Point 10070	0.0	0.0	0.0	0.0	0.0	16.6	1,088.1	1,104.7
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4121500	Rebsamen Collector/Golf Course 10080	0.0	0.0	0.0	0.0	0.0	3.2	202.8	206.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CAPITAL OPERATING PLAN
REPLACEMENT MAINS AT UTILITY COSTS

Thousands of Dollars to One Decimal Place

PROJECT NUMBER	PROJECT DESCRIPTION	CARRYOVERS GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)				NEW GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)			
		PRIOR	2012	BEYOND	TOTAL	PRIOR	2012	BEYOND	TOTAL
4121600	Boyle Park Mainline - R24	0.0	0.0	0.0	0.0	0.0	36.2	419.6	455.8
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4121700	48" Cross Connection (16K) - R29	0.0	0.0	0.0	0.0	0.0	7.5	86.8	94.3
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4121800	Rebsamen Collector/Alltell 10040	0.0	0.0	0.0	0.0	0.0	7.9	510.1	518.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4121900	Mainline Improvements for Modeled Overflows and Growth	0.0	0.0	0.0	0.0	0.0	0.0	11,311.1	11,311.1
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4180300	Upper Country Club Outfall - R19	0.0	0.0	0.0	0.0	0.0	0.0	452.3	452.3
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	GROSS EXPENDITURES	4,847.8	2,344.4	99,843.9	107,036.1	21.0	1,875.0	28,670.1	30,566.1
	ADVANCES & CONTRIBUTIONS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	NET EXPENDITURES	4,847.8	2,344.4	99,843.9	107,036.1	21.0	1,875.0	28,670.1	30,566.1

CAPITAL OPERATING PLAN
RELOCATION PROJECTS
Thousands of Dollars to One Decimal Place

PROJECT NUMBER	PROJECT DESCRIPTION	CARRYOVERS GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)				NEW GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)			
		PRIOR	2012	BEYOND	TOTAL	PRIOR	2012	BEYOND	TOTAL
5120000	Relocation Projects - Inhouse	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	GROSS EXPENDITURES	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0
	ADVANCES & CONTRIBUTIONS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	NET EXPENDITURES	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0

CAPITAL OPERATING PLAN
WASTEWATER PUMPING FACILITIES
Thousands of Dollars to One Decimal Place

NUMBER	PROJECT DESCRIPTION	CARRYOVERS				NEW			
		GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)				GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)			
		PRIOR	2012	BEYOND	TOTAL	PRIOR	2012	BEYOND	TOTAL
6120100	Replace One (1) C18 Diesel Engine 575 HP @ 1800 RPM	0.0	0.0	0.0	0.0	0.0	75.0	0.0	75.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6130100	Cantrell Rd PS Upgrade 404	0.0	0.0	0.0	0.0	0.0	0.0	7,950.7	7,950.7
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6130200	Cantrell Rd PS Force Main 404	0.0	0.0	0.0	0.0	0.0	0.0	3,161.1	3,161.1
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6130300	Cantrell Road Area In-Line Storage 404	0.0	0.0	0.0	0.0	0.0	0.0	16,987.5	16,987.5
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6130400	Peak Flow Pump Station - Additional Pump 404	0.0	0.0	0.0	0.0	0.0	0.0	1,203.7	1,203.7
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6130500	Jamison Pump Station Upgrade 404	0.0	0.0	0.0	0.0	0.0	0.0	2,184.3	2,184.3
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	GROSS EXPENDITURES	0.0	0.0	0.0	0.0 #	0.0	75.0	31,487.3	31,562.3
	ADVANCES & CONTRIBUTIONS	0.0	0.0	0.0	0.0 #	0.0	0.0	0.0	0.0
	NET EXPENDITURES	0.0	0.0	0.0	0.0	0.0	75.0	31,487.3	31,562.3

CAPITAL OPERATING PLAN
WASTEWATER TREATMENT FACILITIES
Thousands of Dollars to One Decimal Place

PROJECT NUMBER	PROJECT DESCRIPTION	CARRYOVERS GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)				NEW GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)			
		PRIOR	2012	BEYOND	TOTAL	PRIOR	2012	BEYOND	TOTAL
7020100	Little Maumelle Wastewater Treatment Facility 404	81,290.5 (477.9)	40.0 0.0	0.0 0.0	81,330.5 (477.9)	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
7070100	Fourche Creek Wastewater Treatment Facility Hydraulic Upgrade 404	17,722.8 0.0	1,140.0 0.0	1,210.0 0.0	20,072.8 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
7100500	Adams Field Final Clarifier Stamford Baffle System 407	0.0 0.0	57.8 0.0	127.3 0.0	185.1 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
7110300	Digester #3 Repair 404	100.0 0.0	3,000.0 0.0	0.0 0.0	3,100.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
7110500	New Gravity Belt Thickener 409	95.7 0.0	31.9 0.0	0.0 0.0	127.6 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
7120100	Twenty Four Inch Mag Meter 407	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	12.0 0.0	0.0 0.0	12.0 0.0
7130100	Adams Field & Mabelvale Pike Storage 404	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	77,928.2 0.0	77,928.2 0.0
7130200	Rock Creek Storage 404	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	26,489.7 0.0	26,489.7 0.0
7160100	Fourche Creek WTF Phase III - Rehabilitation 404	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	13,322.1 0.0	13,322.1 0.0
TOTAL	GROSS EXPENDITURES	99,209.0	4,269.7	1,337.3	104,816.0	0.0	12.0	104,417.9	104,429.9
	ADVANCES & CONTRIBUTIONS	(477.9)	0.0	0.0	(477.9)	0.0	0.0	0.0	0.0
	NET EXPENDITURES	98,731.1	4,269.7	1,337.3	104,338.1	0.0	12.0	104,417.9	104,429.9

CAPITAL OPERATING PLAN
TRANSPORTATION EQUIPMENT
Thousands of Dollars to One Decimal Place

PROJECT NUMBER	PROJECT DESCRIPTION	CARRYOVERS GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)				NEW GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)			
		PRIOR	2012	BEYOND	TOTAL	PRIOR	2012	BEYOND	TOTAL
8100500	Replace Fourche Forklift E0422 409	0.0	0.0	35.3	35.3	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8120100	(7) Seven New Backhoes & 5 Trackhoes 406C&I	0.0	0.0	0.0	0.0	0.0	683.3	0.0	683.3
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	GROSS EXPENDITURES	0.0	0.0	35.3	35.3	0.0	683.3	0.0	683.3
	ADVANCES & CONTRIBUTIONS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	NET EXPENDITURES	0.0	0.0	35.3	35.3	0.0	683.3	0.0	683.3

CAPITAL OPERATING PLAN
GENERAL PLANT
Thousands of Dollars to One Decimal Place

PROJECT NUMBER	PROJECT DESCRIPTION	CARRYOVERS GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)				NEW GROSS EXPENDITURES (ADVANCES & CONTRIBUTIONS)			
		PRIOR	2012	BEYOND	TOTAL	PRIOR	2012	BEYOND	TOTAL
9100100	Hansen Web Service 405	0.0	0.0	28.9	28.9	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9100200	Mtelligence CBM (Hansen SCADA interface) 405	15.8	14.2	0.0	30.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9100500	Replace BOD Incubator (2) 408	0.0	19.2	0.0	19.2	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9101100	Replace A/C Unit Clearwater Maint. 409	0.0	7.4	0.0	7.4	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9101200	Replace A/C Unit Fourche Admin 409	0.0	0.0	8.1	8.1	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9110100	GIS Mobile Device Edit Software 405	0.0	0.0	15.4	15.4	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9110200	eWorkflow Enhancements 405	16.0	42.0	0.0	58.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9110300	Virtual Server 405	0.0	0.0	27.6	27.6	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9110500	Windows Server Operating System 405	4.9	8.4	0.0	13.3	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9110600	Upgrade the Air Supply and Exhaust - Engine Generator Bldg. 409	8.3	26.3	0.0	34.6	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9111000	Add (2) New Dishwasher Racks 408	0.0	12.6	0.0	12.6	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9111100	FCWTP Lab Remodel 408	100.0	1,255.0	0.0	1,355.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9111200	MAS500 Financial Software 403	8.5	78.2	0.0	86.7	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9120100	Replace E0621 Hydra-Pack Unit 406C&R	0.0	0.0	0.0	0.0	0.0	14.0	0.0	14.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9120200	Replace Trailer Mounted Air Compressor E0043 406C&R	0.0	0.0	0.0	0.0	0.0	15.0	0.0	15.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9120300	Replace Muffle Furnace 408	0.0	0.0	0.0	0.0	0.0	9.5	0.0	9.5
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9120400	Replace One (1) A/C Unit at AFTP Admin. Bldg. 409	0.0	0.0	0.0	0.0	0.0	7.4	0.0	7.4
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	GROSS EXPENDITURES	153.5	1,463.3	80.0	1,696.8	0.0	45.9	0.0	45.9
	ADVANCES & CONTRIBUTIONS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	NET EXPENDITURES	153.5	1,463.3	80.0	1,696.8	0.0	45.9	0.0	45.9

STRATEGIC CAPITAL OPERATING PLAN

PROJECT NUMBER	PROJECT DESCRIPTION		ACTUAL	FORECAST	PROPOSED	FORECAST					
			2010	2011	2012	2013	2014	2015	2016	2017	2018
1110000	Short Main Extensions/ Manholes	GROSS	41.3	0.0	5.0	5.3	5.5	5.8	6.1	6.4	6.7
		A & C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		NET	41.3	0.0	5.0	5.3	5.5	5.8	6.1	6.4	6.7
2110000	Construction Deposit Projects	GROSS	1,179.4	1,797.3	1,248.0	1,310.4	1,375.9	1,444.7	1,896.2	1,991.0	2,090.5
		A & C	(1,145.8)	(1,734.6)	(1,200.0)	(1,260.0)	(1,323.0)	(1,389.2)	(1,823.3)	(1,914.4)	(2,010.1)
		NET	33.6	62.7	48.0	50.4	52.9	55.5	72.9	76.6	80.4
3110000	New Mains at Utility Cost	GROSS	969.1	698.4	250.0	262.5	874.0	338.9	355.8	1,011.8	1,062.4
		A & C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		NET	969.1	698.4	250.0	262.5	874.0	338.9	355.8	1,011.8	1,062.4
4110000	Replacement Mains at Utility Cost	GROSS	5,004.6	2,481.1	4,219.8	14,012.9	22,203.4	34,799.7	19,510.7	40,398.3	16,707.9
		A & C	(57.6)	(41.3)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		NET	4,947.0	2,439.8	4,219.8	14,012.9	22,203.4	34,799.7	19,510.7	40,398.3	16,707.9
5110000	Relocation Projects	GROSS	28.7	183.8	100.0	105.0	231.5	821.9	863.0	268.0	281.4
		A & C	0.0	(101.4)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		NET	28.7	82.4	100.0	105.0	231.5	821.9	863.0	268.0	281.4
6110000	Wastewater Pumping Facilities	GROSS	187.2	0.0	75.0	602.2	5,341.8	6,371.5	1,019.5	9,119.1	9,033.2
		A & C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		NET	187.2	0.0	75.0	602.2	5,341.8	6,371.5	1,019.5	9,119.1	9,033.2
7110000	Wastewater Treatment Facilities	GROSS	41,077.6	8,276.3	4,281.7	3,107.5	8,069.9	25,309.0	48,853.6	29,154.7	6,065.1
		A & C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		NET	41,077.6	8,276.3	4,281.7	3,107.5	8,069.9	25,309.0	48,853.6	29,154.7	6,065.1
8110000	Transportation Equipment	GROSS	465.8	378.7	683.3	1,790.8	1,132.4	1,835.6	2,208.3	2,416.9	1,442.0
		A & C	(91.8)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		NET	374.0	378.7	683.3	1,790.8	1,132.4	1,835.6	2,208.3	2,416.9	1,442.0
9110000	General Plant	GROSS	180.4	207.8	1,509.0	1,121.9	661.5	694.6	729.3	765.8	804.1
		A & C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		NET	180.4	207.8	1,509.0	1,121.9	661.5	694.6	729.3	765.8	804.1
TOTALS	Gross Expenditures Advances & Contributions Net Expenditures		49,134.1	14,023.4	12,371.8	22,318.5	39,895.9	71,621.7	75,442.5	85,132.0	37,493.3
			(1,295.2)	(1,877.3)	(1,200.0)	(1,260.0)	(1,323.0)	(1,389.2)	(1,823.3)	(1,914.4)	(2,010.1)
			47,838.9	12,146.1	11,171.8	21,058.5	38,572.9	70,232.5	73,619.2	83,217.6	35,483.2

Project Narratives

Category 6 – Wastewater Pumping Facilities

6120100 Replace One (1) C18 Diesel Engine 575 HP @ 1800 RPM

This purchase will be to replace the Peak Flow Pump Station unit # 2 which had a catastrophic failure in 2011 that resulted in total loss of the C18 diesel engine. There are usually three (3) engines located at the Peak Flow Pump Station. Two units are needed for heavy rainfall events and the third unit is the redundancy in the case of one of the two engines lose their functionality. This replacement unit is critical to eliminate capacity related overflows during heavy rainfall events.

Project					
Number	Description	Prior	2012	Beyond	Total
6130100	Replace One C18 Diesel Engine 575 HP	0.0	75.0	0.0	75.0

6130100 Cantrell Road Pump Station Upgrade

The Cantrell Road Pump Station was placed in service in 1967. Structurally the facility is in good condition. Mechanically and electrically, the pump station components are in need of replacement. Two bar screens were installed in 1986. Two of the original pumps from 1967 were replaced in 1986. A portion of the switchgear is original while some components were replaced or added in 1986. The station does not have back-up power generation. With portions of the equipment at 44 years old and the remaining at 25 years, the reliability of equipment and availability of replacement parts have and will be an issue. This project calls for the replacement of all mechanical and electrical equipment, and installation of back-up power.

Project					
Number	Description	Prior	2012	Beyond	Total
6130100	Cantrell Road Pump Station Upgrade	0.0	0.0	7,950.7	7,950.7

6130200 Cantrell Road Pump Station Force Main

The Cantrell Road Pump Station Force Main was placed in service in 1967. Current technology does not allow for the inspection of an active force main. Therefore, the structural condition of the main is unknown. Design life for similar structures can be 50 years. This project calls for the installation of a new force main and the inspection and rehabilitation of the existing force main after the new main is placed in service.

Project					
Number	Description	Prior	2012	Beyond	Total
6130200	Cantrell Road Pump Station Force Main	0.0	0.0	3,161.1	3,161.1

6130300 Cantrell Road Area In-Line Storage

This four million gallon in-line storage facility will alleviate overflows generated from wet weather flows in the Jimmerson and Cantrell Road areas of the City. In addition, this storage facility will allow the pumping capacity at the Cantrell Road Pump Station to

remain the same, which is essential to eliminate further overflows downstream of the pump station along the Riverfront portion of the City.

Project Number	Description	Prior	2012	Beyond	Total
6130300	Cantrell Road Pump Station In-Line Storage	0.0	0.0	16,987.5	16,987.5

6130400 Peak Flow Pump Station – Additional Pump

The Peak Flow Pump Station was designed with an empty pump position so the capacity of the station could be readily increased when storage becomes available. The increased capacity of the station will reduce the occurrence of sanitary sewer overflows in the Fourche Creek vicinity with additional storage at either BFI or an additional basin at the Peak Flow Attenuation Facility.

Project Number	Description	Prior	2012	Beyond	Total
6130400	Peak Flow Pump Station – Additional Pump	0.0	0.0	1,203.7	1,203.7

6130500 Jamison Road Pump Station Upgrade

The Jamison Road Pump Station was constructed in 1993. The station consists of five submersible pumps which include two 25 hp and three 150 hp pumps. There are two grinders and screens - one on each of the inlet channels. Dry weather flow at the station is approximately 2 mgd. Peak pumping capacity is approximately 16 mgd. Overall the wet well, valve vault, and building structure are in good condition and the station is functioning as designed. No changes are immediately required but the SECAP recommended installing back-up power, painting the ferrous surfaces at the station, and replacing the grinders with a mechanical bar screen when maintenance of the grinders becomes an issue.

Project Number	Description	Prior	2012	Beyond	Total
6130500	Jamison Road Pump Station Upgrade	0.0	0.0	2,184.3	2,184.3

Category 7 – Wastewater Treatment Facilities

7020100 Little Maumelle Wastewater Treatment Facility

The new treatment facility was placed online in July 2011. A one year warranty period follows this milestone date. This year's budget allocates \$40,000 for the completion of the engineering services related to warranty work.

Project Number	Description	Prior	2012	Beyond	Total
7020100	Little Maumelle Wastewater Treatment Facility	81,290.5	40.0	0.0	81,330.5
		(477.9)	0.0	0.0	(477.9)

7070100 Fourche Creek Wastewater Treatment Facility Hydraulic Upgrade

The direct discharge of certain industrial wastes to the primary digestion units (called co-digestion) of the Fourche Creek Wastewater Treatment Facility is an acceptable means of treatment for such wastes. Within 2011, LRW directed Sage V Foods flows from the biological treatment units to the primary digesters. With the acceptance of this industrial flow to the primary digesters, biogas production will increase and excessive methane gas will be produced. LRW staff has concluded it would be prudent to develop a facility plan for handling the increased gas production and addressing future flows from industrial users. The 2012 budget allocates \$2,140,000 for a facility plan and the construction of recommended improvements to the digester complex.

Project		Prior	2012	Beyond	Total
Number	Description				
7070100	Fourche Creek WTF Hydraulic Upgrade	17,722.8	1,140.0	1,210.0	20,072.8

7100500 Adams Field Wastewater Treatment Facility Final Clarifier Stamford Baffle System

The installation of “Stamford Baffles” also referred to as “Up-Flow Baffles”, “Density Current Baffles”, or “Submerged Flow Deflection Baffles” will be installed on all three (3) final clarifiers at the Adams Field facility. Baffle system installations can result in up to a 38 percent increase in clarifier performance. These systems eliminate the “wall effect”, whereby density currents flow up the wall of the clarifier, causing suspended solids to flow directly into the effluent trough causing difficulty in meeting permit TSS limitations. Redirecting the density currents away from the launder, toward the center of the tank, is a low cost alternative to increasing the clarifier efficiency, thus affording the clarifier the ability to settle larger quantity of solids.

Project		Prior	2012	Beyond	Total
Number	Description				
7100500	Adams Field Final Clarifier Stamford Baffle System	0.0	57.8	127.3	185.1

7110300 FCWTF Digest #3 Repair

On April 28, 2011, a welding incident at Fourche Creek Wastewater Treatment Facility caused methane in Primary Digester number 3 to ignite. Following the incident, LRW staff investigated the digester and determined that the structure was damaged. Staff then filed an insurance claim to fully investigate the extent of damage. The insurance company hired an engineering firm to investigate. The firm determined that the structure's roof slab was damaged and recommended replacement. This project calls for the replacement of the roof and supporting columns as well as the replacement of any equipment damaged in the incident.

Project		Prior	2012	Beyond	Total
Number	Description				
7110300	FCWTF Digest #3 Repair	100.0	3,000.0	0.0	3,100.0

7110500 New Gravity Belt Thickener

LRW must obtain and install a new Gravity Belt Thickener (GBT) at the FCWTF to handle the proposed industrial flows. This BGT will be used as the primary solids handling unit and the existing GBT will become the secondary unit. The existing GBT was placed in service in 1998.

Project		Prior	2012	Beyond	Total
Number	Description				
7110500	New Gravity Belt Thickener	95.7	31.9	0.0	127.6

7120100 Twenty Four Inch Mag Meter

This meter is to be installed at the Little Maumelle Pump Station on the Adams Field discharge header. The meter is necessary to implement automated control of peak flow distribution between the Little Maumelle and the Adams Field Wastewater Treatment facilities. Pump staging and controlled ramping of influent flow to Little Maumelle will be necessary to supply sufficient time to facilitate adjustment to treatment process and internal aeration basin flow modes. Given the hydraulic limitation of the Rebsamen Interceptor, accurate flow information is imperative in order to maximize flow diversion while limiting the possibilities of overflow occurrences.

Project		Prior	2012	Beyond	Total
Number	Description				
7120100	Twenty Four Inch Mag Meter	0.0	12.0	0.0	12.0

7130100 Adams Field and Mabelvale Pike Storage

These peak flow storage basins are interconnected with the entire service area of LRW. The trunk system of sanitary sewer lines are dependent on one another and the storage volumes and locations are vital in eliminating large overflows that occur within the trunk system. These storage options are also more cost efficient than to up-size a majority of the interceptor network and use those upgrades to store excess wet weather flows.

Project		Prior	2012	Beyond	Total
Number	Description				
7130100	Adams Field and Mabelvale Pike Storage	0.0	0.0	77,928.2	77,928.2

7130200 Rock Creek Storage

A 7 million gallon in-line storage facility is essential to store wet weather flows generated along the Rock Creek Interceptor and the western portion of the City. This storage allows for considerable cost savings by not having to upgrade the entire length of sewer that makes up the Rock Creek Interceptor.

Project		Prior	2012	Beyond	Total
Number	Description				
7130200	Rock Creek Storage	0.0	0.0	26,489.7	26,489.7

7160100 Fourche Creek Wastewater Treatment Facility Phase III

Recent improvements to the Fourche Creek Wastewater Treatment Plant increased the hydraulic capacity of the plant from 36 million gallons per day (MGD) to 45 MGD. This level of hydraulic throughput was needed to address the hydraulic improvements at the Arch Street Pump Station. However, in the 2008 Facility Plan for the plant, the ultimate hydraulic throughput of the plant was placed at 52 MGD to allow for anticipated growth in the industrial port complex. The budget allocates \$13,322,100 in future years for the construction of additional hydraulic improvements and other capital improvements at the Fourche Treatment Plant.

Project Number	Description	Prior	2012	Beyond	Total
7160100	FCWTF Phase III	0.0	0.0	13,322.1	13,322.1

Category 8 – Transportation Equipment

8100500 Replace Fourche Forklift E0422

The existing Fourche Treatment Facility forklift was purchased in February 1996. This forklift is used on a near-daily basis to accommodate many tasks as required throughout the facility. It underwent many repairs after the 2001 Task Building fire in order to be placed back into service; however, the corrosion process is now affecting it in a significant way. Taking into consideration the new larger pumps that are in service, the larger shoring boxes to be handled, and the needs of the Engine Generator Building, a larger capacity forklift is required. This replacement will provide a 7,000 pound rated capacity lift compared to the current lift that has only a 4,000 pound rated capacity.

Project Number	Description	Prior	2012	Beyond	Total
8100500	Replace Fourche Forklift E0422	0.0	0.0	35.3	35.3

8120100 Seven (7) New Backhoes and Five Track-hoes

Five new 15-foot backhoe/loaders and eight track-hoes are needed to replace seven existing backhoes and five track-hoes, which have been purchased on the buy-back program. Two of the backhoe/loaders are used at our Adams Field and Fourche treatment facilities. The remaining backhoe/loaders and track-hoes are used by our O&M and Capital construction crews on a daily basis.

Project Number	Description	Prior	2012	Beyond	Total
8120100	(7) New Backhoes & (5) Track-hoes	0.0	683.3	0.0	683.3

Category 9 – General Plant

9100100 Hansen Web Service

Hansen 8 Web Services provide a means for other applications to interact and exchange data with Hansen 8. They expose the methods and properties of the Hansen 8 business objects using standard Web technologies, including XML, WSDL, and SOAP. Since the application is built using open standards, Web Services allow any application to interact with Hansen 8, regardless of platform or language. Developers and integrators can use it for a wide variety of tasks, such as building interfaces, integrating Hansen 8 with other applications, or importing data into Hansen 8 from other sources.

Project Number	Description	Prior	2012	Beyond	Total
9100100	Hansen Web Service	0.0	0.0	28.9	28.9

9100200 Mtelligence CBM (Hansen SCADA Interface)

Mtelligence (Maintenance Intelligence) is a software solution that will enable LRW to leverage existing investments in condition monitoring, mobile handhelds, and smart instrumentation (SCADA) in conjunction with Hansen v8 to optimize maintenance planning and predictive Hansen v8 work orders. It facilitates utilization-based (i.e. runtime hours) and condition-based (i.e. alarm condition) work orders to be triggered automatically when tag values exceed predefined thresholds. This integration of systems also gives Maintenance personnel access to real-time asset conditions without having to leave the Hansen v8 application, while providing Operations personnel visibility into maintenance statuses directly from their SCADA screens. The software was purchased in 2010 and \$14,200 is projected for 2012 for configuration of new plant assets.

Project Number	Description	Prior	2012	Beyond	Total
9100200	Mtelligence CBM (Hansen SCADA interface)	15.8	14.2	0.0	30.0

9100500 Replace BOD Incubator (2)

The laboratory needs to replace two (2) BOD incubators. The current models are 14 years old and run continuously. These incubators are used daily for NPDES Permit and process required BOD measurements and must be maintained at the test temperature 20.0 ±1.0 C° at all times.

Project Number	Description	Prior	2012	Beyond	Total
9100500	Replace BOD Incubator (2)	0.0	19.2	0.0	19.2

9101100 Replace A/C Unit Clearwater Maintenance Facility

The existing A/C units continue to require numerous repairs. These units are also using the phased-out refrigerant, which is continually becoming more expensive to obtain.

Project Number	Description	Prior	2012	Beyond	Total
9101100	Replace A/C Unit Clearwater Maint.	0.0	7.4	0.0	7.4

9101200 Replace A/C Unit Fourche Administration

These units are aged and are critical to lab operations. They are very susceptible to the hydrogen sulfide gasses as well as to exhaust lab gasses, which tend to shorten the life of these units.

Project		Prior	2012	Beyond	Total
Number	Description				
9101200	Replace A/C Unit Fourche Admin	0.0	0.0	8.1	8.1

9110100 GIS Mobile Device Edit Software

The Geographic Information System Mobile Device Edit software will provide a tool for mobile users to update IMS information in real time with pictures, coordinates and data. These forms could even be used to print approval/rejection notice on site with handheld thermal printers. It will also allow specific features points or lines to be added directly into an ArcSDE version from a handheld device, such as a Blackberry phone. This would be useful when LRW personnel inspect Service Lines. Using the device's GPS coordinates, the software can create a service line map feature, including attribute data during field inspections.

Project		Prior	2012	Beyond	Total
Number	Description				
9110100	GIS Mobile Device Edit Software	0.0	0.0	15.4	15.4

9110200 eWorkflow Enhancements

The eWorkflow software system has been a tremendous time saver over the past three (3) years. The new enhancements will allow for further manpower savings by eliminating data entry, data duplication, and human error. This enhancement will involve the integration of the eWorkflow system with existing finance software by taking approved purchases and then generating purchase orders. The cost will include the research, application development, and testing required to implement the system.

Project		Prior	2012	Beyond	Total
Number	Description				
9110200	eWorkflow Enhancements	16.0	42.0	0.0	58.0

9110300 Virtual Server

Virtual Servers allow multiple virtual operating systems to be hosted on one (1) physical machine. A Virtual Server environment offers numerous cost savings over a traditional physical server environment. Operating system licensing, cooling costs, and manpower to upkeep the hosted systems are just a few areas of potential savings. The cost includes the physical host server, as well as licensing requirements. Installation will be performed by staff.

Project		Prior	2012	Beyond	Total
Number	Description				
9110300	Virtual Server	0.0	0.0	27.6	27.6

9110500 Windows Server Operating System

The majority of the servers that provide the foundation of the computing system at LRW currently run on Microsoft Operating Systems that are seven (7) years old. The latest version, Server 2008 R2, offers numerous security enhancements. This project will include the cost of licensing and media to install the software by staff.

Project		Prior	2012	Beyond	Total
Number	Description				
9110500	Windows Client Operating System	4.9	8.4	0.0	13.3

9110600 Upgrade the Air Supply and Exhaust – Engine Generator Building

This project will involve the installation of high cfm make-up air fans and exhaust fans in the Generator Building’s vertical walls and roof. This system needs to be installed to control the ambient temperatures within the Generator Building to keep the new Jenbacher Generator from having unscheduled trips and preventing any damage to the unit during the high temperatures of the summer months. It will also help all other switchgear and electrical components within the Generator Building by extending the life by reducing the ambient temperatures.

Project		Prior	2012	Beyond	Total
Number	Description				
9110600	Upgrade the Air Supply and Exhaust – Engine Generator Bldg.	8.3	26.3	0.00	34.6

9111000 Add Two (2) New Dishwasher Racks

The laboratory needs two (2) additional dish machine racks for specialized large containers and glassware. The racks will be used for the large sample containers, dilution containers, graduated cylinders, and storage carboys.

Project		Prior	2012	Beyond	Total
Number	Description				
9111000	Add (2) New Dishwasher Racks	0.0	12.6	0.0	12.6

9111100 Remodel Existing Laboratory Space

The existing laboratory is over 25 years old and needs to be remodeled. The Laboratory's metal cabinets have corroded beyond repair. The floor tiles, ceiling grid/tiles, air conditioner vents are in poor condition with obvious signs of corrosion. The workflow is constrained due to additional work areas added in the past in ad hoc fashion as space became available. The proposed remodel would include replacement of the existing laboratory cabinet/casework, removal of some walls to open up the floor space and high traffic areas, replacement of floor tiles with a pour in place urethane-based no wax, skid proof cover, replacement of the ceiling tiles and grid system, replacement of three (3) existing fume hoods and the addition of one new fume hood for improved worker productivity and safety.

Project		Prior	2012	Beyond	Total
Number	Description				
9111100	Laboratory Remodel	100.0	1,255.0	0.0	1,355.0

9111200 MAS500 Financial Software

In July 2012 Sage Products will no longer support LRW's financial software Platinum for Windows. MAS500 is being offered to all PFW users at no cost for the software modules. The estimated cost of \$78,200 in 2012 is to convert historical financial data and implementation, and conversion to MAS500.

Project		Prior	2012	Beyond	Total
Number	Description				
9111200	MAS500 Financial Software	8.5	78.2	0.0	86.7

9120100 Replace E0621 Hydra-Pack Unit

The existing 1998 RGC Hydra-pack unit needs to be replaced. This unit operates the jackhammer and chipping hammer for the manhole adjustment crew. This is another asset that was not added to the capital budget plan when it was purchased. We would like to replace it with an air compressor unit that will be mounted in the bed of the service truck just as the hydra-pack unit was. The air unit provides better pressure and is not affected by the higher temperatures in summer as the hydraulic unit was.

Project		Prior	2012	Beyond	Total
Number	Description				
9120100	Replace E0621 Hydra-Pack Unit	0.0	14.0	0.0	14.0

9120200 Replace Trailer Mounted Air Compressor

The existing 1986 Ingersoll Rand trailer mounted air compressor needs to be replaced; these units were never added to the capital budget account after they were purchased. We added them to the ten year capital plan last year hoping they would last until replacement time but E0043 simply cannot be maintained.

Project		Prior	2012	Beyond	Total
Number	Description				
9120200	Replace Trailer Mounted Air Compressor	0.0	15.0	0.0	15.0

9120300 Replace Muffle Furnace

The existing muffle furnace is 14 years old and needs to be replaced. Additional screws have been drilled into the unit to hold the door frame together. The motion of opening and closing the doors on a daily basis has stripped the screw holes on the lower portion of the unit causing the handle to slip and the unit to not close consistently. This unit is used to volatilize process control samples for activated sludge process and sludge digestion process.

Project

Number	Description	Prior	2012	Beyond	Total
9120300	Replace Muffle Furnace	0.0	9.5	0.0	9.5

9120400 Replace One A/C Unit at AFWTF Administration Building

Currently there are 5 existing HVAC Split System Units at the Administration Building. These units continually need maintenance and repairs throughout each year. This item will anticipate the replacement of one unit.

Project

Number	Description	Prior	2012	Beyond	Total
9120400	Replace One A/C Unit at AFWTF	0.0	7.4	0.0	7.4

Little Rock Wastewater 5-yr Capital Strategic Plan Projects 2012-2016

DESCRIPTION	2012	2013	2014	2015	2016	5-yr Total
COLLECTION SYSTEM/OMP						
PROJECTS/CONTRACT SEWER REHAB	\$3,943,442	\$13,545,458	\$20,999,517	\$33,535,571	\$18,183,413	\$90,607,401
NEW MAINS/ RELOCATIONS/ RELAYS/ DEVELOPER FUNDED						
CANTRELL ROAD PUMP STATION	\$679,380	\$890,586	\$2,367,895	\$2,486,290	\$2,625,190	\$9,049,341
CANTRELL ROAD FORCE MAIN	0	\$426,497	\$3,773,898	\$3,750,333	0	\$7,950,728
CANTRELL ROAD AREA IN-LINE STORAGE	0	\$175,745	\$1,496,465	\$1,488,896	0	\$3,161,106
PEAK FLOW PS - ADDITIONAL PUMP	0	0	0	0	\$897,323	\$897,323
JAMISON PUMP STATION UPGRADE	0	0	\$71,413	\$1,132,282	0	\$1,203,695
LITTLE MAUMELLE TREATMENT PLANT	\$40,000	0	0	0	\$122,204	\$122,204
FOURCHE CREEK TP HYDRAULIC UPGRADES (Sage V Digester Improvements & Boilers)						
FOURCHE CREEK TP DIGESTER #3 REPAIR	\$1,140,000	\$1,210,000	0	0	0	\$2,350,000
ADAMS FIELD & MABELVALE PIKE STORAGE	\$3,000,000	0	0	0	0	\$3,000,000
ROCK CREEK IN-LINE STORAGE	0	\$1,113,097	\$2,220,730	\$18,566,948	\$37,044,283	\$88,945,058
FOURCHE CREEK TP PHASE III - REHAB	0	\$602,240	\$5,270,365	\$6,336,917	\$767,728	\$12,977,250
OTHER PUMPING / TREATMENT FACILITIES	\$176,650	\$182,149	\$578,813	\$405,169	\$443,660	\$1,786,441
TRANSPORTATION/GENERAL PLANT						
TOTALS	\$11,171,760	\$21,058,466	\$38,572,984	\$70,232,552	\$73,619,395	\$214,655,157

