

CASE STUDIES

OF THE



3 Year Study

Based on Kilowatt Usage of

Pump Stations

Before and After

Installation of Sewer Sentries

Case Studies based on Kilowatt Usage

Table of Contents

1. Areas with No Sewer Sentries Increase in Kilowatt Usage due to Extra Rainfall.
2. Areas with Sewer Sentries Installed. Reduction in Kilowatt Usage even with Extra Rainfall.
3. No Sewer Sentries. Dollar Amount Loss due to Extra 4.3" Rainfall. Comparing 2013 to 2015.
4. With Sewer Sentries. Dollar Amount Saved even with Extra 4.3" Rainfall. Comparing 2013 to 2015
5. No Sewer Sentries. Dollar Amount Loss due to Extra 16.8" Rainfall. Comparing 2013 to 2016.
6. With Sewer Sentries. Dollar Amount Saved even with Extra 16.8" Rainfall. Comparing 2013 to 2016
7. With Sewer Sentries. Individual Areas Payoff Schedule with 15% increase added due to extra Rain.
8. With Sewer Sentries. Projected Savings in periods of 5, 7.5, and 10 Years.
9. 50% of WOSD#5 Sewer System equipped with Sewer Sentries Savings and Payoff. 2013 to 2015.
10. Information used in Study. Pump Costs, Treatment Costs, Electricity Cost

PUMP STATIONS SEWER SENTRIES WHERE NOT INSTALLED

Church 30433254	Z-1	3 - 8"	Hinton 29286770	Z-2	3 - 12"	N., Side Douglas U 29287604	2 - 8"	Richardson T 29259082	2 - 3"
SS In	0		SS In	0		SS In	0	SS In	0
SS Not In	49		SS Not In	71		SS Not In	91	SS Not In	81
Total MHs	49		Total MHs	71		Total MHs	91	Total MHs	81

	2013	2015	2016	2013	2015	2016	2013	2015	2016	2013	2015	2016
Rainfall	52.6"	56.9"	69.4"	52.6"	56.9"	69.4"	52.6"	56.9"	69.4"	52.6"	56.9"	69.4"
	6240	4560	7680	868	636	1115	3921	2589	4384	1293	974	1331
	3360	8400	6960	535	1347	902	3077	5043	3543	996	1680	1292
	5040	5280	12960	667	709	2539	3224	3202	5740	1240	994	1947
	4080	5100	7920	537	753	1051	2684	2987	4442	1232	1213	1432
	5040	6720	8160	707	1068	1281	3253	4658	4748	241	1309	1960
	3840	4560	5520	451	567	733	2598	2433	2940	1796	836	954
	3120	3840	4080	460	513	486	2134	2027	2430	682	536	769
	3360	3840	6480	495	537	889	2083	2159	3387	571	521	1218
	3124	3360	5040	472	513	886	1957	1877	2914	574	418	1104
	3030	3250	3600	573	796	518	2374	3674	1784	719	1177	704
	6000	6240	2880	1094	833	424	3167	3232	1684	1102	1134	677
	4080	7680	4800	584	1115	664	2584	4384	2756	819	1131	985
	50314	62830	76080	7443	9387	11488	33056	38265	40752	11265	11923	14373

12516	25766
--------------	--------------

25%	51%
------------	------------

Increase Increase

1944	4045
-------------	-------------

26%	54%
------------	------------

Increase Increase

5209	7696
-------------	-------------

16%	23%
------------	------------

Increase Increase

658	3108
------------	-------------

6%	28%
-----------	------------

Increase Increase

Parker	W	2 - 4"	Central	Z-5	2 - 3"	Evergreen	S	2 - 6"	Standard Reed	C-5	2 - 3"
29261658			52529203			39152988			25270828		
SS In	0		SS In	0		SS In	0		SS In	0	
SS Not In	66		SS Not In	31		SS Not In	91		SS Not In	26	
Total MHs	66		Total MHs	31		Total MHs	91		Total MHs	26	

	2013	2015	2016	2013	2015	2016	2013	2015	2016	2013	2015	2016
Rainfall	52.6"	56.9"	69.4"	52.6"	56.9"	69.4"	52.6"	56.9"	69.4"	52.6"	56.9"	69.4"
	1082	585	1999	225	154	282	2085	1816	2474	479	511	894
	679	1667	1551	181	289	239	1312	3029	1996	581	758	627
	828	1272	1820	233	175	767	1618	1767	3661	512	408	1208
	661	952	1882	182	150	279	1249	1591	2045	513	484	684
	754	1732	1680	198	226	296	1530	2735	2586	541	445	678
	531	772	876	111	113	181	0	1444	1783	509	397	667
	461	469	775	110	101	97	1926	1248	1403	433	435	644
	381	664	1024	82	115	202	1085	1263	1964	536	621	541
	413	612	1166	97	119	160	786	1063	1886	502	565	763
	559	1671	647	148	341	104	1096	1933	1158	447	710	621
	719	1042	666	241	179	72	1378	1843	1140	779	695	658
	688	1999	1271	148	282	232	1153	2474	1786	748	894	865
	7756	13437	15357	1956	2244	2911	15218	22206	23882	6580	6923	8850

5681	7601
------	------

288	955
-----	-----

6988	8664
------	------

343	2270
-----	------

73%	98%
-----	-----

15%	49%
-----	-----

46%	57%
-----	-----

5%	35%
----	-----

Increase Increase

Increase Increase

Increase Increase

Increase Increase

Off Olice on Pam Z-3 2 - 3" 29292455		Off Walters and Lasha 2 - 3" 29262045 Z-4		Sewer Sentries 0
SS In	0	SS In	0	
SS Not In	47	SS Not In	18	
Total MHs	47	Total MHs	18	Manholes Total 571

	2013	2015	2016	2013	2015	2016	2015	2016			
Rainfall	52.6"	56.9"	69.4"	52.6"	56.9"	69.4"			2013	2015	2016
	2068	1232	1777	425	363	475			Rainfall	Rainfall	Rainfall
	1825	2446	1414	305	633	386			52.6"	56.9"	69.4"
	1270	1444	2921	251	408	1787					
	1095	1361	5131	250	352	4681					
	1345	1865	1609	325	640	621				4.3" more	16.8" more
	1316	1159	1252	273	349	336					
	1094	887	1124	195	268	322				8% more	32% more
	923	928	1252	179	241	432					
	981	806	1270	196	162	375					
	980	1533	854	216	315	218					
	1261	1377	996	298	444	228					
	1274	1777	1356	338	475	395					
	15432	16815	20956	3251	4650	10256					

1383	5524
------	------

9%	36%
----	-----

Increase Increase

1399	7005
------	------

43%	215%
-----	------

Increase Increase

36409	72634
-------	-------

26% Ave	45% Ave
---------	---------

Increase Increase

PUMP STATIONS SEWER SENTRIES WERE INSTALLED

Restfull Homes		2 - 4"	T-John	F	2 - 4"	Nichols	M	2- 3"	Landreaux	C-6	2 - 3"
29254760	D-2		29255247			29254950			28221885		
SS In	64	Installed	SS In	25	Installed	SS In	17	Installed	SS In	16	Installed
SS Not In	6	Before	SS Not In	0	Before	SS Not In	1	Before	SS Not In	0	Before
Total MHs	70	!/1/2015	Total MHs	25	1/1/2015	Total MHs	18	3/12/2015	Total MHs	16	3/10/2015

2013	2015	2016	2013	2015	2016	2013	2015	2016	2013	2015	2016
52.6"	56.9"	69.4"	52.6"	56.9"	69.4"	52.6"	56.9"	69.4"	52.6"	56.9"	69.4"
2170	971	1143	1815	753	907	379	111	76	286	271	275
1620	1448	1203	1732	1351	612	299	185	80	290	280	221
1321	1093	1693	1466	843	1004	165	129	106	376	240	337
1444	983	1136	1809	935	696	149	94	96	191	234	285
1699	1383	1356	1532	977	727	413	148	178	277	239	313
1008	933	907	1525	660	590	194	122	42	217	192	217
763	764	838	1486	610	585	144	91	38	268	186	216
822	791	882	1251	1123	520	123	30	39	346	204	251
697	833	1134	1279	1090	698	119	27	61	246	175	269
658	1182	704	1359	951	532	142	53	33	256	287	209
1013	1155	821	1863	797	615	166	69	41	274	264	256
1219	1143	1218	2099	907	778	192	76	58	289	275	285
14434	12679	13035	19216	10997	8264	2485	1135	848	3316	2847	3134

Rainfall

1755	1399
------	------

12%	10%
-----	-----

Decrease Decrease

8219	10952
------	-------

43%	57%
-----	-----

Decrease Decrease

1350	1637
------	------

54%	66%
-----	-----

Decrease Decrease

469	182
-----	-----

14%	6%
-----	----

Decrease Decrease

Lakewood	C-4	2 - 3"	Harrell Rd	G-1	2 - 3"	Casa Linda	I-1	2 - 8"	Hart	A	2 - 3"
29255825			29258274			29281011			29265410		
SS In	13	Installed	SS In	5	Installed	SS In	137	Installed	SS In	39	Installed
SS Not In	17	Before	SS Not In	3	Before	SS Not In	34	Before	SS Not In	15	Before
Total MHs	30	7/15/2015	Total MHs	8	5/15/2015	Total MHs	171	5/15/2015	Total MHs	54	6/3/2015

2013	2015	2016	2013	2015	2016	2013	2015	2016	2013	2015	2016	
52.6"	56.9"	69.4"	52.6"	56.9"	69.4"	52.6"	56.9"	69.4"	52.6"	56.9"	69.4"	Rainfall
633	310	560	504	386	440	12761	4728	8464	1970	835	1359	
682	456	383	439	441	378	9103	9175	6526	1559	1406	1162	
444	284	540	440	383	404	7644	5449	10464	1290	1142	1674	
502	367	346	434	391	382	8503	5495	7248	1698	1230	1800	
497	415	487	402	399	381	6835	8376	8757	1492	1329	1309	
880	347	338	424	356	331	6064	4359	5053	1277	911	1550	
1160	358	420	414	369	370	5647	4159	5255	1053	847	1367	
587	317	365	426	369	332	5766	4440	5763	1089	793	1287	
686	379	426	427	370	385	5371	3646	7285	1167	772	1646	
454	557	319	392	425	344	5843	8030	4586	1358	1338	831	
609	394	337	457	288	372	9558	5886	4442	1623	1176	889	
400	560	438	483	440	362	6691	8464	6212	1480	1359	968	
7134	4744	4959	5242	4617	4481	89786	72207	80055	17056	13138	15842	

2390	2175
------	------

34%	31%
-----	-----

Decrease Decrease

625	761
-----	-----

12%	15%
-----	-----

Decrease Decrease

17579	9731
-------	------

20%	11%
-----	-----

Decrease Decrease

3918	1214
------	------

23%	7%
-----	----

Decrease Decrease

Nichols L.	L	2 - 6"	164 Sunset	B	2 - 4"	
29262805			29285871			
SS In	321	Installed	SS In	37	Installed	Sewer Sentries 674
SS Not In	96	Before	SS Not In	61	Before	
Total MHs	417	7/31/2015	Total MHs	98	6/4/2015	Total Manholes 907

52.6"	56.9"	69.4"	52.6"	56.9"	69.4"	Rainfall
2013	2015	2016	2013	2015	2016	2015 2016

						Total Kilowatt Savings
14628	6518	9962	6720	2668	6313	
8512	9674	11040	3252	2424	5610	
6568	6405	10543	2931	3438	6449	
5897	7004	8545	4586	3953	5951	
8238	6291	9421	5218	4931	6510	
7190	3640	7123	4592	2998	7459	
7148	3111	8183	4108	2919	7849	
6858	4286	7479	5494	2732	5673	
6004	7809	7363	7731	2520	8945	
8056	8665	6738	8832	4360	3944	
8881	10135	4836	10492	4458	2898	
6050	9962	7750	7511	6313	6755	
94030	83500	98983	71467	43714	74356	

2013	2015	2016
Rainfall	Rainfall	Rainfall
52.6"	56.9"	69.4"
	4.3" more	16.8" more
	8% more	32% more

10530	4953
-------	------

11% Up 5%
 Decrease Increase

27753	2889
-------	------

39% **4%**
 Decrease Decrease

74588 35893

Ave 26% **Ave 20%**
 Decrease Decrease

AREA NO SEWER SENTRIES WHERE INSTALLED

2015 RAIN 8% MORE 4.3"

COST

2015					
Station	Pump Size	Cost per Yr. \$		% of Cost \$	Cost per Yr. \$
Church	8"	4200		0.25	1050
Hinton	6"	1824		0.26	474
N. Side Douglas	8"	2800		0.16	448
Jewels Richards	3"	1100		0.06	66
Parker	4"	1224		0.73	894
Central	3"	1100		0.15	165
Evergreen	6"	1824		0.46	839
Standard Reed	3"	1100		0.05	55
Off Olice on Par	3"	1100		0.09	99
Off Walters and	3"	1100		0.43	473

4563

2015					
Station	Kilowatts Saved per Yr.	Treatment Cost per Kilowatt \$0.19	Electricity Cost per Kilowatt \$0.08	Clorine Cost \$	
Church	12516	2378	1001	1000	
Hinton	1944	370	156	1000	
N. Side Douglas	5209	990	417		
Jewels Richards	658	125	53		
Parker	5681	1079	455		
Central	288	55	23		
Evergreen	6988	1328	559		
Standard Reed	343	65	28		
Off Olice on Par	1383	263	111		
Off Walters and	1399	266	112		
		6919	2915	2000	11834

More Cost due to 4.3" more Rainfall \$16,397

2015 COST \$16,397

AREA SEWER SENTRIES WHERE INSTALLED

2015 RAIN 8% MORE 4.3"

SAVINGS

2015					
Station	Pump Size	Cost per Yr.		% of Savings	Savings per Yr.
		\$		\$	\$
Restful Homes	4"	1224	X	0.12	147
T - John	4"	1224	X	0.43	526
Nichols	3"	1100	X	0.54	594
Landreux	3"	1100	X	0.14	154
Lakewood	3"	1100	X	0.34	374
Harrell	3"	1100	X	0.12	132
Casa Linda	8"	2800	X	0.2	560
Hart	3"	1100	X	0.23	253
Nichols L	6"	1824	X	0.11	204
164 Sunset	4"	1224	X	0.39	477

13796

3421

2015				
Station	Kilowatts Saved per Yr.	Treatment Cost per Kilowatt \$0.19	Electricity Cost per Kilowatt \$0.08	Chlorine Cost Savings \$
Restful Homes	1755	333	140	1000
T - John	8219	1562	658	1000
Nichols	1350	257	108	
Landreux	469	89	38	
Lakewood	2390	454	191	
Harrell	625	119	50	
Casa Linda	17579	3340	1406	
Hart	3918	744	314	
Nichols L	10530	2001	842	
164 Sunset	27753	5273	2221	
		14172	5968	2000

22140

2015 Savings \$25,561

		233 Sewer Sentries not on	
Sewer Sentries	674		
Buy and Install	250		
	168500	/	\$25,561
			6.6 Years
			Payoff

AREA NO SEWER SENTRIES WHERE INSTALLED

2016 RAIN 32%MORE 16.8"

COST

2016					
Station	Pump Size	Cost per Yr.		% of Cost	Cost per Yr.
		\$		\$	\$
Church	8"	4200		0.51	2142
Hinton	6"	1824		0.54	985
N. Side Douglas	8"	2800		0.23	644
Jewels Richards	3"	1100		0.28	308
Parker	4"	1224		0.98	1199
Central	3"	1100		0.49	539
Evergreen	6"	1824		0.57	1824
Standard Reed	3"	1100		0.35	385
Off Olice on Par	3"	1100		0.36	396
Off Walters and	3"	1100		0.43	473

8895

2016				
Station	Kilowatts Saved per Yr.	Treatment Cost per Kilowatt \$0.19	Electricity Cost per Kilowatt \$0.08	Clorine Cost \$
Church	25766	4895	2061	1000
Hinton	4045	769	323	1000
N. Side Douglas	7696	1462	616	
Jewels Richards	3108	591	249	
Parker	7601	1444	608	
Central	955	182	77	
Evergreen	8664	1646	693	
Standard Reed	2270	431	182	
Off Olice on Par	5524	1049	442	
Off Walters and	7005	1330	560	
		13799	5811	2000

21610

More Cost due to 4.3" more Rainfall \$30,505

2015 COST \$30,505

AREA SEWER SENTRIES WHERE INSTALLED

2016 RAIN MORE 32% MORE 16.8"

SAVINGS

2016					
Station	Pump Size	Cost per Yr.		% of Savings	Savings per Yr.
		\$		\$	\$
Restful Homes	4"	1224	X	0.1	122
T - John	4"	1224	X	0.57	698
Nichols	3"	1100	X	0.66	726
Landreux	3"	1100	X	0.06	66
Lakewood	3"	1100	X	0.31	341
Harrell	3"	1100	X	0.15	165
Casa Linda	8"	2800	X	0.11	308
Hart	3"	1100	X	0.07	77
Nichols L	6"	1824	X	*0.05	*93
164 Sunset	4"	1224	X	0.04	49

2459

2016					
Station	Kilowatts Saved per Yr.	Treatment Cost per Kilowatt \$0.19	Electricity Cost per Kilowatt \$0.08	Clorine Cost Savings \$	
Restful Homes	1399	333	140	1000	
T - John	10952	1562	658	1000	
Nichols	1637	257	108		
Landreux	182	89	38		
Lakewood	2175	454	191		
Harrell	761	119	50		
Casa Linda	9731	3340	1406		
Hart	1214	744	314		
Nichols L	4953	2001	842		
164 Sunset	2829	5273	2221		
		14172	5968	2000	22140

2016 Savings \$24,599

Sewer Sentries	674			All Sewer Sentries not on
Buy and Install	250			
	168500	/	24599	
			6.8 Years	Payoff

Sewer Sentries	Electricity Savings	Treatment Savings	Pump Life Savings	Clorine Cost Saved	Total Savings
----------------	---------------------	-------------------	-------------------	--------------------	---------------

Restful Homes	64 ea	Kilo 1755	Kilo 1755	P C 1224	5gal bu 15	
Stopped Overflows	\$250	\$0.08	\$0.19	12%	\$85	
	\$16,000	\$141	\$334	\$147	\$1,275	\$1,897

15% up without SS	0 ea	Kilo 2165	Kilo 2165	P C 1224	5gal bu 15	
		\$0.08	\$0.19	15%	\$85	
		\$173	\$411	\$184	\$1,275	\$2,043
						\$3,940
	\$16,000	/	\$3,940			4.06 years

Sewer Sentries	Electricity Savings	Treatment Savings	Pump Life Savings	Clorine Cost Saved	Total Savings
----------------	---------------------	-------------------	-------------------	--------------------	---------------

T - John	41 ea	Kilo 8219	Kilo 8219	P C 1224	5gal bu 15	
Stopped Overflows	\$250	\$0.08	\$0.19	43%	\$85	
	\$10,250	\$658	\$1,562	\$527	\$1,275	\$4,022

15% up without SS	0 ea	Kilo 2882	Kilo 2882	P C 1224	5gal bu 15	
		\$0.08	\$0.19	15%	\$85	
		\$231	\$548	\$184	\$1,275	\$2,238
						\$6,260
	\$10,250	/	\$6,260			1.64 years

Sewer Sentries	Electricity Savings	Treatment Savings	Pump Life Savings	Clorine Cost Saved	Total Savings
----------------	---------------------	-------------------	-------------------	--------------------	---------------

Nichols	17 ea	Kilo 1350	Kilo 1350	P C 1100		
	\$250	\$0.08	\$0.19	54%		
	\$4,250	\$108	\$257	\$594		\$959

15% up without SS	0 ea	Kilo 373	Kilo 373	P C 1100		
		\$0.08	\$0.19	15%		
		\$30	\$71	\$165		\$266
						\$1,225
	\$4,250	/	\$1,225			3.5 years

Sewer Sentries	Electricity Savings	Treatment Savings	Pump Life Savings	Clorine Cost Saved	Total Savings
----------------	---------------------	-------------------	-------------------	--------------------	---------------

Landreaux	16 ea	Kilo 469	Kilo 469	P C 1100	
	\$250	\$0.08	\$0.19	14%	
	\$4,000	\$38	\$90	\$154	\$282

15% up without SS	0 ea	Kilo 498	Kilo 498	P C 1100	
		\$0.08	\$0.19	15%	
		\$40	\$95	\$165	\$300
					\$572
	\$4,000	/	\$572	7.0 years	

Sewer Sentries	Electricity Savings	Treatment Savings	Pump Life Savings	Clorine Cost Saved	Total Savings
----------------	---------------------	-------------------	-------------------	--------------------	---------------

Lakewood	13 ea	Kilo 2390	Kilo 2390	\$1,100	
	\$250	\$0.08	\$0.19	34%	
	\$3,250	\$191	\$454	\$374	\$1,019

15% up without SS	0 ea	Kilo 1070	Kilo 1070	P C 1100	
		\$0.08	\$0.19	15%	
		\$86	\$203	\$165	\$454
					\$1,473
	\$3,250	/	\$1,473	2.2 years	

Sewer Sentries	Electricity Savings	Treatment Savings	Pump Life Savings	Clorine Cost Saved	Total Savings
----------------	---------------------	-------------------	-------------------	--------------------	---------------

Harold Rd	5 ea	Kilo 625	Kilo 625	\$1,100	
	\$250	\$0.08	\$0.19	12%	
	\$1,250	\$50	\$119	\$132	\$301

15% up without SS	0 ea	Kilo 786	Kilo 786	P C 1100	
		\$0.08	\$0.19	15%	
		\$63	\$159	\$165	\$387
					\$688
	\$1,250	/	\$688	1.81 years	

Sewer Sentries	Electricity Savings	Treatment Savings	Pump Life Savings	Clorine Cost Saved	Total Savings
----------------	---------------------	-------------------	-------------------	--------------------	---------------

Casa Linda	137 ea	Kilo 17579	Kilo 17579	\$2,800	
	\$250	\$0.08	\$0.19	20%	
	\$34,250	\$1,406	\$3,340	\$560	\$5,306

15% up without SS	0 ea	Kilo 13468	Kilo 13468	P C 2800	
		\$0.08	\$0.19	15%	
		\$1,077	\$2,559	\$420	\$4,056
					\$9,362
	\$34,250	/	\$9,362	3.65 years	

Sewer Sentries	Electricity Savings	Treatment Savings	Pump Life Savings	Clorine Cost Saved	Total Savings
----------------	---------------------	-------------------	-------------------	--------------------	---------------

Hart	39 ea	Kilo 3918	Kilo 3918	\$1,100	
	\$250	\$0.08	\$0.19	23%	
	\$9,750	\$745	\$745	\$253	\$1,743

15% up without SS	0 ea	Kilo 2558	Kilo 2558	P C 1100	
		\$0.08	\$0.19	15%	
		\$205	\$486	\$165	\$856
					\$2,599
	\$9,750	/	\$2,599	3.75 years	

Sewer Sentries	Electricity Savings	Treatment Savings	Pump Life Savings	Clorine Cost Saved	Total Savings
----------------	---------------------	-------------------	-------------------	--------------------	---------------

Nichols L.	321 ea	Kilo 10530	Kilo 10530	\$1,824	
	\$250	\$0.08	\$0.19	11%	
	\$80,250	\$842	\$2,001	\$200	\$3,043

15% up without SS	0 ea	Kilo 14104	Kilo 14104	\$1,824	
		\$0.08	\$0.19	15%	
		\$1,129	\$2,680	\$274	\$4,083
					\$7,126
	\$80,250	/	\$7,126	11.26 years	

Sewer Sentries	Electricity Savings	Treatment Savings	Pump Life Savings	Clorine Cost Saved	Total Savings
----------------	---------------------	-------------------	-------------------	--------------------	---------------

164 Sunset	37 ea	Kilo 27753	Kilo 27753	\$1,224	
	\$250	\$0.08	\$0.19	39%	
	\$9,250	\$2,220	\$5,273	\$477	\$7,970

15% up without SS	0 ea	Kilo 10720	Kilo 10720	\$1,824	
		\$0.08	\$0.19	15%	
		\$858	\$2,037	\$274	\$3,169
	\$9,250	/	\$11,139	0.83 years	\$11,139

Savings Per Year	Cost of Sewer Sentries
------------------	------------------------

Restful Hom.	\$3,940	\$16,000			
T - Johns	\$6,260	\$10,250			
Nichols	\$1,225	\$4,250			
Landreaux	\$572	\$4,000			
Lakewood	\$1,473	\$3,250			
Harold Rd.	\$688	\$1,250			
Casa Linda	\$9,362	\$34,250			
Hart	\$2,559	\$9,750			
Nichols L.	\$7,126	\$80,250	5 Year Results	7.5 Year Results	10 Year Results
164 Sunset	\$11,139	\$9,250	Savings	Savings	Savings
TOTAL	\$44,344	\$172,500	\$49,220	\$160,080	\$270,940

\$44,344		\$221,720	\$332,580	\$443,440
	690 Sew Sen	\$322 Ea	\$482 Ea	\$645 Ea

Savings in 2015 with 50% Manholes Equipped with Sewer Sentries

Electricity		Treatment		Pump Life		Clorine		Total
Savings		Savings		Savings		Savings		Savings
		360000		116023				
		X		X				
		0.12		0.12				
18027.66		43200		13922.76		2000		77150.42

Cost of Sewer Sen
1700
X
<u>250</u>
425000

/

Savings in 2015
\$77,150.42

SAVINGS \$77,150

5.5 Years Payoff

**Note: 1700 of 3500 Manholes With the Sewer Sentries Installed. 50 %
 Extra Rainfall of 4.3" in 2015 and 16.8" in 2016
 More flow due to Point Repairs on completely Blocked lines. 200,000 GPD +**

ELECTRICAL BILLS FOR 2013 - 2015 - 2016

Month	2013	2015	2016
	52.6	56.9	69.4
1	19390.49	12155.16	15229.36
2	16169.71	13352.41	13185.26
3	12847.79	9679.67	16516.68
4	11320.06	14013.92	10028.23
5	11134.55	10486.89	11403.84
6	12895.13	11209.83	11694.43
7	11062.33	12702.49	11668.85
8	11389.34	9642.77	12127.47
9	11119.77	9423.62	13938.38
10	11092.14	9901.71	10606.69
11	11841.94	10486.47	11361.04
12	13812.67	12993.32	14021.41
	154075.92	136048.26	151781.64
		18027.66	2294.28

1 year Savings of Electricity Cost	12%	2%
---	------------	-----------

\$ per Inch of Rain	2929.20	2391.01	2187.06
---------------------	---------	---------	---------

Note: 1700 of 3500 Manholes With the Sewer Sentries Installed. 50 %
 Extra Rainfall of 4.3" in 2015 and 16.8" in 2016
 More flow due to Point Repairs on completely Blocked lines. 200,000 GPD +

TREATMENT COST CALCULATION

2013	\$ per Month	Treatment	
1	19390.49	Cost per	
2	16169.71	Month Ave.	30000
3	12847.79		X 12
4	11320.06	Cost per year	360000
5	11134.55	Total Cost	154076
6	12895.13		/
7	11062.33	Cost per Kilow	0.08
8	11389.34	Kilowatts user	1925950
9	11119.77	Yr treatment	360000
10	11092.14		/
11	11841.94	Kilowatts user	1925950
12	13812.67	Treatment Cost	
Total Cost		154075.92	Per Killowatt 0.19

For Every 1 Kilowatt used it cost \$.19 of Treatment Cost

PUMP STATION COST PER YEAR CALCULATION

Size Pump	New	Parts	10 Year	1 Year	# Of Pumps	1 year Cost
2" Pump	3400	2100	5500	550	2	1100
3" Pump	3400	2100	5500	550	2	1100
4" Pump	3820	2300	6120	612	2	1224
6" Pump	5620	3500	9120	912	2	1824
8" Pump	8500	5500	14000	1400	2	2800
10" Pump	12000	7500	19500	1950	3	5850
12" Pump	24900	19000	43900	4390	3	13170

**This is Based on a 10 Year Life Expectantcy of Pump Station with 1 Rebuild Job.
Labor is not included due to hard to establish the Cost.
This Cost is based on Gorman Rump Pump Manufactory and Employees at WOSD#5.**

WOSD#5 PUMP STATION COST
PER YEAR

Pump Size	# of Pumps	New Pump	Parts	Total	10 Yr Total	Days Labor	Labor Cost
		\$	\$	\$		\$ 800 per Day	10 Yr Total
2"	10	3400	2100	5500	55000	10	8000
3"	58	3400	2100	5500	319000	58	46400
4"	18	<u>3820</u>	2300	6120	110160	18	14400
6"	10	5617	3500	9117	91170	10	8000
8"	9	9500	7300	16800	151200	12	9600
10"	3	12000	8500	20500	61500	10	8000
12"	6	24900	19000	43900	263400	18	14400

1051430	108800
/	/
10	10
\$105,143	\$10,880

WOSD#5 Cost of 54 Pump Stations for 1 Year \$116,023



Summary Account 52792066
 Statement For MARCH 2013
 Mail Date 04/11/2013

Business Solutions Center
 877-ETRBIZZ (877-387-2499); 8a-5p, Mon-Fri
 Power Outage or Safety Concern, 24 hrs/7days
 800-968-8243 (800-9OUTAGE)

Collective Bill

Basic Bill For - West Ouachita Sewerage Dit. #5

Detail Number	Current Month Energy Charges	Billing Status	Rate	Qty	Service Dates		Meter Number / Facility Type	Service Location / ID	Billed Demand	Billed kWh / CCF / MBtu
					From	To				
39152988	\$111.22	ACTIVE	MP		02/15/2013	03/18/2013	844831	Evergreen And Tulip West Monroe		1312
39153150	\$103.50	ACTIVE	MP		02/11/2013	03/12/2013	7230242	Ark And Henderson G2 West Monroe	7.26	755
52529203	\$66.23	ACTIVE	SGS		02/14/2013	03/14/2013	3202202	153 Netherland St West Monroe	3.50	334
91612341	\$22.84	ACTIVE	SGS		02/11/2013	03/12/2013	3351904	Forty Oaks Farm Rd West Monroe	3.00	56
102669645	\$54.31	ACTIVE	SGS		02/11/2013	03/12/2013	3270980	1 Hamilton Park West Monroe	9.00	217
25270828	\$49.25	ACTIVE	MP		02/07/2013	03/12/2013	668732	Standard Reed Rd West Monroe		581
25272964	\$2,563.56	ACTIVE	MP		02/07/2013	03/11/2013	648520	Kiroll Rd Station C West Monroe	96.00	30240
25476747	\$33.28	ACTIVE	MP		02/15/2013	03/19/2013	759996	Central And Ransom St West Monroe		181
28221562	\$26.89	ACTIVE	MP		02/22/2013	03/25/2013	675717	Jennifer Ln West Monroe		273
28221885	\$27.37	ACTIVE	MP		02/08/2013	03/11/2013	785865	Landreaux West Monroe		290
28222156	\$34.53	ACTIVE	MP		02/15/2013	03/19/2013	7144595	160 Sterling Ave West Monroe	5.00	97
28222537	\$20.40	ACTIVE	MP		02/07/2013	03/12/2013	7012207	Hidden Lakes Saw Stat West Monroe		117
29254760	\$137.33	ACTIVE	MP		02/07/2013	03/08/2013	660365	Restful Homes Rd West Monroe		1620
29254950	\$38.03	ACTIVE	MP		02/07/2013	03/11/2013	3381878	Nichols Dr West Monroe		299
29255247	\$146.85	ACTIVE	MP		02/11/2013	03/11/2013	844962	T John Rd West Monroe		1732
29255494	\$25.52	ACTIVE	MP		02/11/2013	03/11/2013	3358013	Forest Vlg Mbl Lot17 West Monroe	4.20	244
29255825	\$57.81	ACTIVE	MP		02/12/2013	03/12/2013	7638969	Lakewood Dr West Monroe		682
29256047	\$358.43	ACTIVE	MP		02/13/2013	03/14/2013	3381059	Ouachita Pkg Near I-20 West Monroe	26.15	4228
29256625	\$102.75	ACTIVE	MP		02/11/2013	03/13/2013	7144670	Love Rd Sta H West Monroe	11.94	1212
29257680	\$22.74	ACTIVE	MP		02/11/2013	03/13/2013	7155880	Lakeland Gardens West Monroe	0.94	175
29258274	\$43.67	ACTIVE	MP		02/11/2013	03/12/2013	403965	Harrell Rd West Monroe		439
29259082	\$84.42	ACTIVE	MP		02/15/2013	03/19/2013	851275	Jewell St At Richardso West Monroe		996
29261369	\$17.82	ACTIVE	MP		02/13/2013	03/15/2013	729335	Short Cox St West Monroe		53
29261658	\$57.56	ACTIVE	MP		02/13/2013	03/16/2013	3376518	Parker St West Monroe	18.69	679
29261872	\$223.73	ACTIVE	MP		02/11/2013	03/12/2013	844061	New Natchitoches Rd West Monroe		2639
29262045	\$27.98	ACTIVE	MP		02/15/2013	03/18/2013	7138180	Off Walters On Lashay West Monroe		305
29262300	\$2,007.45	ACTIVE	MP		02/18/2013	03/19/2013	7639060	Lenwill Rd West Monroe	86.40	23680
29262565	\$45.95	ACTIVE	MP		02/11/2013	03/12/2013	7040101	121 Wolf Lair Dr West Monroe		542
29262805	\$721.59	ACTIVE	MP		02/07/2013	03/11/2013	848814	Nichols Dr Station L West Monroe		8512
29263142	\$31.11	ACTIVE	MP		02/09/2013	03/11/2013	7485790	Post Oaks Estates Rd West Monroe		127
29263639	\$15.93	ACTIVE	MP		02/14/2013	03/14/2013	900576	Wallace Dean Rd West Monroe		6
29264264	\$30.61	ACTIVE	MP		02/11/2013	03/12/2013	3356245	Green Springs Sub West Monroe	8.94	361
29265410	\$132.17	ACTIVE	MP		02/11/2013	03/12/2013	7230188	Hart Rd West Monroe	7.90	1559
29266285	\$65.36	ACTIVE	MP		02/15/2013	03/18/2013	7220852	Smith St West Monroe		771
29268752	\$125.27	ACTIVE	MP		02/18/2013	03/19/2013	851964	Hinton And Hickory West Monroe		535
29261011	\$771.71	ACTIVE	MP		02/13/2013	03/12/2013	7223867	Casa Linda Sdrea222 West Monroe	60.92	9103
29282647	\$27.85	ACTIVE	MP		02/11/2013	03/12/2013	3429835	Kenny Ln West Monroe		302
29283298	\$18.31	ACTIVE	MP		02/11/2013	03/11/2013	665424	Sabron Ln West Monroe		65
29285871	\$275.68	ACTIVE	MP		02/11/2013	03/13/2013	3288676	164 Sunset Rd West Monroe	28.18	3252
29286770	\$1,329.25	ACTIVE	MP		02/14/2013	03/14/2013	3255430	Hilton Station N West Monroe	147.20	15680
29287604	\$485.46	ACTIVE	MP		02/15/2013	03/19/2013	7063052	N Side And End Douglas St West Monroe	25.67	3077
29288149	\$38.88	ACTIVE	MP		02/08/2013	03/08/2013	3355542	Tupaw Manor Aptre West Monroe	10.12	315
29288982	\$33.88	ACTIVE	MP		02/08/2013	03/08/2013	3262242	Lakeside Dr West Monroe	5.62	196
29290509	\$788.41	ACTIVE	MP		02/08/2013	03/08/2013	N8003059	Pincrest D 1 West Monroe	34.97	2136
29291101	\$19.68	ACTIVE	MP		02/11/2013	03/12/2013	815229	Ashwood Ironwood West Monroe		99
29291382	\$121.89	ACTIVE	MP		02/11/2013	03/13/2013	776342	327 WellRd West Monroe		1438
29291572	\$156.41	ACTIVE	MP		02/15/2013	03/18/2013	858110	New Natch And Wash West Monroe		1845
29292455	\$154.71	ACTIVE	MP		02/15/2013	03/18/2013	757861	Off Olice On Pam West Monroe		1625
29354131	\$352.00	ACTIVE	SGS		02/08/2013	03/11/2013	7092870	327 Wallace Rd West Monroe	14.00	2376
29453537	\$186.24	ACTIVE	MP		02/11/2013	03/12/2013	3383533	Barfoot Rd West Monroe	10.76	1961
29453776	\$43.67	ACTIVE	MP		02/11/2013	03/13/2013	7238909	I 20 And Well Road Lift West Monroe		439

AM C COLL
 00000018 00018 00002 entLA COL DPO MAIL 01 20130409 050243



Entergy

Entergy Louisiana, LLC
entergy-louisiana.com

Summary Account 52792066
Statement For MARCH 2016
Mail Date 04/12/2016

Collective Bill

Business Solutions Center
877-ETRBIZZ (877-387-2499); 8a-5p, Mon-Fri
Power Outage or Safety Concern, 24 hrs/7days
800-968-8243 (800-9OUTAGE)

Level I - Basic Bill For - West Ouachita Sewerage Dlt. #5

Detail Number	Current Month Energy Charges	Billing Status	Rate	Qty	Service Dates		Meter Number / Facility Type	Service Location / ID	Billed Demand	Billed kWh / CCF / MBtu
					From	To				
29453637	\$100.51	ACTIVE	MP		02/11/2016	03/14/2016	3383533	Barfoot Rd West Monroe	12.26	1342
29453776	\$40.20	ACTIVE	MP		02/11/2016	03/14/2016	7238909	I 20 And Well Road Lift West Monroe		453
29254760	\$126.80	ACTIVE	MP		02/09/2016	03/10/2016	3391834	Restful Homes Rd West Monroe	25.38	1693
29254950	\$30.79	ACTIVE	MP		02/08/2016	03/10/2016	3381878	Nichols Dr West Monroe		106
29255247	\$75.22	ACTIVE	MP		02/09/2016	03/11/2016	844962	T John Rd West Monroe		1004
29255494	\$29.44	ACTIVE	MP		02/10/2016	03/12/2016	3358013	Forest Vlg Mbl Lot17 West Monroe	8.42	393
29255825	\$40.45	ACTIVE	MP		02/11/2016	03/12/2016	7638969	Lakewood Dr West Monroe		540
29256047	\$503.66	ACTIVE	MP		02/15/2016	03/16/2016	3381059	Ouachita Pkg Near I-20 West Monroe	56.04	6724
29256625	\$136.61	ACTIVE	MP		02/11/2016	03/12/2016	7144670	Love Rd Sta H West Monroe	15.95	1824
29257680	\$22.12	ACTIVE	MP		02/11/2016	03/11/2016	7155680	Lakeland Gardens West Monroe	5.63	195
29258274	\$38.87	ACTIVE	MP		02/11/2016	03/12/2016	403965	Harrell Rd West Monroe		404
29259082	\$145.84	ACTIVE	MP		02/17/2016	03/17/2016	851275	Jewell St At Richardso West Monroe		1947
29261369	\$62.77	ACTIVE	MP		02/16/2016	03/15/2016	729335	Short Cox St West Monroe		838
29261658	\$136.31	ACTIVE	MP		02/16/2016	03/15/2016	3376518	Parker St West Monroe	24.57	1820
29261872	\$177.52	ACTIVE	MP		02/11/2016	03/14/2016	844061	New Natchitoches Rd West Monroe		2370
29262045	\$133.84	ACTIVE	MP		02/17/2016	03/17/2016	7138180	Off Walters On Lashay West Monroe		1787
29262300	\$1,749.71	ACTIVE	MP		02/18/2016	03/18/2016	7639080	Lenwil Rd West Monroe	137.60	23360
29262565	\$58.27	ACTIVE	MP		02/11/2016	03/15/2016	7040101	121 Wolf Lair Dr West Monroe		778
29262805	\$789.68	ACTIVE	MP		02/09/2016	03/10/2016	848814	Nichols Dr Station L West Monroe		10543
29263142	\$32.91	ACTIVE	MP		02/09/2016	03/10/2016	7485790	Post Oaks Estates Rd West Monroe		184
29263639	\$17.39	ACTIVE	MP		02/15/2016	03/15/2016	900576	Wallace Dean Rd West Monroe		20
29264284	\$33.85	ACTIVE	MP		02/11/2016	03/11/2016	3356245	Green Springs Sub West Monroe	8.23	452
29265410	\$125.39	ACTIVE	MP		02/11/2016	03/12/2016	3454581	Hart Rd West Monroe		1674
29266285	\$67.42	ACTIVE	MP		02/17/2016	03/17/2016	7220852	Smith St West Monroe		900
29268752	\$190.16	ACTIVE	MP		02/18/2016	03/18/2016	851964	Hinton And Hickory West Monroe		2539
29281011	\$783.77	ACTIVE	MP		02/11/2016	03/12/2016	3528687	Casa Linda Sdrea222 West Monroe	78.35	10464
29282647	\$44.72	ACTIVE	MP		02/09/2016	03/11/2016	3429835	Kenny Ln West Monroe		597
29283298	\$19.91	ACTIVE	MP		02/09/2016	03/11/2016	665424	Sebron Ln West Monroe		113
29285871	\$483.04	ACTIVE	MP		02/11/2016	03/12/2016	3268676	164 Sunset Rd West Monroe	25.17	6449
29286770	\$1,989.40	ACTIVE	MP		02/15/2016	03/15/2016	3255430	Hilton Station N West Monroe	144.00	26560
29287604	\$543.92	ACTIVE	MP		02/17/2016	03/17/2016	7063052	N Side And End Douglas St West Monroe	53.01	5740
29288149	\$41.72	ACTIVE	MP		02/09/2016	03/11/2016	3355542	Tupaw Manor Aptre West Monroe	17.25	509
29288982	\$35.70	ACTIVE	MP		02/09/2016	03/09/2016	3252242	Lakeside Dr West Monroe	7.87	287
29290509	\$840.17	ACTIVE	MP		02/09/2016	03/10/2016	N6003059	Pincrest D 1 West Monroe	34.98	3165
29291101	\$21.31	ACTIVE	MP		02/11/2016	03/12/2016	815229	Ashwood Ironwood West Monroe		165
29291382	\$43.13	ACTIVE	MP		02/11/2016	03/14/2016	776342	327 Well Rd West Monroe		561
29291572	\$188.05	ACTIVE	MP		02/17/2016	03/17/2016	856110	New Natch And Wash West Monroe		2511
29292455	\$218.77	ACTIVE	MP		02/17/2016	03/17/2016	757961	Off Olice On Pam West Monroe		2921
39152988	\$274.21	ACTIVE	MP		02/17/2016	03/17/2016	844931	Evergreen And Tulp West Monroe		3661
39153150	\$90.10	ACTIVE	MP		02/11/2016	03/11/2016	7230242	Ark And Henderson G2 West Monroe	9.00	1203
52529203	\$116.61	ACTIVE	SGS		02/15/2016	03/16/2016	3202202	153 Netherland St West Monroe	7.50	668
26476747	\$57.45	ACTIVE	MP		02/17/2016	03/17/2016	759996	Central And Ransom St West Monroe		767
25270828	\$90.50	ACTIVE	MP		02/10/2016	03/11/2016	668732	Standard Reed Rd West Monroe		1208
102669645	\$75.33	ACTIVE	SGS		02/10/2016	03/12/2016	3270980	1 Hamilton Park West Monroe	10.00	386
25272964	\$4,152.56	ACTIVE	MP		02/08/2016	03/10/2016	648520	Kiroil Rd Station C West Monroe	100.80	55440
91612341	\$80.92	ACTIVE	SGS		02/11/2016	03/12/2016	3351904	Forty Oaks Farm Rd West Monroe	3.50	494
30432983	\$70.34	ACTIVE	MP		02/17/2016	03/18/2016	874192	Latham Ln West Monroe		939
30433254	\$970.74	ACTIVE	MP		02/18/2016	03/18/2016	3241272	Church And Levee St West Monroe	100.80	12960
29364131	\$307.27	ACTIVE	SGS		02/10/2016	03/12/2016	3531728	327 Wallace Rd West Monroe	17.50	1920
28221562	\$36.33	ACTIVE	MP		02/24/2016	03/24/2016	675717	Jennifer Ln West Monroe		485
28221885	\$25.98	ACTIVE	MP		02/09/2016	03/11/2016	785865	Landreaux West Monroe		337

OFFICE 800-968-8243 FAX 800-968-8243