



OFFICIAL NOTICE AND AGENDA
of a meeting of a City Board, Commission, Department
Committee, Agency, Corporation, Quasi-Municipal
Corporation, or Sub-unit thereof.

A Meeting of Wausau Water Works Commission will be held in the
Council Chambers, 1st Floor City Hall, Wausau, WI 54403 at 1:30 p.m. on
Tuesday, November 10, 2020.

AGENDA

1. Approve Minutes of October 6, 2020 Meeting.
2. Director's Report on Utility Operations
 - Shannon Lane Accepted Water Distribution Supervisor Position.
 - Accepted Offer of Hire for Water Distribution Maintainer Position.
 - Interviews for Senior Plant Operations Technician Position.
 - Interviews for Administrative Assistant III Position.
 - DWTF Construction Update.
 - Wastewater Plant on Track to Meet Permit Limits.
 - Sewer Main Backup on October 30th.
 - WWTF Plant Upgrade.
 - Proposals to Assess Interceptor Sewer.
 - Greg Cina – New Hire for Sewer Maintainer.
 - Easements for Industrial Park Forcemain Access Vaults.
 - Utility Financial Reports for September.
3. Discussion and Possible Action on Approving Award of the Recommended Solar Proposal.
4. Discussion on the Timeline for the Wauter Savvy Campaign.
5. Discussion and Possible Action for the Approval of Sole Source Purchases of ClarIon 415 from Chemtrade Chemicals for 2021.
6. Discussion and Possible Action on the Purchase of Full Size Half Ton Pickup.
(Quotes were opened at the Oct. 27th Board of Public Works Meeting. Staff is reviewing quotes and will provide final tabulation at meeting.)
7. Discussion and Possible Action on the Purchase of a Long Wheelbase High Roof Van.
(Quotes were opened at the Oct. 27th Board of Public Works Meeting. Staff is reviewing quotes and will provide final tabulation at meeting.)

Adjourn.

**Next meeting scheduled for December 1, 2020.*

THIS NOTICE POSTED AT CITY HALL AND EMAILED TO CITY PAGES AND DAILY HERALD: November 6, 2020 at 10:50 am.

Due to the COVID-19 pandemic, this meeting is being held in person and via teleconference. Members of the media and the public may attend in person, subject to the social distancing rules of maintaining at least 6 feet apart from other individuals, or by calling 1-408-418-9388. The Access Code is 146 402 5812 and the password is gRkcrsd33D9. Individuals appearing in person will either be seated in the Council Chambers or an overflow room, subject to the social distancing rules. Space available will be on a first come, first served basis. All public participants' phones will be muted during the meeting. Members of the public who do not wish to appear in person may view the meeting live over the internet at <https://tinyurl.com/wausaucitycouncil> on the City of Wausau's YouTube Channel https://www.youtube.com/channel/UC-Nigpdco_i8sq5FbbJD_aw, live by cable TV, Channel 981, and a video is available in its entirety and can be accessed at <https://waam.viebit.com>. Any person wishing to offer public comment who does not appear in person to do so, may e-mail michelle.weasler@ci.wausau.wi.us with "Water Commission public comment" in the subject line prior to the meeting start. All public comment, either by email or in person, will be limited to items on the agenda at this time. The messages related to agenda items received prior to the start of the meeting will be provided to the Chair.

In accordance with the requirements of Title II of the Americans with Disabilities Act of 1990 (ADA), the City of Wausau will not discriminate against qualified individuals with disabilities on the basis of disability in its services, programs or activities. If you need assistance or reasonable accommodations in participating in this meeting or event due to a disability as defined under the ADA, please call the ADA Coordinator at (715) 261-6590 or ADAServices@ci.wausau.wi.us to discuss your accessibility needs. We ask your request be provided a minimum of 72 hours before the scheduled event or meeting. If a request is made less than 72 hours before the event the City of Wausau will make a good faith effort to accommodate your request.



Minutes of October 6, 2020

A meeting of the Wausau Water Works Commission was called to order at 1:30 p.m. in City Hall on October 6, 2020. In compliance with Wisconsin Statutes, this meeting was posted and receipted for by the Wausau Daily Herald on October 1, 2020.

Members present: President Rosenberg, Commissioners Force, Robinson, Herbst, Gehin.

Others present: Eric Lindman, Dave Erickson, Scott Boers, Valerie Swanborg, Gerald Mortenson/G. Morty & the Makers, Steve Miller.

1) Approve Minutes of September 22, 2020 Meeting.

Robinson asked that agenda item #6 be corrected. The language that was to be inserted into the resolution should've been "would be to apply for and administer the principle forgiveness" not "therefore be it resolved" as indicated in the minutes.

Force had a question on the RFP for Solar. Has that occurred? Lindman advised that is out and we should receive proposals on October 29th.

Herbst moved to approve the minutes of the September 22, 2020 meeting. Seconded by Robinson. Motion to approve the minutes with the correction to the wording for agenda item #6 carried 5-0.

2) Director's Report on Utility Operations.

Force asked if the amount we've requested for the LSL replacements in 2021 was \$450,000.00. Lindman confirmed it was \$450,000.00 with an average cost of \$4,500.00 per property. We requested funding for 100 services.

Director's Report placed on file.

3) Presentation on the Water Conservation Campaign.

Force advised that he, Boers and Miller have met with Gerald Mortenson 2-3 times since the commission authorized this project. They've look at a number of logo and message ideas. The presentation is the one that their group decided was the best.

Presentation is attached.

Gehin suggested that for the bathroom maybe there should be a tagline about listening to unusual noises such as a toilet running.

Force advised that what Mortenson has put together are just examples of 3 areas. We can certainly add to this and continue to generate information that could be put out in a creative form.

Robinson asked about rain barrels. Force advised that it would need to be a separate project because we will need to find a barrel provider and evaluate costs.

Force advised the next step will be putting together a campaign strategy.

4) Discussion on Water Demand during COVID-19 for Wausau.

Lindman attended the AWWA and there was a lot of talk from municipalities around the country about reduced water usage during the spring. They anticipate this will continue going into fall and winter as well. He thought it would be a good idea to look at usage. We did increase rates so it's difficult to compare revenue to previous years as it relates to usage. The usage has stayed pretty steady for Wausau and we did not see a heavy impact. We will continue to monitor this as we move into fall. Other municipalities were seeing an increase in residential and a slight drop on the commercial side. It may be that Wausau isn't as large as those municipalities so we just haven't seen a drastic impact.

5) Discussion and Possible Action on Revisions to the Five Year Capital Plan.

Lindman explained that when the commission approved the 2020 capital plan, we were going off of the street projects that were approved last year by the Capital Improvement Street Maintenance committee. The 5 year capital plan for streets completely changed since then. We went back to the capital plan and revised what those streets would be. There is an impact to our budget so the revised numbers are in need of the commission's approval, mainly on those street projects.

Motion by Gehin to approve the changes to the 5 year capital plan. Seconded by Herbst.

Robinson noticed that Fulton Street, from 1st St to 6th St is scheduled for 2023 which brings into question the disruption to the neighborhood as McIndoe will be shut down one year and Fulton the next. Is there thought given to sequencing projects to minimize disruption? Lindman advised that there was question on Fulton, whether they were going to do it sooner rather than later. Currently they don't have funding for it but it's anticipated at some point it would be funded out of the TID. Aspirus has projected the opening of their clinic in spring of 2022 so we anticipate 2023 for Fulton Street. This is tentative and they do pay attention to sequencing.

Force asked how these changes develop. Lindman advised that the new Council had other priorities and wanted different streets done.

Motion to accept the revisions to the 5 year capital plan carried 5-0.

Adjourn.

There being no further business to discuss, motion was made by Robinson to adjourn the meeting. Seconded by Herbst.



MEMORANDUM

TO: President Rosenberg
Commissioner Herbst
Commissioner Force
Commissioner Gehin
Commissioner Robinson

FROM: Eric Lindman, P.E.
Director of Public Works & Utilities

SUBJECT: Director's Report – October 2020

WATER DIVISION

1. The Utility is happy to announce that Shannon Lane has accepted the Water Distribution Supervisor Position with the Water Department. With over 24 years of water and sewer experience, he has been and fortunately will continue to be, a great asset to the Utility.
2. We have an accepted offer of hire on our Water Distribution Maintainer position which was vacated August 6th.
3. Interviews for the Senior Plant Operations Technician position were held Oct. 22nd.
4. Staff will be having interviews for the Admin III position November 11th.
5. Construction update for the DWTF, provided by Becher-Hoppe.

WASTEWATER DIVISION

1. The wastewater plant is on track to meet permit limits for October. We continue to have high effluent phosphorus results in part due to the construction project.
2. We had a sewer main backup on the evening of October 30th which caused wastewater to seep from a manhole at the corner of 1st Avenue and Bridge Street. The sewer main was surcharged from that intersection east to the Bridge Street bridge. We were fortunate that we did not have any basement backups. The incident was reported to the DNR and the Notice of Noncompliance response is included in the packet.

3. The wastewater plant upgrade continues to move along rapidly. The most recent progress report from Donohue is included in the packet.
4. The Engineering Department sent out a request for proposals to assess the condition of the interceptor sewer in which we had a small section collapse last August. The work will include cleaning and televising.
5. Greg Cina started as a Sewer Maintainer on October 19, 2020 and we are very happy to have him onboard. We are working to fill three remaining open positions on our sewer collection crew.
6. We have made progress in obtaining easements to allow construction of the Industrial Park Forcemain access vaults. The railroad has come up with some additional requirements which may prevent us from getting the construction done this fall.

Utility Financial Reports for September

Wausau Drinking Water Treatment Facility

Project Status

November 5, 2020

The Drinking Water Treatment Facility project continues to be on schedule and within budget.

Nearly all below-ground concrete work – footings, basement walls, tank walls -has been completed and the basement area storage tanks are in the process of being leak tested. After the tests are successfully completed the walls will be backfilled. Many of the concrete floors have been completed and work on stairwells and the elevator shaft continues. Installation of electrical conduits, pipe supports, and plumbing is also ongoing.

In November, masonry wall construction will begin in earnest and crews will continue to pour concrete for structural columns, gravity filter walls and the series of tanks used for water treatment prior to filtration. All concrete work in cold weather is being completed using appropriate protections including covering areas with plastic and temporary heat. Piping crews are scheduled to begin installing underground piping next to the buildings after Thanksgiving.

The general intent is to complete walls and set the pre-cast roof planks in December. Temporary heat will then be installed and work will then focus on electrical work, process piping, and equipment installation throughout the winter.







November 5, 2020

David Erickson, Wastewater Superintendent
407 Grant Street
Wausau, WI 54403

Subject: **NOTICE OF NONCOMPLIANCE**
WPDES Permit #WI-0025739-09-1
Sanitary Sewer Overflow

Mr. Erickson:

The purpose of this letter is to issue a Notice Of Noncompliance (NON) for violations of the above referenced WPDES Permit. **On October 31, 2020 a sanitary sewer overflow (SSO) occurred reportedly due to a blocked sanitary sewer line at the intersection of Bridge and N 1st Avenue in the City of Wausau. SSOs are prohibited per section 6.3.1.1, WPDES Permit.**

Summary of Noncompliance:

Section 6.3.1.1. Overflows Prohibited

Any overflow or discharge or wastewater from the sewage collection system or at the sewage treatment facility, other than from permitted outfalls, is prohibited.

The Department of Natural Resources (department) realizes the COVID-19 public health emergency is affecting daily operations for many businesses and municipalities and understands the difficulty in upholding typical sewer line maintenance schedules. The department has kept this in mind in assessing the appropriate enforcement response. Based on the supporting documentation submitted alongside the SSO form, the department believes the permittees immediate response to the overflow is sufficient and compliant with section 6.3.1, WPDES permit.

Requested Actions:

Wausau is currently out of compliance with its WPDES Permit **and will remain in noncompliance** until all requirements of the permit are met to achieve compliance, the department requests the following actions:

- Ensure collection system cleaning and maintenance activities are pursuant of the permittee's CMOM. If the current activities are aligned with the CMOM, consider increasing the maintenance and cleaning schedule to be in compliance with Section 6.3.3 WPDES permit.

Please provide a written response to the department by December 5, 2020 addressing each of the required action items. Please be advised that if violations continue or if corrective action is not achieved, that the department may pursue further enforcement action. Those actions may ultimately result in a referral to the Department of Justice with potential penalties per s. 283.89, Wis. Stats.

If you have any questions or comments, please contact me at nicholas.lindstrom@wisconsin.gov or (715) 492-1787. I appreciate your cooperation in protecting our natural resources.

Sincerely,

Nicholas Lindstrom, WIDNR-Wastewater compliance engineer

CC (email): Geisa Thielen, WIDNR- Regional Wastewater Program Supervisor
Eric Lindman, City of Wausau- Director of Public Works

Project Status Report



Wastewater Treatment Facility Improvements Project – Engineer During Construction

City of Wausau, Wisconsin

Donohue Project Number 13229

Period | September 6 – October 3, 2020

Invoice 40

Engineer Activities This Period

- Construction administration services related to technical review of contractor shop drawings, responding to contract interpretation questions (RFIs), initiating requests for proposals (RFPs), attending weekly and monthly construction progress meetings, processing work change directives to the contract, and contractor monthly payment requests.
- Prepared and submitted Clean Water Fund disbursement request and provided CWF administration.
- Provided full time Resident Project Representative (RPR).
- Provided part time on-site observation of selected work by Becher-Hoppe.
- Finalized Change Order 2 which reconciled pre-contract award value engineering cost reduction recommendations proposed by the Contractor.
- Developing Change Order 3 which provides standard overhead coiling door operators in lieu of explosion proof door operators in non-rated areas and other credit items that were not reconciled in Change Order 2.
- Prepared Request for Proposals and Work Change Directives for unforeseen and change of conditions.
- Resolved the disposal process of the historical landfill material discovered during the excavation of various structure foundations. Worked extensively with the WDNR and County Landfill representatives to develop a mutually acceptable

Engineer Near-Term Activities

- As the project proceeds, the engineer will continue to provide construction administration services including the technical review of shop drawings, responding to RFIs, preparing RFPs, attending weekly and monthly construction progress meetings, processing change orders, reviewing contractor payment requests, and providing full-time on-site resident engineering services.
- Finalize Change Order 3.

Contractor Progress to Date

- The Notice to Proceed with Construction was issued to the Contractor on June 18, 2020 and established the final completion date as June 3, 2023.
- Construction on the improvements to the Wastewater Treatment Facility (WWTF) began on July 6, 2020.

Wastewater Treatment Facility Improvements Project – Engineer During Construction

City of Wausau, Wisconsin

Donohue Project Number 13229

Period | September 6 – October 3, 2020

Invoice 40

- **Structure 100 (Main Building):**
 - Interior reroute of roof storm drains complete and connected to new 15-inch storm sewer that runs between Structure 110 and Structure 700.
 - Storm sewer temporarily routed to drain to catch basin at east end of Adrian Street.
 - Gravity Belt Thickener (GBT) drain line reroute piping in place to allow for GBT drain to be collected in reused chemical feed tank that is set up to pump GBT effluent to Structure 200 (Grit Chamber).
 - Miron is setting up for additional demolition of concrete in garage areas.
- **Structure 120 (Administration Building)** concrete masonry unit (CMU) walls are completed and structure is ready for precast and exterior split face CMUs. Under slab piping and conduit runs complete and slab base brought up to subgrade elevation. Van Ert Electric is running in-slab conduit for electrical and communication. August Winter & Sons, Inc. has placed in-slab floor drains. Integrity placed new 6-inch diameter water main valve for Structure 120 tie-in for fire protection and potable water. Structure 120 sanitary sewer line connected to sanitary in Adrian Street. Temporary power for structure getting setup for future tie-in to building power.
- **Structure 404 (Junction Structure):** tie-in to Structure 350 (Primary Effluent Channel) is complete.
- **Structure 350 (Primary Effluent Channel):** First section of base slab and walls completed up to south side of Structure 330 (Primary Clarifier 3) and Structure 340 (Primary Clarifier 4). Structure 340 (Primary Clarifier 4) drained and cleaned by City to prep for future tie-in of these to structures to Structure 350 (Primary Effluent Channel). Integrity placed the 36-inch diameter ductile iron bypass line from Structure 404 (Junction Structure) to the Effluent Channel north of Building 600.
- **Tunnel 900:** overnight September 23-24 contractors along with City personnel disconnected Primary Clarifiers #3 and #4 from the existing Primary Effluent pipe in Tunnel 900. This is the first stage in the connection and restart of these two Primary Clarifiers to the new Structure 350 (Primary Effluent Channel) and Structure 404 (Junction Structure).
- **Yard Piping:** Integrity has placed the secondary scum line from Structure 200 (Grit Building) to just south of existing Structure 400 (Activated Sludge Building). Additionally, they have been installing the lines between Structure 600 (Effluent Building) and Structure

Project Status Report



Wastewater Treatment Facility Improvements Project – Engineer During Construction

City of Wausau, Wisconsin

Donohue Project Number 13229

Period | September 6 – October 3, 2020

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610 (Chemical Building) and running them out as far as possible, these lines include the chemical lines SHC, PRC and MHS, W2, W3.

- Building 610 (Chemical Building) – All base slab and foundation walls completed for structure. The west side stoops are also completed up to grade. Van Ert has placed the electrical conduit in the subgrade for the electrical room. They are preparing for the electrical duct bank that runs between Structure 600 (Effluent Building) and Structure 610 (Chemical Building). Miron has poured the first interior floor slab. Currently the mason has mobilized from Structure 120 (Administration Building) to Structure 610 (Chemical Building).
- Structure 770 (Solids Building) and Structure 910 (Tunnel 1): Precision has excavated to subgrade for the west half of Structure 770. Additionally, they have excavated Tunnel 1 Structure 770 up to the exterior of existing Structure 700 (Digester Building), to get ready for the slab and wall pours for Tunnel 1. The first mud slab pour for the southwest corner of Structure 770 has been completed. Miron and Wisconsin Rebar are getting ready for the foundation slab pour. August Winters has placed the in-slab sanitary piping and venting. The large 300-ton crane has moved to allow the crane to be utilized for the construction of Structure 770.
- Spoils stockpile and removal from site has commenced to the Marathon County Landfill.
- Construction progress photographs are located at the end of this progress report.

Construction Schedule

- The Contractor has developed a detailed construction schedule that defines a timeline for the orderly completion of the work and a breakdown by structure of the work to be done in the various work areas. We are presently reviewing the timeline and work tasks against the various constraints identified in the project manual to confirm that the contractor has adequately addressed them and accounted for shutdown time limits.

Project Status Report



Wastewater Treatment Facility Improvements Project – Engineer During Construction

City of Wausau, Wisconsin

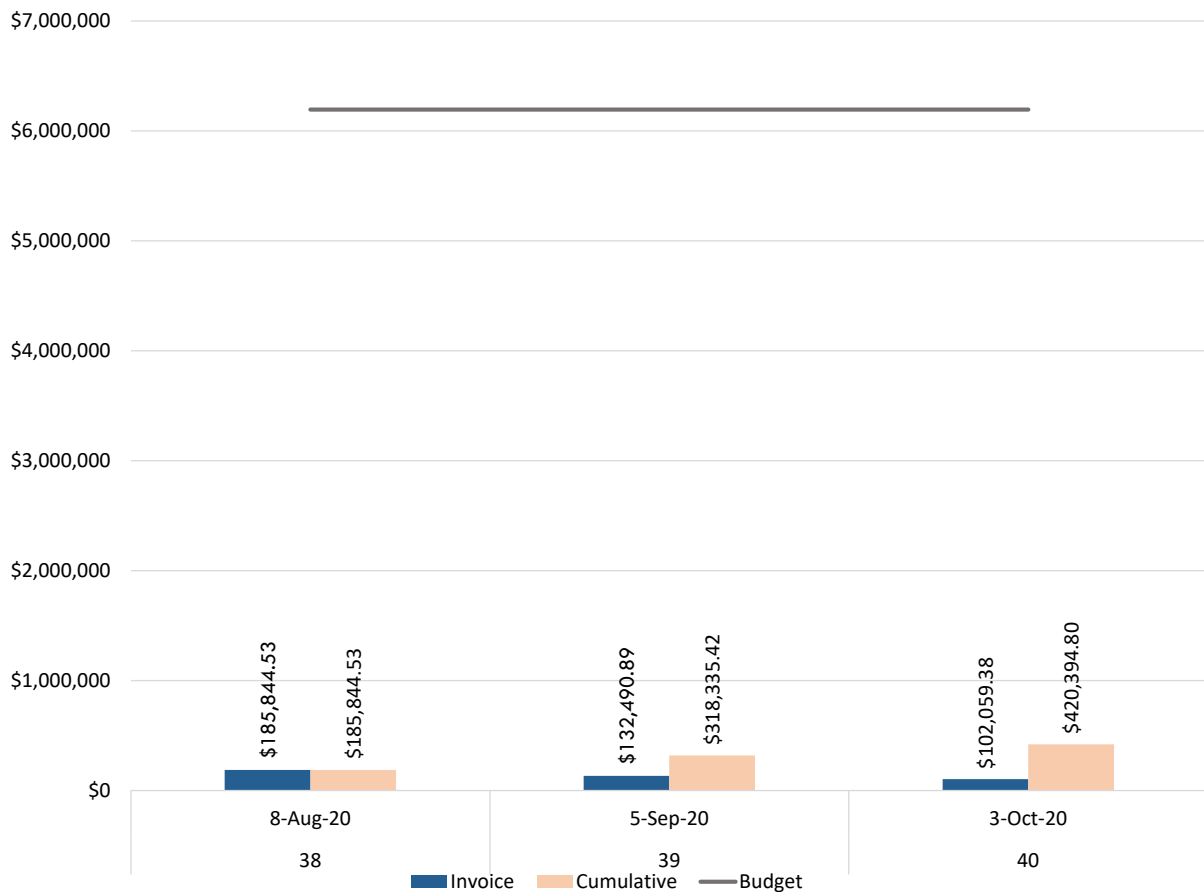
Donohue Project Number 13229

Period | September 6 – October 3, 2020

Invoice 40

Project Related Budget Snapshot

Construction Engineering Budget



Project Status Report



Wastewater Treatment Facility Improvements Project – Engineer During Construction

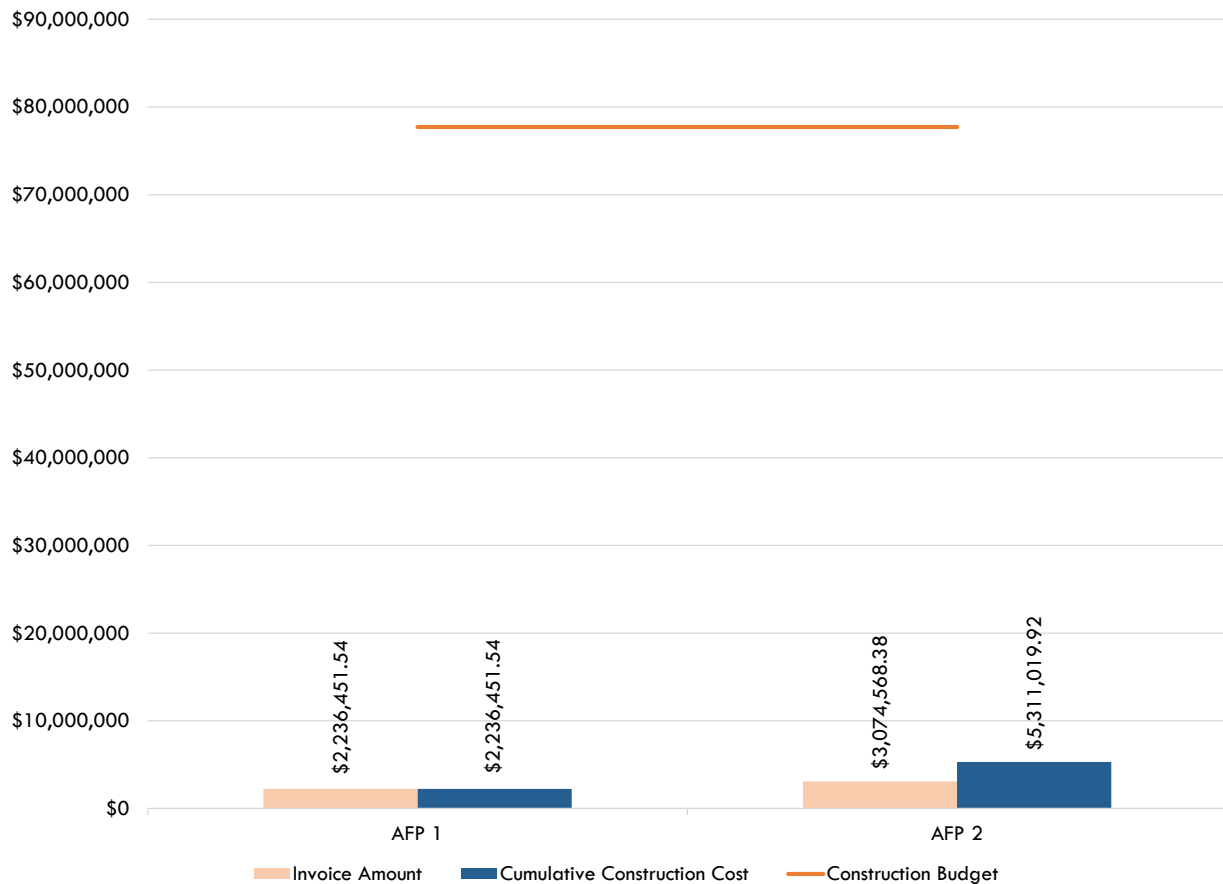
City of Wausau, Wisconsin

Donohue Project Number 13229

Period | September 6 – October 3, 2020

Invoice 40

Construction Budget: Pay Applications Approved by Engineer



Budget Notes:

1. No budget issues at this time.

Remarks

1. None.

Project Status Report

Wastewater Treatment Facility Improvements Project – Engineer During Construction

City of Wausau, Wisconsin

Donohue Project Number 13229

Period | September 6 – October 3, 2020

Invoice 40

Construction Photographs



Temporary Gravity Belt Thickener drain tied into new collection tank to be pumped to Grit Chamber.



New storm sewer between Structure 110 (Vehicle Storage Building) and Structure 700 (Digester Building) to drain storm water from Structure 100 (Main Building).

Project Status Report



Wastewater Treatment Facility Improvements Project – Engineer During Construction

City of Wausau, Wisconsin

Donohue Project Number 13229

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Concrete masonry unit walls going up in garage of Structure 120 (Administration Building)



Temporary power setup for Structure 120 (Administration Building), waiting to get connected.

Project Status Report



Wastewater Treatment Facility Improvements Project – Engineer During Construction

City of Wausau, Wisconsin

Donohue Project Number 13229

Period | September 6 – October 3, 2020

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New sanitary sewer connection for Structure 120 (Administration Building).



Looking south down new Structure 350 (Primary Effluent Channel).

Project Status Report



Wastewater Treatment Facility Improvements Project – Engineer During Construction

City of Wausau, Wisconsin

Donohue Project Number 13229

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Structure 404 (Junction Structure) water test.



Primary Clarifiers 3 and 4 disconnected from existing primary effluent piping.

Project Status Report

Wastewater Treatment Facility Improvements Project – Engineer During Construction

City of Wausau, Wisconsin

Donohue Project Number 13229

Period | September 6 – October 3, 2020

Invoice 40



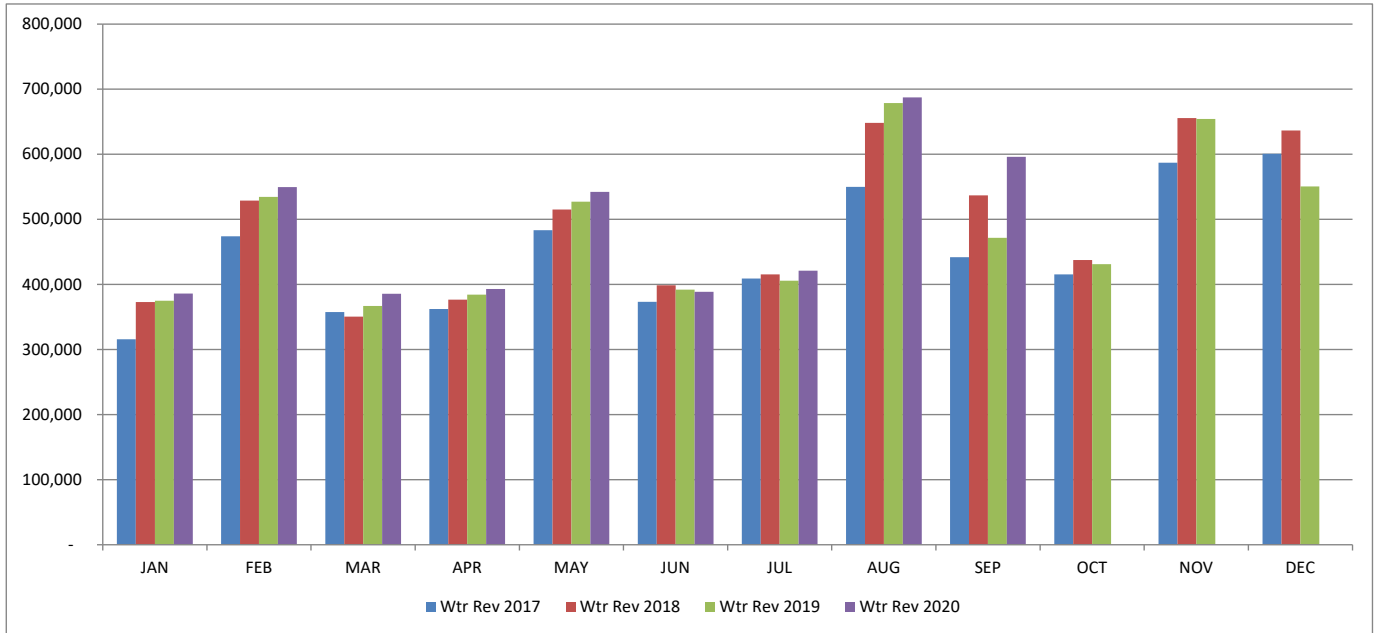
Demolition work has started on Structure 340 (Primary 4) to allow for future tie in to Structure 350 (Primary Effluent Channel).



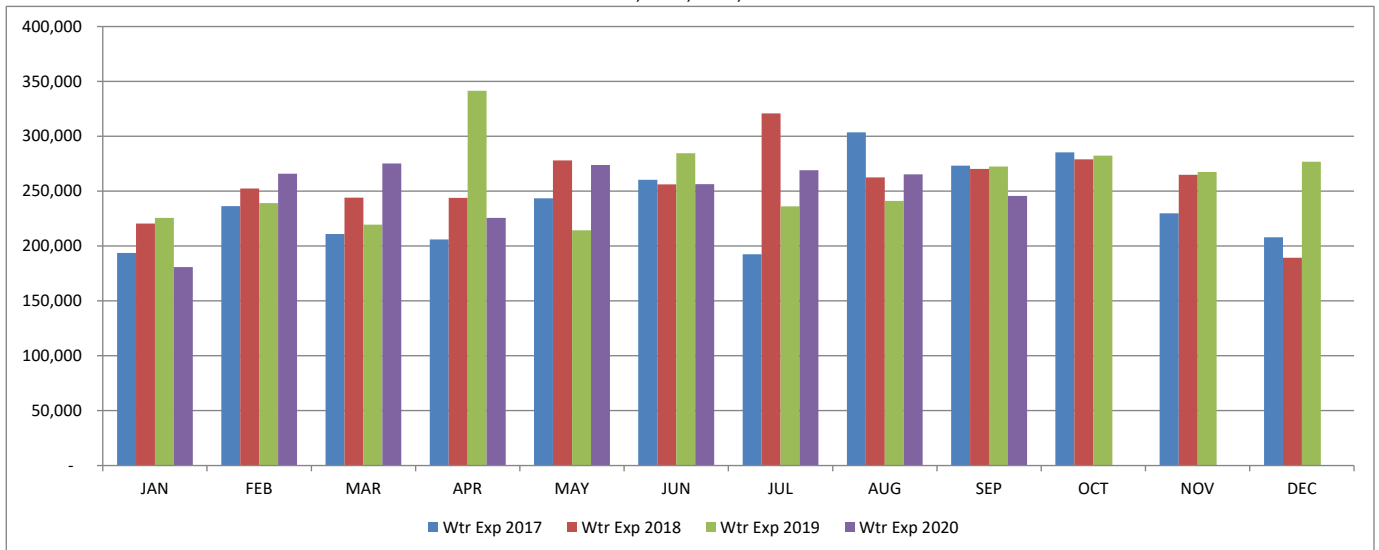
Placing yard piping between new Structure 610 (Chemical Building) and existing Structure 600 (Effluent Building).

WAUSAU WATER UTILITY REVENUE & EXPENSE ANALYSIS
4 YEAR COMPARISON AS OF SEPTEMBER 30, 2020

WATER UTILITY REVENUE 2017, 2018, 2019, 2020



WATER UTILITY O&M EXPENSE 2017, 2018, 2019, 2020



WATER REVENUE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
Wtr Rev 2017	315,708	473,854	357,593	362,178	483,173	373,255	409,202	549,850	441,934	415,511	586,989	600,657	5,369,904
Wtr Rev 2018	373,006	528,830	350,419	376,733	515,013	398,562	415,415	648,201	536,710	437,367	655,459	636,379	5,872,093
Wtr Rev 2019	374,991	534,366	366,893	384,442	527,047	392,107	405,744	678,575	471,771	431,064	654,108	550,559	5,771,666
Wtr Rev 2020	385,935	549,673	385,789	393,017	542,047	388,720	421,028	687,279	595,954				4,349,440
Change over Prior Yr	2.9%	2.9%	5.2%	2.2%	2.8%	-0.9%	3.8%	1.3%	26.3%				5.2%
2019 Aug Rate Incr						2020 No FI Chrgs	2020 Jul Rate Incr	2019 Aug Rate Incr	2019 -558K Mfam&irr	Tax Roll			

WATER OP&MAINT EXP	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
Wtr Exp 2017	193,720	236,342	210,957	206,089	243,588	260,442	192,512	303,588	273,295	285,349	229,744	207,995	2,497,400
Wtr Exp 2018	220,397	252,366	244,175	243,978	278,071	256,150	320,847	262,632	270,192	279,018	264,964	189,331	3,082,119
Wtr Exp 2019	225,698	239,131	219,540	341,466	214,321	284,521	236,079	241,050	272,508	282,351	267,475	276,782	3,100,922
Wtr Exp 2020	180,879	266,005	275,178	225,683	273,876	256,450	269,170	265,225	245,725				2,258,191
Change over Prior Yr	-19.9%	11.2%	25.3%	-33.9%	27.8%	-9.9%	14.0%	10.0%	-9.8%				-0.7%
				* 2019 Pilot Study	labor \$10K contractual svcs \$40K		2020 Rate Stdy, Sensus prgm						

WATER UTILITY - CITY OF WAUSAU
BALANCE SHEET STATEMENT
September, 30 2020

	Current Year CY YTD	Prior Year PY YTD
ASSETS		
Current Assets:		
Cash and cash equivalents	\$ 1,309,771	\$ 100
Accounts receivable	1,902,831	1,815,316
Inventories and prepayments	366,935	345,932
Total Current Assets	<u>3,579,537</u>	<u>2,161,348</u>
Noncurrent Assets:		
Restricted cash and cash equivalents:		
Debt service/redemption funds	839,004	597,880
Revenue bond sinking fund	-	177,739
Net Restricted cash and receivables	<u>839,004</u>	<u>775,620</u>
Property, plant and equipment:		
Property and equipment	68,452,243	62,393,268
Accumulated depreciation	<u>(22,851,307)</u>	<u>(21,115,515)</u>
Net Property, Plant and Equipment	<u>45,600,936</u>	<u>41,277,754</u>
Net pension asset	-	194,496
Total Noncurrent Assets	<u>46,439,940</u>	<u>42,247,869</u>
TOTAL ASSETS	<u>50,019,477</u>	<u>44,409,217</u>
DEFERRED OUTFLOWS OF RESOURCES		
Deferred outflow-net pension asset	648,686	360,485
TOTAL DEFERRED OUTFLOWS	<u>648,686</u>	<u>360,485</u>
LIABILITIES		
Current Liabilities:		
Accounts payable	125,427	1,980
Contracts payable	18,706	20,560
Salaries/wages payable	16,135	16,482
Compensated absences payable	55,959	63,604
Due to Sewer Fund	140,000	140,000
Revenue Bond debt - current portion	-	1,465,000
Accrued interest payable	337,628	76,905
Total Current Liabilities	<u>693,854</u>	<u>1,784,530</u>
Noncurrent Liabilities:		
Due to Sewer Fund	700,000	859,724
Revenue Bond debt	6,744,215	4,018,544
Loan debt	3,792,901	-
Compensated absences	79,004	115,546
Net pension liability	238,853	-
Total Noncurrent Liabilities	<u>11,554,974</u>	<u>4,993,814</u>
TOTAL LIABILITIES	<u>12,248,827</u>	<u>6,778,345</u>
DEFERRED INFLOWS OF RESOURCES		
Deferred inflow-net pension liability	358,909	411,418
TOTAL DEFERRED INFLOWS	<u>358,909</u>	<u>411,418</u>
TOTAL NET POSITION	<u>\$ 38,060,427</u>	<u>\$ 37,579,940</u>

NOTES

DEBT TO EQUITY RATIO

37.6%

17.3%

WATER UTILITY - CITY OF WAUSAU
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION
September, 30 2020

	Water Utility 2020 Budget	Current Year Sept 2020 YTD	Var to Budget Bdg-Act Var	% Bdg Var	Prior Year Sept 2019 YTD
OPERATING REVENUES					
Charges for services and sales	\$ 6,265,700	\$ 4,340,053	\$ (1,925,647)	69.3%	\$ 4,118,559
Other operating revenues	44,000	9,387	(34,613)	21.3%	17,376
Total Operating Revenues	6,309,700	4,349,440	(1,960,260)	68.9%	4,135,935
OPERATING EXPENSES					
Operating and maintenance					
Personal Service	1,186,083	818,724	367,358	69.0%	832,181
Personal Benefits	470,785	312,287	158,498	66.3%	335,924
Contractual Services	918,260	531,558	386,702	57.9%	513,242
Supplies & Expense	818,200	334,615	483,585	40.9%	300,302
Building Materials	401,910	247,491	154,419	61.6%	292,363
Fixed Charges	26,100	12,707	13,393	48.7%	11,500
Grants, Contributions, & Other	2,000	808	1,192	40.4%	1,104
Total Operating and Maintenance	3,823,337	2,258,191	1,565,146	59.1%	2,286,615
Depreciation	1,063,000	1,060,797	2,203	99.8%	917,040
Meter Allocation (Contra Account)	-	(375,000)	375,000	100.0%	(377,243)
Total Operating Expenses	4,886,337	2,943,988	1,942,349	60.2%	2,826,413
Operating Income (Loss)	1,423,363	1,405,452	(17,911)	98.7%	1,309,522
NONOPERATING REVENUES (EXPENSES)					
Investment income	5,000	-	(5,000)	0.0%	-
Interest expense	(140,500)	(408,970)	(268,470)	291.1%	(106,754)
Amortization of premium/discount	(4,200)	500,000	504,200	-11904.8%	-
Gain on asset disposal	-	1,901	1,901	0.0%	2,309
Total Nonoperating Revenues (Expenses)	(139,700)	92,931	232,631	-66.5%	(104,445)
Income (loss) before Capital Contributions and Transfers	1,283,663	1,498,383	214,720	116.7%	1,205,077
Capital Contributions	10,000	19,880	9,880	198.8%	4,000
Transfers Out	(1,130,660)	(852,995)	277,665	75.4%	(848,993)
CHANGE IN NET POSITION	163,003	665,268	502,265	408.1%	360,084
NET POSITION, BEG OF THE YEAR	37,395,158	37,395,158	-		37,219,855
NET POSITION, TO DATE	<u>\$ 37,558,161</u>	<u>\$ 38,060,427</u>	<u>\$ 502,265</u>		<u>\$ 37,579,940</u>

WATER UTILITY - CITY OF WAUSAU

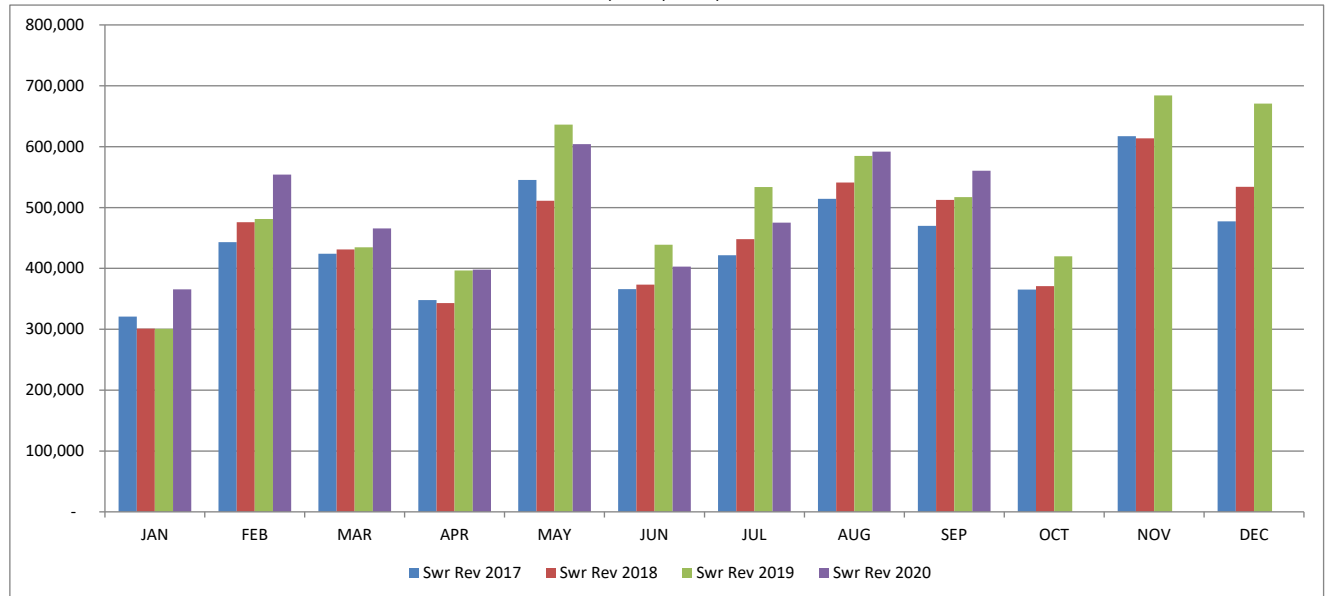
Statement of Cash Flow

September, 30 2020

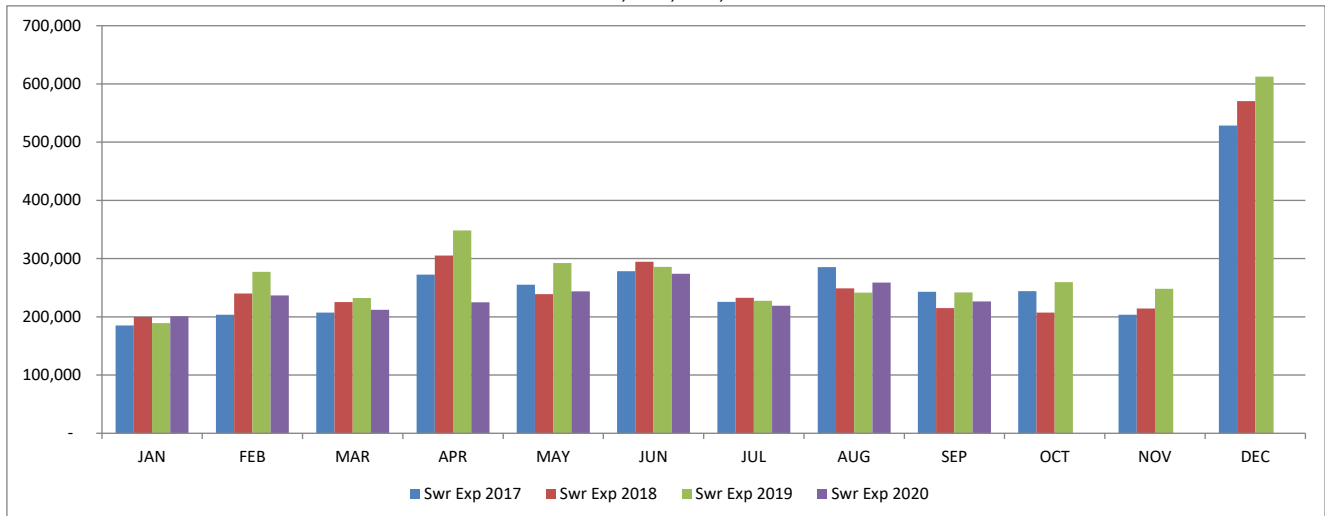
	2020	2019
CASH FLOWS FROM OPERATING ACTIVITIES		
Receipts from customers, users and others	\$ 3,982,669	\$ 3,811,169
Payments to suppliers	(1,884,803)	(1,334,659)
Payments to employees	(852,754)	(863,479)
	<u>1,245,112</u>	<u>1,613,031</u>
Net Cash Provided (Used) by Operating Activities		
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES		
Debt Redemption Fund	24,357	43,609
Bond Sinking Fund	-	838,261
Transfers Out	(852,995)	(848,993)
	<u>(828,638)</u>	<u>52,601</u>
Net Cash Provided (Used) by Noncapital Financing Activities		
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES		
Acquisition and construction of capital assets	(3,247,029)	(2,998,895)
Proceeds from Capital Debt	3,083,662	-
Principal on Capital Debt	(265,038)	(506,100)
Interest paid on capital debt	(134,100)	(66,483)
Proceeds from sale of capital assets	1,901	2,309
	<u>(540,724)</u>	<u>(3,565,169)</u>
Net Cash Used by Capital and Related Financing Activities		
CASH FLOWS FROM INVESTING ACTIVITIES		
Investment income received	-	-
	<u>(124,249)</u>	<u>(1,899,537)</u>
Net Increase (Decrease) in Cash and Equivalents		
Cash and cash equivalents - beginning of year	<u>1,434,020</u>	<u>1,899,637</u>
Cash and cash equivalents - end of period	<u><u>1,309,771</u></u>	<u><u>\$ 100</u></u>
Reconciliation of operating income (loss) to net cash provided (used) by operating activities:		
Operating income (loss)	\$ 1,405,452	\$ 1,309,522
Adjustments to reconcile operating income (loss) to net cash provided (used) by operating activities:		
Depreciation expense	1,060,797	917,040
Changes in assets and liabilities:		
Accounts receivable	(366,771)	(324,766)
Inventories and prepayments	(74,784)	(70,888)
Accounts payable	(745,552)	(186,579)
Salaries/wages payable	(40,935)	(33,548)
Accrued compensated absences	6,906	2,249
Net pension expense	-	-
	<u>-</u>	<u>-</u>
Net cash provided (used) by operating activities	<u><u>\$ 1,245,112</u></u>	<u><u>\$ 1,613,031</u></u>

WAUSAU SEWER UTILITY REVENUE & EXPENSE ANALYSIS
4 YEAR COMPARISON AS OF SEPTEMBER 30, 2020

SEWER UTILITY REVENUE 2017, 2018, 2019, 2020



SEWER UTILITY O&M EXPENSE 2017, 2018, 2019, 2020



SEWER REVENUE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
Swr Rev 2017	320,757	443,198	424,130	348,080	545,244	366,057	421,445	514,169	469,975	365,128	617,356	477,445	5,312,984
Swr Rev 2018	301,205	475,813	431,153	343,019	511,048	373,395	447,960	541,053	512,411	371,017	613,820	534,078	5,455,973
Swr Rev 2019	300,631	481,028	434,643	396,415	636,115	438,814	533,542	584,840	517,217	419,839	684,077	670,837	6,097,998
Swr Rev 2020	365,677	554,026	465,526	397,838	604,296	402,841	475,298	591,839	560,313				4,417,654
Change over Prior Yr	21.6%	15.2%	7.1%	0.4%	-5.0%	-8.2%	-10.9%	1.2%	8.3%				2.2%
	End 2019 Rate Incr				2020 decrs Indstrl & PubAuth		2020 decrs Indstrl, PubAuth, FI Chrgs			2020 Rate Incr	Tax Roll		

SEWER OP&MAINT EXP	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
Swr Exp 2017	185,280	203,569	207,148	272,576	254,998	278,322	225,788	285,215	243,169	244,006	203,707	528,399	3,132,176
Swr Exp 2018	200,090	240,192	225,336	305,188	238,844	294,728	232,575	248,929	215,114	207,301	214,232	570,689	3,193,217
Swr Exp 2019	189,059	277,260	232,249	348,348	292,492	285,586	227,457	241,503	242,073	259,724	248,202	612,461	3,456,415
Swr Exp 2020	200,999	236,715	212,016	224,784	243,581	274,074	219,117	258,807	226,306				2,096,399
Change over Prior Yr	6.3%	-14.6%	-8.7%	-35.5%	-16.7%	-4.0%	-3.7%	7.2%	-6.5%				-10.3%
		2019 Sludge Hauling		2019 Sludge Hauling	2019 Sludge Hauling			2017 Chemicals & Eq Parts		2019 Conctr Srv +20%	2016 BldgMtrl, SwrFpr	2016 Slde Hndlg	

Notes:

* Expenses for all years have been adjusted for monthly allocation of annual meter expense and annual central services cost

SEWER UTILITY - CITY OF WAUSAU
BALANCE SHEET STATEMENT
September, 30 2020

	Current Year Sep CY YTD	Prior Year Sep PY YTD
ASSETS		
Current Assets:		
Cash and cash equivalents	\$ 1,436,886	\$ -
Accounts receivable	1,886,139	1,736,347
Due from Water Fund	140,000	140,000
Total Current Assets	<u>3,463,025</u>	<u>1,876,347</u>
Noncurrent Assets:		
Restricted cash and receivables:		
Equipment replacement fund	1,999,722	1,859,400
Debt service/redemption funds	1,423,869	991,392
Revenue bond sinking fund	-	2,083,104
Advance to water fund	700,000	840,000
Net Restricted cash and receivables	<u>4,123,591</u>	<u>5,773,896</u>
Property, Plant and Equipment:		
Property and equipment	83,820,704	73,429,674
Accumulated depreciation	<u>(29,056,354)</u>	<u>(27,860,378)</u>
Net Property, Plant and Equipment	<u>54,764,349</u>	<u>45,569,296</u>
Net pension asset	-	147,451
Total Noncurrent Assets	<u>58,887,941</u>	<u>51,490,643</u>
TOTAL ASSETS	<u>62,350,966</u>	<u>53,366,990</u>
DEFERRED OUTFLOWS OF RESOURCES		
Deferred Outflow on net pension asset	486,030	272,175
TOTAL DEFERRED OUTFLOWS	<u>486,030</u>	<u>272,175</u>
LIABILITIES		
Current Liabilities:		
Accounts payable	44,200	1,285
Salaries and wages payable	10,321	12,504
Compensated absences payable	45,789	52,212
Due to other funds	15,000	252,808
Accrued interest payable	35,848	81,181
Total Current Liabilities	<u>151,158</u>	<u>5,509,869</u>
Noncurrent Liabilities:		
Revenue Bond debt	11,546,091	4,938,238
Loan debt	5,655,347	297,920
Compensated absences	88,505	100,892
Net pension liability	195,239	20,246
Total Noncurrent Liabilities	<u>17,485,181</u>	<u>5,357,296</u>
TOTAL LIABILITIES	<u>17,636,339</u>	<u>10,867,166</u>
DEFERRED INFLOWS OF RESOURCES		
Deferred Outflow on net pension asset	251,794	291,658
TOTAL DEFERRED INFLOWS	<u>251,794</u>	<u>291,658</u>
TOTAL NET POSITION	<u>\$ 44,948,862</u>	<u>\$ 42,480,341</u>
NOTES		
DEBT TO EQUITY RATIO	38.3%	24.4%

SEWER UTILITY - CITY OF WAUSAU
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION
September, 30 2020

	Sewer Utility 2020 Budget	Current Year Sep 2020 YTD	Var to Budget Bdg-Act Var	% Bdg Var	Prior Year Sep 2019 YTD
OPERATING REVENUES					
Charges for services and sales	\$ 6,251,960	\$ 4,417,263	\$ (1,834,697)	70.7%	\$ 4,322,025
Other operating revenues	4,000	391	(3,609)	9.8%	1,219
Total Operating Revenues	6,255,960	4,417,654	(1,838,306)	70.6%	4,323,245
OPERATING EXPENSES					
Operating and maintenance					
Personal Service	897,375	567,632	329,742	63.3%	638,870
Personal Benefits	317,378	282,545	34,833	89.0%	260,786
Contractual Services	1,432,600	818,736	613,864	57.2%	923,530
Supplies & Expense	547,200	295,667	251,533	54.0%	359,173
Building Materials	220,000	114,725	105,275	52.1%	122,460
Fixed Charges	40,000	16,207	23,793	40.5%	16,449
Grants, Contributions, & Other	1,400	886	514	63.3%	1,260
Total Operating and Maintenance	3,455,952	2,096,399	1,359,553	60.7%	2,322,527
Depreciation	1,285,000	937,491	347,509	73.0%	952,920
Total Operating Expenses	4,740,952	3,033,890	1,707,063	64.0%	3,275,447
Operating Income (Loss)	1,515,008	1,383,765	(131,243)	91.3%	1,047,797
NONOPERATING REVENUES (EXPENSES)					
Investment income	43,000	13,469	(29,531)	31.3%	69,533
Interest expense	(212,000)	(236,787)	(24,787)	111.7%	(176,573)
Amortization premium/discount	32,000	1,750,000	1,718,000	5468.8%	-
Total Nonoperating Revenues (Expenses)	(137,000)	1,526,683	1,663,683	-1114.4%	(107,040)
Income (loss) before Capital Contributions and Transfers	1,378,008	2,910,447	1,532,439	211.2%	940,757
Capital Contributions	40,000	14,784	(25,216)	37.0%	6,700
Transfers Out	(498,000)	(378,500)	119,500	76.0%	(364,748)
CHANGE IN NET POSITION	920,008	2,546,731	1,626,724	276.8%	582,710
NET POSITION, BEG OF YEAR	42,402,131	42,402,131	-		41,897,631
NET POSITION, TO DATE	<u>\$ 43,322,139</u>	<u>\$ 44,948,862</u>	<u>\$ 1,626,724</u>		<u>\$ 42,480,341</u>

SEWER UTILITY - CITY OF WAUSAU

Statement of Cash Flow

September, 30 2020

	2020	2019
CASH FLOWS FROM OPERATING ACTIVITIES		
Receipts from customers, users and others	\$ 4,116,585	\$ 4,104,865
Payments to suppliers	(2,779,316)	(1,948,632)
Payments to employees	(600,988)	(663,494)
Net Cash Provided (Used) by Operating Activities	736,280	1,492,739
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES		
Debt Redemption Fund	825,361	(126,762)
Bond Sinking Fund	1,480,339	1,320,382
Transfer Out	(363,500)	(111,940)
Net Cash Provided (Used) by Noncapital Financing Activities	1,942,200	1,081,680
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES		
Capital Contributions	14,784	6,700
Acquisition and construction of capital assets	(6,972,181)	(4,105,126)
Proceeds from Capital Debt	7,134,913	6,809,649
Principal on Capital Debt	(6,924,293)	(7,490,889)
Interest paid on capital debt	1,459,973	(149,014)
Net Cash Used by Capital and Related Financing Activities	(5,286,803)	(4,928,680)
CASH FLOWS FROM INVESTING ACTIVITIES		
Investment income received	13,469	69,533
Net Increase (Decrease) in Cash and Equivalents	(2,594,854)	(2,284,729)
Cash and cash equivalents - beginning of year	6,031,462	4,144,128
Cash and cash equivalents - end of period	\$ 3,436,608	\$ 1,859,400
Reconciliation of operating income (loss) to net cash provided (used) by operating activities:		
Operating income (loss)	\$ 1,383,765	\$ 1,047,797
Adjustments to reconcile operating income (loss) to net cash provided (used) by operating activities:		
Depreciation expense	937,491	952,920
Changes in assets and liabilities:		
Accounts receivable	(301,070)	(218,380)
Accounts payable	(1,250,549)	(264,974)
Salaries/wages payable	(32,447)	(26,443)
Accrued compensated absences	(909)	1,818
Net cash provided (used) by operating activities	\$ 736,280	\$ 1,492,739

Department of Public Works



Eric Lindman, P.E.
Director of Public Works and Utilities

TO: Wausau Waterworks Commission

FROM: Eric Lindman, P.E.
Director of Public Works & Utilities

DATE: November 10, 2020

SUBJECT: Solar Proposals - Recommendation

An RFP was prepared for solicitation proposals to plan, design and manager the construction of a solar array for the new DWTF. Three proposals were received by the following firms:

1. IMEG
2. Clark Dietz
3. APEX

Proposals were independently reviewed by three staff members and the results of the scoring are attached. Based on the proposals received it is recommended to award the work to Clark Dietz.

Attachments:

1. Average Rating Scores
2. RFP Narrative
3. Clark Dietz Proposal

	AVERAGE SCORING FOR THE PLANNING, DESIGN AND CONSTRUCTION MANAGEMENT OF A SOLAR GENERATION FACILITY						
			IMEG		Clark Dietz		APEX
	Selection Criteria - Rater 1	Weighted %	Score (1-20)	Weighted Score	Score (1-20)	Weighted Score	Score (1-20) Weighted Score
	Experience in other utility solar projects and firm's key personnel including partners/sub-consultants	30%	18	5.4	19	5.7	14 4.2
	Proposers approach and defined outline of the project	30%	16	4.8	20	6	8 2.4
	Cost to Complete Scope of Services	15%	10	1.5	5	0.75	10 1.5
	Firm's location and experience working with the Utility and other solar projects in the upper Midwest	25%	16	4	18	4.5	16 4
	Total =		60	15.7	62	16.95	48 12.1
			IMEG		Clark Dietz		APEX
	Selection Criteria - Rater 2	Weighted %	Score (1-20)	Weighted Score	Score (1-20)	Weighted Score	Score (1-20) Weighted Score
	Experience in other utility solar projects and firm's key personnel including partners/sub-consultants	30%	15	4.5	15	4.5	10 3
	Proposers approach and defined outline of the project	30%	10	3	15	4.5	10 3
	Cost to Complete Scope of Services	15%	10	1.5	5	0.75	10 1.5
	Firm's location and experience working with the Utility and other solar projects in the upper Midwest	25%	10	2.5	15	3.75	5 1.25
	Total =		45	11.5	50	13.5	35 8.75
			IMEG		Clark Dietz		APEX
	Selection Criteria - Rater 3	Weighted %	Score (1-20)	Weighted Score	Score (1-20)	Weighted Score	Score (1-20) Weighted Score
	Experience in other utility solar projects and firm's key personnel including partners/sub-consultants	30%	10	3	15	4.5	5 1.5
	Proposers approach and defined outline of the project	30%	5	1.5	15	4.5	10 3
	Cost to Complete Scope of Services	15%	10	1.5	5	0.75	15 2.25
	Firm's location and experience working with the Utility and other solar projects in the upper Midwest	25%	10	2.5	15	3.75	10 2.5
	Total =		35	8.5	50	13.5	40 9.25
	Scoring Average =		46.67	11.90	54.00	14.65	41.00 10.03
	Cost =		\$97,500.00		\$235,355.00		\$90,150.00
			other fees billed separate				

CITY OF WAUSAU

REQUEST FOR PROPOSALS

ENGINEERING PROFESSIONAL SERVICES FOR THE PLANNING, DESIGN AND CONSTRUCTION MANAGEMENT OF A SOLAR GENERATION FACILITY



October 2020

Engineering Professional Services Planning, Design, and Construction Management of a Solar Generation Facility



City of Wausau, WI

October 27, 2020





October 27, 2020

Eric Lindman, PE
Director of Public Works & Utilities
City of Wausau
407 Grant Street
Wausau, WI 54403

RE: Proposal: Engineering Professional Services for the Planning, Design and Construction Management of a Solar Generation Facility

Dear Eric:

Thank you for inviting Clark Dietz to propose on the new DWTF's Proposed Solar Generation Facility. We are honored to be considered for this opportunity. We have worked on over 100 MW of solar installations over the last 5 years and are excited for the chance to work on one in our hometown.

We have put together team, based in downtown Wausau, with specialized subconsultants from around Wisconsin. The Wausau-based Clark Dietz staff presented here for your project, have been involved in all 100 MWs of experience.

I will be your client manager and lead the civil engineering efforts. Lisa is our electrical team lead and will coordinate the electrical team, including SunVest, our DC design subconsultant. Paul Zouski and Scott Kauzlaric are the team's electrical design engineers. Paul will also be the electrical construction lead, much as he is now with the DWTF project.

Our sub consultants were carefully selected for this project based on their experience and its location.

Riverside Land Surveying will provide the topographic and boundary survey used as a basis for the project. Located in Weston, they are familiar with the City of Wausau, and can mobilize to the project site very quickly.

ECS is on board to provide the geotechnical investigation and report. They are national firm with a portfolio of ground-mount solar array experience in the Midwest.

Finally, we have partnered with SunVest Solar. SunVest is based in Wisconsin and will provide the DC design and WPS coordination for the project. They are a PV specialty company who also installs large-scale solar systems. In the rapidly changing solar environment, we thought it important to have a partner who is versed in the newest technologies, their constructability and supply-chain availability. We are currently working with SunVest on other solar projects in the Upper Midwest. As we have presented in the following pages, the Clark Dietz team is the best-fit for this project.

- We are experienced with both solar arrays and municipal water utilities.
- We know the City's bidding documents and bidding process.
- We know the Utility's staff.
- We provided the electrical design for the DWTF and can hit the ground running.
- Both Clark Dietz and SunVest know WPS staff and their interconnection process.

The Clark Dietz team promises to work very hard for you on this project. We look forward to working with the City and the Utility on this exciting project.

Sincerely,

Clark Dietz, Inc.

Tonia Westphal, PE, LEED AP
Client Manager
tonia.westphal@clarkdietz.com

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Cost to Complete Scope of Services	28

ABOUT US

GOOD FOR PEOPLE. GOOD FOR THE PLANET.

We are a U.S. based multi-disciplined engineering firm providing professional consulting and design services for utility-scale energy projects throughout the Midwest.

Our firm was founded nearly 60 years ago with a primary focus on civil engineering services. In response to our growing client base, we have expanded our expertise to include specializations in power and energy. We have quickly grown in our solar engineering expertise, and continue to evolve our services to meet the changing needs of the solar industry.

WORK DRIVEN BY PURPOSE.

Our goal is to have a positive impact on people, the natural environment, and the well-being of the communities in which we live, work, and play. Our employees are registered in the following states:

Georgia
Illinois
Indiana
Iowa
Kentucky
Michigan
Minnesota
Missouri
Tennessee
Texas
Wisconsin





City of Wausau, WI

**CLIENT MANAGER/CIVIL TEAM
LEAD**

Tonia Westphal, PE, LEED AP

CLARK DIETZ

**ELECTRICAL
TEAM LEAD**

Lisa Zahrt, PE, LEED AP

**ELECTRICAL
DESIGN/
CONSTRUCTION LEAD**

Paul Zouski, PE

**ELECTRICAL ENGINEER
DESIGN**

Scott Kauzlaric, PE

SUB-CONSULTANTS

**GEOTECHNICAL
ECS MIDWEST, LLC**

Matthew Meyer, PE
David Maciolek, PE
Alex Barker, PE

**SURVEY
RIVERSIDE LAND
SURVEYING, LLC**

Nathan Wincentzen, PLS
Sam Haugen

**SUNVEST SOLAR
SOLAR DC DESIGN TEAM
LEAD**

Ryan Shannon

**SOLAR DC
OPERATIONS & UTILITY
COORDINATION**

Adam Gusse



Tonia S. Westphal, PE, LEED AP

Client Manager/Civil Team Lead

EXPERIENCE

24 Years

EDUCATION

BS, Environmental Engineering,
Michigan Technological University

REGISTRATIONS

LEED Accredited Professional
#10295227

Wisconsin Professional Engineer
#38231-006

Michigan Professional Engineer
#48157

PROFESSIONAL AFFILIATIONS

Wisconsin Society of Professional
Engineers

American Council of Engineering
Companies, Government Affairs
Committee Chair

Wisconsin Rural Water Association

American Public Works Association

Wisconsin Water Association

Wisconsin Wastewater Operators
Association

CIVIC ORGANIZATIONS

Merrill Area Chamber of Commerce

River District Development
Foundation of Merrill

South Area Business Association

North Central Wisconsin Stormwater
Coalition

Wausau Region Chamber of
Commerce

Rotary International

Ms. Westphal has over 24 years of experience serving state, agricultural, commercial/residential, and municipal clients on a variety of infrastructure projects. Tonia is proficient in site design and construction including: regulatory permitting and compliance, site plan geometrics, utilities, site grading and drainage, storm water management, cost-benefit analysis, construction contract assembly, project closeout reporting and documentation. Today's regulations and technologies are moving at a faster pace than ever before. Tonia stays abreast with these evolving regulations and newer technologies to advise her clients on financially responsible and technically sound infrastructure improvements that comply with today's regulations.

As an experienced civil engineer, Tonia is keenly aware that decisions made today, have a lasting impact on future improvements and the community's vitality. Highly engaged with her clients, Tonia proactively facilitates informed decision making to optimize the impact on the community. Her clients have come to rely on her experience and insights to provide engineering solutions that support their goals.

Relevant Experience

O'Shea Urban Solar Farm, Detroit, MI. This 2.04 MW, 7,400 panel, ground-mount solar farm serves 450 homes and includes recreational and educational community spaces. Design services included electrical engineering (design compliance review, fault current study, grounding design), and site civil and structural, including review of solar array layout, grading plans, SESC requirements, perimeter fencing, ordinance compliance, and inverter pad/foundation design.

Solar Farm Sites, Detroit and Lapeer, MI. Site civil, structural, and electrical engineering services for this three-site project that is one of the largest utility-owned PV solar arrays east of the Mississippi River. The project will generate 45 MW of solar power with 200,000 solar panels, enough to power 9,000 homes. Largest Carport Solar Array in Michigan, East Lansing, MI.

Large Scale Solar Park, Rincon, GA. Electrical and site/civil design services for a new 18.36 MW solar park. Work included review of plans for code compliance, including site plans, one-line diagrams, details and calculations.

New Solar Plant, Brownstown, MI. Electrical and site/civil design services for construction of a new 500KW DTE solar park, including site plans detailing layout of solar array equipment, grounding, and underground conduits; solar system power and communication one-line diagrams; panelboard schedule; details for electrical equipment installation; and preparation of final bidding documents.

WPS Weston Power Plant Crusher House, Weston, WI. Provided bid documents used to solicit bids for the HVAC system replacement in the Crusher House located at the Weston Power Plant.

Solar Photovoltaic System, Urbana, IL. Worked closely with sanitary district staff to investigate various alternatives and cost estimates for constructing, financing, and operating a solar photovoltaic system at the site of their northeast wastewater treatment facility.

Other Experience:

- Brownfield Redevelopment, Kokomo, IN.
- DTE Solar - Turill Road, Lapeer, MI.
- 2018-2020 Project Management, Fisher, IL.



Lisa M. Zahrt, PE, LEED AP

Electrical Team Lead

EXPERIENCE

16 Years

EDUCATION

BS, Electrical Engineering, University of Wisconsin-Platteville

REGISTRATIONS

Illinois Professional Engineer
#062.066174

Indiana Professional Engineer
#PE11500378

Georgia Professional Engineer
#PE040317

Michigan Professional Engineer
#6201056943

Minnesota Professional Engineer
#47856

Florida Professional Engineer
#85509

Wisconsin Professional Engineer
#40470-6

Kentucky Professional Engineer
#36013

LEED Accredited Professional
#10327230

ADDITIONAL TRAINING

Principals of Substation Design & Construction

Revit MEP: Electrical Essentials

Revit MEP: Project Fundamentals

Focus on Energy Resource for Energy Efficiency and Renewable Energy

Roadmap to Lighting Optimization

Lighting Specifier, Lithonia Lighting

Fire Alarm Systems Seminar

Power Quality and Transformer Efficiency

PROFESSIONAL AFFILIATIONS

American Council of Engineering Companies (ACEC)

National Society of Professional Engineers (NSPE)

Ms. Zahrt has 16 years of experience in the electrical engineering field, including numerous projects in the power and energy segment. In particular, she has expertise in renewable energy projects. This experience includes utility interactive as well as stand-alone systems. She has worked effectively with various electric utilities coordinating interconnect requirements and providing appropriate design calculations to ensure a successful outcome. Lisa has attended various training courses in the renewable energy field and is committed to staying on top of current technology.

Relevant Experience

Lily Lake Solar, Maple Park, IL. Electrical engineering to support the development of a 2.8 MW tracking solar photovoltaic system. Electrical services included coordinating the utility interconnect, system grounding design, equipment selection, cable management design, voltage drop and temperature derating calculations, protective device coordination, fault current study and arc flash study.

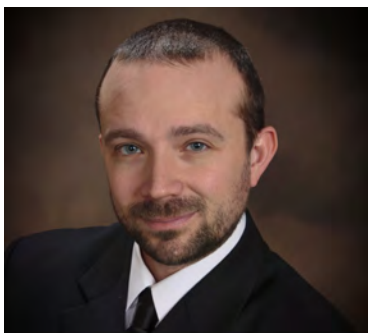
Lutz Solar, Gardner, IL. Electrical engineering to assist with development of a solar photovoltaic system with tracking that will generate 2.8 MW of power. Electrical services included coordinating the utility interconnect, system grounding design, equipment selection, cable management design, voltage drop and temperature derating calculations, protective device coordination, fault current study and arc flash study.

UW Parkside Solar, Kenosha, WI. Electrical engineering to assist with ground mount solar photovoltaic development which will produce 2.83 MW of power. Services included system grounding design and study, equipment analysis, utility interconnect, cable ampacity calculations, sizing of electrical conductors, disconnects, fuses and breakers, and fault current and arc flash study.

Harley Davidson Powertrain Operations Rooftop Solar Array, Menomonee Falls, WI. Electrical engineering to support the development of a solar photovoltaic system which will generate 2.87 MW of power. Services included system grounding design and study, equipment analysis, cable ampacity calculations, sizing of electrical conductors, disconnects, fuses and breakers, and fault current and arc flash study.

Other Experience:

- Solar Decommissioning, Gibson City, IL.
- DTE Solar – Demille and Turrill Road, Lapeer, MI.
- Deer Creek Solar Park, Facility and SCADA, Marion, IN.
- O'Shea Urban Solar Farm, Detroit MI.
- Large Scale Solar Park, Rincon, GA.
- Kokomo Solar I Brownfield Redevelopment, Kokomo, IN.
- Solar Park Site Electrical Design, Argos, IN.
- Solar Park Electrical Services, New Castle, IN.
- Hoosier Energy Solar Park, Greene County, IN.
- Expansion of Rooftop Solar Array, Canton, MI.
- Solar Plant Electrical Design, Brownstown, MI.
- Solar Photovoltaic System, Urbana, IL.
- Solar Park Design Services, Harrison County, IN.
- Largest Carport Solar Array in Michigan, East Lansing, MI.



Paul L. Zouski, PE

Electrical Design/Construction Lead

EXPERIENCE

17 Years

EDUCATION

BS, Electrical Engineering, University of Wisconsin - Platteville

REGISTRATIONS

Wisconsin Professional Engineer
#42301-6

Kentucky Professional Engineer
#33759

Virginia Professional Engineer
#0402059171

Texas Professional Engineer
#117485

Wisconsin Commercial Electrical
Inspector #1068205

Wisconsin Master Electrician
#1068205

Illinois Professional Engineer
#062.065998

ADDITIONAL TRAINING

NFPA 70E Electrical Safety in the
Workplace Seminar

NECA Basic Estimating of Electrical
Construction

OSHA 10 Certification

PROFESSIONAL AFFILIATIONS

National Society of Professional
Engineers

Wisconsin Society of Professional
Engineers

Mr. Zouski is an experienced project engineer and master electrician specializing in electrical design, cost estimating and arc flash analysis for educational, corporate, governmental, and industrial facilities. Paul's areas of expertise include power and energy, low and medium voltage power distribution, fault current, coordination, and arc flash studies, emergency power, and grounding.

Paul's training and experience as a master electrician and commercial electrical inspector lends insight to economical, constructible and maintenance-friendly designs.

Relevant Experience

Wausau DWTF Electrical Design, Wausau, WI. Electrical engineering to support a new drinking water treatment facility for the City of Wausau. Design services included utility coordination, load analysis, site electrical, power distribution, lighting, fire alarm, communication systems and security systems.

Lily Lake Solar, Maple Park, IL. Electrical engineering to support the development of a 2.8 MW tracking solar photovoltaic system. Electrical services included coordinating the utility interconnect, system grounding design, equipment selection, cable management design, voltage drop and temperature derating calculations, protective device coordination, fault current study and arc flash study.

UW Parkside Solar, Kenosha, WI. Electrical engineering to assist with ground mount solar photovoltaic development which will produce 2.83 MW of power. Services included system grounding design and study, equipment analysis, utility interconnect, cable ampacity calculations, sizing of electrical conductors, disconnects, fuses and breakers, and fault current and arc flash study.

Other Experience

- Large Scale Solar Park, Rincon, GA.
- Solar Park Electrical Design, Bainbridge, IN.
- Solar Park Site Electrical Design, Argos, IN.
- Solar Park Site Electrical Services, New Castle, IN.
- Hoosier Energy Solar Park, Greene County, IN.
- Expansion of Rooftop Solar Array, Canton, MI.
- New Solar Plant, Brownstown, MI.
- Solar Park Design Services, Harrison County, IN.



Scott M. Kauzlaric, PE

Electrical Design Engineer

EXPERIENCE

5 Years

EDUCATION

BS, Electrical Engineering, UW-Platteville

AAS, Electronics and Computer Systems Technician, Northcentral Technical College

REGISTRATIONS

Wisconsin Professional Engineer
#47791-6

ADDITIONAL TRAINING

CompTIA A+ Depot

Minding the Details, Every Step of the Way

Mr. Kauzlaric is a skilled electrical engineer who minds the details in-house and in the field, supporting projects with data collection, technical design and construction observation. Scott has experience designing many different types of solar installations including rooftop, ground mount fixed and ground mount tracking systems. Extremely thorough, Scott provides accurate system modeling, research and NEC code information for these installations to ensure the system meets all applicable codes and standards and performs as expected.

Relevant Experience

Lily Lake Solar, Maple Park, IL. Electrical engineering to support the development of a 2.8 MW tracking solar photovoltaic system. Electrical services included coordinating the utility interconnect, system grounding design, equipment selection, cable management design, voltage drop and temperature derating calculations, protective device coordination, fault current study and arc flash study.

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UW Parkside Solar, Kenosha, WI. Electrical engineering to assist with ground mount solar photovoltaic development which will produce 2.83 MW of power. Services included system grounding design and study, equipment analysis, utility interconnect, cable ampacity calculations, sizing of electrical conductors, disconnects, fuses and breakers, and fault current and arc flash study.

Harley Davidson Powertrain Operations Rooftop Solar Array, Menomonee Falls, WI. Electrical engineering to support the development of a solar photovoltaic system which will generate 2.87 MW of power. Services included system grounding design and study, equipment analysis, cable ampacity calculations, sizing of electrical conductors, disconnects, fuses and breakers, and fault current and arc flash study.

Other Experience:

- Deer Creek Solar Facility SCADA, Marion, IN.
- O'Shea Urban Solar Farm, Detroit, MI.
- Solar Farm Sites, Detroit and Lapeer, MI.
- Largest Carport Solar Array in Michigan, East Lansing, MI.
- Large Scale Solar Park, Rincon, GA.
- Brownfield Redevelopment, Kokomo, IN.
- Solar Park Site Electrical Design, Argos, IN.
- Hoosier Energy Solar Park, Greene County, IN.
- Expansion of Rooftop Solar Array, Canton, MI.
- Solar Park Design Services, Harrison County, IN.
- DTE Solar - Turrill Road, Lapeer, MI.



Adam Gusse

VP of Operations

EXPERIENCE

12+ Years

EDUCATION

MS Biology, Env. Sci – UW
LaCrosse

BS Biology, Env Sci,
Chemistry Minor - UW
LaCrosse

CERTIFICATIONS

OSHA 10 Certified

Fronius IG Plus, Galvo,
Primo & SYMO Certified
Service Provider

MREA Certified PV, Solar
Thermal and Wind Site
Assessor

WiDRC PSC 119
Redevelopment Committee
Member

NABCEP PV Tech Certified

SEIA, Wisconsin
Sustainability Summit,
MSA, AIA and other
Conference Presentation

Wisconsin Dwelling
Contractor

NEC 2014 & NEC 2017
Advanced PV Training

EXPERIENCE

Managed and designed over 750 solar electric, solar hot water, and wind projects in Wisconsin and the upper Midwest since entering the renewable energy industry in 2008. His skills help commercial, residential, utility, and consulting customers from project conception to a fully functional renewable energy system. Project design, utility coordination, permitting, material management, manpower scheduling, and close out training on systems from 100 kW to MW's are his main responsibilities. Previous solar development experience with MG&E, Alliant Energy, WPPI Energy, and WE Energies owned systems have provided Adam with a solid reputation from many of the utility engineers throughout the Midwest. As Vice President he also develops and leads the long-term business planning with the executive team at Sunvest, manages all aspects of the financials for the division, and works toward continued growth of the company in the Midwest.

PROJECT EXPERIENCE

From residential off-grid PV to utility owned solar farms.

Fixed ground mounts, single & dual axis trackers, Carports, Ballasted & flush roof mount, and Ballasted ground mounts.

Overall PV troubleshooting, service, and maintenance from modules through to monitoring systems

PROJECTS

- Madison College – 1.86MW Rooftop, Madison, WI
- Manlove Gas Storage Plant – 1.38 MW Ground Mount, Fisher, IL
- Alliant Energy Headquarters – Roof, Carports, Spotlight Structures, Trackers, etc Madison, WI
- Akwesasne Community Solar Garden – 1.25MW Ground Mount, Akwesasne, NY
- Jeffers Clark Building – 380 kW Parking Garage Top Milw, WI
- New Berlin School Dist – 2.8MW Roof & Ground, New Berlin, WI



Ryan Shannon

Senior Director of Design and Engineering

EXPERIENCE

9 Years

EDUCATION

Ferris State University
BA – Electrical & Electronics Engineering

CERTIFICATIONS

Certificate of Achievement,
Energy Systems – Photovoltaic

NABCEP PV Installation Professional



EXPERIENCE

- More than 8 years of leadership in design, engineering, and installation in the energy industry.
- Work comfortably with executives, account representatives, professional engineers, PV designers, and representatives of outsourced design teams.
- Develop and maintain business relationships with vendors and contractors.
- Consistently recognized for leadership in serving others, mechanical acumen, and natural and creative problem-solving abilities.

PROJECT EXPERIENCE

- Lead a team of PV designers and a network of contract professional engineers.
- Oversee the system design and performance analysis of C&I and utility-scale PV systems.
- Strategize and vet new equipment roll-outs and subsequent design changes in collaboration with supply chain.
- Develop company process and management tools to improved operational efficiency.
- Develop quality control standards and AutoCAD and Excel templates to improve department quality and efficiency.

PROJECTS

- WEC Energy Group (40MW-DC)
- People's Gas (1.3MW-DC)
- Akwesasne (Tribe) Housing Authority (1.248MW-DC)



Nathan Wincentsen, PLS

Project Manager

KEY STAFF	POSITION / PROJECT ROLE	YEARS EXPERIENCE	EDUCATION	REGISTRATION
Nathan J. Wincentsen	Owner/Quality Control/ Survey Crew Chief	26	Assoc. Degree in Civil Engineering Tech. Mid-State Tech. College	PLS

Education

Associate Degree in Civil Engineering Technology
Mid-State Technical College

United States Marine Corps
Specialized Training in:
Computer Aided Design Drafting, Technical Drafting, and Construction Surveying

Certification/Registration

Waste Site Worker Training - 29 CFR 1910.120
Trimble Real Time Kinematic GPS
Wisconsin Professional Land Surveyor No. 2539

Experience

Riverside Land Surveying LLC - Professional Land Surveyor/Owner 2005 to 2012 and 2017 - present
Responsible for office / project management and field work of contractor staking on WisDOT projects, general construction staking on subdivisions, roads, buildings, and parking lots, Boundary Retracement Surveys, Certified Survey Maps, Subdivision Plats, Condominium Plats, ALTA/NPS Land Title Surveys, Topographic Design Surveys, PLSS corner remonumentation and maintenance, DTM preparation for installation in GPS site control equipment, and flood plain surveys.

Becher Hoppe Associate, Inc - Survey Supervisor 2012 to 2016
Responsibilities included supervising survey crews and performing topographic design surveys, ALTA/NSPS Land Title Surveys, PLSS corner remonumentation and maintenance, right-of-way surveys, FAA GIS airspace surveys, airport obstruction surveys and construction staking. Also prepared subdivision plats, traditional right-of-way plats, WisDOT Transportation Project Plats, Certified Survey Maps, retracement boundary survey maps, and drafting and analyzing legal descriptions. While at Becher Hoppe Nathan also was the project manager of several WisDOT Bureau of Aeronautics land acquisition projects.

REI - Professional Land Surveyor/ Project Manager - February 1993 - 2004
Responsible for project management and field work of WisDOT projects, general construction staking on subdivisions, roads, buildings, landfills, and parking lots, Certified Survey Maps, ALTA/NPS Land Title Surveys, plats of survey, topographic surveys, PLSS corner remonumentation and maintenance, DTM preparation for installation in GPS site control equipment, and flood plain surveys.

Professional Organizations

Wisconsin Society of Land Surveyors
National Society of Professional Surveyors
Wausau Elks Lodge

MATTHEW A. MEYER, PE

GEOTECHNICAL DEPARTMENT MANAGER : PRINCIPAL ENGINEER

**PROFESSIONAL PROFILE**

Mr. Meyer, P.E. is a Geotechnical Department Manager and Principal Engineer for the ECS Midwest, LLC Neenah-Green Bay office. He possesses over 18 years of professional experience including project management, coordination, and review for geotechnical explorations and construction materials testing projects. As department manager, his responsibilities include managing and mentoring a staff of three individuals to ensure all projects stay on time and on budget. In addition, he is also a Wisconsin Certified Soil Tester. Mr. Meyer is active in the ASCE (American Society of Civil Engineers) and Phi Kappa Phi Honor Society.

REGISTRATIONS

Professional Engineer: WI, MI, MN,
MO, SD, IA

SKILLS

Shallow and Deep Foundations
Retaining Wall Design
Pavements
Slope Stability Analysis
Geotechnical Instrumentation
Distress Investigation
Settlement Monitoring
Staged Embankment Construction
Storm Water Management

EDUCATION

Master of Science, Civil
Engineering, University of
Wisconsin-Platteville, WI (2013)

Bachelor of Science, Civil
Engineering, University of
Wisconsin- Platteville, WI (2002)

PROJECT EXPERIENCE

- Fox Cities Exhibition Center, Appleton, WI
- CHS Co-op Facility, Center Valley, WI
- Various Bridges, W-DOT, WI
- USH 41 – I43 Interchange Embankments, Green Bay, WI
- RiverHeath Development, Appleton, WI
- Badger Mining New Screening Building, Taylor, WI
- Fond du Lac WPCP, Fond du Lac, WI
- JCI/Biolife Foundation Distress, Menasha, WI
- Neenah Sludge Lagoons, Neenah, WI
- Land O' Lakes, Inc. Facility Expansion, Keil, WI
- Nestle Facility, Little Chute, WI
- Natural Gas Pipeline, Chilton to Plymouth, WI
- Woodlake Hotel and Parking Lot, Kohler, WI
- Appleton Medical Center Bed Tower, Appleton, WI
- Dry Fertilizer Building, Auroraville, WI
- Boardwalk Bridges, Neenah-Menasha, WI
- City Hall and Fire Station, Kaukauna, WI
- Banta Bowl Stadium, Appleton, WI
- USH 12 Reconstruction and Noise Wave, Madison, WI
- Grassland Dairy Expansion, Greenwood, WI
- Lawrence University Campus Center, Appleton, WI



DARIN MACIOLEK, P.E

DEPARTMENT MANAGER, GEOTECHNICAL SERVICES: PRINCIPAL ENGINEER



PROFESSIONAL PROFILE

Darin is a Geotechnical Department Manager and a Principal Engineer with ECS Midwest, LLC in the Brookfield, WI office. He possesses 28 years of geotechnical and construction related engineering and consulting experience. Mr. Maciolek's responsibilities include managing geotechnical engineering projects, proposal preparation and review, financial performance, maintaining client relationships, performing a variety of field and laboratory testing services, preparing and reviewing reports, and technical review and consultation. He has worked on more than 3,000 projects throughout the U.S.

REGISTRATIONS

Professional Engineer: WI, FL, MI,
IN, OH, KY, VA, NC, SC, GA, IL

PROFESSIONAL ASSOCIATIONS

American Society of Civil Engineers
ASCE Geo-Institute
GeoProfessional Business
Association
Order of the Engineer

CERTIFICATIONS

OSHA 40 Hour Hazardous Waste
CPN Nuclear Density Gauge
Certification
U.S. Dept. of Labor MSHA
Surface Mining Training

SKILLS

Foundations
Retaining Walls
Slope Stability
Pavements
Seepage Analysis
Ground Improvement
Forensic Investigations
Value Engineering
Risk Assessments
Karst

EDUCATION

Master of Engineering,
Geotechnical Emphasis,
The University of Idaho,
Moscow, ID

Bachelor of Science,
Civil Engineering,
University of Wisconsin,
Platteville, WI

PROJECT EXPERIENCE

- Zaun Field Solar, Grafton, WI
- Jones Dairy Solar, Fort Atkinson, WI
- Regal Ware Solar, West Bend, WI
- Ozaukee County Solar, Mequon, WI
- Olsen Prairie Solar, Racine, WI
- Village of Saukville Solar, Saukville, WI
- UW Parkside Solar, Kenosha, WI
- American Family Insurance Solar, Madison, WI
- Lena Solar Site, Lena IL
- Potiac 1B Solar Site, Pontiac, IL
- Quad Graphics Solar, Lomira, WI
- Reindeer Solar, Sauk Rapids, MN
- JJ Clay Solar, Felton, MN
- Horne South Solar, Felton, MN
- Bush Solar, Owatonna, MN
- Washington County Solar, West Bend, WI
- University Lake School Solar, Hartland, WI
- Crawfordsville Solar Park, Crawfordsville, IN
- Boldt Solar, Greenville, WI
- Gelita Solar, Calumet City, IL
- Columbia City Solar, Columbia City, IN
- Logansport Solar, Logansport, IN
- Standard Solar, East Carondelet, IL
- Centerville Solar, Centerville, IN
- Anderson 3 Solar, Anderson, IN
- Anderson 4 Solar, Anderson, IN
- Anderson 5 Solar, Anderson, IN
- Anderson 6 Solar, Anderson, IN
- Danville Solar, Danville, IL
- Northern Solar, Rockford, IL
- Steele Elementary School Solar, Galesburg, IL
- Oneida Utility Scale Solar, Oneida, WI
- Monticello Utility Solar, Monticello, IL
- Tell City Solar, Tell City, IN
- Gas City Solar, Gas City, IN



OUR SERVICES



CIVIL ENGINEERING

- Surveying
- Conceptual Design & Feasibility
- Site Civil Engineering
- Grading, Drainage, & Storm Water Management
- Construction Documents
- Construction Administration
- Project Management
- Permitting & Approvals

ELECTRICAL ENGINEERING

- Utility Interconnections
- Underground Cable Design
- Grounding
- One Line Diagram Development
- Plan Reviews
- Security System Design
- Construction Documents
- Construction Administration

STRUCTURAL ENGINEERING

- Analysis for New Equipment
- Foundation Design
- Retaining Walls

BY THE NUMBERS



14,629
Homes Served



104.82MW
Installed and In-progress



416,160
Solar Panels Supported

TYPES OF PROJECTS

- Ground Mount Solar Fields
- Rooftop Arrays
- Brownfield Redevelopments
- Urban Solar Farms
- Carport Installations



PHOTO BY
inovateus
SOLAR™

EXPERIENCE

DEMILLE AND TURRILL ROAD SITES > LAPEER, MI

 **45 MW**  **9,000 Homes Served**  **200,000 Solar Panels**

This two-site solar development includes one of the largest utility-owned PV solar array sites east of the Mississippi River. 200,000 solar panels will generate 45 MW of solar power, serving 9,000 homes. Clark Dietz is overseeing the site development for both sites providing project management, civil engineering, and electrical engineering design services: Plan Commission submittal drawings; site utility plan; site, tree clearing, grading, restoration, and erosion control plans; access road and fencing details; as well as grounding modeling, underground cable sizing, and utility interconnect coordination.

LARGEST CARPORT SOLAR ARRAY IN MICHIGAN > EAST LANSING, MI

 **10 MW**  **545+ Buildings Served**  **40,000 Solar Panels**

As part of Michigan State University's long-term strategic solution to provide cost effective, reliable power to over 545 campus buildings, five parking lots will be equipped with solar panel parking bays; generating up to 10 MW of power. Clark Dietz is providing project management and civil and electrical engineering services. Civil: review of solar array layout, submittal drawings, SESC requirements, review for City and University standards conformance, and fencing details. Electrical: design compliance review, grounding design and study, and communications system consultation.

BROWNFIELD REDEVELOPMENT > KOKOMO, IN

 **5.4 MW**  **1,000 Homes Served**  **21,000 Solar Panels**

The redevelopment of a former scrap steel plant site in Kokomo, IN cleared the way for the construction of a new 26-acre solar farm. Clark Dietz provided electrical, site civil, and structural engineering for the 5.4 MW ground-mounted PV Array on a brownfield site in Kokomo, IN which had not been used in over a decade. Services included project management, brownfield site redevelopment, site layout, access roadway design, site grading and drainage, permitting, grounding design, utility interconnect coordination, specifications, construction services, and record drawings.



EXPERIENCE

O'SHEA URBAN SOLAR FARM > DETROIT, MI

 **2.04 MW**  **450 Homes Served**  **7,400 Solar Panels**

What was previously an abandoned park in Detroit, is being transformed into an urban solar farm. One of the largest of its kind in the US, this 2.04 MW, 7,400 panel, ground-mount solar farm will serve 450 homes and include recreational and educational community spaces. Clark Dietz is providing electrical, civil, and structural engineering services. Electrical: design compliance review, fault current study, grounding design, and final construction documents. Civil: review of solar array layout, site review, grading plans, SESC requirements, perimeter fencing, and ordinance compliance; culminating in final site plan design. Structural: inverter pad/foundation design and construction documentation.

REGIONAL ELECTRIC CO-OP > NEW CASTLE, IN

 **1.08 MW**  **150 Homes Served**  **4,320 Solar Panels**

Electrical design, engineering, and consulting services, resulting in final design documents for the construction of a new 1.08 MW solar park in New Castle, IN. Services included: site plans detailing layout of solar array equipment, grounding, and underground conduits; solar system power and communication one-line diagrams; panelboard schedule; details for electrical equipment installation; and preparation of final bidding documents.

REGIONAL ELECTRIC CO-OP > GREENE COUNTY, IN

 **1.08 MW**  **150 Homes Served**  **4,320 Solar Panels**

Electrical design, engineering, and consulting services, resulting in final design documents for the construction of two new 1.08 MW solar parks in Crane and New Castle, IN. Services included: site plans detailing layout of solar array equipment, grounding, and underground conduits; solar system power and communication one-line diagrams; panelboard schedule; details for electrical equipment installation; and preparation of final bidding documents.

LUTZ CSG SOLAR ARRAY INSTALLATION > GARDNER, IL

 **2.9 MW**  **7,500 Solar Panels**

Electrical, civil, and structural design, engineering, consulting services and construction phase services for the construction of a new 2.9 MW DC ground mount, tracking type PV system. The project is a design/build with a leading solar contractor in southern Wisconsin. Services included: civil plans with topography, new access road, and fencing; site plans detailing layout of solar array equipment, grounding, and conduit routing; power, grounding, and communication one-line diagrams; details for civil and electrical equipment installations; survey for construction layout; SWPPP inspections; and preparation of IFC documents.

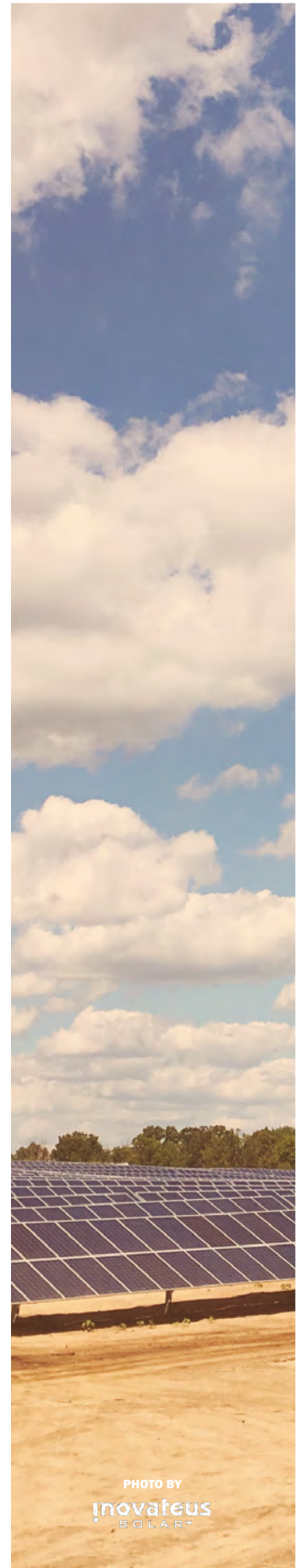


PHOTO BY
inovateus
SOLAR

EXPERIENCE

REGIONAL ELECTRIC CO-OP > HARRISON COUNTY, IN

 **1.08 MW**  **150 Homes Served**  **4,320 Solar Panels**

Electrical and civil design, engineering, and consulting services, resulting in final design documents for the construction of a new 1.08 MW solar park in Georgetown, IN. Services included: site plans detailing layout of solar array equipment, grounding, and underground conduits; solar system power and communication one-line diagrams; panel board schedule; details for electrical equipment installation; and preparation of final bidding documents.

EXPANSION: LARGEST MI ROOFTOP SOLAR ARRAY > CANTON, MI

 **200 kW**

Electrical design, engineering, and consulting services, resulting in final design documents for the construction of a 200kW roof top solar array for a major retailer store in Canton, MI. Services included: site plans detailing layout of solar array equipment, grounding, conduit routing; solar system power and communication one-line diagrams; panel board schedule; details for electrical equipment installation; and preparation of final bidding documents.

NEW LARGE SCALE SOLAR PLANT > RINCON, GA

 **18.36 MW**  **1,200 Homes Served**  **67,300 Solar Panels**

Electrical design, engineering, and consulting services, resulting in final design documents for the construction of a new large-scale 18.36 MW solar park in Rincon, GA. Project elements included review of plans and design manual for code compliance, including site plans, one-line diagrams, details and calculations.

2 NEW SOLAR PLANTS: ELECTRICAL > ARGOS & BAINBRIDGE, IN

 **1.08 MW**  **250 Homes Served**  **4,000 Solar Panels**

Electrical design, engineering, and consulting services, resulting in final design documents for the construction of two new Indiana solar parks (720kW in Argos and 360kW in Bainbridge). Services included site plans detailing layout of solar array equipment, grounding, and underground conduits; solar system power and communication one-line diagrams; panel board schedule; details for electrical equipment installation; and preparation of final bidding documents.



EXPERIENCE

NEW SOLAR PLANT > BROWNSTOWN, MI

 **500 kW**  **84 Homes Served**  **1,800 Solar Panels**

Electrical and civil design, engineering, and consulting services, resulting in final design documents for the construction of a new 500kW solar park in Taylor, MI. Services included: site plans detailing layout of solar array equipment, grounding, and underground conduits; solar system power and communication one-line diagrams; panelboard schedule; details for electrical equipment installation; and preparation of final bidding documents.

DEER CREEK - NEW SOLAR PARK ELECTRICAL DESIGN > MARION, IN

 **2.5 MW**  **550 Homes Served**  **10,000 Solar Panels**

Clark Dietz supplied network and SCADA design and relay settings for the Deer Creek solar field. Work involved functional design and control narrative of the system, updates to transformers, combining switchgear, and installation of ION meters. Data collection is accomplished through PLC's deployed at major data collection points, providing real-time and historical reporting. The system is equipped with redundant SCADA control services, HMI workstations, field instrumentation, meteorological stations, and communications devices. It also interfaces with owner's data communications system, transmitting communications via a fiber optic infrastructure.

DEER CREEK - SCADA > MARION, IN

 **2.5 MW**  **550 Homes Served**  **10,000 Solar Panels**

Clark Dietz supplied network and SCADA design and relay settings for the Deer Creek solar field. Work involved functional design and control narrative of the system, updates to transformers, combining switchgear, and installation of ION meters. Data collection is accomplished through PLC's deployed at major data collection points, providing real time and historical reporting. The system is equipped with redundant SCADA control services, HMI work stations, field instrumentation, meteorological stations, and communications devices. The system interfaces with owner's data communications system, transmitting communications via a fiber optic infrastructure.

DEER CREEK - CONTROL BUILDING PLANS > MARION, IN

 **2.5 MW**  **550 Homes Served**  **10,000 Solar Panels**

Drafted an overall plan view and four elevation views of the solar plant's control building and associated equipment based on owner dimensions.



PHOTO BY
inovateus
SOLAR

EXPERIENCE

HARLEY DAVIDSON POWERTRAIN OPERATIONS FACILITY

> MENOMONEE FALLS, WI

 **2.9 MW**  **8,400 Solar Panels**

Electrical and structural design, engineering, consulting services and construction phase services for the construction of a new 2.9 MW DC roof top, fixed mounted PV system for an existing manufacturing facility. The project is a design/build with a leading solar contractor in southern Wisconsin. Services included: site plans detailing layout of solar array equipment, grounding, and conduit routing; power, grounding, and communication one-line diagrams; details for electrical equipment installations; and preparation of IFC documents.

UNIVERSITY OF WISCONSIN - PARKSIDE SOLAR ARRAY INSTALLATION

> KENOSHA, WI

 **2.8 MW**  **8,300 Solar Panels**

Electrical, civil, and structural design, engineering, consulting services and construction phase services for the construction of a new 2.8 MW DC ground mount, fixed mounted PV system. The project is a design/build with a leading solar contractor in southern Wisconsin. Services included: civil plans with topography, new access road, and fencing; site plans detailing layout of solar array equipment, grounding, and conduit routing; power, grounding, and communication one-line diagrams; details for civil and electrical equipment installations; survey for construction layout; and preparation of IFC documents.

LILY LAKE CSG SOLAR ARRAY INSTALLATION > MAPLE PARK, IL

 **2.9 MW**  **7,500 Solar Panels**

Electrical, civil, and structural design, engineering, consulting services and construction phase services for the construction of a new 2.9 MW DC ground mount, tracking type PV system. The project is a design/build with a leading solar contractor in southern Wisconsin. Services included: civil plans with topography, new access road, and fencing; site plans detailing layout of solar array equipment, grounding, and conduit routing; power, grounding, and communication one-line diagrams; details for civil and electrical equipment installations; survey for construction layout; SWPPP inspections; and preparation of IFC documents.





Who We Are

SunVest Solar is a solar development company, helping commercial building owners, non-profit organizations, Tribes, and land-owners invest in sustainable solar energy. We enable our customers to become sustainable while reducing their carbon footprint.

Our Mission

Our mission is to advance American energy independence nationwide. We do this by focusing on cost-effective solar solutions for our customers, sustainable environmental stewardship, and job growth and educational advancement.

Why We Stand Out

We are not limited to any one subcontractor, product, component, or financing method. The solar energy market is a moving target with incentive programs that are constantly changing on both federal and state levels. Solar projects often face upfront financing barriers and we remove the financial hurdles to help make projects a reality from the start.



Wisconsin-based SunVest Solar currently serves customers from coast-to-coast, already serving New York, New Jersey, Pennsylvania, Wisconsin, Illinois, Missouri, Colorado, Nebraska and Washington. Founded in 2009, we are an experienced solar system company with over 850 customers who have more than 50,000 solar panels, totaling over 25 MW. This equals more than 25 million kWh of solar production every year, saving our customers well over \$1.5 million dollars annually.



NATIONAL HEADQUARTERS: N27 W24025 Paul Ct., Suite 100, Pewaukee, WI 53072

REGIONAL OFFICES: Wisconsin | Illinois | Michigan | Pennsylvania | New York | New Jersey

www.SunVest.com | (262) 547-1200



WEC Energy Group (40MW-DC)

SunVest Solar was chosen by WEC Energy Group (utility) to build out a 40MW-DC portfolio of solar PV projects over various sites across WE Energy's territory in Wisconsin, both roof-mount and ground-mount. These projects will be built as part of WEC's Solar Now program, which was officially launched in June 2019.

SunVest completed the first project in the portfolio at the New Berlin School District, which will be a total of 2.2MWdc. This project includes three roof-mount arrays and one ground-mount, as follows:

- Ronal Reagan Elementary School – Roof – 466kW-DC
- Ronal Reagan Elementary School – Ground – 730kW-DC
- West Middle and High School – Roof – 989kW-DC
- Eisenhower Elementary School – Roof – 619kW-DC

As of April 2020, SunVest was actively building 3 other projects in the portfolio, for a combined capacity of 3.77MWdc. 15 other projects in this portfolio are queued up for a 2020 build.

NATIONAL HEADQUARTERS: N27 W24025 Paul Ct., Suite 100, Pewaukee, WI 53072

REGIONAL OFFICES: Wisconsin | Illinois | Michigan | Pennsylvania | New York | New Jersey

www.SunVest.com | (262) 547-1200

General Firm Overview

“
ONCE AGAIN, ECS
HAS DELIVERED.
THANKS FOR YOUR
HARD WORK.”

- ROBERT TITUS
PAPPAS PROPERTIES



LOCAL: Extending the ECS Group of Companies' 30-year reputation of growth, ECS Midwest, LLC is a nationally ranked provider of environmental and geotechnical engineering as well as facilities consulting and construction observation and testing services. We provide these services to both private and public sectors.

ECS Midwest, LLC has been proudly serving the Chicagoland and Wisconsin areas for nearly 18 years. The subsidiary is run by President and Senior Principal Engineer, Mr. Brett Gitskin, PE. The Midwestern operations are supported by office locations in Buffalo Grove, Bridgeview, Chicago, and Kankakee, IL as well as Evansville, Milwaukee, Neenah and Green Bay, WI.

COMPANY: The ECS Group of Companies (ECS) is comprised of six operating entities providing geotechnical engineering, construction materials testing, environmental consulting, and facilities engineering services for a wide array of projects and clients. ECS currently operates in 53 locations, throughout Eastern, Southeastern, and Midwestern states.

PEOPLE: ECS currently employs over 1500 talented and experienced registered professional engineers, geologists, and scientists; project level engineers, geologists, and scientists; as well as certified field and laboratory engineering technicians, and support staff. ECS is heavily invested in computer technology; we also maintain an in-house IT staff for hardware and software programming in support of our proprietary systems.

VALUE: The professional staffs at ECS are dedicated to providing responsive and reliable services. It is our corporate philosophy to “*Set the Standard for Service*” for our clients. We truly embrace providing our services “on time and under budget”, but also realize that our services must bring value to our clients. ECS has earned the reputation for being responsive and having the ability to “think outside the box” to provide solutions to problems on projects. Our current initiatives with regard to generating timely reports are truly innovative in the consulting industry.

ACCOMPLISHMENT: The employees of ECS are proud to be ranked 81st among the Top 500 Pure Design Firms by ENR (2017). Hard work and dedication to serving our clients has allowed ECS to become one of the largest consulting firms in the country.

SAFETY: ECS understands that the best safety cultures are driven by employee commitment, not just compliance. Safety has been and continues to be a priority at ECS. In 2010, we launched a new initiative to ingrain safety as a core value and integral part of our culture. Our Behavior Based Safety process known as **STAR** places safety at the forefront of everything we do. As a result, we have lowered our recordable incident rate by over 50%.

For more information on ECS and our complete office listings, please visit: www.ecslimited.com





Corporate Profile

Our Vision

Our vision was to create a unique firm in which clients benefit from technical expertise and long-term value and business referral sources are well served through our unwavering commitment to the success of their businesses.

The Partners of Riverside Land Surveying LLC, guided by a strong work ethic, established this firm with a clear foundation: values, purpose, and competency. We strive to be a trusted advisor to our clients in a variety of practice areas that includes public infrastructure, land planning, boundary resolution, PLSS Corner Perpetuation and Maintenance, and residential and commercial development. We bring a comprehensive understanding of our client's goals to the table along with unsurpassed quality of service.

Corporate Structure:

Keith Walkowski - Co-Owner
Nathan Wincentsen - Co-Owner

Address:

5310 Willow Street
Weston, WI 54476

Phone Number:

715-241-7500

Website:

www.riversidelandsurveying.com

Email:

mail@riversidelandsurveying.com

Memberships:

National Society of Professional Surveyors (NSPS)
Wisconsin Society of Land Surveyors (WSLS)

Survey Services

Our team of Professional Surveyors has over 40 years of combined surveying experience for a wide range of clients including WisDOT, Counties, Municipalities, Contractors and private clients throughout Central Wisconsin. Our three survey crews are equipped with the up to date robotic total stations, GPS and software to maximize production and minimize costs.

Land Planning

- State Subdivision Plats
- County Subdivision Plats
- Condominium Plats
- Cemetery Plats
- Certified Survey Maps
- Easement Descriptions
- Topographic Surveys
- Estate Planning

Boundary

- Plat of Surveys
- ALTA/NSPS Land Title Survey
- PLSS Corner Remonumentation and Maintenance
- Boundary Line Resolution

Flood Plain Surveys

- Elevation Certificate Surveys
- LOMA / LOMR / CLOMA & CLOMR

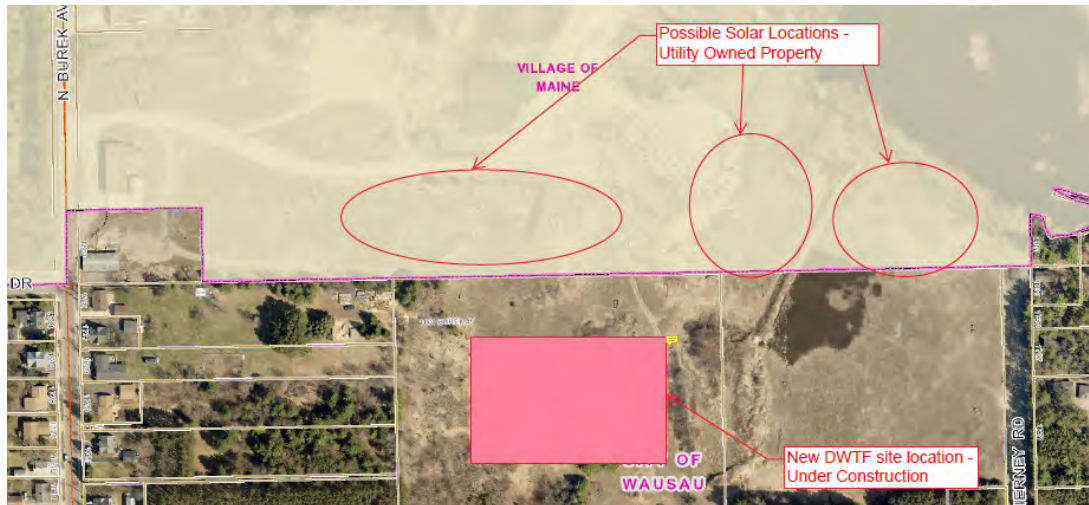
Construction Staking

- Roads
- Bridges
- Residential & Commercial Buildings
- Utilities
- Parking Lots
- Landfills
- Storm Water Management Facilities

UNDERSTANDING AND APPROACH

Wausau Waterworks (Utility) is currently constructing a new Drinking Water Treatment Facility (DWTF) at 1801 Burek Avenue. A solar energy generation system is being considered to supplement power at the DWTF. The Utility intends to own and operate the system and is confident that using all the solar power it generates will be the best path forward at this time. The new DWTF is anticipated to be online (for power consumption) starting in the summer of 2022.

Three different areas of the site are being considered for the system and future generation. The Utility currently owns this property, located in the Village of Maine. The scope of this project includes a determination of the exact location of the array.



PLANNING/PRELIMINARY DESIGN

The Clark Dietz Team understands that the Planning/Preliminary Design phase of the project is paramount in setting the stage for a successful project. During this phase we will meet with the various project constituents and stakeholders while we collectively move forward to develop the project. The following is an outline of our proposed scope of services.

- **Kick-off Meeting with Utility**
 - The Clark Dietz team will hold a kickoff meeting where we will discuss the project roles, responsibilities, and goals.
- **Project Management, Coordination and Quality Assurance**
 - Clark Dietz utilizes Quality Management on all projects. We have developed a method of tracking project activities and document checking to ensure that our project deliverables meet or exceed the client's needs. The effort takes little time and is implemented during the early stages of the project. This results in all design team members having the same understanding of the scope, needs and goals for the project.
 - A Project Work Plan (PWP) will be prepared, which is a "living document" of the project scope and activities. Individual staff and their activities are identified as well as describing each task in detail, effort, and resources. Supporting design information and resources are an important part of the PWP.
 - Quality Management reviews will be held by an independent Clark Dietz staff member with management responsibilities. The reviewer will consider the status of the project scope, schedule, budget and staffing to ensure that the client's needs are being met.

- **Analyze DWTF Loads and Demand**

- The Clark Dietz team will review the plant loads and determine the system demand. This task includes coordination with the DWTF design engineering team as well as the Utility staff. Anticipated process schedules and equipment runtimes will be needed from the Utility. We anticipate a high level of engagement between the Solar Clark Dietz team and the DWTF design team so that the system is “right-sized” as the power use options are evaluated.

Clark Dietz Difference: Clark Dietz was part of the DWTF design team and knows the DWTF design, design engineers and DWTF staff.

- **Determine Optimal Size of the Array & Evaluate the Site Layout Options**

- Based on the load information and demand from the previous task, we will determine the optimal size of the solar array.
- Once the sizing is determined, layout options will be evaluated. In doing so, what started as a “generic” sort of layout will reference the site topographic and boundary survey that were performed in parallel with the preliminary design phase. The array sizing and geometry will be graphically represented on the project site.
- We would anticipate a design meeting (or conference call) with the Utility as the footprint of the solar array becomes more solid.

- **Analyze Equipment Options**

- The Clark Dietz team will provide the Utility with benefits, performance, cost, and maintenance considerations for various equipment related to the solar array.
- This information will facilitate decision-making toward the best equipment around which to design the array.
- We understand that the Utility is interested in a tracking system. Since the pace of change in the solar industry is very fast, we will stay abreast of other potential technologies which may be of interest to the Utility.
- We anticipate working meetings or conference calls between the Utility and the Clark Dietz team to facilitate the decision-making process.

Clark Dietz Difference: Clark Dietz is teaming with SunVest Solar who is a solar developer with deep experience in the Midwest. Their experience adds a constructability, supply chain, and cost perspective to the rapidly changing landscape of the solar industry.

- **Coordination with Focus on Energy and WPS**

- We will have early discussion with WPS. In our experience it is advantageous to request a Preliminary Review for Interconnect with WPS (WEC). This way, WPS’s requirements are established in writing and formalized as the project moves toward bidding.
- Focus on Energy’s application is now prescriptive in nature. Therefore, application generally takes place after the system design. However, the Clark Dietz team will engage Focus on Energy to understand funding limitations and associated timelines for the DWTF project, specifically.

SURVEY AND SOIL ANALYSIS

▪ Topographic and Boundary Survey & Desktop Review of Environmental Conditions

- As part of the Clark Dietz team, Riverside Land Surveying will complete a topographic survey of the project area as noted in the request for proposals. Data will be collected using GPS equipment and translated into Civil 3D for use in design.
- Utility as-builts will be requested from private utility companies and incorporated into the base map.
- Benchmarks and control will be points will be set for future project use.
- A property boundary will be illustrated to assist the Utility with its Village of Maine zoning approval process.
- Readily available published environmental information such as wetland and floodplain information will be reviewed. Additional environmental services are not included.

▪ Geotechnical Investigation and Report

- ECS will provide the geotechnical services for the proposed array. We have carefully selected ECS based on their experience in the solar market. They understand the impacts of the site soils and their relation to the types of solar racking systems used throughout the Midwest.
- A thorough geotechnical investigation will be performed in parallel with portions of the Preliminary Design Phase. The following summarizes the geotechnical scope of services:
 - Field Investigation
 - Digger's Hotline
 - Perform eighteen (18) standard penetration test borings to a depth of 15 feet below existing grade.
 - Perform standard penetration test at regular intervals.
 - Collect 3 bulk samples for laboratory testing.
 - Measure depth to free groundwater observed.
 - Laboratory Testing
 - Visual classification of soil sample.
 - Perform index laboratory testing.
 - Perform 3 sets of corrosion series tests.
 - Perform 1 thermal resistivity test.
 - Report
 - Field observations.
 - Subsurface soils characterization.
 - Test boring logs.
 - Recommendations concerning suitable foundation types and depths.
 - Recommendations for low volume gravel-surfaced and asphalt-surfaced drives.
 - Evaluation of site soils for suitability for reuse as engineered fill.

PREPARE/PRESENT THREE DESIGN OPTIONS

Three design options will be prepared and evaluated as noted in the RFP and summarized below.

- Develop Electrical Layout Options for 40%, 60% and 90% of Annual Estimated Power Requirement
 - Develop Siting Options for 40%, 60% and 90% Designs
 - Prepare Probable Costs for 40%, 60% and 90% Designs
- Coordinate with WPS on Electrical Interconnect Requirements
 - We will revisit the discussion with WPS as we further prepare the design options and various build-out scenarios.
- Present Design Options to Wausau Waterworks Commission on February 2, 2021.

FINAL DESIGN AND BID PACKAGE

As soon as the Commission is comfortable with the direction they would like for the solar array, we will move forward with the design and specifications for bidding. The following summarizes the Final Design Phase:

Civil

- Site Layout Plans
- Drives and Array Access
- Site Grading and Erosion Control
- Storm Water Management Design
- Site Restoration Coordination

Electrical

- Array Layout and DC Design
- AC Design
- Interconnect Design and Details
- Tracking System
- Cable Management Details
- One-Line Development
- Grounding Design
- Communication System Design
- PV System Labeling

Structural

- Equipment Pad Design
- Racking Coordination

General

- Project Management
- 50% Review Submittal
- 50% Design Development Meeting
- 90% Review Submittal
- 90% Design Development Meeting
- Incorporate Review Comments
- Opinion of Probable Construction Cost
- QA/QC
- Final Revisions, Drawings and Specifications

Bidding

- Front End Specifications (City of Wausau)
- Bidding Documents
- Pre-Bid Meeting
- Clarifications, Interpretations, Addenda
- Bid Evaluation and Recommendations

Clark Dietz Difference: *We bring a unique and valuable perspective to your project. We work on both solar development projects, which are frequently design-build, and for municipal utilities, where competitive bidding is required.*

CONSTRUCTION PROJECT MANAGEMENT AND 50% ONSITE INSPECTION

The Clark Dietz team is uniquely qualified for the construction phase of this project. We are actively involved as the DWTF design electrical engineer, so we have familiarity with the new plant, the site and the various stakeholders. We are located in Wausau and the proposed construction staff would be based out of Wausau, adding:

- Pre-Construction Meeting
- Project Management
- Coordination with Contractor
- Shop Drawing Review
- Short Circuit Analysis and Coordination Study
- RFIs/Change Orders
- 50% Onsite Inspection
- Final Installation Review and Punchlist
- Record Drawings
- O&M Manuals
- Project Closeout

In addition to these construction management activities, we can also offer the option of an arc flash hazard analysis for the new solar plant. This would include analysis of both the DC and AC systems and include a comprehensive report and labeling in compliance with NFPA 70E. This system can then be integrated into the DWTF arc flash analysis and labeling as an additional fault current source.

COST TO COMPLETE

Cost Item 1 – Planning/Preliminary Design

\$14,860

Kick-off Meeting with Utility
Analyze DWTF Loads and Demand
Determine Optimal Size of the Array
Evaluate Site Layout Options
Analyze Equipment Options
Coordination with WPS and Focus on Energy

Cost Item 2 – Survey and Soil Analysis

\$19,915

Topographic and Boundary Survey
Geotechnical Investigation and Report
Desktop Review of Environmental Conditions

Cost Item 3 – Prepare/Present Three Design Options

\$23,240

Develop Electrical Layout Options for 40%, 60% and 90% of Annual Estimated Power Reqmnt.
Develop Siting Options for 40%, 60% and 90% Designs
Prepare Probable Costs for 40%, 60% and 90% Designs
Coordinate with WPS on Electrical Interconnect Requirements
Present Design Options to Wausau Waterworks Commission

Cost Item 4 – Final Design and Bid Package

\$90,560

Civil

Ingress and Egress Design
Grading and Erosion Control
Storm Water Management
Site Restoration

Structural

Equipment Pad Design
Racking Coordination
Technical Specifications

Electrical

Array Layout and DC Design
AC Design
Interconnect Design and Details
Tracking System
Cable Management Details
One-Line Development
Grounding Design
Communication System Design
PV System Labeling

General

Project Management
50% Review Submittal
50% Design Development Meeting
90% Review Submittal
90% Design Development Meeting
Incorporate Review Comments
Internal Project Team Meetings
Opinion of Probable Construction Cost
QA/QC
Final Revisions, Drawings and Specifications

Bidding

Front End Specifications and Contract
Bidding Documents
Pre-Bid Meeting
Clarifications, Interpretations, Addenda
Bid Evaluation and Recommendations

Cost Item 5 – Construction Project Management and 50% Onsite Inspection

\$86,780

Pre-Construction Meeting
Project Management
Coordination with Contractor
Shop Drawing Review
Short Circuit Analysis and Coordination Study
RFIs/Change Orders
50% Onsite Inspection (Assumes 6 months construction or 480 hours)
Final Installation Review and Punchlist
Record Drawings
O&M Manuals
Project Closeout

Total Estimated Fee

\$235,355



Engineering Quality of Life®

Tonia Westphal, PE, LEED AP

Client Manager

Clark Dietz, Inc.
500 N. 3rd Street, Suite 703,
Wausau, WI 54403

📞 715.432.8381

✉️ tonia.westphal@clarkdietz.com

clarkdietz.com

Join us on social media:



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REQUEST FOR ENGINEERING PROPOSALS

SOLAR GENERATION FACILITY – 1801 BUREK AVE

I. General Information

Wausau Waterworks (Utility) is currently constructing a new Drinking Water Treatment Facility (DWTF) at the above address. The Utility is interested in generating power using solar technology to supplement power use at the new DWTF. The Utility is soliciting proposals from engineering firms with experience in design and construction oversight of solar generation facilities.

The intent of this request is to solicit proposals from engineering firms who have experience in the planning, design, and construction oversight of solar generating facilities for non-residential entities.

Submitted proposals for this work must be received before 10:30 am on October 27, 2020. 4 printed copies and a jump drive with a pdf copy shall be delivered to:

City of Wausau – Engineering
City Hall
407 Grant St
Wausau, WI 54403

II. Background

The City of Wausau has worked with three different solar/energy vendors over the past two years to determine if solar generation would be feasible on existing structures within the City and would there be a favorable payback if the solar arrays were 3rd party owned. All three of the analysis resulted in long term payback, primarily due to the cost of purchasing the power and the capital cost.

The Utility is pursuing owning and operating a solar generating system which would supplement power for the new DWTF. The Utility is confident that owning and operating a solar generating system and utilizing all of the power it generates will be the best path forward at this time and have the best overall operation and financial benefit.

In 2016 the Utility purchased property that is in the Village of Maine adjacent to the new DWTF. It is proposed to construct the ground mounted solar array on this property and to dedicate an appropriate area of the parcel for a properly sized solar generation system and possible expansion in the future. The exact location of the solar array will be determined once the hired engineering firm determines the proper size and space required. In general the property area is shown in Appendix A.

The new DWTF is proposed to be completed in the fall of 2022. The WDNR has stated the new facility will need to be up and operational for a period of time and wasting treated water prior to the existing treatment facility to be taken offline. It is anticipated the new facility will begin using power in summer of 2022.

III. Additional Information

Included in Appendix B is the past 3-years of power usage at the existing Water Treatment Facility. This information is being provided for proposers to use as an idea of the size of the system the Utility is considering to construct. The actual power load/usage of the new facility may vary somewhat but for consistency of comparing proposals the power information shall be used to complete the proposal.

WPS has provided the following information related to the Interconnection Agreement as well as other requirements related to systems greater than 20kW.

The WPS contact for any systems greater than 20kW:

Corey Kuchta
Wisconsin Public Service
1717 10th Ave
Menominee, MI 49858
906-863-4319 or corey.kuchta@wisconsinpublicservice.com

A link to the interconnect agreement and customer owned renewable energy website:

- <https://accel.wisconsinpublicservice.com/environment/pdf/dist-gen-interconnect-agree-psc6030.pdf>
- https://accel.wisconsinpublicservice.com/environment/generation_wi.aspx#greater

IV. Scope of Services

The primary goal of the scope of services is for the Utility to equally evaluate proposals received from engineering firms. The intent of the scope of services is to establish the general information the Utility is looking to receive in deliverables for each step of the project. It is the responsibility of the qualified engineering firm to prepare and outline what their requirements and timelines for providing the requested deliverables, including establishing what required information they will need provided from the Utility. The proposal shall be no more than 30 pages.

The following items are required to be included in the proposed scope of work:

1. Qualifications
 - a. Provide your firms qualifications related to the proposed work
 - b. Provide the staff/project team and their experience on solar projects for utilities
 - c. Highlight experience with similar projects in the upper Midwest
 - d. Experience with design of single solar arrays generating over 5MW of power and cumulative solar projects generating over 50MW of power
 - e. Experience with ground mount solar arrays with tracking system installed
 - f. Identify any partners/sub-consultants you plan to work with to complete the scope of services and provide their qualifications
2. Outline for planning/preliminary design of the solar facility
 - a. Establish meeting timelines and site visits needed for proper planning
 - b. Outline information that will be needed by Utility staff
 - c. Include meetings with WPS staff as required
 - d. Include Focus on Energy as needed
 - e. Determine a power load for the new DWTF to use for design basis. Utility will assist with providing necessary design information
 - f. Provide equipment options and benefits to Utility staff including operation and maintenance, overall performance, power monitoring software and equipment warranty
 - g. Utility wants a tracking system on the panels versus fixed
 - h. Prepare an estimate for the area required for the solar facility and finalize the site location
 - i. Have a meeting with the Utility and WPS regarding the required interconnect agreement
3. Complete site investigation
 - a. Prepare site survey of the site location
 - b. Complete soil analysis for structural design
4. Preliminary design to include three options
 - a. Prepare a preliminary size and construction estimate for providing 40% of the annual power requirement for the new DWTF facility
 - b. Prepare a preliminary size and construction estimate for providing 60% of the annual power requirement for the new DWTF facility
 - c. Prepare a preliminary size and construction estimate for providing 90% of the annual power requirement for the new DWTF facility
 - d. Present all three options to the Wausau Waterworks Commission for consideration and a decision
5. Design and specifications for bidding
 - a. Prepare design of the facility approved by the Commission
 - b. Complete specifications and contract (using City contract documents) for a complete bid package
 - c. The bid shall be a unit price contract

V. Minimum Cost items Identified in the Proposal

1. Provide a cost for Planning/Preliminary Design
2. Provide a cost for Survey/Soil Analysis
3. Cost for preparing and presenting 3 design options for consideration
4. Cost for final design and bid package
5. Cost for project management and 50% onsite inspection

VI. Project Progression (ESTIMATED TIMELINE FOR COMPLETION)

❖ Proposal due	October 27, 2020
❖ Expected award	November 10, 2020
❖ Field Work Scheduled/Completed	December 15, 2020
❖ Presentation of Options to Commission	February 2, 2021
❖ Begin Bidding for Construction	TBD
❖ Construction Completion	TBD

VII. Submission and Review of Proposals

Qualifications and proposals for this work must be received by 10:30 am on October 27, 2020. 4 printed copies and a jump drive with a pdf copy shall be delivered to:

City of Wausau – Engineering
City Hall
407 Grant St
Wausau, WI 54403

The review committee will be made up of the Director of Public Works, Water Plant Superintendent, and Electrical Inspector at a minimum. The following items will be considered in the selection of a firm:

- ❖ (30%) Experience in other utility solar projects and firm's key personnel including partners/sub-consultants
- ❖ (30%) Proposers approach and defined outline of the project
- ❖ (15%) Cost to Complete Scope of Services
- ❖ (25%) Firm's location and experience working with the Utility and other solar projects in the upper Midwest

VIII. Statement of Intent

This is the first significant solar project which will be undertaken by the City of Wausau. This project is highly supported by the residents, elected officials and staff. Cost and payback of the facility is important but there is also a high importance for the City to move towards alternative energy as part of its overall goal of sustainability. The primary goal of the utility is to have a well-

defined and well vetted designed solar project for bidding. It is critical the firm provide thorough information to the Commission and City elected officials as requested throughout the project timeline. This is the first solar project the City will be building and it is anticipated future solar projects will follow and utilize similar technology and equipment.

IX. Point of Contact

The following is the point of contact for necessary information:

Eric Lindman, P.E
City of Wausau – Director of Public Works & Utilities
407 Grant St
Wausau, WI 54403
715-261-6740
eric.lindman@ci.wausau.wi.us

THE CITY OF WAUSAU RESERVES THE RIGHT TO REJECT ANY AND ALL PROPOSALS.

APPENDIX A

Map Identifying Site Locations

APPENDIX B

Power Usage – Existing Water Treatment Facility



CITY OF WAUSAU
SOLE SOURCE PURCHASE JUSTIFICATION
REQUIRED FORM PURCHASE OF GOODS OR SERVICES EXCEEDING \$5,000

Purchase of goods or services for no more than \$25,000 may be made without competition when it is agreed *in advance* between the Department Head and the Finance Director. Sole source purchasing allows for the procurement of goods and services from a single source without soliciting quotes or bids from multiple sources. Sole source procurement cannot be used to avoid competition, rather it is used in certain situations when it can be documented that a vendor or contractor holds a unique set of skills or expertise, that the services are highly specialized or unique in character or when alternate products are unavailable or unsuitable from any other source. Sole source purchasing should be avoided unless it is clearly necessary and justifiable. The justification must withstand public and legislative scrutiny. The Department Head is responsible for providing written documentation justifying the valid reason to purchase from one source or that only one source is available. Sole source purchasing criteria include: urgency due to public safety, serious injury financial or other, other unusual and compelling reasons, goods or service is available from only one source and no other good or service will satisfy the City's requirements, legal services provided by an attorney, lack of acceptable bids or quotes, an alternate product or manufacturer would not be compatible with current products resulting in additional operating or maintenance costs, standardization of a specific product or manufacturer will result in a more efficient or economical operation or aesthetics, or compatibility is an overriding consideration, the purchase is from another governmental body, continuity is achieved in a phased project, the supplier or service demonstrates a unique capability not found elsewhere, the purchase is more economical to the city on the basis of time and money of proposal development.

1. Sole source purchase under \$5,000 shall be evaluated and determined by the Department Head.
2. Sole source purchase of \$5,000 to \$25,000 a formal written justification shall be forwarded to the Finance Director who will concur with the sole source or assist in locating additional competitive sources.
3. Sole source purchase exceeding \$25,000 must be approved by the Finance Committee.



Ongoing Sole Source – 365 days



One Time Sole Source Request

1. Provide a detailed explanation of the good or service to be purchased and vendor.

Clarion 415 is an Alum/Polymer blend designed specifically for our plant to remove Iron and manganese from raw well water.

2. Provide a brief description of the intended application for the service or goods to be purchased.

This chemical is used specifically for water treatment, the removal of Iron and Manganese.

3. State why other products or services that compete in the market will not or do not meet your needs or comply with your specifications.

Historically Iron and Manganese removal was accomplished with just the use of Alum, this worked but removal rates were poor. After the use of the Clarion 415, product consumption went down by over half and removal rates drastically increased.

4. Describe your efforts to identify other vendors to furnish the product or services.

This product is proprietary and can only be made or distributed by the vendor owning the rights.

5. How did you determine that the sole source vendor's price was reasonable?

Similar products on the market are comparably priced.

Which of the following best describes this sole source procurement? Select all that apply.

- ☒ Product or vendor is uniquely qualified with capability not found elsewhere.
- ☐ Urgency due to public safety, serious financial injury or other. (explain)
- ☒ The procurement is of such a specialized nature that by virtue of experience, expertise, proximity or ownership of intellectual property
- ☐ Lack of acceptable quotes or bids.
- ☒ Product compatibility or the standardization of a product.
- ☐ Continuation of a phased project.
- ☐ Proposal development is uneconomical.

Department: Water

Preparer: Scott Boers

Vendor Name: Chemtrade Chemicals

Expected amount of purchase or contract: \$Approx. \$84,000.00 dependent upon supply needs

Department Head Signature:

Date:

Finance Director Signature:

Date: