

EXHIBIT 1



CITY OF LA CROSSE UTILITIES OFFICE

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March 26, 2015

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TO: Consulting Engineers

SUBJECT: Request for Proposals (RFP) – Effluent Phosphorus Compliance

The La Crosse Sanitary Sewer Utility (SSU) is requesting proposals for professional services to assist the utility with the initial planning process needed to prepare for the expected new, significantly lower phosphorus (P) limit that will apply to the effluent discharged from the City's Isle La Plume wastewater treatment plant.

The intent of this RFP is to specify and describe a comprehensive process to consider options available to the SSU for compliance with the new effluent P limit, evaluate practical alternatives that may be viable for the SSU, and to recommend the most reliable and cost-effective alternative to achieve compliance with the anticipated effluent phosphorus limit. The completed planning process shall satisfy requirements outlined in the City's WPDES permit.

This RFP will explain the minimum requirements for submittal of proposals. The intended result of this study is to identify the most practical, feasible and cost-effective option for compliance with the anticipated effluent phosphorus limit.

General description and background information related to the City of La Crosse wastewater treatment facility

- A) The SSU operates a regional wastewater treatment facility (WWTP) located on Isle La Plume (905 Joseph Houska Drive) in the City of La Crosse. In addition to the City of La Crosse, the WWTP currently also provides wastewater treatment service to the following contracted users:
- City of Onalaska
 - City of La Crescent, MN
 - Town of Campbell
 - Town of Shelby Sanitary Districts #1 & #2
 - The City has started discussions with the Village of Holmen for contracted wastewater treatment service. With approval of a contract, service extension from that community could potentially occur in the next 2 -3 years.

The City is currently negotiating new agreements with the Town of Campbell and with Shelby Sanitary District #2. Similarly, negotiations for a successor agreement between La Crosse and the City of Onalaska will likely start in late-2015; the current agreement expires at the end of 2016. Copies of current sewer service agreements will be provided to the selected consultant.

- B) Although there were no compliance requirements at the time, the SSU completed a full facility plan for the WWTP in 2010. The facility plan did not include detailed discussion related to compliance with the future, anticipated effluent phosphorus limit. Information from the facility plan is available for review by consulting engineers that may be interested in this current study.
- C) Influent and effluent data for the last five years for the Isle La Plume WWTP, through the end of 2014, is included with this RFP.
- D) The Utility's WPDES permit actually expired on December 31, 2014. The SSU has been actively working with the WDNR since mid-2014 to submit information to satisfy requirements for re-issuance of a new, 5-year WPDES permit. A copy of the current draft of the anticipated WPDES for the period 2015-2019 is included with this RFP.
- E) The Utility completed a full review of its sanitary sewer user charge system in 2014. Revised rates were approved by the Common Council and implemented, effective January 1, 2015. A copy of the executive summary of the approved rate review is included with this RFP.

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The Scope of Services for this project intends to describe a comprehensive process to:

- (1) Evaluate the WWTP's current performance related to phosphorus removal;
- (2) Review details & requirements of the anticipated, succeeding 5-year WPDES permit;
- (3) Consider options currently available to the SSU related to effluent P compliance;
- (4) Consider site specific criteria as they apply to the La Crosse system;
- (5) Evaluate viable alternatives and identify and recommend the most practical, cost-effective alternate for compliance; and
- (6) Propose a plan of action and schedule to achieve effluent compliance per the anticipated WPDES permit timeline.

Tasks to be completed as part of this study

- Review the anticipated WPDES permit and incorporate requirements into the phosphorus study.
- Review Chapter 46 of current City of La Crosse municipal code (available on City website: www.cityoflacrosse.org) and recommend changes related to local limits or other Code provisions related to Phosphorus compliance.
- Discuss legislation and regulatory activity pertaining to phosphorus compliance, especially related to possibility for relief, exemption or delays to compliance requirements. Discuss and verify the anticipated timetable for full compliance with expected effluent phosphorus limit.
- Evaluate phosphorus loading from non-residential sources in La Crosse and contracted sewer customers.
- Discuss and recommend actions for possible source reduction of phosphorus.
- Update wastewater treatment plant operational conditions and data related to phosphorus since completion of facility plan.
- Consider Adaptive Management option; discuss viability/applicability of Adaptive Management for La Crosse; recommend whether La Crosse should pursue this alternative as part of effluent phosphorus compliance.
- Consider Water Quality Trading option; discuss viability/applicability of Water Quality Trading for La Crosse; recommend whether La Crosse should pursue this alternative as part of effluent phosphorus compliance.
- Consider application for an effluent phosphorus limit variance; discuss potential for successfully obtaining a variance; recommend whether La Crosse should pursue a variance as part of effluent phosphorus compliance.
- Discuss current treatment technologies & processes that could be applied to meet expected effluent phosphorus limit. Recommend which technologies & processes are viable for La Crosse.
- Discuss developing technologies that may be applicable and viable for La Crosse to meet the expected effluent phosphorus limit within the anticipated timetable for compliance.
- Evaluate & analyze current WWTP performance related to phosphorus removal; identify and recommend upgrades/changes for optimization of existing treatment processes.
- Based on evaluation of current WWTP performance, recommend pilot testing or other procedures to confirm recommendations for optimization, or to test the effectiveness of phosphorus-removal treatment techniques/processes.
- Evaluate recommended alternates for compliance with effluent phosphorus requirements. Evaluation shall include a cost-effectiveness analyses and consider estimates for construction, start-up & implementation, and operation (including staffing) of new process(es) as well as impact of alternatives to other processes at WWTP. EXAMPLE: Impact to biosolids production, etc.
- Discuss non-monetary factors (advantages/disadvantages) of each option. Meet with Utility and City staff to discuss these evaluations.
- Based on evaluation, recommend the most reliable, cost-effective option for meeting the expected effluent phosphorus limit.

Additional anticipated requirements to be included as part of Scope of Work

1. Meet with Utility and City staff to discuss and further develop study goals and objectives. Review and discuss:
 - ✓ Scope of Services and proposed schedule for completion of the Study.
 - ✓ Utility's objectives for the study.
 - ✓ Key project personnel.
 - ✓ Additional ideas, recommendations or suggestions to enhance the successful completion of the study.
 - ✓ Any related project issues or concerns.
2. Visit the WWTP with Utility staff to review the facility and gather operational data and information as needed to supplement information from the facility plan and this RFP.
3. Meet or correspond with the WDNR to clarify WPDES permit requirements pertaining to effluent phosphorus.
4. Prepare a preliminary presentation to review and discuss the planning project with Utility and City staff, WDNR and other interested agencies.

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Additional anticipated requirements to be included as part of Scope of Work - continued

5. Prepare a potential implementation plan for viable options, including potential opportunities to phase-in recommendations over time.
6. Presentation to Board of Public Works to explain the planning process and explain and discuss recommendations.
7. Identify financial impact to typical residential customer based on recommended implementation plan.
8. Prepare a draft Study Report for review by Utility and City staff.
9. Schedule and facilitate a public meeting to discuss the draft Study Report, to be coordinated with a Common Council informational meeting.
10. Based on comments from the Utility/City and input from public presentation(s), prepare a final Study Report and submit to Utility/City for ultimate submittal to WDNR, to satisfy WPDES permit requirements.
11. Review and respond to comments from WDNR related to the final Study Report.

Technical Proposal, Qualifications and Cost Proposal

1. Describe planned approach for completing the required work.
2. Provide information to describe the project organization, including:
 - Company contact information (Name, address, phone number, web site, etc.)
 - Identify names of Project Manager, Engineer(s) and staff that will make-up the project team.
 - Location of primary office where work will be completed.
 - Company organizational chart.
 - Provide short resumes of project team members.
 - Describe team members' responsibilities with this project and past experience with similar studies.
 - Indicate which team members will be involved with specific tasks and estimate the amount of time each person will devote to this planning project.
3. Provide a work schedule showing the tasks identified in the Scope of Work and estimated time required to complete these tasks.
4. Provide information on company experience and references, including:
 - General qualifications of company.
 - Description of similar studies completed in the last five years, specifically related to planning & compliance with stringent effluent phosphorus limits affecting other wastewater facilities. The preference would be for work completed at similar-sized, municipal wastewater systems in Wisconsin. Include contact names, phone numbers, email addresses, etc. for these communities.
 - Provide experience with evaluating programs for source-reduction of phosphorus, especially involving contracted regional customers, as well as commercial, industrial and other non-residential sources.
5. Price proposal.
 - Provide a detailed labor estimate in spreadsheet format for each team activity (Project Manager, Project Engineer, Technician, Clerical, etc.) for the tasks specified as part of the Scope of Work.
 - Provide hourly rates for each team member listed in the proposal.
 - Provide estimate of project expenses.
 - Provide not-to-exceed total price based on the Scope of this proposal.

Evaluation of Proposals

The City will be solely responsible for selection of a consultant to complete the specified work. The City reserves the right to reject any and all proposals, and to select a consultant in the best interests of the City.

Proposals will be reviewed and evaluated by a selection team made-up of Utility and City staff. Proposals will primarily be evaluated based on the technical proposal and qualifications. However, price and level of effort will also be considered as part of the evaluation process. Based on proposals and necessary follow-up information, the team will select an engineering firm to complete the work.

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Submittal Requirements

1. Submit six (6) copies of the proposal.
2. Proposals shall be a maximum of 20 pages.
3. Maximum sheet size of 11" X 17".
4. Proposal shall be signed by an authorized agent of the company.
5. Submit in sealed envelope or container, marked as PROPOSAL FOR CITY OF LA CROSSE PHOSPHORUS COMPLIANCE STUDY.
6. Submittal of proposal relinquishes and rights to the proposal and ideas contained therein.
7. **Deadline for receipt of proposals is 3:00 PM, CST, Friday, April 24, 2015.**

City of La Crosse Standard Terms and Conditions

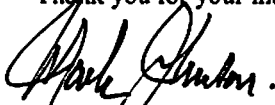
The City of La Crosse Standard Terms and Conditions is included with this RFP and shall apply to this work.

Issuing Agency and Contact Information

This Request for Proposals (RFP) is being issued by the City of La Crosse Sanitary Sewer Utility. Your firm is invited to submit a proposal for these professional consulting services. The company selected to do this work will contract with the Sanitary Sewer Utility and be responsible directly to the Utilities Manager for the completion of work described in this RFP.

Questions related to this RFP must be in writing and mailed or emailed to the contact person. Consultants are not permitted to contact individual City Council Members or selection team members for clarification of the RFP until the selection committee has developed a short list of consultants. All inquiries and questions for clarification concerning this RFP should be directed to Mark Johnson.

Thank you for your interest in this work.



Mark Johnson.
La Crosse Utilities office

Cc: Wastewater
Public Works
Engineering

CITY OF LA CROSSE ISLE LA PLUME WASTEWATER TREATMENT FACILITY
 INFLUENT DATA FOR CALENDAR YEAR 2010

Month	Average	Average	Average	Average	TKN	Influent Ammonia	Influent Cadmium	Influent Chromium	Influent Copper	Influent CN	Influent Lead	Influent Mercury	Influent Molybdenum	Influent Nickel	Influent Zinc
	Influent Flow	Influent TSS	Influent BOD	Influent Total P											
January	8.835	316	315	6.8	44.1	19.2	0.432	8.68	200	3	4.91	130.0	14.9	7.96	353
February	9.207	345	325	7.3	41.6	20.5	0.341	7.59	125	1	6.40		15.6	5.62	290
March	9.678	287	285	6.6	42.7	18.5	0.343	19.70	144	2	6.24	59.8	4.4	9.24	427
April	10.425	292	277	6.2	37.8	15.3	0.254	9.93	124	1	4.60	86.3	8.3	7.52	353
May	9.978	311	278	6.7	41.7	18.1	0.372	10.70	146	3	5.71	132.0	13.6	19.10	406
June	10.768	302	298	6.3	42.3	16.3	0.307	7.75	190	2	5.14	97.8	20.1	7.16	543
July	11.846	261	262	5.6	36.3	15.4	0.300	12.00	155	1	4.75	98.6	25.7	6.66	343
August	11.181	291	297	6.1	37.9	14.5	0.276	11.40	141	2	4.08	27.1	20.8	4.06	283
September	10.261	286	396	6.8	43.5	17.8	0.276	9.16	149	1	4.46	116.0	13.7	10.10	304
October	11.758	241	228	5.3	27.3	37.3	0.299	5.15	108	2	2.92	22.3	9.3	4.32	401
November	9.754	272	258	5.8	36.4	23.9	0.379	9.36	162	2	5.47	248.0	10.3	6.06	403
December	9.251	269	285	6.0	34.7	23.9	0.594	7.95	112	3	5.48	112.0	2.4	6.72	379
Averages	10.245	289	292	6.3	38.9	20.1	0.348	9.95	146	2	5.01	102.7	13.3	7.88	374

CITY OF LA CROSSE ISLE LA PLUME WASTEWATER TREATMENT FACILITY
 INFLUENT DATA FOR CALENDAR YEAR 2011

Month	Average	Average	Average	Average	TKN	Ammonia	Cadmium	Chromium	Copper	CN	Lead	Mercury	Molybdenum	Nickel	Zinc
	Influent	Influent	Influent	Influent											
	Flow	TSS	BOD	Total P											
	MGD	mg/l	mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ng/l	ug/l	ug/l	ug/l
January	9.054	285	286	6.1	39.4	14.9	0.264	9.70	120	2	5.11	47.7	9.53	7.73	526
February	9.481	323	343	6.6	44.0	20.3	0.350	16.80	138	1	6.25	81.3	17.50	6.97	410
March	10.228	289	296	6.5	39.0	14.6	0.234	10.30	157	1	5.63	87.9	9.15	6.18	311
April	15.889	181	165	3.9	26.9	10.4	0.395	10.30	130	3	5.23	56.9	12.40	6.72	288
May	13.234	224	175	4.7	26.4	11.5	0.206	12.20	95	2	2.84	156.0	6.44	5.14	271
June	12.208	255	223	5.3	33.8	14.1	0.298	7.77	125	4	4.31	99.2	23.60	4.39	334
July	12.381	252	214	5.5	36.0	12.8	0.235	8.95	124	0	3.96	128.0	24.40	5.44	296
August	11.239	243	198	6.4	29.4	13.0	0.295	7.79	136	5	4.58	105.0	24.60	5.19	244
September	9.730	285	249	6.8	32.1	15.1	0.153	9.37	134	1	3.59	118.0	15.90	6.32	278
October	9.420	294	270	6.9	40.5	20.3	0.248	7.51	150	0	5.92	69.9	19.80	5.82	407
November	9.176	353	285	7.8	32.0	20.5	0.261	9.06	190	1	5.24	79.5	11.20	6.17	714
December	9.421	299	266	6.6	38.8	20.2	0.218	7.60	152	2	3.82	51.3	3.55	6.95	358
Averages	10.955	274	248	6.1	34.9	15.6	0.263	9.78	138	2	4.71	90.1	14.84	6.09	370

CITY OF LA CROSSE ISLE LA PLUME WASTEWATER TREATMENT FACILITY
 INFLUENT DATA FOR CALENDAR YEAR 2012

	Average Influent Flow	Average Influent TSS	Average Influent BOD	Average Influent Total P	Influent TKN	Influent Ammonia	Influent Cadmium	Influent Chromium	Influent Copper	Influent CN	Influent Lead	Influent Mercury	Influent Molybdenum	Influent Nickel	Influent Zinc
Month	MGD	mg/l	mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ng/l	ug/l	ug/l	ug/l
January	9.428	306	231	6.0	36.2	19.2	0.220	8.06	208	2	3.99	144.0	6.54	6.93	296
February	9.657	330	245	6.2	35.6	14.9	0.328	8.71	152	5	5.98	24.3	2.51	6.18	573
March	9.640	363	295	7.2	45.8	18.5	0.228	9.75	159	3	4.15	100.0	8.63	7.27	447
April	9.327	369	276	7.0	40.6	19.4	0.305	9.06	167	3	4.67	356.0	4.99	6.76	344
May	9.854	351	270	6.4	34.5	16.7	0.216	7.36	156	3	4.68	28.1	5.04	5.88	319
June	10.873	333	254	6.0	28.9	13.4	0.393	8.96	181	3	4.86	0.1	14.80	6.64	394
July	11.068	317	258	7.7	29.4	13.6	0.238	7.79	141	3	4.98	53.2	21.40	6.57	293
August	9.600	336	268	6.9	41.2	18.0	0.226	7.54	166	3	4.55	190.0	12.10	4.79	375
September	8.876	303	268	7.0	35.0	20.2	0.221	6.34	185	3	4.14	231.0	13.90	5.40	307
October	8.519	308	256	6.6	34.2	21.0	0.350	8.68	182	3	6.06	45.1	10.00	5.67	308
November	8.512	292	238	6.5	35.8	20.4	0.213	6.86	141	3	5.88	83.0	4.60	5.31	320
December	8.255	315	253	6.3	38.2	21.3	0.369	8.20	148	3	6.43	174.0	4.38	6.14	304
Averages	9.467	327	260	6.7	36.3	18.1	0.276	8.11	166	3	5.03	119.1	9.07	6.13	357

CITY OF LA CROSSE ISLE LA PLUME WASTEWATER TREATMENT FACILITY
 INFLUENT DATA FOR CALENDAR YEAR 2013

	Average Influent Flow	Average Influent TSS	Average Influent BOD	Average Influent Total P	Influent TKN	Influent Ammonia	Influent Cadmium	Influent Chromium	Influent Copper	Influent CN	Influent Lead	Influent Mercury	Influent Molybdenum	Influent Nickel	Influent Zinc
Month	MGD	mg/l	mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ng/l	ug/l	ug/l	ug/l
January	8.880	297	253	6.1	71.9	19.6	1.850	8.42	171	4	4.90	343.0	3.92	5.73	270
February	9.282	301	239	6.1	39.9	20.0	0.274	7.95	385	3	5.22	112.0	1.12	8.75	390
March	9.333	296	211	5.4	26.6	17.4	0.170	9.14	220	9	5.93	76.6	1.12	6.77	292
April	10.650	270	201	4.7	30.1	15.6	0.259	6.93	202	9	4.11	68.5	1.12	3.97	246
May	12.328	251	216	4.8	34.5	15.3	0.267	72.00	140	8	3.20	70.8	12.20	34.4	291
June	12.613	230	191	4.8	25.9	13.4	0.211	6.08	130	6	4.14	93.1	6.11	6.21	203
July	11.779	218	214	5.6	29.7	12.3	0.196	4.99	120	7	3.38	151.0	14.80	3.85	242
August	10.001	245	212	6.2	29.3	15.6	0.199	5.14	145	6	4.31	46.6	12.50	5.53	267
September	9.531	274	252	6.9	37.3	20.4	0.226	5.88	145	6	4.19	71.1	9.51	5.14	333
October	9.123	327	290	8.0	47.1	27.3	0.229	25.20	165	6	6.37	118.0	7.47	5.16	228
November	8.941	642	345	7.6	26.1	22.8	0.298	9.57	184	6	5.07	120.0	3.68	4.85	306
December	8.712	605	353	7.7	41.8	25.4	0.381	17.80	186	9	8.66	367.0	11.50	7.53	336
Averages	10.098	330	248	6.2	36.7	18.8	0.380	14.93	183	7	4.96	136.5	7.09	8.16	284

CITY OF LA CROSSE ISLE LA PLUME WASTEWATER TREATMENT FACILITY
 INFLUENT DATA FOR CALENDAR YEAR 2014

Month	Average	Average	Average	Average	TKN	Ammonia	Cadmium	Chromium	Copper	CN	Lead	Mercury	Molybdenum	Nickel	Zinc
	Influent Flow	Influent TSS	Influent BOD	Influent Total P											
	MGD	mg/l	mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ng/l	ug/l	ug/l	ug/l
January	8.968	313	339	7.2	41.6	21.4	0.293	9.39	153	7	6.32	62.9	1.53	10.2	400
February	9.647	291	271	6.8	32.9	23.0	0.278	10.60	161	6	4.84	87.7	1.12	4.77	258
March	9.473	259	226	6.5	36.8	20.6	0.170	9.98	116	6	4.25	107.0	1.12	3.48	269
April	10.695	314	264	5.8	48.7	22.6	0.368	7.68	131	9	5.56	135.0	9.16	5.06	312
May	14.334	211	192	4.4	27.8	13.4	0.242	7.50	89	5	2.50	103.0	2.64	3.52	180
June	14.711	212	230	4.8	33.1	13.3	0.206	5.05	97	18	4.88	123.0	8.63	3.34	239
July	14.787	320	307	5.1	28.1	11.0	0.268	4.34	84	10	3.07	200.0	10.20	4.65	220
August	10.622	741	355	6.7	29.7	17.9	0.356	8.11	208	10	7.75	146.0	32.00	6.08	367
September	10.294	294	303	6.5	31.8	22.0	0.218	7.84	156	34	3.85	56.7	18.30	3.7	252
October	9.439	282	304	6.8	34.2	19.2	0.168	8.11	150	3	3.84	252.0	10.20	6.23	303
November	9.217	448	357	7.8	43.0	24.5	0.201	6.75	119	6	2.78	274.0	9.62	5.08	229
December	9.258	705	417	7.8	51.7	23.5	0.327	7.63	142	7	6.80	61.8	1.66	5.09	333
Averages	10.954	366	297	6.3	36.6	19.4	0.258	7.75	134	10	4.70	134.1	8.85	5.10	280

CITY OF LA CROSSE ISLE LA PLUME WASTEWATER TREATMENT FACILITY
 EFFLUENT DATA FOR CALENDAR YEAR 2010

Month	Average	Average	Average	Average	TKN	Ammonia	Cadmium	Chromium	Copper	CN	Lead	Mercury	Molybdenum	Nickel	Zinc	Fecal Col	Fecal Col	Effluent
	Effluent	Effluent	Effluent	Effluent														Nitrate
	Flow	TSS	BOD	Total P														(Hach)
MGD	mg/l	mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ng/l	ug/l	ug/l	ug/l	Pre-UV	After UV	mg/l	
January	8.773	6.5	4.1	0.61	2.37	1.52	0.057	1.25	21.8	2	0.18	1.5	6.44	3.89	44.6			5.30
February	9.334	6.1	4.2	0.39	13.30	12.07	0.068	0.82	31.2	1	0.54	1.5	8.21	2.97	71.2			2.31
March	10.262	4.6	3.2	0.37	15.00	4.03	0.041	1.50	22.5	3	0.26	1.1	0.73	3.88	70.9			4.32
April	10.727	5.4	4.0	0.75	1.98	0.17	0.041	1.13	15.9	1	0.18	1.6	4.58	4.21	89.4			5.24
May	9.896	6.8	4.5	0.70	3.14	2.06	0.041	1.45	19.2	3	0.18	1.4	10.00	5.01	57.8	31,400	94	5.34
June	10.555	6.3	4.1	0.66	2.83	0.38	0.041	1.78	31.2	5	0.18	1.3	12.60	4.94	51.0	13,575	56	4.22
July	11.263	3.8	2.7	0.27	2.26	0.14	0.041	5.31	14.7	4	0.18	0.9	16.70	4.15	43.2	15,167	202	4.60
August	10.754	4.5	2.8	0.26	2.24	0.27	0.057	0.83	15.3	1	0.18	0.8	0.68	1.87	37.1	35,575	586	4.78
September	10.675	27.9	36.1	3.25	23.54	16.74	0.047	1.02	10.0	2	0.15	2.6	7.82	5.18	18.2	538,369	138,344	1.91
October	11.946	4.5	4.2	0.20	6.45	4.19	0.042	0.68	7.8	3	0.32	1.0	3.08	3.16	42.0			4.56
November	9.698	5.0	2.4	0.30	1.93	0.15	0.042	0.99	12.0	3	0.31	0.9	2.89	3.44	43.1			5.29
December	9.237	6.5	3.2	0.39	3.12	0.67	0.042	0.91	14.1	6	0.15	1.0	1.23	4.01	50.1			4.54
Averages	10.260	7.3	6.3	0.68	6.5	3.53	0.047	1.47	18.0	3	0.23	1.3	6.25	3.89	51.6	126,817	27,856	4.37

CITY OF LA CROSSE ISLE LA PLUME WASTEWATER TREATMENT FACILITY
 EFFLUENT DATA FOR CALENDAR YEAR 2011

Month	Average	Average	Average	Average	TKN	Ammonia	Cadmium	Chromium	Copper	CN	Lead	Mercury	Molybdenum	Nickel	Zinc	Fecal Col	Fecal Col	Effluent
	Effluent	Effluent	Effluent	Effluent														Nitrate
	Flow	TSS	BOD	Total P														(Hach)
MGD	mg/l	mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ng/l	ug/l	ug/l	ug/l	Pre-UV	After UV	mg/l	
January	9.183	9.4	5.2	1.25	2.98	0.19	0.042	1.38	19.3	1	0.15	1.27	5.42	4.31	79.9			4.09
February	9.650	7.9	4.2	0.44	3.26	0.61	0.042	9.15	18.6	10	0.30	1.22	8.43	5.17	72.5			3.40
March	10.160	9.0	5.1	0.59	5.39	2.14	0.063	1.38	18.5	4	0.18		5.91	4.76	66.1			3.63
April	15.578	9.3	5.1	0.81	8.79	5.93	0.078	0.88	19.7	1	0.15	1.02	5.94	3.60	54.6			3.34
May	12.742	9.6	4.7	0.82	4.60	2.89	0.063	9.30	21.8	2	0.15	4.89	4.04	4.11	62.8	26,378	211	4.30
June	11.540	4.8	2.5	0.55	1.91	0.41	0.063	4.73	26.6	3	0.32	1.81	18.40	4.24	63.4	13,889	59	5.00
July	11.256	3.9	2.4	0.91	2.10	0.36	0.063	0.74	15.9	0	0.15	1.29	18.60	2.77	62.3	20,975	115	5.39
August	10.296	4.6	2.8	0.88	2.47	0.30	0.063	9.48	25.8	3	0.51	0.88		3.57	50.7	52,140	154	5.65
September	9.140	4.1	2.3	0.57	1.87	0.34	0.063	0.47	20.9	2	0.02	0.64	14.70	4.34	46.2	10,122	83	6.12
October	8.841	4.8	2.9	0.74	2.25	0.36	0.063	0.85	24.0	5	0.30	0.96	11.70	2.98	58.5			6.81
November	8.395	5.7	3.4	1.04	2.49	0.92	0.063	0.98	49.5	3	0.20	1.00	8.37	3.60	95.0			7.17
December	8.486	11.9	6.4	1.12	8.77	5.86	0.063	0.69	37.8	3	0.15	1.58	1.95	3.96	60.7			5.33
Averages	10.439	7.1	3.9	0.81	3.91	1.69	0.061	3.34	24.9	3	0.21	1.51	9.41	3.95	64.4	24,701	124	5.02

CITY OF LA CROSSE ISLE LA PLUME WASTEWATER TREATMENT FACILITY
 EFFLUENT DATA FOR CALENDAR YEAR 2012

	Average	Average	Average	Average														Effluent	
	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Nitrate
	Flow	TSS	BOD	Total P	TKN	Ammonia	Cadmium	Chromium	Copper	CN	Lead	Mercury	Molybdenum	Nickel	Zinc	Fecal Col	Fecal Col	(Hach)	
Month	MGD	mg/l	mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ng/l	ug/l	ug/l	ug/l	Pre-UV	After UV	mg/l	
January	8.761	10.0	6.1	1.09	10.49	7.69	0.063	1.41	48.6	3	0.19	1.65	3.83	4.15	71.1			4.89	
February	9.111	7.6	4.5	0.67	16.64	13.08	0.063	1.28	87.2	11	0.36	1.07	1.75	3.54	92.7			3.06	
March	9.823	10.3	6.3	1.18	19.00	15.49	0.068	1.21	98.2	3	0.42	1.21	2.01	4.02	89.7			2.91	
April	9.524	8.5	4.5	0.66	24.75	20.80	0.068	1.63	63.3	3	0.19	1.09	2.07	5.72	97.5			1.59	
May	9.565	8.3	4.6	1.26	14.66	9.42	0.068	1.44	78.9	3	0.41	1.16	2.26	3.44	43.3	69,000	408	4.13	
June	10.169	4.0	2.1	0.69	1.69	0.91	0.068	1.04	37.2	3	0.23	0.70	10.10	3.75	62.0	5,570	26	4.37	
July	10.143	4.4	1.9	0.69	9.46	4.81	0.068	1.42	24.9	3	0.23	1.13	17.30	3.56	90.6	34,975	520	5.09	
August	9.236	3.8	1.8	0.99	1.84	0.21	0.068	0.89	60.2	3	0.23	0.68	8.54	2.98	96.7	18,780	71	5.15	
September	8.627	2.7	1.5	0.37	2.22	0.20	0.068	0.76	64.7	3	0.23	0.59	13.80	3.67	78.5	44,575	58	5.69	
October	8.458	3.9	1.6	0.36	1.16	0.21	0.068	1.68	170.0	3	0.23	0.51	7.66	3.83	67.4			5.82	
November	8.342	2.9	1.2	0.45	1.32	0.28	0.068	0.58	79.4	3	0.23	0.68	1.14	3.43	47.9			5.37	
December	7.891	4.4	1.9	0.54	1.45	0.18	0.068	0.94	68.6	3	0.23	0.69	1.12	3.68	74.5			5.99	
Averages	9.138	5.9	3.2	0.75	8.72	6.11	0.067	1.19	73.4	4	0.27	0.93	5.97	3.81	76.0	34,580	217	4.51	

CITY OF LA CROSSE ISLE LA PLUME WASTEWATER TREATMENT FACILITY
 EFFLUENT DATA FOR CALENDAR YEAR 2013

	Average Effluent Flow	Average Effluent TSS	Average Effluent BOD	Average Effluent Total P															Effluent Nitrate (Hach)
Month	MGD	mg/l	mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ng/l	ug/l	ug/l	ug/l	ug/l	Pre-UV	After UV	mg/l
January	8.353	4.5	2.1	0.70	1.51	0.22	0.068	50.10	77.8	3	0.23	1.63	1.12	3.36	89.4				6.83
February	8.793	5.8	2.4	0.49	2.12	0.36	0.068	1.48	84.6	3	0.39	0.93	1.12	3.46	42.9				6.98
March	9.017	5.6	2.4	0.47	2.48	0.72	0.068	14.80	79.0	9	0.59	0.79	1.12	4.44	79.1				6.29
April	10.301	4.9	2.2	0.63	2.04	0.29	0.078	1.67	95.4	9	0.27	1.14	1.12	2.64	60.0				5.69
May	11.812	5.4	2.4	0.47	2.24	1.53	0.078	14.90	75.1	7	0.27	1.03	3.14	4.76	92.4	13,985	35		5.12
June	11.798	2.4	1.5	0.77	0.98	0.16	0.078	1.40	62.5	6	0.27	0.76	2.58	4.29	58.0	1,591	4		6.50
July	10.925	3.4	2.2	0.74	1.49	0.26	0.078	0.06	125.0	6	1.35	0.57	8.32	3.06	47.2	35,188	125		5.37
August	9.412	3.3	2.1	0.80	1.30	0.19	0.078	0.55	12.2	6	0.27	0.75	7.88	2.39	41.7	6,404	27		5.76
September	9.373	4.4	2.6	0.76	2.43	0.93	0.078	0.72	17.4	6	0.27	1.11	9.45	4.08	56.1	9,094	18		6.87
October	9.166	4.8	2.4	0.81	0.94	0.18	0.078	0.91	18.1	6	0.50	0.77	6.03	3.58	59.4				6.69
November	8.720	4.0	2.6	0.26	1.91	0.74	0.078	1.98	22.4	6	0.27	0.77	2.42	1.81	54.3				7.61
December	8.416	5.5	2.9	0.25	2.29	0.80	0.078	1.66	21.0	14	0.27	0.93	2.65	3.59	52.8				7.39
Averages	9.674	4.5	2.3	0.60	1.81	0.53	0.076	7.52	57.5	7	0.41	0.93	3.91	3.46	61.1	13,252	42		6.43

CITY OF LA CROSSE ISLE LA PLUME WASTEWATER TREATMENT FACILITY
 EFFLUENT DATA FOR CALENDAR YEAR 2014

	Average Effluent Flow	Average Effluent TSS	Average Effluent BOD	Average Effluent Total P															Effluent Nitrate (Hach)
Month	MGD	mg/l	mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ng/l	ug/l	ug/l	ug/l	ug/l	Pre-UV	After UV	mg/l
January	8.731	6.3	3.6	0.32	7.93	7.32	0.078	0.80	23.8	6	0.27	0.73	1.12	3.46	46.3				4.36
February	9.420	5.3	2.9	0.27	14.68	14.45	0.086	1.89	28.0	6	0.25	1.06	1.12	3.43	48.4				3.48
March	9.241	5.1	2.8	0.29	23.45	20.23	0.086	1.61	26.6	6	0.25	1.20	1.12	2.98	46.3				3.68
April	10.563	6.8	4.1	0.44	11.06	9.89	0.086	1.20	34.8	7	0.25	1.26	5.55	3.42	68.7				4.31
May	13.843	5.6	2.9	0.38	3.84	2.73	0.086	0.59	19.4	4	0.25	4.53	1.12	2.21	58.1	6,164	23		4.48
June	14.080	3.3	2.7	0.62	1.62	0.27	0.086	0.43	30.0	6	0.25	0.96	7.53	1.73	52.6	3,994	12		6.04
July	13.830	3.8	3.8	0.49	1.47	0.23	0.086	0.43	21.8	9	0.25	0.84	4.17	2.34	47.2	50,174	508		6.18
August	9.493	3.2	3.6	0.32	3.14	0.18	0.086	0.43	47.9	6	0.25	0.91	21.50	3.04	44.4	14,476	14		7.83
September	9.843	3.8	3.3	0.81	1.08	0.36	0.086	1.43	74.0	13	0.25	1.02	13.80	1.70	50.5	32,343	22		8.87
October	9.102	3.0	3.1	0.40	7.24	6.06	0.086	0.50	46.5	3	0.25	0.80	3.01	3.44	43.2				9.31
November	8.448	3.9	4.4	0.49	2.41	0.26	0.086	0.92	48.9	7	0.25	0.20	1.74	2.86	53.5				10.04
December	8.568	5.6	5.6	0.66	2.25	0.53	0.086	0.92	37.4	6	0.25	0.69	0.98	3.74	48.2				8.78
Averages	10.430	4.6	3.6	0.46	6.68	5.21	0.085	0.93	36.6	7	0.25	1.18	5.23	2.86	50.6	21,430	116		6.45

EXHIBIT 1

WPDES Permit No. WI-0029581-09-0



WPDES PERMIT

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
**PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE
ELIMINATION SYSTEM**

City of La Crosse

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility
located at
905 Joseph Houska Drive
to
**the Mississippi River in the Lower La Crosse River Watershed
of the Bad Axe – La Crosse Rivers Basin located in La Crosse County**

in accordance with the effluent limitations, monitoring requirements and other conditions set
forth in this permit.

The permittee shall not discharge after the date of expiration. If the permittee wishes to continue to discharge after this expiration date an application shall be filed for reissuance of this permit, according to Chapter NR 200, Wis. Adm. Code, at least 180 days prior to the expiration date given below.

State of Wisconsin Department of Natural Resources
For the Secretary

By

Michael Vollrath
Wastewater Field Supervisor

Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE - July 01, 2015

EXPIRATION DATE - June 30, 2020

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1 Influent Requirements

1.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
701	Representative influent samples shall be collected prior to the grit removal and filtrate/centrate return.

1.2 Monitoring Requirements

The permittee shall comply with the following monitoring requirements.

1.2.1 Sampling Point 701 - INFLUENT PRIOR TO GRIT REMOVAL

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Continuous	Continuous	
BOD ₅ , Total		mg/L	Daily	24-Hr Flow Prop Comp	
Suspended Solids, Total		mg/L	Daily	24-Hr Flow Prop Comp	
Cadmium, Total Recoverable		µg/L	Monthly	72-Hr Flow Prop Comp	
Chromium, Total Recoverable		µg/L	Monthly	72-Hr Flow Prop Comp	
Copper, Total Recoverable		µg/L	Monthly	72-Hr Flow Prop Comp	
Lead, Total Recoverable		µg/L	Monthly	72-Hr Flow Prop Comp	
Nickel, Total Recoverable		µg/L	Monthly	72-Hr Flow Prop Comp	
Zinc, Total Recoverable		µg/L	Monthly	72-Hr Flow Prop Comp	
Cyanide, Total		µg/L	Monthly	Grab	
Mercury, Total Recoverable		ng/L	Monthly	24-Hr Flow Prop Comp	

1.2.1.1 Total Metals Analyses

Measurements of total metals and total recoverable metals shall be considered as equivalent.

1.2.1.2 Sample Analysis

Samples shall be analyzed using a method which provides adequate sensitivity so that results can be quantified, unless not possible using the most sensitive approved method.

1.2.1.3 Mercury Monitoring

The permittee shall collect and analyze all mercury samples according to the data quality requirements of ss. NR 106.145(9) and (10), Wisconsin Administrative Code. The limit of quantitation (LOQ) used for the effluent and field blank shall be less than 1.3 ng/L, unless the samples are quantified at levels above 1.3 ng/L. The permittee shall collect at least one mercury field blank for each set of mercury samples (a set of samples may include combinations of intake, influent, effluent or other samples all collected on the same day). The permittee shall report results of samples and field blanks to the Department on Discharge Monitoring Reports.

2 In-Plant Requirements

2.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
106	A representative in plant sample shall be collected for a Mercury field blank using standard sample handling procedures.

2.2 Monitoring Requirements and Limitations

The permittee shall comply with the following monitoring requirements and limitations.

2.2.1 Sampling Point 106 - MERCURY FIELD BLANK

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Mercury, Total Recoverable		ng/L	Monthly	Blank	

2.2.1.1 Mercury Monitoring

The permittee shall collect and analyze all mercury samples according to the data quality requirements of ss. NR 106.145(9) and (10), Wisconsin Administrative Code. The limit of quantitation (LOQ) used for the effluent and field blank shall be less than 1.3 ng/L, unless the samples are quantified at levels above 1.3 ng/L. The permittee shall collect at least one mercury field blank for each set of mercury samples (a set of samples may include combinations of intake, influent, effluent or other samples all collected on the same day). The permittee shall report results of samples and field blanks to the Department on Discharge Monitoring Reports.

3 Surface Water Requirements

3.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)
001	Representative effluent samples shall be collected following secondary clarification and prior to discharge to the Mississippi River.

3.2 Monitoring Requirements and Effluent Limitations

The permittee shall comply with the following monitoring requirements and limitations.

3.2.1 Sampling Point (Outfall) 001 - PRIOR TO DISCHARGE

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Continuous	Continuous	
CBOD ₅	Monthly Avg	25 mg/L	Daily	24-Hr Flow Prop Comp	
CBOD ₅	Weekly Avg	40 mg/L	Daily	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	30 mg/L	Daily	24-Hr Flow Prop Comp	
Suspended Solids, Total	Weekly Avg	45 mg/L	Daily	24-Hr Flow Prop Comp	
pH Field	Daily Max	9.0 su	Daily	Grab	
pH Field	Daily Min	6.0 su	Daily	Grab	
Cadmium, Total Recoverable		µg/L	Monthly	72-Hr Flow Prop Comp	
Chromium, Total Recoverable		µg/L	Monthly	72-Hr Flow Prop Comp	
Lead, Total Recoverable		µg/L	Monthly	72-Hr Flow Prop Comp	
Nickel, Total Recoverable		µg/L	Monthly	72-Hr Flow Prop Comp	
Zinc, Total Recoverable		µg/L	Monthly	72-Hr Flow Prop Comp	
Cyanide, Total		µg/L	Monthly	Grab	
Nitrogen, Ammonia (NH ₃ -N) Total	Daily Max - Variable	mg/L	Weekly	24-Hr Flow Prop Comp	See ammonia footnote below.
Nitrogen, Ammonia Variable Limit		mg/L	Weekly	24-Hr Flow Prop Comp	See ammonia footnote below.

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Fecal Coliform	Geometric Mean	400 #/100 ml	2/Week	Grab	Limit and monitoring effective May-Sept annually.
Acute WET		TU _a	See Listed Qtr(s)	24-Hr Flow Prop Comp	Tests required annually, rotating quarters. See Acute footnote below.
Nitrogen, Total		mg/L	Quarterly	24-Hr Flow Prop Comp	
Nitrogen, Nitrite + Nitrate Total		mg/L	Quarterly	24-Hr Flow Prop Comp	
Nitrogen, Total Kjeldahl		mg/L	Quarterly	24-Hr Flow Prop Comp	
Hardness, Total as CaCO ₃		mg/L	Quarterly	24-Hr Flow Prop Comp	
Phosphorus, Total	Monthly Avg	1.0 mg/L	5/Week	24-Hr Flow Prop Comp	Interim limit of 1.0 mg/L monthly average effective throughout the permit term. Final limits of 0.100 mg/L, 17 lbs 6-month avgs and 0.300 mg/L monthly avg effective next permit term. See phosphorus footnote below and compliance schedule.
Copper, Total Recoverable	Daily Max	86 µg/L	Monthly	24-Hr Flow Prop Comp	Monitoring effective upon permit issuance. Limit effective July 2018. See copper compliance schedule.
Copper, Total Recoverable	Daily Max	32 lbs/day	Monthly	Calculated	Limit effective July 2018. See copper compliance schedule.
Mercury, Total Recoverable	Daily Max	4.8 ng/L	Monthly	Grab	See Mercury footnote below and compliance schedule.

3.2.1.1 Average Annual Design Flow

The average annual design flow of the permittee's wastewater treatment facility is 20 MGD.

3.2.1.2 Ammonia Nitrogen Effluent Limitations

Acute Ammonia limitations (daily maximums) are based on the effluent pH. Below is a table which states the applicable ammonia limit for various pH values from 6.0 to 9.0 standard units (s.u.) and should be used to determine the daily maximum ammonia limit to be reported on the DMRs. When measuring pH, rounding to the nearest 0.1 is required. For example, if the pH reading is 7.14 it should be rounded to 7.1. If the pH reading was 7.15, it should be rounded to 7.2. These limits apply year-round unless noted below.

Effluent pH (s.u.)	NH ₃ -N Limit (mg/L)	Effluent pH (s.u.)	NH ₃ -N Limit (mg/L)
pH ≤ 7.5	No Limit	8.2 < pH ≤ 8.3	9.4
7.5 < pH ≤ 7.6	34*	8.3 < pH ≤ 8.4	7.8
7.6 < pH ≤ 7.7	29*	8.4 < pH ≤ 8.5	6.4
7.7 < pH ≤ 7.8	24*	8.5 < pH ≤ 8.6	5.3
7.8 < pH ≤ 7.9	20*	8.6 < pH ≤ 8.7	4.4
7.9 < pH ≤ 8.0	17	8.7 < pH ≤ 8.8	3.7
8.0 < pH ≤ 8.1	14	8.8 < pH ≤ 8.9	3.1
8.1 < pH ≤ 8.2	11	8.9 < pH ≤ 9.0	2.6

* During the months of May through October if the pH is less than or equal to 7.9 there is no daily maximum limit for NH₃-N. Limits shown in the table above with an asterisk * would only apply from November through April.

3.2.1.3 Total Metals Analyses

Measurements of total metals and total recoverable metals shall be considered as equivalent.

3.2.1.4 Sample Analysis

Samples shall be analyzed using a method which provides adequate sensitivity so that results can be quantified at a level of quantitation below the calculated/potential effluent limit, unless not possible using the most sensitive approved method.

3.2.1.5 Mercury Monitoring

The permittee shall collect and analyze all mercury samples according to the data quality requirements of ss. NR 106.145(9) and (10), Wisconsin Administrative Code. The limit of quantitation (LOQ) used for the effluent and field blank shall be less than 1.3 ng/L, unless the samples are quantified at levels above 1.3 ng/L. The permittee shall collect at least one mercury field blank for each set of mercury samples (a set of samples may include combinations of intake, influent, effluent or other samples all collected on the same day). The permittee shall report results of samples and field blanks to the Department on Discharge Monitoring Reports.

3.2.1.6 Phosphorus Water Quality Based Effluent Limitation(s)

The final water quality based effluent limits for phosphorus are 0.100 mg/L, 17 lbs/day 6-month average and 0.300 mg/L monthly average unless:

- (A) As part of the application for the next reissuance, or prior to filing the application, the permittee submits either: 1.) a watershed adaptive management plan and a completed Watershed Adaptive Management Request Form 3200-139; or 2.) an application for water quality trading; or 3.) an application for a variance; or 4.) new information or additional data that supports a recalculation of the numeric limitation; and
- (B) The Department modifies, revokes and reissues, or reissues the permit to incorporate a revised limitation before the expiration of the compliance schedule*.

Note: The permittee may also submit an application for a variance within 60 days of this permit reissuance, as noted in the permit cover letter, in accordance with s. 283.15, Stats.

If Adaptive Management or Water Quality Trading is approved as part of the permit application for the next reissuance or as part of an application for a modification or revocation and reissuance, the plan and specifications submittal, construction, and final effective dates for compliance with the total phosphorus WQBEL may change in the reissued or modified permit. In addition, the numeric value of the water quality based effluent limit may change based on new information (e.g. a TMDL) or additional data. If a variance is approved for the next reissuance, interim limits

and conditions will be imposed in the reissued permit in accordance with s. 283.15, Stats., and applicable regulations. A permittee may apply for a variance to the phosphorus WQBEL at the next reissuance even if the permittee did not apply for a phosphorus variance as part of this permit reissuance.

Additional Requirements: If a water quality based effluent limit has taken effect in a permit, any increase in the limit is subject to s. NR 102.05(1) and ch. NR 207, Wis. Adm. Code. When a six-month average effluent limit is specified for Total Phosphorus the applicable averaging periods are May through October and November through April.

***Note:** The Department will prioritize reissuances and revocations, modifications, and reissuances of permits to allow permittees the opportunity to implement adaptive management or nutrient trading in a timely and effective manner.

3.2.1.7 Alternative Approaches to Phosphorus WQBEL Compliance

Rather than upgrading its wastewater treatment facility to comply with WQBELs for total phosphorus, the permittee may use Water Quality Trading or the Watershed Adaptive Management Option, to achieve compliance under ch. NR 217, Wis. Adm. Code, provided that the permit is modified, revoked and reissued, or reissued to incorporate any such alternative approach. The permittee may also implement an upgrade to its wastewater treatment facility in combination with Water Quality Trading or the Watershed Adaptive Management Option to achieve compliance, provided that the permit is modified, revoked and reissued, or reissued to incorporate any such alternative approach. If the Final Compliance Alternatives Plan concludes that a variance will be pursued, the Plan shall provide information regarding the basis for the variance.

3.2.1.8 Submittal of Permit Application for Next Reissuance and Adaptive Management or Pollutant Trading Plan or Variance Application

The permittee shall submit the permit application for the next reissuance at least 6 months prior to expiration of this permit. If the permittee intends to pursue adaptive management to achieve compliance with the phosphorus water quality based effluent limitation, the permittee shall submit with the application for the next reissuance: a completed Watershed Adaptive Management Request Form 3200-139, the completed Adaptive Management Plan and final plans for any system upgrades necessary to meet interim limits pursuant to s. NR 217.18, Wis. Adm. Code. If the permittee intends to pursue pollutant trading to achieve compliance, the permittee shall submit an application for water quality trading with the application for the next reissuance. If system upgrades will be used in combination with pollutant trading to achieve compliance with the final water quality-based limit, the reissued permit will specify a schedule for the necessary upgrades. If the permittee intends to seek a variance, the permittee shall submit an application for a variance with the application for the next reissuance.

3.2.1.9 Whole Effluent Toxicity (WET) Testing

Primary Control Water: Mississippi River, upstream of discharge

Instream Waste Concentration (IWC): 1.8%

Dilution series: At least five effluent concentrations and dual controls must be included in each test.

- Acute: 100, 50, 25, 12.5, 6.25% and any additional selected by the permittee.

WET Testing Frequency:

Acute tests shall be conducted [choose one: once every other year, once each year, twice each year, quarterly, or bimonthly] in rotating quarters in order to collect seasonal information about the discharge. Tests are required during the following quarters.

- Acute Tests:
Oct-Dec 2015
Jan-March 2016
Apr-June 2017

July-Sept 2018

Oct-Dec 2019

Jan-March 2020

Acute WET testing shall continue after the permit expiration date (until the permit is reissued) in accordance with the WET requirements specified for the fourth calendar year of this permit. For example, the next test would be required in April – June 2021.

Reporting: The permittee shall report test results on the Discharge Monitoring Report form, and also complete the "Whole Effluent Toxicity Test Report Form" (Section 6, "*State of Wisconsin Aquatic Life Toxicity Testing Methods Manual, 2nd Edition*"), for each test. The original, complete, signed version of the Whole Effluent Toxicity Test Report Form shall be sent to the Biomonitoring Coordinator, Bureau of Water Quality, 101 S. Webster St., P.O. Box 7921, Madison, WI 53707-7921, within 45 days of test completion. The Discharge Monitoring Report (DMR) form shall be submitted electronically by the required deadline.

Determination of Positive Results: An acute toxicity test shall be considered positive if the Toxic Unit - Acute (TU_a) is greater than 1.0 for either species. The TU_a shall be calculated as follows: If $LC_{50} \geq 100$, then $TU_a = 1.0$. If LC_{50} is < 100 , then $TU_a = 100 \div LC_{50}$. A chronic toxicity test shall be considered positive if the Relative Toxic Unit - Chronic (rTU_c) is greater than 1.0 for either species. The rTU_c shall be calculated as follows: If $IC_{25} \geq IWC$, then $rTU_c = 1.0$. If $IC_{25} < IWC$, then $rTU_c = IWC \div IC_{25}$.

Additional Testing Requirements: Within 90 days of a test which showed positive results, the permittee shall submit the results of at least 2 retests to the Biomonitoring Coordinator on "Whole Effluent Toxicity Test Report Forms". The 90 day reporting period shall begin the day after the test which showed a positive result. The retests shall be completed using the same species and test methods specified for the original test (see the Standard Requirements section herein).

4 Land Application Requirements

4.1 Sampling Point(s)

The discharge(s) shall be limited to land application of the waste type(s) designated for the listed sampling point(s) on Department approved land spreading sites or by hauling to another facility.

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
002	Representative cake sludge samples shall be collected prior to land application. Sludge must be mixed prior to sampling and monitored bimonthly for lists 1, 2, 3, and 4, and once in 2016 for PCBs.
003	Representative liquid sludge samples shall be collected from the sludge storage discharge. Sludge must be mixed prior to sampling, and monitored bimonthly for lists 1, 2, 3, and 4, and once in 2016 for PCBs.

4.2 Monitoring Requirements and Limitations

The permittee shall comply with the following monitoring requirements and limitations.

4.2.1 Sampling Point (Outfall) 002 - CAKE SLUDGE and 003- LIQUID SLUDGE

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Solids, Total		Percent	1/ 2 Months	Composite	
Arsenic Dry Wt	Ceiling	75 mg/kg	1/ 2 Months	Composite	
Arsenic Dry Wt	High Quality	41 mg/kg	1/ 2 Months	Composite	
Cadmium Dry Wt	Ceiling	85 mg/kg	1/ 2 Months	Composite	
Cadmium Dry Wt	High Quality	39 mg/kg	1/ 2 Months	Composite	
Copper Dry Wt	Ceiling	4,300 mg/kg	1/ 2 Months	Composite	
Copper Dry Wt	High Quality	1,500 mg/kg	1/ 2 Months	Composite	
Lead Dry Wt	Ceiling	840 mg/kg	1/ 2 Months	Composite	
Lead Dry Wt	High Quality	300 mg/kg	1/ 2 Months	Composite	
Mercury Dry Wt	Ceiling	57 mg/kg	1/ 2 Months	Composite	
Mercury Dry Wt	High Quality	17 mg/kg	1/ 2 Months	Composite	
Molybdenum Dry Wt	Ceiling	75 mg/kg	1/ 2 Months	Composite	
Nickel Dry Wt	Ceiling	420 mg/kg	1/ 2 Months	Composite	
Nickel Dry Wt	High Quality	420 mg/kg	1/ 2 Months	Composite	
Selenium Dry Wt	Ceiling	100 mg/kg	1/ 2 Months	Composite	
Selenium Dry Wt	High Quality	100 mg/kg	1/ 2 Months	Composite	
Zinc Dry Wt	Ceiling	7,500 mg/kg	1/ 2 Months	Composite	
Zinc Dry Wt	High Quality	2,800 mg/kg	1/ 2 Months	Composite	
Nitrogen, Total Kjeldahl		Percent	1/ 2 Months	Composite	
Nitrogen, Ammonium (NH ₄ -N) Total		Percent	1/ 2 Months	Composite	
Phosphorus, Total		Percent	1/ 2 Months	Composite	

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Phosphorus, Water Extractable		% of Tot P	1/2 Months	Composite	
Potassium, Total Recoverable		Percent	1/2 Months	Composite	
PCB Total Dry Wt	Ceiling	50 mg/kg	Once	Composite	Once in 2016.
PCB Total Dry Wt	High Quality	10 mg/kg	Once	Composite	Once in 2016.

Other Sludge Requirements	
Sludge Requirements	Sample Frequency
List 3 Requirements – Pathogen Control: The requirements in List 3 shall be met prior to land application of sludge.	BiMonthly
List 4 Requirements – Vector Attraction Reduction: The vector attraction reduction shall be satisfied prior to, or at the time of land application as specified in List 4.	BiMonthly

4.2.1.1 List 2 Analysis

If the monitoring frequency for List 2 parameters is more frequent than "Annual" then the sludge may be analyzed for the List 2 parameters just prior to each land application season rather than at the more frequent interval specified.

4.2.1.2 Changes in Feed Sludge Characteristics

If a change in feed sludge characteristics, treatment process, or operational procedures occurs which may result in a significant shift in sludge characteristics, the permittee shall reanalyze the sludge for List 1, 2, 3 and 4 parameters each time such change occurs.

4.2.1.3 Multiple Sludge Sample Points (Outfalls)

If there are multiple sludge sample points (outfalls), but the sludges are not subject to different sludge treatment processes, then a separate List 2 analysis shall be conducted for each sludge type which is land applied, just prior to land application, and the application rate shall be calculated for each sludge type. In this case, List 1, 3, and 4 and PCBs need only be analyzed on a single sludge type, at the specified frequency. If there are multiple sludge sample points (outfalls), due to multiple treatment processes, List 1, 2, 3 and 4 and PCBs shall be analyzed for each sludge type at the specified frequency.

4.2.1.4 Sludge Which Exceeds the High Quality Limit

Cumulative pollutant loading records shall be kept for all bulk land application of sludge which does not meet the high quality limit for any parameter. This requirement applies for the entire calendar year in which any exceedance of Table 3 of s. NR 204.07(5)(c), is experienced. Such loading records shall be kept for all List 1 parameters for each site land applied in that calendar year. The formula to be used for calculating cumulative loading is as follows:

$$[(\text{Pollutant concentration (mg/kg)} \times \text{dry tons applied/ac}) + 500] + \text{previous loading (lbs/acre)} = \text{cumulative lbs pollutant per acre}$$

When a site reaches 90% of the allowable cumulative loading for any metal established in Table 2 of s. NR 204.07(5)(b), the Department shall be so notified through letter or in the comment section of the annual land application report (3400-55).

4.2.1.5 Sludge Analysis for PCBs

The permittee shall analyze the sludge for Total PCBs one time during 2016. The results shall be reported as "PCB Total Dry Wt". Either congener-specific analysis or Aroclor analysis shall be used to determine the PCB concentration. The permittee may determine whether Aroclor or congener specific analysis is performed. Analyses shall be performed in accordance with Table EM in s. NR 219.04, Wis. Adm. Code and the conditions specified in Standard Requirements of this permit. PCB results shall be submitted by January 31, following the specified year of analysis.

4.2.1.6 Lists 1, 2, 3, and 4

List 1 TOTAL SOLIDS AND METALS
See the Monitoring Requirements and Limitations table above for monitoring frequency and limitations for the List 1 parameters
Solids, Total (percent)
Arsenic, mg/kg (dry weight)
Cadmium, mg/kg (dry weight)
Copper, mg/kg (dry weight)
Lead, mg/kg (dry weight)
Mercury, mg/kg (dry weight)
Molybdenum, mg/kg (dry weight)
Nickel, mg/kg (dry weight)
Selenium, mg/kg (dry weight)
Zinc, mg/kg (dry weight)

List 2 NUTRIENTS
See the Monitoring Requirements and Limitations table above for monitoring frequency for the List 2 parameters
Solids, Total (percent)
Nitrogen Total Kjeldahl (percent)
Nitrogen Ammonium (NH ₄ -N) Total (percent)
Phosphorus Total as P (percent)
Phosphorus, Water Extractable (as percent of Total P)
Potassium Total Recoverable (percent)

List 3

PATHOGEN CONTROL FOR CLASS B SLUDGE

The permittee shall implement pathogen control as listed in List 3. The Department shall be notified of the pathogen control utilized and shall be notified when the permittee decides to utilize alternative pathogen control.

The following requirements shall be met prior to land application of sludge.

Parameter	Unit	Limit
Fecal Coliform *	MPN/gTS or CFU/gTS	2,000,000
OR, ONE OF THE FOLLOWING PROCESS OPTIONS		
Aerobic Digestion		Air Drying
Anaerobic Digestion		Composting
Alkaline Stabilization		PSRP Equivalent Process

* The Fecal Coliform limit shall be reported as the geometric mean of 7 discrete samples on a dry weight basis.

List 4

VECTOR ATTRACTION REDUCTION

The permittee shall implement any one of the vector attraction reduction options specified in List 4. The Department shall be notified of the option utilized and shall be notified when the permittee decides to utilize an alternative option.

One of the following shall be satisfied prior to, or at the time of land application as specified in List 4.

Option	Limit	Where/When it Shall be Met
Volatile Solids Reduction	≥38%	Across the process
Specific Oxygen Uptake Rate	≤1.5 mg O ₂ /hr/g TS	On aerobic stabilized sludge
Anaerobic bench-scale test	<17 % VS reduction	On anaerobic digested sludge
Aerobic bench-scale test	<15 % VS reduction	On aerobic digested sludge
Aerobic Process	>14 days, Temp >40°C and Avg. Temp > 45°C	On composted sludge
pH adjustment	>12 S.U. (for 2 hours) and >11.5 (for an additional 22 hours)	During the process
Drying without primary solids	>75 % TS	When applied or bagged
Drying with primary solids	>90 % TS	When applied or bagged
Equivalent Process	Approved by the Department	Varies with process
Injection	-	When applied
Incorporation	-	Within 6 hours of application

4.2.1.7 Daily Land Application Log

Daily Land Application Log		
Discharge Monitoring Requirements and Limitations		
The permittee shall maintain a daily land application log for biosolids land applied each day when land application occurs. The following minimum records must be kept, in addition to all analytical results for the biosolids land applied. The log book records shall form the basis for the annual land application report requirements.		
Parameters	Units	Sample Frequency
DNR Site Number(s)	Number	Daily as used
Outfall number applied	Number	Daily as used
Acres applied	Acres	Daily as used
Amount applied	As appropriate * /day	Daily as used
Application rate per acre	unit */acre	Daily as used
Nitrogen applied per acre	lb/acre	Daily as used
Method of Application	Injection, Incorporation, or surface applied	Daily as used

* gallons, cubic yards, dry US Tons or dry Metric Tons

4.2.2 Sampling Point (Outfall) 003 - LIQUID SLUDGE

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Solids, Total		Percent	1/ 2 Months	Composite	
Arsenic Dry Wt	Ceiling	75 mg/kg	1/ 2 Months	Composite	
Arsenic Dry Wt	High Quality	41 mg/kg	1/ 2 Months	Composite	
Cadmium Dry Wt	Ceiling	85 mg/kg	1/ 2 Months	Composite	
Cadmium Dry Wt	High Quality	39 mg/kg	1/ 2 Months	Composite	
Copper Dry Wt	Ceiling	4,300 mg/kg	1/ 2 Months	Composite	
Copper Dry Wt	High Quality	1,500 mg/kg	1/ 2 Months	Composite	
Lead Dry Wt	Ceiling	840 mg/kg	1/ 2 Months	Composite	
Lead Dry Wt	High Quality	300 mg/kg	1/ 2 Months	Composite	
Mercury Dry Wt	Ceiling	57 mg/kg	1/ 2 Months	Composite	
Mercury Dry Wt	High Quality	17 mg/kg	1/ 2 Months	Composite	
Molybdenum Dry Wt	Ceiling	75 mg/kg	1/ 2 Months	Composite	
Nickel Dry Wt	Ceiling	420 mg/kg	1/ 2 Months	Composite	
Nickel Dry Wt	High Quality	420 mg/kg	1/ 2 Months	Composite	
Selenium Dry Wt	Ceiling	100 mg/kg	1/ 2 Months	Composite	
Selenium Dry Wt	High Quality	100 mg/kg	1/ 2 Months	Composite	
Zinc Dry Wt	Ceiling	7,500 mg/kg	1/ 2 Months	Composite	
Zinc Dry Wt	High Quality	2,800 mg/kg	1/ 2 Months	Composite	
Nitrogen, Total Kjeldahl		Percent	1/ 2 Months	Composite	

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Ammonium (NH ₄ -N) Total		Percent	1/ 2 Months	Composite	
Phosphorus, Total		Percent	1/ 2 Months	Composite	
Phosphorus, Water Extractable		% of Tot P	1/ 2 Months	Composite	
Potassium, Total Recoverable		Percent	1/ 2 Months	Composite	
PCB Total Dry Wt	Ceiling	50 mg/kg	Once	Composite	
PCB Total Dry Wt	High Quality	10 mg/kg	Once	Composite	

Other Sludge Requirements	
Sludge Requirements	Sample Frequency
List 3 Requirements – Pathogen Control: The requirements in List 3 shall be met prior to land application of sludge.	Annual
List 4 Requirements – Vector Attraction Reduction: The vector attraction reduction shall be satisfied prior to, or at the time of land application as specified in List 4.	Annual

4.2.2.1 List 2 Analysis

If the monitoring frequency for List 2 parameters is more frequent than "Annual" then the sludge may be analyzed for the List 2 parameters just prior to each land application season rather than at the more frequent interval specified.

4.2.2.2 Changes in Feed Sludge Characteristics

If a change in feed sludge characteristics, treatment process, or operational procedures occurs which may result in a significant shift in sludge characteristics, the permittee shall reanalyze the sludge for List 1, 2, 3 and 4 parameters each time such change occurs.

4.2.2.3 Multiple Sludge Sample Points (Outfalls)

If there are multiple sludge sample points (outfalls), but the sludges are not subject to different sludge treatment processes, then a separate List 2 analysis shall be conducted for each sludge type which is land applied, just prior to land application, and the application rate shall be calculated for each sludge type. In this case, List 1, 3, and 4 and PCBs need only be analyzed on a single sludge type, at the specified frequency. If there are multiple sludge sample points (outfalls), due to multiple treatment processes, List 1, 2, 3 and 4 and PCBs shall be analyzed for each sludge type at the specified frequency.

4.2.2.4 Sludge Which Exceeds the High Quality Limit

Cumulative pollutant loading records shall be kept for all bulk land application of sludge which does not meet the high quality limit for any parameter. This requirement applies for the entire calendar year in which any exceedance of Table 3 of s. NR 204.07(5)(c), is experienced. Such loading records shall be kept for all List 1 parameters for each site land applied in that calendar year. The formula to be used for calculating cumulative loading is as follows:

$[(\text{Pollutant concentration (mg/kg)} \times \text{dry tons applied/ac}) + 500] + \text{previous loading (lbs/acre)} = \text{cumulative lbs pollutant per acre}$

When a site reaches 90% of the allowable cumulative loading for any metal established in Table 2 of s. NR 204.07(5)(b), the Department shall be so notified through letter or in the comment section of the annual land application report (3400-55).

4.2.2.5 Sludge Analysis for PCBs

The permittee shall analyze the sludge for Total PCBs one time during 2016. The results shall be reported as "PCB Total Dry Wt". Either congener-specific analysis or Aroclor analysis shall be used to determine the PCB concentration. The permittee may determine whether Aroclor or congener specific analysis is performed. Analyses shall be performed in accordance with Table EM in s. NR 219.04, Wis. Adm. Code and the conditions specified in Standard Requirements of this permit. PCB results shall be submitted by January 31, following the specified year of analysis.

4.2.2.6 Lists 1, 2, 3, and 4

List 1 TOTAL SOLIDS AND METALS
See the Monitoring Requirements and Limitations table above for monitoring frequency and limitations for the List 1 parameters
Solids, Total (percent)
Arsenic, mg/kg (dry weight)
Cadmium, mg/kg (dry weight)
Copper, mg/kg (dry weight)
Lead, mg/kg (dry weight)
Mercury, mg/kg (dry weight)
Molybdenum, mg/kg (dry weight)
Nickel, mg/kg (dry weight)
Selenium, mg/kg (dry weight)
Zinc, mg/kg (dry weight)

List 2 NUTRIENTS
See the Monitoring Requirements and Limitations table above for monitoring frequency for the List 2 parameters
Solids, Total (percent)
Nitrogen Total Kjeldahl (percent)
Nitrogen Ammonium (NH ₄ -N) Total (percent)
Phosphorus Total as P (percent)
Phosphorus, Water Extractable (as percent of Total P)
Potassium Total Recoverable (percent)

List 3

PATHOGEN CONTROL FOR CLASS B SLUDGE

The permittee shall implement pathogen control as listed in List 3. The Department shall be notified of the pathogen control utilized and shall be notified when the permittee decides to utilize alternative pathogen control.

The following requirements shall be met prior to land application of sludge.

Parameter	Unit	Limit
Fecal Coliform*	MPN/gTS or CFU/gTS	2,000,000
OR, ONE OF THE FOLLOWING PROCESS OPTIONS		
Aerobic Digestion		Air Drying
Anaerobic Digestion		Composting
Alkaline Stabilization		PSRP Equivalent Process

* The Fecal Coliform limit shall be reported as the geometric mean of 7 discrete samples on a dry weight basis.

List 4

VECTOR ATTRACTION REDUCTION

The permittee shall implement any one of the vector attraction reduction options specified in List 4. The Department shall be notified of the option utilized and shall be notified when the permittee decides to utilize an alternative option.

One of the following shall be satisfied prior to, or at the time of land application as specified in List 4.

Option	Limit	Where/When it Shall be Met
Volatile Solids Reduction	≥38%	Across the process
Specific Oxygen Uptake Rate	≤1.5 mg O ₂ /hr/g TS	On aerobic stabilized sludge
Anaerobic bench-scale test	<17 % VS reduction	On anaerobic digested sludge
Aerobic bench-scale test	<15 % VS reduction	On aerobic digested sludge
Aerobic Process	>14 days, Temp >40°C and Avg. Temp > 45°C	On composted sludge
pH adjustment	>12 S.U. (for 2 hours) and >11.5 (for an additional 22 hours)	During the process
Drying without primary solids	>75 % TS	When applied or bagged
Drying with primary solids	>90 % TS	When applied or bagged
Equivalent Process	Approved by the Department	Varies with process
Injection	-	When applied
Incorporation	-	Within 6 hours of application

4.2.2.7 Daily Land Application Log

Daily Land Application Log		
Discharge Monitoring Requirements and Limitations		
The permittee shall maintain a daily land application log for biosolids land applied each day when land application occurs. The following minimum records must be kept, in addition to all analytical results for the biosolids land applied. The log book records shall form the basis for the annual land application report requirements.		
Parameters	Units	Sample Frequency
DNR Site Number(s)	Number	Daily as used
Outfall number applied	Number	Daily as used
Acres applied	Acres	Daily as used
Amount applied	As appropriate * /day	Daily as used
Application rate per acre	unit */acre	Daily as used
Nitrogen applied per acre	lb/acre	Daily as used
Method of Application	Injection, Incorporation, or surface applied	Daily as used

* gallons, cubic yards, dry US Tons or dry Metric Tons

5 Schedules

5.1 Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus

The permittee shall comply with the WQBELs for Phosphorus as specified. No later than 30 days following each compliance date, the permittee shall notify the Department in writing of its compliance or noncompliance. If a submittal is required, a timely submittal fulfills the notification requirement.

Required Action	Due Date
<p>Operational Evaluation Report: The permittee shall prepare and submit to the Department for approval an operational evaluation report. The report shall include an evaluation of collected effluent data, possible source reduction measures, operational improvements or other minor facility modifications that will optimize reductions in phosphorus discharges from the treatment plant during the period prior to complying with final phosphorus WQBELs and, where possible, enable compliance with final phosphorus WQBELs by 07/01/2018. The report shall provide a plan and schedule for implementation of the measures, improvements, and modifications as soon as possible, but not later than 07/01/2018 and state whether the measures, improvements, and modifications will enable compliance with final phosphorus WQBELs. Regardless of whether they are expected to result in compliance, the permittee shall implement the measures, improvements, and modifications in accordance with the plan and schedule specified in the operational evaluation report.</p> <p>If the operational evaluation report concludes that the facility can achieve final phosphorus WQBELs using the existing treatment system with only source reduction measures, operational improvements, and minor facility modifications, the permittee shall comply with the final phosphorus WQBEL by 07/01/2018 and is not required to comply with the milestones identified below for years 3 through 9 of this compliance schedule ('Preliminary Compliance Alternatives Plan', 'Final Compliance Alternatives Plan', 'Final Plans and Specifications', 'Treatment Plant Upgrade to Meet WQBELs', 'Complete Construction', 'Achieve Compliance').</p> <p>STUDY OF FEASIBLE ALTERNATIVES - If the Operational Evaluation Report concludes that the permittee cannot achieve final phosphorus WQBELs with source reduction measures, operational improvements and other minor facility modifications, the permittee shall initiate a study of feasible alternatives for meeting final phosphorus WQBELs and comply with the remaining required actions of this schedule of compliance. If the Department disagrees with the conclusion of the report, and determines that the permittee can achieve final phosphorus WQBELs using the existing treatment system with only source reduction measures, operational improvements, and minor facility modifications, the Department may reopen and modify the permit to include an implementation schedule for achieving the final phosphorus WQBELs sooner than 07/01/2024.</p>	07/01/2016
<p>Compliance Alternatives, Source Reduction, Improvements and Modifications Status: The permittee shall submit a 'Compliance Alternatives, Source Reduction, Operational Improvements and Minor Facility Modification' status report to the Department. The report shall provide an update on the permittee's: (1) progress implementing source reduction measures, operational improvements, and minor facility modifications to optimize reductions in phosphorus discharges and, to the extent that such measures, improvements, and modifications will not enable compliance with the WQBELs, (2) status evaluating feasible alternatives for meeting phosphorus WQBELs.</p>	07/01/2017
<p>Preliminary Compliance Alternatives Plan: The permittee shall submit a preliminary compliance alternatives plan to the Department.</p> <p>If the plan concludes upgrading of the permittee's wastewater treatment facility is necessary to achieve final phosphorus WQBELs, the submittal shall include a preliminary engineering design report.</p>	07/01/2018

<p>If the plan concludes Adaptive Management will be used, the submittal shall include a completed Watershed Adaptive Management Request Form 3200-139 without the Adaptive Management Plan.</p> <p>If water quality trading will be undertaken, the plan must state that trading will be pursued.</p>	
<p>Final Compliance Alternatives Plan: The permittee shall submit a final compliance alternatives plan to the Department.</p> <p>If the plan concludes upgrading of the permittee's wastewater treatment is necessary to meet final phosphorus WQBELs, the submittal shall include a final engineering design report addressing the treatment plant upgrades, and a facility plan if required pursuant to ch. NR 110, Wis. Adm. Code.</p> <p>If the plan concludes Adaptive Management will be implemented, the submittal shall include a completed Watershed Adaptive Management Request Form 3200-139 and an engineering report addressing any treatment system upgrades necessary to meet interim limits pursuant to s. NR 217.18, Wis. Adm. Code.</p> <p>If the plan concludes water quality trading will be used, the submittal shall identify potential trading partners.</p> <p>Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.</p>	07/01/2019
<p>Progress Report on Plans & Specifications: Submit progress report regarding the progress of preparing final plans and specifications. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.</p>	07/01/2020
<p>Final Plans and Specifications: Unless the permit has been modified, revoked and reissued, or reissued to include Adaptive Management or Water Quality Trading measures or to include a revised schedule based on factors in s. NR 217.17, Wis. Adm. Code, the permittee shall submit final construction plans to the Department for approval pursuant to s. 281.41, Stats., specifying treatment plant upgrades that must be constructed to achieve compliance with final phosphorus WQBELs, and a schedule for completing construction of the upgrades by the complete construction date specified below. (Note: Permit modification, revocation and reissuance, and reissuance are subject to s. 283.53(2), Stats.)</p> <p>Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.</p>	07/01/2021
<p>Treatment Plant Upgrade to Meet WQBELs: The permittee shall initiate construction of the upgrades. The permittee shall obtain approval of the final construction plans and schedule from the Department pursuant to s. 281.41, Stats. Upon approval of the final construction plans and schedule by the Department pursuant to s. 281.41, Stats., the permittee shall construct the treatment plant upgrades in accordance with the approved plans and specifications. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.</p>	11/01/2021
<p>Construction Upgrade Progress Report #1: The permittee shall submit a progress report on construction upgrades. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.</p>	11/01/2022
<p>Construction Upgrade Progress Report #2: The permittee shall submit a progress report on construction upgrades. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.</p>	11/01/2023
<p>Complete Construction: The permittee shall complete construction of wastewater treatment system upgrades. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.</p>	06/01/2024

Achieve Compliance: The permittee shall achieve compliance with final phosphorus WQBELs. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.	07/01/2024
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5.2 Mercury Pollutant Minimization Program

The permittee shall implement or continue to implement a pollutant minimization program as defined in s. NR 106.145(7), Wis. Adm. Code.

Required Action	Due Date
Submit Annual Status Reports: The permittee shall submit to the Department an annual status report on the progress of the PMP as required by s. NR 106.145(7), Wis. Adm. Code. Submittal of the first annual status report is required by the Date Due. Note: If the permittee wishes to apply for an alternative mercury effluent limitation, that application is due with the application for permit reissuance by 6 months prior to permit expiration. The permittee should submit or reference the PMP plan as updated by the Annual Status Report or more recent developments as part of that application.	04/01/2016
Submit Annual Status Report: Submit second annual status report.	04/01/2017
Submit Annual Status Report: Submit third annual status report.	04/01/2018
Submit Annual Status Report: Submit fourth annual status report.	04/01/2019
Submit Annual Status Report #5: Submit fifth annual status report.	04/01/2020

5.3 Sludge Management Plan Update

This compliance schedule requires the permittee to achieve compliance by the specified date

Required Action	Due Date
Sludge Management Plan Submittal: : The permittee shall submit to the Department an updated sludge management plan which shall include plans to provide additional sludge storage capacity.	12/31/2015

5.4 Copper Compliance Schedule

This compliance schedule requires the permittee to achieve compliance by the specified date

Required Action	Due Date
Report on Effluent Discharges: Submit a report on effluent discharges of copper with conclusions regarding compliance.	10/01/2015
Action Plan: Submit an action plan for complying with the effluent limitation. If construction is required, include plans and specifications with the submittal.	12/31/2015
Initiate Actions: Initiate actions identified in the plan.	07/01/2016
Complete Actions: Complete actions necessary to achieve compliance with the effluent limitations. Copper limits become effective 07/01/2018.	06/30/2018

6 Standard Requirements

NR 205, Wisconsin Administrative Code: The conditions in ss. NR 205.07(1) and NR 205.07(2), Wis. Adm. Code, are included by reference in this permit. The permittee shall comply with all of these requirements. Some of these requirements are outlined in the Standard Requirements section of this permit. Requirements not specifically outlined in the Standard Requirement section of this permit can be found in ss. NR 205.07(1) and NR 205.07(2).

6.1 Reporting and Monitoring Requirements

6.1.1 Monitoring Results

Monitoring results obtained during the previous month shall be summarized and reported on a Department Wastewater Discharge Monitoring Report. The report may require reporting of any or all of the information specified below under 'Recording of Results'. This report is to be returned to the Department no later than the date indicated on the form. A copy of the Wastewater Discharge Monitoring Report Form or an electronic file of the report shall be retained by the permittee.

Monitoring results shall be reported on an electronic discharge monitoring report (eDMR). The eDMR shall be certified electronically by a principal executive officer, a ranking elected official or other duly authorized representative. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

If the permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included on the Wastewater Discharge Monitoring Report.

The permittee shall comply with all limits for each parameter regardless of monitoring frequency. For example, monthly, weekly, and/or daily limits shall be met even with monthly monitoring. The permittee may monitor more frequently than required for any parameter.

6.1.2 Sampling and Testing Procedures

Sampling and laboratory testing procedures shall be performed in accordance with Chapters NR 218 and NR 219, Wis. Adm. Code and shall be performed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code. Groundwater sample collection and analysis shall be performed in accordance with ch. NR 140, Wis. Adm. Code. The analytical methodologies used shall enable the laboratory to quantitate all substances for which monitoring is required at levels below the effluent limitation. If the required level cannot be met by any of the methods available in NR 219, Wis. Adm. Code, then the method with the lowest limit of detection shall be selected. Additional test procedures may be specified in this permit.

6.1.3 Pretreatment Sampling Requirements

Sampling for pretreatment parameters (cadmium, chromium, copper, lead, nickel, zinc, and mercury) shall be done during a day each month when industrial discharges are occurring at normal to maximum levels. The sampling of the influent and effluent for these parameters shall be coordinated. All 24 hour composite samples shall be flow proportional.

6.1.4 Recording of Results

The permittee shall maintain records which provide the following information for each effluent measurement or sample taken:

- the date, exact place, method and time of sampling or measurements;
- the individual who performed the sampling or measurements;
- the date the analysis was performed;
- the individual who performed the analysis;
- the analytical techniques or methods used; and
- the results of the analysis.

6.1.5 Reporting of Monitoring Results

The permittee shall use the following conventions when reporting effluent monitoring results:

- Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1 mg/L, report the pollutant concentration as < 0.1 mg/L.
- Pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.
- For purposes of calculating NR 101 fees, the 2 mg/l lower reporting limits for BOD₅ and Total Suspended Solids shall be considered to be limits of quantitation
- For the purposes of reporting a calculated result, average or a mass discharge value, the permittee may substitute a 0 (zero) for any pollutant concentration that is less than the limit of detection. However, if the effluent limitation is less than the limit of detection, the department may substitute a value other than zero for results less than the limit of detection, after considering the number of monitoring results that are greater than the limit of detection and if warranted when applying appropriate statistical techniques.

6.1.6 Compliance Maintenance Annual Reports

Compliance Maintenance Annual Reports (CMAR) shall be completed using information obtained over each calendar year regarding the wastewater conveyance and treatment system. The CMAR shall be submitted by the permittee in accordance with ch. NR 208, Wis. Adm. Code, by June 30, each year on an electronic report form provided by the Department.

In the case of a publicly owned treatment works, a resolution shall be passed by the governing body and submitted as part of the CMAR, verifying its review of the report and providing responses as required. Private owners of wastewater treatment works are not required to pass a resolution; but they must provide an Owner Statement and responses as required, as part of the CMAR submittal.

A separate CMAR certification document, that is not part of the electronic report form, shall be mailed to the Department at the time of electronic submittal of the CMAR. The CMAR certification shall be signed and submitted by an authorized representative of the permittee. The certification shall be submitted by mail. The certification shall verify the electronic report is complete, accurate and contains information from the owner's treatment works.

6.1.7 Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 3 years from the date of the sample, measurement, report or application. All pertinent sludge information, including permit application information and other documents specified in this permit or s. NR 204.06(9), Wis. Adm. Code shall be retained for a minimum of 5 years.

6.1.8 Other Information

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 correct information to the Department.

6.2 System Operating Requirements

6.2.1 Noncompliance Reporting

Sanitary sewer overflows and sewage treatment facility overflows shall be reported according to the 'Sanitary Sewer Overflows and Sewage Treatment Facility Overflows' section of this permit.

The permittee shall report the following types of noncompliance by a telephone call to the Department's regional office within 24 hours after becoming aware of the noncompliance:

- any noncompliance which may endanger health or the environment;
- any violation of an effluent limitation resulting from a bypass;
- any violation of an effluent limitation resulting from an upset; and
- any violation of a maximum discharge limitation for any of the pollutants listed by the Department in the permit, either for effluent or sludge.

A written report describing the noncompliance shall also be submitted to the Department's regional office within 5 days after the permittee becomes aware of the noncompliance. On a case-by-case basis, the Department may waive the requirement for submittal of a written report within 5 days and instruct the permittee to submit the written report with the next regularly scheduled monitoring report. In either case, the written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; the steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance; and if the noncompliance has not been corrected, the length of time it is expected to continue.

A scheduled bypass approved by the Department under the 'Scheduled Bypass' section of this permit shall not be subject to the reporting required under this section.

NOTE: Section 292.11(2)(a), Wisconsin Statutes, requires any person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance to notify the Department of Natural Resources immediately of any discharge not authorized by the permit. The discharge of a hazardous substance that is not authorized by this permit or that violates this permit may be a hazardous substance spill. To report a hazardous substance spill, call DNR's 24-hour HOTLINE at 1-800-943-0003.

6.2.2 Flow Meters

Flow meters shall be calibrated annually, as per s. NR 218.06, Wis. Adm. Code.

6.2.3 Raw Grit and Screenings

All raw grit and screenings shall be disposed of at a properly licensed solid waste facility or picked up by a licensed waste hauler. If the facility or hauler are located in Wisconsin, then they shall be licensed under chs. NR 500-536, Wis. Adm. Code.

6.2.4 Sludge Management

All sludge management activities shall be conducted in compliance with ch. NR 204 "Domestic Sewage Sludge Management", Wis. Adm. Code.

6.2.5 Prohibited Wastes

Under no circumstances may the introduction of wastes prohibited by s. NR 211.10, Wis. Adm. Code, be allowed into the waste treatment system. Prohibited wastes include those:

- which create a fire or explosion hazard in the treatment work;
- which will cause corrosive structural damage to the treatment work;
- solid or viscous substances in amounts which cause obstructions to the flow in sewers or interference with the proper operation of the treatment work;
- wastewaters at a flow rate or pollutant loading which are excessive over relatively short time periods so as to cause a loss of treatment efficiency; and
- changes in discharge volume or composition from contributing industries which overload the treatment works or cause a loss of treatment efficiency.

6.2.6 Bypass

This condition applies only to bypassing at a sewage treatment facility that is not a scheduled bypass, approved blending as a specific condition of this permit, a sewage treatment facility overflow or a controlled diversion as provided in the sections titled 'Scheduled Bypass', 'Blending' (if approved), 'SSO's and Sewage Treatment Facility Overflows' and 'Controlled Diversions' of this permit. Any other bypass at the sewage treatment facility is prohibited and the Department may take enforcement action against a permittee for such occurrences under s. 283.89, Wis. Stats. The Department may approve a bypass if the permittee demonstrates all the following conditions apply:

- The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities or adequate back-up equipment, retention of untreated wastes, reduction of inflow and infiltration, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance. When evaluating feasibility of alternatives, the department may consider factors such as technical achievability, costs and affordability of implementation and risks to public health, the environment and, where the permittee is a municipality, the welfare of the community served; and
- The bypass was reported in accordance with the Noncompliance Reporting section of this permit.

6.2.7 Scheduled Bypass

Whenever the permittee anticipates the need to bypass for purposes of efficient operations and maintenance and the permittee may not meet the conditions for controlled diversions in the 'Controlled Diversions' section of this permit, the permittee shall obtain prior written approval from the Department for the scheduled bypass. A permittee's written request for Department approval of a scheduled bypass shall demonstrate that the conditions for bypassing specified in the above section titled 'Bypass' are met and include the proposed date and reason for the bypass, estimated volume and duration of the bypass, alternatives to bypassing and measures to mitigate environmental harm caused by the bypass. The department may require the permittee to provide public notification for a scheduled bypass if it is determined there is significant public interest in the proposed action and may recommend mitigation measures to minimize the impact of such bypass.

6.2.8 Controlled Diversions

Controlled diversions are allowed only when necessary for essential maintenance to assure efficient operation. Sewage treatment facilities that have multiple treatment units to treat variable or seasonal loading conditions may shut down redundant treatment units when necessary for efficient operation. The following requirements shall be met during controlled diversions:

- Effluent from the sewage treatment facility shall meet the effluent limitations established in the permit. Wastewater that is diverted around a treatment unit or treatment process during a controlled diversion

shall be recombined with wastewater that is not diverted prior to the effluent sampling location and prior to effluent discharge;

- A controlled diversion does not include blending as defined in s. NR 210.03(2e), Wis. Adm. Code, and as may only be approved under s. NR 210.12. A controlled diversion may not occur during periods of excessive flow or other abnormal wastewater characteristics;
- A controlled diversion may not result in a wastewater treatment facility overflow; and
- All instances of controlled diversions shall be documented in sewage treatment facility records and such records shall be available to the department on request.

6.2.9 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit. The wastewater treatment facility shall be under the direct supervision of a state certified operator as required in s. NR 108.06(2), Wis. Adm. Code. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training as required in ch. NR 114, Wis. Adm. Code, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

6.3 Sewage Collection Systems

6.3.1 Sanitary Sewage Overflows and Sewage Treatment Facility Overflows

6.3.1.1 Overflows Prohibited

Any overflow or discharge of wastewater from the sewage collection system or at the sewage treatment facility, other than from permitted outfalls, is prohibited. The permittee shall provide information on whether any of the following conditions existed when an overflow occurred:

- The sanitary sewer overflow or sewage treatment facility overflow was unavoidable to prevent loss of life, personal injury or severe property damage;
- There were no feasible alternatives to the sanitary sewer overflow or sewage treatment facility overflow such as the use of auxiliary treatment facilities or adequate back-up equipment, retention of untreated wastes, reduction of inflow and infiltration, or preventative maintenance activities;
- The sanitary sewer overflow or the sewage treatment facility overflow was caused by unusual or severe weather related conditions such as large or successive precipitation events, snowmelt, saturated soil conditions, or severe weather occurring in the area served by the sewage collection system or sewage treatment facility; and
- The sanitary sewer overflow or the sewage treatment facility overflow was unintentional, temporary, and caused by an accident or other factors beyond the reasonable control of the permittee.

6.3.1.2 Permittee Response to Overflows

Whenever a sanitary sewer overflow or sewage treatment facility overflow occurs, the permittee shall take all feasible steps to control or limit the volume of untreated or partially treated wastewater discharged, and terminate the discharge as soon as practicable. Remedial actions, including those in NR 210.21 (3), Wis. Adm. Code, shall be implemented consistent with an emergency response plan developed under the CMOM program.

6.3.1.3 Permittee Reporting

Permittees shall report all sanitary sewer overflows and sewage treatment overflows as follows:

- The permittee shall notify the department by telephone, fax or email as soon as practicable, but no later than 24 hours from the time the permittee becomes aware of the overflow;

- The permittee shall, no later than five days from the time the permittee becomes aware of the overflow, provide to the department the information identified in this paragraph using department form number 3400-184. If an overflow lasts for more than five days, an initial report shall be submitted within 5 days as required in this paragraph and an updated report submitted following cessation of the overflow. At a minimum, the following information shall be included in the report:
 - The date and location of the overflow;
 - The surface water to which the discharge occurred, if any;
 - The duration of the overflow and an estimate of the volume of the overflow;
 - A description of the sewer system or treatment facility component from which the discharge occurred such as manhole, lift station, constructed overflow pipe, or crack or other opening in a pipe;
 - The estimated date and time when the overflow began and stopped or will be stopped;
 - The cause or suspected cause of the overflow including, if appropriate, precipitation, runoff conditions, areas of flooding, soil moisture and other relevant information;
 - Steps taken or planned to reduce, eliminate and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;
 - A description of the actual or potential for human exposure and contact with the wastewater from the overflow;
 - Steps taken or planned to mitigate the impacts of the overflow and a schedule of major milestones for those steps;
 - To the extent known at the time of reporting, the number and location of building backups caused by excessive flow or other hydraulic constraints in the sewage collection system that occurred concurrently with the sanitary sewer overflow and that were within the same area of the sewage collection system as the sanitary sewer overflow; and
 - The reason the overflow occurred or explanation of other contributing circumstances that resulted in the overflow event. This includes any information available including whether the overflow was unavoidable to prevent loss of life, personal injury, or severe property damage and whether there were feasible alternatives to the overflow.

NOTE: A copy of form 3400-184 for reporting sanitary sewer overflows and sewage treatment facility overflows may be obtained from the department or accessed on the department's web site at <http://dnr.wi.gov/topic/wastewater/SSOreport.html>. As indicated on the form, additional information may be submitted to supplement the information required by the form.

- The permittee shall identify each specific location and each day on which a sanitary sewer overflow or sewage treatment facility overflow occurs as a discrete sanitary sewer overflow or sewage treatment facility overflow occurrence. An occurrence may be more than one day if the circumstances causing the sanitary sewer overflow or sewage treatment facility overflow results in a discharge duration of greater than 24 hours. If there is a stop and restart of the overflow at the same location within 24 hours and the overflow is caused by the same circumstance, it may be reported as one occurrence. Sanitary sewer overflow occurrences at a specific location that are separated by more than 24 hours shall be reported as separate occurrences; and
- A permittee that is required to submit wastewater discharge monitoring reports under NR 205.07 (1) (r) shall also report all sanitary sewer overflows and sewage treatment facility overflows on that report.

6.3.1.4 Public Notification

The permittee shall notify the public of any sanitary sewer and sewage treatment facility overflows consistent with its emergency response plan required under the CMOM (Capacity, Management, Operation and Maintenance) section of this permit and s. NR 210.23 (4) (f), Wis. Adm. Code. Such public notification shall occur promptly following any overflow event using the most effective and efficient communications available in the community. At minimum, a

daily newspaper of general circulation in the county(s) and municipality whose waters may be affected by the overflow shall be notified by written or electronic communication.

6.3.2 Capacity, Management, Operation and Maintenance (CMOM) Program

- The permittee shall by August 1, 2016 submit to the Department verification that a CMOM program for the sewage collection system has been developed which is consistent with the requirements of NR 210.23, Wis. Adm. Code.
- The permittee shall develop and maintain written documentation of the CMOM program components, and shall verify each year with the submittal of the Compliance Maintenance Annual Report required under the 'Compliance Maintenance Annual Reports' section of this permit that the CMOM program documentation is current and meets the requirements in NR 210.23, Wis. Adm. Code.
- The permittee shall implement a CMOM program consistent with the permittee's program documentation and with the requirements of NR 210.23, Wis. Adm. Code.
- The permittee shall annually conduct a self-audit of activities to ensure the CMOM program is being implemented as necessary to meet the requirements contained in the CMOM program documentation.
- The permittee shall make available CMOM program documentation, a record of implementation activities and the results of the self-audit to the Department on request.

6.3.3 Sewer Cleaning Debris and Materials

All debris and material removed from cleaning sanitary sewers shall be managed to prevent nuisances, run-off, ground infiltration or prohibited discharges.

- Debris and solid waste shall be dewatered, dried and then disposed of at a licensed solid waste facility.
- Liquid waste from the cleaning and dewatering operations shall be collected and disposed of at a permitted wastewater treatment facility.
- Combination waste including liquid waste along with debris and solid waste may be disposed of at a licensed solid waste facility or wastewater treatment facility willing to accept the waste.

6.4 Surface Water Requirements

6.4.1 Permittee-Determined Limit of Quantitation Incorporated into this Permit

For pollutants with water quality-based effluent limits below the Limit of Quantitation (LOQ) in this permit, the LOQ calculated by the permittee and reported on the Discharge Monitoring Reports (DMRs) is incorporated by reference into this permit. The LOQ shall be reported on the DMRs, shall be the lowest quantifiable level practicable, and shall be no greater than the minimum level (ML) specified in or approved under 40 CFR Part 136 for the pollutant at the time this permit was issued, unless this permit specifies a higher LOQ.

6.4.2 Appropriate Formulas for Effluent Calculations

The permittee shall use the following formulas for calculating effluent results to determine compliance with average concentration limits and mass limits and total load limits:

Weekly/Monthly/Six-Month/Annual Average Concentration = the sum of all daily results for that week/month/six-month/year, divided by the number of results during that time period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

Weekly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the week.

Monthly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the month.

Six-Month Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the six-month period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

Annual Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the entire year.

Total Monthly Discharge: = monthly average concentration (mg/L) x total flow for the month (MG/month) x 8.34.

Total Annual Discharge: = sum of total monthly discharges for the calendar year.

12-Month Rolling Sum of Total Monthly Discharge: = the sum of the most recent 12 consecutive months of Total Monthly Discharges.

6.4.3 Effluent Temperature Requirements

Weekly Average Temperature – The permittee shall use the following formula for calculating effluent results to determine compliance with the weekly average temperature limit (as applicable): Weekly Average Temperature = the sum of all daily maximum results for that week divided by the number of daily maximum results during that time period.

Cold Shock Standard – Water temperatures of the discharge shall be controlled in a manner as to protect fish and aquatic life uses from the deleterious effects of cold shock. 'Cold Shock' means exposure of aquatic organisms to a rapid decrease in temperature and a sustained exposure to low temperature that induces abnormal behavior or physiological performance and may lead to death.

Rate of Temperature Change Standard – Temperature of a water of the state or discharge to a water of the state may not be artificially raised or lowered at such a rate that it causes detrimental health or reproductive effects to fish or aquatic life of the water of the state.

6.4.4 Visible Foam or Floating Solids

There shall be no discharge of floating solids or visible foam in other than trace amounts.

6.4.5 Surface Water Uses and Criteria

In accordance with NR 102.04, Wis. Adm. Code, surface water uses and criteria are established to govern water management decisions. Practices attributable to municipal, industrial, commercial, domestic, agricultural, land development or other activities shall be controlled so that all surface waters including the mixing zone meet the following conditions at all times and under all flow and water level conditions:

- a) Substances that will cause objectionable deposits on the shore or in the bed of a body of water, shall not be present in such amounts as to interfere with public rights in waters of the state.
- b) Floating or submerged debris, oil, scum or other material shall not be present in such amounts as to interfere with public rights in waters of the state.
- c) Materials producing color, odor, taste or unsightliness shall not be present in such amounts as to interfere with public rights in waters of the state.
- d) Substances in concentrations or in combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant or aquatic life.

6.4.6 Percent Removal

During any 30 consecutive days, the average effluent concentrations of BOD₅ and of total suspended solids shall not exceed 15% of the average influent concentrations, respectively. This requirement does not apply to removal of total

suspended solids if the permittee operates a lagoon system and has received a variance for suspended solids granted under NR 210.07(2), Wis. Adm. Code.

6.4.7 Fecal Coliforms

The limit for fecal coliforms shall be expressed as a monthly geometric mean.

6.4.8 Seasonal Disinfection

Disinfection shall be provided from May 1 through September 30 of each year. Monitoring requirements and the limitation for fecal coliforms apply only during the period in which disinfection is required. Whenever chlorine is used for disinfection or other uses, the limitations and monitoring requirements for residual chlorine shall apply. A dechlorination process shall be in operation whenever chlorine is used.

6.4.9 Whole Effluent Toxicity (WET) Monitoring Requirements

In order to determine the potential impact of the discharge on aquatic organisms, static-renewal toxicity tests shall be performed on the effluent in accordance with the procedures specified in the *"State of Wisconsin Aquatic Life Toxicity Testing Methods Manual, 2nd Edition"* (PUB-WT-797, November 2004) as required by NR 219.04, Table A, Wis. Adm. Code). All of the WET tests required in this permit, including any required retests, shall be conducted on the *Ceriodaphnia dubia* and fathead minnow species. Receiving water samples shall not be collected from any point in contact with the permittee's mixing zone and every attempt shall be made to avoid contact with any other discharge's mixing zone.

6.4.10 Whole Effluent Toxicity (WET) Identification and Reduction

This standard requirement applies only to acute or chronic WET monitoring that is not accompanied by a WET limit. Within 60 days of a retest which showed positive results, the permittee shall submit a written report to the Biomonitoring Coordinator, Bureau of Water Quality, 101 S. Webster St., PO Box 7921, Madison, WI 53707-7921, which details the following:

- A description of actions the permittee has taken or will take to remove toxicity and to prevent the recurrence of toxicity;
- A description of toxicity reduction evaluation (TRE) investigations that have been or will be done to identify potential sources of toxicity, including some or all of the following actions:
 - (a) Evaluate the performance of the treatment system to identify deficiencies contributing to effluent toxicity (e.g., operational problems, chemical additives, incomplete treatment)
 - (b) Identify the compound(s) causing toxicity
 - (c) Trace the compound(s) causing toxicity to their sources (e.g., industrial, commercial, domestic)
 - (d) Evaluate, select, and implement methods or technologies to control effluent toxicity (e.g., in-plant or pretreatment controls, source reduction or removal)
- Where corrective actions including a TRE have not been completed, an expeditious schedule under which corrective actions will be implemented;
- If no actions have been taken, the reason for not taking action.

The permittee may also request approval from the Department to postpone additional retests in order to investigate the source(s) of toxicity. Postponed retests must be completed after toxicity is believed to have been removed.

6.5 Pretreatment Program Requirements

The permittee is required to operate an industrial pretreatment program as described in the program initially approved by the Department of Natural Resources including any subsequent program modifications approved by the Department, and including commitments to program implementation activities provided in the permittee's annual pretreatment program report, and that complies with the requirements set forth in 40 CFR Part 403 and ch. NR 211, Wis. Adm. Code. To ensure that the program is operated in accordance with these requirements, the following general conditions and requirements are hereby established:

6.5.1 Inventories

The permittee shall implement methods to maintain a current inventory of the general character and volume of wastewater that industrial users discharge to the treatment works and shall provide an updated industrial user listing annually and report any changes in the listing to the Department by March 31 of each year as part of the annual pretreatment program report required herein.

6.5.2 Regulation of Industrial Users

6.5.2.1 Limitations for Industrial Users:

The permittee shall develop, maintain, enforce and revise as necessary local limits to implement the general and specific prohibitions of the state and federal General Pretreatment Regulations.

6.5.2.2 Control Documents for Industrial Users (IUs)

The permittee shall control the discharge from each significant industrial user through individual discharge permits as required by s. NR 211.235, Wis. Adm. Code and in accordance with the approved pretreatment program procedures and the permittee's sewer use ordinance. The discharge permits shall be modified in a timely manner during the stated term of the discharge permits according to the sewer use ordinance as conditions warrant. The discharge permits shall include at a minimum the elements found in s. NR 211.235(1), Wis. Adm. Code and references to the approved pretreatment program procedures and the sewer use ordinance.

6.5.2.3 Review of Industrial User Reports, Inspections and Compliance Monitoring

The permittee shall require the submission of, receive, and review self-monitoring reports and other notices from industrial users in accordance with the approved pretreatment program procedures. The permittee shall randomly sample and analyze industrial user discharges and conduct surveillance activities to determine independent of information supplied by the industrial users, whether the industrial users are in compliance with pretreatment standards and requirements. The inspections and monitoring shall also be conducted to maintain accurate knowledge of local industrial processes, including changes in the discharge, pretreatment equipment operation, spill prevention control plans, slug control plans, and implementation of solvent management plans.

The permittee shall inspect and sample the discharge from each significant industrial user as specified in the permittee's approved pretreatment program or as specified in NR 211.235(3). The permittee shall evaluate whether industrial users identified as significant need a slug control plan according to the requirements of NR 211.235(4). If a slug control plan is needed, the plan shall contain at a minimum the elements specified in s. NR 211.235(4)(b), Wis. Adm. Code.

6.5.2.4 Enforcement and Industrial User Compliance Evaluation & Violation Reports

The permittee shall enforce the industrial pretreatment requirements including the industrial user discharge limitations of the permittee's sewer use ordinance. The permittee shall investigate instances of noncompliance by collecting and analyzing samples and collecting other information with sufficient care to produce evidence admissible in enforcement proceedings or in judicial actions. Investigation and response to instances of noncompliance shall be in accordance with the permittee's sewer use ordinance and approved Enforcement Response Plan.

The permittee shall make a semiannual report on forms provided or approved by the Department. The semiannual report shall include an analysis of industrial user significant noncompliance (i.e. the Industrial User Compliance Evaluation, also known as the SNC Analysis) as outlined in s. NR 211.23(1)(j), Wis. Adm. Code, and a summary of

the permittee's response to all industrial noncompliance (i.e. the Industrial User Violation Report). The Industrial User Compliance Evaluation Report shall include monitoring results received from industrial users pursuant to s. NR 211.15(1)-(5), Wis. Adm. Code. The Industrial User Violation Report shall include copies of all notices of noncompliance, notices of violation and other enforcement correspondence sent by the permittee to industrial users, together with the industrial user's response. The Industrial User Compliance Evaluation and Violation Reports for the period January through June shall be provided to the Department by September 30 of each year and for the period July through December shall be provided to the Department by March 31 of the succeeding year, unless alternate submittal dates are approved.

6.5.2.5 Publication of Violations

The permittee shall publish a list of industrial users that have significantly violated the municipal sewer use ordinance during the calendar year, in the largest daily newspaper in the area by March 31 of the following year pursuant to s. NR 211.23(1)(j), Wis. Adm. Code. A copy of the newspaper publication shall be provided as part of the annual pretreatment report specified herein.

6.5.2.6 Multijurisdictional Agreements

The permittee shall establish agreements with all contributing jurisdictions as necessary to ensure compliance with pretreatment standards and requirements by all industrial users discharging to the permittee's wastewater treatment system. Any such agreement shall identify who will be responsible for maintaining the industrial user inventory, issuance of industrial user control mechanisms, inspections and sampling, pretreatment program implementation, and enforcement.

6.5.3 Annual Pretreatment Program Report

The permittee shall evaluate the pretreatment program, and submit the Pretreatment Program Report to the Department on forms provided or approved by the Department by March 31 annually, unless an alternate submittal date is approved. The report shall include a brief summary of the work performed during the preceding calendar year, including the numbers of discharge permits issued and in effect, pollution prevention activities, number of inspections and monitoring surveys conducted, budget and personnel assigned to the program, a general discussion of program progress in meeting the objectives of the permittee's pretreatment program together with summary comments and recommendations.

6.5.4 Pretreatment Program Modifications

- **Future Modifications:** The permittee shall within one year of any revisions to federal or state General Pretreatment Regulations submit an application to the Department in duplicate to modify and update its approved pretreatment program to incorporate such regulatory changes as applicable to the permittee. Additionally, the Department or the permittee may request an application for program modification at any time where necessary to improve program effectiveness based on program experience to date.
- **Modifications Subject to Department Approval:** The permittee shall submit all proposed pretreatment program modifications to the Department for determination of significance and opportunity for comment in accordance with the requirements and conditions of s. NR 211.27, Wis. Adm. Code. Any substantial proposed program modification shall be subject to Department public noticing and formal approval prior to implementation. A substantial program modification includes, but is not limited to, changes in enabling legal authority to administer and enforce pretreatment conditions and requirements; significant changes in program administrative or operational procedures; significant reductions in monitoring frequencies; significant reductions in program resources including personnel commitments, equipment, and funding levels; changes (including any relaxation) in the local limitations for substances enforced and applied to users of the sewerage treatment works; changes in treatment works sludge disposal or management practices which impact the pretreatment program; or program modifications which increase pollutant loadings to the treatment works. The Department shall use the procedures outlined in s. NR

211.30, Wis. Adm. Code for review and approval/denial of proposed pretreatment program modifications. The permittee shall comply with local public participation requirements when implementing the pretreatment program.

6.5.5 Program Resources

The permittee shall have sufficient resources and qualified personnel to carry out the pretreatment program responsibilities as listed in ss. NR 211.22 and NR 211.23, Wis. Adm. Code.

6.6 Land Application Requirements

6.6.1 Sludge Management Program Standards And Requirements Based Upon Federally Promulgated Regulations

In the event that new federal sludge standards or regulations are promulgated, the permittee shall comply with the new sludge requirements by the dates established in the regulations, if required by federal law, even if the permit has not yet been modified to incorporate the new federal regulations.

6.6.2 General Sludge Management Information

The General Sludge Management Form 3400-48 shall be completed and submitted prior to any significant sludge management changes.

6.6.3 Sludge Samples

All sludge samples shall be collected at a point and in a manner which will yield sample results which are representative of the sludge being tested, and collected at the time which is appropriate for the specific test.

6.6.4 Land Application Characteristic Report

Each report shall consist of a Characteristic Form 3400-49 and Lab Report. The Characteristic Report Form 3400-49 shall be submitted electronically by January 31 following each year of analysis.

Following submittal of the electronic Characteristic Report Form 3400-49, this form shall be certified electronically via the 'eReport Certify' page by a principal executive officer, ranking elected official or duly authorized representative. The 'eReport Certify' page certifies that the electronic report is true, accurate and complete. The Lab Report must be sent directly to the facility's DNR sludge representative or basin engineer unless approval for not submitting the lab reports has been given.

The permittee shall use the following convention when reporting sludge monitoring results: Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 1.0 mg/kg, report the pollutant concentration as < 1.0 mg/kg .

All results shall be reported on a dry weight basis.

6.6.5 Calculation of Water Extractable Phosphorus

When sludge analysis for Water Extractable Phosphorus is required by this permit, the permittee shall use the following formula to calculate and report Water Extractable Phosphorus:

Water Extractable Phosphorus (% of Total P) =

$$[\text{Water Extractable Phosphorus (mg/kg, dry wt)} \div \text{Total Phosphorus (mg/kg, dry wt)}] \times 100$$

6.6.6 Monitoring and Calculating PCB Concentrations in Sludge

When sludge analysis for "PCB, Total Dry Wt" is required by this permit, the PCB concentration in the sludge shall be determined as follows.

Either congener-specific analysis or Aroclor analysis shall be used to determine the PCB concentration. The permittee may determine whether Aroclor or congener specific analysis is performed. Analyses shall be performed in accordance with the following provisions and Table EM in s. NR 219.04, Wis. Adm. Code.

- EPA Method 1668 may be used to test for all PCB congeners. If this method is employed, all PCB congeners shall be delineated. Non-detects shall be treated as zero. The values that are between the limit of detection and the limit of quantitation shall be used when calculating the total value of all congeners. All results shall be added together and the total PCB concentration by dry weight reported. **Note:** It is recognized that a number of the congeners will co-elute with others, so there will not be 209 results to sum.
- EPA Method 8082A shall be used for PCB-Aroclor analysis and may be used for congener specific analysis as well. If congener specific analysis is performed using Method 8082A, the list of congeners tested shall include at least congener numbers 5, 18, 31, 44, 52, 66, 87, 101, 110, 138, 141, 151, 153, 170, 180, 183, 187, and 206 plus any other additional congeners which might be reasonably expected to occur in the particular sample. For either type of analysis, the sample shall be extracted using the Soxhlet extraction (EPA Method 3540C) (or the Soxhlet Dean-Stark modification) or the pressurized fluid extraction (EPA Method 3545A). If Aroclor analysis is performed using Method 8082A, clean up steps of the extract shall be performed as necessary to remove interference and to achieve as close to a limit of detection of 0.11 mg/kg as possible. Reporting protocol, consistent with s. NR 106.07(6)(e), should be as follows: If all Aroclors are less than the LOD, then the Total PCB Dry Wt result should be reported as less than the highest LOD. If a single Aroclor is detected then that is what should be reported for the Total PCB result. If multiple Aroclors are detected, they should be summed and reported as Total PCBs. If congener specific analysis is done using Method 8082A, clean up steps of the extract shall be performed as necessary to remove interference and to achieve as close to a limit of detection of 0.003 mg/kg as possible for each congener. If the aforementioned limits of detection cannot be achieved after using the appropriate clean up techniques, a reporting limit that is achievable for the Aroclors or each congener for the sample shall be determined. This reporting limit shall be reported and qualified indicating the presence of an interference. The lab conducting the analysis shall perform as many of the following methods as necessary to remove interference:

3620C – Florisil

3640A - Gel Permeation

3630C - Silica Gel

3611B - Alumina

3660B - Sulfur Clean Up (using copper shot instead of powder)

3665A - Sulfuric Acid Clean Up

6.6.7 Annual Land Application Report

Land Application Report Form 3400-55 shall be submitted electronically by January 31, each year whether or not non-exceptional quality sludge is land applied. Non-exceptional quality sludge is defined in s. NR 204.07(4), Wis. Adm. Code. Following submittal of the electronic Annual Land Application Report Form 3400-55, this form shall be certified electronically via the 'eReport Certify' page by a principal executive officer, ranking elected official or duly authorized representative. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

6.6.8 Other Methods of Disposal or Distribution Report

The permittee shall submit electronically the Other Methods of Disposal or Distribution Report Form 3400-52 by January 31, each year whether or not sludge is hauled, landfilled, incinerated, or exceptional quality sludge is distributed or land applied. Following submittal of the electronic Report Form 3400-52, this form shall be certified electronically via the 'eReport Certify' page by a principal executive officer, ranking elected official or duly authorized representative. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

6.6.9 Approval to Land Apply

Bulk non-exceptional quality sludge as defined in s. NR 204.07(4), Wis. Adm. Code, may not be applied to land without a written approval letter or Form 3400-122 from the Department unless the Permittee has obtained permission from the Department to self approve sites in accordance with s. NR 204.06 (6), Wis. Adm. Code. Analysis of sludge characteristics is required prior to land application. Application on frozen or snow covered ground is restricted to the extent specified in s. NR 204.07(3) (1), Wis. Adm. Code.

6.6.10 Soil Analysis Requirements

Each site requested for approval for land application must have the soil tested prior to use. Each approved site used for land application must subsequently be soil tested such that there is at least one valid soil test in the four years prior to land application. All soil sampling and submittal of information to the testing laboratory shall be done in accordance with UW Extension Bulletin A-2100. The testing shall be done by the UW Soils Lab in Madison or Marshfield, WI or at a lab approved by UW. The test results including the crop recommendations shall be submitted to the DNR contact listed for this permit, as they are available. Application rates shall be determined based on the crop nitrogen recommendations and with consideration for other sources of nitrogen applied to the site.

6.6.11 Land Application Site Evaluation

For non-exceptional quality sludge, as defined in s. NR 204.07(4), Wis. Adm. Code, a Land Application Site Request Form 3400-053 shall be submitted to the Department for the proposed land application site. The Department will evaluate the proposed site for acceptability and will either approve or deny use of the proposed site. The permittee may obtain permission to approve their own sites in accordance with s. NR 204.06(6), Wis. Adm. Code.

6.6.12 Class B Sludge: Fecal Coliform Limitation

Compliance with the fecal coliform limitation for Class B sludge shall be demonstrated by calculating the geometric mean of at least 7 separate samples. (Note that a Total Solids analysis must be done on each sample). The geometric mean shall be less than 2,000,000 MPN or CFU/g TS. Calculation of the geometric mean can be done using one of the following 2 methods.

Method 1:

$$\text{Geometric Mean} = (X_1 \times X_2 \times X_3 \dots \times X_n)^{1/n}$$

Where X = Coliform Density value of the sludge sample, and where n = number of samples (at least 7)

Method 2:

$$\text{Geometric Mean} = \text{antilog}[(X_1 + X_2 + X_3 \dots + X_n) \div n]$$

Where X = \log_{10} of Coliform Density value of the sludge sample, and where n = number of samples (at least 7)

Example for Method 2

Sample Number	Coliform Density of Sludge Sample	\log_{10}
1	6.0×10^5	5.78
2	4.2×10^6	6.62
3	1.6×10^6	6.20
4	9.0×10^5	5.95
5	4.0×10^5	5.60
6	1.0×10^6	6.00
7	5.1×10^5	5.71

The geometric mean for the seven samples is determined by averaging the \log_{10} values of the coliform density and taking the antilog of that value.

$$(5.78 + 6.62 + 6.20 + 5.95 + 5.60 + 6.00 + 5.71) \div 7 = 5.98$$

$$\text{The antilog of } 5.98 = 9.5 \times 10^5$$

6.6.13 Vector Control: Volatile Solids Reduction

The mass of volatile solids in the sludge shall be reduced by a minimum of 38% between the time the sludge enters the digestion process and the time it either exits the digester or a storage facility. For calculation of volatile solids reduction, the permittee shall use the Van Kleeck equation or one of the other methods described in "Determination of Volatile Solids Reduction in Digestion" by J.B. Farrell, which is Appendix C of EPA's *Control of Pathogens in Municipal Wastewater Sludge* (EPA/625/R-92/013). The Van Kleeck equation is:

$$VSR\% = \frac{VS_{IN} - VS_{OUT}}{VS_{IN} - (VS_{OUT} \times VS_{IN})} \times 100$$

Where: VS_{IN} = Volatile Solids in Feed Sludge (g VS/g TS)

VS_{OUT} = Volatile Solids in Final Sludge (g VS/g TS)

VSR% = Volatile Solids Reduction, (Percent)

6.6.14 Class B Sludge - Vector Control: Injection

No significant amount of the sewage sludge shall be present on the land surface within one hour after the sludge is injected.

7 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Operational Evaluation Report	July 1, 2016	18
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Compliance Alternatives, Source Reduction, Improvements and Modifications Status	July 1, 2017	18
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Preliminary Compliance Alternatives Plan	July 1, 2018	18
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Final Compliance Alternatives Plan	July 1, 2019	19
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Progress Report on Plans & Specifications	July 1, 2020	19
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Final Plans and Specifications	July 1, 2021	19
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Treatment Plant Upgrade to Meet WQBELs	November 1, 2021	19
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Construction Upgrade Progress Report #1	November 1, 2022	19
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Construction Upgrade Progress Report #2	November 1, 2023	19
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Complete Construction	June 1, 2024	20
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Achieve Compliance	July 1, 2024	20
Mercury Pollutant Minimization Program -Submit Annual Status Reports	April 1, 2016	20
Mercury Pollutant Minimization Program -Submit Annual Status Report	April 1, 2017	20
Mercury Pollutant Minimization Program -Submit Annual Status Report	April 1, 2018	20
Mercury Pollutant Minimization Program -Submit Annual Status Report	April 1, 2019	20
Mercury Pollutant Minimization Program -Submit Annual Status Report #5	April 1, 2020	20
Sludge Management Plan Update -Sludge Management Plan Submittal	December 31, 2015	20
Copper Compliance Schedule -Report on Effluent Discharges	October 1, 2015	20
Copper Compliance Schedule -Action Plan	December 31, 2015	20
Copper Compliance Schedule -Initiate Actions	July 1, 2016	20
Copper Compliance Schedule -Complete Actions	June 30, 2018	20
Compliance Maintenance Annual Reports (CMAR)	by June 30, each year	22

Industrial User Compliance Evaluation and Violation Reports	Semiannual	31
Pretreatment Program Report	Annually	31
General Sludge Management Form 3400-48	prior to any significant sludge management changes	32
Characteristic Form 3400-49 and Lab Report	by January 31 following each year of analysis	32
Land Application Report Form 3400-55	by January 31, each year whether or not non-exceptional quality sludge is land applied	33
Report Form 3400-52	by January 31, each year whether or not sludge is hauled, landfilled, incinerated, or exceptional quality sludge is distributed or land applied	33
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	21

Report forms shall be submitted electronically in accordance with the reporting requirements herein. Any facility plans or plans and specifications for municipal, industrial, industrial pretreatment and non industrial wastewater systems shall be submitted to the Bureau of Water Quality, P.O. Box 7921, Madison, WI 53707-7921. All other submittals required by this permit shall be submitted to:

West Central Region - LaCrosse, 3550 Mormon Coulee Road, La Crosse, WI 54601

LA CROSSE SANITARY SEWER UTILITY

LA CROSSE, WISCONSIN

PROPOSED SEWER “USER CHARGE” RATES

EXECUTIVE REPORT

AUGUST 14, 2014

*John A. Mayer
Utility Rate Consultant
Milwaukee, Wisconsin*

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Thursday, August 14, 2014

Mr. Mark E. Johnson
Utilities Director
CITY OF LA CROSSE
400 La Crosse Street
La Crosse, WI 54601

Dear Mr. Johnson:

Accompanying this letter is our report titled **Proposed Sewer "User Charge" Rates**. This report contains our "Findings & Recommendations" for the sanitary sewer utility. Essentially the proposed increase adjusts sanitary sewer revenues for 5 years of normal and ordinary inflation as measured by the Consumer Price Index (CPI-U).

This increase is a conservative increase, and if actual capital improvements follow the level as projected by the utility in their 5-Year CIP, the utility will be pretty much out of cash by the end of 2019. This increase will provide an estimated \$1,117,000 for capital projects. This dollar amount will decrease over time as labor and non-labor costs increase. This \$1,117,000 is approximately equal to the historical actual 8-year inflation adjusted construction average. However, the utility's 5-year CIP is projecting an average capital project expenditure of \$1,500,000 per year. Given the following: a) the inherent uncertainty of 5-year construction projections, b) the desire to limit rate increases to the absolute minimum necessary, c) the level of existing cash reserves, and d) the ability to increase rates again in 2 or 3 years if capital needs dictate; a more measured and conservative increase was considered a reasonable approach.

A separate document has been provided to you containing this **Executive Report** plus approximately 105 pages of "schedules-only" which show detailed financial information, cost-of-service and rate design calculations, customer usage, revenue reconciliation and development of billable units, and numerous other schedules relating to the cost-of-service allocations and rate design for the sewer utility. These schedules provide all of the supporting information for our rate recommendation and are included to fulfill DNR sewer "user charge" review requirements should that need arise in the near future.

As always it was a pleasure working with you, Jared, and Tina. I thank you all for your prompt response to my many questions and requests for data.

Respectfully submitted,

/s/ John A. Mayer

John A. Mayer
Utility Rate Consultant

JAM/cb3

LA CROSSE SANITARY SEWER UTILITY

LA CROSSE, WISCONSIN

RESULTS OF CONTRACTUALLY REQUIRED 5-YEAR RATE REVIEW & PROPOSED SEWER "USER CHARGE" RATES

AUGUST 14, 2014

EXECUTIVE REPORT

Preface

The purpose of periodic sewer rate reviews is to perform a comprehensive evaluation of the financial condition of the Utility, considering historical data and, as much as possible, anticipated changes that can affect the financial health of the Utility. In addition, the La Crosse Sanitary Sewer Utility is required by contract with the City of Onalaska to conduct a rate re-determination "...not less than once in five years."

The current rate review considers not only operating and capital expenses over the past 13 years, but also incorporates expected changes to operating expenses as well as anticipated capital projects proposed through the City's Capital Improvement Program. Recommendations for rate changes apply to the full rate structure, including:

- Fixed and sewer use charges for City of La Crosse customers;
- Wholesale rates charged to other entities that current receive sewer and wastewater treatment service from La Crosse. Currently, the City provides these services to:
 - The City of Onalaska;
 - The City of La Crescent, MN;
 - The Town of Campbell Utility District;
 - The Town of Shelby Sanitary District #1; and
 - The Town of Shelby Sanitary District #2.
- High-strength charges for customers discharging higher than domestic strength waste;
- Charges for waste that delivered and discharged at the wastewater plant by waste haulers.

Any changes to rates must be applied to all categories of customers.

Findings & Recommendations

1. The current sewer rates in effect for the City of La Crosse were based on a rate study dated September 2009. That report contained rate recommendations for the years 2010, 2011, and 2012 consisting of 3 approximately equal percentage increases. The recommended rate increase for 2010 was 8.83%. The rates for 2011 and 2012 were never implemented.
2. For the 10 year period from 1/1/2003 through 12/31/2012 (2013 data not yet available) the utility has funded \$12.8 million of construction, of which \$7.1 million was for treatment plant upgrades to the aeration system sludge storage, headworks improvements, SCADA upgrades, UV system replacement, rebuilding primary clarifiers and final clarifiers, and other projects. The Sanitary Sewer Utility (SSU) has accomplished this using existing cash reserves coupled with cash generated through user charge rates. The fact that this construction was done without borrowing is a major factor in explaining why SSU rates in La Crosse (LAX) are one of the lowest, if not the lowest, in the State of Wisconsin.
3. A "financially prudent" level of utility rates suggests that revenues need to be great enough for the utility to pay all operating expenses, pay debt service principal and interest, and have enough cash remaining to pay for "ordinary and typical capital expenditures" for an average year. Ordinary and typical capital projects include such things as replacing sewer mains in conjunction with road rehabilitation, rebuilding lift stations, replacing treatment plant mechanical items that wear out, replacing utility trucks, etc. If the utility needs to spend \$x,xxx,xxx for capital projects each and every year for the foreseeable future, borrowing for that level of expenditure on an annual basis does not make a lot of financial sense.
4. This is why it does not make financial sense. If the utility needed \$1,000,000 each year for "normal capital construction" the utility could raise rates to generate \$1,000,000 to cash finance the construction, or it could borrow the \$1,000,000 and raise rates to only pay for debt service. Each year the utility would have to borrow another \$1,000,000 and raise rates to cover the additional debt service. Each year the total debt service would increase because each year another \$1,000,000 was borrowed. Given a normal level of interest rates (not the artificially low rates set by the current Federal Reserve policy) and a maturity schedule of 14 – 18 years, there is a point of equilibrium when the oldest debt issue is paid off but another new debt issue is added. At that point total debt service is approximately 150% of the original borrowing. Ultimately the utility will have raised rates \$1,500,000 to pay for debt service, basically forever, versus originally raising rates by \$1,000,000 to fund "normal capital construction" with cash.
5. Recent inflation adjusted capital expenditure averages are:

	<u>SSU Asset Addit.</u>	<u>SSU Asset Addit. w/o Major Proj.</u>
10-year:	\$1,440,300	\$430,000
8-year:	\$1,115,900	\$427,000
6-year:	\$ 981,600	\$521,800
4-year:	\$1,011,800	\$630,400
6. As is the case with most water and wastewater utilities in Wisconsin, usage has declined over time even though the number of customers has increased. It seems that this trend has slowed in La Crosse during the last 5-years. From the time of the last rate study in which rates were adjusted in September 2009 until now, residential usage is down 7.4%, however commercial usage is up slightly 0.3%; industrial usage is up 15.0%; public authority usage up 3.3%; and combined total usage up 1.5%. During this same period the overall number of customers increased 0.8%.
7. Periodic rate increases are inevitable when the following three conditions exist: 1) the volume of billable sales decreases each year, 2) labor and non-labor costs increase each year, and 3) every few years the EPA and/or DNR change regulations that require stricter discharge limits

and/or monitoring for some new element now determined to be a concern. More about this later, but the elephant in the closet is called "the coming DNR phosphorus discharge limits for LAX".

8. There is one area in which there is some control. Utilities with the lowest amount of debt are generally the ones with the lowest rates. This is simply basic economics applied to rates. The converse is also true. LAX has roughly 15,900 SSU customers with sewer influent flow of 3,575 MG/yr (million gallons per year). In comparison, Fond du Lac has 15,400 customers with sewer influent flow of 3,046 MG/yr. FDL recently completed a \$59 million new treatment plant. The estimated median LAX residential customer using 1,600 cubic feet (12,000 gallons) per quarter currently pays \$31.74 every 3 months. At FDL's rates that bill would be \$100.06 per quarter. Thirty-seven cents (37¢) of every \$1 of FDL's sewer revenue is needed to pay debt service. Oshkosh also has made some \$37.5 million in treatment plant and collection system improvements in the past 10 year. At Oshkosh's rates the median LAX customer would pay \$80.90 per quarter. Thirty-six point three cents (36.2¢) of every revenue dollar is needed to pay debt service in Oshkosh. As of right now, LAX is totally debt free which is a phenomenal accomplishment, and indeed a major factor in the extraordinary low sanitary sewer rates in LAX.
9. The point to be made is that if a sewer utility like LAX can upgrade its existing treatment plant, maintain compliance with DNR discharge requirements, and consequently avoid building a new treatment plant, it will have the greatest potential to contain sewer rates to the absolutely lowest level possible. If it can perform these upgrades without the need to borrow money, it absolutely will have the lowest rates possible.
10. The SSU has a 5-year "Capital Improvement Projects" (5-Yr. CIP) currently totaling \$7.37 million, \$5.25 million of which have been approved in previous capital budgets. While the SSU could borrow to fund the construction of these projects, recent history suggest that the SSU would rather continue the more financially conservative course of "cash financing" this construction. The major criteria is that the rates generate the dollars needed to cash-finance the projects, should that be the City Council's desire.
11. The 5-Yr. CIP averages \$1,473,000 per year which is approximately the same as the 10-year inflation adjusted construction average in item 5 above. If the desire was to increase cash flow to that level, an increase in rates of 15.74% would be needed. However, capital project schedules frequently tend to "extend" in terms of times. The 8-year inflation adjusted construction average is \$1,115,900. Increasing rates to that level of cash flow would require an overall increase in sewer revenues of 9.86%.
12. ***Given the following: a) the inherent uncertainty of 5-year construction projections, b) the desire to limit rate increases to the absolute minimum necessary, c) the level of existing cash reserves, and d) the ability to increase rates again in 2 or 3 years if capital needs dictate; it is recommended that overall sanitary revenues be increased by approximately 9.80%. (This is slightly lower than the target of 9.86% due to rounding of the volume rate to the nearest 1¢ per 100 cubic feet.)***
13. The CPI-U increase for the 5-year period from June 2009 – June 2014 was 10.50%. The increase in wages measured by the CPI-W for that same period was 11.25%. The increase in construction costs as measured by the Engineering News Record Construction Cost Index (ENR-CCI) was 14.81%. Consequently the recommended increase of 9.80% should be viewed as nothing more than a conservative adjustment for inflationary cost increases.
14. The rates were developed by first projecting a level of operating and maintenance expenses (O&M) for calendar year 2015. Labor costs were estimated by assuming a 2% per year labor increase over actual 2013 levels. Most non-labor costs were estimated by taking the 3-year

inflation adjusted historical average times 102% per year. A 3-year inflation-adjusted average for almost all expenses was used as the base for projections of 2014 and 2015 expenses. The inflation factor for each of the 3-years was calculated by taking the average CPI-U for the 2013 base year divided by the average CPI-U for each year included in the average. The actual expenses for each year times the calculated CPI-U "inflation factor" produces the inflation-adjusted expenses for that year. The mathematical average of those 3 years provides the "3-year inflation adjusted average" level of expense. This averaging process adjusts for year-to-year variations in non-labor expenses that frequently occur. Electric power, natural gas, chemicals, and pension & benefit costs were estimated to increase by 3% over the inflation adjusted average.

15. Accounting rules require the SSU to maintain a balance sheet which shows assets and liabilities. Using the asset list as of 12-31-2012 updated with several items from 2013, a new DNR mandated "Equipment Replacement Fund" (ERF) list was developed. Based on that list, the annual accrual to ERF for 2015 should be \$399,380.
16. Capital expenditures consist of "normal and ordinary" new equipment capital outlays of \$126,000 (which is the 12-year inflation adjusted actual new equipment capital outlay). A capital projects/reserve amount \$718,042 which together with the annual accrual to ERF brings the total cash for to \$1,117,422 which is the targeted 8-year inflation adjusted average actual construction by the SSU.
17. The sum of #14, #15, and #16 above comprise the **Revenue Requirement** or total amount of cash required to be generated by sewer "user charge" rates. Comparing projected revenues to the revenue requirement indicates the level that sewer rates need to be adjusted.
18. A comprehensive cost-of-service and rate design was performed to determine the actual recommended rates that would generate the targeted increase. The rate design portion of the study results in sewer "user charge" rates for domestic sewage customers, non-domestic high-strength sewage customers, and trucked-in sewage waste. The user charge rates were developed using methodology consistent with both EPA and DNR definitions of an approvable "user charge" system which is one that results in rates that are fair, equitable, and which collect for costs in proportion the each user's contribution to the total wastewater loading of the treatment works. These rates were developed with the intent of satisfying in-depth reviews by either the DNR or PSCW. These rates hold open LAX's options to pursue Federal or State grants or low interest lows should that be desired.
19. For ***residential*** customers, wastewater discharge in LAX is estimated using actual water meter readings for the 2 winter quarters (actual months for those 2 winter quarters vary due to meter reading cycles), and using the ***lower of*** "actual usage" or the "average of the Q4 and Q1" for the 2nd and 3rd quarters. This most likely underestimates the actual discharge into the sanitary sewer since during the summer children are home from school, college students return to live at home for the summer, people do more laundry, take more showers, entertain more guests, etc. Also people who take extended winter vacations have an unusually low "winter average" usage. **Examining actual billed volumes of water vs. sewer for the years 2011, 2012, and 2013, somewhere between 45% - 55% of summer water usage IS NOT billed as sewer usage.** That seems like an extraordinary large percentage. While it is reasonable to assume that some portion of the increase in water usage during the summer quarters versus the "winter average" is for watering lawns and gardens; it is also reasonable to assume that a significant portion of the increase is due to an actual increase in wastewater discharged into the sanitary sewer system. To better estimate actual usage during Q2 and Q3 it is recommended that LAX change the formula to the ***lower of*** "actual usage" or 130% of the winter average of Q4 and Q1.

20. The "elephant in the closet" referred to previously is the coming DNR mandate to reduce phosphorus discharge limits from the treatment plant. The timing and cost to meet these reduced phosphorus limits are, as yet, very much of an "educated engineering guess". At the moment phosphorus reduction could result in a capital expenditure anywhere from \$10 million to \$60 million. That amount is not possible to "cash finance" and will require borrowing to finance the needed construction. Hopefully LAX would be able to secure a low interest loan from the State's "Clean Water Fund" (CWF), but none the less such a massive amount of borrowing would translate to an "ADDITIONAL INCREASE" in the 14% to 86% range. That is why is so important to cash finance the construction indicated in the 5-year CIP. Limiting borrowing to only what is needed for the required phosphorus reduction will keep sanitary sewer rates as low as possible.

Equipment Replacement Fund

As a condition for any potential future grant funding (or low interest loans) for the construction of treatment plants and/or other sewerage facilities, the DNR would require the establishment of an "Equipment Replacement Fund" or ERF. Each year the utility is required to set aside money in a separate fund to provide for the replacement of equipment whose service life is shorter than the expected service life of the wastewater treatment plant. Generally speaking that means that equipment with a service life of 20 years or less should be included in the ERF. Annual operating, maintenance, and replacement costs are referred to as OM&R costs. These costs must be recovered from current users in order to have a DNR approvable user charge system. In order to preserve the option of obtaining a "low interest loan" in the future, the decision was made in 1990 to establish an equipment replacement fund.

During past rate studies concerns have been raised that the balance in the ERF fund is too large. The DNR has issued guidelines for the determination of the "Minimum Required ERF Balance". These guidelines can be found on the internet at the following web address: <http://dnr.wi.gov/aid/documents/eif/guide/replace.html>. There are two accepted methods for determining the minimum ERF balance: 1) the annual accrual for each line item piece of equipment times the number of years that piece of equipment has been in-service, and 2) a balance equal to a percentage of mechanical equipment to be replaced. Under the 1st method the calculated "Minimum Required ERF Balance" balance should be \$3,990,335. Under the 2nd method the minimum balance should be \$1,457,784. The actual ERF balance as of 12/31/2013 was \$2,208,686 so under Method 1 the ERF is under-funded by \$1,781,650 but under Method 2 it is over-funded by \$750,902. Under the proposed CIP construction coupled with the recommended increase the ERF balance will decrease to \$671,000. This should be considered a temporary condition and restoring the minimum ERF balance of about \$1.5 million calculated under Method 2 should be considered a goal.

Level of Existing Non-Replacement Fund Balances

A 2nd concern that has been raised in the past is that the level of existing cash reserves (exclusive of the ERF) is too large. The utility has been able to fund all of its capital improvements during the past 10 years from cash reserves without the need to resort to borrowing. The ability to fund capital projects from cash on hand without borrowing is the key element to keeping sewer rates as low as possible. One needs only to look at Schedule 3, Page 1 to see that the City's sewer rates are extraordinarily low.

A utility's "cash balance" (excluding cash in the "equipment replacement fund") can be viewed as having two components: 1) an "operating reserve fund" or "rate stabilization" fund which can be used to handle year-to-year variations in revenues, annual increases in operating costs,

and any unforeseen major repairs, and 2) a "capital reserve fund" (or "depreciation reserve fund" if you will) which is used to pay for capital items without the need to borrow.

Logically utilities need a minimum of working capital equal to their billing cycle or 3 months which would translate to about \$1,500,000. On the high side, 4½ months of revenues would seem more than sufficient which would be \$2,200,000. Therefore an "operating reserve fund" between \$1.5 and \$2.2 million would be a reasonable target range.

Most utilities *do not* have a funded depreciation reserve as such. Utilities typically accumulate cash over time by having revenues in excess of expenses that may or may not be the result of including "depreciation" as a line item in the rate setting process. The cash in the utility's bank account not identified as an "operating reserve fund" can be considered a "capital reserve fund", and typically is used for the purchase and/or construction of capital assets. There is no "right" or "wrong" level of cash to be held in a "capital reserve fund". Common sense would suggest that accumulating vast amounts of cash for no definitive future construction project might be inappropriate. However if "big ticket items" are in the foreseeable future and it is desired by the municipality to fund such projects wholly or partly from revenues versus borrowing, then the only question becomes one of making sure that monies are collected in a fair and equitable manner.

The argument often raised against cash financing large capital expenditures is that of timing. Some feel that the benefit received from a particular piece of equipment is best matched by bonding since this matches the "cost" of the item to the service life of that same item. The contra argument is that a customer should pay for a service based on the cost to replace that service, hence replacement or "marginal cost pricing". Unless the utility is accumulating cash for a specific capital project or projects, a reasonable accumulation of cash in the "capital reserve fund" equal to 3 or 4 years of depreciation is suggested. Using Public Service Commission of Wisconsin (PSCW) guideline depreciation rates, that would translate to \$3.7 to \$5.0 million

Consequently non-ERF cash reserves ranging from \$1.5 million to \$7.2 million would be "reasonable". ***The current non-ERF balance is \$3.1 million is on the low side of the range.*** The utility has proposed **\$7,366,000** worth of capital improvement projects for 2015 – 2019 that are desired to be funded without borrowing. Utilities that can consistently avoid borrowing and can fund ongoing periodic construction from cash reserves always end up to be the utilities with the lowest rates. If these projects are cash-financed, the non-ERF cash reserves will be reduced to an estimated \$401,000 level by the end of 2014. This is an uncomfortably low level, however it was considered acceptable in order to limit the increases to the absolutely smallest possible, but still be able to cash-finance the needed construction.

Conclusion

The recommended rates shown on Schedule 1 are projected to continue to cover operating costs and also permit the utility to cash-finance the \$7.37 million of construction as shown on Schedule LAX-1. The rate increase is a "bare bones" level of increase, and if the 5-year CIP materializes as estimated it will reduce cash balances by over \$4 million. ***If combined unrestricted and ERF cash balances decrease under \$2.5 million the SSU needs to review rates once again and likely implement another increase before the typical 5-year review mark.***

Attached are several schedules showing the current rates and recommended rates, comparisons with sewer rates in other communities, and a graph showing La Crosse compared to the rates in other university communities. The bound report consists of this **Executive Report** plus additional sections containing schedules-only which show detailed financial and cost study work-papers that support the recommended rate changes.

ESTIMATE 5-YEAR CAPITAL PROJECT COSTS

<u>CURRENT PROJECTS & EQUIPMENT BUDGETED FOR 2015</u>		<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
1	CONVERT SCADA TO RADIO					
2	REPLACE LIGHTING-PLANT 1	\$160,000				
3	INSTALL SEWER LINER - 24" MAIN FROM LAX RIVER TO STATE ST	35,000				
4	PLC REPLACEMENT & INTEGRATOR SERVICES	135,000	\$693,600	\$80,200	\$330,000	0
5	NEW SANITARY SEWER ON 22ND ST-MARKET TO WINNEBAGO	432,000	\$1,049,400	\$1,049,400	\$1,049,400	\$1,049,400
6	NEW SANITARY SEWER ON 22ND ST-WINNEBAGO TO MISSISSIPPI	18,700				
7	NEW SANITARY SEWER ON 22ND ST-MISSISSIPPI TO JACKSON	30,400				
8	SANITARY SEWER MODIFICATIONS - BNSF R.O.W.	34,300				
9	EQ ITEMS - LAB SPEC, HOTTSY & SALT SPREADER	100,000				
10	EQ ITEM - SEWER MAINT TRUCK (S-11)	19,250				
11	EQ ITEM - PICKUP TRUCK (D-22)	30,000				
		<u>20,800</u>				
		\$1,015,450				

ESTIMATED AMOUNTS FOR CAPITAL PROJECTS-NEXT 5 YEARS

CURRENT PROJECTS & EQUIPMENT BUDGETED FOR 2016

1	REPLACE CONTROLS AT CAUSEWAY SANITARY LIFT STATION	\$25,000
2	INSTALL SEWER LINER-30" MAIN FROM LAX RIVER TO STATE ST	136,000
3	NEW SANITARY SEWER ON 13TH ST FROM FERRY TO MARKET	35,100
4	SANITARY SEWER & REHAB PROJECTS	330,000
5	EQ ITEM - FLATBED TRUCK (D-21)	36,000
6	EQ ITEM - FLATBED TRUCK (D-35)	38,000
7	EQ ITEM - POTABLE GENERATOR	90,000
8	EQ ITEM - CHAIN HOIST	<u>3,500</u>
		\$693,600

CURRENT PROJECTS & EQUIPMENT BUDGETED FOR 2017

1	EQ ITEM - (4) LAPTOP CPMPUTERS	\$7,200
2	EQ ITEM - TRUCK (TRP-54)	19,000
3	EQ ITEM - VAN (TVB - 01)	37,000
4	EQ ITEM - VAN (VAN -10)	<u>17,000</u>
		\$80,200

CURRENT PROJECTS & EQUIPMENT BUDGETED FOR 2018

1	SANITARY SEWER & REHAB PROJECTS	\$330,000
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PROJECTS APPROVED IN PREVIOUS CAPITAL BUDGETS

	2011 - 2012	2011 - 2012	2011 - 2012	2011 - 2013	2011 - 2013	2011 - 2013	2012 - 2014	2014 - 2015	2014 - 2015
1	INSPECT/REHAB LARGE COLLECTION SYSTEM GATES	\$240,000							
2	DIGESTER/HEATING SYSTEMS REHAB - DIGESTER HEATING	1,386,000							
3	DIGESTER/HEATING SYSTEMS REHAB - FACILITY-WIDE HEATING SYSTEM	589,000							
4	DIGESTER/HEATING SYSTEMS REHAB - BLDG ROOF & REPAIR DIG. #4 COVER	379,000							
5	DIGESTER/HEATING SYSTEMS REHAB - DIGESTER RECIRCULATION	666,000							
6	DIGESTER/HEATING SYSTEMS REHAB - DIGESTER MIXING	1,323,000							
7	DIGESTER/HEATING SYSTEMS REHAB - F.O.G. & HIGH STR. WASTE RECEIVING	468,000							
8	DIGESTER/HEATING SYSTEMS REHAB - ENERGY RECOVERY	0							
9	DIGESTER/HEATING SYSTEMS REHAB - 2ND WASTE GAS BURNER	196,000							
		\$5,247,000							
		\$1,049,400							
		<u>\$7,366,250</u>							

BUDGETED 3,119,000 - DID NOT INCLUDE; OTHER PROJECTS FIRST

5-YEAR AVERAGE AMOUNT FOR PREVIOUSLY BUDGETED PROJECTS

Total 2015 - 2019 Construction

**LA CROSSE WASTEWATER UTILITY
CONSTRUCTION CASH FLOW ANALYSIS**

			Total Cash	Unrestricted Cash	Equipment Replacement Fund
Cash Balance as of	12/31/2013		\$ 5,281,813	\$ 3,073,128	\$ 2,208,686
Generated thru Rates	2014		\$ 612,135	\$ 247,172	\$ 364,963
Cash Available for Construction			\$ 5,893,949	\$ 3,320,300	\$ 2,573,649
Normal Construction For	2014		(108,200)	\$ -	\$ (108,200)
Major Construction For	2014		(\$863,800)	\$ (863,800)	\$ -
Cash Balance as of	12/31/2014		\$ 4,921,949	\$ 2,456,500	\$ 2,465,449
Generated thru Rates	2015	80%	\$ 970,580	\$ 571,200	\$ 399,380
Cash Available for Construction			\$ 5,892,529	\$ 3,027,700	\$ 2,864,829
Normal Construction For	2015		\$ (126,500)	\$ (18,300)	\$ (108,200)
Major Construction For	2015		(\$2,064,850)	\$ (1,414,850)	\$ (650,000)
Cash Balance as of	12/31/2015		\$ 3,701,179	\$ 1,594,550	\$ 2,106,629
Generated thru Rates	2016		\$ 988,380	\$ 589,000	\$ 399,380
Cash Available for Construction			\$ 4,689,559	\$ 2,183,550	\$ 2,506,009
Normal Construction For	2016		\$ (126,500)	\$ (18,300)	\$ (108,200)
Major Construction For	2016		(\$1,743,000)	\$ (1,093,000)	\$ (650,000)
Cash Balance as of	12/31/2016		\$ 2,820,059	\$ 1,072,250	\$ 1,747,809
Generated thru Rates	2017		\$ 860,880	\$ 461,500	\$ 399,380
Cash Available for Construction			\$ 3,680,939	\$ 1,533,750	\$ 2,147,189
Normal Construction For	2017		\$ (126,500)	\$ (18,300)	\$ (108,200)
Major Construction For	2017		(\$1,129,600)	\$ (479,600)	\$ (650,000)
Cash Balance as of	12/31/2017		\$ 2,424,839	\$ 1,035,850	\$ 1,388,989
Generated thru Rates	2018		\$ 730,780	\$ 331,400	\$ 399,380
Cash Available for Construction			\$ 3,155,619	\$ 1,367,250	\$ 1,788,369
Normal Construction For	2018		\$ (126,500)	\$ (18,300)	\$ (108,200)
Major Construction For	2018		\$ (1,379,400)	\$ (729,400)	\$ (650,000)
Cash Balance as of	12/31/2018		\$ 1,649,719	\$ 619,550	\$ 1,030,169
Generated thru Rates	2019		\$ 598,080	\$ 198,700	\$ 399,380
Cash Available for Construction			\$ 2,247,799	\$ 818,250	\$ 1,429,549
Normal Construction For	2019		\$ (126,500)	\$ (18,300)	\$ (108,200)
Major Construction For	2019		\$ (1,049,400)	\$ (399,400)	\$ (650,000)
Cash Balance as of	12/31/2019		\$ 1,071,899	\$ 400,550	\$ 671,349
Cumulative Change in Cash Balance			\$ (4,209,915)	\$ (2,672,578)	\$ (1,537,337)
Ordinary Incr. in O&M		\$125,000	/yr	inflated by 2.0%/yr.	
				<u>per year avg.</u>	
Total Major Construction			\$ 7,366,250	\$ 1,473,250	
Total "Normal" Construction			\$ 632,500	\$ 126,500	

PRESENT & PROPOSED "USER CHARGE" RATES

	Present Rate	Proposed Rate
	\$	\$

Domestic Sewage Customers (Category A)

BOD<250 mg/l, TSS<350 mg/l, P<10 mg/l , NH3-N<40 mg/l):

Quarterly Facilities Charge:

Meter Size

Meter Size	Present Rate	Proposed Rate
5/8	\$13.50	\$15.00
3/4	13.50	15.00
1	22.00	24.00
1½	37.00	39.00
2	56.00	60.00
3	100.00	108.00
4	162.00	174.00
6	318.00	342.00
8	506.00	543.00
10	756.00	813.00
12	1,006.00	1,080.00

Volume Charge:

\$ per 100 cubic feet	\$1.14	\$1.26
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Flat Rate for Unmetered Customers

New Quarterly Charge

(Based on 17 CCF/quarter)	\$32.88	\$36.40
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Non-Domestic Sewage Customers

BOD>250 mg/l, TSS>350 mg/l, P>10 mg/l , NH3-N>40 mg/l):

Quarterly Facilities Charge:

Same as Domestic Sewage Customers

Volume Charge:

Same as Domestic Sewage Customers

Surcharge per lb. Over

Domestic Strength Sewage:

B.O.D.	(\$/lb.)	\$0.210	\$0.224
T.S.S.	(\$/lb.)	\$0.223	\$0.211
Phosphorus	(\$/lb.)	\$2.465	\$4.177
NH ₃ -N	(\$/lb.)	\$0.600	\$0.559

WHOLESALE CUSTOMERS

	Contract Expires		Present	Rates per Cost Study
Onalaska	3/28/2017	\$ per million gallons	\$1,488	\$1,631
Tn. of Campbell	12/31/2014	\$ per million gallons	\$1,488	\$1,631
Shelby SD#2	12/31/2014	\$ per million gallons	\$1,488	\$1,631
La Crescent, MN	12/31/2027	\$ per million gallons	\$1,488	\$1,631

TANKER TRUCK HAULERS

Billing Charge (Admin./Testing)	Present	Proposed
	\$11.00	\$11.00

Bill at Category "B" Rates if Tested for Strength, or in appropriate category below:

Volume Charge:

Holding Tank (Low Strength)	BOD / TSS / P / NH3-N < 600 / 1800 / 25 / 50	\$/Kgal	\$5.40	\$5.70
Septic Waste (Medium Strength)	BOD / TSS / P / NH3-N < 1800 / 5500 / 60 / 100	\$/Kgal	\$15.40	\$15.90
Grease Trap (High Strength)	BOD / TSS / P / NH3-N < 7500 / 15000 / 120 / 200	\$/Kgal	\$45.00	\$46.00

PROPOSED RATES - DETAIL

Domestic Sewage Customers

BOD<250 mg/l, TSS<350 mg/l, P<10 mg/l , NH3-N<40 mg/l):

Quarterly Facilities Charge:

<u>Meter Size</u>	<u>Total</u>	<u>OM&R</u>	<u>Capital</u>
5/8	\$15.00	\$8.48	\$6.52
3/4	\$15.00	\$8.48	\$6.52
1	\$24.00	\$14.55	\$9.45
1½	\$39.00	\$24.67	\$14.33
2	\$60.00	\$36.82	\$23.18
3	\$108.00	\$65.16	\$42.84
4	\$174.00	\$105.65	\$68.35
6	\$342.00	\$206.87	\$135.13
8	\$543.00	\$328.33	\$214.67
10	\$813.00	\$490.28	\$322.72
12	\$1,080.00	\$652.23	\$427.77

<u>Volume Charge:</u>	\$ per 100 cubic feet	\$1.26	\$1.21	\$0.05
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Non-Domestic Sewage Customers

BOD>250 mg/l, TSS>350 mg/l, P>10 mg/l , NH3-N>40 mg/l):

Quarterly Facilities Charge:

Same as Domestic Sewage Customers

Volume Charge:

Same as Domestic Sewage Customers

Surcharge per lb. Over

Domestic Strength Sewage:

		<u>Total</u>	<u>OM&R</u>	<u>Capital</u>
B.O.D.	(\$/lb.)	\$0.224	\$0.206	\$0.018
T.S.S.	(\$/lb.)	\$0.211	\$0.190	\$0.021
Phosphorus	(\$/lb.)	\$4.177	\$3.862	\$0.315
NH ₃ -N	(\$/lb.)	\$0.559	\$0.541	\$0.018

SEWER BILL COMPARISON

Qtrly Usage CCF	0.750 INCH METER				1 INCH METER				2 INCH METER			
	Present	Proposed	\$ Chg.	% Chg.	Present	Proposed	\$ Chg.	% Chg.	Present	Proposed	\$ Chg.	% Chg.
0	13.50	15.00	1.50	11.1%								
1	14.64	16.26	1.62	11.1%								
2	15.78	17.52	1.74	11.0%								
3	16.92	18.78	1.86	11.0%								
4	18.06	20.04	1.98	11.0%								
5	19.20	21.30	2.10	10.9%								
6	20.34	22.56	2.22	10.9%								
7	21.48	23.82	2.34	10.9%								
8	22.62	25.08	2.46	10.9%								
9	23.76	26.34	2.58	10.9%								
10	24.90	27.60	2.70	10.8%	33.40	36.60	3.20	9.6%				
11	26.04	28.86	2.82	10.8%	34.54	37.86	3.32	9.6%				
12	27.18	30.12	2.94	10.8%	35.68	39.12	3.44	9.6%				
13	28.32	31.38	3.06	10.8%	36.82	40.38	3.56	9.7%				
14	29.46	32.64	3.18	10.8%	37.96	41.64	3.68	9.7%				
15	30.60	33.90	3.30	10.8%	39.10	42.90	3.80	9.7%				
16	31.74	35.16	3.42	10.8%	40.24	44.16	3.92	9.7%				
17	32.88	36.42	3.54	10.8%	41.38	45.42	4.04	9.8%				
18	34.02	37.68	3.66	10.8%	42.52	46.68	4.16	9.8%				
19	35.16	38.94	3.78	10.8%	43.66	47.94	4.28	9.8%				
20	36.30	40.20	3.90	10.7%	44.80	49.20	4.40	9.8%				
22	38.58	42.72	4.14	10.7%	47.08	51.72	4.64	9.9%				
25	42.00	46.50	4.50	10.7%	50.50	55.50	5.00	9.9%	84.50	91.50	7.00	8.3%
30	47.70	52.80	5.10	10.7%	56.20	61.80	5.60	10.0%	90.20	97.80	7.60	8.4%
35	53.40	59.10	5.70	10.7%	61.90	68.10	6.20	10.0%	95.90	104.10	8.20	8.6%
40	59.10	65.40	6.30	10.7%	67.60	74.40	6.80	10.1%	101.60	110.40	8.80	8.7%
45	64.80	71.70	6.90	10.6%	73.30	80.70	7.40	10.1%	107.30	116.70	9.40	8.8%
50	70.50	78.00	7.50	10.6%	79.00	87.00	8.00	10.1%	113.00	123.00	10.00	8.8%
60	81.90	90.60	8.70	10.6%	90.40	99.60	9.20	10.2%	124.40	135.60	11.20	9.0%
70	93.30	103.20	9.90	10.6%	101.80	112.20	10.40	10.2%	135.80	148.20	12.40	9.1%
80	104.70	115.80	11.10	10.6%	113.20	124.80	11.60	10.2%	147.20	160.80	13.60	9.2%
90	116.10	128.40	12.30	10.6%	124.60	137.40	12.80	10.3%	158.60	173.40	14.80	9.3%
100	127.50	141.00	13.50	10.6%	136.00	150.00	14.00	10.3%	170.00	186.00	16.00	9.4%
150	184.50	204.00	19.50	10.6%	193.00	213.00	20.00	10.4%	227.00	249.00	22.00	9.7%
200	241.50	267.00	25.50	10.6%	250.00	276.00	26.00	10.4%	284.00	312.00	28.00	9.9%
300	355.50	393.00	37.50	10.5%	364.00	402.00	38.00	10.4%	398.00	438.00	40.00	10.1%
400	469.50	519.00	49.50	10.5%	478.00	528.00	50.00	10.5%	512.00	564.00	52.00	10.2%
500	583.50	645.00	61.50	10.5%	592.00	654.00	62.00	10.5%	626.00	690.00	64.00	10.2%
750	868.50	960.00	91.50	10.5%	877.00	969.00	92.00	10.5%	911.00	1,005.00	94.00	10.3%
1000	1,153.50	1,275.00	121.50	10.5%	1,162.00	1,284.00	122.00	10.5%	1,196.00	1,320.00	124.00	10.4%
2000	2,293.50	2,535.00	241.50	10.5%	2,302.00	2,544.00	242.00	10.5%	2,336.00	2,580.00	244.00	10.4%
3000	3,433.50	3,795.00	361.50	10.5%	3,442.00	3,804.00	362.00	10.5%	3,476.00	3,840.00	364.00	10.5%

* Average Residential = 16.2 Units/quarter
 * Typical Residential = 16.0 Units/quarter
 Typical % of Avg. = 98.9%

SEWER BILL COMPARISON - SELECTED CUSTOMERS

Meter Size (in.)	Customer Type	CCF Used	Quarterly Bill @			
			Present	Proposed	\$ Change	% Change
			\$	\$	\$	%
0.625 *	Small Residential	8	22.62	25.08	2.46	10.9%
0.625 *	Typical Residential	16	31.74	35.16	3.42	10.8%
0.750 *	Large Residential	32	49.98	55.32	5.34	10.7%
0.750 *	Small Commercial	62	84.18	93.12	8.94	10.6%
1.000	Typical Commercial	124	163.36	180.24	16.88	10.3%
1.500	Large Commercial	372	461.08	507.72	46.64	10.1%
1.500	Very Large Commercial	500	607.00	669.00	62.00	10.2%
2.000	Industrial	700	854.00	942.00	88.00	10.3%
3.000	P/A - School	400	556.00	612.00	56.00	10.1%

* Note: The PSCW considers 5/8" x 5/8" meters, 5/8" x 3/4" meters, and 3/4" x 3/4" meters to be identical. The recommended SSU rates also uses those definitions.

COMPARISON WITH OTHER SEWER RATES

Municipality:	Source Data	(x)	Quarterly Conn. Chg.	Volume Chg. \$/CCF	Qtrly. Bill @ 16 CCF
Rhineland	Oct-2009	(4)	\$52.00	\$5.89	\$146.31
Tomahawk	Jan-2013	(1)	\$37.00	\$5.54	\$125.68
Platteville	Jan-2013	(1)	\$45.00	\$4.61	\$118.72
Marshfield	Jan-2013	(1)	\$54.50	\$3.78	\$114.94
Park Falls	Jan-2013	(1)	\$42.00	\$4.01	\$106.15
Whitewater	Jan-2013	(1)	\$27.25	\$4.68	\$102.05
Fond du Lac	Jan-2009	(4)	\$37.50	\$3.91	\$100.06
Ashland	Jan-2007	(3)	\$40.50	\$3.72	\$99.98
Durand	Jan-2013	(1)	\$38.75	\$3.63	\$96.79
Tomah	Jan-2013	(1)	\$15.00	\$4.75	\$91.00
Stevens Point	Apr-2010	(4)	\$34.00	\$3.31	\$86.96
Mondovi	Jan-2013	(1)	\$22.00	\$3.93	\$84.95
Oshkosh	Jan-2014	(4)	\$22.50	\$3.65	\$80.90
Black River Falls	Jan-2013	(1)	\$10.00	\$3.94	\$73.07
Prairie du Chien	Jan-2013	(1)	\$30.00	\$2.58	\$71.29
Monroe	Jan-2013	(1)	\$20.00	\$3.18	\$70.86
Kenosha	Jan-2010	(2)	\$7.25	\$3.86	\$69.00
West Salem	Jan-2013	(1)	\$45.00	\$1.38	\$67.14
Portage	Jan-2013	(1)	\$32.75	\$2.14	\$66.98
Beloit	Jan-2013	(1)	\$19.00	\$2.95	\$66.15
Janesville	Jan-2013	(1)	\$35.50	\$1.77	\$63.86
Port Washington	Jan-2013	(1)	\$15.25	\$2.94	\$62.28
Madison	Jan-2013	(1)	\$33.75	\$1.77	\$62.11
Milwaukee	Jul-2014	(4)	\$18.83	\$2.56	\$59.79
Ripon	Jan-2013	(1)	\$17.50	\$2.58	\$58.79
Wausau	Jan-2013	(1)	\$17.00	\$2.59	\$58.41
Onalaska	Jan-2013	(1)	\$15.00	\$2.52	\$55.33
Holmen	Jan-2010	(2)	\$12.50	\$2.60	\$54.15
Eau Claire	Apr-2014	(4)	\$5.31	\$2.97	\$52.83
Sheboygan	Jan-2013	(1)	\$24.25	\$1.54	\$48.90
Chippewa Falls	Jan-2010	(2)	\$13.75	\$2.15	\$48.10
Appleton	Jan-2013	(1)	\$13.50	\$2.04	\$46.17
Sauk City	Jan-2013	(1)	\$15.50	\$1.57	\$40.63
La Crosse	2015 Proposed		\$15.00	\$1.26	\$35.16
La Crosse	Jan-2013		\$13.50	\$1.14	\$31.74
Average without La Crosse			\$26.35	\$3.18	\$77.28

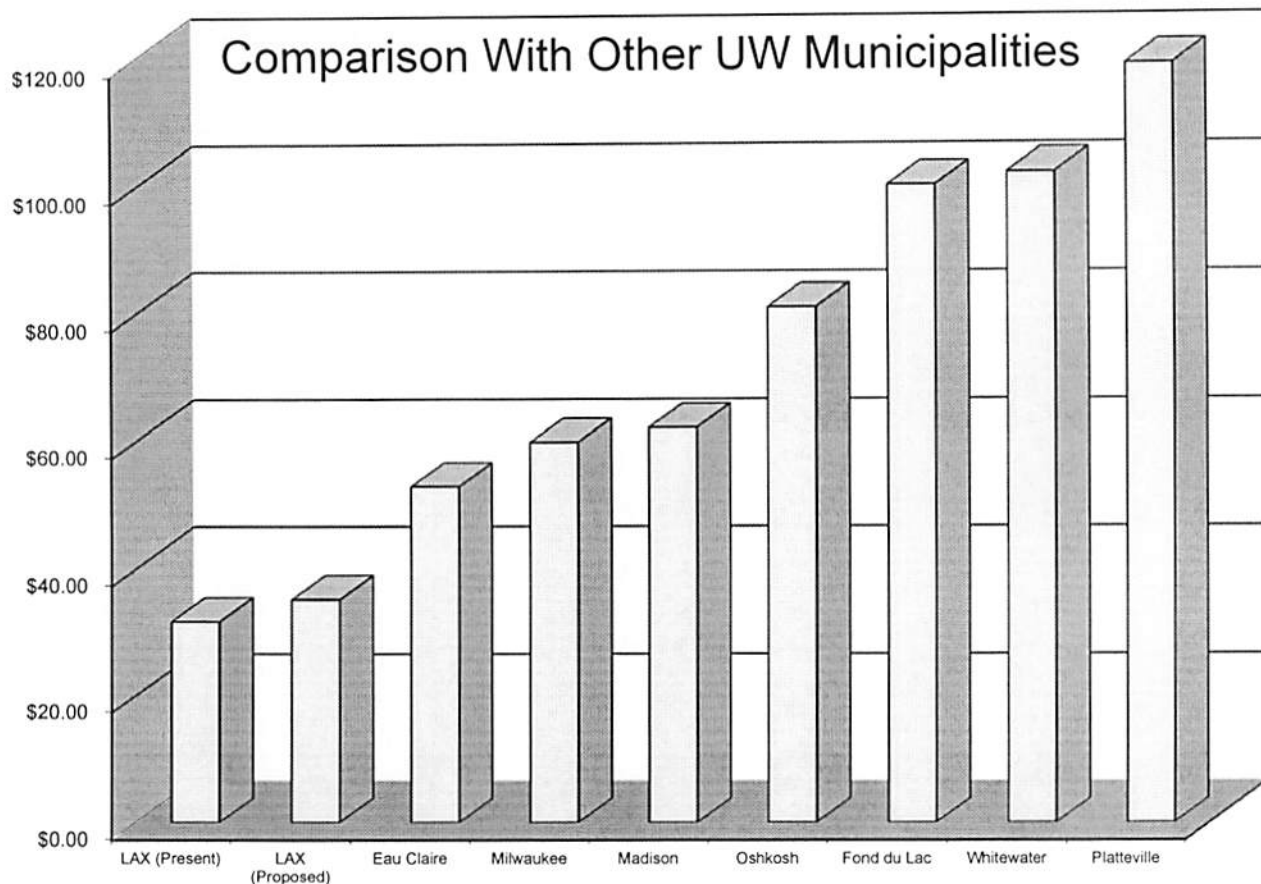
- (1) MSA's "2013 Wisconsin Sewer User Charge Survey Report"
(2) MSA's "2010 Wisconsin Sewer User Charge Survey Report"
(3) MSA's "2007 Wisconsin Sewer User Charge Survey Report"
(4) Updated Rates per Consultant
(5) MMSD plus Local Rate

La Crosse	Jan-2013	\$13.50	\$1.14	\$31.74
La Crosse	Phase 1	\$15.00	\$1.26	\$35.16

Present Rates +/- Average	-48.77%	-64.19%	-58.93%
Proposed Rates +/- Average	-43.08%	-60.42%	-54.51%

MSA's "2013 Wisconsin Sewer User Charge Survey Report"				
Range	Population:	Avg. Qtrly Conn. Chg.	Volume Chg. \$/CCF	Qtrly. Bill @ 16 CCF
A	0 - 500	\$76.76	\$2.12	\$110.72
B	501 - 1,000	\$65.49	\$3.52	\$121.76
C	1,001 - 2,000	\$65.39	\$3.74	\$125.20
D	2,001 - 5,000	\$50.55	\$3.60	\$108.13
E	5,001 - 10,000	\$35.06	\$2.90	\$81.40
F	10,001 - 50,000	\$26.29	\$3.15	\$76.62
G	Over 50,000	\$23.07	\$1.97	\$54.51

Figure 1

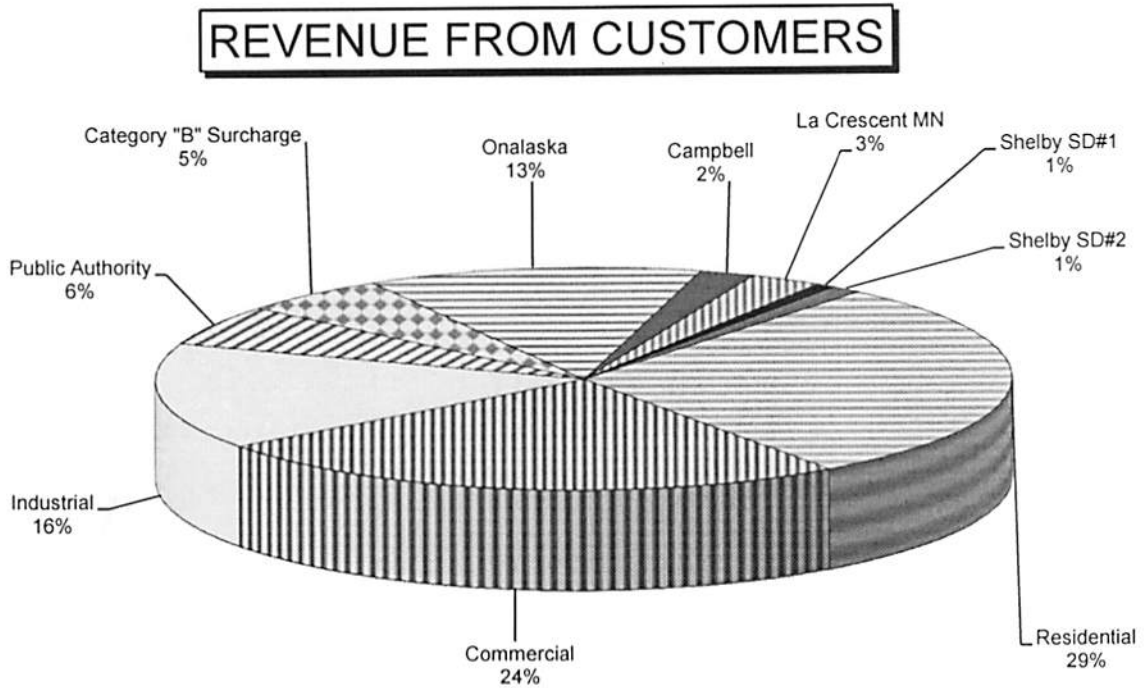


<u>UNIVERSITY CAMPUS COMPARISON:</u>		<u>Average</u>
		<u>Quarterly</u>
		<u>Resid. Bill</u>
LAX (Present)		\$31.74
LAX (Proposed)	2015 Proposed	\$35.16
Eau Claire		\$52.83
Milwaukee		\$59.79
Madison		\$62.11
Oshkosh		\$80.90
Fond du Lac		\$100.06
Whitewater		\$102.05
Platteville		\$118.72
Average - All of the Above		\$76.45

PRESENT & PROPOSED REVENUES

	Revenues Under		Dollar Increase	Percent Increase	
	Present	Recommended			
	Rates	Rates			
	\$	\$	\$	%	
Customer Class:					
Residential	\$1,718,310	\$1,903,167	\$184,857	10.76%	
Commercial	1,447,428	1,596,944	149,515	10.33%	
Industrial	917,747	1,013,438	95,691	10.43%	
Public Authority	342,722	377,950	35,229	10.28%	LAX Incr. 10.23%
Category "B" Surcharge	337,053	358,837	21,785	6.46%	
Onalaska	753,050	825,420	72,370	9.61%	
Campbell	124,543	136,512	11,969	9.61%	
La Crescent MN	160,176	175,569	15,393	9.61%	
Shelby SD#1 [Incr. not calculated]	47,500	47,500	0	0.00%	Whsle Incr. 9.61%
Shelby SD#2 [Incr. based on Whsle Incr.]	68,800	75,385	6,585	9.57%	
Total	\$5,917,329	\$6,510,722	\$593,394	10.03%	
Category "B" Hi-Strength Sewage (Domestic Sewage Portion plus Charge for Excess over Domestic Sewage)	\$1,089,747	\$1,190,764	\$101,018	9.27%	
Other Revenue:					
Non-Sewer "Deduct" Meters	1,000	1,000	0		
Late Payment Charge	46,600	46,600	0		
All Other Revenue	28,600	28,600	0		
Pre-Treatment Revenue	61,723	61,723	0		
Total - All Revenue	\$6,055,251	\$6,648,645	\$593,394	9.80%	
Target Revenue Level		\$6,652,272			
Amount Over / (Under) Target		(\$3,627)			
Percent Over / (Under) Target		-0.05%			

Figure 2



<u>REVENUE UNDER PROPOSED RATES:</u>	<u>\$</u>	<u>% of Total Revenues</u>
Residential	1,903,167	29.2%
Commercial	1,596,944	24.5%
Industrial	1,013,438	15.6%
Public Authority	377,950	5.8%
Category "B" Surcharge	358,837	5.5%
Onalaska	825,420	12.7%
Campbell	136,512	2.1%
La Crescent MN	175,569	2.7%
Shelby SD#1	47,500	0.7%
Shelby SD#2	75,385	1.2%
USER CHARGE REVENUE	\$6,510,722	100.0%

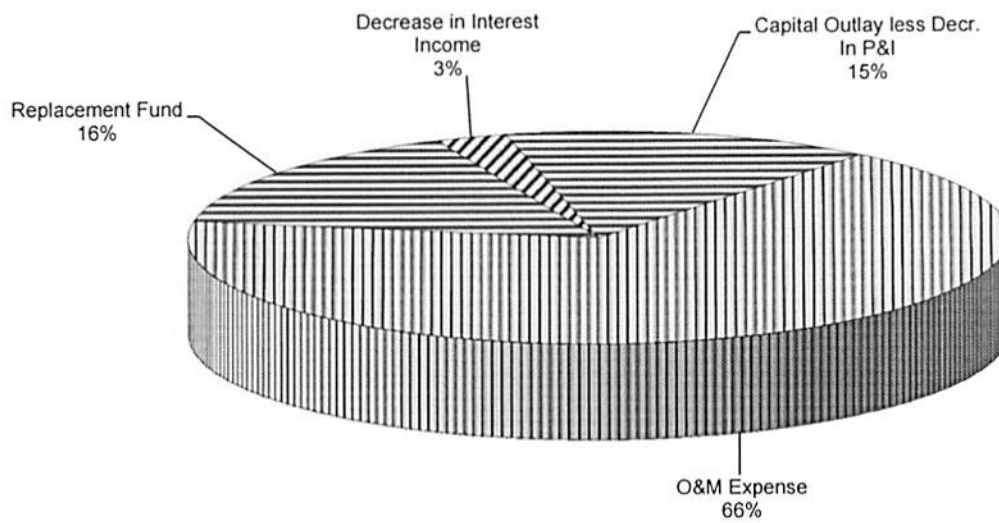
Revenue Over/(Under) Target	(\$3,627)	
Debt Service as % of Revenue	0.00%	Proposed
Debt Service as % of Revenue	0.00%	Present

REASONS FOR THE CHANGE IN SEWER RATES

		Present Revenues & Expenses	Basis For Present Rates	Increase/ (Decrease)	% Increase/ (Decrease)	
		\$	\$	\$	%	
REVENUES:						
Residential	Category "A" (Domestic Sewage)	1,718,310	1,782,305	(63,995)	-3.59%	
Commercial	Category "A" (Domestic Sewage)	1,447,428	1,447,354	74	0.01%	
Industrial	Category "A" (Domestic Sewage)	917,747	806,649	111,098	13.77%	
Public Authority	Category "A" (Domestic Sewage)	342,722	331,196	11,526	3.48%	
Category "B" Surcharge		337,053	214,253	122,800	57.32%	
Tanker Truck Waste		21,600	20,100	1,500	7.46%	
Onalaska		753,050	814,110	(61,060)	-7.50%	
Tn. Of Campbell		124,543	151,998	(27,455)	-18.06%	
La Crescent MN		160,176	169,216	(9,040)	-5.34%	
Shelby SD#1 & 1A		47,500	42,800	4,700	10.98%	
Shelby SD#2		68,800	75,496	(6,696)	-8.87%	
TOTAL SEWER SERVICE		5,938,929	5,855,478	83,451	1.43%	
Misc. Revenues		116,323	86,632	29,691	34.27%	
TOTAL OPERATING REVENUES		6,055,251	5,942,110	113,142	1.90%	
OPERATING EXPENSES:						
Direct Salaries & Wages		1,224,700	1,206,962	17,738	1.47%	Annualized % Chg. 0.25%
Employee Benefits (Pension, Insur., FICA)		866,850	724,645	142,205	19.62%	3.12%
Electric, Gas, Wtr, Swr		723,450	714,750	8,700	1.22%	0.21%
Chemicals		202,800	148,200	54,600	38.84%	5.52%
All Other Costs		2,400,550	2,151,076	249,474	11.60%	1.90%
Total O&M Expense		5,418,350	4,945,634	472,716	9.56%	1.58%
Replacement Fund		399,380	286,580	112,800	39.36%	5.86%
CASH OPERATING EXPENSES		5,817,730	5,232,214	585,516	11.19%	1.84%
CAPITAL COSTS:						
Principal & Interest on Debt		0	175,885	(175,885)	-100.00%	-100.00%
Less: Interest Income / TIF / Spec. Assmnt.		(10,000)	(30,000)	20,000	-66.67%	-17.17%
Capital Outlay - WWTP		95,500	102,200	(6,700)	-6.56%	-1.16%
Capital Outlay - Collection		31,000	11,600	19,400	167.24%	18.36%
Less: Equipment Replacement Fund Withdrawal		0	(59,300)	59,300	-100.00%	-100.00%
Cash Contingency		718,042	509,511	208,531	40.93%	6.06%
TOTAL CAPITAL REQUIREMENTS		834,542	709,896	124,646	17.56%	2.81%
TOTAL OPERATING & CAPITAL EXPENSES		\$6,652,272	\$5,942,110	\$710,162	11.95%	1.95%
TOTAL CHANGE IN REVENUES REQUIRED		\$597,020	\$0	\$597,020	9.86%	

Figure 3

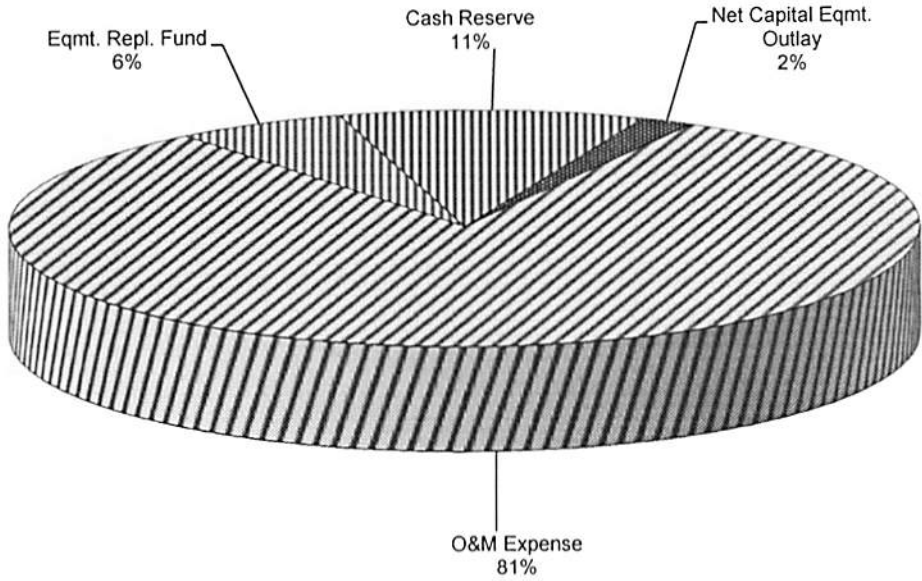
REASONS FOR THE CHANGE



<u>Reason For The Change:</u>	<u>\$</u>	<u>%</u>	<u>Incr. In Rates Required</u>
O&M Expense	472,716	66.6%	6.6%
Replacement Fund	112,800	15.9%	1.6%
Decrease in Interest Income	20,000	2.8%	0.3%
Capital Outlay less Decr. In P&I	104,646	14.7%	1.5%
Sub-total	\$710,162	100.0%	9.9%
Less: Increase in Revenue	(113,142)		
NET CHANGE REQUIRED	\$597,020		

Figure 4

EXPENSE COMPONENTS



<u>EXPENSE COMPONENTS:</u>	<u>\$</u>	<u>% of Total Expense</u>
O&M Expense (w/o PreTrmnt)	5,357,127	81.2%
Eqmt. Repl. Fund	399,380	6.1%
Cash Reserve	718,042	10.9%
Net Capital Eqmt. Outlay	126,000	1.9%
Total Sewer Revenue Required	6,600,549	100.00%
Less: Interest Income	(10,000)	
Less: Other Revenue	(76,200)	
USER CHARGE REVENUE NEEDED	\$6,514,349	

22. **ASSIGNMENT, SUBLET, AND TRANSFER.** Contracting Party shall not assign, sublet, or transfer its interests or obligations under the provisions of this Agreement without the prior written consent of La Crosse. This Agreement shall be binding on the heirs, successors, and assigns of each party hereto. Contracting Party shall provide not less than forty-five (45) days advance written notice of any intended assignment, sublet or transfer.

23. **NO WAIVER.** The failure of any party to insist, in any one or more instances, upon performance of any of the terms, covenants, or conditions of this Agreement shall not be construed as a waiver, or relinquishment of the future performance of any such term, covenant, or condition by any other party hereto but the obligation of such other party with respect to such future performance shall continue in full force and effect.

24. **SUBCONTRACTING.** None of the services to be performed under this Agreement shall be subcontracted without the prior written approval of La Crosse. If any of the services are subcontracted, the performance of such services shall be specified by written contract and shall be subject to each provision of this Agreement. Contracting Party shall be as fully responsible to La Crosse for the acts and omissions of its subcontractors and of person either directly or indirectly employed by them, as it is for acts and omissions of persons directly employed by it.

25. **CONFLICTS OF INTEREST.** Contracting Party covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of its services hereunder. Contracting Party further covenants that in the performance of this Agreement no person having any conflicting interest shall be employed. Any interest on the part of Contracting Party or its employees must be disclosed to La Crosse.

26. **NON-DISCRIMINATION.** Pursuant to law, it is unlawful and Contracting Party agrees not to willfully refuse to employ, to discharge, or to discriminate against any person otherwise qualified because of race, color, religion, sex, sexual orientation, age, disability, national origin or ancestry, lawful source of income, marital status, creed, or familial status; not to discriminate for the same reason in regard to tenure, terms, or conditions of employment, not to deny promotion or increase in compensation solely for these reasons; not to adopt or enforce any employment policy which discriminates among employees on account of race, color, religion, sex, creed, age, disability, national origin or ancestry, lawful source of income, marital status or familial status; not to seek such information as to any employee as a condition of employment; not to penalize any employee or discriminate in the selection of personnel for training, solely on the basis of race, color, religion, sex, sexual orientation, age, disability, national origin or ancestry, lawful source of income, marital status, creed or familial status.

Contracting Party shall include or cause to be included in each subcontract covering any of the services to be performed under this Agreement a provision similar to the above paragraph, together with a clause requiring such insertion in further subcontracts that may in turn be made.

27. **POLITICAL ACTIVITIES.** Contracting Party shall not engage in any political activities while in performance of any and all services and work under this Agreement.

28. **GOVERNMENTAL APPROVALS.** Contracting Party acknowledges that various of the specific undertakings of La Crosse described in this Agreement may require approvals from the City of La Crosse Council, City of La Crosse bodies, and/or other public bodies, some of which may require public hearings and other legal proceedings as conditions precedent thereto. Contracting Party further acknowledges that this Agreement is subject to appropriation by the La Crosse Common Council. La Crosse's obligation to perform under this Agreement is conditioned upon obtaining all such approvals in the manner required by law. La Crosse cannot assure that all such approvals will be obtained, however, it agrees to use good faith efforts to obtain such approvals on a timely basis.

29. **ENTIRE AND SUPERSEDING AGREEMENT.** This writing, all Exhibits hereto, and the other documents and agreements referenced herein, constitute the entire Agreement between the parties with respect to the subject matter hereof, and all prior agreements, correspondences, discussions and understandings of the parties (whether written or oral) are merged herein and made a part hereof. This Agreement, however, shall be deemed and read to include and incorporate such minutes, approvals, plans, and specifications, as referenced in this Agreement, and in the event of a conflict between this Agreement and any action of La Crosse, granting approvals or conditions attendant with such approval, the specific action of La Crosse shall be deemed controlling. To the extent that any terms and conditions contained in this Agreement, all Exhibits hereto, and the other documents and agreement referenced herein conflict with these Standard Terms and Conditions, the Standard Terms and Conditions shall take precedence.

30. **AMENDMENT.** This Agreement shall be amended only by formal written supplementary amendment. No oral amendment of this Agreement shall be given any effect. All amendments to this Agreement shall be in writing executed by both parties.

31. **IMPLEMENTATION SCHEDULE AND TIME OF THE ESSENCE.** Any and all phases and schedules which are the subject of approvals, or as set forth herein, shall be governed by the principle that time is of the essence, and modification or deviation from such schedules shall occur only upon approval of La Crosse. The Mayor, or in the Mayor's absence, the Council President, shall have the ability to postpone any deadline listed herein, up to a maximum of ninety (90) days.

32. **TIME COMPUTATION.** Any period of time described in this Agreement by reference to a number of days includes Saturdays, Sundays, and any state or national holidays. Any period of time described in this Agreement by reference to a number of business days does not include Saturdays, Sundays or any state or national holidays. If the date or last date to perform any act or to give any notices is a Saturday, Sunday or state or national holiday, that act or notice may be timely performed or given on the next succeeding day which is not a Saturday, Sunday or state or national holiday.

33. **NOTICES.** Any notice, demand, certificate or other communication under this Agreement shall be given in writing and deemed effective: a) when personally delivered; b) three (3) days after deposit within the United States Postal Service, postage prepaid, certified, return receipt requested; or c) one

(1) business day after deposit with a nationally recognized overnight courier service, addressed by name and to the party or person intended as follows:

To the City:	Attn: City Clerk City of La Crosse 400 La Crosse Street La Crosse, WI 54601	Copy to:	Attn: City Attorney City of La Crosse 400 La Crosse Street La Crosse, WI 54601
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Contracting party shall identify in writing and provide to La Crosse the contact person and address for notices under this Agreement.

34. **INCORPORATION OF PROCEEDINGS AND EXHIBITS.** All motions accepted, approvals granted, minutes documenting such motions and approvals, and plans and specifications submitted in conjunction with any and all approvals as granted by La Crosse, including but not limited to adopted or approved plans or specifications on file with La Crosse, and further including but not limited to all exhibits as referenced herein, are incorporated by reference herein and are deemed to be the contractual obligation of Contracting Party whether or not herein enumerated.

35. **ACCESS TO RECORDS.** Contracting Party, at its sole expense, shall maintain books, records, documents and other evidence pertinent to this Agreement in accordance with accepted applicable professional practices. La Crosse, or any of its duly authorized representatives, shall have access, at no cost to La Crosse, to such books, records, documents, papers or any records, including electronic, of Contracting Party which are pertinent to this Agreement, for the purpose of making audits, examinations, excerpts and transcriptions.

36. **PUBLIC RECORDS LAW.** Contracting Party understands and acknowledges that La Crosse is subject to the Public Records Law of the State of Wisconsin. As such, Contracting Party agrees to retain all records as defined by Wisconsin Statute § 19.32(2) applicable to this Agreement for a period of not less than seven (7) years after the termination or expiration of this Agreement. Contracting Party agrees to assist La Crosse in complying with any public records request that La Crosse receives pertaining to this Agreement. Additionally, Contracting Party agrees to indemnify and hold harmless La Crosse, its elected and appointed officials, officers, employees, and authorized representatives for any liability, including without limitation, attorney fees related to or in any way arising from Contracting Party's actions or omissions which contribute to La Crosse's inability to comply with the Public Records Law. In the event that Contracting Party decides not to retain its records for a period of seven (7) years, then it shall provide written notice to La Crosse whereupon La Crosse shall take custody of said records assuring such records are not already maintained by La Crosse. This provision shall survive the termination of this Agreement.

37. **CONSTRUCTION.** This Agreement shall be construed without regard to any presumption or rule requiring construction against the party causing such instrument to be drafted. This Agreement shall be deemed to have been drafted by the parties of equal bargaining strength. The captions appearing at the first of each numbered section of this Agreement are inserted and included solely for convenience but shall never be considered or given any effect in construing this Agreement with the duties, obligations, or liabilities of the respective parties hereto or in ascertaining intent. If any questions of intent should arise. All terms and words used in this Agreement, whether singular or plural and regardless of the gender thereof, shall be deemed to include any other number and any other gender as the context may require.

38. **NO THIRD-PARTY BENEFICIARY.** Nothing contained in this Agreement, nor the performance of the parties hereunder, is intended to benefit, nor shall inure to the benefit of, any third party.

39. **COMPLIANCE WITH LAW.** The parties shall comply in all material respects with any and all applicable federal, state and local laws, regulations and ordinances.

40. **FORCE MAJEURE.** La Crosse shall not be responsible to Contracting Party for any resulting losses and it shall not be a default hereunder if the fulfillment of any of the terms of this Agreement is delayed or prevented by revolutions or other civil disorders, wars, acts of enemies, strikes, fires, floods, acts of God, adverse weather conditions, legally required environmental remedial actions, industry-wide shortage of materials, or by any other cause not within the control of the party whose performance was interfered with, and which exercise of reasonable diligence, such party is unable to prevent, whether of the class of causes hereinabove enumerated or not, and the time for performance shall be extended by the period of delay occasioned by any such cause.

41. **GOOD STANDING.** Contracting Party affirms that it is a company duly formed and validly existing and in good standing under the laws of the State of Wisconsin and has the power and all necessary licenses, permits and franchises to own its assets and properties and to carry on its business. Contracting Party is duly licensed or qualified to do business and is in good standing in the State of Wisconsin and in all other jurisdictions in which failure to do so would have a material adverse effect on its business or financial condition.

42. **AUTHORITY.** The persons signing this Agreement warrant that they have the authority to sign as, or on behalf of, the party for whom they are signing.

43. **EXECUTION OF AGREEMENT.** Contracting Party shall sign and execute this Agreement on or before sixty (60) days of its approval by the La Crosse Common Council, and Contracting Party's failure to do so will render the approval of the Agreement by the La Crosse Common Council null and void unless otherwise authorized.

44. **COUNTERPARTS.** This Agreement may be executed in one or more counterparts, all of which shall be considered but one and the same agreement and shall become effective when one or more counterparts have been signed by each of the parties and delivered to the other party.

45. **SURVIVAL.** All express representations, indemnifications and limitations of liability included in this Agreement will survive its completion or termination for any reason.

Revised: July 2011

Johnson, Mark

From: Johnson, Mark
Sent: Monday, April 13, 2015 9:51 AM
To: Lynne, Eric (elynne@donohue-associates.com); Larson, Troy (Troy.Larson@strand.com); 'Randy Sanford'; 'jjsmith@ati-ae.com'; Degen, Tom; MFDavy@davyinc.com; 'gene@tcengineers.net'
Cc: Greeno, Jared; Kozelek, Greg; Hexom, Dale
Subject: Supplemental Information #1 - Phosphorus RFP

Good morning,

The following summarize and respond to questions related to the original Request for Quotations, dated March 25, 2015:

Question (1) – “The RFP identifies a single deliverable (Study Report) to satisfy WPDES permit requirements. Reading the RFP, it appears that it is the Utilities intent to produce one report that satisfies the first four compliance tasks in the draft permit (through Final Compliance alternatives plan). Is this the expectation?”

Answer:

It looks like I could have done a better job in the RFP of using the same terms and descriptions as shown in the draft WPDES. The intent of the RFP is to complete, as assist the Utility in completing, the following items, described as Required Actions, in Part 5.1 of the draft RFP:

- *Items to complete.....*
 - *Operational Evaluation Report*
 - *Preliminary Compliance Alternatives Plan*
 - *Final Compliance Alternatives Plan*

- *Assist Utility to complete; submittal by Utility.....*
 - *Compliance Alternatives, Source Reduction, Improvements and Modifications Status*

Question (2) – “If the expectation is that one report will satisfy all four items above, is it your expectation that the project be completed by July 1, 2016?”

Answer:

Tentative completion dates.....

<u>Required Action</u>	<u>Completion Date</u>	<u>Tentative Completion Date</u>
• <i>Operational Evaluation Report</i>		<i>December 31, 2015</i>
• <i>Preliminary Compliance Alternatives Plan</i>		<i>December 31, 2015</i>
• <i>Final Compliance Alternatives Plan</i>		<i>December 31, 2015</i>
• <i>Compliance Alternatives, Source Reduction, Improvements and Modifications Status</i>	<i>December 31, 2016</i>	

Note that the Utility will be responsible for submittal of all plans and reports to DNR.

Question (3) – “Does the City have a budgeted amount for this project?”

Answer:

The current budget estimate that was approved in the City’s Capital Improvement Budget is \$75,000.

Question (4) – “Can resumes be included as an appendix to the proposal and not count towards the 20 page limit?”

Answer:

Proposals are limited to 20-pages, including resumes.

Question (5) – “Does the LOE and price proposal information need to be in a separate document? Does this price proposal count towards the 20 page limit?”

Answer:

The technical and cost proposals may be submitted together. The cost proposal may be a separate document, no more than two pages, in addition to the 20-page technical proposal.

Question (6) – “Do I understand correctly that this RFP includes providing the City of La Crosse with all the required compliance reports related to phosphorus in section 5.1 “Water Based Effluent Limits (WQBELs) for Total Phosphorus” for the present permit term (EXPIRATION DATE – June 30, 2020)?”

Answer:

Please refer to Answers provided for Questions (1) & (2).

Question (7) – “Please confirm that these are the reports required by the RFP.

- a. **Operational Evaluation Report** – Source reduction/operational improvements/other minor facility modifications, due 7-1-16
- b. **Compliance Alternatives, Source Reduction, Improvements and Modifications Status** – Study of Feasible Alternatives – Submit status of study, due 7-1-17
- c. **Preliminary Compliance Alternatives Plan** (Includes a preliminary engineering design report), due 7-1-19
- d. **Final Compliance Alternatives Plan** (Included a final engineering design report), due 7-1-19”

Answer:

Please refer to Answers provided for Questions (1) & (2).

Question (8) – “Please confirm this RFP includes time spent working with the WWTP staff on operational optimization efforts, work done to satisfy the requirements for the Operational Evaluation Report.”

Answer:

The intent of the RFP is to include a process where the selected consultant reviews the current operation and performance of the existing WWTP and, with that information, works with Utility staff to evaluate current performance, identifies potential methods for enhancing and optimizing performance of existing operational methods and processes, considers/suggests the need for additional analytical work and/or pilot testing, and works with Utility staff to implement whatever additional work and/or testing is selected to provide the needed information.

Question (9) – “Will additional laboratory testing required by operational optimization efforts be done by the treatment plant staff? Examples of additional types of analyses are; COD/NO₃-N/PO₄-P/TP/Dissolved TP/TSS/Dissolved PO₄-P.”

Answer:

Please refer to the Answer to Question (8). The Utility will be responsible for coordinating additional lab work as needed to complete the process of enhancing and optimizing the existing WWTP operation and performance.

Question (10 – Part 1) – “The WPDES permit compliance schedule has multiple milestone dates with required submittals. The RFP references one final Study Report, and the scope in the RFP includes both operational evaluation tasks and alternative analysis tasks. The requested report, however, does not appear to be focused on the specific interim permit compliance requirements, but rather the longer term compliance objective of the phosphorus rules.

- Is it your intent that the city use the report developed by the consultant to satisfy DNR interim compliance milestones as they arrive? Put another way, do you specifically want the consultant to develop the permit required documents for year 1,2, --- of the permit, or are you looking for a long-range plan from which the City will submit the documents required by the permit?
- If the City is mainly looking for a long range plan rather than meeting the interim permit requirements, what is your ideal schedule to have this report completed?”

Answer:

Please refer to Answers provided for Questions (1) & (2).

Question (10 – Part2) – “We know from past projects that there are elements within the City of La Crosse’s standard terms and conditions that present issues with our (and our competitors’) insurance. We also know that this has been negotiated on some projects.

- Are the terms and conditions negotiable?”

Answer:

The Standard Terms & Conditions that were included with the RFP are as currently approved by the City’s Common Council. No City department has the authority to directly negotiate these. Consultants should note any proposed exceptions or modifications to any of the requirements of the Standard Terms & Conditions with their proposal. The Utility will consider the impact and risk of the proposed exception(s) to the Utility/City and note any recommended changes/exceptions to the City Standard Terms & Conditions as a part of approval of a contract for these services. Final approval of any exceptions to the City’s Standard Terms & Conditions will be by the City Council.

Thank you for your interest in working with the Utility on this project. Please note that proposals for this work are due by 3:00 PM, Friday, April 24, 2015.

Sincerely,

Mark Johnson.

Mark Johnson.
La Crosse Utilities Office
400 La Crosse Street
La Crosse, WI 54601

Office: 608-789-7588
Cell: 608-792-0498