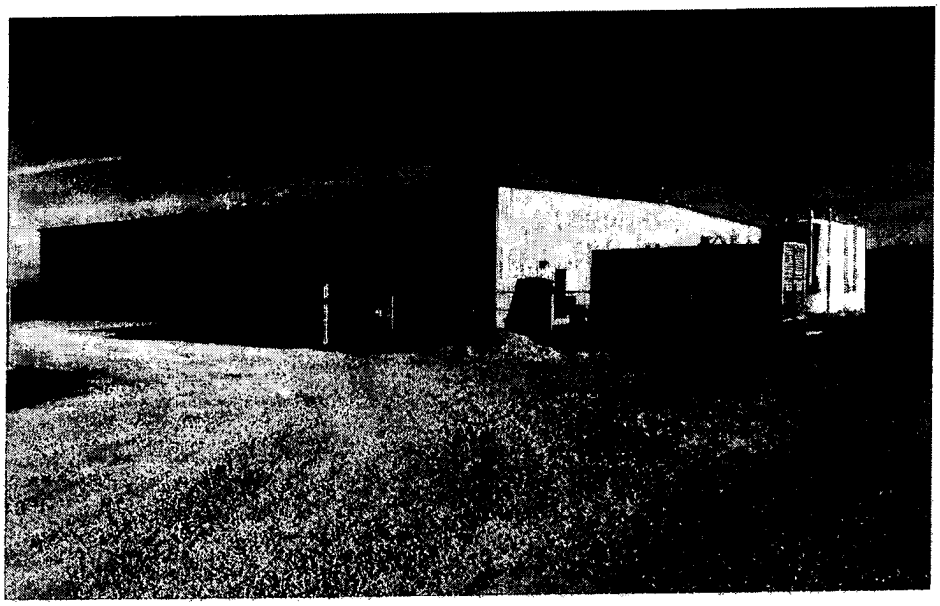
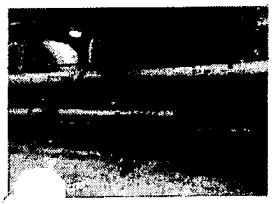
WOODARD &CURRAN

Monthly Operating REPORT

May 2015





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June 16, 2015

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COMMITMENT & INTEGRITY DRIVE RESULTS

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EXECUTIVE SUMMARY

Woodard and Curran assumed responsibility of the South Sangamon Water System on May 1, 2015. Prior to assuming responsibility, we started setting up for the transition of the system by developing a transition plan and coordinating a series of meetings in order to have a smooth and seamless transition. Members from Woodard & Curran's safety, IT, and SCADA transition support teams were onsite in addition to other members supporting the accounting, insurance, compliance, and administrative needs.

Safety is the #1 priority as part of the transition and daily operations. A safety audit was scheduled the week of May 18th, employee physicals and drug screens were conducted, and the safety training schedules were established. There were no Lost Time accidents during the month of May and the required monthly safety training was completed.

All regulatory reporting and sampling requirements were performed for the month, and the water quality met all IEPA limits. The plant produced a total of 34.03 MG for the month and there were no disruptions of service. Data for the month of May and prior to Woodard & Curran assuming the operations continues to be entered into the system for daily process control, regulatory reporting, historical analysis, and trouble shooting. The operations team consisting of process experts and engineers will be utilizing the database to support the projects optimization and capital investments.

There were no complaints for the month. We did experience a couple of after hour alarm events associated with computer glitch's or instrument failures. The necessary adjustments were made and there were no disruptions of service or water quality.

The installation of the preventative computerized maintenance management system is an ongoing effort. We started some preventative maintenance activities and will continue to build the maintenance management system as part of the implementation of the preventative, predictive, and corrective maintenance program. We had three service calls to the plant in May to address a leak in the roof, the repair of (2) of the dehumidifiers, and the inspection of the backflow prevent devices. The new backup power supply SSWC purchased in March was installed in May.

Woodard & Curran is working with the SSWC and engineers to develop a Capital Improvement Plan. The plan will be a 1-5 year plan summarizing potential projects required to address regulatory, safety, reliability, maintenance, or water quality issues. The current capital plan is a working document and still being defined as it relates to cost and priority.

The hiring effort as part of the transition has been ongoing since April. Woodard & Curran has posted the operator position in local and national recruiting services and been working with ERTC to generate interest. Several candidates have applied and five interviews have been conducted. The effort is ongoing to onboard an operator as soon as possible. Bobby Nichols has been filling the operator position in the interim. Training needs for the various processes, operations software tools, and maintenance are being developed to support the operation's needs.

A site visit by Woodard & Curran's CEO, Doug McKeown, and Business Center Manager, Steve Niro is scheduled for June. The Maintenance and Reliability Manager, Rich Hunt, and Operations Process Expert, Derek Burton, are scheduled for site visits in June as part of the transition plan.

The first months financial summary is provided showing the costs are $50,847 under for the month and year to date. As part of the transition, several of the monthly expenditures have likely carried over into June explaining the significant difference between budget and actual expenses. Starting May 1, Homefield Energy was proposing a 15-20% increase in electric rates. Woodard & Curran worked closely with the SSWC to solicit quotes from Homefield and Constellation, which resulted in a 12.2% decrease by switching to Constellation Energy as part of a 30-month contract.

1. SAFETY

1.1 SAFETY TRAINING

Joanna Wallace provided Site specific training as well as guidance through the Pure Safety monthly training for WTP staff

1.2 LOST TIME ACCIDENTS

There were no lost time accidents

1.3 SAFETY AUDIT

During Joanna's visit to the site, a safety audit was performed. The findings of the audit should be available in June for immediate attention.

1.4 MISCELLANOUS SAFETY

Attended a companywide safety stand-down for Arc Flash related task.

2. COMPLIANCE, FLOWS, AND LOADINGS

2.1 COMPLIANCE

The effluent quality was within regulatory limits and all reporting and sampling requirements were met for May. We continue to experience a slight Free Chlorine exceedance of the NPDES discharge limit. The annual Consumer Compliance Report is currently being generated and will be available in July.

2.2 INFLUENT FLOWS AND LOADINGS

The total water produced for the month of May was 36.837 MG and the influent parameters were all within the normal range. The influent flow and loadings are summarized below in Table 2.1

Table 2.1

Influent Concentrations and Flow

Day	Raw pH	Raw Temp	Raw Fe	Raw Mn	Raw F	Raw Hard	Raw Alk	Total Well Flow
	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	Gal
1	7.61	15.60	0.60	0.213	0.09	356	280	1.049
2	6.73	15.30	0.63	0.221	0.25	350	264	1.125
3	7.09	14.80	0.77	0.218	0.30	342	270	1.114
4	7.26	15.20	0.99	0.228	0.26	356	270	1.188
5	8.13	15.60	1.05	0.224	0.22	362	278	1.119
6	7.37	15.00	0.88	0.212	0.22	350	272	1.073
7	7.13	17.70	1.12	0.225	0.20	358	278	1.107
8	8.55	18.00	1.29	0.210	0.18	358	278	1.16
9	6.70	15.20	0.88	0.210	0.21	356	166	1.152
10	6.81	15.40	0.67	0.202	0.09	332	264	1.22
11	7.57	14.40	0.73	0.208	0.13	362	272	1.308
12	7.59	13.20	0.63	0.213	0.23	366	276	1.337
13	6.87	15.20	0.91	0.212	0.19	248	268	1.334
14	6.92	13.40	0.74	0.218	0.19	360	274	1.178
15	7.59	13.80	0.86	0.202	0.19	356	274	1.244
16	7.65	15.40	0.98	0.212	0.39	366	278	1.229
17	7.61	17.00	0.83	0.198	0.20	366	278	1.25
18	7.59	13.90	0.96	0.208	0.29	360	272	1.352
19	7.59	13.70	0.88	0.210	0.29	364	266	1.307
20	8.33	16.20	0.78	0.206	0.28	362	278	1.174
21	7.56	13.60	0.97	0.210	0.28	360	282	1.162
22	6.92	13.50	0.95	0.210	0.23	362	264	1.183
23	6.52	14.30	1.17	0.210	0.32	358	268	1.27
24	6.81	14.10	0.89	0.221	0.25	342	162	1.244
25	7.85	13.70	0.93	0.218	0.48	394	266	1.176
26	6.68	13.40	0.97	0.206	0.35	342	276	1.143
27	7.68	14.20	1.04	0.204	0.28	364	278	1.204
28	7.67	13.60	0.87	0.203	0.27	366	268	1.099
29	7.80	14.40	0.87	0.205	0.22	358	278	1.051
30	7.05	14.10	0.94	0.204	0.07	346	270	1.158
31	6.88	13.30	1.05	0.220	0.43	350	268	1.127
Max	**6.88**	**13.30**	**1.05**	**0.220**	**0.43**	**350**	**268**	**1.352**
Min	**6.52**	**13.20**	**0.60**	**0.198**	**0.07**	**248**	**162**	**1.049**
Avg	**7.36**	**14.72**	**0.90**	**0.212**	**0.24**	**354**	**266**	**1.188**
Total	-	-	-	-	-	-	-	**36.837**

2.3 EFFLUENT CONCENTRATIONS

The effluent water quality parameters were all within the normal range for average and peak concentrations. The average removal efficiency for Manganese was 86%. The effluent water quality concentrations are summarized below in Table 2.2.

The facility produced 34.08 MG during the month with a daily average of 1.10 MG and a min/max of 0.95/1.35 MG.

Table 2.2

Effluent Water Quality

Date	Free Cl2	Total Cl2	Finished pH	Finished Temp	Finished Iron	Finished Maganese	Maganese Removal %	Finished Fluoride	Finished Hardness	Finished Alk	Finished P
1	1.5	1.4	7.17	15.10	0.00	0.032	84.98	0.51	120	280	1.26
2	1.4	1.4	6.94	15.00	0.00	0.034	84.62	0.55	120	264	1.20
3	1.2	1.2	7.10	17.60	0.00	0.038	82.57	0.59	122	278	1.26
4	1.4	1.4	7.18	17.10	0.00	0.033	85.53	0.61	130	270	1.21
5	1.2	1.4	8.36	16.90	0.00	0.033	85.27	0.86	122	266	1.24
6	1.0	1.2	7.13	17.90	0.00	0.032	84.91	0.61	116	240	0.94
7	1.3	1.5	6.98	16.20	0.00	0.032	85.78	0.97	118	264	1.20
8	1.1	1.3	8.13	16.70	0.00	0.030	85.71	0.79	120	278	1.24
9	1.2	1.4	6.53	17.30	0.00	0.035	83.33	0.82	116	258	0.93
10	1.2	1.2	6.75	17.50	0.00	0.027	86.63	0.78	116	264	0.97
11	1.3	1.5	7.83	16.70	0.00	0.027	87.02	0.85	116	276	1.18
12	0.9	1.1	7.81	16.30	0.00	0.032	84.98	1.16	118	274	1.29
13	1.0	1.0	6.62	22.10	0.00	0.019	91.04	0.98	118	236	1.40
14	1.4	1.5	6.74	16.20	0.00	0.034	84.40	0.88	122	276	1.20
15	1.4	1.5	7.80	16.40	0.00	0.025	87.62	0.98	116	268	1.12
16	1.4	1.5	7.69	16.20	0.00	0.034	83.96	1.20	116	268	1.17
17	1.4	1.4	7.88	16.80	0.00	0.021	89.39	0.90	116	256	1.22
18	1.5	1.6	7.78	17.00	0.00	0.028	86.54	1.14	118	254	1.21
19	1.4	1.5	7.83	15.30	0.00	0.030	85.71	0.92	126	280	1.26
20	1.4	1.5	8.06	14.70	0.00	0.035	83.01	0.93	122	264	1.19
21	1.5	1.5	7.80	14.80	0.00	0.022	89.52	1.20	120	278	1.07
22	1.2	1.2	6.80	16.50	0.00	0.028	86.67	1.01	122	254	1.28
23	1.2	1.2	6.66	19.20	0.00	0.018	91.43	1.03	112	272	1.44
24	1.4	1.4	6.75	15.20	0.00	0.030	86.43	0.62	104	272	1.02
25	1.4	1.4	8.06	14.90	0.00	0.048	77.98	1.25	130	270	0.77
26	1.6	1.6	6.82	14.40	0.00	0.028	86.41	1.22	112	264	1.18
27	1.5	1.5	7.84	17.90	0.00	0.018	91.18	1.00	118	275	1.15
28	1.4	1.4	7.92	16.40	0.00	0.028	86.21	1.04	120	250	1.43
29	1.6	1.6	7.92	20.30	0.00	0.036	82.44	0.98	116	268	1.24
30	1.0	1.2	6.71	22.40	0.00	0.017	91.67	1.04	112	254	2.91
31	1.2	1.2	6.80	16.00	0.00	0.033	85.00	1.26	114	268	1.21
Max	**1.6**	**1.6**	**8.36**	**22.40**	**0.00**	**0.048**	**91.67**	**1.26**	**130**	**280**	**2.91**
Min	**0.9**	**1.0**	**6.53**	**14.40**	**0.00**	**0.017**	**77.98**	**0.51**	**104**	**236**	**0.77**
Avg	**1.3**	**1.4**	**7.37**	**16.87**	**0.00**	**0.030**	**86.06**	**0.93**	**118**	**266**	**1.24**

2.4 LAGOON DISCHARGE CONCENTRATIONS

The results for the NPDES lagoon discharge permit are summarized below. We continue to experience exceedances of the Cl concentration.

Table 2.3 Weekly Grab Sample Analysis Results

Date	Fe (mg/l)	Mn (mg/l)	Chloride (mg/l)	Cl^2 (mg/l)	pH (S.U.)	TSS (mg/l)
5/4/2015	0.753	0.279	454	0.311	7.96	4
5/11/2015	0.394	0.209	329	0	8.06	0
5/18/2015	1.41	0.65	458	0.717	8.12	7
5/26/2015	0.644	0.298	420	0.386	8.1	4
Minimum	0.394	0.209	329	0	7.96	0
Maximum	1.41	0.65	458	0.717	8.12	7
Average	0.8	0.359	415	0.353	8.06	3.75
Monthly Avg Limit	***2.0***	***1.0***	-	-	-	***15***
Daily Limit	***4.0***	***2.0***	***500***	***0.05***	***6.0-9.0***	***30***

3. OPERATIONS

3.1 EVENTS IMPACTING OPERATIONS

3.2 EMERGENCY & SERVICE CALLS

3.2.1 Emergency Call-outs

Brine System Alarm: On May 21, 2015, the plant went into alarm at approximately 2:30 am. The regeneration process had stopped because the minimum amount of flow needed during the Brine process was insufficient. The sensor was cleaned and the regeneration was completed.

3.3 CUSTOMER COMPLAINTS

3.4 MAINTENANCE & REPAIR

The installation of the preventative computerized maintenance management system is an ongoing effort. We started some preventative maintenance activities and will continue to build the maintenance management system as part of the implementation of the preventative, predictive, and corrective maintenance program.

We had three service calls to the plant in May to address:

- Leak in the roof on the northeast corner of the building: A Leak in the roof on the northeast corner of the building was discovered on May 6, 2015. Henson Robinson was called and arrived at the plant on May 11, 2015 to inspect and fix the roof. No apparent leak was discovered, but they did caulk the areas where they thought perhaps water could be getting in. This failed to fix the issue and Henson Robinson will be returning soon to try and find out where the leak is occurring and effect repairs.
- Dehumidifiers: Due to the amount of electronic in the SSWC plant, it's important that humidity levels remain low in the plant. Once the humidity levels began to rise we discovered that two (2) of the six (6) dehumidifiers were not working in the plant. I called Petersburg Plumbing and Heating and they're representative came out to look at the two that were not working and check the remaining 4 humidifiers while he was here. One unit is in need of both a Defrost Timer and Condensation Pump, the other unit needs just a Condensate Pump. These parts have been ordered and are expected to arrive at the plant on June 15, 2015 or the following day. Once they're here, Petersburg Plumbing and Heating will return to the plant to install the parts.
- Backflow Prevention Devices: The backflow prevention devices are required by the state of Illinois in the event there is a loss of pressure in the plant. These are required to be checked once a year. The testing was completed on May 13, 2015 and are in good working condition.

The power supply on the WesTech HMI malfunctioned on February 14, 2015 and shut the entire plant down. In March, 2015, SSWC purchased a new power supply at a cost of $1,100.00. The new unit was installed on May 22, 2015. The old unit will be shipped back for possible repair in order to provide some redundancy for this critical part.

3.5 PHOSPHATE BLEND PROPOSED CHANGE

Water Solutions Unlimited is recommending we change phosphate we're currently feeding. The steel corrosion rates are excellent. The copper corrosion rates could stand to be a little lower. The current phosphate is a 50/50 blend. We would be switching to a 75/25 blend. The cost is the same as well as the feed rate. There would be no noticeable change to the consumer.

4. PROJECT MANAGEMENT & SUPPORT

4.1 STAFFING & TRAINING

- We are still in the process of hiring a candidate for the operator's position here at the plant. Once this task is completed, training will take place in the near future.
- On May 20, 2015, Joanna Wallace came to the plant to review the current safety plans and procedures in place at SSWC.

4.2 CORPORATE SUPPORT

- Meeting with WesTech on May 11, 2015 regarding issues with the filters and future support
- Bi-weekly project support calls
- SCADA service group onsite on May 13, 2015 to review system in place
- W&C IT onsite on May 20, 2015 to review site technology needs
- Jennifer Anders and Jason Dennis onsite May 11, 2015 for support

4.3 BUDGET

As part of the transition, the budget and all vendor accounts were established. Starting May 1, Homefield Energy was proposing a 15-20% increase in electric rates. Woodard & Curran worked closely with the SSWC to solicit quotes from Homefield and Constellation, which resulted in a 12.2% decrease by switching to Constellation Energy as part of a 30-month contract.

The first month's financial summary is provided below in Table 3.1 showing the costs are $50,847 under for the month and year to date. As part of the transition, several of the monthly expenditures have likely carried over into June explaining the significant difference between budget and actual expenses.

Table 4.1 Budget Table

Budget Category	Month Budget	Month Actual	YTD Budget	YTD Actual	Annual Budget	over(under)	% of budget
Labor (D.L. + OH)	$19,187	$6,974	$19,187	$6,974	$230,244	($12,213)	3%
Utilities	$8,320	$0	$8,320	$0	$99,840	($8,320)	0%
Chemicals	$16,388	$8,389	$16,388	$8,389	$196,655	($7,999)	4%
Maintenance & Repair	$8,299	$0	$8,299	$0	$99,585	($8,299)	0%
Sludge	$13,813	$0	$13,813	$0	$165,760	($13,813)	0%
Lab Supplies and Equipment	$1,530	$0	$1,530	$0	$18,355	($1,530)	0%
Office Supplies	$188	$2,368	$188	$2,368	$2,250	$2,181	105%
Miscellaneous Expenses	$1,213	$637	$1,213	$637	$14,550	($576)	4%
Other Operating Costs	$278	$0	$278	$0	$3,339	($278)	0%
Subtotal of Costs for Contract Year 2	**$69,215**	**$18,368**	**$69,215**	**$18,368**	**$830,578**	($50,847)	2%
Fixed Fee for Contract Year 2	$6,922	$6,922	$6,922	$6,922	$83,059	$0	8%
Total	**$76,136**	**$25,290**	**$76,136**	**$25,290**	**$913,637**	**($50,847)**	**3%**

5. CAPITAL PLANNING

5.1 CURRENT PROJECTS STATUS

Sampling Stations in the Well Field: On June 2, 2015, Mr. Terry Burke and Dan Held met with the Illinois Environmental Protection Agency to discuss a number of project. One issue discussed was the sampling locations in the well field and the classification of the SSWC plant as "under the influence of surface water". During these discussions, Mr. David Cook recommended sampling stations be installed. He also suggested that in the future it's possible the current sample locations will not be allowed.

During inspection of the plant by Safety personnel from Woodard and Curran, the current sample locations are located inside concrete pits at the individual well sites. This location has been designated a confined space. Because of this designation, two people will be required to pull well samples and special equipment will need to be set up at each location each time a sample is drawn.

Sampling stations can be installed at each well that will not require entry into the current sample locations. The total cost for the sampling stations and the labor to install the sample stations is approximately $15,000. Two bids were obtained for the sample stations: $785 each from Midwest Meter and $829 each from IMCO Utility Supply. The cost to install the sample station is $8,320.

5.2 DRAFT CAPITAL IMPROVEMENT PLAN

DRAFT

South Sangamon Water Commission
Capital Improvement Plan
2015-2016

Last Updated 5/12/2015

PROJECT GENERAL				
Issue	Recommended action	Cost	Status	Priority
Air Conditioning System for the Conference Room, Lab, and Break Room		$25,000		2
Installation of Green Sand Filters	Being considered for water quality and operations cost purposes	$1,300,000		2
Installation of back up pressure system	Hydroneumatic "bladder" tank or an elevated storage tower to maintain pressure in the transmission main if the HS pumps go down	$250,000		1
	Total	$1,575,000		

WELLS 1-10				
Issue	Recommended action	Cost	Status	Priority
Installation of injection port extensions	Required by IEPA as part of the permit requirements for the injection port installation. The cost is $3,090 per well	$ 11,700		1
Installation of "donut rings" on 9 remaining wells	The original installation was poor and is failing. Well #7 incurred damage to water freezing inside the shaft The cost is $450 per well	$ 4,050		1
Installation of pigging stations in the well field	Needed to clean out the iron and manganese that accumulates in the lines form the well field to the plant	$ 250,000		1
Sampling Stations in the wellfield	Allow one person to pull samples, current sample ports are in a confined space, and IEPA recently suggested the modifications should be made	$ 15,000		1
	Total	$280,750		

AERATION				
Issue	Recommended action	Cost	Status	Priority
Modification to Aerator Doors	Current doors do not allow access for inspection and cleaning	$ 20,000		2
Installaion of New Tubing		$ 5,000		2
Installation of automatic wasting valve	The current valve is manual and the installation of an automatic wasting valve will improve the process			2
	Total	$25,000		

DETENTION/MIXING TANK				
Issue	Recommended action	Cost	Status	Priority
Repair of CL2 conduit line to the detention tank		$ 5,000		1
Cleaning and inspection of the detention tank, clear well, and high chloride tank	The plant has been in service for 2 years and the tanks should be taken down periodically for inspection and cleaning by a Vac Truck	$ 6,000		2
	Total	$ 11,000		

WESTECH FILTERS				
Issue	Recommended action	Cost	Status	Priority
Filter Replacement	The recommended life expectancy of the filters are 7-12 years. Recent inpections show they are still in good shape. The cost of each filter is $9,000 and there are 22 filters on each of the three banks.	$600,000		4
Upgrade of HMI	The current OS is Windows XP	$20,000		1
Replacment of Valves				1
	Total	$620,000		

ION EXCHANGE UNITS				
Issue	Recommended action	Cost	Status	Priority
Installation of injection port for citric acid and maintenance of the Ion Exhance U	The resin is seeing higher iron/manganese loadings that expected which is fouling the resin. The port will allow for a citric injection cleaning to restore the resin.	$ 7,500.00		3
Solids separator on the Brine Tanks 1 and 2		$ 10,000.00		2
	Total	$17,500		

CHEMICAL ROOMS				
Issue	Recommended action	Cost	Status	Priority
Air Handling System in Chemical Rooms	Safety Issue			1
Purchase a redundant chlorine pump for the detention tank	There is not a redundant pump for back up purposes	$7,000		1
Purchase a redundant chlorine pump for the finished water	There is not a redundant pump for back up purposes	$7,000		1
Purchase a flouride pump	Properly sized for current flow and operations protocol			2
Removal of Ammonia tank	The ammonia system is not being used	$6,500		3
Installation of a bisulfate pump to the lagoons	Chlorine residuals on the lagoon effluent are consistantly above the NPDES permit	$10,000		2
	Total	$30,500		

CLEARWELL				
Issue	Recommended action	Cost	Status	Priority
Cleaning of the clearwell along with the detention tank and high chloride tank	Mains cracked and damaged by roots			2

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South Sangamon Water Commission
Capital Improvement Plan
2015-2016

	Total	$0		

LAGOONS				
Issue	Recommended action	Cost	Status	Priority
Clean solids out of the lagoons	The lagoons have been in service for 2 years and the current level of solids indicate it needs to be cleaned out in the next 1-2 years	$75,000		3
	Total	$75,000		

TRANSMISSION MAIN				
Issue	Recommendation	Cost	Status	Priority
		$25,000		3
		$100,000		1
	Total	$125,000.00		
	Grand Total	$2,759,750		

Priority Scale
1 - Highest
5 - Lowest
0 - Completed or in progress

Cost Summary

Priority 1	$669,750
Priority 2	$1,376,000
Priority 3	$114,000
Priority 4	$600,000
Priority 5	$0
Priority 0	$0
Total	$2,759,750