

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the of Missouri-American Water)	
Company for a Certificate of Convenience)	
and Necessity Authorizing it to Install,)	Case No.: SA-2015-0150
Own, Acquire, Construct, Operate,)	Tariff No. YS-2015-0319
Control, Manage and Maintain a Sewer)	
System in and around the City of Arnold, MO.)	

STAFF RECOMMENDATION TO APPROVE TARIFF

COMES NOW the Staff of the Missouri Public Service Commission (“Staff”), by and through counsel, and hereby files its recommendation regarding tariff sheet PSC MO No. 21, Original Sheet Nos. 1 through 42, submitted in the above- referenced case by Missouri-American Water Company (“MAWC”). In support of this recommendation, Staff respectfully states:

1. On April 30, 2015, MAWC filed a complete new tariff to comply with the Commission’s *Order*, with the assigned tracking number YS-2015-0319 and an effective date of May 30, 2015. MAWC further filed a *Motion for Expedited Treatment*, in which it requested approval on less than thirty (30) days’ notice, with a proposed effective date of May 22, 2015.

2. On April 30, 2015, the Commission issued an *Order Directing Staff to File a Recommendation and Setting Deadline for Responses*, in which it directed Staff to review the new tariff sheet and file a recommendation on whether the tariff sheet is in compliance with the Commission’s *Order*.

3. In compliance with the Commission’s *Order*, Staff has examined MAWC’s filed tariff sheets. James A. Merciel, Jr., Utility Regulatory Engineering Supervisor in the Water & Sewer Unit of the Missouri Public Service Commission, participated in the review of this tariff filing and states that, to the best of his knowledge, information, and

belief, the tariff sheets comply with the terms of the *Order* in this case. The Affidavit of James A. Merciel, Jr. is attached and incorporated by reference.

4. Staff would like to bring to the Commission's attention a matter pointed out by MAWC when it filed this tariff. Included in the proposed tariff, on Sheet No. 7, MAWC included a charge, termed a "Capacity Fee," of \$1,500. This charge was not studied by Staff in the preparation of its recommendation that was filed on April 1, 2015. The reason it was not studied is that the concept of this fee did not surface until very late in the investigative phase of this CCN case, through no fault of Staff, MAWC, or Arnold. After further review of information provided by MAWC regarding this "Capacity Fee," Staff takes the position that the proposed fee is reasonable. A memorandum from Staff is attached here as Appendix A, and incorporated by reference.

WHEREFORE, Staff submits this recommendation to the Commission stating that the tariff sheet filed in this case and pending in Tracking No. YS-2015-0319 complies with the terms of the Commission's *Order*.

Respectfully submitted,

/s/ Cydney D. Mayfield

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Attorney for Staff of the
Missouri Public Service Commission

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was served, either electronically or by First Class United States Mail, postage prepaid, on this **11th day of May, 2015**, to the parties of record as set out on the official Service List maintained by the Data Center of the Missouri Public Service Commission for this case, a copy of which is attached hereto and incorporated herein by reference.

/s/ Cydney D. Mayfield

MEMORANDUM

TO: Missouri Public Service Commission Official Case File
Case No. SA-2015-0150
Missouri-American Water Company

FROM: Jim Merciel – Water and Sewer Unit

SUBJECT: Staff’s Recommendation to Approve Tariff -- YS-2015-0319

DATE: May 11, 2015

On April 14, 2015, the Commission issued its *Order Approving Application for a Certificate of Convenience and Necessity* (Order), for Missouri-American Water Company (MAWC) to provide sewer service in its proposed Arnold Service Area. On April 30, the company filed a new tariff to comply with the Commission’s Order, along with a Motion for Expedited Treatment.

On April 30, 2015, the Commission issued an *Order Directing Staff to File a Response*, in which it ordered Staff to file a pleading by May 11, 2015, stating whether or not the tariff sheets as filed comply with the Commission’s Order.

Staff has reviewed the tariff, and believes the tariff does comply with the Order.

However, included in the proposed tariff, on Sheet No. 7, MAWC included a charge, termed a “Capacity Fee,” of \$1,500. This charge was not studied by Staff in the preparation of its recommendation that was filed on April 1, 2015. The reason it was not studied is that the concept of invoking this fee did not surface until very late in the investigative phase of this CCN case, through no fault of Staff, MAWC, or Arnold. It was simply the timing of how the details of the transaction developed, along with the availability of information.

Staff takes the position that the proposed Capacity Fee is reasonable.

As the investigation was processed, Staff was provided a series of workpapers, which is actually a financial document entitled “City of Arnold Sewer Cost of Service Model” that was prepared for the City of Arnold, dated in 2009. A copy of this workpaper document is included as Attachment A and incorporated herein by reference. On Schedule 17 on Page 27, this document purports to justify a charge of \$2,393 per “EDU” which Staff interprets to mean customer equivalent, a residential customer being one customer equivalent, or one EDU. Staff also saw notes from an Arnold City Council meeting in 2007 where the City raised the fee to \$2,500. The previous amount is unknown to Staff.

APPENDIX A

In addition to this document, Staff has studied the wholesale sewage treatment contract that the City of Arnold entered into with the Metropolitan St. Louis Sewer District (MSD) in 2008, entitled “Sewerage System Agreement” (Agreement), and of which MAWC is a successor party. A copy of this Agreement is included with this memorandum as Attachment B and incorporated herein by reference. As a part of the Agreement, MAWC appears to be obligated to the payment of some \$43 million dollars for construction of MSD’s Lower Meramec Waste Water Treatment Facility, and related upgrades, to which the Arnold Sewer System is connected for sewage treatment processing. Although Staff has not thoroughly studied the contract, the payments, and the timing of payment obligations, a cursory review leads Staff to believe that a Capacity Fee of \$1,500 as proposed by MAWC, or perhaps an amount that could be substantially higher, would be reasonable in order to finance a sewage treatment facility.

Staff, therefore, recommends the Commission approve the tariff as filed by MAWC, with expedited treatment as requested, and to include the Capacity Fee as included within the proposed tariff.

List of Attachments:

Attachment A – City of Arnold Sewer Cost of Service Model

Attachment B – Sewerage System Agreement (MSD – Arnold Wholesale Contract)



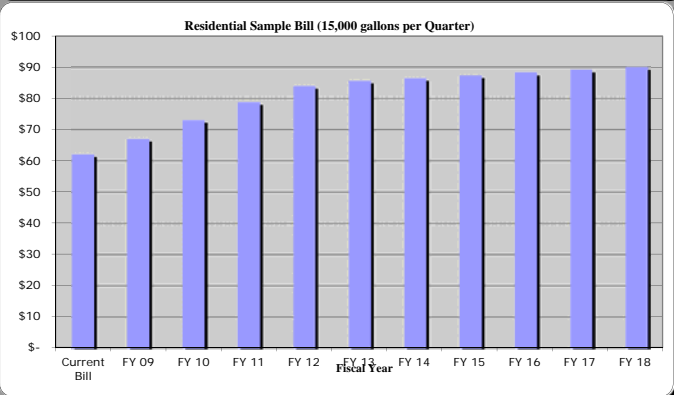
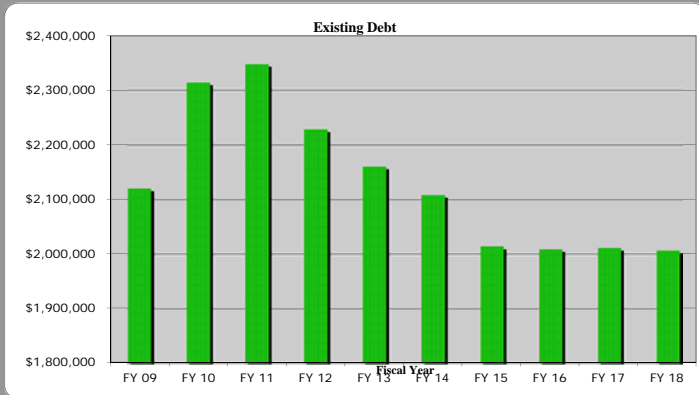
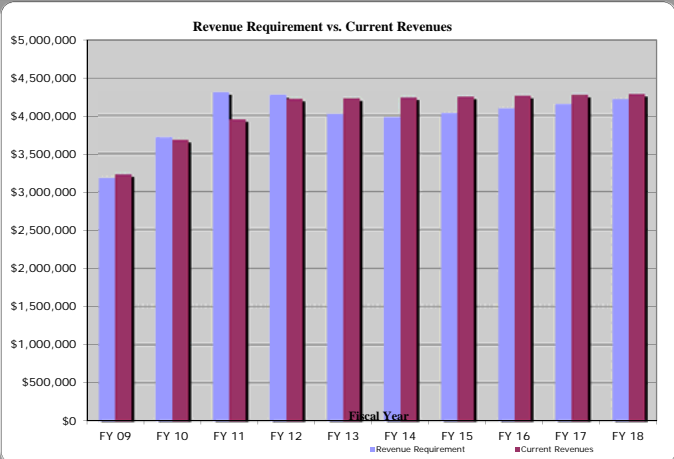
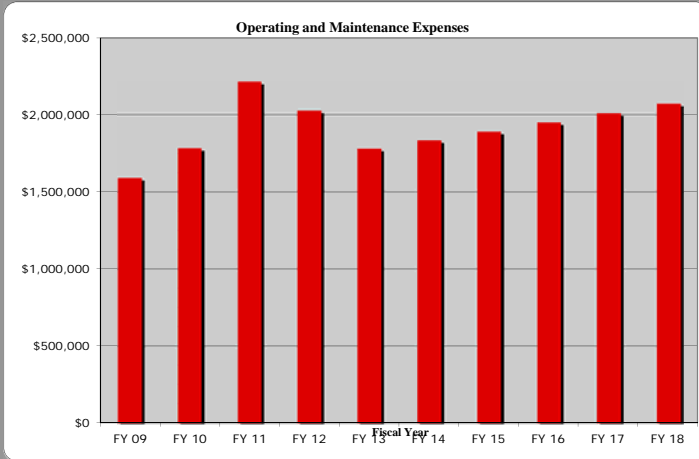
City of Arnold Sewer Cost of Service Model
Developed by: Municipal & Financial Services Group, LLC
Last Update: 11/21/2009
By: DGL

MODEL INDEX

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City of Arnold, Sewer Rate Study

	Source	Base Year	Fiscal Year									
		FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Inflation Rate	Industry Estimate	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Estimated Consumption (Gallons per Day - 1 EDU)	Industry Standard	300	300	300	300	300	300	300	300	300	300	300
Customer Growth Rate	Historical	2.00%	0.25%	0.58%	0.49%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%
Production Growth Rate	Historical	2.00%	0.25%	0.58%	0.49%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%
	Source	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Interest Rate on Borrowings	Estimate	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Debt Admin Cost (% of debt)	Industry Standard	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Debt Maturity	City Standard	20	20	20	20	20	20	20	20	20	20	20
Interest Earned on Investments		5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Annual % Increase in Rates (from Rate Projections)												
Sewer Rate Increases			20%	9.0%	8%	7%	2%	1%	1%	1%	1%	1%



City of Arnold, Sewer Rate Study

SCHEDULE 2 - OPERATING AND MAINTENANCE EXPENSES

Code	Description	FY 05 Actual	FY 06 Actual	FY 07 Actual	FY 08 Actual	FY 09 Actual	FY 10 Budget	FY 11 Forecast	FY 12 Forecast	FY 13 Forecast	FY 14 Forecast	FY 15 Forecast	FY 16 Forecast	FY 17 Forecast	FY 18 Forecast
Personnel Services															
41501	Salaries & Wages	210,042	258,716	246,754	285,680	305,165	301,460	319,402	328,984	338,854	349,019	359,490	370,274	381,383	392,824
41505	Overtime	7,321	15,122	14,545	18,282	12,670	10,000	18,000	18,540	19,096	19,669	20,259	20,867	21,493	22,138
42110	FICA	16,420	20,773	18,420	23,022	23,981	23,827	25,811	26,585	27,383	28,204	29,051	29,922	30,820	31,744
42130	Pension-LAGERS	32,499	45,115	45,870	47,471	48,134	48,588	56,009	57,689	59,420	61,203	63,039	64,930	66,878	68,884
42210	Health & Life Insurance	42,899	56,132	52,106	70,088	77,814	79,006	73,962	76,181	78,466	80,820	83,245	85,742	88,314	90,964
42220	Short Term Disability	469	1,030	920	1,095	1,140	1,445	1,531	1,577	1,624	1,673	1,723	1,775	1,828	1,883
43270	Temporary Personnel	12,317	6,698	13,889	302	-	-	-	-	-	-	-	-	-	-
	Personnel Services Subtotal	321,967	403,586	392,504	445,942	468,905	464,326	494,715	509,556	524,843	540,588	556,806	573,510	590,716	608,437
Supplies															
45110	General Operating Supplies	45,008	67,810	63,815	112,470	88,628	85,000	90,000	92,700	95,481	98,345	101,296	104,335	107,465	110,689
45210	Printing	1,888	2,123	1,387	761	2,858	4,000	4,000	4,120	4,244	4,371	4,502	4,637	4,776	4,919
45220	Postage	5,679	5,890	2,626	6,551	7,868	8,000	8,000	8,240	8,487	8,742	9,004	9,274	9,552	9,839
45250	Expendable Equipment	-	6,485	6,216	9,150	2,336	3,500	11,000	11,330	11,670	12,020	12,381	12,752	13,135	13,529
45310	Gas & Oil	2,371	2,861	2,596	4,884	3,450	5,000	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149
	Supplies Subtotal	54,946	85,169	76,640	133,815	105,140	105,500	118,000	121,540	125,186	128,942	132,810	136,794	140,898	145,125
Contractual Services															
43110	Legal	-	-	-	-	-	5,500	500	515	530	546	563	580	597	615
43120	Engineering	-	-	-	-	2,979	100,000	300,000	300,000	-	-	-	-	-	-
43130	Financial	-	-	-	14,832	14,708	-	-	-	-	-	-	-	-	-
43133	Bank Analysis Charges	-	-	-	-	2,980	8,000	8,000	8,240	8,487	8,742	9,004	9,274	9,552	9,839
43135	Credit Card Fees	-	-	-	-	1,297	-	-	-	-	-	-	-	-	-
43240	Data Processing	-	-	-	-	1,309	200	6,300	6,489	6,684	6,884	7,091	7,303	7,523	7,748
43250	MSD Treatment	198,219	184,680	213,551	626,391	603,696	563,261	582,919	601,864	621,424	641,621	662,473	684,004	706,234	729,186
43260	Grass Mowing	1,400	3,620	1,450	-	-	1,500	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230
43285	Administration Costs	132,000	138,000	138,000	138,081	138,000	138,000	138,000	138,000	142,140	146,404	150,796	155,320	159,980	164,779
43290	Miscellaneous	132,000	-	-	50	-	250	5,000	5,000	5,150	5,305	5,464	5,628	5,796	5,970
44110	Travel & Lodging	859	859	347	514	671	1,100	1,200	1,236	1,273	1,311	1,351	1,391	1,433	1,476
44130	Mileage	295	338	368	317	577	600	700	721	743	765	788	811	836	861
44140	Seminars	50	1,030	110	190	-	300	600	618	637	656	675	696	716	738
44150	Memberships	104	-	157	110	113	200	200	206	212	219	225	232	239	246
44160	Education	-	85	198	198	198	50	-	-	-	-	-	-	-	-
45010	Advertising	161	642	713	978	213	200	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230
45090	Equipment Rental	2,827	1,398	1,604	1,076	2,254	1,600	3,000	3,090	3,183	3,278	3,377	3,478	3,582	3,690
45150	Uniforms	2,102	2,704	2,729	4,489	3,576	3,500	4,500	4,635	4,774	4,917	5,065	5,217	5,373	5,534
45320	Vehicle Maintenance	8,031	13,839	10,740	15,352	11,391	9,000	15,000	15,450	15,914	16,391	16,883	17,389	17,911	18,448
46110	Telephone	1,280	1,552	1,321	1,022	-	-	-	-	-	-	-	-	-	-
46130	Long Distance	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46140	Cellular Phone	2,462	3,074	2,688	3,185	3,189	3,000	4,000	4,120	4,244	4,371	4,502	4,637	4,776	4,919
46150	Pagers	61	121	74	69	71	100	100	103	106	109	113	116	119	123
46210	Electric	47,877	51,404	95,046	35,602	22,230	23,000	25,000	25,750	26,523	27,318	28,138	28,982	29,851	30,747
46220	Gas	197	225	87	393	274	300	500	515	530	546	563	580	597	615
46230	Water	2,345	2,249	1,619	1,484	1,186	1,700	2,000	2,060	2,122	2,185	2,251	2,319	2,388	2,460
46420	Equipment Maintenance	10,367	-	8,024	5,360	8,718	6,500	12,000	12,360	12,731	13,113	13,506	13,911	14,329	14,758
46480	Contract Sewer Repairs	55,642	77,903	92,130	118,732	55,706	175,000	190,000	195,700	201,571	207,618	213,847	220,262	226,870	233,676
	Water Shut-Off Fees	-	-	-	-	-	100	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
46530	Sewer Backup Insurance Deductible	13,476	22,316	9,976	45,777	81,572	3,000	65,000	66,950	68,959	71,027	73,158	75,353	77,613	79,942
	Contractual Services Subtotal	611,755	506,039	580,932	1,067,316	1,008,298	1,045,961	1,367,519	1,396,682	1,131,057	1,166,512	1,203,081	1,240,800	1,279,704	1,319,831
Capital Outlay															
	Land and Buildings	-	35,000	-	-	6,333	156,000	94,268	-	-	-	-	-	-	-
	Office Equipment	-	-	-	-	3,734	-	-	-	-	-	-	-	-	-
	Automotive Equipment	-	230,000	-	-	-	12,000	97,000	-	-	-	-	-	-	-
	Machinery & Equipment	472,214	114,500	-	-	-	-	43,000	-	-	-	-	-	-	-
	Capital Outlay Subtotal	472,214	379,500	-	-	10,067	168,000	234,268	-	-	-	-	-	-	-
Total Operation and Maintenance Expenses		1,460,882	1,374,294	1,050,076	1,647,073	1,592,410	1,783,787	2,214,502	2,027,778	1,781,086	1,836,042	1,892,698	1,951,105	2,011,318	2,073,393
	O&M System Reinvestment	55,642	77,903	92,130	118,732	55,706	175,000	190,000	195,700	201,571	207,618	213,847	220,262	226,870	233,676

City of Arnold, Sewer Rate Study

SCHEDULE 2A - MSD Treatment Costs

	Growth Percentage									
	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Growth	0.25%	0.58%	0.49%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%
Operating	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%

	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Increase due to Growth							2,760	1,457	1,505	1,554	1,604	1,656	1,710	1,766
Increase due to General Inflation							16,898	17,488	18,056	18,643	19,249	19,874	20,520	21,187
Increase due to Capital Additions						-	-	-	-	-	-	-	-	-
MSD Treatment	198,219	184,680	213,551	626,391	603,696	563,261	582,919	601,864	621,424	641,621	662,473	684,004	706,234	729,186

City of Arnold, Sewer Rate Study

SCHEDULE 2C - Rock Creek Expenses

		FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Total Sewer O&M Expenses		\$ 1,592,410	\$ 1,783,787	\$ 2,214,502	\$ 2,027,778	\$ 1,781,086	\$ 1,836,042	\$ 1,892,698	\$ 1,951,105	\$ 2,011,318	\$ 2,073,393
	Reduction Percentage										
Salaries & Wages	10%	\$ 30,517	\$ 30,146	\$ 31,940	\$ 32,898	\$ 33,885	\$ 34,902	\$ 35,949	\$ 37,027	\$ 38,138	\$ 39,282
Printing	100%	\$ 2,858	\$ 4,000	\$ 4,000	\$ 4,120	\$ 4,244	\$ 4,371	\$ 4,502	\$ 4,637	\$ 4,776	\$ 4,919
Postage	100%	\$ 7,868	\$ 8,000	\$ 8,000	\$ 8,240	\$ 8,487	\$ 8,742	\$ 9,004	\$ 9,274	\$ 9,552	\$ 9,839
Data Processing	100%	\$ 1,309	\$ 200	\$ 6,300	\$ 6,489	\$ 6,684	\$ 6,884	\$ 7,091	\$ 7,303	\$ 7,523	\$ 7,748
Grass Mowing	100%	\$ -	\$ 1,500	\$ 1,000	\$ 1,030	\$ 1,061	\$ 1,093	\$ 1,126	\$ 1,159	\$ 1,194	\$ 1,230
Administrative Costs	80%	\$ 110,400	\$ 110,400	\$ 110,400	\$ 110,400	\$ 113,712	\$ 117,123	\$ 120,637	\$ 124,256	\$ 127,984	\$ 131,823
Equipment Rental	100%	\$ 2,254	\$ 1,600	\$ 3,000	\$ 3,090	\$ 3,183	\$ 3,278	\$ 3,377	\$ 3,478	\$ 3,582	\$ 3,690
Contractual Sewer Repair	25%	\$ 13,926	\$ 43,750	\$ 47,500	\$ 48,925	\$ 50,393	\$ 51,905	\$ 53,462	\$ 55,066	\$ 56,717	\$ 58,419
Sewer Back-up Insurance Deductible	100%	\$ 81,572	\$ 3,000	\$ 65,000	\$ 66,950	\$ 68,959	\$ 71,027	\$ 73,158	\$ 75,353	\$ 77,613	\$ 79,942
TOTAL		\$ 250,704	\$ 202,596	\$ 277,140	\$ 282,142	\$ 290,607	\$ 299,325	\$ 308,305	\$ 317,554	\$ 327,080	\$ 336,893
Total O&M Expenses Applicable to All Customers		\$ 1,341,706	\$ 1,581,191	\$ 1,937,362	\$ 1,745,636	\$ 1,490,479	\$ 1,536,717	\$ 1,584,393	\$ 1,633,551	\$ 1,684,237	\$ 1,736,500
Expenses Not Applicable to Rock Creek Customers		\$ 250,704	\$ 202,596	\$ 277,140	\$ 282,142	\$ 290,607	\$ 299,325	\$ 308,305	\$ 317,554	\$ 327,080	\$ 336,893
Rock Creek Discount:		15.74%	11.36%	12.51%	13.91%	16.32%	16.30%	16.29%	16.28%	16.26%	16.25%

City of Arnold, Sewer Rate Study

SCHEDULE 3 - EXISTING DEBT SERVICE

Debt Issue		Outstanding Principal	FY 08 Actual	FY 09 Actual	FY 10 Budget	FY 11 Forecast	FY 12 Forecast	FY 13 Forecast	FY 14 Forecast	FY 15 Forecast	FY 16 Forecast	FY 17 Forecast	FY 18 Forecast
Meramec WWTP Construction Costs	Principal	\$ 16,721,443	282,891	391,755	409,076	427,163	446,050	465,772	486,366	507,871	530,326	553,774	578,259
Meramec WWTP Construction Costs	Interest & Admin Fee	\$ 10,791,029	661,662	589,565	691,423	673,336	654,449	634,727	614,133	592,628	570,173	546,724	522,239
Infrastructure Facilities Revenue Bonds	Principal	\$ 2,475,000	-	80,000	85,000	85,000	90,000	95,000	95,000	100,000	105,000	110,000	115,000
Infrastructure Facilities Revenue Bonds	Interest & Admin Fee	\$ 1,547,802	54,363	116,386	111,536	153,328	106,733	103,078	99,231	95,208	90,928	86,386	81,547
Series 2005 Bonds	Principal	\$ 5,885,000	210,833	216,667	225,833	231,667	242,500	256,667	266,667	276,667	287,500	301,667	312,500
Series 2005 Bonds	Interest & Admin Fee	\$ 3,416,729	277,357	270,487	312,580	304,388	244,924	233,224	222,957	212,291	201,224	189,662	176,637
Series 2006 Bonds	Principal	\$ 2,742,167	125,000	125,833	130,000	130,000	130,000	130,833	135,000	135,000	135,833	140,833	145,833
Series 2006 Bonds	Interest & Admin Fee	\$ 1,520,458	139,352	124,305	142,430	137,739	110,446	105,517	100,284	94,659	88,111	82,274	74,880
Series 1992A/1993A Bonds	Principal	\$ 529,000	64,250	67,333	71,333	75,333	79,333	83,417	88,000	-	-	-	-
Series 1992A/1993A Bonds	Interest	\$ 91,823	22,570	21,445	19,530	16,170	7,856	3,411	841	-	-	-	-
Series 1992A SRF Revenue Bonds	Principal	\$ 513,433	82,917	87,917	92,917	97,917	105,833	45,933	-	-	-	-	-
Series 1992A SRF Revenue Bonds	Interest	\$ 118,287	35,798	28,890	22,634	16,548	10,921	3,496	-	-	-	-	-
Meramec WWTP Disinfection Constr Costs	Principal												
Meramec WWTP Disinfection Constr Costs	Interest & Admin Fee												
Total Principal		\$ 28,866,043	\$ 765,891	\$ 969,505	\$ 1,014,159	\$ 1,047,080	\$ 1,093,717	\$ 1,077,622	\$ 1,071,033	\$ 1,019,538	\$ 1,058,660	\$ 1,106,274	\$ 1,151,593
Total Interest		\$ 17,486,127	\$ 1,191,102	\$ 1,151,078	\$ 1,300,133	\$ 1,301,509	\$ 1,135,329	\$ 1,083,452	\$ 1,037,445	\$ 994,786	\$ 950,436	\$ 905,045	\$ 855,303
Total Existing Debt		\$ 46,352,170	\$ 1,956,993	\$ 2,120,583	\$ 2,314,292	\$ 2,348,589	\$ 2,229,046	\$ 2,161,075	\$ 2,108,478	\$ 2,014,323	\$ 2,009,096	\$ 2,011,320	\$ 2,006,896

SEWER		Percent Non-Growth	FY 08 Actual	FY 09 Actual	FY 10 Budget	FY 11 Forecast	FY 12 Forecast	FY 13 Forecast	FY 14 Forecast	FY 15 Forecast	FY 16 Forecast	FY 17 Forecast	FY 18 Forecast
<u>Amount Non-Growth</u>													
Meramec WWTP Construction Costs	Principal	100%	282,891	391,755	409,076	427,163	446,050	465,772	486,366	507,871	530,326	553,774	578,259
Meramec WWTP Construction Costs	Interest & Admin Fee	100%	661,662	589,565	691,423	673,336	654,449	634,727	614,133	592,628	570,173	546,724	522,239
Infrastructure Facilities Revenue Bonds	Principal	100%	-	80,000	85,000	85,000	90,000	95,000	95,000	100,000	105,000	110,000	115,000
Infrastructure Facilities Revenue Bonds	Interest & Admin Fee	100%	54,363	116,386	111,536	153,328	106,733	103,078	99,231	95,208	90,928	86,386	81,547
Series 2005 Bonds	Principal	100%	210,833	216,667	225,833	231,667	242,500	256,667	266,667	276,667	287,500	301,667	312,500
Series 2005 Bonds	Interest & Admin Fee	100%	277,357	270,487	312,580	304,388	244,924	233,224	222,957	212,291	201,224	189,662	176,637
Series 2006 Bonds	Principal	100%	125,000	125,833	130,000	130,000	130,000	130,833	135,000	135,000	135,833	140,833	145,833
Series 2006 Bonds	Interest & Admin Fee	100%	139,352	124,305	142,430	137,739	110,446	105,517	100,284	94,659	88,111	82,274	74,880
Series 1992A/1993A Bonds	Principal	100%	64,250	67,333	71,333	75,333	79,333	83,417	88,000	-	-	-	-
Series 1992A/1993A Bonds	Interest	100%	22,570	21,445	19,530	16,170	7,856	3,411	841	-	-	-	-
Series 1992A SRF Revenue Bonds	Principal	100%	82,917	87,917	92,917	97,917	105,833	45,933	-	-	-	-	-
Series 1992A SRF Revenue Bonds	Interest	100%	35,798	28,890	22,634	16,548	10,921	3,496	-	-	-	-	-
Meramec WWTP Disinfection Constr Costs	Principal	100%	-	-	-	-	-	-	-	-	-	-	-
Meramec WWTP Disinfection Constr Costs	Interest & Admin Fee	100%	-	-	-	-	-	-	-	-	-	-	-
		100%	-	-	-	-	-	-	-	-	-	-	-
		100%	-	-	-	-	-	-	-	-	-	-	-
		100%	-	-	-	-	-	-	-	-	-	-	-
		100%	-	-	-	-	-	-	-	-	-	-	-
Total Non-Growth			\$ 1,956,993	\$ 2,120,583	\$ 2,314,292	\$ 2,348,589	\$ 2,229,046	\$ 2,161,075	\$ 2,108,478	\$ 2,014,323	\$ 2,009,096	\$ 2,011,320	\$ 2,006,896
Total Principal Non-Growth			\$ 765,891	\$ 969,505	\$ 1,014,159	\$ 1,047,080	\$ 1,093,717	\$ 1,077,622	\$ 1,071,033	\$ 1,019,538	\$ 1,058,660	\$ 1,106,274	\$ 1,151,593
Total Interest & Admin Fee Non-Growth			\$ 1,191,102	\$ 1,151,078	\$ 1,300,133	\$ 1,301,509	\$ 1,135,329	\$ 1,083,452	\$ 1,037,445	\$ 994,786	\$ 950,436	\$ 905,045	\$ 855,303

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Model Update Instructions: There are 8 extra places for new capital projects. Please adjust each of the allocation parameters for each new project.

SCHEDULE 4 - CAPITAL IMPROVEMENT PROJECTS

Project	Code	Allocation (%)		Non-Growth Funding Source		Growth Funding Source		FY 09 Projected	FY 10 Projected	FY 11 Projected	FY 12 Projected	FY 13 Projected	FY 14 Projected	FY 15 Projected	FY 16 Projected	FY 17 Projected	FY 18 Projected	FY 19 Projected
		Non Growth:	Growth:	Cash:	Bond:	Cash:	Bond:											
Sewer																		
MSD Treatment Plant - Phase II	Above	100%	0%	100%	0%	100%	0%					67,971	120,568	214,723	219,950	217,726	222,150	222,641
		100%	0%	100%	0%	100%	0%											
		100%	0%	100%	0%	100%	0%											
		100%	0%	100%	0%	100%	0%											
		100%	0%	100%	0%	100%	0%											
		100%	0%	100%	0%	100%	0%											
		100%	0%	100%	0%	100%	0%											
		100%	0%	100%	0%	100%	0%											
		100%	0%	100%	0%	100%	0%											
Total Sewer Capital Improvements								-	-	-	-	67,971	120,568	214,723	219,950	217,726	222,150	222,641
Capital Projects by Type																		
Buried Assets	Buried							-	-	-	-	-	-	-	-	-	-	-
Above Ground Assets	Above							-	-	-	-	67,971	120,568	214,723	219,950	217,726	222,150	222,641
Total								-	-	-	-	67,971	120,568	214,723	219,950	217,726	222,150	222,641

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SCHEDULE 5A - NON-GROWTH - CASH FUNDED CIP

Project	Code	FY 09 Projected	FY 10 Projected	FY 11 Projected	FY 12 Projected	FY 13 Projected	FY 14 Projected	FY 15 Projected	FY 16 Projected	FY 17 Projected	FY 18 Projected
MSD Treatment Plant - Phase II	Above	-	-	-	-	67,971	120,568	214,723	219,950	217,726	222,150
	0 0	-	-	-	-	-	-	-	-	-	-
	0 0	-	-	-	-	-	-	-	-	-	-
	0 0	-	-	-	-	-	-	-	-	-	-
	0 0	-	-	-	-	-	-	-	-	-	-
	0 0	-	-	-	-	-	-	-	-	-	-
	0 0	-	-	-	-	-	-	-	-	-	-
	0 0	-	-	-	-	-	-	-	-	-	-
	0 0	-	-	-	-	-	-	-	-	-	-
Total Non-Growth Cash Funded Sewer Capital Projects		-	-	-	-	67,971	120,568	214,723	219,950	217,726	222,150
Capital Projects by Type											
Buried Assets	Buried	-	-	-	-	-	-	-	-	-	-
Above Ground Assets	Above	-	-	-	-	67,971	120,568	214,723	219,950	217,726	222,150
Total		-	-	-	-	67,971	120,568	214,723	219,950	217,726	222,150

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No update necessary - automatic updates based upon the changes made on Schedule 4.

SCHEDULE 5B - NON-GROWTH - BOND FUNDED CIP

Project	Code	FY 09 Projected	FY 10 Projected	FY 11 Projected	FY 12 Projected	FY 13 Projected	FY 14 Projected	FY 15 Projected	FY 16 Projected	FY 17 Projected	FY 18 Projected	FY 19 Projected
MSD Treatment Plant - Phase II	Above	-	-	-	-	-	-	-	-	-	-	-
	0 0	-	-	-	-	-	-	-	-	-	-	-
	0 0	-	-	-	-	-	-	-	-	-	-	-
	0 0	-	-	-	-	-	-	-	-	-	-	-
	0 0	-	-	-	-	-	-	-	-	-	-	-
	0 0	-	-	-	-	-	-	-	-	-	-	-
	0 0	-	-	-	-	-	-	-	-	-	-	-
	0 0	-	-	-	-	-	-	-	-	-	-	-
	0 0	-	-	-	-	-	-	-	-	-	-	-
Total Non-Growth Bond Funded Sewer Capital Projects		-	-	-	-	-	-	-	-	-	-	-
Capital Projects by Type												
Buried Assets	Buried	-	-	-	-	-	-	-	-	-	-	-
Above Ground Assets	Above	-	-	-	-	-	-	-	-	-	-	-
Total		-	-	-	-	-	-	-	-	-	-	-

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No update necessary - automatic updates based upon the changes made on Schedule 4.

SCHEDULE 5C - GROWTH - CASH FUNDED CIP

Project	Code	FY 09 Projected	FY 10 Projected	FY 11 Projected	FY 12 Projected	FY 13 Projected	FY 14 Projected	FY 15 Projected	FY 16 Projected	FY 17 Projected	FY 18 Projected	FY 19 Projected
MSD Treatment Plant - Phase II	Above	-	-	-	-	-	-	-	-	-	-	-
	0	0	-	-	-	-	-	-	-	-	-	-
	0	0	-	-	-	-	-	-	-	-	-	-
	0	0	-	-	-	-	-	-	-	-	-	-
	0	0	-	-	-	-	-	-	-	-	-	-
	0	0	-	-	-	-	-	-	-	-	-	-
	0	0	-	-	-	-	-	-	-	-	-	-
	0	0	-	-	-	-	-	-	-	-	-	-
Total Growth Cash Funded Sewer Capital Projects		-	-	-	-	-	-	-	-	-	-	-

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No update necessary - automatic updates based upon the changes made on Schedule 4.

SCHEDULE 5D - GROWTH - BOND FUNDED CIP

Project	Code	FY 09 Projected	FY 10 Projected	FY 11 Projected	FY 12 Projected	FY 13 Projected	FY 14 Projected	FY 15 Projected	FY 16 Projected	FY 17 Projected	FY 18 Projected	FY 19 Projected	FY 20 Projected	FY 21 Projected	FY 22 Projected	FY 23 Projected	FY 24 Projected	FY 25 Projected	FY 26 Projected	FY 27 Projected	FY 28 Projected	FY 29 Projected	FY 30 Projected	FY 31 Projected	FY 32 Projected	FY 09-32 Total
MSD Treatment Plant - Phase II	Above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Growth Bond Funded Sewer Capital Projects		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Capital Projects by Type																										
Buried Assets	Buried	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Above Ground Assets	Above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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No update necessary - changes to administrative costs, interest rate, and period should be made on the control panel unless you would like to change the parameters of a solitary bond issue.

SCHEDULE 6 - PROJECTED DEBT SERVICE

Non-Growth	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	Total
Non-Growth Debt	-	-	-	-	-	-	-	-	-	-	-
Sewer Debt Subtotal	-	-	-	-	-	-	-	-	-	-	-
Administrative Costs (% of debt service)	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
Administrative Costs Subtotal	-	-	-	-	-	-	-	-	-	-	
Total Debt	-	-	-	-	-	-	-	-	-	-	
Debt Service Financing Terms											
Interest Rate	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
Period (years)	20	20	20	20	20	20	20	20	20	20	
Annual Debt Service Payment	-	-	-	-	-	-	-	-	-	-	
Debt Service Payment Schedule											
	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	
Projected Debt Serv. - FY 09	-	-	-	-	-	-	-	-	-	-	
Projected Debt Serv. - FY 10	-	-	-	-	-	-	-	-	-	-	
Projected Debt Serv. - FY 11	-	-	-	-	-	-	-	-	-	-	
Projected Debt Serv. - FY 12	-	-	-	-	-	-	-	-	-	-	
Projected Debt Serv. - FY 13	-	-	-	-	-	-	-	-	-	-	
Projected Debt Serv. - FY 14	-	-	-	-	-	-	-	-	-	-	
Projected Debt Serv. - FY 15	-	-	-	-	-	-	-	-	-	-	
Projected Debt Serv. - FY 16	-	-	-	-	-	-	-	-	-	-	
Projected Debt Serv. - FY 17	-	-	-	-	-	-	-	-	-	-	
Projected Debt Serv. - FY 18	-	-	-	-	-	-	-	-	-	-	
Total Projected Annual Non-Growth Debt Service	-	-	-	-	-	-	-	-	-	-	

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No update necessary.

SCHEDULE 7 - OPERATING AND MAINTENANCE RESERVE

O&M Reserve	FY 09 Forecast	FY 10 Forecast	FY 11 Forecast	FY 12 Forecast	FY 13 Forecast	FY 14 Forecast	FY 15 Forecast	FY 16 Forecast	FY 17 Forecast	FY 18 Forecast
Operating and Maintenance Expenses	1,592,410	1,783,787	2,214,502	2,027,778	1,781,086	1,836,042	1,892,698	1,951,105	2,011,318	2,073,393
Target Balance (90 days operating)	392,649	439,838	546,042	500,000	439,172	452,723	466,693	481,094	495,941	511,248
Previous Year Cash Flow Surplus (Deficit)		43,784	(33,442)	(357,237)	(50,677)	291,291	390,493	388,674	385,788	381,791
Beginning Year O&M Cash Balance*	439,943	483,727	450,285	188,805	238,127	629,418	1,019,912	1,408,585	1,794,373	2,176,164
Sewer O&M Reserve Contribution	\$ -	\$ -	\$ 95,756	\$ 100,000	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -

*Assumes full funding of reserve in first year

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SCHEDULE 8A - ASSET DATA

Replacement Cost Index			
Material	Size	Lookup Value	Unit Replacement Cost
Clay	12	Clay12	\$56
Clay	10	Clay10	\$53
Clay	12	Clay12	\$56
Clay	6	Clay6	\$46
Clay	8	Clay8	\$46
Concrete	10	Concrete10	\$60
Concrete	12	Concrete12	\$79
Concrete	15	Concrete15	\$91
Concrete	18	Concrete18	\$118
Concrete	21	Concrete21	\$127
Concrete	24	Concrete24	\$143
Concrete	27	Concrete27	\$167
PVC	36	PVC36	\$262
PVC	8	PVC8	\$46

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SCHEDULE 8B - REPLACEMENT TABLE

Sum of Total Cost	Material			Grand Total	Replacement Running Total
Replacement Year	Clay	Concrete	PVC		
2016	\$ 126,853.11			\$ 126,853.11	\$ 126,853.11
2017	\$ 755,545.11			\$ 755,545.11	\$ 882,398.21
2018	\$ 3,616,518.83			\$ 3,616,518.83	\$ 4,498,917.04
2019	\$ 34,089.55			\$ 34,089.55	\$ 4,533,006.60
2020	\$ 2,945,026.96			\$ 2,945,026.96	\$ 7,478,033.56
2022	\$ 671,737.18			\$ 671,737.18	\$ 8,149,770.74
2024	\$ 47,219.30			\$ 47,219.30	\$ 8,196,990.05
2028	\$ 245,550.81			\$ 245,550.81	\$ 8,442,540.86
2029	\$ 68,293.32			\$ 68,293.32	\$ 8,510,834.19
2030	\$ 2,467,313.81			\$ 2,467,313.81	\$ 10,978,148.00
2032	\$ 177,805.32			\$ 177,805.32	\$ 11,155,953.32
2037	\$ 966,597.15			\$ 966,597.15	\$ 12,122,550.46
2038	\$ 145,843.74			\$ 145,843.74	\$ 12,268,394.20
2040	\$ 3,129,209.06			\$ 3,129,209.06	\$ 15,397,603.26
2056		\$ 1,505,714.48		\$ 1,505,714.48	\$ 16,903,317.74
2058		\$ 1,906,506.59	\$ 618,869.45	\$ 2,525,376.03	\$ 19,428,693.77
2060		\$ 3,026,772.24	\$ 21,386.43	\$ 3,048,158.67	\$ 22,476,852.44
2064			\$ 143,569.79	\$ 143,569.79	\$ 22,620,422.23
2066			\$ 451,967.44	\$ 451,967.44	\$ 23,072,389.67
2067			\$ 645,564.07	\$ 645,564.07	\$ 23,717,953.75
2068			\$ 971,841.62	\$ 971,841.62	\$ 24,689,795.36
2069			\$ 39,580.73	\$ 39,580.73	\$ 24,729,376.10
2070			\$ 683,070.56	\$ 683,070.56	\$ 25,412,446.66
2071			\$ 147,567.41	\$ 147,567.41	\$ 25,560,014.07
2072			\$ 874,578.19	\$ 874,578.19	\$ 26,434,592.27
2073			\$ 278,547.87	\$ 278,547.87	\$ 26,713,140.13
2074			\$ 282,470.16	\$ 282,470.16	\$ 26,995,610.29
2075			\$ 157,283.93	\$ 157,283.93	\$ 27,152,894.23
2076			\$ 1,384,663.03	\$ 1,384,663.03	\$ 28,537,557.26
2077			\$ 115,433.13	\$ 115,433.13	\$ 28,652,990.39
2078			\$ 879,469.62	\$ 879,469.62	\$ 29,532,460.01
2080			\$ 356,125.62	\$ 356,125.62	\$ 29,888,585.62
2084			\$ 379,413.18	\$ 379,413.18	\$ 30,267,998.81
2085			\$ 77,710.31	\$ 77,710.31	\$ 30,345,709.12
2086			\$ 404,094.23	\$ 404,094.23	\$ 30,749,803.35
2087			\$ 1,585,174.09	\$ 1,585,174.09	\$ 32,334,977.44
2088			\$ 50,835.17	\$ 50,835.17	\$ 32,385,812.60
Grand Total	\$ 15,397,603.26	\$ 6,438,993.30	\$ 10,549,216.05	\$ 32,385,812.60	

SCHEDULE 8C - REPAIR, RENEWAL AND REPLACEMENT RESERVE (3R RESERVE) - Buried Assets

Required Annual Reinvestment

Current Year	2009
Annual Inflation Rate	3%
Total Cost of Replacement in Arrears (2008 Dollars)	\$ -
Number of Years to Pay Off	20
Annual Cost for 20 Year Payoff	\$ -

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Future Annual Replacement Cost (2008 Dollars)	\$ -	\$ -	-	-	-	-	-	-	\$ 126,853	\$ 755,545	\$ 3,616,519
Remaining Cost of Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Required Annual Reinvestment	-	-	-	-	-	-	-	-	126,853	755,545	3,616,519
O&M Planned Reinvestment - Buried Assets	118,732	55,706	175,000	190,000	195,700	201,571	207,618	213,847	220,262	226,870	233,676
CIP Planned Reinvestment - Buried Assets	-	-	-	-	-	-	-	-	-	-	-
Total Planned Reinvestment - Buried Assets	118,732	55,706	175,000	190,000	195,700	201,571	207,618	213,847	220,262	226,870	233,676
Planned Annual Reinvestment less Required Annual Reinvestment	118,732	55,706	175,000	190,000	195,700	201,571	207,618	213,847	93,409	(528,675)	(3,382,843)
Recommended 3R Investment	223,631	223,631	223,631	223,631	223,631	223,631	223,631	223,631	223,631	223,631	223,631
3R Cumulative Cash Balance	223,631	447,261	670,892	894,522	1,118,153	1,341,783	1,565,414	1,789,044	2,012,675	2,236,305	2,459,936
Fund 3R Reserve	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Actual 3R Investment	-	-	-	-	223,631	223,631	223,631	223,631	223,631	223,631	223,631

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Model Update Instructions: Each year the miscellaneous revenues should be update to relfect actual results and new budget numbers. The miscellaneous revenues for future years will update automatically based upon the new budget and the assumed inflation rate for each line item.

SCHEDULE 9 - MISCELLANEOUS REVENUES

Account Description	FY05 Actual	FY06 Actual	FY07 Actual	FY 08 Actual	FY 09 Actual	FY 10 Budget	FY 11 Forecast	FY 12 Forecast	FY 13 Forecast	FY 14 Forecast	FY 15 Forecast	FY 16 Forecast	FY 17 Forecast	FY 18 Forecast
Penalties-Sewer Service	14,424	23,607	44,877	43,185	41,329	55,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Returned Check Fees	(75)	394	225	400	146	300	300	300	300	300	300	300	300	300
MIRMA Grant						7,177	-	-						
Water Shut-Off Fees	-	-	-	-	-	-	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Collection Fees						28,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Total Miscellaneous Revenue	14,349	24,001	45,102	43,585	41,474	90,477	73,300	73,300	73,300	73,300	73,300	73,300	73,300	73,300

City of Arnold, Sewer Rate Study

SCHEDULE 11 - INVESTMENTS

	FY 09 Actual	FY 10 Forecast	FY 11 Forecast	FY 12 Forecast	FY 13 Forecast	FY 14 Forecast	FY 15 Forecast	FY 16 Forecast	FY 17 Forecast	FY 18 Forecast
Interest Rate	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Investments		\$ 3,885,566	\$ 3,885,566	\$ 3,885,566	\$ 3,885,566	\$ 3,885,566	\$ 3,885,566	\$ 3,885,566	\$ 3,885,566	\$ 3,885,566
Total Investments*	-	3,885,566	3,885,566	3,885,566	3,885,566	3,885,566	3,885,566	3,885,566	3,885,566	3,885,566
Interest Income	\$ 376,617	\$ 194,278	\$ 194,278	\$ 194,278	\$ 194,278	\$ 194,278	\$ 194,278	\$ 194,278	\$ 194,278	\$ 194,278

City of Arnold, Sewer Rate Study

SCHEDULE 12 - REVENUE REQUIREMENT

	FY 09 Actual	FY 10 Forecast	FY 11 Forecast	FY 12 Forecast	FY 13 Forecast	FY 14 Forecast	FY 15 Forecast	FY 16 Forecast	FY 17 Forecast	FY 18 Forecast
Operating Costs										
Operating Expenses	1,592,410	1,783,787	2,214,502	2,027,778	1,781,086	1,836,042	1,892,698	1,951,105	2,011,318	2,073,393
Operating Reserve Contribution	-	-	95,756	100,000	100,000	-	-	-	-	-
Operating Expenses Subtotal	1,592,410	1,783,787	2,310,258	2,127,778	1,881,086	1,836,042	1,892,698	1,951,105	2,011,318	2,073,393
Capital Costs										
Non-Growth Existing Debt Service	2,120,583	2,314,292	2,348,589	2,229,046	2,161,075	2,108,478	2,014,323	2,009,096	2,011,320	2,006,896
Non-Growth Cash Funded Capital Projects	-	-	-	-	67,971	120,568	214,723	219,950	217,726	222,150
Non-Growth Projected Debt Service	-	-	-	-	-	-	-	-	-	-
3R Reserve Contribution	-	-	-	223,631	223,631	223,631	223,631	223,631	223,631	223,631
Capital Expenses Subtotal	2,120,583	2,314,292	2,348,589	2,452,677	2,452,677	2,452,677	2,452,677	2,452,677	2,452,677	2,452,677
Total Revenue Requirement	3,712,993	4,098,079	4,658,847	4,580,455	4,333,763	4,288,719	4,345,374	4,403,781	4,463,994	4,526,069
Miscellaneous Other Revenues (including interest income)	418,091	284,755	267,578	267,578	267,578	267,578	267,578	267,578	267,578	267,578
Connection Fee Revenues	110,000	94,882	81,321	41,694	41,798	41,902	42,007	42,112	42,217	42,323
Net Revenue Requirement	3,184,901	3,718,442	4,309,947	4,271,183	4,024,386	3,979,238	4,035,789	4,094,091	4,154,199	4,216,168
Current Revenues	3,228,685	3,685,000	3,952,710	4,220,505	4,231,056	4,241,634	4,252,238	4,262,869	4,273,526	4,284,210
Surplus / (Shortfall)	43,784	(33,442)	(357,237)	(50,677)	206,670	262,396	216,450	168,778	119,327	68,042
Cumulative Surplus / (Shortfall)	43,784	10,342	(346,895)	(397,572)	(190,902)	71,494	287,944	456,722	576,049	644,090

City of Arnold, Sewer Rate Study

SCHEDULE 13 - WASTEWATER USER RATES

	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	
Net Required Revenue		\$ 3,184,901	\$ 3,718,442	\$ 4,309,947	\$ 4,271,183	\$ 4,024,386	\$ 3,979,238	\$ 4,035,789	\$ 4,094,091	\$ 4,154,199	\$ 4,216,168	
Customer Accounts												
Arnold Residential	6,203	6,219	6,254	6,285	6,301	6,316	6,332	6,348	6,364	6,380	6,396	
Arnold Multi-Family	1,775	1,779	1,790	1,798	1,803	1,807	1,812	1,816	1,821	1,826	1,830	
Arnold Other Sewer District	14	14	14	14	14	14	14	14	14	14	14	
Arnold Commerical	340	382	384	386	387	388	389	390	391	392	393	
Rock Creek	482	482	483	486	488	490	491	492	493	494	496	
Total Accounts	8,814	8,876	8,925	8,970	8,993	9,016	9,038	9,061	9,083	9,106	9,129	
Assumed Minimum Multi-Family Usage per Unit	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	
Customer Usage (Gallons)												
Residential Total Usage	504,703,175	505,964,933	508,874,231	511,367,715	512,646,134	513,927,750	515,212,569	516,500,600	517,791,852	519,086,331	520,384,047	
Residential Average Quarterly Usage	99,270,826	99,519,003	100,091,237	100,581,684	100,833,138	101,085,221	101,337,934	101,591,279	101,845,257	102,099,870	102,355,120	
Residential Average Winter Quarterly Usage 6,000 gallons and under	41,434,966	41,538,553	41,777,400	41,982,109	42,087,064	42,192,282	42,297,763	42,403,507	42,509,516	42,615,790	42,722,329	
Residential Average Winter Quarterly Usage over 6,000 gallons	57,835,860	57,980,450	58,313,837	58,599,575	58,746,074	58,892,939	59,040,172	59,187,772	59,335,741	59,484,081	59,632,791	
Residential Average Winter Quarterly Usage 15,000 gallons and under	77,319,586	35,974,332	36,181,184	36,358,472	36,449,368	36,540,491	36,631,843	36,723,422	36,815,231	36,907,269	36,999,537	
Residential Average Winter Quarterly Usage over 15,000 gallons	21,951,240	22,006,118	22,132,653	22,241,103	22,296,706	22,352,448	22,408,329	22,464,350	22,520,511	22,576,812	22,633,254	
Commerical Total Usage	176,001,000	178,780,000	179,807,985	180,689,044	181,140,767	181,593,619	182,047,603	182,502,722	182,958,979	183,416,376	183,874,917	
Commercial Average Quarterly Usage	34,669,800	34,756,475	34,956,324	35,127,610	35,215,429	35,303,468	35,391,726	35,480,206	35,568,906	35,657,829	35,746,973	
Commercial Usage over 6,000 gallons per month	160,082,800	160,483,087	161,405,865	162,196,754	162,602,246	163,008,751	163,416,273	163,824,814	164,234,376	164,644,962	165,056,574	
Commercial Usage under 6,000 gallons per quarter	36,772,020	36,863,950	37,075,918	37,257,590	37,350,734	37,444,111	37,537,721	37,631,565	37,725,644	37,819,958	37,914,508	
Commercial Usage over 6,000 gallons per quarter	68,485,860	68,657,075	69,051,853	69,390,207	69,563,682	69,737,592	69,911,936	70,086,715	70,261,932	70,437,587	70,613,681	
Commerical Usage under 15,000 gallons per quarter	29,040,165	29,498,700	29,668,318	29,813,692	29,888,227	29,962,947	30,037,854	30,112,949	30,188,231	30,263,702	30,339,361	
Commercial Usage over 15,000 gallons per quarter	146,960,835	149,281,300	150,139,667	150,875,352	151,252,540	151,630,672	152,009,748	152,389,773	152,770,747	153,152,674	153,535,556	
Rock Creek Total Usage	30,438,805	30,514,902	30,690,363	30,840,746	30,917,847	30,995,142	31,072,630	31,150,311	31,228,187	31,306,258	31,384,523	
Rock Creek Average Quarterly Usage	5,987,054	6,002,022	6,036,534	6,066,113	6,081,278	6,096,481	6,111,722	6,127,002	6,142,319	6,157,675	6,173,069	
Rock Creek Average Winter Quarterly Usage 6,000 gallons and under	41.74%	2,498,956	2,505,203	2,519,954	2,531,954	2,538,284	2,544,630	2,550,991	2,557,369	2,563,762	2,570,171	
Rock Creek Average Winter Quarterly Usage over 6,000 gallons	58.26%	3,488,099	3,496,819	3,516,926	3,534,159	3,542,994	3,551,851	3,560,731	3,569,633	3,578,557	3,587,503	
Rock Creek Average Winter Quarterly Usage 15,000 gallons and under	77.89%	4,663,168	4,674,826	4,701,706	4,724,745	4,736,557	4,748,398	4,760,269	4,772,170	4,784,100	4,796,060	
Rock Creek Average Winter Quarterly Usage over 15,000 gallons	22.11%	1,323,886	1,327,196	1,334,827	1,341,368	1,344,721	1,348,083	1,351,453	1,354,832	1,358,219	1,361,615	
Total Usage	711,142,980	715,259,835	719,372,579	722,897,505	724,704,748	726,516,510	728,332,802	730,153,634	731,979,018	733,808,965	735,643,488	
	<i>check</i>	<i>711,142,980</i>	<i>715,259,835</i>	<i>719,372,579</i>	<i>722,897,505</i>	<i>724,704,748</i>	<i>726,516,510</i>	<i>728,332,802</i>	<i>730,153,634</i>	<i>731,979,018</i>	<i>733,808,965</i>	
RESIDENTIAL WINTER QUARTER BILLING, COMMERCIAL ALL USAGE BILLED (15,000 gallons in Fixed Charge)	Allocation	Allocation	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
USER-DEFINED												
Arnold				9.00%	8.0%	6.5%	2.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Quarterly Fixed Charge	\$	\$ 67.02	\$ 73.05	\$ 78.90	\$ 84.02	\$ 85.70	\$ 86.56	\$ 87.43	\$ 88.30	\$ 89.18	\$ 90.08	
Unit Charge	\$	\$ 3.98	\$ 4.34	\$ 4.69	\$ 4.99	\$ 5.09	\$ 5.14	\$ 5.19	\$ 5.24	\$ 5.30	\$ 5.35	
Rock Creek				9.00%	8.0%	6.5%	2.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Quarterly Fixed Charge	\$	\$ 55.63	\$ 62.09	\$ 67.06	\$ 71.42	\$ 72.85	\$ 73.58	\$ 74.31	\$ 75.06	\$ 75.81	\$ 76.56	
Unit Charge	\$	\$ 3.30	\$ 3.69	\$ 3.98	\$ 4.24	\$ 4.33	\$ 4.37	\$ 4.41	\$ 4.46	\$ 4.50	\$ 4.55	
Collected Revenue from Fund Balance	\$	\$ 3,228,685	\$ 3,685,000	\$ 3,952,710	\$ 4,220,505	\$ 4,315,678	\$ 4,369,731	\$ 4,424,462	\$ 4,479,879	\$ 4,535,989	\$ 4,592,802	
Required Revenue	\$	\$ 3,184,901	\$ 3,718,442	\$ 4,309,947	\$ 4,271,183	\$ 4,024,386	\$ 3,979,238	\$ 4,035,789	\$ 4,094,091	\$ 4,154,199	\$ 4,216,168	
Annual Surplus (Deficit)	\$	\$ 43,784	\$ (33,442)	\$ (57,237)	\$ (50,677)	\$ 291,291	\$ 390,493	\$ 388,674	\$ 385,788	\$ 381,791	\$ 376,634	
Cummulative Surplus/Deficit	\$	\$ 43,784	\$ 10,342	\$ (46,895)	\$ (97,572)	\$ 193,719	\$ 584,212	\$ 972,886	\$ 1,358,674	\$ 1,740,465	\$ 2,117,099	
	from Fund Balance		225,000									
	I&I Study		100,000	300,000								

Usage

City of Arnold, Sewer Rate Study

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SCHEDULE 14B - BILL SUMMARY

Residential Bill Comparison		Quarterly Sewer Bill												
		Current	Alternative A			Alternative B			Alternative C			Alternative D		
Quarterly Usage	Current	Bill	%	\$	Bill	%	\$	Bill	%	\$	Bill	%	\$	
Small User	4,000	\$ 62	75	20%	\$ 13	38	-39%	\$ (24)	51	-17%	\$ (11)	67.02	7.9%	\$ 4.9
Small User	6,000	\$ 62	75	20%	\$ 13	48	-24%	\$ (15)	58	-7%	\$ (4)	67.02	7.9%	\$ 4.9
Small User	8,000	\$ 62	75	20%	\$ 13	57	-8%	\$ (5)	65	4%	\$ 2	67.02	7.9%	\$ 4.9
Average User	12,000	\$ 62	75	20%	\$ 13	76	22%	\$ 14	78	25%	\$ 16	67.02	7.9%	\$ 4.9
Average User	14,000	\$ 62	75	20%	\$ 13	86	38%	\$ 23	85	36%	\$ 22	67.02	7.9%	\$ 4.9
Average User	16,000	\$ 62	75	20%	\$ 13	95	53%	\$ 33	91	47%	\$ 29	71.00	14.3%	\$ 8.9
High User	20,000	\$ 62	75	20%	\$ 13	114	84%	\$ 52	104	68%	\$ 42	86.92	39.9%	\$ 24.8
High User	30,000	\$ 62	75	20%	\$ 13	162	160%	\$ 100	138	121%	\$ 75	126.72	104.0%	\$ 64.6
High User	40,000	\$ 62	75	20%	\$ 13	209	237%	\$ 147	171	175%	\$ 109	166.52	168.0%	\$ 104.4

Top Users		Quarterly Sewer Bill												
		Current	Alternative A			Alternative B			Alternative C			Alternative D		
Actual Average Quarterly Usage	Current	Bill	%	\$	Bill	%	\$	Bill	%	\$	Bill	%	\$	
1	20,858,250	\$ 71,961	\$ 86,641	20%	\$ 14,680	\$ 103,164	43%	\$ 31,203	\$ 72,046	0%	\$ 85	\$ 83,023	15.4%	\$ 11,062
2	1,169,253	\$ 4,034	\$ 4,857	20%	\$ 823	\$ 5,802	44%	\$ 1,768	\$ 4,076	1%	\$ 42	\$ 4,661	15.5%	\$ 627
3	543,000	\$ 1,873	\$ 2,256	20%	\$ 382	\$ 2,705	44%	\$ 832	\$ 1,914	2%	\$ 41	\$ 2,168	15.8%	\$ 295
4	376,000	\$ 1,297	\$ 1,562	20%	\$ 265	\$ 1,879	45%	\$ 582	\$ 1,338	3%	\$ 40	\$ 1,504	15.9%	\$ 207
5	373,000	\$ 1,287	\$ 1,549	20%	\$ 263	\$ 1,864	45%	\$ 577	\$ 1,327	3%	\$ 40	\$ 1,492	15.9%	\$ 205
6	324,500	\$ 1,120	\$ 1,348	20%	\$ 228	\$ 1,624	45%	\$ 505	\$ 1,160	4%	\$ 40	\$ 1,299	16.0%	\$ 179
7	310,750	\$ 1,072	\$ 1,291	20%	\$ 219	\$ 1,556	45%	\$ 484	\$ 1,112	4%	\$ 40	\$ 1,244	16.0%	\$ 172
8	276,000	\$ 952	\$ 1,146	20%	\$ 194	\$ 1,385	45%	\$ 432	\$ 992	4%	\$ 40	\$ 1,106	16.1%	\$ 154
9	258,750	\$ 893	\$ 1,075	20%	\$ 182	\$ 1,299	46%	\$ 407	\$ 933	4%	\$ 40	\$ 1,037	16.2%	\$ 144
10	258,250	\$ 891	\$ 1,073	20%	\$ 182	\$ 1,297	46%	\$ 406	\$ 931	4%	\$ 40	\$ 1,035	16.2%	\$ 144
11	210,250	\$ 725	\$ 873	20%	\$ 148	\$ 1,059	46%	\$ 334	\$ 765	6%	\$ 40	\$ 844	16%	\$ 119
12	179,500	\$ 619	\$ 746	20%	\$ 126	\$ 907	47%	\$ 288	\$ 659	6%	\$ 40	\$ 722	17%	\$ 102
13	162,500	\$ 561	\$ 675	20%	\$ 114	\$ 823	47%	\$ 263	\$ 601	7%	\$ 40	\$ 654	17%	\$ 93
14	147,750	\$ 510	\$ 614	20%	\$ 104	\$ 750	47%	\$ 241	\$ 550	8%	\$ 40	\$ 595	17%	\$ 86
15	146,750	\$ 506	\$ 610	20%	\$ 103	\$ 745	47%	\$ 239	\$ 546	8%	\$ 40	\$ 591	17%	\$ 85
16	142,000	\$ 490	\$ 590	20%	\$ 100	\$ 722	47%	\$ 232	\$ 530	8%	\$ 40	\$ 572	17%	\$ 83
17	141,500	\$ 488	\$ 588	20%	\$ 100	\$ 719	47%	\$ 231	\$ 528	8%	\$ 40	\$ 570	17%	\$ 82
18	135,250	\$ 467	\$ 562	20%	\$ 95	\$ 689	48%	\$ 222	\$ 506	9%	\$ 40	\$ 546	17%	\$ 79
19	92,250	\$ 318	\$ 383	20%	\$ 65	\$ 476	50%	\$ 158	\$ 358	12%	\$ 40	\$ 374	18%	\$ 56
20	85,000	\$ 293	\$ 353	20%	\$ 60	\$ 440	50%	\$ 147	\$ 333	14%	\$ 40	\$ 346	18%	\$ 52
21	74,750	\$ 258	\$ 311	20%	\$ 53	\$ 389	51%	\$ 131	\$ 298	15%	\$ 40	\$ 305	18%	\$ 47
22	71,750	\$ 248	\$ 298	20%	\$ 51	\$ 375	51%	\$ 127	\$ 287	16%	\$ 40	\$ 293	18%	\$ 45
23	55,000	\$ 190	\$ 228	20%	\$ 39	\$ 292	54%	\$ 102	\$ 229	21%	\$ 40	\$ 226	19%	\$ 36
24	46,250	\$ 160	\$ 192	20%	\$ 33	\$ 248	56%	\$ 89	\$ 199	25%	\$ 40	\$ 191	20%	\$ 32
25	38,750	\$ 134	\$ 161	20%	\$ 27	\$ 211	58%	\$ 78	\$ 173	30%	\$ 40	\$ 162	21%	\$ 28
26	19,250	\$ 66	\$ 80	20%	\$ 14	\$ 115	73%	\$ 49	\$ 106	60%	\$ 40	\$ 84	26%	\$ 17
27	18,750	\$ 65	\$ 78	20%	\$ 13	\$ 112	74%	\$ 48	\$ 104	61%	\$ 40	\$ 82	27%	\$ 17
28	16,500	\$ 62	\$ 75	20%	\$ 13	\$ 101	63%	\$ 39	\$ 97	55%	\$ 34	\$ 73	17%	\$ 11
29	13,750	\$ 62	\$ 75	20%	\$ 13	\$ 88	41%	\$ 26	\$ 87	40%	\$ 25	\$ 67	8%	\$ 5

Alternative Descriptions

- Alternative A Current Rate Structure
- Alternative B Quarterly Fixed Charge plus Consumption Charge based on Winter Quarter
- Alternative C Quarterly Fixed Charge plus Consumption Charge based on Winter Quarter for Residential, Commercial billed for all Consumption
- Alternative D Alternative C with 15,000 gallons included in Fixed Charge

City of Arnold, Sewer Rate Study

SCHEDULE 15 - OPERATING CASH FLOW PROJECTIONS

	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Revenues:										
Usage Charges (User Defined Rates)	\$ 3,228,685	\$ 3,685,000	\$ 3,952,710	\$ 4,220,505	\$ 4,315,678	\$ 4,369,731	\$ 4,424,462	\$ 4,479,879	\$ 4,535,989	\$ 4,592,802
Misc. Other Revenues	\$ 528,091	\$ 379,638	\$ 348,899	\$ 309,272	\$ 309,376	\$ 309,481	\$ 309,585	\$ 309,690	\$ 309,796	\$ 309,901
Total Revenues	\$ 3,756,776	\$ 4,064,638	\$ 4,301,610	\$ 4,529,777	\$ 4,625,054	\$ 4,679,212	\$ 4,734,048	\$ 4,789,569	\$ 4,845,785	\$ 4,902,704
Expenses:										
Total Operating Expenses	\$ 1,592,410	\$ 1,783,787	\$ 2,214,502	\$ 2,027,778	\$ 1,781,086	\$ 1,836,042	\$ 1,892,698	\$ 1,951,105	\$ 2,011,318	\$ 2,073,393
Existing Debt Service	\$ 2,120,583	\$ 2,314,292	\$ 2,348,589	\$ 2,229,046	\$ 2,161,075	\$ 2,108,478	\$ 2,014,323	\$ 2,009,096	\$ 2,011,320	\$ 2,006,896
Projected Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Cash Funded Capital Projects	\$ -	\$ -	\$ -	\$ -	\$ 67,971	\$ 120,568	\$ 214,723	\$ 219,950	\$ 217,726	\$ 222,150
Operating Reserve Contribution	\$ -	\$ -	\$ 95,756	\$ 100,000	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -
3R Reserve Contribution	\$ -	\$ -	\$ -	\$ 223,631	\$ 223,631	\$ 223,631	\$ 223,631	\$ 223,631	\$ 223,631	\$ 223,631
Total Expenses	\$ 3,712,993	\$ 4,098,079	\$ 4,658,847	\$ 4,580,455	\$ 4,333,763	\$ 4,288,719	\$ 4,345,374	\$ 4,403,781	\$ 4,463,994	\$ 4,526,069
Annual Net Surplus / (Deficit)	\$ 43,784	\$ (33,442)	\$ (357,237)	\$ (50,677)	\$ 291,291	\$ 390,493	\$ 388,674	\$ 385,788	\$ 381,791	\$ 376,634
Cumulative Surplus / (Deficit)	\$ 43,784	\$ 10,342	\$ (346,895)	\$ (397,572)	\$ (106,281)	\$ 284,212	\$ 672,886	\$ 1,058,674	\$ 1,440,465	\$ 1,817,099

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SCHEDULE 16 - SURCHARGE CALCULATIONS

Annual FY 2009 Wastewater Treatment and Laboratory Expenses O&M Costs	625,926
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Item	COD ₅	BOD ₅	TSS
Percentage Allocated	25.0%	40.0%	35.0%
(1) Allocated Costs	\$156,481	\$250,370	\$219,074
Projected Annual Plant Influent (FY 2009 gallons)	715,259,835	715,259,835	715,259,835
Average Pollutant Concentration (mg/L)	600	300	300
Average Pollutant Concentration (lb/gallon)	0.0050	0.0025	0.0025
(2) Plant Influent Pollutant (pounds per year FY 2009)	3,581,090	1,790,545	1,790,545
Surcharge Unit Rate = (1) / (2) cost per pound	\$0.04	\$0.14	\$0.12
Current Rates			

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SCHEDULE 17 - SEWER CONNECTION FEE

SYSTEM CHARACTERISTICS

Current Sewer System Characteristics

Wastewater Treatment Capacity	4.5 mgd
Persons per EDU	4
Usage per person	75.0 gpd
Wastewater Return Factor	90%
Usage per EDU	270

Sewer System Net Increment Cost of Capacity Method			
	Treatment	Collection	Total
Projected Growth Capital Expenses	\$ 20,269,043	\$ 5,452,400	\$ 25,721,443
Debt Service			
Interest Rate	5.0%		
Period (years)	20		
Total Cost to be Debt Funded (Principal)	\$ 20,269,043	5,452,400	\$ 25,721,443
Admin Fees (% of principal)	5.0%	\$ 272,620	\$ 1,286,072
Debt Service:	\$ 34,155,249	\$ 5,725,020	\$ 39,880,269
Total Projected Debt Service	\$ 34,155,249	\$ 5,725,020	\$ 39,880,269
Cash Funded Capital Projects	\$ -	\$ -	\$ -
Cost of Water System Capacity	\$ 34,155,249	\$ 5,725,020	\$ 39,880,269
Capacity Added with Projects	4.5	4.5	
Total Capacity By Asset	4.5	4.5	
Unit Cost by Asset	\$ 7.59	\$ 1.27	
Sewer System Development Charge per EDU	\$ 2,049	\$ 344	\$ 2,393

City of Arnold, Sewer Rate Study

SCHEDULE 18 - CONNECTION FEE CASH FLOW

	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Annual Number of New Connections*	50	44	38	33	17	17	17	17	17	17	17
Connection Fee	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500
Sewer Connection Revenue	\$ 125,000	\$ 110,000	\$ 94,882	\$ 81,321	\$ 41,694	\$ 41,798	\$ 41,902	\$ 42,007	\$ 42,112	\$ 42,217	\$ 42,323
	\$ 125,400	\$ 111,950	95,000								

*Number of new connections based on residential single family and commercial (excludes multi-family units)

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SCHEDULE 19 - WASTEWATER FUND CASH BALANCE

	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Contribution to O&M Reserve		\$ -	\$ -	\$ 95,756	\$ 100,000	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -
O&M Reserve Withdrawal		\$ -	\$ 43,784	\$ (33,442)	\$ (357,237)	\$ (50,677)	\$ 291,291	\$ 390,493	\$ 388,674	\$ 385,788	\$ 381,791
3R Reserve Contribution		\$ -	\$ -	\$ -	\$ 223,631	\$ 223,631	\$ 223,631	\$ 223,631	\$ 223,631	\$ 223,631	\$ 223,631
Net Revenues (Expenses) in Operating		\$ 43,784	\$ (33,442)	\$ (357,237)	\$ (50,677)	\$ 291,291	\$ 390,493	\$ 388,674	\$ 385,788	\$ 381,791	\$ 376,634
Total Sewer Fund Cash Balance - End of Year	\$ 3,557,934	\$ 3,601,718	\$ 3,524,492	\$ 3,296,454	\$ 3,926,643	\$ 4,592,243	\$ 4,915,075	\$ 5,136,886	\$ 5,357,631	\$ 5,577,264	\$ 5,795,738

SEWERAGE SYSTEM AGREEMENT

THIS AGREEMENT, dated as of the 11th day of December, 2008 (regardless of when signed by the parties hereto), by and between The Metropolitan St. Louis Sewer District (herein referred to as the "District"), a body corporate and politic duly organized, and existing under the laws of the State of Missouri (herein referred to as the "State"), and the City of Arnold, Missouri, a Third Class City of the State of Missouri (herein referred to as the "Municipality"). Upon the permanent and continuous diversion of the Municipality's flow to the Project Facility this Agreement shall supercede the existing Agreement dated March 3, 1982.

WITNESSETH:

WHEREAS, pursuant to and in accordance with the provisions of Article VI, Section 30, of the Constitution of the State of Missouri, The Metropolitan St. Louis Sewer District was created and the Charter (herein referred to as the "Plan" as amended on November 7, 2000) of the District was adopted on February 9, 1954; and

WHEREAS, Section 3.020(7) of said Plan of the District empowers the District: "To contract with municipalities, districts, other public agencies, individuals, or private corporations, or any of them whether within or without the District, for the construction, use, or maintenance of common or joint sewers, drains, outlets, or disposal plants, or for the performance of any service required by the District"; and

WHEREAS, Section 3.020(8) of said Plan of the District empowers the District: "To contract with, and there under to permit municipalities, districts, other public agencies, individuals, or private corporations, or any of them whether within or without the District, to connect with and use the facilities of the District. The rates for such service and connections shall be such

as may be agreed upon between the contracting parties”; and

WHEREAS, the District, pursuant to its authorities and powers aforesaid, is the lead applicant for Federal and State water pollution control grant and loan assistance in the Lower Meramec River Basin comprising nine (9) major watersheds in St. Louis County, Missouri and four (4) major watersheds in Jefferson County, Missouri and, concomitantly therewith, has developed a regional sewerage system facility plan for the entire Lower Meramec River Basin, watershed known as the “201 Plan” and the “208 Plan”; and

WHEREAS, Section 3.020(9) of said Plan of the District empowers the District: “To enter into and perform contracts, whether long-term or short-term, with any establishment, whether within or without the District, for the provision and operation by the District of sewerage facilities to abate or reduce the pollution of waters caused by discharges of wastes by such establishment, and the payment periodically by such establishment to the District of amounts at least sufficient to compensate the District for the cost of providing (including payment of principal and interest charges, if any) and operating and maintaining the sewerage facilities serving such establishment”; and

WHEREAS, Section 3.020(10) of said Plan of the District empowers the District: “To enter into negotiations with the Federal Government and the State of Missouri and other states and political subdivisions thereof, or the agencies of any of them, and apply for and obtain from any of them, any and all assistance and grants-in-aid that may be available”; and

WHEREAS, the District is duly authorized pursuant to said Plan to undertake by contract the planning, financing, construction, maintenance, and operation of a regional system of trunk sewers and wastewater treatment plant or plants; and

WHEREAS, pursuant to Sections 70.210, 70.220, and 250.010-250.250 of the Revised Statutes of the State of Missouri, the Municipality has the power to take any and all actions

required to construct, maintain or acquire by agreement wastewater treatment or wastewater treatment systems and to pay for the same, in whole or in part, out of the revenues of the Municipality or by the collection of charges for such services; and

WHEREAS, the Municipality is authorized to pay a reasonable charge for wastewater treatment and disposal service to the District, based upon the volume discharged by the Municipality into the District's Project Facility, such charge to provide sufficient revenues for Operation and Maintenance Costs and for Capital Costs necessary to make alterations, additions, or improvements and for Local Project Costs related to that portion of the Project Facility reasonably attributable and allocable to the Municipality in accordance with generally accepted engineering principles; and

WHEREAS, the District herein agrees to obtain all governmental approvals required by law for the engineering, construction, acquisition, ownership, operation and maintenance of the Project Facility by the District;

NOW, THEREFORE, IN CONSIDERATION OF THE MUTUAL PROMISES CONTAINED HEREIN, IT IS MUTUALLY AGREED AS FOLLOWS:

I. DEFINITION OF TERMS

All terms which are defined herein shall have the same meanings for all purposes of this Agreement, as amended and supplemented, and of any instrument or document appertaining hereto (except where the context by clear implication otherwise requires).

A. Billing Period shall, mean the period for which the prior three-months of service was received.

B. BOD₅ (Biochemical Oxygen Demand) shall, mean the quantity of oxygen utilized in five (5) days in the biochemical oxidation of carbonaceous and nitrogenous compounds and

certain inorganic materials in water or wastewater as determined by Standard Methods and expressed in milligrams per liter.

C. Capital Costs shall mean the cost of capital replacements, alterations, additions and improvements related to the Project Facility, but not including Project Costs or costs related to increasing the capacity of the Project Facility and/or making improvements to provide service to Other Users.

D. Chemical Oxygen Demand (COD) shall mean the quantity of oxygen utilized in the chemical oxidation of organic and oxidizable inorganic matter in water or wastewater as determined by Standard Methods and expressed in milligrams per liter.

E. Connection Point(s) shall mean the physical point at which the Municipality's Collection System will be connected to the Project Facility, defined as the center of the structure. The Connection Point shall denote the division of the District and the Project Facility, from the Municipality and its Collection System, said Connection Point also being the point, which divides all responsibility for construction and maintenance between the parties. Actual responsibility will be determined where the collection system pipe connects to the structure as built. The Connection Point shall be located at the following sites:

1. Connection Point A: A connection point located in a tract of land conveyed to "St. Louis County" as recorded in deed book 8042, page 323, of St. Louis County records, the location of which is more particularly described as follows:

Commencing at the intersection of the East right-of-way line of a 20 foot wide private road as shown on "Appel's Subdivision On The Meramec" a subdivision recorded in plat book 12, page 113 of St. Louis County records, and the North right-of-way line of Telegraph Road; thence in a Northerly direction along said East right-of-way line a distance of 933 feet more or less to the Northwest corner of a tract of land conveyed to "St. Louis County" as recorded in deed book 8042, page 323, of St. Louis County records; thence leaving said East right-of-way, Northeasterly along the Northwesterly line of said "St. Louis County" tract a distance of 386 feet more or less to a point on said Northwesterly line; thence leaving said Northwesterly line, in a Southeasterly direction perpendicular to said Northwesterly line a distance of 214 feet more or less to the Connection Point.

2. Connection Point B: A connection point located in Lot 4 of "Anna T. Harris Subdivision" a subdivision recorded in plat book 3, page 30 of Jefferson County records, the location of which is more particularly described as follows:

Commencing at the Northwest corner of a tract of land conveyed to Glenn W. Ford as recorded in deed book 501, page 839, of Jefferson County records, said corner lying on the Easterly right-of-way line of Fannie Road (15' wide) and the Southerly line of Lot 4 of "Anna T. Harris Subdivision" a subdivision recorded in plat book 3, page 30 of Jefferson County records; thence Northwesterly along the Southerly line of said Lot 4, a distance of 15 feet more or less to the Southwest corner of said Lot 4 lying on the common right-of-way of "Burlington & Northern" Railroad (varied width) and Fannie Road (15' wide); thence Northeasterly along the West line of said Lot 4 also being the Easterly right-of-way of said "Burlington & Northern" Railroad, a distance of 239 feet more or less to a point on said West line and Easterly right-of-way; thence leaving said West line and Easterly right-of-way, in a Southeasterly direction perpendicular to said West line, a distance of 190 feet more or less to the Connection Point.

F. Design Allotted Share of Peak Flow shall mean the maximum instantaneous allowable rate of flow that may be discharged by the Municipality to the Project Facility; the maximum rate of flow from the Municipality that will be handled by the District without special or penalty charge. The peak flow of the Municipality shall not be based on the design peak flow of the Project Facility, peak flows from various areas not being additive.

G. Design Allotted Share of Average Flow shall mean the maximum annual average daily allowable flow that may be discharged by the Municipality to the Project Facility; the Municipality's annual average daily flow for which the Project Facility is designed; the maximum annual average daily flow from the Municipality that will be handled by the District, except as otherwise provided herein.

H. Design Allotted Share of BOD₅ and Total Suspended Solids (TSS) Loads shall mean the Municipality's allowable BOD₅ and Total Suspended Solids Loads that may be discharged over a period of twenty-four (24) hours based upon the average for thirty (30) consecutive days; the Municipality's share of the total design BOD₅ and Total Suspended Solids for which facilities are designed in order to meet effluent criteria; the maximum BOD₅ and Total Suspended Solids for twenty-four (24) hours average for thirty (30) consecutive days from the

Municipality that will be handled by the District without special or penalty charge except as otherwise provided herein.

I. Executive Director shall mean the Executive Director for The Metropolitan St. Louis Sewer District as provided in Section 6.010 of the Plan of the District, or his designee or other duly authorized representative.

J. Industrial Connection Sewer shall mean that portion of sewer line required to carry the sewage of any industrial or commercial establishment from the last point of sewage entry on the premises to the Municipality's Collection System or to carry the discharge from any industrial pretreatment facility to the Municipality's Collection System.

K. Industrial Waste shall mean the water-borne wastes, including contaminated cooling water, from industrial processes, as distinct from sanitary wastewater.

L. Industrial User shall mean any person who discharges into the District's wastewater system from any source regulated under Section 307(b), (c), or (d) of the Clean Water Act or from any source listed in Division A, B, C, D, E, or I of the Standard Industrial Classification Manual or from any solid waste disposal operation such as, but not limited to landfills, recycling facilities, solid or hazardous waste handling or disposal facilities, and centralized wastewater treatment facilities (CWT's).

M. Load shall mean the quantity of wastewater characteristics such as BOD₅, TSS, or other constituents.

N. Local Project Cost shall mean that part of the Project Cost that is not paid for by either State or Federal funding.

O. Management Fee shall mean a fee equal to ten percent (10%) of the Operation and Maintenance Costs plus Capital Costs paid to the District to recover administrative and general overhead costs.

P. Municipality's Collection System shall mean those facilities for the collection and transmission of wastewater owned and operated by the Municipality prior to interconnection with the Project Facility, including future additions and improvements thereto, and those facilities constructed by the Municipality in order to effect the interconnection with the Project Facility.

Q. National Pollutant Discharge Elimination System (NPDES) Permit shall mean a permit issued under the National Pollutant Discharge Elimination System pursuant to Section 402 of the Clean Water Act for a discharge into the waters of the State.

R. Normal Wastewater shall mean wastewater that, prior to any treatment, contains not more than 300 milligrams per liter of suspended solids and has a BOD₅ not greater than 300 milligrams per liter, and a COD not greater than 600 milligrams.

S. Operation and Maintenance Costs shall mean the cost of operation, maintenance and administration directly related to the Project Facility. Such costs shall include, but not limited to: personnel costs, laboratory analysis, equipment costs, materials and supplies, operating costs for buildings and plants (utilities, maintenance of grounds, etc.) and administrative and general expenditures (telephone, copier costs, office supplies, etc.) and all other costs necessary for operation and maintenance of the Project Facility.

T. Other User shall mean any person, firm, corporation, or other entity, whether municipal or otherwise, discharging sewage to the Project Facility by use of facilities other than the Municipality's Collection System.

U. Peak Flow shall mean the maximum instantaneous rate of flow that is discharged by a User to the Project Facility.

V. Person shall mean not only a natural person, corporation, or other legal entity, but also two or more natural persons, corporations, or other legal entities acting jointly as a firm,

partnership, unincorporated association, joint venture, or otherwise.

W. Pretreatment shall mean the reduction or elimination of pollutants or the alteration of the nature of pollutant properties in wastewater to a more acceptable state prior to discharge to the District's wastewater system.

X. Pretreatment Regulations or Pretreatment Standards shall mean all applicable Federal rules and regulations implementing Section 307 of the Federal Water Pollution Control Act, as well as any non-conflicting State or local standards. In cases of conflicting standards or regulations, the more stringent thereof shall be applied.

Y. Project Facility shall mean the facilities for the transmission, storage, treatment, recycling, and reclamation of industrial and domestic wastewater, to be constructed in accordance with Section III of this Agreement, and includes any device, facility, structure, equipment or works owned or used by the District, for the purpose of the transmission, storage, treatment, recycling, or reclamation of industrial and domestic wastes, or necessary to recycle or reuse water at the most economical cost over the estimated life of the system, including outfall sewers, pumping, power, and other equipment, and their appurtenances, extensions, improvements, remodeling, additions, and alterations thereof; elements essential to provide a reliable, recycled supply such, as standby treatment units and clear well facilities; and any works, including easement access rights and property acquisition, that will be an integral part of the treatment process or are used for ultimate disposal of residues resulting from such treatment as described in Attachment A..

Z. Project Cost shall mean all reasonable and necessary costs and expenses incurred by the District in designing, financing, and constructing the Project Facility, including but not limited to: costs and expenses for obtaining necessary permits, licenses, approvals and grants for design and construction; architects', contractors', and engineers' fees; the cost of labor, material,

supplies, and services actually used in design and construction; fees for legal and consulting services; land and easement acquisition costs (except as provided in Section III with respect to the acquisition of certain easements necessary for the Municipality to construct portions of its Collection System in St. Louis County); debt service; interest on bonds or other obligations issued by the District to finance the Project Cost.

AA. Sanitary Wastewater shall mean wastewater emanating from the sanitary conveniences, including toilet, bath, laundry, lavatory, and/or kitchen sink of residential and non-residential sources, as distinct from industrial waste.

BB. Service Charge shall mean the Operation and Maintenance Costs plus the Capital Costs and Management Fee.

CC. Sewage is used interchangeably with, and shall have the same meaning as, the term "Wastewater."

DD. Standard Industrial Classification Manual (SIC Manual) shall mean the latest edition of said publication by the Executive Office of the President, Office of Management and Budget.

EE. Storm Water Inflow shall mean any flow occurring during or immediately following any form of natural precipitation and resulting there from and entering the sanitary sewers of the Municipality's Collection System.

FF. Total Suspended Solids (TSS) shall mean all matter in water, wastewater, or other liquids; that is retained on a filter as determined by Standard Methods and expressed in milligrams per liter. Total Suspended Solids is also known as Nonfilterable Residue (NFR).

GG. 201 PLAN shall mean the document entitled "Final 201 Facility Plan, Lower Meramec River Basin" by The Metropolitan St. Louis Sewer District dated September, 1979, and approved by the Division of Environmental Quality of the Missouri Department of Natural Resources on February 27, 1980, together with the associated Environmental Impact Statement

(EPA-907/9-79-004) (EPA-7-MO-St. Louis, St. Louis County-WWTP-79), approved by the Environmental Protection Agency on July 11, 1979.

HH. 208 PLAN shall mean the document entitled "St. Louis, Missouri Water Quality Management Plan - Areawide Waste Treatment Management Study (208)" by the East-West Gateway Coordinating Council dated May, 1978, as approved by the Missouri Clean Water Commission on February 23, 1979, certified by the State of Missouri on May 10, 1979, and by the United States Environmental Protection Agency on December 27, 1979.

II. User shall mean any person who discharges, or causes the discharge of wastewater into the District's wastewater system or who discharges or causes the discharge of storm water or any NDPES permit regulated effluent or any other waste into the District's storm water system or any person served by the District's system.

JJ. Waste shall mean any material other than unpolluted water that is accidentally or purposely discarded into the District's system.

KK. Wastewater shall mean the water-borne wastes, industrial waste and/or sanitary wastewater as defined herein, emanating from residential and non-residential sources together with such groundwater, surface water, or storm water as cannot be avoided.

II. GENERAL PROVISIONS

A. Securing of Grants

The District and the Municipality agree that they shall cooperate in securing grants to make any necessary improvements to the Municipality's Collection System. The District shall assist the Municipality in securing any State and Federal grants for which the Municipality is eligible.

B. Ordinances

Both parties agree to enact ordinances authorizing all actions necessary and proper for the

execution of this Agreement.

C. Authorized Entry

Any duly authorized employee of the District bearing proper credentials and identification shall be permitted access to such premises within the Municipality as may be necessary for the purpose of inspection and observation, measurement, sampling and testing, in accordance with the provisions of this Agreement.

D. Enforcement of Regulations

The Municipality agrees to conform with and enforce all minimum standards, ordinances, rules, regulations and requirements of the District and all applicable State and Federal laws, rules, and regulations concerning wastewater discharges, including pretreatment regulations, standards and prohibitions, monitoring, and reporting within the Municipality's Collection System.

Wastewater emptied into the District's Project Facility from the Municipality's Collection System shall be in conformity with the current ordinances and current regulations pertaining to sewers or sewage within the District and/or in accordance with all State and Federal laws, rules, and regulations, whichever is the most restrictive. Wastewater not in conformity with such rules and regulations shall not be permitted to flow through the sewers of the Municipality into the Project Facility.

E. Amendments - Federal and State Regulations

The Municipality and the District agree to abide by any changes in this Agreement made necessary in order to comply with any revisions or amendments to State or Federal laws, rules, or regulations.

F. Successors

Subject to the terms and conditions of this Agreement, wherever the District or the

Municipality, as the case may be, is referred to herein, such provision shall be deemed to include the successors of the District or the Municipality, as the case may be, whether so expressed or not. Subject to the terms and conditions of the Agreement, all of the covenants, stipulations, obligations and agreements by or on behalf of and other provisions for the benefit of the District or the Municipality contained herein shall bind and shall inure to the benefit of such successors and shall bind and shall inure to the benefit of any officer, board, district, commission, authority, agent, or other instrumentality to whom or to which there shall be transferred by or in accordance with law any powers, duties or functions of the District or the Municipality, respectively, or of its successor, the possession of which is necessary or appropriate in order to comply with any such covenants, stipulations, obligations, agreements, or other provisions hereof.

G. Design Review

The District shall have the right to review, for informational purposes and without charge to the Municipality the designs, specifications, and criteria for additions or modifications to any portion of the Municipality's Collection System connected directly or indirectly to the Project Facility; provided, however, that nothing in this paragraph or this Agreement shall be construed as giving the District a right of approval or disapproval of such additions or modifications.

H. Plans and Specifications Relating to Industrial Wastewater Treatment

Plans, specifications, and any other pertinent information relating to treatment or pretreatment facilities, holding tanks, control and neutralization equipment or other facilities to be utilized in the treatment or control of Industrial Wastewater discharged to the Municipality's Collection System shall be submitted for review to the District and no construction of such facilities shall be commenced until said plans, specifications, and information are approved by the District, which approval shall not be unreasonably withheld if the plans, specifications, and information submitted shall comply with the published standards of the District.

I. Inspection and Testing

The Municipality shall, with respect to property owned by it or under its control, allow the District Industrial Waste Testing personnel and such personnel from the State or Federal agencies, upon the presentation of proper credentials:

- (1) To enter premises where an effluent source is located or in which any records are required to be kept under the terms of this Agreement; and
- (2) At reasonable times to have access to or copy any records required by this Agreement, State or Federal laws, or regulations to be kept by the Municipality, and
- (3) To inspect, repair or adjust any monitoring equipment or monitoring method required by the terms of this Agreement; and
- (4) To sample any User of the Collection System for pollutants and wastewater flow.

The Municipality shall, when requested under reasonable circumstances, assist District personnel in making such investigations of property and inquiry of persons discharging sewage into the Municipality's Collection System within the boundaries or jurisdiction of the Municipality.

J. Reports and Records

Persons discharging sewage to the Collection System of the Municipality shall make all reports required by Municipal ordinances, rules or regulations directly to the Municipality. The Municipality shall require within its boundaries or jurisdiction that all such reports be made to it and shall cause copies of all such reports to be sent to the District, upon request by the District.

The Municipality agrees to furnish and make available to the District any and all Municipal records, information, plans, and other data necessary for the District's establishment, operation, and maintenance of the Project Facility, and for the establishment of the sums to be paid by the Municipality to the District pursuant to Section IV of this Agreement.

The District agrees to provide an accounting of Project Costs to the Municipality as various portions of the Project Facility are scheduled and programmed, and continuing until the

Project Facility is completed. The accounting shall itemize and explain all costs to be included in the Project Cost, the basis for annual amortization, and the cost of the Municipality's attributable and allocable share thereof.

The District shall maintain separate accounting of Operation and Maintenance Costs and Capital Costs related to the Project Facility. The District agrees to furnish upon request to the Municipality, at intervals not to exceed twelve months starting with commencement of service and thereafter coinciding with the District's fiscal year, such accounting records and all other information, plans and data of the District which the District has utilized in determining Operation and Maintenance Costs and Capital Costs related to the Project Facility and in calculating the Municipality's attributable and allocable share thereof.

III. CONSTRUCTION OF PROJECT FACILITY AND CONNECTION TO COLLECTION SYSTEM

A. Location of Facility

The District agrees to design, construct, and operate the Project Facility as soon as is reasonably practical and to obtain all necessary governmental approvals for the design, engineering, construction, acquisition, ownership, operation, and maintenance of the Project Facility. The Project Facility shall be located at the following site:

A tract of land as described as the MSD Meramec Treatment Plant, Boundary Adjustment Plat recorded in Plat Book 352, Pages 594 – 595 in St. Louis County, Missouri.

The District may expand the Project Facility from time to time beyond the Municipality's Design Allotted Share as the District deems necessary, without cost to the Municipality. The District may connect Other Users to the Project Facility, provided that the District meets the obligation to the Municipality to provide the Design Allotted Share set forth herein and provided the District does not reduce the quantity of treatment provided to the Municipality at any time.

Should the Municipality require additional capacity beyond its Design Allotted Share and should such additional capacity require construction beyond that contemplated herein, the parties shall attempt to reach a mutually satisfactory agreement on a method of financing construction for such additional capacity and, the District agrees that it shall provide the additional capacity if the Municipality agrees to bear the entire cost, if any.

B. Connection to Project Facility

The Municipality hereby agrees that it will connect the Municipality's Collection System to the Project Facility by constructing a gravity sewer to the Connection Point(s). The date of connection was November 8, 2007.

The Municipality shall pay all costs relating to the construction of the gravity sewer pipes connecting the Collection System to the Project Facility at the Connection Point(s), and the cost of physical connection(s).

IV. TREATMENT DESIGN ALLOTTED SHARE

The District hereby agrees to design and construct the Project Facility to provide the following Design Allotted Share capacity of the Project Facility to the Municipality:

- | | | |
|-----|--|--------|
| (1) | Design Share for User's Average Annual Flow in 1,000 gallon units per operating day: | 4,500 |
| (2) | Design Share for User's Peak Flow in 1,000 gallon units per twenty-four (24) hour day: | 18,000 |

V. FINANCING THE PROJECT FACILITY

A. Financing the Project Facility

The Local Project Cost for the Project Facility (which shall include the cost of land and

easement acquisition) shall be borne equitably by the Municipality and all Other Users. The Municipality's proportionate share of the Local Project Cost for the Project Facility shall be calculated in accordance with Attachment A. The Municipality shall be excluded from the cost of constructing facilities necessary to connect any Other User to the Project Facility.

The Municipality shall pay to the District its proportionate share of each phase of the Local Project Cost for the Project Facility in equal quarterly installments with annual interest over a period of twenty-five (25) years, billing and payments shall commence January 2008. The annual interest shall be that rate of interest which is the average rate of interest paid on municipal revenue sewerage bonds, rated "AA" or its equivalent, on a regularly established market for such bonds, as of the date the District first advances funds for the construction of the Project Facility. The Municipality and the District have agreed to a rate of 4.35% per annum based on the October 2003 start of construction of the phase I work as defined in Attachment A. The rate of interest charged for future phases will be determined as described above.

B. Financing Change Order Numbers 8, 11, 13 and 16

The total amount of change order numbers 8, 11, 13, and 16, associated with the Lower Meramec River System Improvements project (95066), Telegraph Road Drop Shaft, billed to the Municipality was \$842,161.72. Of this total, the Municipality paid \$662,161.72 to MSD on October 8, 2008. Both parties agree that the difference of \$180,000.00 will be resolved pursuant to Section XIV of this agreement. This Sewerage System Agreement supersedes the Intergovernmental Cooperation Agreement executed on May 23, 2005.

C. Charge for Late Payments

Any monies owed that remain unpaid pursuant to a payment schedule or due date as indicated in this agreement shall bear interest, equal to one and one-half percent (1 ½ %) per month or 18% annum, until such time as the balance is paid in full.

VI. RATES FOR SERVICE BY THE DISTRICT

A. Service Charges for the Project Facility.

The Municipality shall pay to the District a service charge for treatment and disposal of wastewater delivered to the Project Facility. The District shall bill the Municipality such service charge at the end of each billing period and the Municipality shall make payment to the District within thirty (30) days of the billing. The service charge shall commence upon permanent and continuous diversion of the flows from the Municipality's Collection System to the Project Facility.

The service charge to be billed to the Municipality and all Other Users shall be based on Operation and Maintenance Costs, the Capital Costs and a Management Fee equal to ten per cent (10%) of the Operation and Maintenance Costs and Capital Costs.

The Municipality's Operation and Maintenance Costs for the billing period shall be calculated as the proportional share of the Municipality's total metered sewage volume delivered to the Project Facility during the billing period to the total metered volume delivered to the Project Facility by the Municipality and all other Users.

The Municipality's Capital Costs shall be based on their share of the actual cost incurred during the previous year by the District for expenditures over and above those included in the Operations and Maintenance Costs. Payments shall be made in equal installments based on the billing period over the course of the next year.

To facilitate billing, the District agrees that it shall maintain accounting records relating to the Operation and Maintenance Costs and Capital Costs attributable to the Project Facility, separate and apart from accounting records relating to any other District facility. Such records shall be audited annually by a certified public accountant and shall be available for inspection by elected or administrative officials of the Municipality at reasonable times.

B. Special Service Charges

Costs incurred by the District in assisting in the location and elimination of prohibited discharges within the Municipality's Collection System shall be borne by the Municipality. Any costs incurred by the District will be billed to the Municipality.

C. State or Federal Fees

The Municipality shall be responsible for its share of cost incurred by the District as assessed by the state and/or federal regulators.

D. Charge for Late Payments

Any charges billed that remain unpaid by the due date indicated on the bill rendered shall bear interest, equal to one and one-half percent (1 ½ %) per month or 18% annum, until such time as the balance is paid in full.

VII. COLLECTION SYSTEM AND CONNECTIONS

A. Responsibility for Collection System

The Municipality shall retain the responsibility for construction, operation, maintenance, and ownership of facilities comprising its Collection System and future additions thereto and shall retain all contractual and managerial obligations associated with such Collection system facilities, subject to the rights of the District as expressly set out in this Agreement. The Municipality agrees to maintain in good repair its sewers connected to the Project Facility and to reduce infiltration/inflow to levels that are consistent with existing and any future District requirements.

B. Other User's Right to Connect

The Municipality agrees to allow any Other User within its watershed to connect to the Municipality's Collection System, provided that the Municipality's Collection System has sufficient reserve capacity to carry the total flow and the total flow does not exceed their Design

Allotted Flows.

C. Municipality's Collection System and Control of Connections

Sewer connections to the Municipality's Collection System that are Municipal or Sanitary and Improvement Districts under the jurisdiction of the Municipality shall be controlled by the Municipality. Current records will be maintained by the Municipality and made available to the District upon request by the Executive Director or duly authorized representative. New connections shall be limited to wastewater only and the number of connections authorized within the Municipality's Collection System shall be the sole responsibility of the Municipality and its duly authorized representatives.

D. Storm Water Connections Prohibited

The municipality shall not make or permit to be made any storm water connections which will contribute directly or indirectly into the Municipality's Collection System, this includes but is not limited to storm water run-off from surface drains; ditches; streams; storm sewers; roof, area-way or foundation drains; or any other source. The Municipality shall work as expeditiously as possible to eliminate all existing storm water connections to the Municipality's Collection System. After the date of this Agreement, construction specifications for all sewers constructed in the Municipality's collection System shall provide that infiltration of ground water shall not exceed 200 gallons per inch diameter per mile in 24 hours.

VIII. INDUSTRIAL WASTE CONTROL

The Municipality shall enact and enforce ordinances embodying the following standards within the Collection System jurisdiction of the Municipality.

A. Prohibited Discharges

No person shall discharge or convey, or permit or allow to be discharged or conveyed to the Municipality's Collection System any wastewater containing pollutants of such character or

quantity that will:

- (1) not be susceptible to treatment or interfere with the process or efficiency of the Project Facility treatment system; or
- (2) constitute a hazard to human or animal life, or to the stream or water course receiving the Project Facility effluent; or
- (3) violate pretreatment regulations or standards; or
- (4) cause the Project Facility to violate its NPDES permit or applicable receiving water standards.

B. Toxic Substances

Any toxic substances in amount exceeding standards promulgated by the Administrator of the United States Environmental Protection Agency pursuant to Section 307(a) of the Federal Water Pollution Control Act, and chemical elements or compounds, phenols or other taste or odor production substances, or any other substances which are not susceptible to treatment or which may interfere with the biological processes or efficiency of the Project Facility's treatment system, or that will pass through the system, shall not be discharged.

C. Excessive Discharge Rate

Wastewater at a flow rate or containing such concentrations or quantities of pollutants that exceed for any time period longer than fifteen (15) minutes more than five (5) times the average twenty-four (24) hour concentration, quantities or flow during normal operations and which would cause a treatment process upset and subsequent loss of treatment efficiency shall not be allowed.

D. Pretreatment Facilities Operation

If pretreatment or control of waste flows is required, such facilities shall be maintained in good working order and be operated as efficiently as possible by the person discharging such

waste at his own cost and expense, subject to the requirements of all applicable rules, regulations, codes, ordinances, and laws.

E. Hazardous Wastes

It is agreed and understood that the parties to this Agreement are, or may be subject to Section 311 of the Federal Water Pollution Control Act, as it applies to oil and hazardous wastes, and to any applicable State law or legislation, under the authority preserved by Section 510 of the Federal Water Pollution Control Act.

F. Enforcement of Regulations

The Municipality agrees to conform with and enforce all ordinances, rules, regulations and requirements of the District pertaining to the collection and disposal of Industrial Wastewater; and both parties agree to conform with all applicable State and Federal laws, rules and regulations.

IX. INDUSTRIAL MONITORING AND REPORTING

To comply with regulatory requirements, all industries classified as existing or new sources by the United States Environmental Protection Agency, having either acceptable or unacceptable wastes, must file with the District all reports and analyses required by District ordinances, rules and pretreatment regulations of the flow and strength characteristics of their wastewater discharge in terms of BOD₅, suspended solids, grease, PH, categorical pretreatment standards and any other parameter required by the District or the United States Environmental Protection Agency or the Missouri Department of Natural Resources to comply with the General Pretreatment Regulations, Pretreatment Standard, NPDES Permits or sludge disposal regulations.

Industries regulated by the Pretreatment Regulations must file all required reports and submit self-monitoring reports semi-annually to the District during months selected by the District for reporting by regulated industrial subcategories. Reporting of information by

industries not regulated by Pretreatment Regulations will be done according to District ordinance. From time to time the District may require 24 hour flow proportion composite samples to be split and given to the District Industrial Waste Division Laboratory for verification. Such samples shall be representative of a normal average production day. Any additional costs for obtaining the additional samples or testing shall be paid for by the Industrial User involved.

Measuring, sampling and analysis of wastewater will be conducted in a manner that will reflect the amounts and characteristics of the wastes being discharged into the Project Facility, and in accordance with uniform procedures as specified in Standard Methods For The Examination Of Water And Wastewater, published jointly by the American Public Health Association, the American Water Works Association and Water Pollution Control Federation, or any other methods developed by and/or acceptable to the United States Environmental Protection Agency.

X. MEASUREMENT – SAMPLING AND TESTING

A. Facilities and Responsibility

The District will include in the Project Cost monies expended for the construction of measurement, sampling, and analysis facilities and equipment. The District will include in Operation and Maintenance Cost monies expended for the sampling and analysis of industrial, municipal, and other wastewaters considered necessary by the District.

B. Flow Recorder

To facilitate a fair and equitable charge being billed by the District, the Municipality agrees to the installation, at the Municipality's expense, of automatic flow recorders to be approved by and operated by the District in the Municipality's jurisdictional limits and immediately upstream of the Connection Point(s) and at such other locations as the parties hereto

may mutually agree upon in writing.

C. Independent Calibration

The parties hereto agree that within 60 days of execution of this agreement the automatic flow recorders will be calibrated by an independent calibration firm. A firm mutually agreed to by both parties will be hired, at MSD's expense, to perform annual calibration and provide a certification form to both parties. Both parties will be notified when the calibration will be performed.

D. Sampling Devices

To facilitate a fair and equitable measurement of normal wastewater loads being discharged into the District's collection system, the Municipality agrees to the installation, at the Municipality's expense, of automatic sampling devices to be approved by and operated by the District in the Municipality's jurisdictional limits and immediately upstream of the Connection-Point(s) and at such other locations as the parties hereto may mutually agree upon in writing.

E. Reporting New Industries

The person or department authorized to issue building permits within the jurisdictional limits of the Municipality shall notify the District of any new industries locating within such jurisdictional limits as soon as such location is known to such person or department.

F. Admission to Property

Whenever it shall be necessary for the purposes of monitoring compliance with any applicable laws, rules, or regulations, or with the provisions of this Agreement, District personnel, upon the presentation of proper credentials, may enter upon any property or premises at reasonable times for the purpose of:

- (1) copying any records required to be kept under the provisions of this Agreement; and
- (2) inspecting any monitoring equipment or methods; and

(3) sampling any discharge of wastewater to the Municipality's Collection System.

District personnel may enter upon such property at any hour under emergency circumstances.

G. Protection from Accidental Discharge

Each Industrial User shall provide protection from accidental discharge of prohibited materials or other wastes regulated by District ordinances. Facilities to prevent accidental discharge of prohibited materials shall be provided and maintained at the Industrial User's own cost and expense. Detailed plans showing facilities and operating procedures to provide this protection shall be submitted to the District for review, and shall be approved by the District before construction of the facility. Review and approval of such plans and operating procedures shall not relieve the Industrial User from the responsibility to modify its facility as necessary to meet the requirements of District ordinances.

H. Reporting of Accidental Discharge

If, for any reason, an Industrial User does not comply with or will be unable to comply with any prohibition, limitation, or standard in District ordinances, the Industrial User responsible for such noncompliance shall immediately notify the District and the Municipality so that corrective action may be taken to protect the Project Facility. In addition, a written report addressed to the Executive Director of the District detailing the date, time, and cause of the accidental discharge, the quantity and characteristics of the discharge and the corrective action, if any, taken to prevent future discharges, shall be filed by the responsible Industrial User within five (5) days of the occurrence of the noncompliance.

I. Hold Harmless

The Municipality agrees that authorized personnel of the District may make such entry onto the lands of the Municipality as may be necessary to permit necessary measuring and sampling of wastes of the Municipality discharges into the Project Facility and for all other

necessary purposes in connection with the acquisition, construction, operation, repair, and maintenance of the Project Facility. The District agrees to hold Municipality harmless from any and all claims, including reasonable attorneys' fees and costs, made for property damage or bodily injury resulting from the action of the District's employees or agents occurring on the property of the Municipality and while acting in the course of District employment.

XI. DAMAGES TO THIRD PARTIES

The Connection Point(s) shall initially determine the division of responsibility between the Municipality and the District with respect to their liability for damages caused to third parties, such that the parties hereto shall be liable to third parties for blockages, backups, and other maintenance breakdowns occurring within their respective areas of responsibility.

XII. SEVERABILITY

If any term, covenant, or condition of this Agreement or the application thereof to any person or circumstance shall to any extent be invalid or unenforceable, the remainder of this Agreement or the application of such term, covenant, or condition to persons or circumstances other than those as to which it is invalid or unenforceable, shall not be affected thereby and each term, covenant, or condition of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

XIII. ESCAPE CLAUSE

If found to be in the best interest of the public and the District, non-compliance with this agreement may be reason for termination of treatment of flows but not termination of any future financial obligations associated with phase 2 and 3 as defined in Attachment A.

XIV. DISPUTE RESOLUTION

Any dispute arising out of this Agreement will be resolved, on a confidential basis, by arbitration. To begin the process either party may deliver to the other party a written notice describing the dispute and the demand. The parties agree to meet within 30 days of the receipt of the demand and

in good faith and using commercially reasonable efforts try to resolve the dispute by negotiation. If 45 days after this meeting the dispute remains unresolved either party may start binding arbitration. A single arbitrator jointly selected by the parties shall conduct the arbitration. If the parties are unable to agree upon an arbitrator, they shall apply jointly to the Federal Mediation and Conciliation Service which shall furnish a list of at least five (5) arbitrators from which the parties shall select one by alternately striking off the others, the party seeking arbitration striking first. The decision of the arbitrator shall be final and binding upon the parties. The Arbitrator shall not have authority to alter, amend change or add to the provisions of this Agreement. Each party will pay the fees of its own attorneys, expenses of witnesses and all other expenses and costs in connection with the presentation of their case. The arbitration costs, including but not limited to, the arbitrator's fees, costs of records or transcripts and administrative fees will be borne equally by the parties. Neither arbitration under this section nor any legal action, regardless of its form, related to or arising out of this agreement may be brought more than two (2) years after the cause of action first accrued.

XV. SECTION HEADS

All section and paragraph headings are inserted for convenience only and will not affect the construction or interpretation of this Agreement.

XVI. EXECUTION OF COUNTERPARTS

This Agreement may be simultaneously executed in several counterparts, each of which so executed shall be deemed to be an original, and such counterparts together will constitute but one and the same Agreement, which will be sufficiently evidenced by any such original counterpart.

XVII. NOTICE

Any notice hereunder to the District shall be deemed to be properly served if delivered or mailed to the District at:

Executive Director
Metropolitan St. Louis Sewer District
2350 Market Street
St. Louis, Missouri 63103

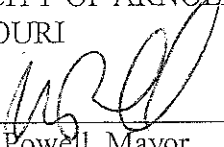
Any notice hereunder to the Municipality shall be deemed to be properly served if

delivered or mailed to the Municipality at:

City Administrator
2101 Jeffco Blvd.
Arnold, Missouri 63010

IN WITNESS WHEREOF, the parties hereto have set their hands on the day and year first above written.


THE CITY OF ARNOLD,
MISSOURI

By: 
Mark Powell, Mayor


ATTEST BY:


By: 
Diane Waller, City Clerk

THE METROPOLITAN ST. LOUIS
SEWER DISTRICT

By: 
Jeffrey Theerman, Executive Director

ATTEST BY:

By: 
Karl Tyminski, Secretary-Treasurer



STATE OF MISSOURI)
) SS.
COUNTY OF JEFFERSON)

On this 20th of November, in the year 2008 before me, a Notary Public in and for said state, personally appear Mark Powell, the Mayor of the City of Arnold, Missouri, known to me to be the person who executed the within Contract on behalf of the City of Arnold, Missouri, and acknowledged to me that the executed the same for the purpose therein stated.

In Testimony Whereof, I have hereunto set my hand and affixed my official seal.

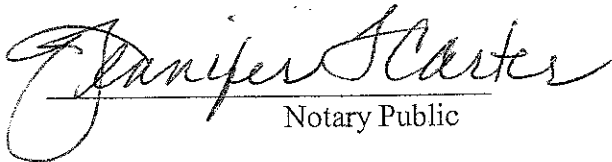

Notary Public

" NOTARY SEAL "
Pamela M. Migneco, Notary Public
Jefferson County, State of Missouri
My Commission Expires 2/26/2011
Commission Number 07390828

STATE OF MISSOURI)
) SS.
CITY OF ST. LOUIS)

On this 11th day of December, in the year 2008, before me, a Notary Public in and for said state, personally appeared Jeffrey Theerman, the Executive Director of The Metropolitan St. Louis Sewer District, known to me to be the person who executed the within Contract on behalf The Metropolitan St. Louis Sewer District, and acknowledged to me that he executed the same for the purposes therein stated.

In Testimony whereof, I have hereunto set my hand and affixed my official seal.



Notary Public



November 1, 2007

LOWER MERAMEC RIVER SYSTEM IMPROVEMENTS (95066)

UPDATED PRELIMINARY FLOW SHARE ESTIMATES

PARTICIPANT	EXISTING	PHASE I	PHASE II	PHASE III
Metropolitan St. Louis Sewer District Flow	1.50	12.20*	23.50	43.50
Arnold Flow	3.00	4.50	4.50	4.50
Total Average Daily Flows (mgd)	4.50	16.70*	28.00	48.00
Metropolitan St. Louis Sewer District Flow Ratio	33%	73%	84%	91%
Arnold Flow Ratio	67%	27%*	16%	9%

* Values forwarded to Arnold dated July 24, 2002.
MSD current values are 10.50, 15.00, and 30% respectively.

DESIGN SERVICES	COSTS		WWTP SHARE PERCENT	COLLECTION SHARE PERCENT	WWTP COST SHARE	COLLECTION COST SHARE
E-897 WWTP Design	\$6,835,322	R	9.00%		\$615,179	
E-898 Lift Station/Tunnel Design	\$3,665,940	F		6.00%		\$219,956
Design Costs Subtotals	\$10,501,262	R			\$615,179	\$219,956
CONSTRUCTION PROJECTS						
95066E Site Preparation	\$1,292,400	R	9.00%		\$116,316	

95066D Site Preloading Phase I	\$9,661,144	F	9.00%		\$869,503	
95066M WWTP Outfall Sewer	\$6,963,006	F	9.00%		\$626,671	
95066S Wetlands Mitigation	\$222,692	F	9.00%		\$20,042	
95066A Wastewater Treatment Plant	\$82,460,523	R	9.00%		\$7,421,447	
95066K Electrical Supply (Sub, Primary & Secondary)	\$3,237,902	R	5.00%	4.00%	\$161,895	\$129,516
95066P Site Preloading Phase II	\$2,386,516	E	9.00%		\$214,786	
95066J Natural Treatment Area (Grant)	\$2,668,002	E	9.00%		\$240,120	
95066F Educational/Recreational Facility (Grant)	\$3,416,957	E	9.00%		\$307,526	
95066H Site Restoration/Landscaping	\$201,600	E	9.00%		\$18,144	
95066B Baumgartner Tunnel	\$55,945,000	R		3.00%		\$1,678,350
Arnold Drop Shaft	\$772,830	F		9.00%		\$69,555
95066L Lift Station (includes 95066L1)	\$32,567,051	R		9.00%		\$2,931,035
95066N Baumgartner Lagoon Closure	\$3,910,000	R		0.00%		\$0
95066R Mattese Creek Sewer	\$2,392,634	F		0.00%		\$0
Construction Costs Subtotals	\$208,098,257	R			\$9,996,451	\$4,808,455

CONSTRUCTION MANAGEMENT

E-977 WWTP Construction Management (A1)	\$7,870,000	R	9.00%		\$708,300	
E-897 WWTP CM Services/Design (A-SDC)	\$3,170,678	R	9.00%		\$285,361	

E-985 Lift Station Construction Management (B1)	\$5,450,000	R	6.00%		\$327,000
E-898 Lift Station CM Services/Design (B-SDC)	\$1,514,860	F	6.00%		\$90,892
Construction Management Costs Subtotals	\$18,005,538	R		\$993,661	\$417,892

OTHER COSTS

Meramec Lagoon Cell No. 1 Closure	\$1,207,549	F	9.00%	\$108,679	
Meramec Lagoon Cell No. 2 & 3 Aeration	\$243,880	F	9.00%	\$21,949	
Montgomery Watson (Facility Plan Update)	\$430,000	F	9.00%	\$38,700	
Earth Tech (Grant Application)	\$146,465	F	9.00%	\$13,182	
Archaeological Research Center Phase I	\$3,985	F	9.00%	\$359	
Archaeological Research Center Phase II & III	\$136,920	F	9.00%	\$12,323	
Ameren Easement (Outfall Sewer)	\$60,000	F	9.00%	\$5,400	
Menendez Property (Site Preparation Const. Access)	\$25,479	F	9.00%	\$2,293	
Ameren Power Line Relocation (138 kVA)	\$388,440	F	9.00%	\$34,960	
Tunnel Easements	\$203,225	R	3.00%		\$6,097
Meramec Lagoon Cell No. 2 & 3 Closure	\$3,500,000	E	9.00%	\$315,000	
Permit Costs (Added April 27, 2004)	\$705,500	E	9.00%	\$63,495	
SRF Finance Costs (Added April 27, 2004)	\$1,000,000	E	9.00%	\$90,000	
Other Costs Subtotals	\$8,051,443	R		\$706,340	\$6,097

SUBTOTAL COSTS	\$244,656,500	R		\$12,311,630	\$5,452,400
Federal Grant (Added April 27, 2004)	-\$11,584,300	E	9.00%	(\$1,042,587)	
ARNOLD'S COST SHARE PHASE I		R		\$11,269,043	\$5,452,400
FUTURE CONSTRUCTION COSTS					
Estimated Future Const. Costs (Added April 27, 2004)	\$100,000,000	E	9.00%	\$9,000,000	
ARNOLD'S TOTAL EST. COST SHARE		R		\$20,269,043	\$5,452,400
ARNOLD'S DIRECT COSTS					
Intergovernmental Agreement May 23, 2005					
Telegraph D. S.Revisions (Added March 9, 2006)	\$846,447	R		100.00%	\$846,447

Notes:

F = Final Cost

E = Estimated Cost (Original)

R = Revised Estimated Cost

Costs do not include interest

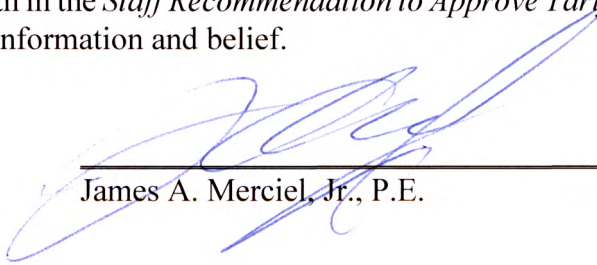
**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of Missouri-American Water)
Company for a Certificate of Convenience and)
Necessity Authorizing it to Install, Own,) File No. SA-2015-0150
Acquire, Construct, Operate, Control, Manage) Tariff File No. YS-2015-0319
and Maintain a Sewer System in and around)
the City of Arnold, Missouri.)

AFFIDAVIT OF JAMES A. MERCIEL, JR., P.E.


STATE OF MISSOURI)
) ss
COUNTY OF COLE)

James A. Merciel, Jr., P.E., of lawful age, on his oath states: (1) that he is the Assistant Manager – Engineering in the Water and Sewer Unit of the Missouri Public Service Commission; (2) that he participated in the preparation of the foregoing *Staff Recommendation to Approve Tariff* including Attachments A and B; (3) that information in the *Staff Recommendation to Approve Tariff* was provided by him; (4) that he has knowledge of matters set forth in the *Staff Recommendation to Approve Tariff* and (5) that such matters set forth in the *Staff Recommendation to Approve Tariff* are true and correct to the best of his knowledge, information and belief.



James A. Merciel, Jr., P.E.

Subscribed and sworn to before me this 11th day of May 2015.



Notary Public

LAURA DISTLER
Notary Public - Notary Seal
STATE OF MISSOURI
Commissioned for Cole County
My Commission Expires: June 21, 2015
Commission Number: 11203914