



# City of Appleton

100 North Appleton Street  
Appleton, WI 54911-4799  
[www.appleton.org](http://www.appleton.org)

## Meeting Agenda - Final Utilities Committee

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Tuesday, April 26, 2016

5:30 PM

Council Chambers, 6th Floor

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1. Call meeting to order

2. Roll call of membership

3. Approval of minutes from previous meeting

[16-629](#)

Approval of the April 12, 2016 Utilities Committee Meeting minutes.

**Attachments:** [April 12, 2016 Utilities Committee Meeting Minutes.pdf](#)

4. **Public Hearings/Apearances**

5. **Action Items**

[16-627](#)

Amend 2015E Stormwater Consulting Services Contract for Spartan Drive Culvert and Stormwater Practices Preliminary Design and Lift Station Stormwater Management Plan with Brown & Caldwell in an amount not to exceed \$4,235.

**Attachments:** [2015 Spartan Ave Memo BC third Ammend 2016.pdf](#)

6. **Information Items**

[16-631](#)

Confirm the following:

- Elect Vice-Chair and Secretary
- Designate a "Contact Person" who can answer specific questions about agenda items
- Meeting date and time

[16-628](#)

Award Land Appraisal Consultant Contract to Steiro Appraisal Service, Inc. in an amount not to exceed \$16,950. This item will be an Action Item at the Municipal Services Committee meeting.

**Attachments:** [Land Appraisal Consultant Contract Steiro Appraisal Service.pdf](#)

16-630

Monthly Reports for January, February, March 2016

- Wastewater Treatment Plant Synopsis and Receiving Station Revenue
- Water Treatment Plant Synopsis
- Water Distribution and Meter Team Monthly Report - March

**Attachments:** [2016 Q1 AWWTP Synopsis.pdf](#)

[2016 Q1 AWTF Synopsis.pdf](#)

[Water Team Reports March.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

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## Meeting Minutes Utilities Committee

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Tuesday, April 12, 2016

5:30 PM

Council Chambers, 6th Floor

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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 - Alderperson Jirschele, Alderperson Martin, Alderperson Dannecker, Alderperson Baranowski and Alderperson Meltzer

3. Approval of minutes from previous meeting

[16-531](#)

Approval of the March 22, 2016 Utilities Committee Meeting minutes.

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

**Aye:** 5 - Alderperson Jirschele, Alderperson Martin, Alderperson Dannecker, Alderperson Baranowski and Alderperson Meltzer

4. Public Hearings/Appealances

5. Action Items

[16-529](#)

Approve amendment to Municipal Code Chapter 20, Section 20-237(d), relating to how the Stormwater billing amount for impervious area is updated.

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

**Aye:** 5 - Alderperson Jirschele, Alderperson Martin, Alderperson Dannecker, Alderperson Baranowski and Alderperson Meltzer

[16-572](#)

Anticipated Award for Unit F-16, Sewer Cleaning and Televising.

*Motion made by Alderperson Baranowski, seconded by Alderperson Martin to amend the Award for Unit F-16, Sewer Cleaning and Televising to Green Bay Pipe and TV, LLC, in an amount not to exceed \$247,500.00. Motion to Amend approved 5/0.*

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

**Aye:** 5 - Alderperson Jirschele, Alderperson Martin, Alderperson Dannecker, Alderperson Baranowski and Alderperson Meltzer

## 6. Information Items

[16-539](#) 2015 WDNR Green Tier Report.

*Discussed.*

[16-530](#) Approve 2016 Budget Adjustment for Lawrence Street Watermain Project. This item will be an Action Item at the Finance Committee.

*Discussed.*

[16-538](#) Second Amendment to the scope of services for the 2015E Stormwater Consulting Services Contract for Spartan Drive Culvert and Stormwater Practices Preliminary Design and Lift Station Stormwater Management Plan with Brown & Caldwell with no cost change.

*Discussed.*

## 7. Adjournment

**Alderperson Baranowski moved, seconded by Alderperson Martin, that the Utilities Committee meeting be adjourned at 5:50 p.m. Roll Call. Motion carried by the following vote:**

**Aye:** 5 - Alderperson Jirschele, Alderperson Martin, Alderperson Dannecker, Alderperson Baranowski and Alderperson Meltzer

## Department of Public Works – Engineering Division

### MEMO

**TO:** Utilities Committee

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

**DATE:** April 20, 2016

**RE:** Amend 2015E Stormwater Consulting Services Contract for Spartan Drive Culvert and Stormwater Practices Preliminary Design and Lift Station Stormwater Management Plan with Brown & Caldwell in an amount not to exceed \$4,235.

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The Department of Public Works is requesting to amend the scope of services for the 2015E Stormwater Consulting Services Contract with Brown & Caldwell for Spartan Drive Culvert and Stormwater Practices Preliminary Design and Lift Station Stormwater Management Plan to Brown & Caldwell in an amount not to exceed \$4,235. If the amendment is approved, the total contract amount will be \$189,695. After this amendment, \$395,500 will remain in the 2016 stormwater services consulting budget.

In September 2015, a contract with Brown & Caldwell was approved to perform 60% preliminary engineering and design, including preparation of state and federal permits, of three stormwater practices and a box culvert to cross Bear Creek in the Spartan Drive area and prepare the Stormwater Management Plan for the Spartan Drive sanitary sewer lift station. The contract addressed Spartan Drive from Richmond Street (STH 47) to Haymeadow Avenue and Haymeadow Avenue from the existing south terminus to Spartan Drive.

In January 2016, the Utilities Committee and Common Council approved the first amendment to the contract to add 60% preliminary engineering and design of two additional stormwater practices between Richmond Street and Haymeadow Avenue and begin the state and federal permitting process. This amendment also included preparing the WDNR Ch. 30 permit for the Spartan Drive sanitary lift station.

On April 12, 2016 the Utilities Committee reviewed the second amendment to the contract, reallocating the contract amount to perform preliminary engineering on the additional stormwater practices and stream crossing required to construct Spartan Drive between Haymeadow Avenue and Meade Street, with no change in the contract amount.

The scope of work for this third amendment is obtaining the field survey needed to complete the preliminary engineering of the additional practices identified in the second contract amendment. This survey is needed to perform accurate computer modeling for the structure crossing Apple Creek and the additional stormwater practices for Spartan Drive east of Haymeadow Avenue. Aerial topography is limited due to vegetative cover, and as little as one foot of difference between actual elevations and aerial topography can impact the computer modeling necessary for this design. At this time, City Survey Crews have a full workload with this year's paving and utility reconstruction projects and are unable to obtain this additional field survey in the Spartan Drive area in time to keep the preliminary engineering work moving forward. It is also important that this survey be obtained before farming practices and crops prevent it.

Therefore, the Department of Public Works recommends approving the third amendment to the 2015E Stormwater Consulting Services Contract with Brown & Caldwell for Spartan Drive Culvert and Stormwater Practices Preliminary Design and Lift Station Stormwater Management Plan to Brown & Caldwell in an amount not to exceed \$4,235.



## Department of Public Works – Engineering Division

### MEMO

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**TO:** Municipal Services Committee

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

**DATE:** April 15, 2016

**SUBJECT:** Award Land Appraisal Consultant Contract to Steiro Appraisal Service, Inc. in an amount not to exceed \$16,950.

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The Department of Public Works requests approval of the Land Appraisal Consultant Contract to Steiro Appraisal Service, Inc. in an amount not to exceed \$16,950.

DPW anticipates property interests will be acquired for the following projects in 2016 and 2017:

- Proposed CTH JJ Reconstruction and Lightning Drive Construction
- Proposed Leona Street Pond

DPW requested proposals from five qualified appraisal firms. DPW received qualified proposals from Becher-Hoppe and Steiro Appraisal. The Becher-Hoppe proposal was \$26,690. The Steiro Appraisal proposal was \$16,950. Both proposals are from qualified firms and meet the project requirements, therefore:

The Department of Public Works requests approval of the Land Appraisal Consultant Contract to Steiro Appraisal Service, Inc. in an amount not to exceed \$16,950.

**Appleton Wastewater Treatment Plant**  
**Synopsis**  
**January 2016 - March 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 13.47 Million Gallons (MG) of primary digested sludge to biosolids.

**Table 1 – Wastewater Influent / Effluent Treatment Data**

Characteristic	January 2016			February 2016			March 2016		
	Influent		Percent	Influent		Percent	Influent		Percent
<b>AWWTP Flows (MG)</b>									
Industrial Flow	57.5		13.9%	53.7		14.7%	55.6		8.4%
Domestic Flow	355.5		86.1%	311.1		85.3%	606.7		91.6%
Total Flow	413.0			364.8			662.3		
<b>Pollutant Loadings (lbs)</b>	Influent	Effluent	Removal	Influent	Effluent	Removal	Influent	Effluent	Removal
CBOD	830,360	5,067	99.4%	810,788	10,093	98.8%	957,756	15,392	98.4%
TSS	1,396,457	7,298	99.5%	1,432,875	13,373	99.1%	1,486,378	12,053	99.2%
Phosphorous	14,718	534	96.4%	14,846	593	96.0%	15,632	693	95.6%
Ammonia	59,523	780	98.7%	56,655	2,986	94.7%	49,713	5,269	89.4%

**Work Completed:**

- 26,730 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 \$19,250. As part of the Phosphorous Treatment Optimization study, 10,725 gallons of ferric chloride was purchased and fed at a cost \$7,720 in an effort to evaluate chemical removal strategies.
- Monthly effluent ammonia removal averaged 94.3% through the three month period. The plant average effluent concentration for the three month period was 0.68 mg/L. This is in compliance with the ammonia limit for the time period.

**Work in Progress:**

- Digester Improvements Project:** A pre-bid meeting for prospective contractors was held in early January. AWWTP staff and McMahon engineers reviewed the resultant bids and selected August Winter and Sons as the general contractor for the job. A pre-construction meeting was held in early March, and work was started in April.
- Midway Road Lift Station Improvements Project:** This project has been delayed for a year due to location concerns for a new auxiliary power generator. It is anticipated that further studies will be conducted to arrive at a suitable generator location, and the project will move forward in 2017.

**Appleton Wastewater Treatment Plant**  
**Synopsis**  
**January 2016 - March 2016**

- **Scarlet Oak Lift Station Improvement Project:** The project improvements work was publically bid in March and awarded to August Winter and Sons in early April. Work to commence in late April or early May following contract execution.

**Regulatory Summary**

- Monthly Discharge Monitoring reports for January, February and March were filed electronically on time for regulatory compliance. The 2016 1<sup>st</sup> quarter short form was also submitted.

**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 will be conducting compliance monitoring sampling and pretreatment monitoring sampling to comply with 2016 requirements. They will also aid operations staff in preparing for chlorine residual testing during the upcoming disinfection season.
- Lab and operations staff successfully completed sample collection events for Whole Effluent Toxicity (WET) testing. Staff is also involved in pretreatment monitoring and WPDES permit renewal sampling and testing.



**Appleton Wastewater Treatment Plant**  
**Synopsis**  
**January 2016 - March 2016**

**EFFLUENT QUALITY SUMMARY**

**January 2015 – March 2016**

<i>Effluent Parameter:</i>	<i>CBOD mg/L</i>	<i>TSS mg/L</i>	<i>Total Phosphorus mg/L</i>	<i>Ammonia- Nitrogen mg/L</i>	<i>Chlorine Residual mg/L</i>	<i>Fecal Coliform Colonies/ 100 ml</i>	<i>pH s.u.</i>
<i>WPDES LIMITS:</i>	<i>25 mg/L monthly avg.</i>	<i>30 mg/L monthly avg.</i>	<i>1 mg/L monthly avg.</i>	<i>10 mg/L monthly avg.</i>	<i>0.037 mg/L daily limit</i>	<i>400 col/100ml geom. mean</i>	<i>6.0 - 9.0 daily limit</i>

**2015**

January	5	5	0.35	5.25	NA	NA	7.0/7.2
February	3	4	0.25	0.90	NA	NA	7.2/7.3
March	4	3	0.18	1.02	NA	NA	7.1/7.3
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

# 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										\$ 383,525.13
Hickory Meadows	\$ 25,223.73	\$ 21,173.99	\$ 33,817.04										\$ 80,214.76
Jeff Waldvogel Trkg.	\$ 26,878.60	\$ 25,936.68	\$ 28,830.91										\$ 81,646.19
Waldvogel Trucking	\$ 2,103.06	\$ 2,944.38	\$ 2,743.41										\$ 7,790.85
2016 Total	\$ 172,642.52	\$174,844.28	\$ 205,690.13	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 553,176.93
2015 Total *	\$74,477.92	\$59,745.63	\$115,103.25	\$123,573.11	\$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: April 13, 2016  
Copies: K. Rindt (via email)  
C. Shaw (via email)  
B. Kreski  
Utilities Committee

# Appleton Water Treatment Plant Operations Synopsis January, February, March 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 remained virtually unchanged from the previous quarter consistent with a winter season demand profile. Average raw water turbidity decreased by about 80% consistent with Lake Winnebago ice-over. The average electrical energy “wire-to-water” ratio for the quarter increased by 2.8% due to concurrent operation of UV disinfection equipment and ultrafiltration.

WATER PLANT PARAMETERS	Previous (Q4 2015)			Current (Q1 2016)		
	October	November	December	January	February	March
<b>Water Treated</b>						
Finished (million gallons)	266	250.6	255.3	263.1	250.3	262.3
Finished (million gallons / day)	8.6	8.4	8.2	8.5	8.6	8.5
<b>Electrical Energy (WTF)</b>						
Consumption (Megawatt-hours)	540.3	530.6	563.1	587.3	536.3	569.9
MWH / million gallons produced	2.03	2.12	2.21	2.23	2.14	2.17
<b>Turbidity</b>						
Lake (NTU)	30.9	35.3	41.3	10.4	2.9	8.0
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%
<b>Water System Microbial Quality</b>						
Total Coliform Samples	81	81	82	81	81	81
Compliance with Standard	100%	100%	100%	100%	100%	100%
<b>Disinfectant Contact Time</b>						
Minimum CT Ratio Required	1.0	1.0	1.0	1.0	1.0	1.0
Minimum CT Ratio Achieved	7.4	5.8	8.7	6.4	7.7	7.9
<b>Hardness</b>						
Lake Total / Calcium (mg/L)	195/110	203/110	201/112	209/119	217/117	204/118
Finished Total / Calcium (mg/L)	97/12	103/17	112/17	111/26	110/30	108/26
<b>Finished Water Quality</b>						
Total Chlorine (mg/L)	2.26	2.35	2.32	2.10	2.23	1.84
pH	8.5/8.8	8.5/8.7	8.6/8.9	8.5/8.8	8.7/8.9	8.5/8.8
Water Temperature (Degrees F)	56.5	45.5	36.1	33.6	34.3	36.9
Fluoride (mg/L)	0.52	0.69	0.72	0.70	0.70	0.70
Orthophosphate (mg/L)	0.72	0.70	0.66	0.69	0.69	0.67

## 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 81-82 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 and analysis requirements.

### **Safety**

- WTF Safety programs were maintained by completing scheduled safety inspections. There were no significant incidents to report.
- Annual safety, CPR, and first aid training sessions were held.

### **Operations**

- #3 Sodium Hypochlorite bulk tank was returned to service following installation of a horizontal access hatch and replacement of the interior veil. All sodium hypochlorite bulk tanks have been rehabilitated.

### **RUPIP**

- Two UV Disinfection reactors have been in continuous service during the quarter.
- The design engineer provided Operator training during the previous quarter.

### **Softener Recoating Project**

- #4 Softener recoating and new fiberglass weir installation was nearly complete at the end of the quarter.
- Work on #3 Softener will begin in the second quarter with completion expected in July 2016.

### **Glendale Water Tower**

- Work progressed on schedule during the quarter as weather permitted.
- Painting and bowl raising are expected in April.
- Final completion is expected late summer 2016.

### **Staffing & Training**

- All Water Treatment Facility vacancies have been filled.

## WATER SUMMARY FOR MARCH 2016

<b>Work done by Construction Maintenance</b>				
	<u>Mar 15</u>	<u>Mar 16</u>	<u>YTD 15</u>	<u>YTD 16</u>
Hydrants repaired	8	3	16	4
Hydrants replaced	3	0	4	2
Hydrant leaks	1	0	1	1
Valves replaced	0	0	0	0
Valves tested & inspected	0	559	0	559
Valves Rebuilt	1	0	3	0
Valve boxes repaired	26	12	31	18
Curb boxes repaired	25	8	47	14
Curb boxes replaced	8	3	20	9
Lead or galvanized replaced	0	0	0	0
New services 1"	0	0	0	0
New services >1"	0	1	1	1
Water main breaks	9	0	38	16
Joint leaks repaired	0	0	1	0
Water quality	1	0	1	0
Service leaks (City side)	0	0	0	1
<b>Work done by Meter Service Team</b>				
	<u>Mar 15</u>	<u>Mar 16</u>	<u>YTD 15</u>	<u>YTD 16</u>
New accounts set with 3/4" or 1"	15	12	24	20
New accounts set with larger meter	1	0	1	1
Meters tested	710	932	1675	2332
Meters failed	0	74	0	223
Meters stalled	0	0	0	0
Service calls	160	160	366	417
Final readings	303	268	724	702
Read meters - no reading	0	0	0	0
New meters installed	653	960	1653	2396
Exception meters inspected	0	0	0	0
Exception meters removed	0	0	0	0
Service leaks found	0	7	0	16
Cross connection inspections	636	879	1536	2237