City of Appleton

100 North Appleton Street
Appleton, WI 54911-4799
www.appleton.org

Meeting Agenda - Final

Utilities Committee

Tuesday, July 26, 2016 | **5:30 PM** | **Council Chambers, 6th Floor**

1. Call meeting to order

2. Roll call of membership

3. Approval of minutes from previous meeting

16-1160 Approval of the July 12, 2016 Utilities Committee Meeting Minutes.

Attachments: July 12, 2016 Utilities Committee Meeting Minutes.pdf

4. Public Hearings/Appearances

5. Action Items

16-1161 Award 2016H Contract for Coop Road Pond Modeling and Design Assistance to AECOM in an amount not to exceed $38,700.

Attachments: 2016H Coop Road Pond Remodeling AECOM Award Memo Util Cmte 07-26-20

16-1162 Amend 2016B contract for Arbutus Park Stormwater Lift Station Reconstruction Design with Strand Associates in an amount not to exceed $4,400.

Attachments: Arbutus Park Lift Station Design Amendment Memo.pdf

16-1171 Award of TOC Instrument Purchase to OI Analytical for $23,829.50 with a 10% contingency of $2,392.95 for a total not to exceed cost of $26,212.45.

Attachments: TOC Instrument Recommendation.pdf

6. Information Items

16-1163 Department of Utilities Mid-Year Performance Reviews.

Attachments: Utilities Mid Year Performance Indicators.pdf

16-1164 Department of Public Works Mid-Year Performance Reviews.

Attachments: Department of Public Works Mid Year Performance Indicators.pdf

16-1165 Monthly Reports for April, May, June 2016
- Wastewater Treatment Plant Synopsis and Receiving Station Revenue Report
- Water Treatment Plant Synopsis
- Water Distribution and Meter Team Monthly Report - June

Attachments: 2016 Q2 AWWTP Synopsis and Receiving Station Revenue.pdf
2016 Q2 AWTF Synopsis.pdf
Water Team Reports June.pdf

7. Adjournment

Notice is hereby given that a quorum of the Common Council may be present during this meeting, although no Council action will be taken.

Reasonable Accommodations for Persons with Disabilities will be made upon Request and if Feasible.

For questions on the agenda, contact Chris Shaw at 920-832-5945 or Paula Vandehey at 920-832-6474.

City of Appleton

100 North Appleton Street
Appleton, WI 54911-4799
www.appleton.org

Meeting Minutes
Utilities Committee

Tuesday, July 12, 2016 | **5:30 PM** | **Council Chambers, 6th Floor**

1. Call meeting to order

Chairperson Dannecker called the Utilities Committee meeting to order at 5:30 p.m.

2. Roll call of membership

Present: 5 - Dannecker, Baranowski, Meltzer, Reed and Jirschele

3. Approval of minutes from previous meeting

16-1044 Approval of the June 21, 2016 Utilities Committee Meeting Minutes.

Jirschele moved, seconded by Meltzer, that the Minutes be approved. Roll Call. Motion carried by the following vote:

Aye: 5 - Dannecker, Baranowski, Meltzer, Reed and Jirschele

4. Public Hearings/Appearances

5. Action Items

16-1043 Award Matthias Tower Contract Amendment #1 to McMahon and Associates, Inc. for Engineering and Field Services in the amount of $12,000.

Meltzer moved, seconded by Jirschele, that the Report Action Item be recommended for approval. Roll Call. Motion carried by the following vote:

Aye: 4 - Dannecker, Meltzer, Reed and Jirschele

Nay: 1 - Baranowski

6. Information Items

16-1107 Request for Additional 2016 Spending Authority in TIF 6 to Construct Milis Dr.

Discussed.

16-1045 WPPI Generator Revenue Summary.

Reviewed.

7. Adjournment

Jirschele moved, seconded by Reed, that the Utilities Committee meeting be adjourned at 5:41 p.m. Roll Call. Motion carried by the following vote:

Aye: 5 - Dannecker, Baranowski, Meltzer, Reed and Jirschele

Department of Public Works – Engineering Division

MEMO

TO: Utilities Committee

FROM: Paula Vandehey, Director of Public Works
Pete Neuberger, Staff Engineer

DATE: July 19, 2016

RE: Award 2016H Contract for Coop Road Pond Modeling and Design Assistance to AECOM in an amount not to exceed $38,700

The Department of Public Works is requesting approval of the Coop Road Pond Modeling and Design Assistance Contract with AECOM in an amount not to exceed $38,700. After this contract $250,643 will remain in the 2016 stormwater consulting services budget.

Coop Road Pond is a regional stormwater detention pond built in 2008 that serves approximately the east half of the Southpoint Commerce Park. When re-evaluating the pond design for the purpose of meeting recent development prospects in Southpoint Commerce Park, DPW staff determined that USDA had changed the classification of soils in the drainage area since the original design. The reclassification of soils will result in higher modeled flows from the drainage area. DPW staff also determined that recent development prospects in Southpoint Commerce Park reflected sites with higher imperviousness than were assumed in the initial pond design calculations.

Given the above changes, DPW staff and the Community and Economic Development Department identified the need to remodel the pond to determine whether and to what degree the pond may need to be enlarged to help ensure it will meet the needs of likely future development within Southpoint Commerce Park. AECOM performed the initial flood study and the preliminary and final design modeling for the pond. Therefore, DPW solicited a single source quote from AECOM to provide updated modeling and related services for the pond as follows:

- Run Hydrologic and Hydraulic (H&H) modeling to reflect current City ordinance and industry standards for peak flow management.
- Develop several H&H model iterations to reflect various impervious conditions for consideration by City staff.
- Re-run water quality modeling using the latest version of SLAMM under the above scenarios.
- Develop a memorandum reflecting possible changes to pond size needed under the above scenarios.
- Develop a preliminary pond grading plan based on preferred alternative selected by City.
- Based on grading plan refinements developed by the City, re-run modeling as needed.
- Assist the City with development of pond earthwork quantities based on final design by City.
- Assist the City with documentation and submittal for DNR Chapter 30 and Construction Site (NOI) permitting.
- Develop final H&H and SLAMM models per final pond design by City.

DPW staff evaluated AECOM's technical and compensation proposal for these services and determined it to be cost-effective compared to similar projects.

Therefore DPW staff is requesting award of the 2016H Contract for Coop Road Pond modeling and design assistance with AECOM in an amount not to exceed $38,700.

Department of Public Works – Engineering Division

MEMO

TO: Utilities Committee

FROM: Paula Vandehey, Director of Public Works
Chris Shaw, Director of Utilities
Sue Olson, Staff Engineer

DATE: July 18, 2016

RE: Amend 2016B contract for Arbutus Park Stormwater Lift Station Reconstruction Design with Strand Associates in an amount not to exceed $4,400.

The Department of Public Works and Utilities Department are requesting approval to amend the 2016B contract for Arbutus Park Stormwater Lift Station Reconstruction Design with Strand Associates in an amount not to exceed $4,400. If the amendment is approved, the total contract amount will be $50,300. After this amendment, $289,342 will remain in the 2016 stormwater consulting services budget.

The single bid for the reconstruction of the Arbutus Park Stormwater Lift Station received in May 2016 was recently rejected by the Common Council. Staff would like to rebid the project in fall 2016 for construction in 2017. It is anticipated that more contractors will be able to bid the project later in the year as they schedule projects for next construction season.

In order to rebid the project, staff is requesting assistance from Strand Associates for the following scope of services:

- Revise the Special Provisions to coincide with the hillside repair project by Facilities Department.
- Revise the Technical Specifications to include Addendum No. 1 from the first bid.
- Respond to questions from contractors during rebidding and assist with analyzing bid results.

The contract amendment with Strand also includes a 3% wage increase for construction related services to be performed in 2017, instead of 2016. The scope of that work is not changed with this amendment.

"…meeting community needs…enhancing quality of life."

Department of Utilities
Wastewater Treatment Plant
2006 E Newberry Street
Appleton, WI 54915
920-832-5945 tel.
920-832-5949 fax

TO: Chairperson Greg Dannecker and Members of the Utilities Committee

CC: Chris Shaw, Utilities Director

FROM: Michael Suha, Technical Services Manager

DATE: July 20, 2016

RE: ***Award of TOC Instrument Purchase to OI Analytical for $23,829.50 with a 10% contingency of $2,382.95 for a total not to exceed $26.212.45.***

BACKGROUND:

At present, the current instrument was purchased to defray commercial laboratory costs associated with monitoring Total Organic Carbon (TOC) concentrations. Maintenance is needed after eight years of continuous use. The cost estimate associated with the maintenance and potential part replacements is $7704. The original purchase price estimate of the instrument was $35,500. The Utility has a history of in – house analytical capability and TOC process analysis is currently done by the Utility Department. If the instrument were not maintained or replaced all testing would have to be out-sourced to a commercial laboratory. Current costs associated with the testing would be in excess of $8000 annually by a commercial laboratory.

QUOTE RESULTS:

Comparative instrument quotes were obtained from three instrument companies. Using the OI Analytical quote to replace the instrument with the same make and model of $23,829.50 the payback would be slightly less than three years. See table below

Company	**TOC Instrument Quote**
Tekmar	$27,560.77
Shimadzu	$26,698.38
OI Analytical	$23,829.50

RECOMMENDATION:

It is recommended that the instrument be replaced in lieu of parts replacement and to award the purchase of the TOC Instrument to OI Analytical for $23,829.50 with a 10% contingency of $2,382.95 for a total not to exceed $26.212.45.

If you have any questions regarding this project please contact Michael Suha at 920-832-2356 or Chris Shaw at 920-832-5945.

For the Six Months Ending June 30, 2016

Description	Year to Date Expense	Full Year Amended Budget	Percent of Amended Budget
Utility Administration	119,045	261,298	45.6 %
Wastewater Treatment	1,638,942	3,557,336	46.1 %
Biosolids Management	289,979	666,455	43.5 %
Lab & Pretreatment	131,782	296,709	44.4 %
Lift Stations	83,986	136,069	61.7 %
Utilities Capital Improvement	44,157	945,033	4.7 %
Utilities FMD Projects	51,307	528,712	9.7 %
Total	2,359,198	6,391,612	.0 %

WASTEWATER
2016 BUDGET PERFORMANCE DATA

Program / Criteria	Actual 2014	Actual 2015	Target 2016	2016 Mid Year	2016 End of Year	Projected 2016
5411 Utility Administration						
Client Benefits / Impacts						
Safe Work Environment						
# of workers comp claims / year	1	0	0	0		0
# of first aid entries per year	10	13	0	4		4
Strategic Outcomes						
Effective Use of Budgeted Funds						
% of operational budget for plant & lift station dollars obligated	93%	88%	100%	47%		100%
Work Process Outputs						
Government reports prepared						
# of reports filed						
Compliance Report (CMAR)	1	1	1	1		1
Biosolids Annual Report	1	1	1	0		1
Pretreatment Report	2	2	2	0		2
Discharge Report (DMR)	12	12	12	6		12

Program / Criteria	Actual 2014	Actual 2015	Target 2016	2016 Mid Year	2016 End of Year	Projected 2016
5422 Utility Treatment						
Client Benefits / Impacts						
Environmental Safety						
# of DMR Permit exceedance violations	0	0	0	0		0
Essential Services Provided						
# of gallons of influent treated annually	4,487 MG	4,228 MG	4,250 MG	2,710 MG		4,250 MG
Strategic Outcomes						
Trained Staff						
% of staff adequately trained	87%	74%	100%	89%		95%
Average # of hours training per employee	22	16	25	14		25
High Wastewater Treatment Standards						
CMAR GPA for ten categories	A / 3.86	A / 3.73	A / 4.0	A / 3.73		A / 3.73
# of categorical grades of C or below	0	0	0	0		0
Work Process Outputs						
Efficient Plant Operation						
# of work days lost due to injuries	22	0	0	0		0
# of work orders closed	915	737	1,300	300		1,000
# of open work orders	477	397	400	418		400
Average # of days to close preventative work orders	53	59	35	42		35

WASTEWATER
2016 BUDGET PERFORMANCE DATA

Program / Criteria	Actual 2014	Actual 2015	Target 2016	2016 Mid Year	2016 End of Year	Projected 2016
5423 Biosolids Management Program						
Client Benefits / Impacts						
Environmental Safety						
Biosolids Applications # of sites						
with Nitrogen loading exceedences	0	0	0	0		0
with Metal(s) loading exceedences	0	0	0	0		0
Strategic Outcomes						
Beneficial Re-use						
Wet tons applied	19,964	20,936	17,250	11,543		22,000
Wet tons landfilled	0	0	0	0		0
Wet tons composted	2,088	2,496	3,750	1,024		2,274
Work Process Outputs						
Biosolids Production and Storage						
Tons of biosolids produced	22,795	25,176	22,000	13,197		25,000
CMAR compliance						
# of site monitoring completed	46	49	24	23		50

Program / Criteria	Actual 2014	Actual 2015	Target 2016	2016 Mid Year	2016 End of Year	Projected 2016
5424 Laboratory and Pretreatment						
Client Benefits / Impacts						
Environmental Safety						
# of industrial clients	10	10	10	10		10
# of clients in significant non-compliance	0	0	0	0		0
Increase Revenue Sources						
# of permitted haulers	11	11	11	11		11
$ received from other sources	$1,050,251	$1,473,124	$750,000	$1,070,840		$1,700,000
Strategic Outcomes						
# of pollution minimization initiatives	4	4	4	2		4
Work Process Outputs						
Record Maintenance - DMR						
# DMR and QA/QC samples completed	8,457	9,936	6,125	4,780		6,125
Improvement Treatment Processes						
# process samples analyzed annually*	4,506	4,632	4,900	2,130		4,900
Maintain Industrial Pretreatment Compliance						
# of inspections	10	10	10	1		10
# of sampling events	20	20	20	10		20
# of billable samples for other City depts.	552	572	550	232		550

*includes all compliance, process and billing samples
**includes compost pilot

WASTEWATER
2016 BUDGET PERFORMANCE DATA

Program / Criteria	Actual 2014	Actual 2015	Target 2016	2016 Mid Year	2016 End of Year	Projected 2016
5425 Utility Lift Stations						
Client Benefits / Impacts						
Sewage Bypasses / Backups						
# per year attributed to lift stations	0	0	0	0		0
Strategic Outcomes						
Integrity of Lift Stations Maintained						
# of emergency calls required	11	11	15	7		15
Work Process Outputs						
Response to Work Orders						
# of preventative work orders	177	195	168	96		180
# of corrective work orders	10	15	50	18		40

Program / Criteria	Actual 2014	Actual 2015	Target 2016	2016 Mid Year	2016 End of Year	Projected 2016
5432 Capital Improvements						
Client Benefits / Impacts						
Cost Effective Treatment Processes						
# of CIP's in budget year	8	15	6	11		11
# of CIP's in five-year plan	11	19	15	19		19
Strategic Outcomes						
Sewer Rate Changes						
% per year	0%	0%	0%	0%		0%
Work Process Outputs						
Project Management						
% of projects completed at year-end	25%	67%	100%	0%		33%

For the Six Months Ending June 30, 2016

Description	Year to Date Expense	Full Year Amended Budget	Percent of Amended Budget
Filtration Administration	181,872	385,131	47.2 %
Treatment Operations	2,453,643	6,947,795	35.3 %
Treatment Capital	586,983	2,138,912	27.4 %
Treatment FMD Projects	91,251	230,000	39.7 %
Total	3,313,749	9,701,838	34.4 %

WATER
2016 BUDGET PERFORMANCE DATA

Program / Criteria	Actual 2014	Actual 2015	Target 2016	2016 Mid Year	2016 End of Year	Projected 2016
5321 Treatment Administration						
Client Benefits / Impacts						
Safe Work Environment						
# of workers comp claims / year	0	0	0	0		0
# of first aid entries per year	5	4	0	0		0
Strategic Outcomes						
Effective Use of Budgeted Funds						
% of Operational budget dollars obligated	88%	85%	100%	44%		95%
Work Process Outputs						
Government Reports Prepared						
# of names of regular reports						
CCR Report	1	1	1	1		1
DNR Reports	12	12	12	6		12
SARA Report	1	1	2	1		2

Program / Criteria	Actual 2014	Actual 2015	Target 2016	2016 Mid Year	2016 End of Year	Projected 2016
5323 Treatment Operations and Maintenance						
Client Benefits / Impacts						
Adequate Supply of Safe Drinking Water						
% of water sampling tests in compliance per year	100%	100%	100%	100%		100%
# of sprinkling bans	0	0	0	0		0
# of gallons pumped per year	3,181 MG	3,257 MG	3,190 MG	1,609 MG		3,200 MG
Strategic Outcomes						
Trained Staff						
% of staff adequately trained	100%	98%	100%	100%		100%
Average # of hours training per employee	27	30	60	17		40
Work Process Outputs						
Efficient Plant Operation						
# of work days lost due to injuries	0	0	0	0		0
# of work orders closed	277	244	1,100	77		1,000
# of open work orders	96	134	225	111		225
Average # of days to close preventative work orders	80	86	47	30		30
# of reservoirs maintaining pressure per year	6	6	6	6		6
# of membrane repairs	13,968	19,522	15,000	12,855		15,000
Water Towers						
# inspected / painted per year	1 / 0	2 / 0	1 / 1	1 / 0		1 / 0

WATER
2016 BUDGET PERFORMANCE DATA

Program / Criteria	Actual 2014	Actual 2015	Target 2016	2016 Mid Year	2016 End of Year	Projected 2016
5325 Treatment Capital Improvements						
Client Benefits / Impacts						
Adequate Water Pressure						
% of tests having adequate pressure	100%	100%	100%	100%		100%
Cost Effective Treatment Processes						
# of CIP's in budget year	7	7	4	6		6
# of CIP's in five-year plan	8	11	7	10		10
Strategic Outcomes						
Water Rate Changes						
% per year	0%	0%	0%	0%		0%
Work Process Outputs						
Project Management						
% of projects completed at year-end	43%	88%	100%	0%		67%

For the Six Months Ending June 30, 2016

Description	Year to Date Expense	Encumbered Amount	Total Expended and Encumbered	Full Year Amended Budget	Percent of Amended Budget
Wastewater Collection Systems	211,951	265	212,216	870,102	24.4 %
Public Works Capital Improv.	661,674	0	661,674	2,699,330	24.5 %
Total	873,625	265	873,890	3,569,432	24.5 %

DEPARTMENT OF PUBLIC WORKS
MID-YEAR REVIEW

All figures through June 30, 2016

WASTEWATER UTILITY

Collection Systems **Business Unit 5427**

Significant 2016 Events:

Performance Data:

Client Benefits/Impacts	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Target 2016	YTD 2016
Benefit of inspection program						
# of defects identified from TV report	16	13	47**	3**	25	0.4
Compliance with regulation						
# of protruding taps identified	0	1	9**	0**	6	5
# of cross connections identified	52	70	85	86	80	52
Strategic Outcomes						
Reliability of system maintenance program						
# of trouble calls	39	49	57	28	35	13
# of system blockages removed	7	6	7	3	5	0
% of total system televised	11.6%	12.5%	10.0%	14.1%	10.00%	0.0%
Work Process Outputs						
Maintenance performed						
% of total system cleaned	66.4%	51.2%	48.6%	46.6%	48.0%	19.8%
# of spot repairs made	15	0*	13**	46**	23	0
Safeguarding health and safety						
# of protruding taps removed	0	0*	4**	3**	5	0

* Timing of contract pushes work into 2014.

** Totals vary due to 2014 and 2015 funds were bid in 2014 and were completed in 2015

DEPARTMENT OF PUBLIC WORKS
MID-YEAR REVIEW

All figures through June 30, 2016

WASTEWATER UTILITY

Public Works Capital Improvements **Business Unit 5431**

Significant 2016 Events:

Performance Data:

Client Benefits/Impacts	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Target 2016	YTD 2016
Reduction of wastewater treatment cost						
# of manholes-rehab/rebuilt	35	20	39	23	25	12
Distribution section rating from CMAR	A	A	A	A	A	A
# of laterals replaced	181	173	106	198	200	70
Strategic Outcomes						
Improvements to the sanitary sewer system						
Total miles of sanitary sewer	321*	321	320**	323	324	323
% of total miles of sanitary sewer reconstruct	0.55%	0.38%	0.74%	0.46%	0.52%	0.25%
Work Process Outputs						
Restoration of sanitary sewers						
Miles of existing sanitary sewer reconstruct.	1.76	1.24	2.39	1.47	1.68	0.80
Expansion of sanitary sewer system						
Miles of new sanitary sewer added	0.00	0.22	0.09	0.49	1.10	0.00
Reduction of treatment costs						
# of seals installed (I & I)	59	91	75	94	100	30

* Moved from a manual tracking system to a more comprehensive system - GIS

** The total miles of sanitary sewer main within the system decreased due to the City abandoning 2975 feet of sanitary sewer and only installing 494 feet of new sanitary sewer main.

City of Appleton
Water Distribution
Summary Budget to Actual Report
For the Six Months Ending June 30, 2016

Description	Year to Date Expense	Encumbered Amount	Total Expended and Encumbered	Full Year Amended Budget	Percent of Amended Budget
Distribution Administration	233,119	0	233,119	545,370	42.7 %
Customer Service	127,678	0	127,678	141,895	90.0 %
Distribution Ops. & Maint.	453,378	1,328	454,706	1,355,545	33.5 %
Distribution Capital	1,374,903	212,209	1,587,112	5,027,446	31.6 %
Total	2,189,078	213,537	2,402,615	7,070,256	34.0 %

DEPARTMENT OF PUBLIC WORKS
MID-YEAR REVIEW

All figures through June 30, 2016

WATER UTILITY

Distribution Administration **Business Unit 5351**

Significant 2016 Events:

- Reviewed the small meter installation policy
- Working with the Clerk's Office on sending mass mailing of water installation letters
- Redesigned the water meter hangtag in multiple languages to help communication with diverse populations

Performance Data:

Client Benefits/Impacts	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Target 2016	YTD 2016
Efficient customer service						
# Cross connection inspections	New measure ---------->		0	6,615	7,000	3,815
# Appointment request letters sent	New measure ---------->		5,265	11,757	10,000	10,853
Strategic Outcomes						
Consistent and current information						
Policies reviewed/updated	0	1	2	1	1	1
Turnover ratio of inventory - Annual	0.76	0.65	0.74	0.72	0.80	Year end
Work Process Outputs						
Reporting & recording keeping						
# of reports generated for PSC	1	1	1	1	1	1

DEPARTMENT OF PUBLIC WORKS
MID-YEAR REVIEW

All figures through June 30, 2016

WATER UTILITY

Customer Service **Business Unit 5352**

Significant 2016 Events:

Performance Data:

Client Benefits/Impacts	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Target 2016	YTD 2016
Reliable, accurate water usage						
# of large meters replaced	1	0	0	0	0	0
# of meters tested	1,293	428	4,183	6,981	7,000	3,934
# of defective meters replaced	45	36	17	248	100	293
# of meters in service	27,160	27,383	27,589	27,618	27,650	27,713
Strategic Outcomes						
Implementation of system upgrade						
# of trace batteries replaced	802	122	0	0	0	0
# of new meters replaced		450	4,661	7,090	7,000	4,065
Work Process Output						
Service provided						
# of service calls	1,247	1,472	1,863	1,497	1,800	642
System growth						
# of new services installed	177	233	80	120	100	56

DEPARTMENT OF PUBLIC WORKS
MID-YEAR REVIEW

All figures through June 30, 2016

WATER UTILITY

Distribution Operations and Maintenance **Business Unit 5353**

Significant 2016 Events:

- In January we implemented the use of iPads and a "Water App" for recording various maintenance activities. This helped to improve accuracy of records, significantly reduced time to update records, and allows for more efficient record inquiries.

Performance Data:

Client Benefits/Impacts	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Target 2016	YTD 2016
Reliable source at adequate pressure						
Hydrants						
Replaced/Upgrade	6	4	4	6	5	3
% of hydrants flushed	100%	100%	100%	100%	100%	100%
Water loss reported	8.7%	8.5%	10.0%	9.1%	10%	16.0%
Strategic Outcomes						
Reliability of the system						
# of water main breaks	83	87	141	71	85	25
Work Process Outputs						
Preventive maintenance						
# of services replaced	36	24	11	0	15	14
# of valves exercised	1,010	869	525	796	600	1,248
# of valves replaced	5	4	7	5	10	1
# of curb boxes repaired	331	202	248	427	300	108
# of joint leaks fixed	5	4	1	1	3	0
# of service leaks fixed	4	3	3	0	3	1

DEPARTMENT OF PUBLIC WORKS
MID-YEAR REVIEW

All figures through June 30, 2016

WATER UTILITY

Distribution Capital Improvements **Business Unit 5370**

Significant 2016 Events:

Performance Data:

Client Benefits/Impacts	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Target 2016	YTD 2016
Reliable and adequate service						
% of reconstructed streets with relay	100.0%	100.0%	100.0%	100.0%	100%	25.0%
% increase of fire flow capacity	0% - 175%	0% - 45%	0% - 245%	0% - 175%	0% - 200%	200.0%
# of low flow hydrants eliminated	3	3	5	8	5	2
Strategic Outcomes						
System size						
Miles of mains	373*	375.25	373*	373.41	376	375.06
% of total miles of mains reconstructed	0.63%	0.65%	0.66%	0.90%	0.70%	0.20%
# of hydrants in the City	3,277*	3,295	3,313	3,344	3,300	3,372
# of low flow hydrants in the City	107	104	85	77	80	79
Work Process Outputs						
System expansion and improvement						
Miles of transmission lines added	0.17	0.19	1.08	0.00	0.60	0.00
Miles of existing mains relayed	2.3	2.19	2.47	3.36	2.64	0.66

* Moved from a manual tracking system to a more comprehensive system - GIS

City of Appleton
Stormwater Utility
Summary Budget to Actual Report
For the Six Months Ending June 30, 2016

Description	Year to Date Expense	Encumbered Amount	Total Expended and Encumbered	Full Year Amended Budget	Percent of Amended Budget
Stormwater Administration	2,503,813	131	2,503,944	5,611,352	44.6 %
Facilities Maintenance	473,857	2,565	476,422	1,491,987	31.9 %
Leaf Collection	54,755	0	54,755	427,748	12.8 %
Capital Construction	1,454,097	0	1,454,097	5,074,634	28.7 %
Total	4,486,522	2,696	4,489,218	12,605,721	35.6 %

DEPARTMENT OF PUBLIC WORKS
MID-YEAR REVIEW

All figures through June 30, 2016

STORMWATER

Administration **Business Unit 5210**

Significant 2016 Events:

Performance Data:

Client Benefits/Impacts	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Target 2016	YTD 2016
Economic development						
Master plans completed	5	1	4*	0	0	0
Strategic Outcomes						
Alternative sources of revenue						
# of grants applied for	2	0	0	0	1	1
Value of grant dollars awarded or applied	$300,000	$0	$0	$0	$150,000	$0
for future reimbursement						
Safe, reliable future level of service						
Acre feet of storage identified for future use	25	61	0	0	2	.75**
# of DNR non-compliance notices received	1	0	0	0	0	0
Work Process Outputs						
Preventive maintenance of system						
Erosion control plans reviewed (permits)	50	30	15	48	25	24

* Bellaire study, Citywide SWMP, Spartan, Flood Hazard Mitigation Plan Update

DEPARTMENT OF PUBLIC WORKS
MID-YEAR REVIEW

All figures through June 30, 2016

STORMWATER

Facility Maintenance **Business Unit 5220**

Significant 2016 Events:

Performance Data:

Client Benefits/Impacts	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Target 2016	YTD 2016
Benefit of inspection program						
# of spot repairs identified from TV reports	15	17	38*	5*	18	5
Compliance with regulation						
# of protruding taps identified	12	15	23*	5*	17	0
# of cross connections identified	0	0	0	0	0	0
Strategic Outcomes						
Effectiveness of maintenance program						
# of trouble calls	15	24	0	19	20	4
% of total system televised	9.7%	9.6%	8.3%	9.9%	9%	0.1%
Work Process Outputs						
Preventive maintenance						
Cubic yards of material collected from street sweeping operations	3,884	4,124	3,920	5,565	3,800	1,967
% of total storm sewer system cleaned	13.3%	12.8%	9.2%	11.3%	13.0%	1.0%
Safeguarding health and safety						
# of protruding taps removed	10	0	17*	23*	15	0
# of spot repairs made	15	0	19*	37*	16	0

* Totals vary due to 2014 and 2015 funds bid in 2014 and were completed in 2015

DEPARTMENT OF PUBLIC WORKS
MID-YEAR REVIEW

All figures through June 30, 2016

STORMWATER

Leaf Collection **Business Unit 5225**

Significant 2016 Events:

Performance Data:

Client Benefits/Impacts	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Target 2016	YTD 2016
Service provided						
Number of collection cycles	4	4	3.25	5	3	0
Strategic Outcomes						
Cost effective service provided						
Cost/cubic yard collected	$8.10	$12.71	$9.82	$11.00	$10.75	NA
Work Process Outputs						
Safer streets and cleaner storm water system						
Cubic yards of leaves collected	41,180	25,510	33,160	37,100	35,000	0

DEPARTMENT OF PUBLIC WORKS
MID-YEAR REVIEW

All figures through June 30, 2016

STORMWATER

Capital Construction **Business Unit 5230**

Significant 2016 Events:

Performance Data:

Client Benefits/Impacts	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Target 2016	YTD 2016
Solutions to system discrepancies						
Residential mini-sewer/drainage complaints						
Solved	115	99	84	99	100	0
Outstanding	400	360	113*	95*	110	100
Strategic Outcomes						
Improvements to the stormwater system						
Total miles of storm sewer in the city	278.17 **	282	282	292	287	287
% of total miles reconstructed	0.37%	0.23%	0.01%	0.29%	1.07%	0.16%
Acres of new land available	56	0	0	0	0	0
Integrity and growth of the system						
Acre feet of storage developed	0.0	35.0	14.1	3.5***	0.0	0.0
Work Process Outputs						
Restoration of storm sewers						
Miles of storm sewer reconstructed	1.02	0.66	0.35	0.85	2.98	0.47
Expansion of storm sewer system						
Miles of new storm sewer added	0.052	0.66	0.21	0.34	0.16	0.16

* Audited/cleaned up list in 2014 after 2015 Target was developed, 90 on CSR list & 23 on Clearwater inspection list

** Moved from a manual tracking system to a more comprehensive system - GIS

***Birchwood Pond

Appleton Wastewater Treatment Plant
Synopsis
April 2016 - June 2016

Wastewater Treatment Program

- The Appleton Wastewater Treatment Plant (AWWTP) final effluent met all Wisconsin Department of Natural Resources (WDNR) discharge monitoring reporting limits including carbonaceous biochemical oxygen demand (CBOD), total suspended solids (TSS), pH, phosphorous, and ammonia. (See Table 1). The plant maintained good treatment and a healthy microbiological population with a sludge retention time of eight days. Dewatering processes functioned well and converted 12.71 Million Gallons (MG) of primary digested sludge to biosolids.

Table 1 – Wastewater Influent / Effluent Treatment Data

Characteristic	April 2016			May 2016			June 2016		
AWWTP Flows (MG)	Influent		Percent	Influent		Percent	Influent		Percent
Industrial Flow	52.4		10.6%	49.2		13.5%	50.3		12.3%
Domestic Flow	442.7		89.4%	316.0		86.5%	359.2		87.7%
Total Flow	495.1			365.2			409.5		
Pollutant Loadings (lbs)	Influent	Effluent	Removal	Influent	Effluent	Removal	Influent	Effluent	Removal
CBOD	829,936	7,395	99.1%	797,975	10,947	98.6%	840,294	11,793	98.6%
TSS	1,729,730	4,961	99.7%	1,653,488	6,349	99.6%	1,715,660	6,338	99.6%
Phosphorous	16,329	387	97.6%	15,358	805	94.8%	15,181	955	95.7%
Ammonia	49,077	1,347	97.3%	61,421	2,196	96.4%	54,709	2,705	95.1%

Work Completed:

- 19,320 gallons of spent sulfuric acid (i.e. ferrous sulfate) was used for phosphorus removal during the reporting period. The chemical cost savings for using ferrous sulfate was approximately $13,910. As part of the Phosphorous Treatment Optimization study, 12,450 gallons of ferric chloride was purchased and fed at a cost $8,960 in an effort to evaluate chemical removal strategies.

- Monthly effluent ammonia removal averaged 96.3% through the three month period. The plant average effluent concentration for the three month period was 0.58 mg/L. This is in compliance with the ammonia limit for the time period.

- AWWTP mechanical staff and managers were notified of and responded to a Sanitary Sewer Overflow (SSO) on April 5, 2016, when a contractor struck an unmarked sewer lateral downstream from the Lawe St. lift station. With cooperation of Neenah Papers, City staff, and the contractor, repairs were made in a timely manner which greatly reduced the volume of the SSO.

Work in Progress:

- **Digester Improvements Project:** August Winter and Sons general contractor started work in early April. AWWTP staff worked with the contractor to isolate and purge digester gas lines for piping and valve installation. Structure cleaning and painting and fabric cover seam sealing was completed on schedule. Equipment start-up and training is set for mid-July, and it is anticipated that the project will be completed before August 1st.

- **Scarlet Oak Lift Station Improvement Project:** New pump and control panel installation was accomplished in June, with AWWTP mechanical staff attending equipment start-up and training. McMahon engineers have generated a project punch list which the contractor should complete before August 1st.

Regulatory Summary

- Monthly Discharge Monitoring reports for April, May and June were filed electronically on time for regulatory compliance. The 2016 2nd quarter short form was also submitted.

- Plant management staff reviewed the language in the proposed Wisconsin Pollution Discharge Elimination System (WPDES) discharge permit. Comments were forwarded to WDNR staff for their review and comment.

Laboratory Program

- Program objectives for regulatory and process sampling and analysis were met including results for the Discharge Monitoring Report (DMR) and Health Department pool testing program.

- Lab personnel completed the analysis of Double Blind Proficiency samples for laboratory recertification.

- Lab staff completed first – half compliance monitoring sampling and pretreatment monitoring sampling to comply with 2016 requirements. They also aided operations staff in preparing for chlorine residual testing during the disinfection season which started May 1st.

- Lab and operations staff are working cooperatively to implement a new probe for BOD analysis.

Appleton Wastewater Treatment Plant
Synopsis
April 2016 - June 2016

EFFLUENT QUALITY SUMMARY

April 2015 – June 2016

Effluent Parameter:	*CBOD mg/L*	*TSS mg/L*	*Total Phosphorus mg/L*	*Ammonia-Nitrogen mg/L*	*Chlorine Residual mg/L*	*Fecal Coliform Colonies/ 100 ml*	*pH s.u.*
WPDES LIMITS:	*25 mg/L monthly avg.*	*30 mg/L monthly avg.*	*1 mg/L monthly avg.*	*10 mg/L monthly avg.*	*0.037 mg/L daily limit*	*400 col/100ml geom. mean*	*6.0 - 9.0 daily limit*
2015							
April	3	4	0.11	0.51	NA	NA	7.0/7.2
May	3	2	0.19	0.31	<0.01	11	7.1/7.4
June	3	2	0.15	0.42	<0.01	17	7.1/7.6
July	3	2	0.26	0.20	<0.01	10	6.8/7.2
August	3	2	0.56	0.49	<0.01	12	7.0/7.4
September	3	2	0.33	0.69	<0.01	37	7.0/7.3
October	6	6	0.53	0.95	NA	NA	7.1/7.2
November	2	3	0.45	0.21	NA	NA	7.2/7.3
December	4	7	0.26	0.97	NA	NA	7.1/7.1
2016							
January	2	2	0.16	0.24	NA	NA	7.1/7.4
February	3	4	0.20	0.95	NA	NA	6.9/7.2
March	3	2	0.12	0.86	NA	NA	7.2/7.4
April	2	1	0.10	0.32	NA	NA	7.4/7.6
May	4	2	0.27	0.66	<0.01	2	7.0/7.4
June	3	2	0.28	0.75	<0.01	10	7.0/7.4

YEAR 2016 RECEIVING STATION REVENUE

Hauler	January	February	March	April	May	June	July	August	September	October	November	December	Y-T-D Total
A & B Leist Trucking	$ 118,437.13	$124,789.23	$ 140,298.77	$ 138,987.23	$ 104,492.67	$ 114,404.27							$ 741,409.30
Hickory Meadows	$ 25,223.73	$ 21,173.99	$ 42,742.19	$ 25,456.57	$ 13,815.17	$ 20,261.80							$ 148,673.45
Jeff Waldvogel Trkg.	$ 26,878.60	$ 25,936.68	$ 28,830.91	$ 26,536.01	$ 27,584.51	$ 29,965.62							$ 165,732.33
Waldvogel Trucking	$ 2,103.06	$ 2,944.38	$ 2,743.41	$ 3,093.38	$ 2,100.87	$ 2,039.84							$ 15,024.94
2016 Total	$ 172,642.52	$174,844.28	$ 214,615.28	$ 194,073.19	$ 147,993.22	$ 166,671.53	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,070,840.02
2015 Total *	$74,477.92	$59,745.63	$115,103.25	$125,573.11	$116,373.53	$145,077.58	$87,128.58	$147,240.34	$139,098.92	$106,381.19	$141,165.31	$ 209,311.16	$ 1,466,676.52

* Tier Rate Structure increase effective July 1, 2015.

Date: July 14, 2016
Copies: K. Rindt (via email)
C. Shaw (via email)
B. Kreski
Utilities Committee

Appleton Water Treatment Plant
Operations Synopsis
April, May, June 2016

Summary

The table below presents selected water production and quality performance metrics for the current and previous reporting periods. All compliance parameters met or exceeded regulatory requirements. During the quarter, average water production increased by about 7% and average raw water turbidity increased by about 70% consistent with seasonal conditions. The average electrical energy "wire-to-water" ratio for the quarter decreased by about 1% as UV disinfection operations were refined.

WATER PLANT PARAMETERS	Previous (Q1 2016)			Current (Q2 2016)		
	January	February	March	April	May	June
Water Treated						
Finished (million gallons)	263.1	250.3	262.3	262.9	284.3	286.3
Finished (million gallons / day)	8.5	8.6	8.5	8.8	9.2	9.5
Electrical Energy (WTF)						
Consumption (Megawatt-hours)	587.3	536.3	569.9	560.1	592.9	645.6
MWH / million gallons produced	2.23	2.14	2.17	2.13	2.09	2.25
Turbidity						
Lake (NTU)	10.4	2.9	8.0	17.1	8.3	10.6
Finished (NTU)	0.02	0.02	0.02	0.02	0.02	0.02
Finished (<0.15 NTU standard)	100%	100%	100%	100%	100%	100%
Water System Microbial Quality						
Total Coliform Samples	81	81	82	81	81	81
Compliance with Standard	100%	100%	100%	100%	100%	100%
Disinfectant Contact Time						
Minimum CT Ratio Required	1.0	1.0	1.0	1.0	1.0	1.0
Minimum CT Ratio Achieved	6.4	7.7	7.9	1.8	2.5	4.0
Hardness						
Lake Total / Calcium (mg/L)	209/119	217/117	204/118	200/109	187/108	185/100
Finished Total / Calcium (mg/L)	111/26	110/30	108/26	102/21	97/16	95/10
Finished Water Quality						
Total Chlorine (mg/L)	2.10	2.23	1.84	1.80	1.75	1.74
pH	8.5/8.8	8.7/8.9	8.5/8.8	8.5/8.8	8.3/8.8	8.3/9.0
Water Temperature (Degrees F)	33.6	34.3	36.9	43.5	58.1	71.1
Fluoride (mg/L)	0.70	0.70	0.70	0.68	0.67	0.69
Orthophosphate (mg/L)	0.69	0.69	0.67	0.70	0.74	0.72

Laboratory

- In support of plant operations, staff conducted analyses according to method protocols for pH, turbidity, alkalinity, hardness, free/total chlorine, ammonia, phosphorus, and fluoride.
- In support of distribution operations, staff performed required 81 monthly Coliform bacteria analyses along with heterotrophic plate count (HPC) testing.
- Staff collected and processed raw and finished water samples to comply with LT2 and DBPR2 sampling requirements. Support was provided to consecutive customers with shipping of DBPR2 samples.

Safety

- WTF Safety programs were maintained by completing scheduled safety inspections. There were no significant incidents to report.
- Water Treatment Facility staff completed annual respirator fit testing.

Operations

- Matthias Elevated Tower was cleaned and inspected during the quarter. No major maintenance items were identified and the tower was returned to service.
- The Air Relief Valves associated with the Lime Treatment Residuals force main were replaced in a joint effort with DPW and AFD.
- The backup generators were upgraded to include emissions control equipment bringing them into compliance with air emissions standards and WPPI stand-by generation contract requirements.

RUPIP

- Two UV Disinfection reactors were in continuous service during the quarter.

Softener Recoating Project

- #4 Softener recoating and new fiberglass weir installation was completed during the quarter.
- Work on #3 Softener is underway with completion expected in August 2016.

Glendale Water Tower

- Work progressed on schedule during the quarter as weather permitted.
- The bowl was raised into position during the quarter.
- Final completion is expected late summer 2016.

Staffing & Training

- All Water Treatment Facility vacancies have been filled.

WATER SUMMARY FOR JUNE 2016

Work done by Construction Maintenance				
	June 15	June 16	YTD 15	YTD 16
Hydrants repaired	10	3	33	12
Hydrants replaced	0	1	6	3
Hydrant leaks	0	0	1	1
Valves replaced	0	0	0	1
Valves tested & inspected	17	190	17	749
Valves Rebuilt	1	3	6	3
Valve boxes repaired	7	7	102	31
Curb boxes repaired	87	24	236	90
Curb boxes replaced	32	1	64	18
Lead or galvanized replaced	0	12	0	14
New services 1"	0	0	0	0
New services >1"	1	0	3	1
Water main breaks	4	4	46	25
Joint leaks repaired	0	0	1	0
Water quality	1	0	2	0
Service leaks (City side)	0	0	0	1
Work done by Meter Service Team				
	June 15	June 16	YTD 15	YTD 16
New accounts set with 3/4" or 1"	2	28	49	83
New accounts set with larger meter	0	1	1	2
Meters tested	743	873	3727	4807
Meters failed	15	32	15	325
Meters stalled	1	0	1	0
Service calls	140	0	814	642
Final readings	416	462	1758	1854
Read meters - no reading	0	5	0	5
New meters installed	748	900	3775	4965
Exception meters inspected	0	0	0	0
Exception meters removed	0	0	0	0
Service leaks found	0	1	2	24
Cross connection inspections	717	815	3548	4630

WATER MAIN BREAK/JOINT LEAK REPORT JUNE 2016

LOCATION	Work Order	TYPE OF PIPE	SIZE	YEAR	BREAK	ESTIMATED DURATION	ESTIMATED WATER LOSS IN GALLONS	ESTIMATED DOLLAR VALUE OF WATER REVENUE LOSS**
Melrose Avenue/ McDonald Street	211977	CIP	6"	1955	2" hole	3.25 hours	110,177	$670.19
1727 S. Matthias Street	212149	CIP	12"	1964	1/8" crack	3 hours	149,804	$911.24
Melrose Avenue/ McDonald Street	212178	CIP	6"	1955	5" hole	2 hours	453,017	$2,755.65
608 E. Franklin Street	212349	CIP	6"	1925	2"x10" hole	3.5 hours	1,301,628	$7,917.66
								$0.00
								$0.00
								$0.00

**Water loss is calculated at the residential rate of $4.55 per 100 cubic feet.

WATER MAIN BREAK/JOINT LEAK DATA LOG JUNE 2016

Leak Location	Arterial, Collector, Freeway, Local	Type of Street Concrete/Ashpalt	Major Break Minor Break	Catch Basin Draining Yes/No	Date/Time	Comments
Melrose Avenue/ McDonald Street	Local	Asphalt	Major	Yes 45' away	6/17/2016 5:30 p.m. Friday	Fixed right away due to road damage.
1727 S. Matthias Street	Collector	Concrete	Minor	Yes 200' away	6/23/2016 12:30 p.m. Thursday	Fixed right away due to water loss and property damage.
Melrose Avenue/ McDonald Street	Local	Asphalt	Major	Yes 30' away	6/24/2016 5:30 a.m. Friday	Fixed right away due to water loss and potential property damage.
608 E. Franklin Street	Collector	Concrete	Major	Yes 160' away	6/29/2016 12:00 a.m. Wednesday	Fixed right away due to water loss and property damage.