

Board of Public Utilities

Regular Meeting Agenda

Monday, March 30, 2015
4:00 p.m., DPW Conference Room
1199 8th Avenue



City of South Haven

1. Call to Order
2. Roll Call
3. Approval of Agenda
4. Approval of Minutes for the Record – January 26, 2015 Regular Meeting Minutes
5. Interested Citizens in the Audience Will be Heard on Items Not on the Agenda

REPORTS

6. Cost of Energy from Indiana-Michigan Power Company (AEP)
 - A. 2015 Billings – All Charges
 - B. 2014 Billings – All Charges
7. Financial Reports
 - A. Electric Fund – Financial Report for period ending December 31, 2014
 - B. Electric Fund – Review of Percentage Billed
 - C. Electric Fund – Capital Projects
 - D. Water Fund – Financial Report for period ending December 31, 2014
 - E. Water Fund – Review of Percentage Billed
 - F. Sewer Fund – Financial Report for period ending December 31, 2014
8. Unresolved Issues Report
9. SAW Grant Project Progress Report
 - A. SAW Grant – Asset Management Plan Project Status Report
 - B. Rate Consultant Reference Check

NEW BUSINESS

10. Board will be requested to sponsor an historic marker for the Harborwalk.

11. Abonmarche will present an update of the Sewer System Study (Indian Grove Infrastructure Project).

12. Board will be requested to approve a consulting contract with Hubbell, Roth & Clark, Inc. for the WWTP Asset Management Plan.

13. Board will be requested to approve a recommendation to City Council to award the following contracts for 2015 Electric Distribution Line Projects:

A. Award construction services to Kent Power, Inc. of Kent City, Michigan in the amount of \$216,641.13. Labor and materials to be provided are defined in the contract documents prepared by GRP Engineering.

B. Award the contract for professional services for community outreach and communication to Abonmarche in the amount of \$5,500.

14. Public Works Director Comments

A. Next Meeting is scheduled for April 27, 2015.

15. Board Member Comments

16. Adjourn

RESPECTFULLY SUBMITTED,

Roger Huff, PE
Public Works Director

South Haven DPW Building is Barrier-free and the City of South Haven will provide the necessary reasonable auxiliary aids and services for persons with disabilities, such as signers for the hearing impaired and audio tapes of printed materials being considered at the meeting to individuals with disabilities at the meeting upon seven (7) days notice to the South Haven City Clerk. Individuals with disabilities requiring services should contact the City Clerk by writing or calling South Haven City Hall at (269) 637-0750.

CITY OF SOUTH HAVEN
 Cost of Electric Energy from Indiana-Michigan Power Company (AEP)
2015

Date	ACTUAL				BILLING			COST				PJM Open Access Transmission Tariff						Total Cost	cts/ KWHR	
	KW Demand	KVAR Demand	KVA	Power Factor	KW Demand	KVAR Demand	KWHR	\$ KW Demand	\$ KWHR	\$ Fuel Charge	\$ Fuel Adjust	Actual Fuel True-up	Sch 1A \$ KWHR	\$ Network	RTO Start-up \$	Other	Credits			Total PJM
Main	12,184	1,570	12,285	0.9918	12,178	1,570	7,974,908	\$197,728.02	\$84,927.19											
Welder	408	367	548	0.7432	408	367	175,313	\$6,616.17	\$1,866.96											
Phoenix	8,257	1,195	8,343	0.9897	8,253	1,195	3,492,559	\$133,997.33	\$37,193.31											
Feb-15	20,849	3,132	21,083	0.9889	20,839	3,132	11,642,780	\$338,341.52	\$123,987.46	\$207,119.25	(\$51,728.87)	(\$41,147.55)	\$1,525.44	\$57,653.58	\$148.38	\$10,490.61	(\$1,135.22)	\$68,682.79	\$645,254.60	5.542
Main	12,325	1,739	12,447	0.9902	12,325	1,739	7,443,979	\$200,108.62	\$79,273.16											
Welder	331	309	453	0.7313	331	309	160,777	\$5,374.12	\$1,712.17											
Phoenix	8,581	1,288	8,677	0.9889	8,581	1,288	5,041,513	\$139,316.16	\$53,688.58											
Jan-15	21,237	3,336	21,497	0.9879	21,237	3,336	12,646,269	\$344,798.90	\$134,673.91	\$224,970.80	\$16,637.43	\$100,270.82	\$1,656.92	\$63,830.75	\$164.28	\$10,490.61	(\$994.22)	\$75,148.34	\$896,500.20	7.089

Year to Date 2015:

24,289,049

1,541,755 6.348

CITY OF SOUTH HAVEN
 Cost of Electric Energy from Indiana-Michigan Power Company (AEP)
 2014

Date	ACTUAL				BILLING			COST				PJM Open Access Transmission Tariff							Total Cost	cts/ KWHR	
	KW Demand	KVAR Demand	KVA	Power Factor	KW Demand	KVAR Demand	KWHRS	\$ KW Demand	\$ KWHR	\$ Fuel Charge	\$ Fuel Adjust	Actual Fuel True-up	Sch 1A \$ KWHRS	\$ Network	RTO Start-up \$	Other	Credits	Total PJM			
Main	11,432	1,646	11,550	0.9898	11,432	1,646	7,085,827	\$185,609.79	\$75,459.10												
Welder	333	269	428	0.7774	333	269	153,577	\$5,398.47	\$1,635.48												
Phoenix	8,053	1,020	8,117	0.9921	8,053	1,020	4,768,206	\$130,748.35	\$50,778.06												
Welder	0	0	0		0	0	0	\$0.00	\$0.00												
Dec-14	19,818	2,935	20,034	0.9892	19,817	2,935	12,007,610	\$321,756.61	\$127,872.64	\$213,609.38	\$7,797.74	\$60,535.03	\$1,573.24	\$108,790.08	\$299.21	\$15,805.37	(\$1,585.52)	\$124,882.38	\$856,453.78	7.133	
Main	12,007	1,673	12,123	0.9904	12,003	1,673	6,729,178	\$194,883.96	\$71,661.03												
Welder	352	355	500	0.7036	352	355	123,903	\$5,706.95	\$1,319.48												
Phoenix	7,901	939	7,957	0.9930	7,899	939	4,543,741	\$128,253.03	\$48,387.66												
Welder	6	7	9	0.6658	6	7	4,150	\$94.17	\$44.19												
Nov-14	20,266	2,973	20,483	0.9894	20,260	2,973	11,400,971	\$328,938.11	\$121,412.36	\$202,817.57	(\$65,271.70)	(\$1,364.06)	\$1,493.76	\$105,280.72	\$289.56	\$16,026.12	(\$1,439.90)	\$121,650.26	\$708,182.54	6.212	
Main	18,379	4,189	18,850	0.9750	18,369	4,189	9,061,510	\$298,233.08	\$96,498.74												
Welder	309	284	420	0.7354	309	284	142,496	\$5,010.43	\$1,517.48												
Phoenix	10	24	25	0.3782	5	24	2,118,777	\$74.69	\$22,563.49												
Welder	6	7	9	0.6658	6	7	4,282	\$94.17	\$45.60												
Oct-14	18,703	4,503	19,238	0.9722	18,688	4,503	11,327,065	\$303,412.36	\$120,625.31	\$201,502.82	(\$33,179.24)	\$16,236.53	\$1,484.08	\$108,790.08	\$299.21	\$17,152.73	(\$1,357.26)	\$126,368.84	\$734,966.62	6.489	
Main	16,115	5,015	16,877	0.9548	16,112	5,015	8,006,033	\$261,594.43	\$85,258.65												
Welder	265	254	367	0.7230	265	254	131,837	\$4,307.41	\$1,403.97												
Phoenix	11,860	4,871	12,821	0.9250	11,857	4,871	3,682,892	\$192,514.47	\$39,220.22												
Welder	6	7	9	0.6658	6	7	4,144	\$94.17	\$44.13												
Sep-14	28,246	10,146	30,013	0.9411	28,240	10,146	11,824,906	\$458,510.48	\$125,926.97	\$210,359.17	(\$46,334.71)	\$11,060.21	\$1,549.30	\$105,280.72	\$289.56	\$17,328.13	(\$1,342.88)	\$123,104.83	\$882,626.95	7.464	
Main	17,344	5,375	18,158	0.9552	17,344	5,375	8,324,249	\$281,597.27	\$88,647.42												
Welder	358	342	495	0.7237	358	342	116,920	\$5,814.11	\$1,245.12												
Phoenix	12,794	5,443	13,903	0.9202	12,794	5,443	6,038,441	\$207,716.97	\$64,305.17												
Welder	8	17	19	0.4368	8	17	6,431	\$136.38	\$68.49												
Aug-14	30,504	11,177	32,487	0.9390	30,504	11,177	14,486,040	\$495,264.73	\$154,266.19	\$257,699.41	(\$38,669.04)	\$30,716.83	\$1,897.97	\$108,790.05	\$299.21	\$16,772.20	(\$1,567.24)	\$126,192.19	\$1,025,470.31	7.079	
Main	16,930	5,025	17,660	0.9587	16,930	5,025	7,907,886	\$274,875.40	\$84,213.45												
Welder	251	125	280	0.8945	251	125	130,862	\$4,070.37	\$1,393.59												
Phoenix	12,527	4,460	13,298	0.9421	12,527	4,460	5,672,349	\$203,391.54	\$60,406.54												
Welder	8	18	20	0.4307	8	18	6,555	\$136.38	\$69.80												
Jul-14	29,716	9,628	31,237	0.9513	29,716	9,628	13,717,651	\$482,473.68	\$146,083.38	\$244,030.16	(\$44,811.45)	\$27,682.40	\$1,797.29	\$108,790.05	\$299.21	\$16,658.83	(\$1,607.15)	\$125,938.23	\$981,396.40	7.154	
Main	16,223	4,553	16,850	0.9628	16,223	4,553	7,323,514	\$263,396.55	\$77,990.30												
Welder	10	22	24	0.4238	10	22	131,334	\$165.61	\$1,398.61												
Phoenix	12,192	4,498	12,996	0.9382	12,192	4,498	5,285,671	\$197,955.73	\$56,288.70												
Welder	8	19	20	0.4134	8	19	6,421	\$136.38	\$68.38												
Jun-14	28,434	9,092	29,952	0.9525	28,434	9,092	12,746,939	\$461,654.26	\$135,745.98	\$226,761.68	(\$44,703.52)	\$23,664.10	\$1,092.76	\$89,707.48	\$289.56	\$13,460.59	(\$1,301.93)	\$103,248.46	\$906,370.96	7.110	
Main	12,148	2,693	12,443	0.9763	12,148	2,693	6,470,207	\$199,737.00	\$62,245.98												
Welder	242	210	321	0.7548	242	210	137,320	\$3,980.61	\$1,321.07												
Phoenix	9,104	2,965	9,575	0.9508	9,104	2,965	4,589,361	\$149,685.91	\$44,151.48												
Welder	9	25	27	0.3318	9	25	6,845	\$146.33	\$65.85												
May-14	21,503	5,894	22,296	0.9644	21,503	5,894	11,203,733	\$353,549.86	\$107,784.39	\$168,627.37	(\$13,600.21)	\$16,585.82	\$960.46	\$92,697.73	\$299.21	\$11,967.29	(\$1,309.38)	\$104,615.31	\$737,562.54	6.583	
Main	11,035	2,280	11,268	0.9793	11,035	2,280	6,200,288	\$181,437.72	\$59,649.25												
Welder	275	340	437	0.6288	275	340	140,285	\$4,518.26	\$1,349.59												
Phoenix	7,223	155	7,225	0.9998	7,223	155	4,026,846	\$118,767.39	\$38,739.87												
Welder	9	23	25	0.3693	9	23	6,598	\$149.62	\$63.48												
Apr-14	18,542	2,798	18,752	0.9888	18,542	2,798	10,374,017	\$304,872.99	\$99,802.19	\$156,139.32	(\$11,636.53)	(\$12,558.64)	\$889.33	\$89,707.48	\$289.56	\$11,967.29	(\$1,364.68)	\$101,488.98	\$638,108.31	6.151	
Main	11,756	1,283	11,826	0.9941	11,756	1,283	6,923,540	\$193,291.82	\$66,607.22												
Welder	242	304	388	0.6216	242	304	140,739	\$3,970.74	\$1,353.96												
Phoenix	7,975	1,170	8,060	0.9894	7,975	1,170	4,701,765	\$131,124.62	\$45,232.86												
Welder	9	26	27	0.3239	9	26	6,989	\$146.33	\$67.24												
Mar-14	19,981	2,784	20,174	0.9904	19,981	2,784	11,773,033	\$328,533.52	\$113,261.29	\$177,195.92	(\$10,877.11)	(\$44,950.65)	\$1,009.27	\$92,697.73	\$299.21	\$11,967.29	(\$1,935.73)	\$104,037.77	\$667,200.74	5.667	
Main	11,651	1,530	11,751	0.9915	11,651	1,530	6,719,607	\$191,565.41	\$64,645.31												
Welder	371	312	485	0.7652	371	312	141,182	\$6,098.34	\$1,358.23												
Phoenix	8,190	1,078	8,261	0.9915	8,190	1,078	4,543,059	\$134,666.23	\$43,706.04												
Welder	9	22	24	0.3867	9	22	6,223	\$149.62	\$59.87												
Feb-14	20,221	2,941	20,434	0.9896	20,221	2,941	11,410,071	\$332,479.60	\$109,769.45	\$171,732.98	\$19,759.96	(\$46,438.54)	\$978.15	\$83,726.98	\$270.26	\$11,967.30	(\$1,743.34)	\$95,199.35	\$682,502.80	5.982	
Main	12,263	1,559	12,362	0.9920	12,263	1,559	7,522,5														

City of South Haven
Electric Fund - Fund 582
For the period ended February 28, 2015

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Revenues:	Month Actual	Monthly Budget	Prior year MTD	MTD Variance to Budget	MTD Variance to Prior Year	YTD Actual	YTD Budget	Prior YTD Actual	Variance to Budget	Variance to Prior Year	2014-15 Adopted Budget	% of Annual Budget
Electric Sales	\$ 780,526	\$ 1,172,809	\$ 1,193,628	\$ (392,283)	\$ (413,102)	\$ 9,966,243	\$ 9,382,468	\$ 11,024,123	\$ 583,775	\$ (1,057,880)	\$ 14,073,702	71%
Charges for Service	\$ 3,703	\$ 12,500	\$ 30,506	\$ (8,797)	\$ (26,803)	\$ 62,456	\$ 100,000	\$ 164,974	\$ (37,544)	\$ (102,518)	\$ 150,000	42%
Interest Income	\$ 675	\$ 2,500	\$ 9,207	\$ (1,825)	\$ (8,532)	\$ 45,032	\$ 20,000	\$ 49,446	\$ 25,032	\$ (4,413)	\$ 30,000	150%
Other Revenue	\$ 1,253	\$ 3,333	\$ 1,796	\$ (2,081)	\$ (543)	\$ 23,000	\$ 26,667	\$ 50,635	\$ (3,667)	\$ (27,636)	\$ 40,000	57%
Transfers In	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
Total Revenues	\$ 786,157	\$ 1,191,142	\$ 1,235,137	\$ (404,985)	\$ (448,980)	\$ 10,096,731	\$ 9,529,135	\$ 11,289,178	\$ 567,596	\$ (1,192,447)	\$ 14,293,702	

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Expenses	Month Actual	Monthly Budget	Prior year MTD	MTD Variance to Budget	MTD Variance to Prior Year	YTD Actual	YTD Budget	Prior YTD Actual	Variance to Budget	Variance to Prior Year	2014-15 Adopted Budget	% of Annual Budget
Purchased Power	\$ -	\$ 800,000	\$ 667,201	\$ (800,000)	\$ (667,201)	\$ 6,730,811	\$ 6,400,000	\$ 7,280,411	\$ 330,811	\$ (549,600)	\$ 9,600,000	70%
Other Operating Expenses	\$ 183,776	\$ 141,833	\$ 165,557	\$ 41,943	\$ 18,219	\$ 1,315,928	\$ 1,134,660	\$ 1,357,736	\$ 181,268	\$ (41,808)	\$ 1,701,990	77%
Property Tax Equivalents	\$ 58,235	\$ 59,557	\$ 57,236	\$ (1,322)	\$ 999	\$ 524,115	\$ 476,457	\$ 515,122	\$ 47,658	\$ 8,993	\$ 714,685	73%
Energy Optimization Costs	\$ 115	\$ 21,800	\$ 23,026	\$ (21,685)	\$ (22,912)	\$ 185,017	\$ 174,401	\$ 201,060	\$ 10,615	\$ (16,043)	\$ 261,602	71%
Capital Outlay	\$ 232,171	\$ 305,752	\$ 808	\$ (73,581)	\$ 231,363	\$ 2,763,540	\$ 2,446,018	\$ 29,500	\$ 317,522	\$ 2,734,040	\$ 3,669,027	75%
Transfer Out	\$ 14,025	\$ 14,025	\$ 14,754	\$ (0)	\$ (729)	\$ 126,226	\$ 112,201	\$ 132,787	\$ 14,025	\$ (6,561)	\$ 168,301	75%
Depreciation	\$ 55,873	\$ 55,873	\$ 39,510	\$ -	\$ 16,363	\$ 446,985	\$ 446,985	\$ 316,083	\$ -	\$ 130,903	\$ 670,478	67%
Administrative Expenses	\$ 51,593	\$ 62,761	\$ 49,517	\$ (11,168)	\$ 2,076	\$ 550,869	\$ 502,084	\$ 516,951	\$ 48,785	\$ 33,918	\$ 753,126	73%
Total Expenses	\$ 595,788	\$ 1,461,601	\$ 1,017,609	\$ (865,813)	\$ (421,822)	\$ 12,643,491	\$ 11,692,806	\$ 10,349,649	\$ 950,685	\$ 2,293,842	\$ 17,539,209	

Net Fund Change \$ 190,369 \$ (270,459) \$ 217,527 \$ 460,828 \$ (27,158) \$ (2,546,760) \$ (2,163,671) \$ 939,529 \$ (383,089) \$ (3,486,289) \$ (3,245,507)

AS OF JUNE 30, 2014	
Retained Earnings	\$ 17,951,744
Less Net Capital Assets	\$ (11,195,364)
Net Undesignated Reserves	\$ 6,756,380

The Difference here is the addition of new capital assets less new depreciation for FY 15

PROJECTED AS OF JUNE 30, 2015	
Retained Earnings - I Beginning of yr	\$ 17,951,744
Projected Net Income (see below) FY 15	\$ 423,520
Less Net Capital Assets	\$ (15,248,888)
Net Undesignated Reserves	\$ 3,126,376

The 2015 Budget figures include the projects approved by the BPU to date and a revised depreciation figure
The capital outlay also includes WI FI project costs - DPW Storage building and Office renovations have been removed

Year end audit adjustments - not expenses on Income statement



FY 2015 Revenues	\$ 14,293,702
FY 2015 Expenses	\$ (17,539,209)
Net Fund Change	\$ (3,245,507)
Add back Investment in Capital Assets	\$ 3,669,027
Projected Net Income	\$ 423,520

CITY OF SOUTH HAVEN
ELECTRIC FUND
KWH COMPARISONS
ROLLING TWELVE MONTHS

		KWH PURCHASED	KWH BILLED	KWH STREET LTS	STREET LTS 12 MO AVE.	TOTAL KWH BILLED AND STREET LTS	PERCENTAGE BILLED AND STREET LTS TO PURCHASED (ROLLING 12 MOS)	PERCENTAGE BILLED AND STREET LTS TO PURCHASED CURRENT MONTH	
FISCAL 2013									
July	2012	17,466,170	14,702,549	38,276	52,303	14,740,825	93.26%	84.40%	31
August	2012	14,358,453	15,845,089	43,385	52,376	15,888,474	93.50%	110.66%	31
September	2012	11,481,145	12,211,557	48,595	52,463	12,260,152	94.22%	106.79%	30
October	2012	10,545,910	9,741,443	54,699	52,284	9,796,142	94.11%	92.89%	31
November	2012	10,466,158	10,312,656	61,617	52,287	10,374,273	94.68%	99.12%	30
December	2012	11,131,795	9,798,623	69,065	52,368	9,867,688	94.46%	88.64%	31
January	2013	11,560,064	10,621,867	68,768	52,615	10,690,635	94.14%	92.48%	31
February	2013	10,550,434	10,544,686	59,658	52,705	10,604,344	94.21%	100.51%	29
March	2013	11,110,656	10,170,132	53,004	52,242	10,223,136	93.95%	92.01%	31
April	2013	10,233,332	9,906,424	48,201	52,313	9,954,625	94.19%	97.28%	30
May	2013	11,168,009	10,537,176	44,120	52,288	10,581,296	94.78%	94.75%	31
June	2013	11,593,465	10,064,318	37,708	52,258	10,102,026	95.35%	87.14%	30
		<u>141,665,592</u>	<u>134,456,520</u>	<u>627,096</u>		<u>135,083,616</u>			
FISCAL 2014									
July	2013	14,702,976	12,364,189	37,740	52,213	12,401,929	94.64%	84.35%	31
August	2013	13,559,712	13,582,248	42,342	52,126	13,624,590	94.42%	100.48%	31
September	2013	11,670,399	12,462,283	48,796	52,143	12,511,079	95.03%	107.20%	30
October	2013	10,945,398	10,453,792	54,475	52,125	10,508,267	94.91%	96.01%	31
November	2013	10,657,150	9,502,492	58,511	51,866	9,561,003	94.96%	89.71%	30
December	2013	11,962,287	10,244,088	71,063	52,032	10,315,151	94.68%	86.23%	31
January	2014	12,608,593	10,959,716	65,878	51,791	11,025,594	94.12%	87.45%	31
February	2014	11,410,071	12,066,200	59,636	51,790	12,125,836	94.72%	106.27%	29
March	2014	11,773,033	10,878,414	54,626	51,925	10,933,040	94.54%	92.87%	31
April	2014	10,374,016	10,020,033	48,541	51,953	10,068,574	94.63%	97.06%	30
May	2014	11,203,732	10,614,984	44,334	51,971	10,659,318	94.97%	95.14%	31
June	2014	12,746,940	11,082,867	39,220	52,097	11,122,087	93.90%	87.25%	30
		<u>143,614,306</u>	<u>134,231,306</u>	<u>625,162</u>		<u>134,856,468</u>			
FISCAL 2015									
July	2014	13,717,651	12,578,551	38,129	52,129	12,616,680	93.99%	91.97%	31
August	2014	14,486,040	12,740,027	42,644	52,154	12,782,671	93.13%	88.24%	31
September	2014	11,824,906	13,323,234	48,696	52,146	13,371,930	93.87%	113.08%	30
October	2014	11,327,065	11,109,952	55,667	52,245	11,165,619	94.22%	98.57%	31
November	2014	11,400,971	10,662,987	62,443	52,573	10,725,430	94.56%	94.07%	30
December	2014	12,007,610	11,126,842	67,163	52,248	11,194,005	94.83%	93.22%	31
January	2015	12,646,269	11,962,202	63,831	52,078	12,026,033	94.37%	95.10%	31
February	2015	11,642,781	11,272,243	59,367	52,055	11,331,610	94.56%	97.33%	29
		<u>99,053,293</u>	<u>94,776,038</u>	<u>437,940</u>		<u>95,213,978</u>			
Prior Year-to-date		97,516,585	91,635,008	438,441		92,073,449			
Two Years Prior		97,560,129	93,778,470	444,063		94,222,533			

ELECTRIC FUND
CAPITAL PROJECTS
ACTIVITY THROUGH FEBRUARY, AS BUDGETED FOR FY 15 AND PRELIM PROJECTIONS FOR FY 16

GL Number	Description	2013-14 Activity	Amended Budget	YTD As Of 2/28/15	2014-15 Projected	2015-16 REQUESTED	
--- Appropriations ---							
582-558-975-000-0170	BUILDINGS/ADDITIONS IMPROVE	-	-	-	-	-	DPW Office Renovations
582-558-975-000-0220	BUILDINGS/ADDITIONS IMPROVE	-	-	-	-	-	DPW Storage Building
582-558-977-000	EQUIPMENT - SHOP	-	-	-	-	16,000	C.I.P. - Walk-Behind Trencher
582-558-979-000	EQUIPMENT - YARD & STORAGE	-	3,000	1,025	3,000	3,000	
582-558-980-000	OFFICE EQUIPMENT & FURNITURE	-	-	-	-	-	
582-558-988-000	ELECTRICAL SYSTEM CONSTR	-	-	-	-	-	
582-558-988-000-0151	ELECTRICAL SYSTEM CONSTR	-	212,000	206,949	212,000	-	Downtown WI FI project
582-558-988-000-0175	ELECTRICAL SYSTEM CONSTR	-	1,502,000	1,073,997	1,502,000	-	Core City Secondary Engineering and construction
582-558-988-000-0303	ELECTRICAL SYSTEM CONSTR	-	349,000	297,753	349,000	-	Veterans UG Conduit Engineering and construction
582-558-988-000-0304	ELECTRICAL SYSTEM CONSTR	-	181,000	5,450	181,000	-	2nd Ave/Blue Star/6th Engineering and construction
582-558-988-000-0305	ELECTRICAL SYSTEM CONSTR	-	84,000	1,000	84,000	-	Lovejoy to Aylworth Engineering and construction
582-558-988-000-0307	ELECTRICAL SYSTEM CONSTR	-	39,500	1,000	39,500	-	Capacitor Banks 1 Engineering and construction
582-558-988-000-0308	ELECTRICAL SYSTEM CONSTR	-	-	-	-	52,800	14th Ave Electric Engineering and construction
582-558-988-000-0309	ELECTRICAL SYSTEM CONSTR	-	159,000	4,500	159,000	-	St. Joseph Electric Engineering and construction
582-558-988-000-0310	ELECTRICAL SYSTEM CONSTR	-	-	-	-	49,500	Kalamazoo St Elec Engineering and construction
582-558-988-000-0312	ELECTRICAL SYSTEM CONSTR	-	-	-	-	22,000	Capacitor Banks 2 Engineering and construction
582-558-988-000-0313	ELECTRICAL SYSTEM CONSTR	-	-	-	-	220,000	FUTURE LaGrange/Phillips Elec Engineering and construction
582-558-988-000-0314	ELECTRICAL SYSTEM CONSTR	-	-	-	-	165,000	FUTURE 76th St Electric Engineering and construction
582-558-988-000-0315	ELECTRICAL SYSTEM CONSTR	-	-	-	-	66,000	FUTURE Monroe Blvd Elec Engineering and construction
582-558-988-000-0316	ELECTRICAL SYSTEM CONSTR	-	-	-	-	104,500	FUTURE Blue Star Conductor Engineering and construction
582-558-988-000-0317	ELECTRICAL SYSTEM CONSTR	-	-	-	-	93,500	FUTURE Blue Star/M-140 Engineering and construction
582-558-988-001	ELECTRICAL SYSTEM EQUIPMENT	-	-	-	-	-	
582-558-988-001-0163	ELECTRICAL SYSTEM EQUIPMENT	-	-	-	-	-	DO NOT USE - ALL COSTS MOVED TO PROJ 301
582-558-988-001-0301	ELECTRICAL SYSTEM EQUIPMENT	-	1,139,527	1,171,865	1,139,527	-	Phoenix Substation - Engineering and construction
CAPITAL PROJECT TOTALS		-	3,669,027	2,763,539	3,669,027	143,300	649,000

Equals
Budget for Equals YTD
Capital Assets Expense on
on FS FS

City of South Haven
Water Fund - Fund 591
For the period ended February 28, 2015

Col 6 & 11

Revenues:	Month Actual	Monthly Budget	Prior year MTD	MTD Variance to Budget	MTD Variance to Prior Year	YTD Actual	YTD Budget	Prior YTD Actual	Variance to Budget	Variance to Prior Year	2014-15 Adopted Budget	% of Annual Budget
Sales	\$ 190,139	\$ 312,265	\$ 265,565	\$ (122,126)	\$ (75,426)	\$ 2,680,866	\$ 2,498,119	\$ 2,824,177	\$ 182,748	\$ (143,311)	\$ 3,747,178	72%
Charges for Service	4,520	5,833	3,753	(1,314)	766	29,736	46,667	38,322	(16,931)	(8,587)	70,000	42%
Interest Income	-	167	75	(167)	(75)	4,378	1,333	(463)	3,045	4,841	2,000	219%
Special Assessment Revenue	-	958	18,731	(958)	(18,731)	12	7,667	38,553	(7,655)	(38,541)	11,500	0%
Other Revenue	54	2,917	6,091	(2,862)	(6,037)	35,949	23,333	35,941	12,615	8	35,000	103%
Total Revenues	\$ 194,712	\$ 322,140	\$ 294,215	\$ (127,427)	\$ (99,503)	\$ 2,750,941	\$ 2,577,119	\$ 2,936,530	\$ 173,822	\$ (185,590)	\$ 3,865,678	

Expenses:	Month Actual	Monthly Budget	Prior year MTD	MTD Variance to Budget	MTD Variance to Prior Year	YTD Actual	YTD Budget	Prior YTD Actual	Variance to Budget	Variance to Prior Year	2014-15 Adopted Budget	% of Annual Budget
Operating Expenses	\$ 80,290	\$ 117,595	\$ 96,141	\$ (37,305)	\$ (15,851)	\$ 932,036	\$ 940,756	\$ 864,171	\$ (8,720)	\$ 67,865	\$ 1,411,134	66%
Property Tax Equivalents	12,049	16,107	8,349	(4,058)	3,700	108,441	128,856	75,145	(20,415)	33,296	193,284	56%
Capital Outlay	313	20,224	1,491	(19,911)	(1,178)	55,316	161,790	264,158	(106,474)	(208,842)	242,685	23%
Debt Service	30,800	124,859	57,778	(94,059)	(26,978)	763,123	998,874	775,150	(235,751)	(12,028)	1,498,311	51%
Transfers Out	333	404	167	(70)	167	3,000	3,229	1,500	(229)	1,500	4,843	62%
Depreciation	50,703	50,703	16,307	-	34,396	405,623	405,623	130,456	-	275,167	608,435	67%
Administrative Expenses	13,998	19,854	13,871	(5,856)	127	185,234	158,828	168,279	26,406	16,956	238,242	78%
Total Expenses	\$ 188,486	\$ 349,745	\$ 194,103	\$ (161,259)	\$ (5,617)	\$ 2,452,773	\$ 2,797,956	\$ 2,278,858	\$ (345,183)	\$ 173,915	\$ 4,196,934	

Net Fund Change \$ 6,227 \$ (27,605) \$ 100,112 \$ 33,831 \$ (93,885) \$ 298,168 \$ (220,837) \$ 657,672 \$ 519,005 \$ (359,504) \$ (331,256)

AS OF JUNE 30, 2014

Retained Earnings	\$ 7,685,404
Less Contributed Capital	\$ (2,093,205)
Less Net Capital Assets	\$ (5,175,140)
Net Undesignated Reserves	\$ 417,059

The Difference here is the addition of new capital assets less new depreciation for FY 15

PROJECTED AS OF JUNE 30, 2015

Retained Earnings - Beg of Year	\$ 7,685,404
Less Contributed Capital	\$ (2,093,205)
Projected Net Income (see below) FY 15	\$ 491,429
Less Net Capital Assets	\$ (5,540,890)
Net Undesignated Reserves	\$ 542,738

The 2015 Budget figures include the projects approved by the BPU to date and a revised depreciation figure
The capital outlay includes some equipment and Dyckman Ave costs

Year end audit adjustments - not expenses on Income statement →
Year end audit adjustments - not expenses on Income statement →

FY 2015 Revenues	\$ 3,865,678
FY 2015 Expenses	\$ (4,196,934)
Add back principal portion of debt service	\$ 580,000
Add back Investment in Capital Assets	\$ 242,685
Projected Net Income(Loss)	\$ 491,429

CITY OF SOUTH HAVEN
WATER FUND
CuFt COMPARISONS
ROLLING TWELVE MONTHS

		GALLONS PUMPED TO MAINS	CuFt PUMPED TO MAINS	CuFt PLANT TAP UNBILLED	CuFt WATER QUALITY FLUSHING	CuFt BILLED	PERCENTAGE BILLED PLUS PLANT TAP TO PUMPED TO MAINS (ROLLING 12 MOS)	PERCENTAGE BILLED PLUS PLANT TAP TO PUMPED TO MAINS CURRENT MONTH
FISCAL 2013								
July	2012	97,223,000	12,997,727	42,043	149,172	9,601,173	81.95%	74.19%
August	2012	73,095,000	9,772,059	40,244	227,566	10,549,444	83.36%	108.37%
September	2012	51,928,000	6,942,246	36,348	218,946	7,875,634	84.80%	113.97%
October	2012	37,774,000	5,050,000	27,350	259,447	4,949,605	85.50%	98.55%
November	2012	28,082,000	3,754,278	16,894	255,838	3,275,439	86.15%	87.70%
December	2012	27,941,000	3,735,428	34,835	160,400	3,150,827	86.30%	85.28%
January	2013	29,090,000	3,889,037	35,639	83,007	3,204,712	86.22%	83.32%
February	2013	27,257,000	3,643,984	25,791	72,180	3,368,685	86.69%	93.15%
March	2013	28,716,000	3,839,037	30,416	75,789	2,955,708	87.40%	77.78%
April	2013	27,256,000	3,643,850	38,784	79,398	3,120,869	88.84%	86.71%
May	2013	44,617,270	5,964,876	52,314	342,855	3,962,497	88.14%	66.43%
June	2013	52,158,000	6,972,995	57,485	312,780	5,366,701	91.24%	76.96%
		<u>525,137,270</u>	<u>70,205,517</u>	<u>438,141</u>	<u>2,237,378</u>	<u>61,381,294</u>		
FISCAL 2014								
July	2013	70,321,000	9,401,203	62,968	127,844	6,705,606	88.48%	72.00%
August	2013	62,517,000	8,357,888	48,003	196,427	8,322,168	88.81%	100.15%
September	2013	52,536,000	7,023,529	43,984	192,916	7,118,311	89.52%	101.98%
October	2013	35,699,000	4,772,594	41,176	182,891	5,303,775	90.51%	111.99%
November	2013	28,029,000	3,747,193	37,834	99,473	3,426,297	90.79%	92.45%
December	2013	28,262,000	3,778,342	37,166	178,083	2,904,054	90.43%	77.84%
January	2014	36,931,000	4,937,299	40,642	145,998	3,089,262	89.82%	63.39%
February	2014	36,711,000	4,907,888	36,230	128,741	3,454,550	89.24%	71.13%
March	2014	36,506,000	4,880,481	37,567	40,914	3,251,264	89.19%	67.39%
April	2014	29,869,000	3,993,182	33,957	57,952	3,321,979	89.46%	84.04%
May	2014	40,638,000	5,432,888	31,283	70,598	4,278,590	89.10%	78.75%
June	2014	53,611,000	7,167,246	37,032	100,575	5,543,066	85.86%	77.34%
		<u>511,630,000</u>	<u>68,399,733</u>	<u>487,843</u>	<u>1,522,412</u>	<u>56,718,922</u>		
FISCAL 2015								
July	2014	64,316,000	8,598,396	38,503	126,739	6,932,597	84.35%	81.07%
August	2014	66,789,000	8,929,011	42,246	34,492	7,841,235	83.45%	88.29%
September	2014	44,601,000	5,962,701	36,096	100,277	6,663,068	84.55%	112.35%
October	2014	33,430,000	4,469,251	34,492	117,932	4,619,497	85.38%	104.13%
November	2014	29,363,000	3,925,535	34,091	102,686	3,359,059	86.24%	86.44%
December	2014	28,908,000	3,864,706	35,294	67,388	3,125,243	86.64%	81.78%
January	2015	31,306,000	4,185,294	35,561	83,432	4,170,131	87.89%	100.49%
February	2015	28,322,000	3,786,364	34,091	81,219	4,470,432	88.98%	118.97%
		<u>327,035,000</u>	<u>43,721,257</u>	<u>290,374</u>	<u>714,165</u>	<u>41,181,262</u>		
Prior Year-to-date		351,006,000	46,925,936	348,003	1,252,373	40,324,023		
Two Years Prior		372,390,000	49,784,759	259,143	1,426,556	45,975,519		

City of South Haven
Sewer Fund - Fund 592
For the period ended February 28, 2015

Col 6 & 11

Revenues:	Month Actual	Monthly Budget	Prior year MTD	MTD Variance to Budget	MTD Variance to Prior Year	YTD Actual	YTD Budget	Prior YTD Actual	Variance to Budget	Variance to Prior Year	2014-15 Adopted Budget	% of Annual Budget
Sales	\$ 112,488	\$ 193,292	\$ 159,290	\$ (80,804)	\$ (46,802)	\$ 1,645,829	\$ 1,546,333	\$ 1,703,409	\$ 99,495	\$ (57,580)	\$ 2,319,500	71%
IPP Revenues	-	7,685	4,546	(7,685)	(4,546)	52,815	61,483	57,113	(8,668)	(4,298)	92,224	57%
Interest Income	-	208	6	(208)	(6)	1,208	1,667	(758)	(459)	1,966	2,500	48%
Special Assessment Revenue	-	1,250	29,711	(1,250)	(29,711)	17	10,000	48,115	(9,983)	(48,098)	15,000	0%
Other Revenue	-	1,333	7,980	(1,333)	(7,980)	16,988	10,667	13,441	6,322	3,548	16,000	106%
Total Revenues	\$ 112,488	\$ 203,769	\$ 201,534	\$ (91,281)	\$ (89,046)	\$ 1,716,857	\$ 1,630,149	\$ 1,821,320	\$ 86,707	\$ (104,463)	\$ 2,445,224	

Expenses	Month Actual	Monthly Budget	Prior year MTD	MTD Variance to Budget	MTD Variance to Prior Year	YTD Actual	YTD Budget	Prior YTD Actual	Variance to Budget	Variance to Prior Year	2014-15 Adopted Budget	% of Annual Budget
Operating Expenses	\$ 63,972	\$ 98,947	\$ 105,552	\$ (34,975)	\$ (41,580)	\$ 806,338	\$ 791,576	\$ 1,228,992	\$ 14,762	\$ (422,654)	\$ 1,187,364	68%
Grant Expense-SSES	-	-	-	-	-	-	-	104,485	-	(104,485)	-	-
Property Tax Equivalents	7,453	8,104	7,453	(651)	-	67,081	64,835	67,081	2,246	-	97,252	69%
Capital Outlay	118	22,851	7,069	(22,732)	(6,951)	26,779	182,805	17,119	(156,026)	9,661	274,208	10%
Transfers Out	17,000	17,076	19,917	(76)	(2,917)	153,000	136,610	179,250	16,390	(26,250)	204,915	75%
Depreciation	29,060	29,060	20,379	-	8,681	232,479	232,479	163,030	-	69,449	348,719	67%
Administrative Expenses	20,658	26,975	20,922	(6,317)	(264)	243,475	215,800	232,080	27,675	11,396	323,700	75%
Total Expenses	\$ 138,261	\$ 203,013	\$ 181,292	\$ (64,752)	\$ (43,031)	\$ 1,529,153	\$ 1,624,105	\$ 1,992,036	\$ (94,952)	\$ (462,884)	\$ 2,436,158	

Net Fund Change \$ (25,773) \$ 756 \$ 20,242 \$ (26,529) \$ (46,015) \$ **187,704** \$ 6,044 \$ (170,716) \$ 181,660 \$ 358,420 \$ **9,066**

AS OF JUNE 30, 2014	
Retained Earnings	\$ 6,979,471
Less Contributed Capital	\$ (1,013,995)
Less Net Capital Assets	<u>\$ (5,632,250)</u>
Net Undesignated Reserves	\$ 333,226

The Difference here is the addition of new capital assets less new depreciation for FY 15

PROJECTED AS OF JUNE 30, 2015	
Retained Earnings - Beg of Year	\$ 6,979,471
Less Contributed Capital	\$ (1,013,995)
Projected Net Income (see below) FY 15	\$ 264,236
Less Net Capital Assets	<u>\$ (5,725,799)</u>
Net Undesignated Reserves	\$ 503,913

The 2015 Budget figures include the projects approved by the BPU to date and a revised depreciation figure
The capital outlay includes some equipment and Dyckman Ave costs

Year end audit adjustments - not expenses on Income statement →

FY 2015 Revenues	\$ 2,445,224
FY 2015 Expenses	\$ (2,436,158)
Add back Investment in Capital Assets	\$ 255,170
Projected Net Income(Loss)	\$ 264,236



City of South Haven

Agenda Item #8

Unresolved Issues

New items shown in **bold** text.

Completed items shown with single ~~strike through~~ text for one meeting, then double ~~strike through~~ text for the next meeting, then removed from the list.

ACTION ITEMS

- 3/26/12 – Stickland requested that staff provide the utility policy concerning tampering fees for review at the next meeting. Addressed under agenda item 15 at the April 30, 2012 meeting. MMEA was contacted requesting their assistance in contacting fellow members for their policies regarding meter tampering, disconnection or tampering with service feeders/pipes, theft of service, and unsealed meter showing consumption. No response has been received from MMEA. City staff is contacting fellow IMMDA members plus Holland, Lowell, and Coldwater. Policies have been received from Bluffton, IN; Coldwater, MI; Holland BPW; Lowell Light & Power; Niles, MI; Sturgis, MI; Zeeland BPW. These policies will be compiled and summarized and distributed to staff and the BPU for review and comment. Updating the Public Utilities Rules, Regulations and Policies (and Code of Ordinances) is one of City Council's adopted priorities for 2014-15.
- 4/30/12 – As a result of the tamper fee discussion with a resident, staff was requested to compile a list of electrical and plumbing contractors licensed to work in South Haven for the purpose of sending notification letters concerning the tamper policy. City staff contacted the State of Michigan and Michigan Township services, but they could not provide specific information. City of South Haven Building Services has a bulletin board available for posting notices. Suggestion was made to add it to the building permit form or instructions. Start with the City and then work with the townships.
- ~~7/28/14 – DPW staff will work together with the finance department to develop policies to ensure that all material, labor, and design engineering services are appropriately billed to a specific project code. The purpose is to ensure that finance can properly capitalize project costs at the end of the fiscal year.~~
- 1/26/15 – Concerning the Quarterly Outage Report, Burr requested more information for the area near the State Park indicating a number of outages.

Date: March 20, 2015

To: Roger Huff, PE

From: Timothy Drews, PE

Re: South Haven SAW Grant – Asset Management Plan Status Report

The following is intended to provide you with a project status report:

Accomplishments to Date

1. Inventory
 - A list of “missing” manholes was received from the city. We will be locating these manholes in the upcoming weeks.
2. Condition Assessment
 - MACP (manhole) inspections were started, but then put on hold due to weather conditions – this work will ramp back up in the upcoming weeks
 - CCTV work – Sewer videos that did not have PACP ratings were reviewed and rated. 188 videos were completed consisting of approximately 27,000 feet of sanitary and storm pipe.
 - A meeting was held with HRC to determine coordination of efforts regarding their work at the WWTP and with evaluation of township lift stations. It was determined that HRC would include evaluation of the city's lift stations in their work for consistency, and provide Abonmarche the results to include in the Asset Management Plan.
3. Level of Service
 - Not yet started
4. Criticality of Assets
 - Not yet started
5. O&M Strategies
 - A meeting/interview was held with Burton and Associates (utility rate consultant) to determine capabilities and comfort level with city staff
 - A follow-up reference check was completed with the city of Manistee with positive results.
6. Other Costs
 - We have researched Asset Management software packages, and will be scheduling demonstrations shortly. We need to pin down some possible dates for software demonstrations.

Upcoming Work

- SAW Progress meeting scheduled for March 24th at 10:00 a.m. at DPW
- Gather remaining manhole inventory shots.
- Continue MACP inspections. These inspections will focus on storm manholes first.
- CCTV pilot program with Plummer's, plus develop an RFP for the comprehensive CCTV work (with sewer cleaning option by the city)

Scope Changes

- Eliminate Storm Sewer System Metering and Modeling and re-allocate those funds to other Asset Management efforts.

Budget Status

	Budget	Invoiced to Date	Percent Complete
Overall Asset Management Budget	\$1,115,264	\$110,889.07	9.9%
Abonmarche Tasks	\$555,197	\$110,889.07	20.0%
CCTV Work	\$299,397	\$0	0%
Other Sub-consultants	\$38,000	\$0	0%
Software/hardware/training	\$38,000	\$0	0%
City Admin Tasks	\$35,120		
City Pre-cleaning Sewers	\$150,000		

Note: Overall city match for the SAW grant is \$317,000

Schedule Status

The projected completion date for the Asset Management plan is May 1, 2016

Information Needed from City

- List of projects completed in the past 10-15 years
- Priority list of areas to concentrate CCTV work



Other Issues

- Separate progress reports will be submitted for SAW design related work

CC: Brian Dissette, City of South Haven
Larry Halberstadt, City of South Haven
Cindy Clendenon, MDEQ
Christopher Cook, Abonmarche
Tony McGhee, Abonmarche





Meeting Notes – March 13, 2015

City of Manistee Reference Check of Burton and Associates

Question: How did you find their level of professionalism and industry knowledge?

Response: City of Manistee stated that Burton was “top notch and couldn’t have been happier” with their work. They were both timely and professional in their work.

Question: How did they go about communicating findings to stakeholders (City officials/City Council/Township customers and consultants) and respond to questions in an understandable way? Were people satisfied and understood the issues?

Response: Burton conducted three interactive sessions with the project team to review data and test assumptions. Once that was completed, they did a series of presentations with impacted stakeholders (residents, business, other municipalities, etc.) to review their data and models. The one criticism of the work which was noted was that Burton may want to “dumb down” some of the information at these sessions so people can understand easier. However, in the final report, their executive summary was in layman’s terms with the more technical and complex details in the back of the report.

Question: How was their responsiveness and ability to make deadlines/stay within budget?

Response: Burton was very responsive even though the Manistee project was a compressed schedule compared to typical engagements. They compressed their normal schedule by two weeks, stayed within budget and did not miss any deliverables or milestones.

Question: Did they make efficient use of their time to mine data/interactive nature of discussions/timeliness of completing different scenarios?

Response: Manistee conveyed the key is for the community to be organized with the data Burton will need to develop the model. If the data is available and does not have to be created there is not a great deal of burden on city

staff. If the data is available, "the impact on staff is minimal and painless getting information to Burton".

Question: What are your thoughts on our Excel modeling platform and the ability to depict accurate results? Is this a valuable tool you feel will be valuable outside of this engagement?

Response: Manistee did not audit the formulas in each cell of Excel sheet that drove the model but felt they were solid. Manistee staff felt the sheet was a valuable tool as it not only gave them a baseline but also a tool to do sensitivity analysis in the future and change inputs to see the potential impact. Overall, the staff felt the model would have value beyond their initial engagement with Burton.

Question: How was their willingness to respond in person when Township customer issues arose to make additional presentations to aid Manistee in addressing unforeseen conflicts, in some instances out-of-scope?

Response: Burton was good about using "go-to-meeting" in between in-person meetings to update staff on the process and walking through things at various points in between actual meetings on the ground. When an issue with a neighboring township came up, Burton did two more meetings in conjunction with work for another client in the area that were outside their contract at no charge.

Question: How was their preparation of stakeholder Q and A's to assist them in responding to City residents' concern/confusion over the rate structure change?

Response: Overall they did a good job of breaking down the information when doing community presentations. Manistee staff felt it would have been good to let Burton know who the audience was for each presentation so that Burton could tweak the presentation to the interest and capacity of a particular audience.

Question: What was the most valuable thing you got out of your engagement with them?

Response: City staff felt the most valuable part of the work was getting validation of their data and leaving them with a good plan that set up a strategy to address debt on the system and begin funding depreciation.

Question: What would have you have had them do differently knowing what you know now?

Response: They City said they wish there had been a bit of a simpler presentation done with the public to better enable them to consume the data and the recommendations being made. The City said it was valuable to do a simple Q&A for stakeholders before the process started to set the stage for what was happening and what to expect.

The City of Manistee closed by saying they would recommend Burton and Associates and plans on bringing them back every 2 -5 years to revisit the model and make sure everything is tracking as expected and make any necessary adjustments. They also said they would consider bringing them back at various times from year to year for general consultation beyond the model itself.



March 3, 2015

Board of Public Utilities
South Haven, Michigan 49090

Dear Board of Public Utilities,

The Michigan Maritime Museum, in partnership with the City of South Haven, is spearheading efforts to replace the deteriorating Harbor Walk interpretive markers along the Black River Harbor. These markers tell the history of South Haven in words and photos. There are currently 12 markers and it is hopeful that 7 additional markers will be installed. These markers are sponsored by businesses and organizations throughout the city. One of the new markers has been installed at the overlook on Williams Street near Old Harbor Inn. A photo and a conceptual drawing are attached. As you can see in the photo, the base of the marker is designed to resemble the catwalk leading to the South Haven Lighthouse. The purpose of this letter is to make a request to the Board of Public Works to please consider sponsorship of an interpretive marker. The cost of sponsorship is \$1000.

Currently, businesses and organizations that have a tie to a particular topic are being asked to sponsor that particular marker. The "Water Works Plant" marker which is located in close proximity to the plant, is being suggested for sponsorship by the BPU as an obvious tie-in to the topic.

Please consider this sponsorship request for improvements to the South Haven Harbor Walk which has become a popular pedestrian path for locals and visitors.

Sincerely,

Patti Montgomery-Reinert
Executive Director
Michigan Maritime Museum

Informational
sign along HarborWalk



Catwalk
Like
Base
Support



PASSENGER STEAMSHIP TRAVEL

From approximately 1880 to 1945, thousands of visitors arrived in South Haven, placed in staterooms. The City of South Haven and the business were among the ships that arrived regularly, including passenger service between South Haven and Chicago in 1945.

SPONSORED BY
OLD HARBOR VILLAGE
CONDOMINIUM ASSOCIATION



The United States of America, 1876-1901, 1901-1913, 1913-1921, 1921-1929, 1929-1937, 1937-1945, 1945-1953, 1953-1961, 1961-1969, 1969-1977, 1977-1985, 1985-1993, 1993-2001, 2001-2009, 2009-2017, 2017-2025



MARITIME HERITAGE



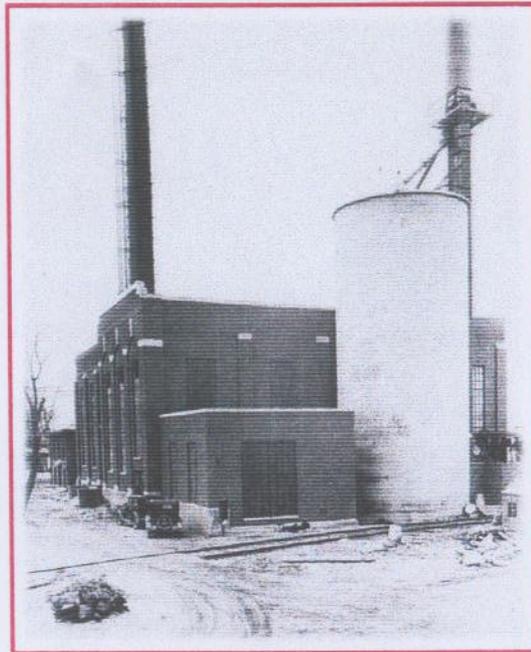
WATER WORKS PLANT

The City of South Haven took a major step forward in providing clean water to residents in 1892 when a water pumping station was constructed on the lakeshore. The original water pumping station was replaced in 1927 with the present structure, and was enlarged in the 1940s and again in the 1960s. The water filtration process begins at an intake pipe one mile off shore. The water is then brought to the plant where it undergoes a series of processes before being sent to one of the City's storage tanks.

SPONSORED BY
THE DON & HELENE SPENCER FAMILY

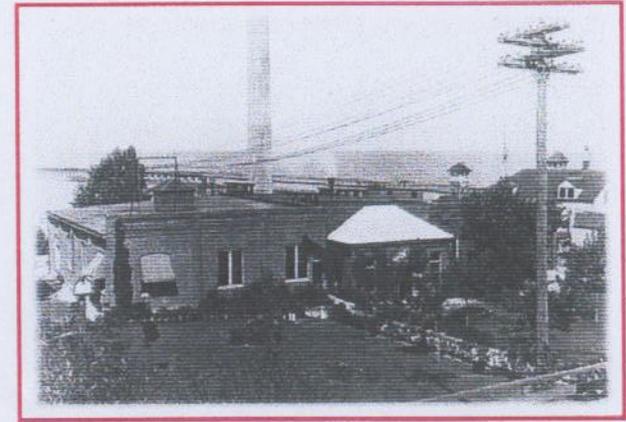


City of South Haven



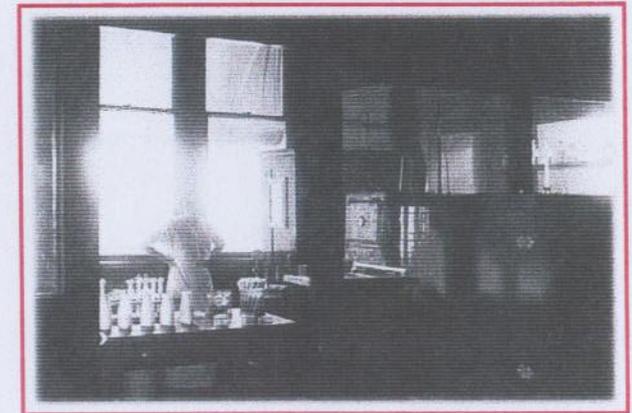
CITY POWER PLANT BURNED COAL

South Haven's power plant was once located next to the current filtration plant. Loads of coal were delivered to the coal-burning plant via rail and water. The power plant was torn down in 1978, when city residents began purchasing electrical power from private utilities.



CITY WATERWORKS ENLARGED TO MEET DEMAND

The original 1892 waterworks plant was enlarged in 1895. A larger facility was needed to accommodate South Haven's growing demand for water.



CLEAN WATER FOR SOUTH HAVEN

This woman ran experiments inside the waterworks plant during the early 1900s. Water quality is constantly monitored today.



Great Lakes
Center for Maritime Studies



MICHIGAN
MARITIME
MUSEUM



Agenda Item # 12

Waste Water Treatment Plant Asset Management Plan

City of South Haven

Background Information:

The National Pollutant Discharge Elimination System (NPDES) permit process was initiated by The Federal Water Pollution Control Act amendments of 1972. The purpose of the program is to control the discharge of pollutants into surface waters by imposing effluent limitations to protect the environment. Authority to administer this program was delegated to Michigan by the Environmental Protection Agency (EPA) in October of 1973. The authority for NPDES permit issuance rests with the Michigan Department of Environmental Quality (MDEQ).

In compliance with these regulations, the City of South Haven is authorized to discharge from the Wastewater Treatment Plant (WWTP) located at 620 Wells Street to the receiving waters of the Black River under Permit No. MI0020320. A complete application was submitted to MDEQ on May 15, 2013 for the permit expiring on October 1, 2013. On January 13, 2015, the City received the draft NPDES Permit from MDEQ. One of the terms and conditions of this permit requires the preparation of an Asset Management Program. On or before October 1, 2015, the City is required to submit to the MDEQ an Asset Management Plan (AMP) for review and approval. The requirements of the Plan and Program are extensive and are detailed in the attached draft permit. In summary, the MDEQ states: "The requirements of an Asset Management Program contain goals of effective performance, adequate funding, and adequate operator staffing and training. Asset management is a planning process that ensures gaining optimum value for each asset and providing the financial resources to rehabilitate and replace them when necessary; and typically includes five core elements which identify: the current state of the asset, the desired level of service (e.g., per the permit, or for the customer), the most critical asset(s) to sustain performance, the best life cycle cost, and the long term funding strategy to sustain service and performance." Additionally, one of the terms and conditions of this permit requires an up-to-date Operations and Maintenance (O&M) Manual.

Staff requested a proposal from the consulting engineering firm of Hubbell, Roth & Clark, Inc. (HRC) to perform the work related to the Asset Management Plan and Program, and the Operations and Maintenance Manual. HRC successfully completed the City of South Haven Waste Water Treatment Plant Evaluation/Facilities Master Plan in 2010, and has extensive working knowledge to the WWTP facilities, equipment, and operations. This knowledge will provide for efficient preparation of the plan, as well the efficiencies HRC have gained from the preparation of AMPs and O&M manuals for other similar sized WWTPs.

There is overlap of the requirements of the NPDES Permit AMP and the Asset Management component of the SAW Grant Project being performed by Abonmarche. City staff, HRC, and Abonmarche have coordinated the scopes of work to ensure there is no duplication of efforts. Efficiency will be gained by incorporation of the collection system AMP into the WWTP AMP as required.

Recommendation:

Approve a recommendation to City Council to approve a consulting engineering contract with Hubbell, Roth & Clark, Inc. for the Waste Water Treatment Plant Asset Management Plan in the not-to-exceed amount of \$110,000.

Support Material:

DRAFT NPDES Permit
HRC Proposal

PERMIT NO. MI0020320

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY



**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Federal Water Pollution Control Act (33 U.S.C. 1251 *et seq.*, as amended; the "Federal Act"); Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA); Part 41, Sewerage Systems, of the NREPA; and Michigan Executive Order 2011-1,

City of South Haven
539 Phoenix Street
South Haven, Michigan 49090

is authorized to discharge from the **City of South Haven Wastewater Treatment Plant** located at

620 Wells Street
South Haven, Michigan 49090

designated as **South Haven WWTP**

to the receiving water named the Black River in accordance with effluent limitations, monitoring requirements, and other conditions set forth in this permit.

This permit is based on a complete application submitted on May 15, 2013.

This permit takes effect on April 1, 2015. The provisions of this permit are severable. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term in accordance with applicable laws and rules. On its effective date this permit shall supersede NPDES Permit No. MI0020320, expiring October 1, 2013.

This permit and the authorization to discharge shall expire at midnight, **October 1, 2018**. In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit an application which contains such information, forms, and fees as are required by the Department of Environmental Quality (Department) by **April 4, 2018**.

Issued _____

DRAFT – January 13, 2015
Philip Argiroff, Chief
Permits Section
Water Resources Division

PERMIT FEE REQUIREMENTS

In accordance with Section 324.3120 of the NREPA, the permittee shall make payment of an annual permit fee to the Department for each October 1 the permit is in effect regardless of occurrence of discharge. The permittee shall submit the fee in response to the Department's annual notice. The fee shall be postmarked by January 15 for notices mailed by December 1. The fee is due no later than 45 days after receiving the notice for notices mailed after December 1.

Annual Permit Fee Classification: Municipal Major, less than 10 MGD (IP)

In accordance with Section 324.3132 of the NREPA, the permittee shall make payment of an annual biosolids land application fee to the Department if the permittee land applies biosolids. In response to the Department's annual notice, the permittee shall submit the fee, which shall be postmarked no later than January 31 of each year.

CONTACT INFORMATION

Unless specified otherwise, all contact with the Department required by this permit shall be made to the Kalamazoo District Supervisor of the Water Resources Division. The Kalamazoo District Office is located at 7953 Adobe Road, Kalamazoo, Michigan 49009-5025, Telephone: 269-567-3500, Fax: 269-567-9440.

CONTESTED CASE INFORMATION

Any person who is aggrieved by this permit may file a sworn petition with the Michigan Administrative Hearing System within the Michigan Department of Licensing and Regulatory Affairs, c/o the Michigan Department of Environmental Quality, setting forth the conditions of the permit which are being challenged and specifying the grounds for the challenge. The Department of Licensing and Regulatory Affairs may reject any petition filed more than 60 days after issuance as being untimely.

PART I

Section A. Limitations and Monitoring Requirements

1. Final Effluent Limitations, Monitoring Point 001A

During the period beginning on the effective date of this permit and lasting until the expiration date of this permit, the permittee is authorized to discharge treated municipal wastewater from Monitoring Point 001A through Outfall 001. Outfall 001 discharges to the Black River. Such discharge shall be limited and monitored by the permittee as specified below.

<u>Parameter</u>	<u>Maximum Limits for Quantity or Loading</u>				<u>Maximum Limits for Quality or Concentration</u>				<u>Monitoring Frequency</u>	<u>Sample Type</u>																						
	<u>Monthly</u>	<u>7-Day</u>	<u>Daily</u>	<u>Units</u>	<u>Monthly</u>	<u>7-Day</u>	<u>Daily</u>	<u>Units</u>																								
Flow	(report)	---	(report)	MGD	---	---	---	---	Daily	Report Total Daily Flow																						
Carbonaceous Biochemical Oxygen Demand (CBOD ₅)																																
May 1 – Sep. 30	370	---	460	lbs/day	20	---	25	mg/l	5x/week	24-Hr Composite																						
Oct. 1 – Apr. 30	460	730	---	lbs/day	25	40	---	mg/l	5x/week	24-Hr Composite																						
Total Suspended Solids (TSS)																																
	550	820	---	lbs/day	30	45	---	mg/l	5x/week	24-Hr Composite																						
Ammonia Nitrogen (as N)																																
May 1 – Sep. 30	170	---	---	lbs/day	(report)	---	---	mg/l	5x/week	24-Hr Composite																						
Oct. 1 – Apr. 30	---	---	---	---	(report)	---	---	mg/l	5x/week	24-Hr Composite																						
Total Phosphorus (as P)																																
	18	---	---	lbs/day	1.0	---	---	mg/l	Daily	24-Hr Composite																						
Fecal Coliform Bacteria	---	---	---	---	200	400	---	cts/100 ml	Daily	Grab																						
Total Residual Chlorine	---	---	---	---	---	---	38	µg/l	Daily	Grab																						
Total Mercury																																
– Corrected	(report)	---	---	lbs/day	(report)	---	---	ng/l	Quarterly	Calculation																						
– Uncorrected	(report)	---	---	lbs/day	(report)	---	---	ng/l	Quarterly	Grab																						
– Field Duplicate	---	---	---	---	(report)	---	---	ng/l	Quarterly	Grab																						
– Field Blank	---	---	---	---	(report)	---	---	ng/l	Quarterly	Preparation																						
– Laboratory Method Blank	---	---	---	---	(report)	---	---	ng/l	Quarterly	Preparation																						
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	12-Month				12-Month																											
	<u>Rolling Average</u>				<u>Rolling Average</u>																											
Total Mercury	0.000055	---	---	lbs/day	3.0	---	---	ng/l	Quarterly	Calculation																						
<table border="0" style="width:100%; text-align:center;"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Minimum</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td><u>Monthly</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>																Minimum											<u>Monthly</u>					
					Minimum																											
					<u>Monthly</u>																											
CBOD ₅ Minimum % Removal																																
Oct. 1 – Apr. 30	---	---	---	---	85	---	---	%	Monthly	Calculation																						
Total Suspended Solids Minimum % Removal																																
	---	---	---	---	85	---	---	%	Monthly	Calculation																						

Minimum

Maximum

PART I

Section A. Limitations and Monitoring Requirements

					<u>Daily</u>		<u>Daily</u>			
pH	---	---	---	---	6.5	---	9.0	S.U.	Daily	Grab
Dissolved Oxygen	---	---	---	---	3.0	---	---	mg/l	Daily	Grab

The following design flow was used in determining the above limitations, but is not to be considered a limitation or actual capacity: 2.19 MGD

- a. **Narrative Standard**
The receiving water shall contain no turbidity, color, oil films, floating solids, foams, settleable solids, or deposits as a result of this discharge in unnatural quantities which are or may become injurious to any designated use.
- b. **Sampling Locations**
Samples for CBOD₅, Total Suspended Solids, Ammonia Nitrogen, and Total Phosphorus shall be taken prior to disinfection. Samples for Dissolved Oxygen, Fecal Coliform Bacteria, Total Mercury, Total Residual Chlorine, and pH shall be taken after disinfection. The Department may approve alternate sampling locations which are demonstrated by the permittee to be representative of the effluent.
- c. **Quarterly Monitoring**
Quarterly samples shall be taken during the months of January, April, July, and October. If the facility does not discharge during these months, the permittee shall sample the next discharge occurring during that quarter. If the facility does not discharge during a quarter, a sample is not required for that quarter. For any month in which a sample is not taken, the permittee shall enter “*G” on the Discharge Monitoring Report.
- d. **Total Residual Chlorine**
Compliance with the Total Residual Chlorine limit shall be determined on the basis of one or more grab samples. If more than one (1) sample per day is taken, the additional samples shall be collected in near equal intervals over at least eight (8) hours. The samples shall be analyzed immediately upon collection and the average reported as the daily concentration. Samples shall be analyzed in accordance with Part II.B.2. of this permit.
- e. **Percent Removal Requirements**
These requirements shall be calculated based on the monthly (30-day) effluent CBOD₅ and Total Suspended Solids concentrations and the monthly influent concentrations for approximately the same period.
- f. **Final Effluent Limitation for Total Mercury**
The final limit for Total Mercury is the Discharge Specific Level Currently Achievable (LCA) based on a multiple discharger variance from the water quality-based effluent limit of 1.3 ng/l, pursuant to Rule 323.1103(9) of the Water Quality Standards. Compliance with the LCA shall be determined as a 12-month rolling average, the calculation of which may be done using blank-corrected sample results. The 12-month rolling average shall be determined by adding the present monthly average result to the preceding 11 monthly average results then dividing the sum by 12. For facilities with quarterly monitoring requirements for Total Mercury, quarterly monitoring shall be equivalent to 3 months of monitoring in calculating the 12-month rolling average. Facilities that monitor more frequently than monthly for Total Mercury must determine the monthly average result, which is the sum of the results of all data obtained in a given month divided by the total number of samples taken, in order to calculate the 12-month rolling average. If the 12-month rolling average for any quarter is less than or equal to the LCA, the permittee will be considered to be in compliance for Total Mercury for that quarter, provided the permittee is also in full compliance with the Pollutant Minimization Program for Total Mercury, set forth in Part I.A.3.

PART I**Section A. Limitations and Monitoring Requirements**

g. Total Mercury Testing and Additional Reporting Requirements

The analytical protocol for Total Mercury shall be in accordance with EPA Method 1631, Revision E, "Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry," EPA-821-R-02-019, August 2002. The quantification level for Total Mercury shall be 0.5 ng/l, unless a higher level is appropriate because of sample matrix interference. Justification for higher quantification levels shall be submitted to the Department within 30 days of such determination.

The use of clean technique sampling procedures is required unless the permittee can demonstrate to the Department that an alternative sampling procedure is representative of the discharge. Guidance for clean technique sampling is contained in EPA Method 1669, "Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels," EPA-821-R96-001, July 1996. Information and data documenting the permittee's sampling and analytical protocols and data acceptability shall be submitted to the Department upon request.

In order to demonstrate compliance with EPA Method 1631E and EPA Method 1669, the permittee shall report, on the daily sheet, the analytical results of all field blanks and field duplicates collected in conjunction with each sampling event, as well as laboratory method blanks when used for blank correction. The permittee shall collect at least one (1) field blank and at least one (1) field duplicate per sampling event. If more than ten (10) samples are collected during a sampling event, the permittee shall collect at least one (1) additional field blank AND field duplicate for every ten (10) samples collected. Only field blanks or laboratory method blanks may be used to calculate a concentration lower than the actual sample analytical results (i.e. a blank correction). Only one (1) blank (field OR laboratory method) may be used for blank correction of a given sample result, and only if the blank meets the quality control acceptance criteria. If blank correction is not performed on a given sample analytical result, the permittee shall report under 'Total Mercury – Corrected' the same value reported under 'Total Mercury – Uncorrected.' The field duplicate is for quality control purposes only; its analytical result shall not be averaged with the sample result.

PART I

Section A. Limitations and Monitoring Requirements

acenaphthene	acenaphthylene	anthracene	benzidine
benzo(a)anthracene	benzo(a)pyrene	3,4-benzofluoranthene	benzo(ghi)perylene
benzo(k)fluoranthene	bis(2-chloroethoxy)methane	bis(2-chloroethyl)ether	bis(2-chloroisopropyl)ether
bis(2-ethylhexyl)phthalate	4-bromophenyl phenyl ether	butyl benzyl phthalate	2-chloronaphthalene
4-chlorophenyl phenyl ether	chrysene	di-n-butyl phthalate	di-n-octyl phthalate
dibenzo(a,h)anthracene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene
3,3'-dichlorobenzidine	diethyl phthalate	dimethyl phthalate	2,4-dinitrotoluene
2,6-dinitrotoluene	1,2-diphenylhydrazine	fluoranthene	fluorene
Hexachlorobenzene	hexachlorobutadiene	hexachlorocyclo-pentadiene	hexachloroethane
indeno(1,2,3-cd)pyrene	isophorone	naphthalene	nitrobenzene
n-nitrosodi-n-propylamine	n-nitrosodimethylamine	n-nitrosodiphenylamine	phenanthrene
pyrene	1,2,4-trichlorobenzene		

3. Pollutant Minimization Program for Total Mercury

The goal of the Pollutant Minimization Program is to maintain the effluent concentration of total mercury at or below 1.3 ng/l. The permittee shall continue to implement the Pollutant Minimization Program approved on September 1, 2005, and modifications thereto, to proceed toward the goal. The Pollutant Minimization Program includes the following:

- an annual review and semi-annual monitoring of potential sources of mercury entering the wastewater collection system;
- a program for quarterly monitoring of influent and periodic monitoring of sludge for mercury; and
- implementation of reasonable cost-effective control measures when sources of mercury are discovered. Factors to be considered include significance of sources, economic considerations, and technical and treatability considerations.

On or before March 31 of each year, the permittee shall submit a status report for the previous calendar year to the Department that includes 1) the monitoring results for the previous year, 2) an updated list of potential mercury sources, and 3) a summary of all actions taken to reduce or eliminate identified sources of mercury.

Any information generated as a result of the Pollutant Minimization Program set forth in this permit may be used to support a request to modify the approved program or to demonstrate that the Pollutant Minimization Program requirement has been completed satisfactorily.

A request for modification of the approved program and supporting documentation shall be submitted in writing to the Department for review and approval. The Department may approve modifications to the approved program (approval of a program modification does not require a permit modification), including a reduction in the frequency of the requirements under items a. and b.

This permit may be modified in accordance with applicable laws and rules to include additional mercury conditions and/or limitations as necessary.

4. Untreated or Partially Treated Sewage Discharge Reporting and Testing Requirements

In accordance with Section 324.3112a of the NREPA, if untreated sewage, including sanitary sewer overflows (SSO) and combined sewer overflows (CSO), or partially treated sewage is directly or indirectly discharged from a sewer system onto land or into the waters of the state, the entity responsible for the sewer system shall immediately, but not more than 24 hours after the discharge begins, notify, by telephone, the Department, local health departments, a daily newspaper of general circulation in the county in which the permittee is located, and

PART I

Section A. Limitations and Monitoring Requirements

a daily newspaper of general circulation in the county or counties in which the municipalities whose waters may be affected by the discharge are located that the discharge is occurring.

The permittee shall also annually contact municipalities, including the superintendent of a public drinking water supply with potentially affected intakes, whose waters may be affected by the permittee's discharge of combined sewage, and if those municipalities wish to be notified in the same manner as specified above, the permittee shall provide such notification. Such notification shall also include a daily newspaper in the county of the affected municipality.

At the conclusion of the discharge, written notification shall be submitted in accordance with and on the "Report of Discharge Form" available via the internet at: <http://www.deq.state.mi.us/csosso/>, or, alternatively for combined sewer overflow discharges, in accordance with notification procedures approved by the Department.

In addition, in accordance with Section 324.3112a of the NREPA, each time a discharge of untreated sewage or partially treated sewage occurs, the permittee shall test the affected waters for *Escherichia coli* to assess the risk to the public health as a result of the discharge and shall provide the test results to the affected local county health departments and to the Department. The testing shall be done at locations specified by each affected local county health department but shall not exceed 10 tests for each separate discharge event. The affected local county health department may waive this testing requirement, if it determines that such testing is not needed to assess the risk to the public health as a result of the discharge event. The results of this testing shall be submitted with the written notification required above, or, if the results are not yet available, submit them as soon as they become available. This testing is not required, if the testing has been waived by the local health department, or if the discharge(s) did not affect surface waters.

Permittees accepting sanitary or municipal sewage from other sewage collection systems are encouraged to notify the owners of those systems of the above reporting and testing requirements.

5. Facility Contact

The "Facility Contact" was specified in the application. The permittee may replace the facility contact at any time, and shall notify the Department in writing within 10 days after replacement (including the name, address and telephone number of the new facility contact).

- a. The facility contact shall be (or a duly authorized representative of this person):
 - for a corporation, a principal executive officer of at least the level of vice president; or a designated representative if the representative is responsible for the overall operation of the facility from which the discharge originates, as described in the permit application or other NPDES form,
 - for a partnership, a general partner,
 - for a sole proprietorship, the proprietor, or
 - for a municipal, state, or other public facility, either a principal executive officer, the mayor, village president, city or village manager or other duly authorized employee.
- b. A person is a duly authorized representative only if:
 - the authorization is made in writing to the Department by a person described in paragraph a. of this section; and
 - the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the facility (a duly authorized representative may thus be either a named individual or any individual occupying a named position).

Nothing in this section obviates the permittee from properly submitting reports and forms as required by law.

PART I

Section A. Limitations and Monitoring Requirements

6. Monthly Operating Reports

Part 41 of Act 451 of 1994 as amended, specifically Section 324.4106 and associated R 299.2953, requires that the permittee file with the Department, on forms prescribed by the Department, reports showing the effectiveness of the treatment facility operation and the quantity and quality of liquid wastes discharged into waters of the state.

Since this permit includes modifications to the monitoring requirements in the previously-issued permit, the previously approved treatment facility monitoring program shall be revised. Within thirty (30) days of the effective date of this permit, the permittee shall submit to the Department a revised treatment facility monitoring program to meet this requirement. Upon approval by the Department the permittee shall implement the revised treatment facility monitoring program. The reporting forms and guidance are available on the DEQ web site at http://www.michigan.gov/deq/0,1607,7-135-3313_44117---,00.html. The permittee may use alternative operating forms if they are consistent with the approved monitoring program. These forms shall be maintained on site and shall be provided to the Department for review upon request. These treatment facility monitoring records shall be maintained for a minimum of three years.

7. Asset Management

The permittee shall at all times properly operate and maintain all facilities (i.e., the sewer system and treatment works as defined in Part 41 of the NREPA), and control systems installed or used by the permittee to operate the sewer system and treatment works and achieve and maintain compliance with the conditions of this permit (also see Part II.D.3 of this permit). The requirements of an Asset Management Program function to achieve the goals of effective performance, adequate funding, and adequate operator staffing and training. Asset management is a planning process for ensuring that optimum value is gained for each asset and that financial resources are available to rehabilitate and replace those assets when necessary. Asset management is centered on a framework of five (5) core elements: the current state of the assets; the required sustainable level of service; the assets critical to sustained performance; the minimum life-cycle costs; and the best long-term funding strategy.

a. Asset Management Program Requirements

On or before October 1, 2015, the permittee shall submit to the Department an Asset Management Plan for review and approval. An approvable Asset Management Plan shall contain a schedule for the development and implementation of an Asset Management Program that meets the requirements outlined below in 1) – 4). A copy of any Asset Management Program requirements already completed by the permittee should be submitted as part of the Asset Management Plan. Upon approval by the Department the permittee shall implement the Asset Management Plan. (The permittee may choose to include the Operation and Maintenance Manual required under Part II.C.14. of this permit as part of their Asset Management Program).

1) *Maintenance Staff.* The permittee shall provide an adequate staff to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this permit. The level of staffing needed shall be determined by taking into account the work involved in operating the sewer system and treatment works, planning for and conducting maintenance, and complying with this permit.

2) *Collection System Map.* The permittee shall complete a map of the sewer collection system it owns and operates. The map shall be of sufficient detail and at a scale to allow easy interpretation. The collection system information shown on the map shall be based on current conditions and shall be kept up-to-date and available for review by the Department. **Note: Items below referencing combined sewer systems are not applicable to separate sewer systems.** Such map(s) shall include but not be limited to the following:

- a) all sanitary sewer lines and related manholes;
- b) all combined sewer lines, related manholes, catch basins and CSO regulators;

PART I**Section A. Limitations and Monitoring Requirements**

- c) all known or suspected connections between the sanitary sewer or combined sewer and storm drain systems;
 - d) all outfalls, including the treatment plant outfall(s), combined sewer treatment facility outfalls, untreated CSOs, and any known SSOs;
 - e) all pump stations and force mains;
 - f) the wastewater treatment facility(ies), including all treatment processes;
 - g) all surface waters (labeled);
 - h) other major appurtenances such as inverted siphons and air release valves;
 - i) a numbering system which uniquely identifies manholes, catch basins, overflow points, regulators and outfalls;
 - j) the scale and a north arrow;
 - k) the pipe diameter, date of installation, type of material, distance between manholes, and the direction of flow; and
 - l) the manhole interior material, rim elevation (optional), and invert elevations.
- 3) *Inventory and assessment of fixed assets.* The permittee shall complete an inventory and assessment of operations-related fixed assets. Fixed assets are assets that are normally stationary (e.g., pumps, blowers, and buildings). The inventory and assessment shall be based on current conditions and shall be kept up-to-date and available for review by the Department.
- a) The fixed asset inventory shall include the following:
 - (1) a brief description of the fixed asset, its design capacity (e.g., pump: 120 gallons per minute), its level of redundancy, and its tag number if applicable;
 - (2) the location of the fixed asset;
 - (3) the year the fixed asset was installed;
 - (4) the present condition of the fixed asset (e.g., excellent, good, fair, poor);
 - (5) the depreciated value of the fixed asset in dollars for year specified in accordance with approved schedules; and
 - (6) the current fixed asset (replacement) cost in dollars for year specified in accordance with approved schedules;
 - b) The fixed asset assessment shall include a "Business Risk Evaluation" that combines the probability of failure of the fixed asset and the criticality of the fixed asset, as follows:
 - (1) Rate the probability of failure of the fixed asset on a scale of 1-5 (low to high) using criteria such as maintenance history, failure history, and remaining percentage of useful life (or years remaining);
 - (2) Rate the criticality of the fixed asset on a scale of 1-5 (low to high) based on the consequence of failure versus the desired level of service for the facility; and

PART I**Section A. Limitations and Monitoring Requirements**

(3) Compute the Business Risk Factor of the fixed asset by multiplying the failure rating from (1) by the criticality rating from (2).

4) *Operation, Maintenance & Replacement (OM&R) Budget and Rate Sufficiency for the Sewer System and Treatment Works.* The permittee shall complete an assessment of its user rates and replacement fund, including the following:

- a) beginning and end dates of fiscal year;
- b) name of the department, committee, board, or other organization that sets rates for the operation of the sewer system and treatment works;
- c) amount in the permittee's replacement fund in dollars for year specified in accordance with approved schedules;
- d) replacement fund of all assets with a useful life of 20 years or less;
- e) expenditures for maintenance, corrective action and capital improvement taken during the fiscal year;
- f) OM&R budget for the fiscal year; and
- g) rate calculation demonstrating sufficient revenues to cover OM&R expenses. If the rate calculation shows there are insufficient revenues to cover OM&R expenses, the permittee shall document, within three (3) fiscal years after submittal of the Asset Management Plan, that there is at least one rate adjustment that reduces the revenue gap by at least 10 percent. The ultimate goal of the Asset Management Program is to ensure sufficient revenues to cover OM&R expenses.

b. Reporting

The permittee shall develop a written report that summarizes asset management activities completed during the previous year and planned for the upcoming year. The written report shall be submitted to the Department on or before July 31 of each year. The written report shall include:

- 1) a description of the staffing levels maintained during the year;
- 2) a description of inspections and maintenance activities conducted and corrective actions taken during the previous year;
- 3) expenditures for collection system maintenance activities, treatment works maintenance activities, corrective actions, and capital improvement during the previous year;
- 4) a summary of assets/areas identified for inspection/action (including capital improvement) in the upcoming year based on the five (5) core elements and the Business Risk Factors;
- 5) a maintenance budget and capital improvement budget for the upcoming year that take into account implementation of an effective Asset Management Program that meets the five (5) core elements;
- 6) an updated asset inventory based on the original submission; and
- 7) an updated OM&R budget with an updated rate schedule that includes the amount of insufficient revenues, if any.

PART I**Section B. Industrial Waste Pretreatment Program****1. Michigan Industrial Pretreatment Program**

- a. The permittee shall implement the Michigan Industrial Pretreatment Program approved on August 5, 1985, and any subsequent modifications approved up to the issuance of this permit.
- b. The permittee shall comply with R 323.2301 through R 323.2317 of the Michigan Administrative Code (Part 23 Rules) and the approved Michigan Industrial Pretreatment Program.
- c. The permittee shall have the legal authority and necessary interjurisdictional agreements that provide the basis for the implementation and enforcement of the approved Michigan Industrial Pretreatment Program throughout the service area. The legal authority and necessary interjurisdictional agreements shall include, at a minimum, the authority to carry out the activities specified in R 323.2306(a).
- d. The permittee shall develop procedures which describe, in sufficient detail, program commitments which enable implementation of the approved Michigan Industrial Pretreatment Program and the Part 23 Rules in accordance with R 323.2306(c).
- e. The permittee shall establish an interjurisdictional agreement (or comparable document) with all tributary governmental jurisdictions. Each interjurisdictional agreement shall contain, at a minimum, the following:
 - 1) identification of the agency responsible for the implementation and enforcement of the approved Michigan Industrial Pretreatment Program within the tributary governmental jurisdiction's boundaries; and
 - 2) the provision of the legal authority which provides the basis for the implementation and enforcement of the approved Michigan Industrial Pretreatment Program within the tributary governmental jurisdiction's boundaries.
- f. The permittee shall prohibit discharges that:
 - 1) cause, in whole or in part, the permittee's failure to comply with any condition of this permit or the NREPA;
 - 2) restrict, in whole or in part, the permittee's management of biosolids;
 - 3) cause, in whole or in part, operational problems at the treatment facility or in its collection system;
 - 4) violate any of the general or specific prohibitions identified in R 323.2303(1) and (2);
 - 5) violate categorical standards identified in R 323.2311; and
 - 6) violate local limits established in accordance with R 323.2303(4).
- g. The permittee shall maintain a list of its nondomestic users that meet the criteria of a significant industrial user as identified in R 323.2302(cc).
- h. The permittee shall develop an enforcement response plan which describes, in sufficient detail, program commitments which will enable the enforcement of the approved Michigan Industrial Pretreatment Program and the Part 23 Rules in accordance with R 323.2306(g).
- i. The Department may require modifications to the approved Michigan Industrial Pretreatment Program which are necessary to ensure compliance with the Part 23 Rules in accordance with R 323.2309.

PART I**Section B. Industrial Waste Pretreatment Program**

- j. The permittee shall not implement changes or modifications to the approved Michigan Industrial Pretreatment Program without notification to the Department.
- k. The permittee shall maintain an adequate revenue structure and staffing level for effective implementation of the approved Michigan Industrial Pretreatment Program.
- l. The permittee shall develop and maintain, for a minimum of three (3) years, all records and information necessary to determine nondomestic user compliance with the Part 23 Rules and the approved Michigan Industrial Pretreatment Program. This period of retention shall be extended during the course of any unresolved enforcement action or litigation regarding a nondomestic user or when requested by the Department or the United States Environmental Protection Agency. All of the aforementioned records and information shall be made available upon request for inspection and copying by the Department and the United States Environmental Protection Agency.
- m. The permittee shall evaluate the approved Michigan Industrial Pretreatment Program for compliance with the Part 23 Rules and the prohibitions set forth in item f. above. Based upon this evaluation, the permittee shall propose to the Department all necessary changes or modifications to the approved Michigan Industrial Pretreatment Program no later than the next Industrial Pretreatment Program Annual Report due date (see item o. below).
- n. The permittee shall develop and enforce local limits to implement the prohibitions set forth in item f. above. Local limits shall be based upon data representative of actual conditions demonstrated in a maximum allowable headworks loading analysis.
- o. On or before April 1 of each year, the permittee shall submit to the Department, as required by R 323.2310(8), an Industrial Pretreatment Program Annual Report on the status of program implementation and enforcement activities. The reporting period shall begin on January 1 and end on December 31. At a minimum, the Industrial Pretreatment Program Annual Report shall contain the following items:
 - 1) additions, deletions, and any other modifications to the permittee's previously submitted nondomestic user inventory (R 323.2306(c)(i));
 - 2) additions, deletions, and any other modifications to the permittee's approved Significant Industrial User List (R 323.2306(h));
 - 3) a listing of the names of Significant Industrial Users not inspected by the permittee at least once during the reporting period or at the frequency committed to in the approved Michigan Industrial Pretreatment Program;
 - 4) a listing of the names of Significant Industrial Users not sampled for all required pollutants by the permittee at least once during the reporting period or at the frequency committed to in the approved Michigan Industrial Pretreatment Program;
 - 5) a listing of the names of Significant Industrial Users without a permit at any time during the reporting period;
 - 6) a listing of the names of categorical industrial users in significant noncompliance for each of the criteria defined in R 323.2302(dd)(i)-(viii);
 - 7) proof of publication of all categorical industrial users in significant noncompliance in the largest daily newspaper in the municipality in which the permittee is located;

PART I**Section B. Industrial Waste Pretreatment Program**

- 8) a summary of the enforcement activities by the permittee during the report period. This Summary shall include:
- a) a listing of the names of nondomestic users which were the subject of an enforcement action;
 - b) the enforcement action taken and the date the action was taken; and
 - c) whether the nondomestic user returned to compliance by the end of the reporting period (include date nondomestic user returned to compliance).
- 9) a listing of the names of Significant Industrial Users who did not submit pretreatment reports in accordance with requirements specified in their permit during the reporting period;
- 10) a listing of the names of Significant Industrial Users who did not self-monitor in accordance with requirements specified in their permit during the reporting period;
- 11) a summary of results of all the sampling and analyses performed of the wastewater treatment plant's influent, effluent, and biosolids conducted in accordance with approved methods during the reporting period. The summary shall include the monthly average, daily maximum, quantification level, and number of samples analyzed for each pollutant. At a minimum, the results of analyses for all locally limited parameters for at least one monitoring event that tests influent, effluent and biosolids during the reporting period shall be submitted with each report, unless otherwise required by the Department. Sample collection shall be at intervals sufficient to provide pollutant removal rates, unless the pollutant is not measurable; and
- 12) any other relevant information as requested by the Department.

PART I**Section C. Residuals Management Program****1. Residuals Management Program for Land Application of Biosolids**

The permittee is authorized to land-apply bulk biosolids or prepare bulk biosolids for land application in accordance with the permittee's approved Residuals Management Program (RMP) approved on March 26, 2001 and approved modifications thereto in accordance with the requirements established in R 323.2401 through R 323.2418 of the Michigan Administrative Code (Part 24 Rules). The approved RMP, and any approved modifications thereto, are enforceable requirements of this permit. Incineration, landfilling and other residual disposal activities shall be conducted in accordance with Part II.D.7. of this permit. The Part 24 Rules can be obtained via the internet (<http://www.michigan.gov/deq/> and on the left side of the screen click on Water, Biosolids & Industrial Pretreatment, Biosolids then click on Biosolids laws and Rules Information which is under the Laws & Rules banner in the center of the screen).

a. Annual Report

On or before October 30 of each year, the permittee shall submit to the Biosolids Program, Water Resources Division, Department of Environmental Quality, P.O. Box 30458, Lansing, MI 48909-7958 for the previous fiscal year of October 1 through September 30. At a minimum, the report shall contain:

1) a certification that current residuals management practices are in accordance with the approved RMP, or a proposal for modification to the approved RMP; and

2) a completed Biosolids Annual Report Form which can be obtained via the internet (<http://www.michigan.gov/deq/> and on the left side of the screen click on Water, Biosolids & Industrial Pretreatment, Biosolids then click on Biosolids Annual Report Form which is under the Downloads banner in the center of the screen) or from the Department.

b. Modifications to the Approved RMP

Prior to implementation of modifications to the RMP, the permittee shall submit proposed modifications to the Department for approval. The approved modification shall become effective upon the date of approval. Upon written notification, the Department may impose additional requirements and/or limitations to the approved RMP as necessary to protect public health and the environment from any adverse effect of a pollutant in the biosolids.

c. Record Keeping

Records required by the Part 24 Rules shall be kept for a minimum of five years. However, the records documenting cumulative loading for sites subject to cumulative pollutant loading rates shall be kept as long as the site receives biosolids.

d. Contact Information

RMP related submittals to the Department shall be to the Kalamazoo District Supervisor of the Water Resources Division. The Kalamazoo District Office is located at 7953 Adobe Road, Kalamazoo Michigan, 49009-5025 Telephone: 269-567-3500, Fax: 269-567-9440.

PART II

Part II may include terms and /or conditions not applicable to discharges covered under this permit.

Section A. Definitions

Acute toxic unit (TU_A) means $100/LC_{50}$ where the LC_{50} is determined from a whole effluent toxicity (WET) test which produces a result that is statistically or graphically estimated to be lethal to 50% of the test organisms.

Annual monitoring frequency refers to a calendar year beginning on January 1 and ending on December 31. When required by this permit, an analytical result, reading, value or observation shall be reported for that period if a discharge occurs during that period.

Authorized public agency means a state, local, or county agency that is designated pursuant to the provisions of section 9110 of Part 91 of the NREPA to implement soil erosion and sedimentation control requirements with regard to construction activities undertaken by that agency.

Best management practices (BMPs) means structural devices or nonstructural practices that are designed to prevent pollutants from entering into storm water, to direct the flow of storm water, or to treat polluted storm water.

Bioaccumulative chemical of concern (BCC) means a chemical which, upon entering the surface waters, by itself or as its toxic transformation product, accumulates in aquatic organisms by a human health bioaccumulation factor of more than 1000 after considering metabolism and other physiochemical properties that might enhance or inhibit bioaccumulation. The human health bioaccumulation factor shall be derived according to R 323.1057(5). Chemicals with half-lives of less than 8 weeks in the water column, sediment, and biota are not BCCs. The minimum bioaccumulation concentration factor (BAF) information needed to define an organic chemical as a BCC is either a field-measured BAF or a BAF derived using the biota-sediment accumulation factor (BSAF) methodology. The minimum BAF information needed to define an inorganic chemical as a BCC, including an organometal, is either a field-measured BAF or a laboratory-measured bioconcentration factor (BCF). The BCCs to which these rules apply are identified in Table 5 of R 323.1057 of the Water Quality Standards.

Biosolids are the solid, semisolid, or liquid residues generated during the treatment of sanitary sewage or domestic sewage in a treatment works. This includes, but is not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment processes and a derivative of the removed scum or solids.

Bulk biosolids means biosolids that are not sold or given away in a bag or other container for application to a lawn or home garden.

Certificate of Coverage (COC) is a document, issued by the Department, which authorizes a discharge under a general permit.

Chronic toxic unit (TU_C) means $100/MATC$ or $100/IC_{25}$, where the maximum acceptable toxicant concentration (MATC) and IC_{25} are expressed as a percent effluent in the test medium.

Class B biosolids refers to material that has met the Class B pathogen reduction requirements or equivalent treatment by a Process to Significantly Reduce Pathogens (PSRP) in accordance with the Part 24 Rules. Processes include aerobic digestion, composting, anaerobic digestion, lime stabilization and air drying.

Combined sewer system is a sewer system in which storm water runoff is combined with sanitary wastes.

PART II

Section A. Definitions

Daily concentration is the sum of the concentrations of the individual samples of a parameter divided by the number of samples taken during any calendar day. If the parameter concentration in any sample is less than the quantification limit, regard that value as zero when calculating the daily concentration. The daily concentration will be used to determine compliance with any maximum and minimum daily concentration limitations (except for pH and dissolved oxygen). When required by the permit, report the maximum calculated daily concentration for the month in the "MAXIMUM" column under "QUALITY OR CONCENTRATION" on the Discharge Monitoring Reports (DMRs).

For pH, report the maximum value of any *individual* sample taken during the month in the "MAXIMUM" column under "QUALITY OR CONCENTRATION" on the DMRs and the minimum value of any *individual* sample taken during the month in the "MINIMUM" column under "QUALITY OR CONCENTRATION" on the DMRs. For dissolved oxygen, report the minimum concentration of any *individual* sample in the "MINIMUM" column under "QUALITY OR CONCENTRATION" on the DMRs.

Daily loading is the total discharge by weight of a parameter discharged during any calendar day. This value is calculated by multiplying the daily concentration by the total daily flow and by the appropriate conversion factor. The daily loading will be used to determine compliance with any maximum daily loading limitations. When required by the permit, report the maximum calculated daily loading for the month in the "MAXIMUM" column under "QUANTITY OR LOADING" on the DMRs.

Daily monitoring frequency refers to a 24-hour day. When required by this permit, an analytical result, reading, value or observation shall be reported for that period if a discharge occurs during that period.

Department means the Michigan Department of Environmental Quality.

Detection level means the lowest concentration or amount of the target analyte that can be determined to be different from zero by a single measurement at a stated level of probability.

Discharge means the addition of any waste, waste effluent, wastewater, pollutant, or any combination thereof to any surface water of the state.

Discharge point is the location where the point source discharge is directed to surface waters of the state or to a separate storm sewer. It includes the location of all point source discharges where storm water exits the facility, including *outfalls* which discharge directly to surface waters of the state, and *points of discharge* which discharge directly into separate storm sewer systems.

EC₅₀ means a statistically or graphically estimated concentration that is expected to cause 1 or more specified effects in 50% of a group of organisms under specified conditions.

Fecal coliform bacteria monthly

FOR WWSLs THAT COLLECT AND STORE WASTEWATER AND ARE AUTHORIZED TO DISCHARGE ONLY IN THE SPRING AND/OR FALL ON AN INTERMITTENT BASIS – Fecal coliform bacteria monthly is the geometric mean of all daily concentrations determined during a discharge event. Days on which no daily concentration is determined shall not be used to determine the calculated monthly value. The calculated monthly value will be used to determine compliance with the maximum monthly fecal coliform bacteria limitations. When required by the permit, report the calculated monthly value in the "AVERAGE" column under "QUALITY OR CONCENTRATION" on the DMR. If the period in which the discharge event occurred was partially in each of two months, the calculated monthly value shall be reported on the DMR of the month in which the last day of discharge occurred.

FOR ALL OTHER DISCHARGES – Fecal coliform bacteria monthly is the geometric mean of all daily concentrations determined during a reporting month. Days on which no daily concentration is determined shall not be used to determine the calculated monthly value. The calculated monthly value will be used to determine compliance with the maximum monthly fecal coliform bacteria limitations. When required by the permit, report the calculated monthly value in the "AVERAGE" column under "QUALITY OR CONCENTRATION" on the DMR.

PART II

Section A. Definitions

Fecal coliform bacteria 7-day

FOR WWSLs THAT COLLECT AND STORE WASTEWATER AND ARE AUTHORIZED TO DISCHARGE ONLY IN THE SPRING AND/OR FALL ON AN INTERMITTENT BASIS – Fecal coliform bacteria 7-day is the geometric mean of the daily concentrations determined during any 7 consecutive days of discharge during a discharge event. If the number of daily concentrations determined during the discharge event is less than 7 days, the number of actual daily concentrations determined shall be used for the calculation. Days on which no daily concentration is determined shall not be used to determine the value. The calculated 7-day value will be used to determine compliance with the maximum 7-day fecal coliform bacteria limitations. When required by the permit, report the maximum calculated 7-day geometric mean value for the month in the “MAXIMUM” column under “QUALITY OR CONCENTRATION” on the DMRs. If the 7-day period was partially in each of two months, the value shall be reported on the DMR of the month in which the last day of discharge occurred.

FOR ALL OTHER DISCHARGES – Fecal coliform bacteria 7-day is the geometric mean of the daily concentrations determined during any 7 consecutive days in a reporting month. If the number of daily concentrations determined is less than 7, the actual number of daily concentrations determined shall be used for the calculation. Days on which no daily concentration is determined shall not be used to determine the value. The calculated 7-day value will be used to determine compliance with the maximum 7-day fecal coliform bacteria limitations. When required by the permit, report the maximum calculated 7-day geometric mean for the month in the “MAXIMUM” column under “QUALITY OR CONCENTRATION” on the DMRs. The first calculation shall be made on day 7 of the reporting month, and the last calculation shall be made on the last day of the reporting month.

Flow-proportioned sample is a composite sample with the sample volume proportional to the effluent flow.

General permit means a National Pollutant Discharge Elimination System permit issued authorizing a category of similar discharges.

Geometric mean is the average of the logarithmic values of a base 10 data set, converted back to a base 10 number.

Grab sample is a single sample taken at neither a set time nor flow.

IC₂₅ means the toxicant concentration that would cause a 25% reduction in a nonquantal biological measurement for the test population.

Illicit connection means a physical connection to a municipal separate storm sewer system that primarily conveys non-storm water discharges other than uncontaminated groundwater into the storm sewer; or a physical connection not authorized or permitted by the local authority, where a local authority requires authorization or a permit for physical connections.

Illicit discharge means any discharge to, or seepage into, a municipal separate storm sewer system that is not composed entirely of storm water or uncontaminated groundwater. Illicit discharges include non-storm water discharges through pipes or other physical connections; dumping of motor vehicle fluids, household hazardous wastes, domestic animal wastes, or litter; collection and intentional dumping of grass clippings or leaf litter; or unauthorized discharges of sewage, industrial waste, restaurant wastes, or any other non-storm water waste directly into a separate storm sewer.

Individual permit means a site-specific NPDES permit.

Inlet means a catch basin, roof drain, conduit, drain tile, retention pond riser pipe, sump pump, or other point where storm water or wastewater enters into a closed conveyance system prior to discharge off site or into waters of the state.

PART II

Section A. Definitions

Interference is a discharge which, alone or in conjunction with a discharge or discharges from other sources, both: 1) inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and 2) therefore, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or, of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent state or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including state regulations contained in any state sludge management plan prepared pursuant to Subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act. [This definition does not apply to sample matrix interference].

Land application means spraying or spreading biosolids or a biosolids derivative onto the land surface, injecting below the land surface, or incorporating into the soil so that the biosolids or biosolids derivative can either condition the soil or fertilize crops or vegetation grown in the soil.

LC₅₀ means a statistically or graphically estimated concentration that is expected to be lethal to 50% of a group of organisms under specified conditions.

Maximum acceptable toxicant concentration (MATC) means the concentration obtained by calculating the geometric mean of the lower and upper chronic limits from a chronic test. A lower chronic limit is the highest tested concentration that did not cause the occurrence of a specific adverse effect. An upper chronic limit is the lowest tested concentration which did cause the occurrence of a specific adverse effect and above which all tested concentrations caused such an occurrence.

Maximum extent practicable means implementation of best management practices by a public body to comply with an approved storm water management program as required by a national permit for a municipal separate storm sewer system, in a manner that is environmentally beneficial, technically feasible, and within the public body's legal authority.

MGD means million gallons per day.

Monthly concentration is the sum of the daily concentrations determined during a reporting period divided by the number of daily concentrations determined. The calculated monthly concentration will be used to determine compliance with any maximum monthly concentration limitations. Days with no discharge shall not be used to determine the value. When required by the permit, report the calculated monthly concentration in the "AVERAGE" column under "QUALITY OR CONCENTRATION" on the DMR.

For minimum percent removal requirements, the monthly influent concentration and the monthly effluent concentration shall be determined. The calculated monthly percent removal, which is equal to 100 times the quantity [1 minus the quantity (monthly effluent concentration divided by the monthly influent concentration)], shall be reported in the "MINIMUM" column under "QUALITY OR CONCENTRATION" on the DMRs.

Monthly loading is the sum of the daily loadings of a parameter divided by the number of daily loadings determined during a reporting period. The calculated monthly loading will be used to determine compliance with any maximum monthly loading limitations. Days with no discharge shall not be used to determine the value. When required by the permit, report the calculated monthly loading in the "AVERAGE" column under "QUANTITY OR LOADING" on the DMR.

Monthly monitoring frequency refers to a calendar month. When required by this permit, an analytical result, reading, value or observation shall be reported for that period if a discharge occurs during that period.

Municipal separate storm sewer means a conveyance or system of conveyances designed or used for collecting or conveying storm water which is not a combined sewer and which is not part of a publicly-owned treatment works as defined in the Code of Federal Regulations at 40 CFR 122.2.

PART II

Section A. Definitions

Municipal separate storm sewer system (MS4) means all separate storm sewers that are owned or operated by the United States, a state, city, village, township, county, district, association, or other public body created by or pursuant to state law, having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under state law, such as a sewer district, flood control district, or drainage district, or similar entity, or a designated or approved management agency under Section 208 of the Federal Act that discharges to the waters of the state. This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

National Pretreatment Standards are the regulations promulgated by or to be promulgated by the Federal Environmental Protection Agency pursuant to Section 307(b) and (c) of the Federal Act. The standards establish nationwide limits for specific industrial categories for discharge to a POTW.

No observed adverse effect level (NOAEL) means the highest tested dose or concentration of a substance which results in no observed adverse effect in exposed test organisms where higher doses or concentrations result in an adverse effect.

Noncontact cooling water is water used for cooling which does not come into direct contact with any raw material, intermediate product, by-product, waste product or finished product.

Nondomestic user is any discharger to a POTW that discharges wastes other than or in addition to water-carried wastes from toilet, kitchen, laundry, bathing or other facilities used for household purposes.

Outfall is the location at which a point source discharge enters the surface waters of the state.

Part 91 agency means an agency that is designated by a county board of commissioners pursuant to the provisions of section 9105 of Part 91 of the NREPA; an agency that is designated by a city, village, or township in accordance with the provisions of section 9106 of Part 91 of the NREPA; or the Department for soil erosion and sedimentation activities under Part 615, Part 631, or Part 632 pursuant to the provisions of section 9115 of Part 91 of the NREPA.

Part 91 permit means a soil erosion and sedimentation control permit issued by a Part 91 agency pursuant to the provisions of Part 91 of the NREPA.

Partially treated sewage is any sewage, sewage and storm water, or sewage and wastewater, from domestic or industrial sources that is treated to a level less than that required by the permittee's National Pollutant Discharge Elimination System permit, or that is not treated to national secondary treatment standards for wastewater, including discharges to surface waters from retention treatment facilities.

Point of discharge is the location of a point source discharge where storm water is discharged directly into a separate storm sewer system.

Point source discharge means a discharge from any discernible, confined, discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, or rolling stock. Changing the surface of land or establishing grading patterns on land will result in a point source discharge where the runoff from the site is ultimately discharged to waters of the state.

Polluting material means any material, in solid or liquid form, identified as a polluting material under the Part 5 Rules (R 324.2001 through R 324.2009 of the Michigan Administrative Code).

POTW is a publicly owned treatment work.

Pretreatment is reducing the amount of pollutants, eliminating pollutants, or altering the nature of pollutant properties to a less harmful state prior to discharge into a public sewer. The reduction or alteration can be by physical, chemical, or biological processes, process changes, or by other means. Dilution is not considered pretreatment unless expressly authorized by an applicable National Pretreatment Standard for a particular industrial category.

PART II

Section A. Definitions

Public (as used in the MS4 individual permit) means all persons who potentially could affect the authorized storm water discharges, including, but not limited to, residents, visitors to the area, public employees, businesses, industries, and construction contractors and developers.

Public body means the United States; the state of Michigan; a city, village, township, county, school district, public college or university, or single-purpose governmental agency; or any other body which is created by federal or state statute or law.

Qualifying storm event means a storm event causing greater than 0.1 inch of rainfall and occurring at least 72 hours after the previous measurable storm event that also caused greater than 0.1 inch of rainfall.

Quantification level means the measurement of the concentration of a contaminant obtained by using a specified laboratory procedure calculated at a specified concentration above the detection level. It is considered the lowest concentration at which a particular contaminant can be quantitatively measured using a specified laboratory procedure for monitoring of the contaminant.

Quarterly monitoring frequency refers to a three month period, defined as January through March, April through June, July through September, and October through December. When required by this permit, an analytical result, reading, value or observation shall be reported for that period if a discharge occurs during that period.

Regional Administrator is the Region 5 Administrator, U.S. EPA, located at R-19J, 77 W. Jackson Blvd., Chicago, Illinois 60604.

Regulated area means the permittee's urbanized area, where urbanized area is defined as a place and its adjacent densely-populated territory that together have a minimum population of 50,000 people as defined by the United States Bureau of the Census and as determined by the latest available decennial census.

Secondary containment structure means a unit, other than the primary container, in which significant materials are packaged or held, which is required by State or Federal law to prevent the escape of significant materials by gravity into sewers, drains, or otherwise directly or indirectly into any sewer system or to the surface or ground waters of this state.

Separate storm sewer system means a system of drainage, including, but not limited to, roads, catch basins, curbs, gutters, parking lots, ditches, conduits, pumping devices, or man-made channels, which is not a combined sewer where storm water mixes with sanitary wastes, and is not part of a POTW.

Significant industrial user is a nondomestic user that: 1) is subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; or 2) discharges an average of 25,000 gallons per day or more of process wastewater to a POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process waste stream which makes up five (5) percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the permittee as defined in 40 CFR 403.12(a) on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's treatment plant operation or violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

Significant materials Significant Materials means any material which could degrade or impair water quality, including but not limited to: raw materials; fuels; solvents, detergents, and plastic pellets; finished materials such as metallic products; hazardous substances designated under Section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (see 40 CFR 372.65); any chemical the facility is required to report pursuant to Section 313 of Emergency Planning and Community Right-to-Know Act (EPCRA); polluting materials as identified under the Part 5 Rules (R 324.2001 through R 324.2009 of the Michigan Administrative Code); Hazardous Wastes as defined in Part 111 of the NREPA; fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

Significant spills and significant leaks means any release of a polluting material reportable under the Part 5 Rules (R 324.2001 through R 324.2009 of the Michigan Administrative Code).

PART II

Section A. Definitions

Special-use area means secondary containment structures required by state or federal law; lands on Michigan's List of Sites of Environmental Contamination pursuant to Part 201, Environmental Remediation, of the NREPA; and/or areas with other activities that may contribute pollutants to the storm water for which the Department determines monitoring is needed.

Stoichiometric means the quantity of a reagent calculated to be necessary and sufficient for a given chemical reaction.

Storm water means storm water runoff, snow melt runoff, surface runoff and drainage, and non-storm water included under the conditions of this permit.

SWPPP means the Storm Water Pollution Prevention Plan prepared in accordance with this permit.

Tier I value means a value for aquatic life, human health or wildlife calculated under R 323.1057 of the Water Quality Standards using a tier I toxicity database.

Tier II value means a value for aquatic life, human health or wildlife calculated under R 323.1057 of the Water Quality Standards using a tier II toxicity database.

Total maximum daily loads (TMDLs) are required by the Federal Act for waterbodies that do not meet water quality standards. TMDLs represent the maximum daily load of a pollutant that a waterbody can assimilate and meet water quality standards, and an allocation of that load among point sources, nonpoint sources, and a margin of safety.

Toxicity reduction evaluation (TRE) means a site-specific study conducted in a stepwise process designed to identify the causative agents of effluent toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in effluent toxicity.

Water Quality Standards means the Part 4 Water Quality Standards promulgated pursuant to Part 31 of the NREPA, being R 323.1041 through R 323.1117 of the Michigan Administrative Code.

Weekly monitoring frequency refers to a calendar week which begins on Sunday and ends on Saturday. When required by this permit, an analytical result, reading, value or observation shall be reported for that period if a discharge occurs during that period.

WWSL is a wastewater stabilization lagoon.

WWSL discharge event is a discrete occurrence during which effluent is discharged to the surface water up to 10 days of a consecutive 14 day period.

3-portion composite sample is a sample consisting of three equal-volume grab samples collected at equal intervals over an 8-hour period.

PART II

Section A. Definitions

7-day concentration

FOR WWSLs THAT COLLECT AND STORE WASTEWATER AND ARE AUTHORIZED TO DISCHARGE ONLY IN THE SPRING AND/OR FALL ON AN INTERMITTENT BASIS – The 7-day concentration is the sum of the daily concentrations determined during any 7 consecutive days of discharge during a WWSL discharge event divided by the number of daily concentrations determined. If the number of daily concentrations determined during the WWSL discharge event is less than 7 days, the number of actual daily concentrations determined shall be used for the calculation. The calculated 7-day concentration will be used to determine compliance with any maximum 7-day concentration limitations. When required by the permit, report the maximum calculated 7-day concentration for the WWSL discharge event in the “MAXIMUM” column under “QUALITY OR CONCENTRATION” on the DMR. If the WWSL discharge event was partially in each of two months, the value shall be reported on the DMR of the month in which the last day of discharge occurred.

FOR ALL OTHER DISCHARGES – The 7-day concentration is the sum of the daily concentrations determined during any 7 consecutive days in a reporting month divided by the number of daily concentrations determined. If the number of daily concentrations determined is less than 7, the actual number of daily concentrations determined shall be used for the calculation. The calculated 7-day concentration will be used to determine compliance with any maximum 7-day concentration limitations in the reporting month. When required by the permit, report the maximum calculated 7-day concentration for the month in the “MAXIMUM” column under “QUALITY OR CONCENTRATION” on the DMR. The first 7-day calculation shall be made on day 7 of the reporting month, and the last calculation shall be made on the last day of the reporting month.

7-day loading

FOR WWSLs THAT COLLECT AND STORE WASTEWATER AND ARE AUTHORIZED TO DISCHARGE ONLY IN THE SPRING AND/OR FALL ON AN INTERMITTENT BASIS – The 7-day loading is the sum of the daily loadings determined during any 7 consecutive days of discharge during a WWSL discharge event divided by the number of daily loadings determined. If the number of daily loadings determined during the WWSL discharge event is less than 7 days, the number of actual daily loadings determined shall be used for the calculation. The calculated 7-day loading will be used to determine compliance with any maximum 7-day loading limitations. When required by the permit, report the maximum calculated 7-day loading for the WWSL discharge event in the “MAXIMUM” column under “QUANTITY OR LOADING” on the DMR. If the WWSL discharge event was partially in each of two months, the value shall be reported on the DMR of the month in which the last day of discharge occurred

FOR ALL OTHER DISCHARGES – The 7-day loading is the sum of the daily loadings determined during any 7 consecutive days in a reporting month divided by the number of daily loadings determined. If the number of daily loadings determined is less than 7, the actual number of daily loadings determined shall be used for the calculation. The calculated 7-day loading will be used to determine compliance with any maximum 7-day loading limitations in the reporting month. When required by the permit, report the maximum calculated 7-day loading for the month in the “MAXIMUM” column under “QUANTITY OR LOADING” on the DMR. The first 7-day calculation shall be made on day 7 of the reporting month, and the last calculation shall be made on the last day of the reporting month.

24-hour composite sample is a flow-proportioned composite sample consisting of hourly or more frequent portions that are taken over a 24-hour period. A time-proportioned composite sample may be used upon approval of the Department if the permittee demonstrates it is representative of the discharge.

PART II

Section B. Monitoring Procedures

1. Representative Samples

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Test Procedures

Test procedures for the analysis of pollutants shall conform to regulations promulgated pursuant to Section 304(h) of the Federal Act (40 CFR Part 136 – Guidelines Establishing Test Procedures for the Analysis of Pollutants), unless specified otherwise in this permit. **Test procedures used shall be sufficiently sensitive to determine compliance with applicable effluent limitations.** Requests to use test procedures not promulgated under 40 CFR Part 136 for pollutant monitoring required by this permit shall be made in accordance with the Alternate Test Procedures regulations specified in 40 CFR 136.4. These requests shall be submitted to the Chief of the Permits Section, Water Resources Division, Michigan Department of Environmental Quality, P.O. Box 30458, Lansing, Michigan, 48909-7958. The permittee may use such procedures upon approval.

The permittee shall periodically calibrate and perform maintenance procedures on all analytical instrumentation at intervals to ensure accuracy of measurements. The calibration and maintenance shall be performed as part of the permittee's laboratory Quality Control/Quality Assurance program.

3. Instrumentation

The permittee shall periodically calibrate and perform maintenance procedures on all monitoring instrumentation at intervals to ensure accuracy of measurements.

4. Recording Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information: 1) the exact place, date, and time of measurement or sampling; 2) the person(s) who performed the measurement or sample collection; 3) the dates the analyses were performed; 4) the person(s) who performed the analyses; 5) the analytical techniques or methods used; 6) the date of and person responsible for equipment calibration; and 7) the results of all required analyses.

5. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Regional Administrator or the Department.

PART II

Section C. Reporting Requirements

1. Start-up Notification

If the permittee will not discharge during the first 60 days following the effective date of this permit, the permittee shall notify the Department within 14 days following the effective date of this permit, and then 60 days prior to the commencement of the discharge.

2. Submittal Requirements for Self-Monitoring Data

Part 31 of the NREPA (specifically Section 324.3110(7)); and R 323.2155(2) of Part 21, Wastewater Discharge Permits, promulgated under Part 31 of the NREPA, allow the Department to specify the forms to be utilized for reporting the required self-monitoring data. Unless instructed on the effluent limitations page to conduct "Retained Self-Monitoring" the permittee shall submit self-monitoring data via the Department's Electronic Environmental Discharge Monitoring Reporting (e2-DMR) system.

The permittee shall utilize the information provided on the e2-Reporting website at <https://secure1.state.mi.us/e2rs/> to access and submit the electronic forms. Both monthly summary and daily data shall be submitted to the Department no later than the 20th day of the month following each month of the authorized discharge period(s). The permittee may be allowed to submit the electronic forms after this date if the Department has granted an extension to the submittal date.

3. Retained Self-Monitoring Requirements

If instructed on the effluent limits page (or otherwise authorized by the Department in accordance with the provisions of this permit) to conduct retained self-monitoring, the permittee shall maintain a year-to-date log of retained self-monitoring results and, upon request, provide such log for inspection to the staff of the Department. Retained self-monitoring results are public information and shall be promptly provided to the public upon request.

The permittee shall certify, in writing, to the Department, on or before January 10th (April 1st for animal feeding operation facilities) of each year, that: 1) all retained self-monitoring requirements have been complied with and a year-to-date log has been maintained; and 2) the application on which this permit is based still accurately describes the discharge. With this annual certification, the permittee shall submit a summary of the previous year's monitoring data. The summary shall include maximum values for samples to be reported as daily maximums and/or monthly maximums and minimum values for any daily minimum samples.

Retained self-monitoring may be denied to a permittee by notification in writing from the Department. In such cases, the permittee shall submit self-monitoring data in accordance with Part II.C.2., above. Such a denial may be rescinded by the Department upon written notification to the permittee. Reissuance or modification of this permit or reissuance or modification of an individual permittee's authorization to discharge shall not affect previous approval or denial for retained self-monitoring unless the Department provides notification in writing to the permittee.

4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report. Such increased frequency shall also be indicated.

Monitoring required pursuant to Part 41 of the NREPA or Rule 35 of the Mobile Home Park Commission Act (Act 96 of the Public Acts of 1987) for assurance of proper facility operation shall be submitted as required by the Department.

PART II

Section C. Reporting Requirements

5. Compliance Dates Notification

Within 14 days of every compliance date specified in this permit, the permittee shall submit a *written* notification to the Department indicating whether or not the particular requirement was accomplished. If the requirement was not accomplished, the notification shall include an explanation of the failure to accomplish the requirement, actions taken or planned by the permittee to correct the situation, and an estimate of when the requirement will be accomplished. If a written report is required to be submitted by a specified date and the permittee accomplishes this, a separate written notification is not required.

6. Noncompliance Notification

Compliance with all applicable requirements set forth in the Federal Act, Parts 31 and 41 of the NREPA, and related regulations and rules is required. All instances of noncompliance shall be reported as follows:

- a. 24-Hour Reporting
Any noncompliance which may endanger health or the environment (including maximum and/or minimum daily concentration discharge limitation exceedances) shall be reported, verbally, within 24 hours from the time the permittee becomes aware of the noncompliance. A written submission shall also be provided within five (5) days.
- b. Other Reporting
The permittee shall report, in writing, all other instances of noncompliance not described in a. above at the time monitoring reports are submitted; or, in the case of retained self-monitoring, within five (5) days from the time the permittee becomes aware of the noncompliance.

Written reporting shall include: 1) a description of the discharge and cause of noncompliance; and 2) the period of noncompliance, including exact dates and times, or, if not yet corrected, the anticipated time the noncompliance is expected to continue, and the steps taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

7. Spill Notification

The permittee shall immediately report any release of any polluting material which occurs to the surface waters or groundwaters of the state, unless the permittee has determined that the release is not in excess of the threshold reporting quantities specified in the Part 5 Rules (R 324.2001 through R 324.2009 of the Michigan Administrative Code), by calling the Department at the number indicated on the second page of this permit (or, if this is a general permit, on the COC); or, if the notice is provided after regular working hours, call the Department's 24-hour Pollution Emergency Alerting System telephone number, 1-800-292-4706 (calls from **out-of-state** dial 1-517-373-7660).

Within ten (10) days of the release, the permittee shall submit to the Department a full written explanation as to the cause of the release, the discovery of the release, response (clean-up and/or recovery) measures taken, and preventative measures taken or a schedule for completion of measures to be taken to prevent reoccurrence of similar releases.

PART II

Section C. Reporting Requirements

8. Upset Noncompliance Notification

If a process "upset" (defined as an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee) has occurred, the permittee who wishes to establish the affirmative defense of upset, shall notify the Department by telephone within 24 hours of becoming aware of such conditions; and within five (5) days, provide in writing, the following information:

- a. that an upset occurred and that the permittee can identify the specific cause(s) of the upset;
- b. that the permitted wastewater treatment facility was, at the time, being properly operated and maintained (note that an upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation); and
- c. that the permittee has specified and taken action on all responsible steps to minimize or correct any adverse impact in the environment resulting from noncompliance with this permit.

No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

In any enforcement proceedings, the permittee, seeking to establish the occurrence of an upset, has the burden of proof.

9. Bypass Prohibition and Notification

- a. Bypass Prohibition
Bypass is prohibited, and the Department may take an enforcement action, unless:
 - 1) bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - 2) there were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass; and
 - 3) the permittee submitted notices as required under 9.b. or 9.c. below.
- b. Notice of Anticipated Bypass
If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least ten (10) days before the date of the bypass, and provide information about the anticipated bypass as required by the Department. The Department may approve an anticipated bypass, after considering its adverse effects, if it will meet the three (3) conditions listed in 9.a. above.
- c. Notice of Unanticipated Bypass
The permittee shall submit notice to the Department of an unanticipated bypass by calling the Department at the number indicated on the second page of this permit (if the notice is provided after regular working hours, use the following number: 1-800-292-4706) as soon as possible, but no later than 24 hours from the time the permittee becomes aware of the circumstances.

PART II

Section C. Reporting Requirements

- d. **Written Report of Bypass**
A written submission shall be provided within five (5) working days of commencing any bypass to the Department, and at additional times as directed by the Department. The written submission shall contain a description of the bypass and its cause; the period of bypass, including exact dates and times, and if the bypass has not been corrected, the anticipated time it is expected to continue; steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass; and other information as required by the Department.
- e. **Bypass Not Exceeding Limitations**
The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to ensure efficient operation. These bypasses are not subject to the provisions of 9.a., 9.b., 9.c., and 9.d., above. This provision does not relieve the permittee of any notification responsibilities under Part II.C.11. of this permit.
- f. **Definitions**
- 1) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
 - 2) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

10. Bioaccumulative Chemicals of Concern (BCC)

Consistent with the requirements of R 323.1098 and R 323.1215 of the Michigan Administrative Code, the permittee is prohibited from undertaking any action that would result in a lowering of water quality from an increased loading of a BCC unless an increased use request and antidegradation demonstration have been submitted and approved by the Department.

11. Notification of Changes in Discharge

The permittee shall notify the Department, in writing, as soon as possible but no later than 10 days of knowing, or having reason to believe, that any activity or change has occurred or will occur which would result in the discharge of: 1) detectable levels of chemicals on the current Michigan Critical Materials Register, priority pollutants or hazardous substances set forth in 40 CFR 122.21, Appendix D, or the Pollutants of Initial Focus in the Great Lakes Water Quality Initiative specified in 40 CFR 132.6, Table 6, which were not acknowledged in the application or listed in the application at less than detectable levels; 2) detectable levels of any other chemical not listed in the application or listed at less than detection, for which the application specifically requested information; or 3) any chemical at levels greater than five times the average level reported in the complete application (see the first page of this permit, for the date(s) the complete application was submitted). Any other monitoring results obtained as a requirement of this permit shall be reported in accordance with the compliance schedules.

PART II

Section C. Reporting Requirements

12. Changes in Facility Operations

Any anticipated action or activity, including but not limited to facility expansion, production increases, or process modification, which will result in new or increased loadings of pollutants to the receiving waters must be reported to the Department by a) submission of an increased use request (application) and all information required under R 323.1098 (Antidegradation) of the Water Quality Standards or b) by notice if the following conditions are met: 1) the action or activity will not result in a change in the types of wastewater discharged or result in a greater quantity of wastewater than currently authorized by this permit; 2) the action or activity will not result in violations of the effluent limitations specified in this permit; 3) the action or activity is not prohibited by the requirements of Part II.C.10.; and 4) the action or activity will not require notification pursuant to Part II.C.11. Following such notice, the permit or, if applicable, the facility's COC may be modified according to applicable laws and rules to specify and limit any pollutant not previously limited.

13. Transfer of Ownership or Control

In the event of any change in control or ownership of facilities from which the authorized discharge emanates, the permittee shall submit to the Department 30 days prior to the actual transfer of ownership or control a written agreement between the current permittee and the new permittee containing: 1) the legal name and address of the new owner; 2) a specific date for the effective transfer of permit responsibility, coverage and liability; and 3) a certification of the continuity of or any changes in operations, wastewater discharge, or wastewater treatment.

If the new permittee is proposing changes in operations, wastewater discharge, or wastewater treatment, the Department may propose modification of this permit in accordance with applicable laws and rules.

14. Operations and Maintenance Manual

For wastewater treatment facilities that serve the public (and are thus subject to Part 41 of the NREPA), Section 4104 of Part 41 and associated Rule 2957 of the Michigan Administrative Code allow the Department to require an Operations and Maintenance (O&M) Manual from the facility. An up-to-date copy of the O&M Manual shall be kept at the facility and shall be provided to the Department upon request. The Department may review the O&M Manual in whole or in part at its discretion and require modifications to it if portions are determined to be inadequate.

At a minimum, the O&M Manual shall include the following information: permit standards; descriptions and operation information for all equipment; staffing information; laboratory requirements; record keeping requirements; a maintenance plan for equipment; an emergency operating plan; safety program information; and copies of all pertinent forms, as-built plans, and manufacturer's manuals.

Certification of the existence and accuracy of the O&M Manual shall be submitted to the Department at least sixty days prior to start-up of a new wastewater treatment facility. Recertification shall be submitted sixty days prior to start-up of any substantial improvements or modifications made to an existing wastewater treatment facility.

PART II

Section C. Reporting Requirements

15. Signatory Requirements

All applications, reports, or information submitted to the Department in accordance with the conditions of this permit and that require a signature shall be signed and certified as described in the Federal Act and the NREPA.

The Federal Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

The NREPA (Section 3115(2)) provides that a person who at the time of the violation knew or should have known that he or she discharged a substance contrary to this part, or contrary to a permit, COC, or order issued or rule promulgated under this part, or who intentionally makes a false statement, representation, or certification in an application for or form pertaining to a permit or COC or in a notice or report required by the terms and conditions of an issued permit or COC, or who intentionally renders inaccurate a monitoring device or record required to be maintained by the Department, is guilty of a felony and shall be fined not less than \$2,500.00 or more than \$25,000.00 for each violation. The court may impose an additional fine of not more than \$25,000.00 for each day during which the unlawful discharge occurred. If the conviction is for a violation committed after a first conviction of the person under this subsection, the court shall impose a fine of not less than \$25,000.00 per day and not more than \$50,000.00 per day of violation. Upon conviction, in addition to a fine, the court in its discretion may sentence the defendant to imprisonment for not more than 2 years or impose probation upon a person for a violation of this part. With the exception of the issuance of criminal complaints, issuance of warrants, and the holding of an arraignment, the circuit court for the county in which the violation occurred has exclusive jurisdiction. However, the person shall not be subject to the penalties of this subsection if the discharge of the effluent is in conformance with and obedient to a rule, order, permit, or COC of the Department. In addition to a fine, the attorney general may file a civil suit in a court of competent jurisdiction to recover the full value of the injuries done to the natural resources of the state and the costs of surveillance and enforcement by the state resulting from the violation.

16. Electronic Reporting

Upon notice by the Department that electronic reporting tools are available for specific reports or notifications, the permittee shall submit electronically all such reports or notifications as required by this permit.

PART II

Section D. Management Responsibilities

1. Duty to Comply

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit, more frequently than, or at a level in excess of, that authorized, shall constitute a violation of the permit.

It is the duty of the permittee to comply with all the terms and conditions of this permit. Any noncompliance with the Effluent Limitations, Special Conditions, or terms of this permit constitutes a violation of the NREPA and/or the Federal Act and constitutes grounds for enforcement action; for permit or Certificate of Coverage (COC) termination, revocation and reissuance, or modification; or denial of an application for permit or COC renewal.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

2. Operator Certification

The permittee shall have the waste treatment facilities under direct supervision of an operator certified at the appropriate level for the facility certification by the Department, as required by Sections 3110 and 4104 of the NREPA. Permittees authorized to discharge storm water shall have the storm water treatment and/or control measures under direct supervision of a storm water operator certified by the Department, as required by Section 3110 of the NREPA.

3. Facilities Operation

The permittee shall, at all times, properly operate and maintain all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes adequate laboratory controls and appropriate quality assurance procedures.

4. Power Failures

In order to maintain compliance with the effluent limitations of this permit and prevent unauthorized discharges, the permittee shall either:

- a. provide an alternative power source sufficient to operate facilities utilized by the permittee to maintain compliance with the effluent limitations and conditions of this permit; or
- b. upon the reduction, loss, or failure of one or more of the primary sources of power to facilities utilized by the permittee to maintain compliance with the effluent limitations and conditions of this permit, the permittee shall halt, reduce or otherwise control production and/or all discharge in order to maintain compliance with the effluent limitations and conditions of this permit.

5. Adverse Impact

The permittee shall take all reasonable steps to minimize or prevent any adverse impact to the surface waters or groundwaters of the state resulting from noncompliance with any effluent limitation specified in this permit including, but not limited to, such accelerated or additional monitoring as necessary to determine the nature and impact of the discharge in noncompliance.

PART II

Section D. Management Responsibilities

6. Containment Facilities

The permittee shall provide facilities for containment of any accidental losses of polluting materials in accordance with the requirements of the Part 5 Rules (R 324.2001 through R 324.2009 of the Michigan Administrative Code). For a Publicly Owned Treatment Work (POTW), these facilities shall be approved under Part 41 of the NREPA.

7. Waste Treatment Residues

Residuals (i.e. solids, sludges, biosolids, filter backwash, scrubber water, ash, grit, or other pollutants or wastes) removed from or resulting from treatment or control of wastewaters, including those that are generated during treatment or left over after treatment or control has ceased, shall be disposed of in an environmentally compatible manner and according to applicable laws and rules. These laws may include, but are not limited to, the NREPA, Part 31 for protection of water resources, Part 55 for air pollution control, Part 111 for hazardous waste management, Part 115 for solid waste management, Part 121 for liquid industrial wastes, Part 301 for protection of inland lakes and streams, and Part 303 for wetlands protection. Such disposal shall not result in any unlawful pollution of the air, surface waters or groundwaters of the state.

8. Right of Entry

The permittee shall allow the Department, any agent appointed by the Department, or the Regional Administrator, upon the presentation of credentials and, for animal feeding operation facilities, following appropriate biosecurity protocols:

- a. to enter upon the permittee's premises where an effluent source is located or any place in which records are required to be kept under the terms and conditions of this permit; and
- b. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect process facilities, treatment works, monitoring methods and equipment regulated or required under this permit; and to sample any discharge of pollutants.

9. Availability of Reports

Except for data determined to be confidential under Section 308 of the Federal Act and Rule 2128 (R 323.2128 of the Michigan Administrative Code), all reports prepared in accordance with the terms of this permit, shall be available for public inspection at the offices of the Department and the Regional Administrator. As required by the Federal Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Act and Sections 3112, 3115, 4106 and 4110 of the NREPA.

10. Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or the facility's COC, or to determine compliance with this permit. The permittee shall also furnish to the Department, upon request, copies of records required to be kept by this permit.

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

PART II

Section E. Activities Not Authorized by This Permit

1. Discharge to the Groundwaters

This permit does not authorize any discharge to the groundwaters. Such discharge may be authorized by a groundwater discharge permit issued pursuant to the NREPA.

2. POTW Construction

This permit does not authorize or approve the construction or modification of any physical structures or facilities at a POTW. Approval for the construction or modification of any physical structures or facilities at a POTW shall be by permit issued under Part 41 of the NREPA.

3. Civil and Criminal Liability

Except as provided in permit conditions on "Bypass" (Part II.C.9. pursuant to 40 CFR 122.41(m)), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance, whether or not such noncompliance is due to factors beyond the permittee's control, such as accidents, equipment breakdowns, or labor disputes.

4. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee may be subject under Section 311 of the Federal Act except as are exempted by federal regulations.

5. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Federal Act.

6. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize violation of any federal, state or local laws or regulations, nor does it obviate the necessity of obtaining such permits, including any other Department of Environmental Quality permits, or approvals from other units of government as may be required by law.



PRINCIPALS

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Keith D. McCormack
Nancy M. D. Faught
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Karyn M. Stichel

HUBBELL, ROTH & CLARK, INC.

OFFICE: 801 Broadway NW, Suite 215
Grand Rapids, MI 49504
PHONE: 616.454.4286
FAX: 616.454.4278
WEBSITE: www.hrc-engr.com
EMAIL: info@hrc-engr.com

VIA E-MAIL

March 10, 2015

City of South Haven
Wastewater Treatment Plant
539 Phoenix Street
South Haven, MI 49090

Attn: Mr. Roger Huff, P.E. Director of Public Works

Re: Proposal for Professional Engineering Services HRC Job No. 20150034
*Asset Management Program (AMP) - Wastewater Treatment Plant (WWTP) /
Wastewater Pump Stations *WWTP Operation and Maintenance Manual

Dear Mr. Huff:

Hubbell, Roth & Clark, Inc. (HRC) is pleased to present this proposal to provide engineering services to the City for development of an Asset Management Program (AMP) for the Wastewater Treatment Plant (WWTP) and Wastewater Pump Stations (City and Twp.) as well as compiling a new Operation and Maintenance (O&M) Manual for the existing WWTP as required by the recent MDEQ Inspection.

We understand that this work is intended to be funded by the City through its WWTP Capital Improvement Fund since the City's SAW grant request application did not specifically include the WWTP assets.

We also recognize that MDEQ will require that the AMP for the entire wastewater system assets be combined into one package and so it is our intent that the WWTP and Pump Station AMP be combined with the Collection System Pipes (Sewers and Force Mains) AMP currently being prepared for the City by Abonmarche. We will prepare our information and coordinate its format so it will be consistent with that provided by Abonmarche so that it easily can be combined into one package submittal.

The South Haven WWTP operates under its existing NPDES permit #MI0020532, which expires on October 1, 2015, and the new permit, which includes an asset management requirement, is in "Draft" stage. Since the City has already accepted a SAW grant, the asset management requirement in the proposed permit cannot be contested.

SCOPE OF SERVICES

The scope of services for this work generally follows the development of the required elements of an AMP as required by MDEQ in order to address the requirements of the Draft NPDES permit. We have attached a scope document which covers the items of work at the WWTP and Pump Stations related to the asset management plan as well as the WWTP Operation and Maintenance Manual for reference.

SCHEDULE

We anticipate that the initial AMP can be completed within nine months of your authorization to proceed. We anticipate preparing a schedule status submittal for your inclusion to MDEQ by the October 1, 2015 deadline so that they can be informed of progress made and anticipated completion date for the AMP by that NPDES Permit milestone.

FEE

Based on the scope of services described above, and our understanding of the necessary effort and the City's expectations, we propose to perform this project for a not-to-exceed budget amount of \$110,000 for the AMP including the compilation of O&M information and the preparation of a new O&M Manual. Please see the breakdown attached to this letter.

If this proposal is accepted, please sign and return a scanned copy of this proposal which will serve as our formal authorization to proceed.

ASSUMPTIONS

1. There is no budget in our proposal for purchase of a Computerized Maintenance and Management Software System (CMMS). We understand that Abonmarche is currently assisting the City with the selection of a software package that will likely include CMMS and Work Order management.
2. No inspection of process tanks is included. Tank Conditions will be based on staff knowledge of conditions, visual observations, previous photographs or other records.
3. As noted in the attached work scope, while we will provide a projected financial forecast, including OM&R budgets. Rate sufficiency is not included within our scope and should be provided by a qualified financial advisor or bond counsel. We understand that there are already provisions within your SAW Grant to bring in a rate consultant to perform this task.
4. After our initial discussions on February 24, 2015, it was determined that more effort is needed to address the current condition and capacity of the existing lift station equipment. We have shifted some of the originally proposed budget to provide a site visit to all of the pump stations (City and Twps.) so as to review the equipment condition first hand. In addition, we understand that the SCADA system has the capability of obtaining a measurement of current pump capacities at each of the stations and this data will be utilized and analyzed to assess the current pump capacities in order to supplement the knowledge of existing pump station equipment conditions.

Mr. Roger Huff, P.E.
March 10, 2015
HRC Job Number 20150034
Page 3 of 8

PERSONNEL

This project will be managed by Dennis J. Benoit, P.E. with assistance by Michael VanderPloeg, P.E. and other HRC discipline department managers as required for input on various replacement costs.

Sally Duffy, P.E., one of HRC's Asset Management leaders will also provide periodic input and quality review of the work products.

We look forward to this opportunity to be of service to the City of South Haven. Please feel free to contact Dennis Benoit at (616) 432-6195 should you have any questions or comments on this proposal.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.



George E. Hubbell, P.E.
President



Dennis J. Benoit, P.E.
Senior Associate

ec: South Haven – Dave Mulac; Larry Halberstadt, P.E.
Abonmarche – Chris Cook, P.E.
HRC - File

ACCEPTED BY: _____

TITLE: _____ DATE: _____

ASSET MANAGEMENT PLAN - SCOPE OF SERVICES

Introduction:

The focus of this Asset Management Plan will be the City of South Haven's Wastewater Treatment Plant (WWTP) and the City and Township Wastewater Pump Stations (33 total). We understand that an AMP will also be prepared for the sanitary sewer collection system by others under a SAW Grant.

If the AMP identifies a gap in the current revenue needs to meet expenses for both the collection, pumping and treatment systems, then significant progress must be made toward achieving the funding structure necessary to operate the system. Since we understand that the Township's Pumping Stations are financed differently (O&M through rates and Capital expenditures separately), a separate financing arrangement may be needed for those. Financing arrangements or rate recommendations will be determined by others (through a rate consultant hired under the SAW Grant) and we will provide our estimates of revenue needs for them in order to determine an appropriate means to establish financing.

The following scope describes the specific activities included in development of the AMP.

A. Project Initiation:

HRC will work with the City to establish the framework and goals for the AMP specific to the needs of the City of South Haven's wastewater pumping and treatment facilities. Meetings and planning sessions will be held to establish the following:

1. Develop organization chart of staff involved and stakeholders.
2. Begin engagement of employees, management, and/or public in the planning and decision making, to develop a culture that includes a shared, common purpose.
3. Schedule meetings with staff and stakeholders.
4. Determine Level of Service (LOS) expectations and Key Performance Indicators (KPIs). Including meetings with key stakeholders.

B. Asset Inventory and Data Collection:

The AMP inventory will be developed using readily-available commercial software such as Excel for listing of inventory, condition and financial tracking for the City's "vertical" assets, which generally includes the Wastewater Treatment Plant and Pump Stations. We understand that the City will be acquiring additional software through the SAW Grant for incorporating maintenance management work orders and we understand that it is intended that this software would be utilized for the ultimate storage of the data developed under this AMP. Data entry from this AMP into the selected software database will be by others. In order to proceed with a systematic method of developing the asset inventory for the various systems, the following activities will be performed:

1. We will review existing hard copy and/or digital record data (O&M information, contract drawings and specifications, maintenance history, etc.) and verify quality and completeness of existing system data as required to achieve the AMP goals.
2. We understand that City staff will be scanning any hard copy data. We will merge the recorded digital files as required to allow for efficient grouping and input into the proposed asset inventory system.
3. We will perform a field inventory of the system's 33 existing lift stations to determine/verify asset data as required. We understand that the current pumping capacities will be obtained using the instrumentation system but we will make a site visit to each of the lift station sites in order to obtain first-hand information on the equipment condition. We understand that since the existing Main and Wells Lift Stations in the City are due to be replaced soon, there will only be enough effort put forth to document their condition so that they can be maintained at least until they are replaced (assumed to be within five years or less). Drawdowns or pumping capacity rate observations will be accomplished and witnessed at some of the lift stations but we will attempt to obtain more of these through analysis of the SCADA system data so that several cycles of drawdown can be measured. This will help to average out the pumping cycles since and get a true average comparison of pumping rates since capacity rate variations are likely during pump startup, shutdown, etc.
4. We will group and input system assets and related asset characteristics, including age and useful life. Include a site visit to all of the pump stations.
 - a. Vertical Assets—WWTP and Pump Stations:
 - i. Structures and buildings
 - ii. Major Pumping and Process Equipment including motors/drives, reducers etc.
 - iii. Valves and gates
 - iv. Piping
 - v. HVAC and plumbing
 - vi. Electrical generating and distribution equipment
 - vii. Electrical and instrumentation panels and cabinets
 - viii. Lighting
 - ix. Instrumentation field devices
 - x. Concrete tanks

C. Condition Assessment:

Using the framework established under the “Project Initiation” phase, a planning level assessment of each asset's condition will be made. The level of analysis will depend on the criticality and likelihood of failure of the individual asset. It is noted that the Wastewater Treatment Master Plan recently completed will be helpful for the components being evaluated. This includes the WWTP and Pump Stations. This Study will serve as a starting point for this assessment.

For the “vertical assets,” condition assessment will be done by using record information and staff knowledge in order to make an estimate of the condition, or by

visual examination and/or review of maintenance history, failure history, remaining useful life, and staff knowledge. Condition assessments, such as vibration analysis of equipment, minor concrete and steel structural analysis (such as hammer sounding or observation of visible steel condition), mechanical operation observation, reviewing energy usage, etc. will be developed. It is likely that most information on replacement costs can likely be obtained through discussions with vendors plus our firm experience.

At this time we have not included any specific costs for outside contractor assistance for things such as sophisticated vibration analysis, infrared analysis or other more detailed analyses that could be performed. We will assess the need for these and advise if they are warranted. In addition, if process tanks require condition assessment or observation to approximate their remaining useful life, to evaluate future improvements and/or replacement to gain the lowest life cycle costs for the assets, and for master planning of future WWTP operations we may require that these tanks be drained, emptied and cleaned to allow for complete inspection and evaluation. Any costs for tank cleaning are not currently included.

After condition assessment is completed, the probability of failure of each asset will be rated on a scale of 1-5 (low to high) based on the observed condition, and this data will be entered into the AMP database for risk evaluation. The estimated current (depreciated) value and estimated replacement cost of the asset will also be entered into the AMP database.

D. Assessment of Asset Criticality and Risk:

The “Business Risk Evaluation” combines the probability of failure and criticality of the asset. The criticality of each asset will be rated on a scale of 1-5 (low to high) based on the consequence of failure versus the desired level of service. A Business Risk Factor will be determined for each asset by multiplying the probability of failure rating by the criticality rating. Redundancy will also be incorporated into this calculation. The Business Risk Factor will be used to determine replacement needs and prioritize future maintenance and capital improvements.

Additionally, we will review the rationale for data entry into the AMP with staff so that there is an understanding of the developed AMP spreadsheet including the rationale for routine maintenance tasks, how to update and extract maintenance tasks, etc. We understand that this data will be incorporated into the chosen Maintenance Management software by others. The spreadsheet will include a rationale for tracking of maintenance activities, risk assessment, redundancy analysis, replacement and operations costs, which will assist with the asset management process.

E. Capital Planning:

Using the results of the Business Risk Evaluation, the short and long-term investment required to achieve the desired level of service will be determined and prioritized using the general approach below:

1. Develop depreciation curves for asset classes based on inventory information.
2. Determine and prioritize required investment.

3. Develop a five to ten-year Capital Improvement Plan (CIP) to address the high priority projects and prepare planning-level construction cost estimates.
4. Provide recommendations for future/ongoing system operation, maintenance, rehabilitation, repair and replacement needs and cost estimates.
5. Conduct a financial forecast, including OM&R budget and rate sufficiency

F. AMP Document Development and Future Planning:

The AMP produced will need to be considered a “living document,” that is reviewed and updated on a regular frequency, and would need to be consulted as part of planning for any future investments. It is anticipated that the document will be reviewed once every three years for the following items:

1. Additional development of key performance indicators (KPIs) and or system for regularly monitoring and reporting metrics.
2. Update condition assessment and system needs.
3. Update O&M Process and Workflow Diagrams
4. Refine operating budget.
5. Re-evaluate system costs and investment versus funding structures.

The initial AMP will need to develop a methodology for how each of these will be adjusted in the future based on new investment, revised equipment life, revised maintenance procedures and how available funding is tracking with respect to expected needs

G. Operation and Maintenance Manual:

As requested during a recent MDEQ review meeting, the City needs to develop an Operation and Maintenance Manual that includes the basic elements of Operation and Maintenance as required by MDEQ policies. It is anticipated that the document will be reviewed once every three years for the following items:

1. Permit standards.
2. Descriptions and operation information for all equipment.
3. Staffing information.
4. Laboratory requirements.
5. Record keeping requirements.
6. A maintenance plan for equipment.
7. An emergency operating plan.
8. Safety program information.
9. Copies of all pertinent forms: as-built plans, and manufacturer’s manuals.
10. Deliverables include 4 copies of a bound manual plus a combined PDF file.

Wastewater Treatment and Pump Stations Asset Management Plan Fee Breakdown

For the above services, a total fee of \$110,000 is proposed. This fee will not be exceeded without prior authorization of the City of South Haven. No costs have been included for software or hardware since it is assumed that existing software and licenses maintained for other uses (such as Excel) can be used for the WWTP AMP. We understand that specific software is already intended to be acquired for tracking maintenance tasks and will be purchased under the sewer system AMP through the SAW Grant. The plant and pump station maintenance tasks may also be tracked with that software depending on its applicability.

For the purposes of discussion, a breakdown of professional services has been prepared. Professional services are based on a blended average rate along with an estimate of hours for the various identified tasks. The breakdown of the proposed fee is presented in the table below.

Scope of Work - Engineer's Fee Breakdown:

Activity	Fee Breakdown ¹	Estimated Hours ¹
A. Asset Management Project Initiation / Meetings		
• Project Organization, Meetings	\$4,800	42
• Level Of Service and Key Performance Indicators	\$4,700	42
B. Asset Inventory and Data Collection		
• WWTP	\$7,400	68
• Pump Stations	\$14,400	128
C. Condition Assessment		
• WWTP	\$11,000	102
• Pump Stations	\$5,000	44
D. Asset Criticality and Risk		
• WWTP	\$7,200	64
• Pump Stations	\$3,600	32
E. Capital Planning		
• WWTP	\$6,300	56
• Pump Stations	\$5,400	48
F. AMP Document and Future Adjustment Procedure		
• WWTP	\$12,200	108
• Pump Stations	\$8,100	72
G. O&M Manual		
• O&M Information Compilation	\$8,600	76
• O&M Manual Document Production	\$11,300	100
GRAND TOTAL =	\$110,000	982

¹Fee breakdowns are included for reference only and were based on an aggregate rate and represent a blended rate for the various classes of personnel involved.



City of South Haven

Agenda Item # 13

2015 Electric Distribution Line Projects

Background Information:

CONSTRUCTION SERVICES

At the July 29, 2013 Regular Meeting of the Board of Public Utilities, GRP Engineering, Inc. presented the Electric Distribution System Study & Five-Year Plan. This study reviewed the City of South Haven's substations and distribution system and provided recommendations for electrical system projects to significantly improve system reliability. The five-year plan identifies four projects for the 2015 year. GRP Engineering, Inc. submitted proposals for projects #104, #105, #106, #107, and #109 (Project Scope is attached). At the September 29, 2014 Regular Meeting, the Board reviewed and provided unanimous approval of a recommendation to City Council to award engineering services to GRP Engineering, and on October 6, 2014, City Council approved the award.

On March 4, 2015, bids were opened for the 2015 Line Reconstruction Projects. A copy of Bid Tabulation #2015-01 prepared by GRP Engineering, Inc. is attached. A total of seven qualified companies were invited to bid and two submitted bids. The low bidder is Kent Power, Inc. of Kent City, Michigan. GRP Engineering recommends that the project be awarded to Kent Power, Inc. in the amount of \$216,641.31. Kent Power has a history of successfully completing projects for South Haven and other municipal clients. They recently completed Phase 1 of the Core City Secondary Upgrade project, and they are currently working on Phase 2.

COMMUNITY OUTREACH AND COMMUNICATION SERVICES

Abonmarche has been successfully providing community outreach and coordination services for both phases of the Core City Project. Staff has requested a proposal for the same services for Project #109 along St. Joseph Street. This will ensure that the project moves forward in a smooth manner with a high level of communication with impacted customers and property owners within the project area.

Funds are included in the Fiscal Year 2013-14 Adopted Budget for electrical system improvements.

Recommendation:

Approve a recommendation to City Council to award the following contracts for 2015 Electric Distribution Line Projects:

A. Award the contract for construction services to Kent Power, Inc. of Kent City, Michigan in the amount of \$216,641.13. Labor and materials to be provided are defined in the contract documents prepared by GRP Engineering.

B. Award the contract for professional services for community outreach and communication to Abonmarche in the amount of \$5,500.

Support Material:

Project Scope
Bid Tabulation
GRP Engineering Recommendation Letter
Project Cost Tracking
Abonmarche Proposal

Project Scope 2015 Electric Distribution Line Projects

Project #104 PR-B Circuit Blue Star Highway – Rebuild circuit PR- B overhead line from 2nd Avenue/Wells Street south along Blue Star Highway to 6th Avenue (1.0 miles). Completion of this project will increase the capacity of the circuit to 500A and allow for full capacity ties to existing circuit PR-A and new underground circuit PR-D. Project includes a full reconstruction of this line section including poles, hardware and conductor. Upgrading this line section will provide more reliable service to several large commercial customers served by circuit PR-B.

Project #105 MS-J Circuit Lovejoy to Alyworth – Project scope is to rebuild circuit MS-J overhead line from Lovejoy Street to Alyworth Avenue north through deep right-of-way (0.3 miles). Completion of this project will increase the capacity of the circuit to 500A, will allow for a full capacity tie to circuit MS-F, and rebuild an aged section of line. Project includes a full reconstruction of this line section including poles, hardware and conductor.

Projects #106 MS-F & #107 PR-B Capacitor Banks - Project scope includes installation of polemount capacitor banks on circuits MS-F and PR-B. Completion of this project will reduce losses on the distribution system, will reduce VAR charges from AEP, and will help to stabilize voltage on these two distribution circuits. Installation of capacitor banks to be completed by City of South Haven crews.

Project #109 MS-J St. Joseph Street – Project scope is to rebuild circuit MS-J overhead line from Elkenburg Street north to Water Street. Completion of this project will increase the capacity of the circuit to 500A from the substation up to Michigan Avenue and will complete the rebuild of an aged section of line in conjunction with the Core City Secondary project in the same area. Project includes a full reconstruction of this line section including poles, hardware and conductor.

BID TABULATION #2015-01

OWNER:
CITY OF SOUTH HAVEN
1199 8TH AVENUE
SOUTH HAVEN, MI 49090

2015 LINE RECONSTRUCTION PROJECTS
#104 PR-B BLUE STAR HIGHWAY
#105 MS-J LOVEJOY - ALYWORTH
#109 MS-J ST. JOSEPH STREET

ENGINEER:
GRP ENGINEERING, INC.
459 BAY STREET
PETOSKEY, MI 49770

BIDDERS	BID BOND	TOTAL CONTRACTOR BASE BID PRICE	REMARKS
CC Power 3850 Beebe Road Kalkaska, MI 49646	10% Bond	\$243,000.00	
SKF Electrical Contracting 10495 Deal Rd Williamsburg, MI 49690			No Bid
Kent Power 90 Spring St Kent City, MI 49330	10% Bond	\$216,641.31	Low Bid
The Hydaker-Wheatlake Company 420 N. Roth Street Reed City, MI 49677			No Bid
NG Gilbet 101 S. Main St Parker City, IN 47368			No Bid
Newkirk Electric, Inc. 1875 Roberts Street Muskegon, MI 49442			No Bid
Henkels & McCoy 985 Jolly Rd Blue Bell, PA 19422			No Bid

This is to certify that at 10:30a.m., local time on Wednesday, March 4, 2015, the bids tabulated herein were publicly opened and read.

GRP Engineering, Inc.

Michael P. McGeehan

 Michael P. McGeehan, PE

March 6, 2015
14-0720.01

Mr. Roger Huff
City of South Haven
1199 8th Avenue
South Haven, MI 49090

**RE: 2015 Line Construction Projects
Bid Evaluation & Recommendation**

Dear Roger:

GRP Engineering, Inc. has completed our evaluation of the bids submitted to the City of South Haven on March 4, 2015 for the 2015 Line Construction projects. Bids were solicited from seven experienced contractors and two bids were received. Kent Power, Inc. submitted the low bid in the amount of \$216,641.13. A complete bid tabulation is attached to this letter.

Current project costs total \$335,278.60 including Kent Power's bid price and all material quotes received. This is nearly \$50,000 under estimated project costs.

Kent Power, Inc. submitted a complete and conforming bid. GRP Engineering, Inc. sees no reason not to accept Kent Power's bid in the full amount for the 2015 Line Construction Projects. Please contact me should you have any additional questions regarding this evaluation and recommendation and notify me or Rob Shelley upon acceptance.

Sincerely,

GRP Engineering, Inc.



Michael P. McGeehan, P.E.
Project Manager

cc: City of South Haven
Mr. Bill Conklin, Mr. Jim Pezzuto
GRP Engineering, Inc.
Mr. Rob Shelley

**City of South Haven
2015 Line Project Cost Tracking**

Project	Labor	Material	Total	Estimate	Over/Under
#104 PR-B Blue Star Hwy	\$76,302.64	\$36,024.94	\$112,327.58	\$165,000.00	(\$52,672.42)
#105 MS-J Lovejoy to Alyworth	\$46,156.25	\$24,930.02	\$71,086.27	\$75,000.00	(\$3,913.73)
#109 MS-J St. Joseph Street	\$94,182.42	\$57,682.33	\$151,864.75	\$145,000.00	\$6,864.75
Totals	\$216,641.31	\$118,637.29	\$335,278.60	\$385,000.00	(\$49,721.40)

March 19, 2015

Roger Huff, PE, Public Works Director
City of South Haven
1199 8th Avenue
South Haven, Michigan 49090

Re: Proposal for Professional Services – 2015 Line Reconstruction Project

Dear Mr. Huff:

Abonmarche is pleased to present this proposal for community outreach and coordination services for the 2015 Line Reconstruction Project for the area of St. Joseph Street as outlined on the construction plans labeled #109 MS-J. We are currently completing community outreach for Phase II of the secondary electrical upgrade project and expect this work to have similar tasks through completion of both electrical upgrades.

We understand that the 2015 Line Reconstruction Projects has been designed and bid by GRP Engineering and is in the process of being awarded to Kent Power. We believe the scope of our services will be the same as our completed services for Phase I and II of the secondary electric projects. With the same team, we will be able to transition to each project seamlessly.

It is anticipated that all construction related inquiries regarding pay estimates, change orders, design revisions, and other electrical technical questions will be administered by GRP Engineering. GRP Engineering will serve as the construction manager for the project while Abonmarche's role will be focused on community outreach and property owner communication.

Our fees and scope listed below assumes that the St. Joseph Street section of the 2015 Line Reconstruction Project will be completed parallel to Phase II of the secondary electrical project. If for some reason this project extends beyond Phase II, Abonmarche will need to develop new costs for the additional time that is required to complete the 2015 Line upgrades.

SCOPE OF SERVICES AND FEES

Construction Activities

Abonmarche will play an active role in communications and facilitation between members of the project team with findings and observations resulting from resident and property owner comments. Below are the scope items and costs that we propose to complete this project.

95 West Main Street
Benton Harbor, MI 49022
269.927.2295

361 First Street
Manistee, MI 49660
231.723.1198

503 Quaker Street
South Haven, MI 49090
269.637.1293

750 Lincoln Way East
South Bend, IN 46601
574.232.8700

341 Airport North Office Park
Fort Wayne, IN 46825
260.497.8823

A. Weekly Progress Meetings \$1,500

Abonmarche will complete weekly progress meetings with City Staff, GRP Engineering, and the contractor. The meetings will be at the same time as the Phase II electrical meetings. During the progress meeting, the project team will decide if new project notifications (door hangers) will be needed and where they will be placed. It is anticipated that construction for the St. Joseph Street work will be completed prior to July 4th.

B. Door Notifications \$1,500

Door notifications will be created and delivered to notify the residents of what to expect during construction, project information, and to provide contact information of the project team.

C. Communication Updates..... \$1000

Abonmarche will develop project updates from the weekly progress meetings and provide to City Staff to post to the City Website. The new 2015 Line Reconstruction information will be included in the current updates that continue to be completed for the Phase II secondary project.

D. Tree Trimming Facilitation and Coordination..... \$1,500

Abonmarche will conduct a site walkthrough with the City's Arborist at the beginning of the project to establish a tree inventory to be used during resident correspondence and/or for the project team's use throughout the project.

Below is a summary of the fees associated with each task.

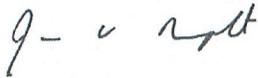
Tasks	Fees
Weekly Progress Meetings	\$1,500
Door Notifications	\$1,500
Communication Updates	\$1,000
Tree Trimming Facilitation and Coordination	\$1,500
Total	\$5,500



The above scope assumes the construction timeframe will run from April 2015 through June 2015 (3 months) as a basis for developing the scope and fees. Your signature in the space provided below will serve as authorization to proceed with this project.

Thank you for the opportunity to work with the City of South Haven. We look forward to assisting you with this project. If you have any questions, please do not hesitate to contact me at (269) 926-4565 or email at jmarquardt@abonmarche.com.

Sincerely,
ABONMARCHE



Jason W. Marquardt, P.E.
Senior Project Engineer



Christopher J. Cook, P.E.
President

Authorized By

Date

cc: Brian Dissette
Timothy R. Drews, P.E.
Tony McGhee

City of South Haven
Abonmarche
Abonmarche

