

Tentative Agenda for the WAVERLY CITY COUNCIL MEETING to be held on January 28, 2025 at 6:00 PM. This meeting will be held at the Waverly City Office Building, 14130 Lancashire, Waverly, NE 68462. A current Agenda shall be readily available for public inspection at the office of the City Clerk during normal business hours.

1. **Call to Order**

1.a) Roll Call

1.b) Pledge of Allegiance

1.c) Acknowledgement of the "Open Meetings Act" poster that is posted by the south entrance.

1.d) Adoption of Agenda

1.e) Approval of the Consent Agenda Items*

All items listed with an asterisk (*) are considered to be routine by the City Council and will be approved by one motion. There will be no separate discussion of these items unless a Council Member or a Citizen so requests, in which event the item will be removed from the Consent Agenda status and considered in its normal sequence on the Agenda.

1.f) Proclamations and Presentations

2. **Public Hearings**

3. **Sheriff's Report**

4. **Public Comments**

5. **Approval of Minutes**

5.a) *Minutes of the January 14, 2025 City Council Meeting

6. **Consideration of Claims and Financial Reports**

6.a) Claims for Payment

6.b) Keno & Sales Tax Reports

7. **Introduction of Resolutions**

8. **Introduction of Ordinances**

8.a) Consideration of the Third and Final Reading of Ordinance 24-11 amending Chapter 91 of the Waverly Municipal Code relating to Fire Prevention.

9. **Introduction of Business and Communications**

9.a) Consideration of an agreement with Heermann Economic Development Consulting, LLC for the City of Waverly, NE Economic Development Strategy and Action Plan (EDSAP) in an amount not to exceed \$44,000.00.

9.b) Consideration of a bid from Bert Gurney & Associates for Dissolved Oxygen & Oxygen Reduction Potential Probes in an amount not to exceed \$21,290.00.

9.c) Consideration of Scope Change Order #1 for the New Well Siting project.

10. **Committee Reports**

10.a) Human Services (Park & Recreation): Council Member Stark

10.b) Public Works (Utilities & Street): Council Member Delahoyde

10.c) Public Health (Fire & Safety): Council Member Jespersen

10.d) Fiscal & Economic Development: Council Member Nielson

10.e) City Administrator Fisher

11. **Adjournment**

The Governing Body reserves the right to go into Executive Session at any time for the reasons outlined in State Statute 84-1410.

The following rules are established for audience members and participants at a Council meeting:

- (1) Any person wishing to address the Council shall first state their name and address.
- (2) Public comments may be for agenda or non-agenda items.
- (3) Remarks shall be limited to five (5) minutes.

MINUTES OF A WAVERLY CITY COUNCIL MEETING HELD ON JANUARY 14, 2025

CALL TO ORDER

Mayor Abbey Pascoe called the meeting to order at 6:00 p.m. and led those in attendance in reciting the Pledge of Allegiance. Pascoe acknowledged the Open Meetings Act Poster located on the south wall of the Council Chambers. Mayor Abbey Pascoe and Council Members David Jespersen, Dave Nielson, Aaron Delahoyde, and Allison Stark were in attendance. Other City Officials present were City Administrator Stephanie Fisher, City Attorney Mark Fahleson, and City Clerk Megan Frye. Others present were Emergency Services Coordinator Robin Hoffman and Lancaster County Sheriff Deputy Jason Brownell. Notice of the Meeting and Agenda were given to the Mayor and all Members of the City Council prior to the Meeting. Notice of the Meeting was posted at Russ's Market Express, the US Post Office, the City Office, and the City website (citywaverly.com).

ADOPTION OF AGENDA

Council Member Jespersen moved to adopt the Agenda as presented. Council Member Nielson seconded the motion.

The following Council Members voted "YEA": Jespersen, Nielson, Delahoyde, and Stark. The following Council Members voted "NAY": None. Motion Carried. 4-0.

APPROVAL OF CONSENT AGENDA

Minutes of the December 23, 2024 City Council Meeting

Consideration of Resolution 25-02 to Establish and Charge Reasonable Fees for Emergency Medical and Fire Service

Consideration of approval of the Employment Agreement with Stephanie Fisher.

Council Member David Jespersen moved to approve the Consent Agenda. Council Member Dave Nielson seconded the motion.

The following Council Members voted "YEA": Nielson, Delahoyde, Stark, and Jespersen. The following Council Members voted "NAY": None. Motion Carried. 4-0.

PROCLAMATIONS AND PRESENTATIONS

None.

PUBLIC HEARINGS

None.

SHERIFF'S REPORT

Deputy Brownell reported there were fewer calls for service last month. Brownell discussed various parking violations with plan of action as warning, citation, and potentially getting towed if issue not remedied. Brownell advised updates to ticket book and a reported van around town with no violations. Mayor Pascoe recognized Law Enforcement Appreciation Week and thanked the Waverly deputies.

PUBLIC COMMENTS

None.

APPROVAL OF MINUTES

Minutes of the December 23, 2024 City Council Meeting

Consent Agenda.

CONSIDERATION OF CLAIMS AND FINANCIAL REPORTS

Claims for payment

Claims for Payment: December 24th, 2024 - January 14th, 2025

Group A

Vendor	Description	Amount
Tammy Johnson	Utility Deposit Refund	\$ 100.00
Michael & Courtney Lucas	Utility Deposit Refund	\$ 100.00
Cody Lundy	Utility Deposit Refund	\$ 30.65
Sara Sheehan	Utility Deposit Refund	\$ 100.00
ADP Fees	Payroll Fees	\$ 300.85
ADP Payroll	Payroll	\$36,751.17
ALLO Communications	Phone/Internet Services	\$ 1,035.64
Barco Municipal Products Inc.	Street & railroad crossing signs	\$ 490.76
Bauer Built	Repairs	\$ 40.25
Black Hills Energy	Natural gas	\$ 1,083.02
Brainard Heating & Air	Shop furnace	\$ 6,526.00
Colonial Life	Insurance	\$ 43.92
Cubby's, Inc.	Fuel	\$ 1,126.22
DataVizion, LLC	VizionCare Complete, Microsoft 365 Business	\$ 1,515.00
Dultmeier Sales, LLC	Salt brine pumps	\$ 4,690.56
Faughn Electric	Wayne Park electrical work	\$16,796.00
Firespring	Business Cards	\$ 230.27
Frontier	Propane	\$ 825.45
Grainger	Supplies	\$ 38.75
Hanna:Keelan Associates, Inc.	General Redevelopment Plan	\$15,000.00
HBE LLP	Keno audit	\$ 5,375.00
Hippo Equipment	Stump grinder rental	\$ 250.00
Horizon Bank	Monthly ACH Fees	\$ 10.00
Horizon Bank	Safety Deposit Box Fee	\$ 33.00
JEO Consulting Group, Inc.	Comp Safety Action Plan, 134 th -Hwy 6 Drainage Imp	\$17,890.00
Jill Robinson	Personnel Photos	\$ 350.00
John Hancock USA	Retirement	\$ 3,065.79
Kelly Supply Company	Supplies	\$ 139.69
Kroger Irrigation & Fence	Sprinkler repair	\$ 686.14
Kroger Landscapes, Inc.	Lawson Park overseeding	\$ 2,750.00
Lancaster Co Sheriff Office	January 2025	\$38,093.00
Landscape Alternatives	Parks/Streets/Cemetery Tree/Landscape Services	\$ 1,850.00
Layne Christensen Company	Well #10 service work & pump repairs	\$18,769.00
Lincoln Electric System	Electricity	\$18,904.70
Mammoth Station	Fuel	\$ 23.23
Mellen & Associates	Gear sector, adapters, press rings	\$ 697.36
Menards-Lincoln North	Supplies	\$ 91.96
Midwest Laboratories, Inc.	Lab fees	\$ 479.09
Nebraska Dept Revenue Waste	Utility Sales Tax	\$ 8,878.68
NE Public Health Environ. Lab	Lab Fees	\$ 541.00
One Call Concepts, Inc.	One-Call Service	\$ 47.58
Overhead Door Company, Inc.	Door repair	\$ 155.00
Patrick Peterman	WFR-Personal Vehicle Reimburse	\$ 345.00

Paul Davis Restoration, Inc.	Laundering Bunker Gear	\$ 50.00
PAVERS LLC	Supplies	\$ 720.64
Pinnacle Bank	Santa Express supplies	\$ 632.37
Pinnacle Bank	Supplies	\$ 3,810.27
Rembolt Ludtke LLP	Bond Matters	\$ 1,440.00
Rembolt Ludtke LLP	Waverly Suburban Fire District, Legal Fees	\$ 7,042.00
Sapp Bros. Inc. - Lincoln	Supplies	\$ 318.00
SEND Lincoln Office	Drawdown #6 - Owner Occupied Housing Program	\$44,667.46
Southeast Area Clerks Assoc.	2025 Annual Dues	\$ 10.00
Sparq Data Solutions	Meeting Subscription	\$ 4,100.00
The Fort	Clothing Allowance	\$ 250.00
The Voice News	Advertising & Printing	\$ 470.18
U.S. Bank Equipment Finance	Ricoh Copier	\$ 143.95
USA Blue Book	Supplies	\$ 1,133.13
Visual Edge IT	Copies	\$ 90.67
Whitehead Oil Co.	Fuel	\$ 200.76
Claims Group A Total		\$271,329.16

Council Member Jespersen moved to approve claims in the amount of \$271,329.16. Council Member Nielson seconded the motion.

The following Council Members voted “YEA”: Delahoyde, Stark, Jespersen, and Nielson. The following Council Members voted “NAY”: None. Motion Carried. 4-0.

Treasurer's Report and Budget & Expense Report

Council Member Jespersen moved to approve Treasurer's Report and Budget & Expense Report. Council Member Nielson seconded the motion.

The following Council Members voted “YEA”: Stark, Jespersen, Nielson, and Delahoyde. The following Council Members voted “NAY”: None. Motion Carried. 4-0.

INTRODUCTION OF RESOLUTIONS

Consideration of Resolution 25-01 Adopting and Revising the Employee Handbook.

Council Member Jespersen moved to approve Resolution 25-01 Adopting and Revising the Employee Handbook. Council Member Nielson seconded the motion.

Mayor Pascoe stated we have allowed city employees to have the afternoon of Christmas Eve off, so this should be added as policy. Pascoe shared a Total Rewards Package is in the works for boosting employee morale, sharing all benefits offered by the city.

The following Council Members voted “YEA”: Jespersen, Nielson, Delahoyde, and Stark. The following Council Members voted “NAY”: None. Motion Carried. 4-0.

RESOLUTION 25-01

RESOLUTION ADOPTING AND REVISING THE EMPLOYEE HANDBOOK

WHEREAS, the establishment of rules and regulations for the hiring and continued employment of City personnel is of benefit to the City, and

WHEREAS, it is advantageous for City personnel to know their rights and terms of employment.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF WAVERLY, NEBRASKA that the Employee Handbook as revised on November 27, 2018, incorporates revisions to the following section:

HOLIDAYS

Regular full-time and regular part-time employees will receive the following holidays as time off with pay: New Year’s Day, Martin Luther King Jr. Day, Presidents Day, Memorial Day, Juneteenth, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, Day after Thanksgiving, Christmas Eve (Four (4) hours; office closed at 12:00 p.m. Noon), and Christmas Day.

The additions and changes in the above stated section is hereby adopted as policy.

PASSED AND APPROVED THIS 14TH DAY OF JANUARY, 2025

Consideration of Resolution 25-02 to Establish and Charge Reasonable Fees for Emergency Medical and Fire Service

Consent Agenda

RESOLUTION NUMBER 25-02

RESOLUTION TO ESTABLISH AND CHARGE REASONABLE FEES FOR EMERGENCY MEDICAL AND FIRE SERVICE

WHEREAS, the establishment of reasonable service fees for emergency medical and fire service is authorized per SS35-514.02, and

WHEREAS, the mandatory public hearing to establish reasonable fees was held on September 13, 2022, and

WHEREAS, the following proposed fees have been determined to be reasonable.

Proposed Emergency Medical Service Fees

Mileage ALS or BLS	\$25.32
BLS Emergency	\$1,000.00
ALS Emergency LVL 1	\$1,275.00
Responded, No Transport	\$200.00

Proposed Fire Service Fees

Response vehicles: charges will be made to the closest ¼ hour. Charges include personnel costs. Mileage will be charged at \$8.00 per mile per vehicle.

Pumper Truck	\$600.00	per hour
Tanker Truck	\$450.00	per hour
Grass Rig	\$300.00	per hour

Aerial Ladder Truck	\$850.00	per hour
Utility Truck	\$250.00	per hour
Heavy Rescue Unit	\$315.00	per hour
Hazardous Material Unit	\$315.00	per hour
Command Vehicle	\$250.00	per hour

Equipment Charges

Jaws of Life	\$350.00
Power Saw	\$100.00
Hydraulic Jack/Chisels	\$100.00
Cribbing Blocks	\$125.00
Winches	\$125.00
Air Bags	\$150.00
High Lift Jack	\$150.00
Brooms	\$25.00
Hand Tools/Shovels	\$25.00

Supplies

Safety Flares	\$12.50	each
Class A Foam	\$225.00	per five gallons
Class AFFF Foam	\$310.00	per five gallons
Absorbent Pads	\$28.00	per bag
Salvage Covers	\$100.00	each
Floor Dry/Absorbent Material	\$28.50	per bag
Water	\$12.50	per hundred gallons

Other equipment and supplies not listed that are consumed or damaged, and any disposal costs of equipment or supplies contaminated as the result of a call will be billed at cost.

NOW THEREFORE, BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF WAVERLY, NEBRASKA that the service fees included in this resolution and proposed at the public hearing on September 13, 2022 are hereby adopted. Citizens residing within the City of Waverly or the Waverly Fire District, or operating a business within the City of Waverly, or the Waverly Fire District, will be exempt from Fire Service Fees.

PASSED AND APPROVED THIS 14TH DAY OF JANUARY, 2025

INTRODUCTION OF ORDINANCES

Consideration of the Second Reading of Ordinance 24-11 amending Chapter 91 of the Waverly Municipal Code relating to Fire Prevention.

Council Member Jespersen moved to introduce and approve the Second Reading of Ordinance 24-11 amending Chapter 91 of the Waverly Municipal Code relating to Fire Prevention. Council Member Nielson seconded the motion.

City Attorney Fahleson read Ordinance 24-11 by title:

AN ORDINANCE OF THE CITY OF WAVERLY, NEBRASKA, AMENDING CHAPTER 91 OF THE WAVERLY MUNICIPAL CODE RELATING TO FIRE PREVENTION; OUTDOOR FIREPLACES; REQUIREMENTS.

Council Member Jespersen moved to strike 91.06 A.4. Do not allow the flames to extend above the pit or chimney. Council Member Stark seconded the motion.

The following Council Members voted “YEA”: Nielson, Delahoyde, Stark, and Jespersen. The following Council Members voted “NAY”: None. Motion Carried. 4-0.

Council Member Delahoyde asked for clarification on the method the fire chief declares a burn ban. Fisher advised a city burn ban is declared when a red flag warning is issued through the National Weather Service and we publish as a public notice in our usual facets; Pascoe suggested a push notification through the city app. Council Member Jespersen requested getting the parameters to issue a burn ban in writing and Council Member Delahoyde advised that will help the fire chief as well. Emergency Services Coordinator Hoffman stated we don't take burn bans lightly; we look at surrounding departments, fuel conditions, winds, drought conditions, and take other variables into account. Hoffman shared we are being precautious to avoid unnecessary fires from a very dry fall and winter.

On original motion, to approve the Second Reading of Ordinance 24-11 amending Chapter 91 of the Waverly Municipal Code relating to Fire Prevention, as amended, the following Council Members voted “YEA”: Delahoyde, Stark, Jespersen, and Nielson. The following Council Members voted “NAY”: None. Motion Carried. 4-0.

INTRODUCTION OF BUSINESS AND COMMUNICATIONS

Consideration of approval of the Employment Agreement with Stephanie Fisher.

Consent Agenda.

COMMITTEE REPORTS

Human Services (Park & Recreation): Council Member Stark

Council Member Stark reported Adult Coed Volleyball league is underway, started last week, and there are 8 teams playing. They removed 12-14 Ash Trees to avoid the Ash Borer Beetle. If anyone has Ash Trees, it is recommended you remove them. Lawson Park Field 5 is almost complete, the dugout shade topper and benches for dugouts are forthcoming. Ball field schedule is being set for spring and summer. The increased fees for Aquatic Center will be on an upcoming meeting. They are working on the Lawson Park Dog Park, getting quotes for fencing. The committee had much discussion on ideas for fundraising and what to do with the space of the old swimming pool.

Public Works (Utilities & Street): Council Member Delahoyde

Council Member Delahoyde reported sewer jetting was done on Danvers, Castlewood, and Eastbourne. They repaired several damaged signs around town. TVs for council room were mounted and set up. Three burials at the cemetery. A new heater and AC unit was installed at the shop. They replaced a broken switch on Well 10. Continue to place millings on N 148th Street from I-80 to Waverly Road. They burned the brush pile last Monday. They put new batteries in the school zone flashers on Amberly Road. Held a meeting with JEO to start the test well site drilling project. Changed oil in the return pumps and the sludge pumps at the wastewater plant. They did a really nice job of applying the salt brine to the streets, so they were ready for the storm that occurred last week.

Public Health (Fire & Safety): Council Member Jespersen

Council Member Jespersen reported there were 18 calls for service with a majority of those EMS calls; we are already ahead of pace from last year at this time, which was 11 calls. We are continuing the trend upwards as we ended 2024 with far more calls than 2023. Training equipment has been ordered that was purchased from the Horizon Bank donation. We are getting one EMS simulator training manikin and two QCPR training manikin sets which include an adult, child, and infant. We will be developing community lay person CPR equipment that they can deploy with those manikins for 2025

Fiscal and Economic Development: Council Member Nielson

No report given.

City Administrator Fisher

City Administrator Fisher reported with the holidays, we have been playing catch-up for a couple weeks, getting back into the normal groove. We had an initial meeting with JEO on the Test Well Program. They have identified 12-13 sites and we will be reaching out to property owners in the upcoming weeks. I will be working with JEO's community contact representative, Andrea, who will help me with proper documentation and language to make sure we are communicating in a unified and solid message to all of these individuals because going out and identifying a new well is a sensitive subject to all parties concerned so we want to make sure that everyone gets the right message. Tomorrow, Wednesday, January 15, I have a Metropolitan Planning Organization (MPO) meeting; the City of Waverly is fortunate to be involved in the Lincoln/Lancaster MPO where we talk about the different transportation initiatives going on in Lincoln and Lancaster County. Our Safe Streets For All program action grant is listed on their projects. I meet tomorrow with our Safe Streets For All federal highway administration representative just to check in and see how we are doing moving through our action items on our action plan. We do have some meetings coming up with various focus groups for that action plan. On January 22, our CRA will meet to consider the Redevelopment Project for the west area-wide TIF in Waverly, which is the first step in that. Then the Planning Commission meets on January 27 and it will come to the City Council after that.

EXECUTIVE SESSION

Council Member Nielson moved to go into Executive Session to protect the public interest with the reason being for a strategy session with respect to contract negotiations. Council Member Jespersen seconded the motion.

The following Council Members voted "YEA": Stark, Jespersen, Nielson, and Delahoyde. The following Council Members voted "NAY": NONE. Motion carried. 4-0.

City Attorney Fahleson declared Closed Session at 6:32 p.m. Those present in Executive Session were Mayor Pascoe, Council Members Jespersen, Nielson, Delahoyde, and Stark, City Administrator Fisher, and City Attorney Fahleson. No action was taken during Executive Session.

City Attorney Fahleson declared Open Session at 7:33 p.m.

Council Member Jespersen moved to leave Executive Session at 7:33 p.m. Council Member Nielson seconded the motion.

The following Council Members voted "YEA": Jespersen, Nielson, Delahoyde, and Stark. The following Council Members voted "NAY": None. Motion Carried. 4-0.

ADJOURNMENT

Council Member Jespersen moved to adjourn the meeting at 7:33 p.m. Council Member Nielson seconded the motion.

The following Council Members voted "YEA": Nielson, Delahoyde, Stark, and Jespersen. The following Council Members voted "NAY": None. Motion Carried. 4-0.

Abbey L. Pascoe
Mayor

Megan K. Frye
City Clerk/Human Resources Asst.

Claims for Payment: January 15th - 28th, 2025

Group A			
Vendor	Description	Amount	Date Paid
ADP FEES	Payroll Fees	\$ 721.80	1/29/2025
ADP FEES	Payroll Fees	\$ 118.95	1/31/2025
ADP FEES	Payroll Fees	\$ 62.95	1/31/2025
ADP PAYROLL	Payroll	\$ 37,712.72	1/24/2025
BLUE CROSS BLUE SHIELD NE	Health Insurance	\$ 16,834.63	2/1/2025
CARQUEST AUTO PARTS	Clutch switch & starter solenoid	\$ 91.23	
CORE & MAIN	Sensus Software Support Fee, Meter & Readout Purchase	\$ 5,438.82	
FAUGHN ELECTRIC	Council room electrical work	\$ 1,175.00	
Federal Licensing Inc.	Radio system license fee	\$ 135.00	
Frontier	Propane	\$ 923.89	
HAWKINS, INC.	Supplies	\$ 1,872.90	
Hometown Leasing	FD Copier	\$ 71.48	
HOTSY EQUIPMENT CO	Equipment repair	\$ 51.00	
INTERSTATE ALL BATTERY CENTER	Battery school zone flasher	\$ 977.00	
JEO CONSULTING GROUP, INC.	Waverly New Well Siting	\$ 4,500.00	
JOHN HANCOCK USA	Retirement	\$ 3,308.45	1/24/2025
Laerdal Medical Corp.	CPR manikins	\$ 16,514.00	
LIFE-ASSIST, INC.	Medical Supplies	\$ 1,079.25	
LINCOLN ELECTRIC SYSTEM	Electricity	\$ 248.74	
MacQueen Emergency	SCBA flow testing	\$ 1,565.00	
Mutual of Omaha	Life & Vision Insurance	\$ 497.77	
NADIA KOVAL	Cleaning Service	\$ 439.23	
NEBRASKA DEPT OF REVENUE	Lottery Tax	\$ 13,098.00	
NE PUBLIC HEALTH ENVIRON. LAB	Lab Fees	\$ 33.00	
NEMSA	Fire/Rescue Membership Fee	\$ 490.00	
One Billing Solutions	December 2024 Billing-EMS	\$ 1,204.77	
PAVERS LLC	Crushed asphalt millings	\$ 660.11	
QUIK DUMP REFUSE	Garbage Service	\$ 575.93	
S.E.Rural Fire Protection Dist	EMS Calls	\$ 2,750.00	
State Fire Marshal Training Div.	Fire Fighter 1 Certification	\$ 50.00	
Stingray Technology Services	Video conference camera system	\$ 4,524.37	
Titan Machinery-Lincoln	Door glass assembly	\$ 1,080.00	
U. S. POSTMASTER	Stamps/Postage	\$ 596.94	
UNION BANK & TRUST CO.	HSA Accounts	\$ 2,500.00	2/1/2025
VERIZON WIRELESS	Phone Service	\$ 328.74	
Storage Ninjas - Waverly	Storage for Engine 34 - F.D. debit card purchase	\$ 139.00	
	Claims Group A Total	\$ 122,370.67	

Abbey Pascoe, Mayor

Cheris Cadwell, City Treasurer/Deputy Clerk

Tax Year	Tax Month	Sales and Use Tax***	Consumers Use Tax	Current Month's Refunds	Administration Fee	Paid to City	Motor Vehicle Sales Tax
2011	MARCH	8.5	0	0	-0.26	8.24	0
2011	APRIL	15,415.21	6,484.81	0	-657	21,243.02	1,823.27
2011	MAY	21,667.75	4,357.64	0	-780.76	25,244.63	5,788.37
2011	JUNE	23,301.52	7,460.50	0	-922.86	29,839.16	4,130.36
2011	JULY	27,421.51	4,525.44	0	-958.41	30,988.54	7,386.23
2011	AUGUST	24,815.25	5,317.90	0	-903.99	29,229.16	6,051.95
2011	SEPTEMBER	25,308.28	4,945.68	0	-907.62	29,346.34	7,157.20
2011	OCTOBER	22,134.06	6,342.28	0	-854.29	27,622.05	4,587.09
2011	NOVEMBER	27,617.00	6,421.31	-25.79	-1,020.38	32,992.14	4,160.86
2011	DECEMBER	23,244.46	7,206.72	0	-913.54	29,537.64	4,359.71
2012	JANUARY	23,359.89	4,393.26	0	-832.59	26,920.56	6,780.83
2012	FEBRUARY	25,526.98	4,160.16	0	-890.61	28,796.53	8,674.90
2012	MARCH	28,559.75	7,902.92	-83.2	-1,091.38	35,288.09	8,671.84
2012	APRIL	23,623.05	9,574.34	-3.33	-995.82	32,198.24	6,178.25
2012	MAY	24,541.36	6,858.38	0	-941.99	30,457.75	5,172.52
2012	JUNE	27,549.48	10,143.28	-380.56	-1,119.37	36,192.83	9,538.15
2012	JULY	27,301.79	10,978.30	-0.78	-1,148.38	37,130.93	5,693.49
2012	AUGUST	30,506.45	7,633.26	-1.86	-1,144.14	36,993.71	9,079.62
2012	SEPTEMBER	24,745.01	8,767.26	-1.51	-1,005.32	32,505.44	4,169.41
2012	OCTOBER	24,429.85	6,119.06	0	-916.47	29,632.44	6,285.49
2012	NOVEMBER	26,792.27	3,318.20	-18.21	-902.77	29,189.49	6,440.89
2012	DECEMBER	27,459.37	3,722.87	0	-935.47	30,246.77	7,076.74
2013	JANUARY	24,879.70	2,889.59	-50	-831.58	26,887.71	5,370.87
2013	FEBRUARY	26,724.12	2,283.36	0	-870.22	28,137.26	3,988.43
2013	MARCH	33,193.18	2,231.83	0	-1,062.75	34,362.26	5,453.53
2013	APRIL	27,197.57	2,107.81	0	-879.16	28,426.22	5,843.58
2013	MAY	30,628.60	2,317.08	-5.16	-988.22	31,952.30	6,412.37
2013	JUNE	29,122.78	7,593.00	-2,091.96	-1,038.71	33,585.11	9,349.84
2013	JULY	32,833.59	2,223.69	-3.64	-1,051.61	34,002.03	7,990.33
2013	AUGUST	36,291.13	3,233.44	-43.08	-1,184.44	38,297.05	15,073.10
2013	SEPTEMBER	34,347.27	8,688.97	0	-1,291.09	41,745.15	11,463.13
2013	OCTOBER	30,797.91	3,943.10	-16,969.14	-533.16	17,238.71	4,370.31
2013	NOVEMBER	29,408.36	1,036.34	0	-913.34	29,531.36	8,019.80
2013	DECEMBER	61,359.57	5,114.91	0	-1,994.23	64,480.25	9,177.12
2014	JANUARY	30,017.85	1,385.43	-4.19	-941.97	30,457.12	4,790.19
2014	FEBRUARY	31,594.51	2,426.46	-3,690.96	-909.9	29,420.11	7,156.77
2014	MARCH	32,421.02	3,271.30	0	-1,070.77	34,621.55	6,011.56
2014	APRIL	33,181.11	6,687.00	0	-1,196.04	38,672.07	8,966.34

2014	MAY	36,039.59	4,958.98	0	-1,229.96	39,768.61	6,281.78
2014	JUNE	30,408.84	3,528.21	-812.08	-993.75	32,131.22	6,908.98
2014	JULY	38,778.88	4,319.77	-165.32	-1,288.00	41,645.33	10,423.14
2014	AUGUST	37,204.63	-1,042.67	0	-1,084.86	35,077.10	12,752.23
2014	SEPTEMBER	35,673.34	2,635.40	0	-1,149.26	37,159.48	6,890.30
2014	OCTOBER	32,755.32	1,097.64	-264.08	-1,007.67	32,581.21	6,242.33
2014	NOVEMBER	29,758.71	4,197.54	-256.71	-1,010.99	32,688.55	7,173.36
2014	DECEMBER	36,212.81	2,697.68	-827.75	-1,142.48	36,940.26	9,673.81
2015	JANUARY	31,430.17	4,819.28	0	-1,087.48	35,161.97	7,641.40
2015	FEBRUARY	28,073.66	2,005.43	0	-902.37	29,176.72	7,068.34
2015	MARCH	30,523.36	3,514.71	-1,252.45	-983.57	31,802.05	7,207.36
2015	APRIL	30,654.89	2,529.75	-406.65	-983.34	31,794.65	7,116.77
2015	MAY	39,248.01	5,794.91	0	-1,351.29	43,691.63	9,533.30
2015	JUNE	31,312.06	4,469.40	-3,589.35	-965.76	31,226.35	6,797.96
2015	JULY	37,820.92	13,511.27	-82.93	-1,537.48	49,711.78	10,182.40
2015	AUGUST	32,702.13	4,749.75	0	-1,123.56	36,328.32	8,532.32
2015	SEPTEMBER	34,772.93	2,776.84	-4.13	-1,126.37	36,419.27	7,182.17
2015	OCTOBER	32,438.30	3,694.75	-13,073.10	-691.8	22,368.15	8,275.22
2015	NOVEMBER	26,484.79	6,798.06	0	-998.49	32,284.36	5,183.27
2015	DECEMBER	35,027.68	8,361.67	-401.67	-1,289.63	41,698.05	5,382.21
2016	JANUARY	34,494.33	1,887.94	0	-1,091.47	35,290.80	7,568.79
2016	FEBRUARY	30,867.40	1,608.14	-1,312.79	-934.88	30,227.87	5,103.29
2016	MARCH	34,681.29	5,691.40	-54.64	-1,209.54	39,108.51	8,511.11
2016	APRIL	32,367.40	2,094.18	0	-1,033.85	33,427.73	6,657.25
2016	MAY	32,517.30	7,487.50	-34,512.80	-164.76	5,327.24	6,533.37
2016	JUNE	38,735.52	7,550.81	0	-1,388.59	44,897.74	9,915.06
2016	JULY	34,322.24	3,484.90	-114.91	-1,130.77	36,561.46	7,592.47
2016	AUGUST	36,751.30	3,824.29	-198.42	-1,211.32	39,165.85	7,313.30
2016	SEPTEMBER	42,023.77	6,704.04	-1.75	-1,461.78	47,264.28	8,791.01
2016	OCTOBER	34,633.96	1,616.05	0	-1,087.50	35,162.51	6,679.20
2016	NOVEMBER	32,423.73	1,774.77	0	-1,025.96	33,172.54	6,436.16
2016	DECEMBER	37,251.12	6,031.09	-299.75	-1,289.47	41,692.99	4,876.80
2017	JANUARY	33,469.65	8,614.34	0	-1,262.52	40,821.47	6,863.48
2017	FEBRUARY	33,713.45	2,042.68	0	-1,072.68	34,683.45	6,736.48
2017	MARCH	42,760.85	3,282.76	-1,234.16	-1,344.28	43,465.17	9,149.62
2017	APRIL	41,358.64	1,773.97	-1,089.74	-1,261.29	40,781.58	7,983.03
2017	MAY	43,807.66	3,357.01	-120.44	-1,411.33	45,632.90	11,624.63
2017	JUNE	43,258.55	7,245.94	-106.53	-1,511.94	48,886.02	9,277.24
2017	JULY	40,577.27	3,157.72	-1,063.48	-1,280.15	41,391.36	6,598.62
2017	AUGUST	41,702.65	5,463.01	-74.28	-1,412.74	45,678.64	10,427.95

2017	SEPTEMBER	50,678.98	2,160.87	-319.62	-1,575.61	50,944.62	13,695.11
2017	OCTOBER	41,192.29	8,828.54	0	-1,500.62	48,520.21	7,569.74
2017	NOVEMBER	43,767.24	5,067.77	-1,397.75	-1,423.12	46,014.14	7,294.89
2017	DECEMBER	53,503.31	8,970.33	0	-1,874.21	60,599.43	8,982.34
2018	JANUARY	40,067.17	1,396.30	0	-1,243.90	40,219.57	8,010.64
2018	FEBRUARY	38,328.66	4,632.29	-216.67	-1,282.33	41,461.95	4,361.85
2018	MARCH	44,653.78	8,958.04	0	-1,608.35	52,003.47	7,890.18
2018	APRIL	43,637.34	3,546.30	0	-1,415.51	45,768.13	7,859.35
2018	MAY	49,767.39	3,104.94	-1,022.46	-1,555.50	50,294.37	9,463.96
2018	JUNE	43,510.52	10,623.77	-895.93	-1,597.15	51,641.21	6,832.18
2018	JULY	42,122.29	1,937.52	-396.1	-1,309.91	42,353.80	5,827.99
2018	AUGUST	50,970.75	2,716.68	0	-1,610.62	52,076.81	13,293.29
2018	SEPTEMBER	39,643.73	3,818.97	0	-1,303.88	42,158.82	6,262.15
2018	OCTOBER	43,991.20	2,897.28	0	-1,406.65	45,481.83	7,533.17
2018	NOVEMBER	44,139.20	4,058.28	-4,983.11	-1,296.43	41,917.94	7,449.37
2018	DECEMBER	43,301.31	4,219.79	0	-1,425.63	46,095.47	8,658.42
2019	JANUARY	41,778.46	2,831.79	-349.28	-1,327.83	42,933.14	8,634.39
2019	FEBRUARY	37,753.03	2,595.61	-4,533.66	-1,074.45	34,740.53	4,058.98
2019	MARCH	45,207.29	3,487.95	-0.9	-1,460.83	47,233.51	8,965.99
2019	APRIL	41,931.04	1,671.25	-944	-1,279.75	41,378.54	7,105.21
2019	MAY	50,371.66	4,608.31	-540.97	-1,633.17	52,805.83	15,575.91
2019	JUNE	47,239.73	4,730.91	0	-1,559.12	50,411.52	6,902.70
2019	JULY	52,092.06	3,821.66	-3,383.94	-1,575.89	50,953.89	9,424.54
2019	AUGUST	47,578.92	11,900.44	0	-1,784.38	57,694.98	7,477.22
2019	SEPTEMBER	53,124.03	7,130.98	0	-1,807.65	58,447.36	11,382.61
2019	OCTOBER	43,090.84	4,687.33	-1,069.43	-1,401.26	45,307.48	8,105.56
2019	NOVEMBER	44,966.28	3,124.88	0	-1,442.73	46,648.43	8,702.34
2019	DECEMBER	51,145.06	4,651.69	0	-1,673.90	54,122.85	7,878.82
2020	JANUARY	42,943.97	1,004.86	-20.42	-1,317.85	42,610.56	8,420.51
2020	FEBRUARY	43,897.77	5,525.53	0	-1,482.70	47,940.60	6,559.23
2020	MARCH	42,056.98	3,509.49	-139.32	-1,362.81	44,064.34	7,372.41
2020	APRIL	41,704.64	12,631.43	-137.66	-1,625.95	52,572.46	2,409.46
2020	MAY	43,803.00	3,207.49	0	-1,410.31	45,600.18	4,510.43
2020	JUNE	55,131.98	6,084.21	0	-1,836.49	59,379.70	12,180.94
2020	JULY	66,198.05	3,798.16	-482.02	-2,085.43	67,428.76	18,066.18
2020	AUGUST	54,937.26	2,161.42	0	-1,712.96	55,385.72	11,556.38
2020	SEPTEMBER	56,125.69	2,273.75	0	-1,751.98	56,647.46	9,608.01
2020	OCTOBER	89,776.04	3,466.82	0	-2,797.29	90,445.57	18,153.45
2020	NOVEMBER	86,949.10	6,479.61	0	-2,802.86	90,625.85	21,547.71
2020	DECEMBER	108,576.77	4,092.67	0	-3,380.08	109,289.36	23,446.26

2021	JANUARY	74,598.19	4,558.11	-879.05	-2,348.32	75,928.93	13,386.75
2021	FEBRUARY	72,896.15	7,312.07	-104.42	-2,403.11	77,700.69	12,505.52
2021	MARCH	93,083.13	3,284.28	-2.9	-2,890.94	93,473.57	14,828.07
2021	APRIL	98,712.24	5,293.21	-969.96	-3,091.06	99,944.43	23,661.01
2021	MAY	97,187.83	4,222.15	-40.35	-3,041.09	98,328.54	25,823.99
2021	JUNE	108,982.91	2,055.87	0	-3,331.16	107,707.62	29,613.97
2021	JULY	95,408.95	7,528.82	-1.31	-3,088.09	99,848.37	18,159.99
2021	AUGUST	99,081.53	3,997.38	0	-3,092.37	99,986.54	19,045.36
2021	SEPTEMBER	95,169.14	26,490.83	0	-3,649.80	118,010.17	14,982.49
2021	OCTOBER	84,890.49	4,810.38	0	-2,691.03	87,009.84	9,257.17
2021	NOVEMBER	99,432.30	7,571.35	-7.31	-3,209.89	103,786.45	13,258.56
2021	DECEMBER	117,320.03	2,872.48	0	-3,605.78	116,586.73	20,511.17
2022	JANUARY	94,993.99	7,431.17	0	-3,072.75	99,352.41	16,055.01
2022	FEBRUARY	100,863.32	14,500.92	0	-3,460.93	111,903.31	31,073.57
2022	MARCH	95,600.01	5,280.99	0	-3,026.43	97,854.57	16,791.29
2022	APRIL	98,630.99	5,313.40	-5,618.25	-2,949.78	95,376.36	18,250.98
2022	MAY	96,913.50	6,326.30	0	-3,097.19	100,142.61	22,080.80
2022	JUNE	119,936.26	5,303.56	-5.08	-3,757.04	121,477.70	35,999.23
2022	JULY	110,599.83	6,739.12	-9,715.04	-3,228.72	104,395.19	25,964.36
2022	AUGUST	115,315.14	8,057.78	0	-3,701.19	119,671.73	24,717.82
2022	SEPTEMBER	107,091.76	5,286.15	0	-3,371.34	109,006.57	20,853.84
2022	OCTOBER	97,831.00	6,146.73	-88,742.95	-457.04	14,777.74	17,684.55
2022	NOVEMBER	103,147.49	5,303.92	-3.61	-3,253.43	105,194.37	14,413.06
2022	DECEMBER	126,213.66	9,717.02	0.00	-4,077.92	131,852.76	19,582.54
2023	JANUARY	99,931.16	4,540.54	-5,737.80	-2,926.02	95,771.88	16,309.36
2023	FEBRUARY	92,450.77	7,723.06	0.00	-3,005.21	97,168.62	17,766.17
2023	MARCH	104,088.00	5,851.20	-5,308.44	-3,138.92	101,491.84	19,821.37
2023	APRIL	107,671.13	7,442.59	0.00	3,453.41	111,660.31	22,676.53
2023	MAY	99,774.64	10,985.95	-871.31	-3,296.68	106,592.60	15,819.03
2023	JUNE	116,964.50	17,405.68	-13.16	-4,030.71	130,326.31	34,107.82
2023	JULY	90,489.34	16,652.84	-196.52	-3,208.37	103,737.29	20,060.61
2023	AUGUST	106,653.66	11,652.42	-2.66	-3,549.10	114,754.32	20,898.64
2023	SEPTEMBER	94,484.67	11,064.11	-32.35	-3,165.49	102,350.94	17,374.97
2023	OCTOBER	89,704.24	15,907.81	-4.06	-3,168.24	102,439.75	19,912.75
2024	NOVEMBER	97,589.16	14,908.49	-4,550.34	-3,238.42	104,708.89	21,411.40
2024	DECEMBER	95,134.75	22,651.96	0.00	-3,533.60	114,253.11	12,711.15
2024	JANUARY	76,394.12	9,310.60	-986.54	-2,541.55	82,176.63	12,082.66
2024	FEBRUARY	103,146.31	11,657.40	-340.10	-3,433.91	111,029.70	31,303.95
2024	MARCH	101,023.80	7,990.16	-14.35	-3,269.99	105,729.62	18,011.46
2024	APRIL	89,290.02	9,800.04	-5.43	-2,972.54	96,112.09	16,984.55

2024	MAY	101,290.86	9,067.08	0.00	-3,310.74	107,047.20	25,940.79
2024	JUNE	95,653.49	6,662.89	-159.66	-3,064.70	99,092.02	25,619.52
2024	JULY	87,998.16	6,439.69	0.00	-2,833.14	91,604.71	14,076.87
2024	AUGUST	90,958.63	7,243.76	0.00	-2,946.07	95,256.32	15,569.72
2024	SEPTEMBER	105,512.30	13,132.88	10,740.52	-3,237.14	104,667.52	21,204.49
2024	OCTOBER	84,153.55	8,735.27	-6,539.70	-2,590.47	83,758.65	16,601.42
2024	NOVEMBER	120,780.83	8,597.03	0.00	3,881.34	125,496.52	22,739.09
	TOTALS			-\$225,638.65		\$9,534,479.56	

*** The Sales and Use Tax Column includes Motor Vehicle Sales Tax. The amount of Motor Vehicle Sales Tax is separately stated in the last column of this spreadsheet.

Sales Tax Collections: sales tax earned two months prior--shown as month paid to City

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025		
January		\$32,992.14	\$29,189.49	\$29,531.36	\$32,688.55	\$32,284.36	\$33,172.54	\$46,014.14	\$41,917.94	\$46,648.43	\$90,625.85	\$103,786.45	\$105,194.37	\$104,708.89	\$125,496.52		
February		\$29,537.64	\$30,246.77	\$64,480.25	\$36,940.26	\$41,698.05	\$41,692.99	\$60,599.43	\$46,095.47	\$54,122.85	\$109,289.36	\$116,586.73	\$131,852.76	\$114,253.11			
March		\$26,920.56	\$26,887.71	\$30,457.12	\$35,161.97	\$35,290.80	\$40,821.47	\$40,219.57	\$42,933.14	\$42,610.56	\$75,928.93	\$99,352.41	\$95,771.88	\$82,176.63			
April		\$28,796.53	\$28,137.26	\$29,420.11	\$29,176.72	\$30,227.87	\$34,683.45	\$41,461.95	\$34,740.53	\$47,940.60	\$77,700.69	\$111,903.31	\$97,168.62	\$111,029.70			
May	\$8.24	\$35,288.09	\$34,362.26	\$34,621.55	\$31,802.05	\$39,108.51	\$43,465.17	\$52,003.47	\$47,233.51	\$44,064.34	\$93,473.57	\$97,854.57	\$101,491.84	\$105,729.62			
June	\$21,243.02	\$32,198.24	\$28,426.22	\$38,672.07	\$31,794.65	\$33,427.73	\$40,781.58	\$45,768.13	\$41,378.54	\$52,572.46	\$99,944.43	\$95,376.36	\$111,660.31	\$96,112.09			
July	\$25,244.63	\$30,457.75	\$31,952.30	\$39,768.61	\$43,691.63	\$5,327.24	\$45,632.90	\$50,294.37	\$52,805.83	\$45,600.18	\$98,328.54	\$100,142.61	\$106,592.60	\$107,047.20			
August	\$29,839.16	\$36,192.83	\$33,585.11	\$32,131.22	\$31,226.35	\$44,897.74	\$48,886.02	\$51,641.21	\$50,411.52	\$59,379.70	\$107,707.62	\$121,477.70	\$130,326.31	\$99,092.02			
September	\$30,988.54	\$37,130.93	\$34,002.03	\$41,645.33	\$49,711.78	\$36,561.46	\$41,391.36	\$42,353.80	\$50,953.89	\$67,428.76	\$99,848.37	\$104,395.19	\$103,737.29	\$91,604.71			
October	\$29,229.16	\$36,993.71	\$38,297.05	\$35,077.10	\$36,328.32	\$39,165.85	\$45,678.64	\$52,076.81	\$57,694.98	\$55,385.72	\$99,986.54	\$119,671.73	\$114,754.32	\$95,256.32			
November	\$29,346.34	\$32,505.44	\$41,745.15	\$37,159.48	\$36,419.27	\$47,264.28	\$50,944.62	\$42,158.82	\$58,477.36	\$56,647.46	\$118,010.17	\$109,006.57	\$102,350.94	\$104,667.52			
December	\$27,622.05	\$29,632.44	\$17,238.71	\$32,581.21	\$22,368.15	\$35,162.51	\$48,520.21	\$45,481.83	\$45,307.48	\$90,445.57	\$87,009.84	\$14,777.74	\$102,439.75	\$83,758.65			
Total Year	\$193,521.14	\$388,646.30	\$374,070.06	\$445,545.41	\$417,309.70	\$420,416.40	\$515,670.95	\$570,073.53	\$569,950.19	\$662,846.63	\$1,157,853.91	\$1,194,331.37	\$1,303,340.99	\$1,195,436.46	\$125,496.52	\$83,664.39	\$41,832.13
Monthly Ave	\$24,190.14	\$32,387.19	\$31,172.51	\$37,128.78	\$34,775.81	\$35,034.70	\$42,972.58	\$47,506.13	\$47,495.85	\$55,237.22	\$96,487.83	\$99,527.61	\$108,611.75	\$99,619.71	\$125,496.52		

City of Waverly

December, 2024

Gross Sales

Waverly \$ 239,998.11

Gross Sales 100.00% **\$ 239,998.11**

Prizes (Payouts)

Waverly

Prizes (Payouts) 84.0162% **\$201,637.34**

Operator Commission 12.0000% \$28,799.77

City Share 3.8210% \$9,170.27

Uncollected Winnings 0.1628% \$390.73

Interest \$7.42

Total to city **\$9,568.42**

YTD SALES \$ 654,921.98

City 7%min earned YTD \$45,844.54

Paid YTD \$40,031.40

Due City **\$5,813.14**

ORDINANCE NO. 24-11

AN ORDINANCE OF THE CITY OF WAVERLY, NEBRASKA, AMENDING CHAPTER 91 OF THE WAVERLY MUNICIPAL CODE RELATING TO FIRE PREVENTION; OUTDOOR FIREPLACES; REQUIREMENTS

BE IT ORDAINED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF WAVERLY, LANCASTER COUNTY, NEBRASKA:

Section 1. That Section 91.04 through 91.06, contained within Chapter 91 of the Waverly Municipal Code be amended to read as follows:

FIRE PREVENTION

§ 91.01 FIRE PREVENTION CODE.

The rules and regulations promulgated by the office of the State Fire Marshal of the State of Nebraska relating to fire prevention are incorporated by reference into this Code and made a part of this Article as though spread at large herein together with all subsequent amendments thereto. (*Ref. 18-132, 19-902, 19-922, 81-502 RS Neb.*) (*Amended by Ord. 02-04, 2/4/02*)

§ 91.02 FIRE PROHIBITED.

It shall be unlawful for any person to set out a fire at any location within the Municipality, except as expressly permitted by §91.06.

§ 91.03 SKY LANTERNS PROHIBITED.

(1) Flying lantern-type devices are prohibited from sale, possession, and use in the City's jurisdiction.

(2) For purposes of this section, flying lantern-type devices means devices that require a flame which produces heated air trapped in a balloon-type covering allowing the device to float in the air. Flying lantern-type devices shall not include hot-air balloons used for transporting persons. (*Neb. Rev. Stat. § 28-1255*)

§ 91.04 DEFINITIONS.

For the purpose of this Article, certain words, phrases, and terms shall be construed as specified below, unless the context otherwise requires:

- A. Fire Pits shall mean constructed of steel, concrete or stone, and constructed above ground with heavy steel screen covering.
- B. Portable Fire Pit shall mean a structure that is manufactured and intended to confine and

control outdoor wood fires. Designed as a portable or moveable fire pit.

C. Chimineas shall mean an outdoor patio fireplace, usually made from clay, intended to confine and control outdoor fires with controlled burning. *(Est. by Ord. 10-08, 7/19/10)*

C.D. Outdoor Fireplace shall mean any fire pit, portable fire pit, or chimineas. Outdoor fireplace does not include barbeque grills that are primarily for outdoor cooking.

§ 91.05 BUILDING PERMIT REQUIRED.

A.

A. A building permit is required for a fire pit, but not for a chiminea or portable fire pit. Barrels, half barrels, drums, or similarly constructed devices are not fire pits, and are not allowed. ~~Outdoor fireplaces do not include barbeque grills that are primarily for outdoor cooking.~~ *(Est. by Ord. 10-08, 7/19/10)*

B. The requirements for the issuance of a building permit by the City to have a fire pit are:

1. A minimum of a ten foot clearance between the fire pit and combustible materials;
2. Fire pit shall be constructed of concrete or an approved non-combustible material;
3. Fuel fire area and openings shall be completely enclosed by a spark guard (wire mesh no greater than 1/2" square openings);
4. Size of the fuel area shall not be larger than 3' in diameter and a height of no more than 3';

§ 91.06 USE OF OUTDOOR FIREPLACE REQUIREMENTS.

A. The requirements for use of an outdoor fireplace are as follows:

1. Outdoor fireplaces shall be placed on a stable non-combustible surface such as a concrete pad and only at grade level;
~~Vent stacks, chimneys and chimineas shall have a steel screen cover made of heavy wire mesh;~~
2. Permitted materials to be burned include ~~Burn~~ untreated non-milled lumber (~~no construction materials~~) or approved fireplace starter logs; Prohibited materials include no leaves, grass, or yard waste, construction materials, trash, plastic, or other materials that create hazardous waste or toxic unwanted fumes;
- ~~1-3.~~ Limit the amount of material being burned to ensure the flames are confined inside the fuel area of the fireplace. ~~Do not allow the flames to extend above the pit or chimney;~~
- ~~2-4.~~ Keep a water supply, garden hose or fire extinguisher readily available in case of emergency;
- 3-5. Use of an outdoor fireplace is prohibited when winds are blowing over 15 miles per hour, a red flag warning has been issued for Lancaster County by the National Weather Service
~~Do not burn an outdoor fireplace when winds are blowing over 12~~

~~mph or when weather conditions are extremely dry; Burning in an outdoor fireplace is prohibited when a burning ban has been issued or when a "Red Flag" warning has been issued for the area, or when a burn ban has been declared by the Waverly Fire Chief;~~

~~4.6. All outdoor fireplaces must be under supervision by a person over the age of 18;~~

~~5. Fires must be completely extinguished and embers cooled prior to 12:00 midnight;~~

~~6. Smoke shall not create a nuisance for neighbors;~~

~~7. The burning of trash, plastic, or any other material that creates hazardous or unwanted fumes is prohibited. Only firewood or similar material appropriate for fireplace use can be burned within the corporate limits. (Est. by Ord. 10-08, 7/19/10)~~

§ 91.07 VIOLATION; PENALTY.

Any person who shall violate any of the provisions of Sections 91.014 through 91.067 shall be guilty of a Class II Misdemeanor as defined by § 131.22 of this Code. (Est. by Ord. 10-08, 7/19/10)

Section 2. That any ordinance in conflict with this ordinance is hereby repealed.

Section 3. This ordinance shall be in full force and take effect from and after its passage, approval and publication according to the law.

PASSED AND APPROVED THIS _____ DAY OF _____, 20254.

Abbey L. Pascoe
Mayor

ATTEST:

Megan K. Frye
City Clerk/Human Resources Assistant

(Seal)

ORDINANCE NO. 24-11

AN ORDINANCE OF THE CITY OF WAVERLY, NEBRASKA, AMENDING CHAPTER 91 OF THE WAVERLY MUNICIPAL CODE RELATING TO FIRE PREVENTION; OUTDOOR FIREPLACES; REQUIREMENTS

BE IT ORDAINED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF WAVERLY, LANCASTER COUNTY, NEBRASKA:

Section 1. That Section 91.04 through 91.06, contained within Chapter 91 of the Waverly Municipal Code be amended to read as follows:

FIRE PREVENTION

§ 91.01 FIRE PREVENTION CODE.

The rules and regulations promulgated by the office of the State Fire Marshal of the State of Nebraska relating to fire prevention are incorporated by reference into this Code and made a part of this Article as though spread at large herein together with all subsequent amendments thereto. (*Ref. 18-132, 19-902, 19-922, 81-502 RS Neb.*) (*Amended by Ord. 02-04, 2/4/02*)

§ 91.02 FIRE PROHIBITED.

It shall be unlawful for any person to set out a fire at any location within the Municipality, except as expressly permitted by §91.06.

§ 91.03 SKY LANTERNS PROHIBITED.

(1) Flying lantern-type devices are prohibited from sale, possession, and use in the City's jurisdiction.

(2) For purposes of this section, flying lantern-type devices means devices that require a flame which produces heated air trapped in a balloon-type covering allowing the device to float in the air. Flying lantern-type devices shall not include hot-air balloons used for transporting persons. (*Neb. Rev. Stat. § 28-1255*)

§ 91.04 DEFINITIONS.

For the purpose of this Article, certain words, phrases, and terms shall be construed as specified below, unless the context otherwise requires:

- A. Fire Pits shall mean constructed of steel, concrete or stone, and constructed above ground with heavy steel screen covering.
- B. Portable Fire Pit shall mean a structure that is manufactured and intended to confine and control outdoor wood fires. Designed as a portable or moveable fire pit.

- C. Chimineas shall mean an outdoor patio fireplace, usually made from clay, intended to confine and control outdoor fires with controlled burning. (*Est. by Ord. 10-08, 7/19/10*)
- D. Outdoor Fireplace shall mean any fire pit, portable fire pit, or chimineas. Outdoor fireplace does not include barbeque grills that are primarily for outdoor cooking.

§ 91.05 BUILDING PERMIT REQUIRED.

- A. A building permit is required for a fire pit, but not for a chiminea or portable fire pit. Barrels, half barrels, drums, or similarly constructed devices are not fire pits, and are not allowed.
- B. The requirements for the issuance of a building permit by the City to have a fire pit are:
 - 1. A minimum of a ten foot clearance between the fire pit and combustible materials;
 - 2. Fire pit shall be constructed of concrete or an approved non-combustible material;
 - 3. Fuel fire area and openings shall be completely enclosed by a spark guard (wire mesh no greater than 1/2" square openings);
 - 4. Size of the fuel area shall not be larger than 3' in diameter and a height of no more than 3';

§ 91.06 USE OF OUTDOOR FIREPLACE.

- A. The requirements for use of an outdoor fireplace are as follows:
 - 1. Outdoor fireplaces shall be placed on a stable non-combustible surface such as a concrete pad and only at grade level;
 - 2. Permitted materials to be burned include untreated non-milled lumber or approved fireplace starter logs; Prohibited materials include leaves, grass, yard waste, construction materials, trash, plastic, or other materials that create hazardous waste or toxic unwanted fumes;
 - 3. Limit the amount of material being burned to ensure the flames are confined inside the fuel area of the fireplace;
 - 4. Keep a water supply, garden hose or fire extinguisher readily available in case of emergency;
 - 5. Use of an outdoor fireplace is prohibited when a red flag warning has been issued for Lancaster County by the National Weather Service, or when a burn ban has been declared by the Waverly Fire Chief;
 - 6. All outdoor fireplaces must be under supervision by a person over the age of 18;
 - 7. Smoke shall not create a nuisance for neighbors; (*Est. by Ord. 10-08, 7/19/10*)

§ 91.07 VIOLATION; PENALTY.

Any person who shall violate any of the provisions of Sections 91.01 through 91.06 shall be guilty of a Class II Misdemeanor as defined by § 131.22 of this Code. (*Est. by Ord. 10-08, 7/19/10*)

Section 2. That any ordinance in conflict with this ordinance is hereby repealed.

Section 3. This ordinance shall be in full force and take effect from and after its passage, approval and publication according to the law.

PASSED AND APPROVED THIS _____ DAY OF _____, 2025.

Abbey L. Pascoe
Mayor

ATTEST:

Megan K. Frye
City Clerk/Human Resources Assistant

(Seal)

AGREEMENT

BETWEEN
HEERMANN ECONOMIC DEVELOPMENT CONSULTING, LLC
&
CITY OF WAVERLY, NEBRASKA

This AGREEMENT is made by and between the City of Waverly, Nebraska (hereinafter referred to as CITY) and the consulting firm of Heermann Economic Development Consulting, LLC of Fremont, Nebraska (hereinafter referred to as the Consultant). CITY hereby engages the services of the Consultant to begin the implementation of the City of Waverly, Nebraska Economic Development Strategy and Action Plan dated May 24, 2023 (hereinafter referred to as the EDSAP).

I. Scope of Work

1.1 Consultant Responsibilities: The Consultant agrees to provide the following services:

- A. To begin the implementation of the EDSAP. The detailed Scope of Work is identified in Attachment A and a copy of the City of Waverly, Nebraska Economic Development Strategy & Action Plan (EDSAP), dated May 24, 2023 is identified in Attachment B, included as a part of this AGREEMENT.

1.2 CITY Responsibilities: To facilitate the Consultant's accomplishment of the services set forth in paragraph 1.1, above, CITY agrees to provide the following supportive services:

- A. Provide legal services, accounting services and filing fees for the creation of the Waverly Economic Development Action Corporation as a 501 c 3 corporation. Provide for Web Site Development fees and the annual Business Retention ad Expansion Software fees. Provide, any available general information required to provide analysis and profile of the City of Waverly, including the whereabouts of various data/information, current studies, etc., necessary for implementation of the EDSAP. The collection of various data/information will be the sole responsibility of the Consultant.
- B. Assist Consultant in scheduling and facilitating meetings with City of Waverly, Waverly Economic Development Action Corporation, Waverly Community Redevelopment Authority, other City of Waverly Boards and/or Commissions, and local, and regional leadership.

II. Compensation/Performance

2.1 Payment for Services: CITY agrees to pay the **Consultant** a fee of Forty-Four Thousand Dollars (\$44,000) for services rendered and expenses incurred in performing the responsibilities under this **AGREEMENT**. Payments for services rendered will be made monthly based on the percentage of completion in Attachment A less previous payments until paid full as set forth in paragraph 2.4 below.

2.2 Assignment: This **AGREEMENT** shall not be assigned by the **Consultant** without prior written approval of CITY. In the absence of such written approval, any attempt at assignment shall render this **AGREEMENT** void.

2.3 Indemnity: The **Consultant** agrees to indemnify and hold CITY harmless from all liabilities to third parties proximately caused by the negligent acts or omissions of the **Consultant**, its employees, agents or representatives.

2.4 Time of Performance: The **Consultant** agrees to commence work on February 1, 2025 the specified services as described in paragraph 1.1 and complete the services on or before April 30, 2026.

2.5 Termination: CITY reserves the right to terminate this **AGREEMENT**, with cause, upon 10 days written notice to the **Consultant**. In the event of such termination, CITY agrees to compensate the **Consultant** for those items enumerated in Article II above, in an amount equivalent to the reasonable value of services rendered to the date of termination plus the actual expenses incurred.

2.6 Integration: This **AGREEMENT** represents the parties' entire agreement, and the same shall not be modified except in writing, signed by both parties.

2.7 Modification: This **AGREEMENT** may be modified at any time by agreement of both parties in writing.

Signed by authorized representatives of the parties on the dates indicated.

1/16/2025
Date


HEERMANN ECONOMIC DEVELOPMENT CONSULTING

Date

CITY OF WAVERLY, NEBRASKA
Abbey Pascoe, Mayor

ATTACHMENT A

SCOPE OF WORK

1/13/2025

The Scope of Work outlined in this Attachment A was developed by reviewing the City of Waverly, Nebraska Economic Development Strategy & Action Plan dated May 24, 2023 which is included in Attachment B.

1. Organize Waverly Economic Development Action Corporation (WEDAC) as a Nonprofit Corporation with 501(c)(3) Organization status. **CONSULTANT** shall complete and file all necessary documents to achieve this Item 1 with the assistance of an Attorney, including but not limited to: Articles of Incorporation, By-Laws, State & Federal filings (including statutory notice of incorporation publications) and application for Federal Tax-Exempt Status.
2. The **CONSULTANT** will assist the WEDAC and the Community Redevelopment Authority (CRA) in establishing their Mission Statements and both their long-term goals and objectives. Each organization will direct their involvement with the implementation of the City of Waverly Economic Development Strategy and Action Plan (EDSAP).
3. The **CONSULTANT** will assist the Board of Directors with organization, orientation, policies, procedures and branding.
4. The **CONSULTANT** will assist WEDAC and CRA in joint meetings to develop metrics for measuring outcomes, and cost-benefit analysis.
5. The **CONSULTANT** will assist in the review TIF Best Practices to ensure TIF is a performance-based incentive for development, but also remains "but for" performance-based incentive, to enhance the tax base. The **CONSULTANT** will assist in the Development of Commercial Performance-Based Incentives for existing and new businesses with private and public funding, TIF Redevelopment Policies and Procedures on a mutually agreed upon basis; and will assist WEDAC and CRA in partnering and recommend a TIF policy to the City Council to review, amend and adoption.
6. The **CONSULTANT** will assist WEDAC in the refinement of the Economic Development Strategic and Action Plan (EDSAP) develop a budget and identify funding sources.
7. The **CONSULTANT** will work to proactively target of commercial retail, restaurants, multi-product grocery, motels, discount retailers, medical/vision clinic and other retail which could be supported by the Waverly market trade area. The specific targeting and proactive recruitment of specific commercial retail types will be refined in the EDSAP. The **CONSULTANT** will work to support and retain existing industrial community partners, assist the expansion of the existing industries, and assist those new light industries which are compatible with community assets and liabilities. With existing and new industrial businesses, we will strive to find mutually beneficial outcomes.
8. The **CONSULTANT** will target and market to the Community, Commercial and Real Estate Developers, and targeted businesses the TIF Redevelopment Policies on the allowable uses.
9. The **CONSULTANT** will identify funding for a Downtown Revitalization Plan with a designated social/entertainment area with an Implementation Plan in conjunction with the TIF Redevelopment policies.
10. The **CONSULTANT** will lead the **Website Development** by researching vendors, choosing a vendor, and such other tasks as may become necessary for development. Assist website

ATTACHMENT A SCOPE OF WORK

1/13/2025

provider with content to launch desktop and mobile sites. Fee for website provider is not included.

11. The **CONSULTANT** will lead the **Business, Retention and Expansion (BRE)** program by researching available BRE software, recommend a BRE software for purchase. The **CONSULTANT** will then assist in the launch, maintenance, and review of BRE results by conducting business interviews, inputting data, reviewing results, and performing any follow up actions as may become necessary for the BRE's maintenance and success. Annual BRE software fees are not included.

12. The **CONSULTANT** will lead the setup, research initial data entry of the **Location One Information System (LOIS)** with the refreshing of the data monthly for accuracy. NDED pays the annual fee.

13. The **CONSULTANT** will develop working relationships with Local Partners and, Regional, State and National Community and Economic Development organizations with and without funding opportunities; Work on developing mutually agreed upon outcomes with redevelopment area land owners with either "green field" or developed properties.

14. The **CONSULTANT** will review Nebraska Department of Economic Development (NDED) Certification Program, review the Pros and Cons for Economic Development Certified Community (EDCC) and the Leadership Certified Community (LCC) programs. The **CONSULTANT**, with the City's consent, shall select a program, proceed with the application requirements, and obtain a certificate for such program.

15. The **CONSULTANT** will assist WEDAC in advising and assisting the City Council, CRA and Planning Commission to develop funding sources to implement local community and economic development policies and planning activities.

4898-2420-9936, v. 1



CITY OF WAVERLY, NEBRASKA
ECONOMIC DEVELOPMENT STRATEGY
& ACTION PLAN



CITY OF WAVERLY, NEBRASKA

ECONOMIC DEVELOPMENT STRATEGY & ACTION PLAN.

**Prepared by: Waverly Economic Development Advisory
Committee (WEDAC).**

May 24, 2023

Strategy 1: Define and implement a future role for the WEDAC.

**Action 1. Name change: *Waverly Economic Development
ACTION CORPORATION.***

Action 2. Officially organize as a not-for-profit, 501(C3) entity.

**Action 3. Secure a full-time Economic Development Director, to work
under the guidance and direction of the WEDAC.**

**Action 4. Create working relationships with primary both public
and private community and economic development
funding entities.**

**Action 5. Establish an annual increase Community Growth Objective
of 2 to 2.5 percent.** This selected Growth Objective will directly
impact economic development efforts in Waverly, including, but not
limited to housing, local and highway commercial, industrial and
public/quasi-public development. A commitment from both the
private sector and the City to assist in financing economic
development projects will be needed.

**Strategy 2: WEDAC to secure important community and economic
development certifications, to increase Waverly's value
with funding entities.**

Action 1. WEDAC secure Leadership Certified Community status.

**Action 2. WEDAC secure Economic Development Certified
Community status.**

**Strategy 3: Continue a progressive mode of funding and conducting
Local Community Planning Initiatives/Projects.**

**Action 1. WEDAC to consult and work with City Council, Community
Development Agency (CDA) and Planning Commission
to define and implement important local planning activities,
both of community and economic development importance.**

Strategy 4: Maintain an active, participatory CDA in Waverly.

- Action 1.** Consider the future role of the CDA as a Community Redevelopment Authority (CRA), with the powers and authority as defined in Neb. Rev. Stat. 18-2101 to 18-2144. Consider the hiring of a director for the CRA, to, also, serve in a similar, dual capacity with the WEDAC.
- Action 2.** Continuously evaluate the provision of Tax Increment Financing (TIF) in Waverly, to ensure that TIF is an incentive for development, but also remains a “but-for” subsidy, to protect the Community’s tax base.
- Action 3.** TIF and other tools of public and private funding should be considered for needed commercial, industrial and housing development activities, as defined in Local Planning Initiatives, on a case-by-case basis.
- Action 4:** Continue the process of urging land owners in the Redevelopment Area to produce a Redevelopment Plan, with consideration of removing selected properties from the Area and/or the CDA/CRA purchasing and pursuing developer(s) for said properties.
- Action 5:** The WEDAC and CDA/CRA to prepare a Redevelopment Planning/TIF informational piece, by defining and detailing acceptable uses of TIF, as determined by the City Council, with an associated application form, all in an effort to educate both the Community and potential developers on the availability and use and process for obtaining TIF in Waverly.
- Action 6:** Expand the Redevelopment Area in Waverly to include selected properties along the HWY 6 Corridor, Wayne Park and the vacant Methodist Church property at 143rd & Folkestone. This could provide TIF assistance in redevelopment efforts of the former Honey Creek Restaurant building, the Park (reclamation associated with the existing pool and other selected amenities) and the potential development of a senior housing program at the Methodist Church site.

Action 7: Create a Downtown Revitalization Plan with an associated Plan of Implementation.

Purpose 1: To create a designated social/entertainment zone in Waverly.

Purpose 2: To provide TIF (and other public/private funding assistance in refurbishing the existing Downtown by rehabilitating/(possibly) repurposing existing buildings, infill developments and (possibly) the improvement/repurposing of the existing City Hall.

Strategy 5: Major Economic Development Specifics.

Action 1. Land Use & Zoning.

- **Re-evaluate the existing land use designation for selected undeveloped land parcels in the Redevelopment Area.**

Purpose: Reclassify such properties to an alternative land use and appropriate zoning paring to better enhance development opportunities to meet the local needs of the Community.

Action 2. Housing Specific.

- **Focus on the development of both Senior and Family Housing, both owner and rental, for selected, appropriate price points. This would include housing for person with special needs.**

Purpose: Approach housing development in a “comprehensive manner”, ensuring that the City of Waverly has the capacity to meet the housing needs of those desiring to reside in the Community in safe and decent housing.

- **Explore the potential for a “Workforce” specific housing program.**

Purpose: To begin to match housing needs with the increase of employees/workers in Waverly. “Target” populations would include employees of local industries, businesses and the school.

- **Seek out and secure all available, both private funding sources and public tools of intervention.**

Purpose: To expedite the development of new housing and the rehabilitation of the existing housing stock in Waverly.

Action 3. Commercial Specific.

- **Implement a Commercial Development Initiative in Waverly to meet the needs and wants of the citizenry and local leadership.**

Purpose 1: To provide a diversity of commercial retail types, as recommended by the Community.

Purpose 2: To provide the development of the following priority businesses and services in the Community; family restaurant, multi-product grocery store, lodging facility, discount store and medical and vision clinic.

- **Implement a program to assist existing businesses and services to expand, while retaining and/or increasing employees.**

Purpose: To maintain a commitment to the businesses currently serving the Community.

- **Involve the Lancaster County Event Center (LCEC) in selected economic development projects in Waverly.**

Purpose: To create a working relationship/partnership with the LCEC, creating projects that benefit both parties.

Action 4. Industrial Specific.

- **Define and seek out those light industries most appropriate for the Community of Waverly.**

Purpose: To ensure that any new industry “fits” with the expectations and wants of the Community, including type and operational style of the company. The relocating of existing industries should be investigated, as an overall improvement and attraction to the Community.

- **Ensure any new industry accepts the role of a “community partner” and commits to making a buy-in with the Community of Waverly.**

Purpose: A commitment to be involved in the social/economic affairs of Waverly and provide monetary investment/contribution to proposed community and economic development projects, including, but not limited to being an active partner in a planned workforce housing program.

Action 5. Public/Quasi-Public Specific.

- **Meet the challenge of providing the Community of Waverly with modern, appropriate public/quasi-public projects.**

***Purpose 1:** To enhance the attraction of Waverly, a continuous effort of identifying, planning and implementation of public projects and events should be a priority of the local leadership.*

***Purpose 2:** The following public services should be given development priority; completion of the aquatic center and associated amenities, reclamation/rejuvenation of Wayne Park, new City Hall, new maintenance facility, new fire station, senior center and library, expansion of school facilities, park improvements/additions, including a new pavilion/gather place, trail development, dog park and community/civic center with fitness/recreational amenities.*

Action 6. Transportation/Public Utilities.

- **Maintain a transportation and public utility system that is modern and meets the future land use growth expectations of the City.**

***Purpose 1:** A transportation/public utilities system that attracts and allows for the potential expansion/growth of new and existing new commercial and industrial businesses.*

***Purpose 2:** The following transportation system components should be given priority in the future development of Waverly; safe vehicular roadways, safe pedestrian routes/trail system, the public schools environs, pedestrian overpass for HWY 6/railroad tracks, upgraded improvements along HWY 6 (to enhance the entry into Waverly), the widening of 148th Street, to include turn lanes and sidewalks, a potential, future second I-80 interchange at 162nd Street and the support for the proposed East Beltway.*

Waverly Economic Development Advisory Committee:

Abbey Pascoe, Waverly City Council President, WEDAC Chair

Bill Gerdes, Mayor, City of Waverly

Stephanie Fisher, City Administrator

Kris Bohac, Chair, Waverly Planning Commission

Mike Palm, City Building Inspector/Zoning Administrator

Cody Mosel, Branch Manager, First State Bank

Dave Watts, Vice President, Watts Electric

Greg Dunlap, President, Horizon Bank

Natasha Hoyer, Owner, Patina Joe Boutique & Coffee

Rusty Wellman, Branch Owner, Farm Bureau Financial Services

Ryan Meston, Financial Analyst, Magnit Global

Bill Schellpeper, President, Smart Chicken

Hanna:Keelan Associates, PC



Stephanie Fisher

From: Tracey Whyman
Sent: Tuesday, January 21, 2025 11:28 AM
To: Stephanie Fisher; Ray Estes
Subject: Do and Orp probe replacement
Attachments: B253394- Gurney Waverly NE 2020 IQ Mobile - BGA.pdf; Endrus Hauser bid.pdf; EH radio system quote.pdf; 04-10-2024 - Waverly NE - Mettler Tolido PH ORP OD Meter Quote.pdf; W63-IQ-SensorNet-Case-Studies-Brochure-web.pdf; YSI-IQSN-Mobile-Brochure.pdf

To replace our Dissolved Oxygen probes, which are aging and are 20 years old along with one that is completely failed. We propose to replace them with the YSI dissolved oxygen probes along with adding ORP probes to the aeration basins to start monitoring and reducing Nitrate levels in our effluent. This system includes the YSI IQ Sensor network communication to allow not only communication with the SCADA system which controls the blower speeds but will also provide remote access to the data and continuous monitoring. The system is also expandable with each IQ module that is capable of monitoring 20 parameters at each site with the addition of additional probes. The local representative firm is in Omaha and is the same rep that provides service for our oxidation recirculation pumps, along with many other manufactures they represent and do service work and sales. We are proposing to approve the bid from Burt Gurney and Associates of Omaha, Nebraska for \$21,290.

Dissolved Oxygen and Oxygen Reduction Potential				
Manufacturer	Rep	DO and ORP monitoring	radio system	Total
Metler Toledo	GPM Blair Nebraska	\$21,879	not included	\$21,879
Endress Hauser	Miller Mechanical Des Moines Iowa/Omaha	\$18,501.62	\$11,233.12	\$29,734.74
YSI	Burt Gurney Omaha	\$21,290	included	\$21,290

Tracey Whyman

City of Waverly Nebraska

Director of Public Works
402-786-2312
Publicworksdirector@citywaverly.com



Quote Number: B253394
Quote Created: 2024 Dec 20
Quote Expiration Date: 2025 Sep 30

Quote Prepared For:
City of Waverly, NE

Lee Dunn
Bert Gurney & Associates
4428 S 108th St
Omaha, NE 68137
(402) 551-7995
lee@bgagurney.com

Email: myra.michaels@xylem.com

Prepared by: Myra Michaels



NOTICE:

The following pricing is proprietary and confidential information. Neither this document nor its contents may be revealed or disclosed to unauthorized persons or sent outside the institution without prior permission from Xylem Inc.

Proposal Summary

#	Part Number	Description	Net Price USD	Qty	Ext. Price USD
1	470026Y	System 2020 3G - 20 Channel Terminal/Controller with MIQ/MC3 Controller with Ethernet interface (Modbus TCP, Ethernet/IP, PROFINET), MIQ/PS wide range power supply, 5 available IQ Sensor Net Connections	\$4,885.00	1	\$4,885.00
2	480008Y	Passive Junction Box IQ. 4 IQ Sensor Net Connections.	\$335.00	2	\$670.00
3	109295Y	IQ Sun Shield, Plastic, for 2020 & 282 module mounting, also used for mounting air cleaning box	\$180.00	2	\$360.00
4	109286Y	Rail mounting kit for SD/M 170, SD/K 170 and SSH/IQ sun shields(dia. 25-60 mm)	\$130.00	2	\$260.00
5	201650Y	Optical DO probe for IQ System, 0-20.00 mg/l	\$2,060.00	2	\$4,120.00
6	109170Y	pH or ORP probe w/ Amplifier, IQ probe. Requires pH or ORP electrode.	\$950.00	2	\$1,900.00
7	109125Y	ORP electrode with built in reference for SensoLyt 690/700, +/- 1000 mV	\$535.00	2	\$1,070.00
8	480044Y	Sensor Connection cable, IQ, 15 m, 49.2 ft	\$240.00	4	\$960.00
9	480070Y	IQ Cable, 2 Wire w/Shield, 250 Meter Roll (820 ft.)	\$2,280.00	1	\$2,280.00
10	109279Y	Pipe mounting of boom or pendulum, with pivot	\$235.00	4	\$940.00
11	109272Y	SensoClean Swing mounting assembly, boom length 1.5 m	\$235.00	4	\$940.00
12	109320Y	Sensor holder with handle for IQ sensors	\$105.00	4	\$420.00
13	473500-02	IQSN Mobile Kit 2	\$1,675.00	1	\$1,675.00

Quote #: B253394
 Expires: 2025 Sep 30

#	Part Number	Description	Net Price USD	Qty	Ext. Price USD
14	473537	IQSN Mobile App and Data Plan, per year	\$670.00	1	\$670.00
15	473506	Horizontal Pole Mounting Kit for xGW Enclosure, IQSN Mobile	\$140.00	1	\$140.00
Subtotal					\$21,290.00

Payment Remit Address for quote B253394

Remit to
 YSI, Inc.
 26717 Network Place
 Chicago, IL 60673 - 1267
 Please review the last page of this quote for payment details via
 ACH, Wire, Swift and Check

Grand Total (in USD)	\$21,290.00
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Terms Prepay
 Ex Works (Incoterms 2020)
 Seller's plant or Origin
 Distribution Center

This order is subject to the Standard Terms and Conditions of Sale - Xylem Americas effective on the date the order is accepted which terms are available at <https://www.xylem.com/en-us/support/xylem-americas-standard-terms-and-conditions/> and incorporated herein by reference and made a part of the agreement between parties.

**YSI Inc. Order Process and Payment Remittance Instructions
Including YSI and MJK**

Credit Card Order

Please call Customer service at (937)-767-7241 (Option 3) and reference quote B253394

PO(Purchase Order) Please make PO out to YSI Inc. using one of the following Addresses and please copy the Sales Rep myra.michaels@xylem.com when emailing PO.

Physical Address

YSI Inc.
1725 Brannum Lane
Yellow Springs, OH 45387

Remit to Address

YSI Inc.
26717 Network Place
Chicago, IL 60673-1267

Email or fax the PO along with a copy of this quote to
ysi.orders@xylem.com
Fax: (937) 767-1058

Purchase Order Guidelines:

- **Submission Method:** POs must be sent via Email or Fax. Carrier submissions are not accepted.
 - **PO Details:** Ensure all POs include complete billing and shipping information and are clearly marked.
 - **PO Content:** Ensure all Item Numbers, Quantities, and Prices for each line item are listed on the PO.
 - **Contact Information:** Provide an email address for Order Acknowledgement, Shipping Acknowledgement, and Invoice.
 - **Additional Charges:** Taxes, tariffs, and shipping charges are extra and not included in the pricing unless specifically listed as a line item.
 - **Tax Exemption:** Tax-exempt customers must include their Tax ID on the PO and provide proof of Tax Exemption status.
-

Payment Remit Address

YSI Inc.
26717 Network Place
Chicago, IL 60673-1267

Tax Identification # 31-0526418
DUNS 00-424-6716

By Check (Drawn on US Banks Only)

YSI Inc.
26717 Network Place
Chicago, IL 60673-1267
Account Number: 20000011127562
Account Name: YSI Inc.

By ACH (with Addenda Record), Wire or SWIFT

JPMorgan Chase Bank, N.A.
New York, NY 10005
Wire Routing Number: 021000021
ACH Routing Number: 028000024
SWIFT BIC: CHASUS33



TRACEY WHYMAN
 DIRECTOR OF PUBLIC WORKS
 CITY OF WAVERLY
 14130 LANCASHIRE ST
 WAVERLY NE 68462-1131

Number 2061184797
Dated 05/10/24
Valid to 06/09/24
Customer No. 46230684

External Sales Miller Mechanical -
 Matt Pierce
mpierce@mmsinonline.com

Inside Sales Miller Mechanical -
 Sales
Telephone 515-243-4287
mms@mmsinonline.com

Your Reference DISSOLVED O2 AND ORP
 Dated 05/10/24

Issue PO to:
Endress+Hauser c/o Miller Mechanical
2350 Endress Place
Greenwood, IN 46143

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**Order and track
 online**

Summary

Item	Qty	Product	Delivery time	Net value (USD)
10	2 PC	Oxymax COS61D COS61D-1020/0 (COS61D-AAA1A3)	9 wrk.day(s)	5,687.62
				Unit price 2,843.81

Endress+Hauser Inc.
 Toll Free - 888-ENDRESS
 FAX - 317-535-8498
www.us.endress.com

Regional Centers:
 East - Chalfont, PA 18914
 Gulfcoast - Pearland, TX 77047
 Midwest - Greenwood, IN 46143
 West - Pearland, TX 77047

Remit To:
 ENDRESS+HAUSER -DEPT 78795
 P.O. Box 78000
 DETROIT, MI 48278-0795

Version

Item	Qty	Product	Delivery time	Net value (USD)
20	2 PC	FLEXDIP CYH112 CYH112-4NC9/0 (CYH112-AE11B30D1+KH)	22 wrk.day(s)	1,099.96 Unit price 549.98
30	2 PC	FLEXDIP CYA112 CYA112-10T5/0 (CYA112-AA11D1AA)	22 wrk.day(s)	366.32 Unit price 183.16
40	3 PC	Memosens CPS12E CPS12E-1009/0 (CPS12E-AA7GAA2)	22 wrk.day(s)	1,837.14 Unit price 612.38
50	2 PC	Ecofit CPA640, Adapterset CPA640-C111	9 wrk.day(s)	804.92 Unit price 402.46
60	2 PC	Meas. cable CYK10 Memosens CYK10-A101	8 wrk.day(s)	889.42 Unit price 444.71
70	2 PC	Liquiline CM442 CM442-2KF0/0 (CM442-AAM2A2F011A)	9 wrk.day(s)	6,099.32 Unit price 3,049.66
80	1 PC	Warranty Start-Up XD21US-1009/0 (XD21US-AA)	to be agreed	1,400.00 Unit price 1,400.00

Total prices	18,184.70
Logistic Service	316.92
Net value	18,501.62
Sales Tax Total	1,295.11
Total including tax (USD)	19,796.73

Ship-To CITY OF WAVERLY
14130 LANCASHIRE ST
WAVERLY NE 68462-1131

Payment term Net 30 Days

Delivery conditions DAP Delivered at place CUSTOMER SITE - Incoterms® 2020

Warranty Details are listed in the items further below.

Delivery time The mentioned delivery times are calculated in working days and are based on partial, standard delivery service.
If you wish complete delivery, please contact your sales representative.

Version

Details Dated 05/10/24

Item	Qty	Product	Net value (USD)
------	-----	---------	-----------------

10	2 PC	Oxymax COS61D <u>COS61D-1020/0</u> (COS61D-AAA1A3)	5,687.62
----	------	--	-----------------

EDI-Orderref.: 2061184797-0010 Unit price 2,843.81

Dissolved oxygen sensor; optical.
Application: Water, Wastewater.
Digital sensor, Memosens protocol
Sensor head: G1, NPT3/4
Automatic sensorcheck.
Factory calibration

Warranty 12 months after delivery

Delivery time 9 wrk.day(s)

Order code description

- AA Approval: Non-hazardous area
- A1 Application/Measuring Range: Oxygen 0...20mg/l
- A Sensor Adaption: Fixed cable; crimp sleeves
- 3 Cable length: 7m

Net weight: 4.832 pound

Country of origin	Country of dispatch	HS-Code
DE	US	9027504015

20	2 PC	FLEXDIP CYH112 CYH112-4NC9/0 (CYH112-AE11B30D1+KH)	1,099.96
----	------	--	-----------------

EDI-Orderref.: 2061184797-0020 Unit price 549.98

Holder
Application: water, waste water
Assembly transmitter, sensor
Application: open channel, reservoir,
tank, basin.
Material: stainl. steel. V4A

Warranty 12 months after delivery

Version

Item	Qty	Product	Net value (USD)
------	-----	---------	-----------------

Delivery time 22 wrk.day(s)

Order code description

- A Approval: w/o
- E Mounting of post: rail mounted (1x)
- 11 Post (vertical 40mm): w/o
- B Traverse Mounting: cross clamp
- 30 Traverse (horizontal 40mm): 500mm
- D Connection Immersion Pipe: cross clamp
- 1 Adapter: w/o
- KH >>Accesory enclosed: pipe protection cap

Net weight: 17.592 pound

Country of origin	Country of dispatch	HS-Code
DE	DE	9027908800

30	2 PC	FLEXDIP CYA112 CYA112-10T5/0 (CYA112-AA11D1AA)	366.32
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EDI-Orderref.:	2061184797-0030	Unit price	183.16
----------------	-----------------	------------	--------

Immersion assembly
Application:
flow channel, tanks, bassin.

Warranty 12 months after delivery

Delivery time 22 wrk.day(s)

Order code description

- A Approval: w/o
- A Immersion Pipe: standard
- 11D Immersion Pipe, Diameter, Length: PVC, 40mm, 2400mm
- 1A Connection angle sensor: PVC, straight
- A Sensor adapter: G1

Net weight: 5.468 pound

Country of origin	Country of dispatch	HS-Code
DE	DE	9027908800

Version

Item	Qty	Product	Net value (USD)
------	-----	---------	-----------------

UN No.	DG class	Packing Group
1133	3	

40	3 PC	Memosens CPS12E CPS12E-1009/0 (CPS12E-AA7GAA2)	1,837.14
----	------	--	-----------------

EDI-Orderref.:	2061184797-0040	Unit price	612.38
----------------	-----------------	------------	--------

ORP comb. sensor, Memosens 2.0.
Junction: PTFE.
Signal transmission: Digital.
Reference system: Ag/AgCl, Gel.
Standard applications in process
and environmental.
ORP element: gold or platinum.

Warranty 12 months after delivery

Delivery time 22 wrk.day(s)

Order code description

- AA Approval: Non-hazardous area
- 7 Electrode Type: Basic version, temperature sensor NTC 30k
- G Application Range: Gold, -1500 mV...1500 mV, -15...135oC, 0,8...17 bar (abs)
- AA Reference System: PTFE ring junction, 3 M KCl, Ag/AgCl
- 2 Shaft Length: 120mm

Net weight: 0.714 pound

Country of origin	Country of dispatch	HS-Code
DE	DE	9027908800

50	2 PC	Ecofit CPA640, Adapterset CPA640-C111	804.92
----	------	--	---------------

EDI-Orderref.:	2061184797-0050	Unit price	402.46
----------------	-----------------	------------	--------

Universal electrode holder

Version

Item	Qty	Product	Net value (USD)
------	-----	---------	-----------------

Application: Process Pg13,5
Electrode: pH-/Redox 120mm.

Warranty 12 months after delivery

Delivery time 9 wrk.day(s)

Order code description

- C Process Connection; material: Thread NPT 3/4", PVDF
- 1 Immersion Depth: 25mm/1"
- 1 Seal: Viton O-ring
- 1 Additional option: w/o

Net weight: 0.75 pound

Country of origin	Country of dispatch	HS-Code
US	US	9027908800

US: Subject to US Export Administration Regulations - EAR99

60	2 PC	Meas. cable CYK10 Memosens <u>CYK10-A101</u>	889.42
----	------	---	---------------

EDI-Orderref.:	2061184797-0060	Unit price	444.71
----------------	-----------------	------------	--------

Application: digital sensors with inductive Memosens plug-in head
Working limit: max. -20...135oC

Warranty 12 months after delivery

Delivery time 8 wrk.day(s)

Order code description

- A Approval: Non-hazardous area
- 10 Cable Length: 10m
- 1 Cable Connection: Wire terminals

Net weight: 1 pound

Country of origin	Country of dispatch	HS-Code
US	US	8544429090

US: Subject to US Export Administration Regulations - EAR99

Version

Item	Qty	Product	Net value (USD)
70	2 PC	Liquiline CM442 <u>CM442-2KF0/0</u> (CM442-AAM2A2F011A)	6,099.32

EDI-Orderref.: 2061184797-0070 Unit price 3,049.66

Transmitter liquid analysis
Multiparameter + Multichannel
applicable for process control,
pH/ORP, conductivity, turbidity
oxygen(DO), disinfection, SAC, nitrate,
ammonia.
Digital sensors; Memosens protocol,
Navigator+softkeys, graphical display
Plug&play for sensors+modules, SD-slot
data logger, alarm relay, IP66+IP67,
NEMA Type 4X enclosure.
Easy to use, simple to maintain:
:: Use of precalibrated sensors
:: Modular concept
:: Extendable

Warranty 12 months after delivery

Delivery time 9 wrk.day(s)

Order code description

- AA Approval: Non-hazardous area
- M2 Sensor Input: 2x digital sensor
- A2 Communication: 2x output 0/4...20mA, HART
- F0 Additional Features: W/o
 - 1 Power supply: 100...230VAC (50/60Hz)
 - 1 Cable Entry: NPT
 - A Cable Entry Set: enclosed

Net weight: 9.934 pound

Country of origin	Country of dispatch	HS-Code
US	US	9027898030

US: Subject to US Export Administration Regulations - EAR99

Version

Item	Qty	Product	Net value (USD)
80	1 PC	Warranty Start-Up XD21US-1009/0 (XD21US-AA)	1,400.00

EDI-Orderref.: 2061184797-0080 Unit price 1,400.00

To protect against unexpected repair costs and ensure peak performance Start-up Package safeguards new devices throughout the extended warranty period of 24 months. Warranty begins on the ship date of the device(s). On-site support and/or optional commissioning can be provided on request by qualified technicians within 12 month of device delivery.

Delivery time to be agreed

Order code description

- A On-site support/commissioning: 1 x half day option
- A Extended Warranty: 2 x instrument/s, 2 additional years after shipment date , (3 years in total) in workshop

Net weight: 0.001 pound

General Terms & Conditions of Sale

All sales order related transactions with Endress+Hauser, Inc. shall be governed by Endress+Hauser, Inc.'s General Terms and Conditions of Sale ("E+H Terms") which are subject to modification. Please visit <https://www.us.endress.com/static/terms-conditions> for the most up to date E+H Terms. Any contracts or agreements which are currently in place shall apply and will not be replaced by the E+H Terms.

QUOTATION

11.15.2024 PHEONIX CONTACT WIRELESS SYSTEM

Miller Mechanical Specialties, Inc.
PO Box 1613
Des Moines, IA 50305-1613
515-243-4287

Quote Number - Rev #	
1099585 - 1	
Order Date	Page
11/15/2024	1 of 3

Quote Expires On: 12/15/2024

Bill To:

CITY OF WAVERLY
14130 LANCASHIRE ST
WAVERLY, NE 68462-1131
US

Ship To:

CITY OF WAVERLY
14130 LANCASHIRE ST
WAVERLY, NE 68462-1131
US

Customer ID: 34879

PO Number		Terms	Ship Route	Taker		
		Net 30		TRENT_BERGEN		
Line #	Qty	Item ID	Unit Price	Pricing UOM	Extended Price	Lead Time
		Item Description				
1	4.00	2901540	852.00	EA	3,408.00	
IN STOCK		PXC WIRELESS MODULE RAD-900-IFS Radioline - 900 MHz wireless transceiver with RS-232/485 interface, can be extended with I/O modules, RSMA (female) antenna connection, point-to-point, star, and mesh networks up to 250 stations, range of up to 32 km (line of sight), use in North America				
2	3.00	2901537	383.00	EA	1,149.00	
IN STOCK		PHOENIX I/O EXTENSION MODULE RAD-AI4-IFS Radioline - I/O extension module, 4 analog current inputs (0/4 mA ... 20 mA)				
3	3.00	2901538	383.00	EA	1,149.00	
IN STOCK		PHOENIX CONTACT I/O EXTENSION MODULE RAD-AO4-IFS RADIOLINE I/O EXTENSION MODULE, 4 ANALOG CURRENT OR VOLTAGE OUTPUTS 0/4mA...20mA, 0V...10V				
4	1.00	2904801	123.00	EA	123.00	
115 DAYS		PHOENIX CONTACT ANTENNA RAD-900-ANT-OMNI-2-2-RSMA - Antenna 2904801 Omnidirectional antenna, 900 MHz, gain: 2 dBi, polarization: linear, degree of protection: IP65, connection: RSMA (male), incl. 1.8 m / 6 ft. connecting cable and mounting bracket for wall mounting				
5	3.00	2867801	296.00	EA	888.00	
25 DAYS		PHEONIX CONTACT DIRECTIONAL ANTENNA				

Salesrep: Matt Pierce
Phone: 402-669-4515
Email: MPierce@mmsinonline.com

QUOTATION

11.15.2024 PHEONIX CONTACT WIRELESS SYSTEM

Miller Mechanical Specialties, Inc.
 PO Box 1613
 Des Moines, IA 50305-1613
 515-243-4287

Quote Number - Rev #	
1099585 - 1	
Order Date	Page
11/15/2024	2 of 3

Quote Expires On: 12/15/2024

Line #	Qty	Item ID	Unit Price	Pricing UOM	Extended Price
Lead Time		Item Description			
		RAD-ISM-900-ANT-YAGI-3-N - Antenna 2867801 Directional antenna, 868 MHz / 900 MHz, gain: 5 dBi, polarization: linear, opening angle: h/v 168°/78°, degree of protection: IP65, connection: N (female), incl. mounting bracket and mast clips			
6	4.00	2803153	115.00	EA	460.00
IN STOCK		PHEONIX CONTACT SUREGE PROTECTION CN-UB-70DC-6-SB - Surge protection device 2803153 Attachment plug with surge protection for coaxial signal interfaces. Connection: N connector, male/female			
7	4.00	2903264	96.00	EA	384.00
20 DAYS		PHEONIX CONTACT ANTENNA CABLE RAD-PIG-RSMA/N-1 - Antenna cable 2903264 Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 0.5 / 0.8 / 1.1 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 1 m (3.3 ft.)			
8	4.00	2903148	146.53	EA	586.12
IN STOCK		PHOENIX CONTACT POWER SUPPLY UNIT TRIO-PS-2G/1AC/24DC/5 - Power supply unit 2903148 Primary-switched TRIO POWER power supply with push-in connection for DIN rail mounting, input: 1-phase, output: 24 V DC/5 A			
9	4.00	2907918	184.00	EA	736.00
IN STOCK		PHOENIX CONTACT SURGE PROTECTION DEVICE PLT-SEC-T3-120-FM-UT - Type 3 surge protection device 2907918 Type 2/3 surge protection, protective plug and base element, with integrated status indicator and remote signaling for single-phase power supply networks. Nom. volt: 120 V AC/DC TYPE 2/3 SURGE PROTECTION, CONSISTING OF PROTECTIVE PLUG AND BASE ELEMENT, WITH INTEGRATED STATUS INDICATOR AND REMOTE SIGNALING FOR SINGLE-PHASE POWER SUPPLY NETWORKS. NOMINAL VOLTAGE 120 V AC/DC.			

Salesrep: Matt Pierce
Phone: 402-669-4515
Email: MPierce@mmsinonline.com

QUOTATION

11.15.2024 PHEONIX CONTACT WIRELESS SYSTEM

Miller Mechanical Specialties, Inc.
PO Box 1613
Des Moines, IA 50305-1613
515-243-4287

Quote Number - Rev #	
1099585 - 1	
Order Date	Page
11/15/2024	3 of 3

Quote Expires On: 12/15/2024

<i>Line #</i>	<i>Qty</i>	<i>Item ID</i>	<i>Unit Price</i>	<i>Pricing UOM</i>	<i>Extended Price</i>
<i>Lead Time</i>		<i>Item Description</i>			

Total Lines: 9

SUB-TOTAL: 8,883.12

TAX: 786.35

MMS START-UP SERVICE: 2,350.00

AMOUNT DUE: **12,019.47**

U.S. Dollars

Freight is prepaid and added to the invoice unless otherwise instructed by the customer. FOB point of shipment.

Salesrep: Matt Pierce
Phone: 402-669-4515
Email: MPierce@mmsinonline.com



10633 County Road 26
 Blair, NE 68008
 Phone: 402-571-1303
Orders: office@gpmweb.net

Quotation

DATE: 04-10-2024
QUOTE # 241004-00

Quotation Prepared For:

Tracy Whyman
 Public Works Director
City of Waverly
 11121 N 141st Street, Waverly, NE 68462
M: 402-613-8705
E: TraceyW@citywaverly.com

Please address purchase orders to:
GPM, Environmental Solutions, LLC

Alternate A RE: Mettler Toledo Process Analytics

Item	Qty	Part Number	Description	Unit Price	Total Price
1	2	52005381	Mettler Toledo Process Analytics InPro4260i/SG ISM Electrode InPro4260i/SG/120 pH Range 0 – 14 Length: 120 mm ISM Yes Connection K8S / ISM Measuring Temp. Range 0 °C – 130 °C 32 °F – 266 °F Measured Pressure Resistance 0 – 15 barg @ 25 °C 0 – 217 psi @ 77 °F	\$1,044.00	\$2,088.00
2	2	53600145	(50 ft) COAX Termination: Tinned Ends *non-returnable*	\$465.60	\$931.20
3	2	52200851	Mettler Toledo Process Analytics InPro 6050 Dissolved Oxygen Sensor InPro6050/120 Operating Range 30 ppb - sat. Measurement Parameter Oxygen Measurement Technology Amperometric/Polarographic Measurement Range (Concentration) (2) 31 ppb - sat. Accuracy ± [1 % + 30 ppb] Response Time (Text) T98 = <90s Primary Media/Application Wastewater; Chemical Processes ISM No ISM (Digital) or Analog Analog Sensor Diameter 12mm	\$1,632.00	\$3,264.00

			<p>O-Ring Material Viton, Silicone Process Connection Pg 13.5 Sensor Length 120 mm Wetted membrane material PTFE Connector Design VP7 Model Family InPro6051 Autoclavable/Sterilizable No CIP resistant No Mechanical Temp. Range 23.0 °F Mechanical Temp. Range -5.0 °C Design Pressure (imp:) 29 psi Design Pressure 2 bar Cable Connector VP6 analog Certificates & Approvals Quality Certificate IP rating IP68 Residual signal in O2 free media <0.3% of signal in ambient air Measuring Temp. Range 0.0 °C Measuring Temp. Range 32.0 °F Detection limit 30 ppb Connection VP (IP68) ***Solution required with unit/ NOT INCLUDED***</p>		
4	2	52300144	<p>Mettler-Toledo Ingold Vario-Pin (VP6-ST) Cable (-30 to 80 C)/(-22 to 176 F)Length: 15 m (49.28 ft)Termination: Tinned Ends</p>	\$655.00	\$1,310.00
5	2	30280772	<p>Mettler Toledo Process Analytics M300 G2 Process 2-channel 1/2 DIN touchscreen Power supply 100 to 240V AC 50/60Hz 10VA20 to 30VDC 10VA Analog outputs 4 for 2-channel versions (2 for 1-channel versions) 0/4 to 20mA, 22mA alarm, galvanically isolated Relays 2 SPST, mechanical, 250VAC or 30VDC, 3A2 SPST, Reed, 250VAC or 250VDC, 0.5A, 10W Digital inputs 2 for 2-channel versions (1 for 1-channel versions) PID controller Yes User interface 4.0" TFT b /w touchscreen, 320Ã—240 pixels Languages 10 (English, German, French, Italian, Spanish, Portuguese, Russian, Japanese, Korean and Chinese) USB interface 1 USB host: data logging, loading or saving configuration 1 USB device: software update interface Ambient temperature “20 to + 50°C (“4 to +122°F) Relative humidity 0 to 90% non-condensing Enclosure rating ½DIN: IP65; ¼DIN: IP65 (front)Approvals and certificates cULus, CE ***Optional Mounting Kit NOT Included***</p>	\$3,528.00	\$7,056.00

6	4	52403525	Mettler Toledo Process Analytics InDip 508 Series immersion housing, easily installed in open tanks, and uses end-user supplied 1" male NPT threaded nipple in the desired length. ORing Material Viton®-FDA Measuring Temp. Range 0 °C – 130 °C Measuring Temp. Range 32 °F – 266 °F Surface Finish N/A Wetted Materials PVC Process Connection Pg 13.5	\$770.40	\$3,081.60
7	2	30298424	Mettler Toledo Process Analytics O2-Electrolyte pack (3x 25ml) Legacy # 341002016IG / Old P/N: 59907065 HazMat material, MUST ship UPS ground	\$151.20	\$302.40
8	2	30300482	Mettler Toledo Process Analytics Wall Mount Kit for 1/2 DIN Transmitters	\$234.00	\$468.00
9	2	MH236B00Z	CPVC Immersion Handrail Mounting Hardware, 1", pH Series	\$1,076.40	\$2,152.80
10	1	Startup	Service visit to complete flow meter installation, comissioning and training.	\$784.00	\$784.00
				Subtotal	\$21,438.00
				Freight	\$441.00
				Total	\$21,879.00

TERMS AND CONDITIONS:

1. Prices Valid 30 Days
2. NET30
3. Estimated Shipping Time (ARO) @ 3-4 weeks
4. 4% fee added when receiving Credit Card payments for products or services.

Customer Acceptance (sign below):

x _____
Accepted by: Title: Date: PO#

If you have any questions about this price quote, please contact:

Dmitrii Timoshin, P. 402-740-9301, dema@gpmweb.net

Fed ID 87-4148464

Thank You For Your Business!



Case Studies & Solutions

IQ SENSORNET - WASTEWATER PROCESS MONITORING AND CONTROL



a xylem brand

CASE STUDIES AND SOLUTIONS



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- 3** Reduce Chemical Costs by Monitoring Orthophosphate
Brookfield, Wisconsin
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Delaware County, Ohio
- 7** Maximizing Efficiency
Springfield, Illinois
- 9** Meeting Strict Discharge Limits
Englewood, Colorado
- 11** Aeration Control Optimization
Missoula, Montana
- 13** Total Suspended Solids Monitoring for Process Stability
Overland Park, Kansas
- 15** Keeping Operating Costs Low and Effluent Quality High
Northeast Ohio
- 17** Plant Optimization Leads to Cost Savings
London, Ontario

Improve Operational Efficiency with Continuous Data

Whether you are looking to reduce energy consumption by monitoring dissolved oxygen to control wastewater aeration, or you would like to understand how to meet strict discharge limits for phosphorus or nitrate, this case study brochure examines how eight water resource recovery facilities are using the YSI IQ SensorNet to monitor and control their wastewater process and meet their unique, individual plant needs.

See why facilities are choosing YSI:

- UltraClean™ ultrasonic cleaning reduces maintenance
- Reliable ion selective electrodes
- Compatibility with digital BUS communications
- One-cable for both power and communication; simplifies installation
- Reliable ammonia and nitrate combination sensors
- Network system offers redundancy and can be expanded
- Full Range of UV-Vis spectral sensors

YSI is excited to bring you this case study brochure to demonstrate how wastewater treatment facilities are saving money, reducing energy consumption and improving their plant's operational efficiency. See how your facility can benefit from the IQ SensorNet system.



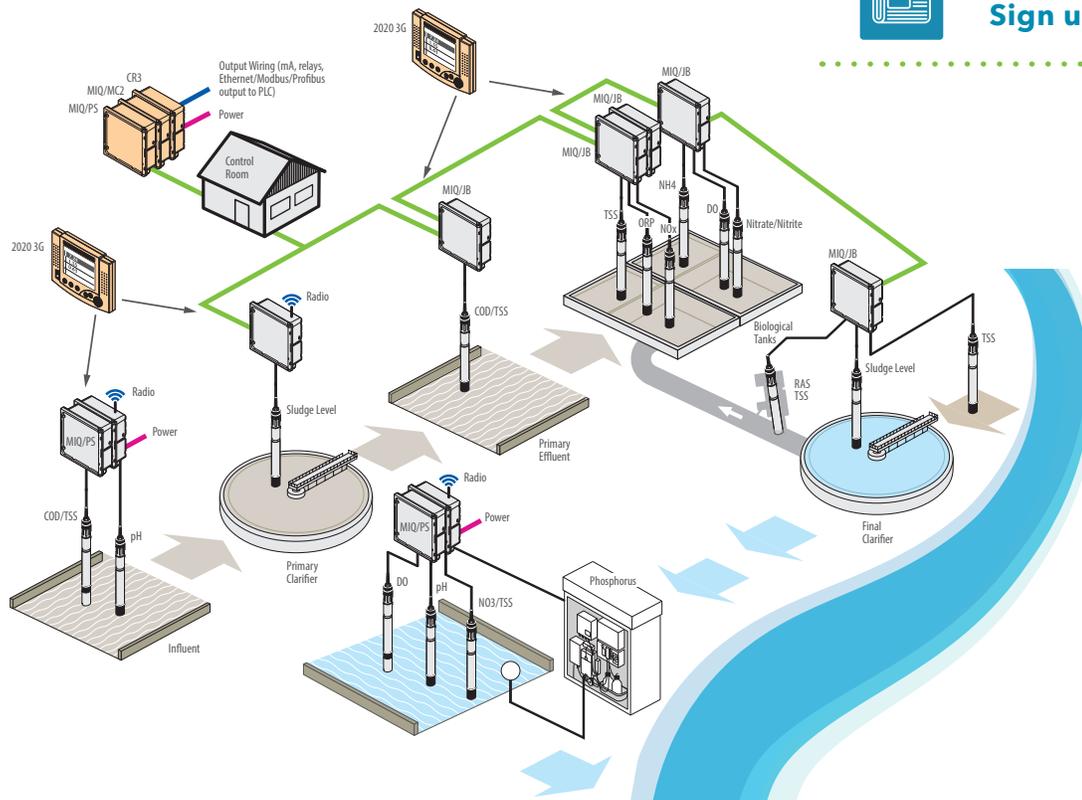
Product Segment Manager, Process



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BROOKFIELD, WISCONSIN

Objective:

Reduce Chemical
Costs by Monitoring
Orthophosphate



Rick Wenzel holding the 0.45 micron filter membrane for the P700 Orthophosphate Analyzer

Acknowledgements:

Many thanks to Rick Wenzel, Process Supervisor at the Fox River Water Pollution Control Center, for providing his experience with the IQ SensorNet system and sensors.

The City of Brookfield covers almost 27 square miles and is home to 40,000 residents. It is a major business, retail and industrial hub in southeastern Wisconsin. Brookfield is geographically unique because the city straddles the sub-continental divide. The western portion of the city flows to the Fox River Water Pollution Control Center (FRWPCC), operated by the City of Brookfield.

The Challenge

The FRWPCC is an activated sludge plant with tertiary filtration designed for an average flow of 12.5 million gallons per day (MGD) and a peak wet weather flow of 50 MGD. The plant complies with a 1.0 mg total phosphorus (TP)/L discharge limit by adding alum to secondary treatment (simultaneous precipitation). The problem with this method is that treatment required an average dosage of over 8,000 gallons per month of alum at a cost that often exceeded \$10,000! FRWPCC needed a solution that would reduce chemical usage and ultimately, save the city money. The facility was also looking for an overall cost-effective solution that would allow them to meet a more stringent limit of 0.075 mg TP/L in the future. FRWPCC sought ways to reduce chemical usage through better control of the chemical feed. Manual adjustment of the chemical pumps based on infrequent grab sampling tended to err on the conservative side to ensure compliance. However, the result was overdosing and high chemical costs. Continuous monitoring was crucial in determining the correct dose and proper timing of the alum.



The Solution

Rick Wenzel, Process Supervisor for the Control Center, considered many options before recommending the IQ SensorNet P700 Orthophosphate Analyzer (figure 1) from YSI. Low reagent consumption and user-defined automatic calibration to a standard were the key differentiators from other options.

The P700 was installed in the filter building to continuously monitor the orthophosphate concentration in filtered effluent. The monitoring system consists of a lightweight 0.45 micron sample filter on a slide rail (figure 2), sample tubing, a 2020 XT controller, and a handrail-mounted cabinet which houses the sample pump, photometer assembly, and chemistry. The phosphate measurement is displayed as PO₄-P and the measurement value is reported to the central SCADA system via a 4-20 mA output. The output signal is used to directly control the dosage of alum to the secondary treatment system by adjusting the speed of chemical metering pumps.

The Results

The monitoring system has allowed FRWPCC to reduce chemical usage and operating costs, and provided valuable insights into treatment dynamics. Alum usage was reduced by over 5,500 gallons in the first 5 months of operation, saving the district an average of \$1500 per month! This comes to an annual average savings of \$18,000.

With the YSI IQ SensorNet P700 Orthophosphate Analyzer, the operators were able to monitor orthophosphate concentrations and adjust the feed pumps based on those measurements.

Furthermore, the data provided Rick with important information that was missing before. "I was surprised at how the trend graph looked throughout the day (figure 3). For instance, we can see the effects of ongoing construction projects and what that is doing to our process." The data also revealed regularly occurring peaks, often on weekends, which is attributed to poor aeration control interfering with biological phosphorus removal. The plant is optimistic that an aeration system overhaul, currently in progress, will correct that situation. Rick and his team continue to seek ways to improve phosphorus removal. They are looking into purchasing a second P700 analyzer to monitor the sidestream from digestion and dewatering.



Figure 1: YSI IQ SensorNet P700 Orthophosphate Analyzer



Savings with Continuous Online Monitoring and Control

	Prior to P700	After P700
Alum usage	8,000 gallons per month	6,890 gallons per month
Cost for alum	\$10,000 per month	\$8,500 per month
Savings	---	\$1500/month \$18,000/year



Figure 2: P700 Orthophosphate Analyzer 0.45 micron filter membrane on a slide rail

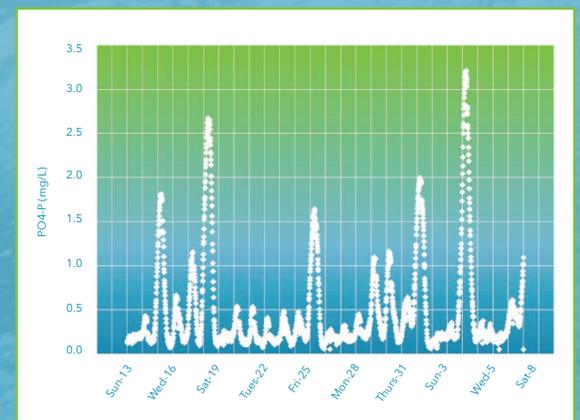


Figure 3: Trend Graph

DELAWARE COUNTY, OHIO

Objective:

Meeting Discharge Limits for Total Inorganic Nitrogen



Anoxic Zone with floating mixer; TriOxmatic (dissolved oxygen), VARiON (ammonium, nitrate), and SensoLyt (pH, ORP) sensors in background

Acknowledgements:

Jon van Dommelen
Ohio EPA Compliance Assistance Unit

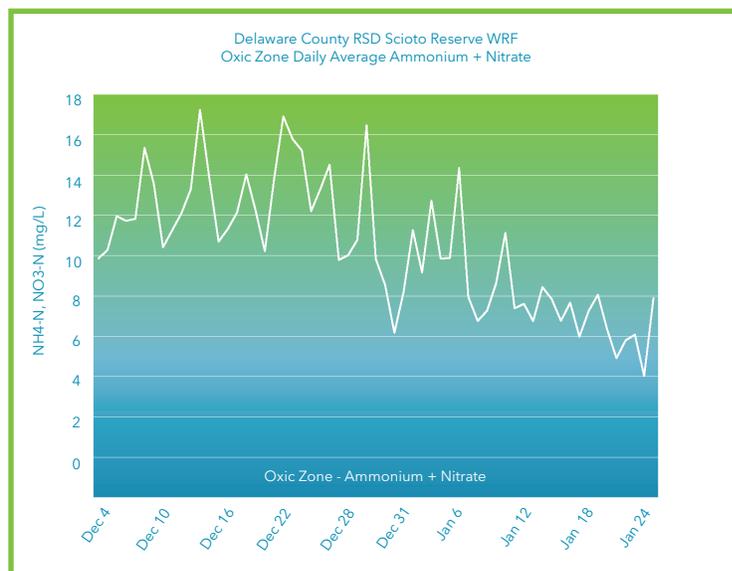
The Delaware County (Ohio) Regional Sewer District faces unique environmental challenges. Delaware County features a large amount of undeveloped land. Combined with the county's proximity to Columbus, this has created intense demand for housing, resulting in explosive population growth and increased daily flow.

The Challenge

In 2012, after years of significant population growth and daily flow increase, the Tartan Fields and Scioto Reserve wastewater treatment facilities' discharge permits were modified by the Ohio Environmental Protection Agency (EPA), requiring a new limit of 10 mg/L total inorganic nitrogen (TIN). The county faced the possibility of a significant capital investment in order to meet an 18-month compliance schedule.

The Solution

The county had a voluntary assessment from Ohio EPA's Compliance Assistance Unit (CAU) completed and the assessment determined the primary goal was to evaluate nitrate levels in and after the anoxic zones to ensure appropriate denitrification in the process. The CAU installed an IQ SensorNet (IQSN) 2020 XT monitoring and control system from YSI, to monitor critical parameters in real time. The IQSN provided a modular plug-and-play system to continuously monitor ammonium, nitrate, dissolved oxygen, pH and oxidation-reduction potential (ORP) in the oxic and anoxic zones using a single networked monitoring system. With the IQSN's simple one-cable networking design - the CAU was able to get the instrumentation up and running quickly to get the information it needed.



Logged data from the 2020 XT Controller can be downloaded and analyzed. This chart shows daily average measurements simulating compliance level monitoring.

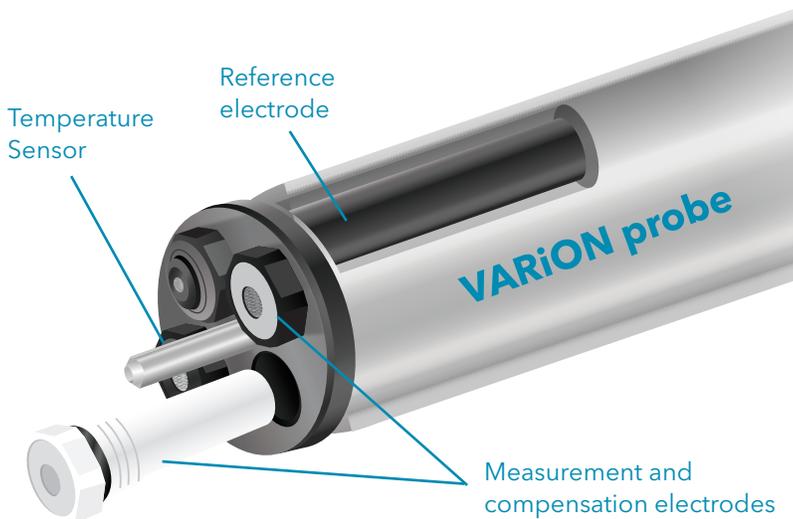
The Results

The real-time monitoring data showed that the on-off operating strategy was able to meet target compliance concentrations intermittently, but it was a balancing act. During periods in which ammonium concentrations were lowest, nitrate concentrations were higher, indicating that more time was required for denitrification. If insufficient time was provided for nitrification, ammonium would spike and nitrate would be lower. The online monitoring demonstrated clearly and quickly that meeting the new requirements was going to require more than a change in operating strategy. The next step for the county was to design and build anoxic zones to provide a more reliable and consistent solution for the denitrification process.

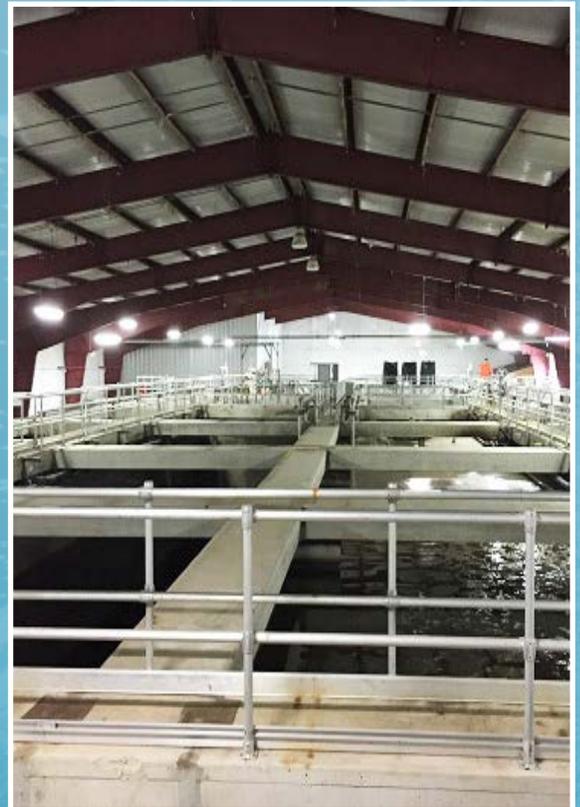
Once the renovations were complete and the anoxic zones were integrated into the plant flow, the CAU determined that both the Tartan Fields and Scioto Reserve facilities had seen a TIN level of 10 mg/L, well within Ohio EPA compliance per the new guidelines. What the plant operators did not expect to find were the other efficiencies gained with the IQSN.

“EPA compliance states that we need to monitor certain criteria and stay within certain parameters with those criteria, as they apply to effluent discharge,” said Mark Chandler, operations superintendent for Delaware County. “Being able to obtain real-time data was the first step to meeting compliance, but it also gave us the ability to analyze trends in plant activity. These trend data have enabled us to progress from simple monitoring and data collection to facilitate actual control of the operation to optimize efficiency.

Coming full circle with it has been a really impressive evolution of what we’re able to do with our process. And we can fine-tune the outcome on a daily, almost hourly, basis.”



VARiON probe



Inside the Scioto Reserve facility

SPRINGFIELD, ILLINOIS

Objective:

Maximizing
Efficiency



Spring Creek employees reviewing data on the YSI IQ SensorNet 2020 XT Controller

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The Sugar Creek facility is in the early stages of a \$54.4 million upgrade, complete with an IQ SensorNet monitoring and control system, tied into SCADA. It will provide necessary improvements to Spring Creek's sister facility and both operations will have cutting edge technology that will establish them as a model water resource recovery facility (WRRF).

Acknowledgements:

Many thanks to Brian Tucker, SMSD Operations Supervisor, for providing his experience with the IQ SensorNet system and sensors.

The Springfield Metro Sanitary District (SMSD) was formed in 1924 to address the challenges of a growing community where raw sewage flowed into the streams and ditches, threatening the drinking water supply and creating unpleasant conditions.

The district's first action was to build the Spring Creek Wastewater Treatment Plant, which came online in 1928 to serve Springfield and surrounding towns.

The Spring Creek plant was built as a conventional activated sludge facility. In 2012, it was converted to vertical-loop reactor (VLR) technology, essentially an oxidation ditch turned on its side. The process consists of a series of reactors operated in aerobic, anoxic and anaerobic conditions to facilitate and optimize the removal of organics and nutrients.

The Challenge

At the original facility, plant operators and support team manually pulled samples for laboratory analysis from the various treatment stages numerous times a day to confirm that the plant was performing in accordance with its permit. The lab measurements also enabled operators to monitor process efficiency and make needed adjustments. The process was effective but labor intensive and based on methods developed decades ago when treatment requirements were less stringent.

The Solution

In the early 2000s, the district began planning for upgrades of the Spring Creek plant to address increased demand and meet new regulatory guidelines for phosphorus and nitrogen.

The team selected the IQ SensorNet (IQSN) monitoring and control system from YSI. It provides real-time, continuous monitoring anywhere in the process for up to 20 wastewater parameters. The system continuously monitors DO, pH and ORP at various process stages to maintain optimum conditions for nitrification, denitrification and biological phosphorus removal.

The primary advantage of the system to the Spring Creek team was the system's ability to communicate with the SCADA system over Profibus. It was important to monitor the parameters necessary to meet the new permit limits, but tying the data back into the SCADA for ultimate control brought the renovated plant to a new level of efficiency and effectiveness.

For Brian Tucker, SMSD operations supervisor, the automation and efficiency that the YSI IQSN provided, and the ease with which it is installed and implemented, meant a level of monitoring and control that wasn't possible earlier in his career.

“In the past, the control component would typically be based on trend data instead of actual, real-time measurements. That requires a fair amount of educated guesses as to what was actually happening in the basins and throughout the plant. The IQSN changes all that.”

The Results

Tucker and his team can now set the required parameter levels at the various locations throughout the facility. Tying that data back into SCADA, the system can turn mixing equipment on or off, open and close control valves, and increase or decrease return rates on the fly, responding in real time to what is happening in the process. Most of the sensors are self-cleaning, so very little maintenance is necessary.

Being able to fine-tune the entire process, from influent through the final discharge into Spring Creek, means significant cost savings, mostly in energy reduction.

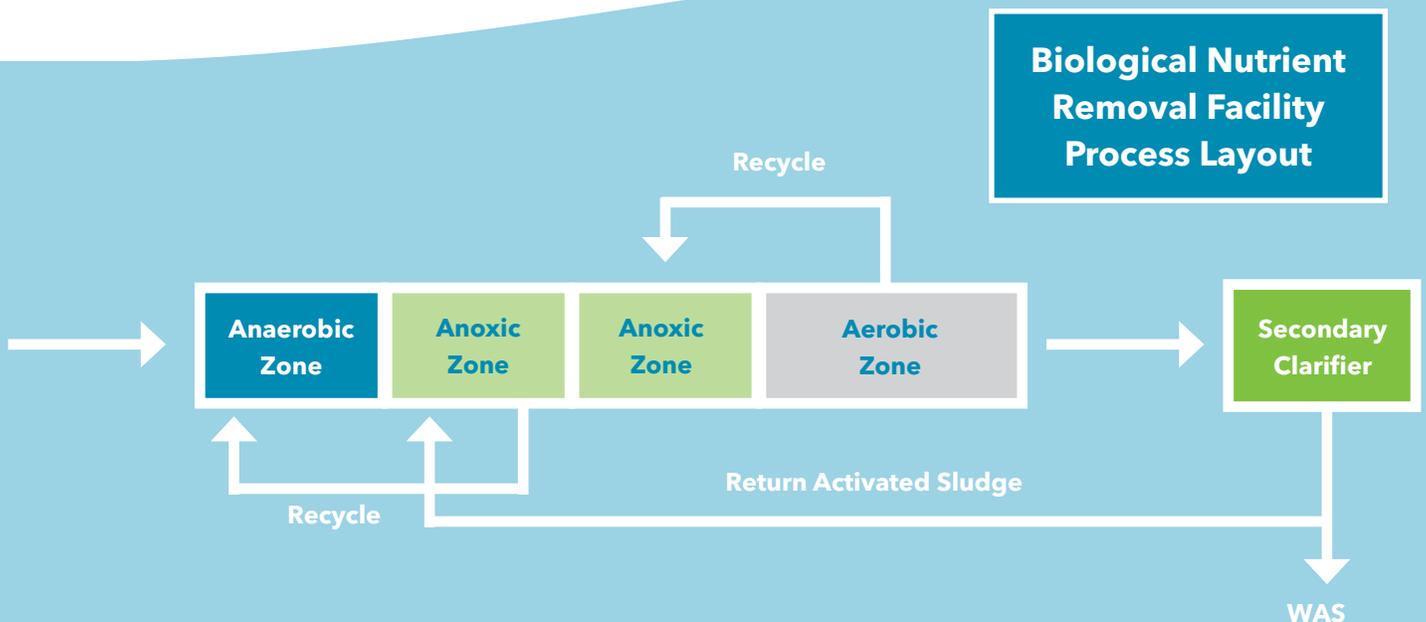
Blowers and motors run only when needed, at specific levels and speeds. Mixing equipment can mostly shut down overnight, when nutrient levels are down and flows are lowest. As the sensors monitor DO at the cascade post-aeration basin, the SCADA system can increase or decrease blower power. Optimized use of the blowers further enhances efficiency.

Being able to monitor the parameters necessary to meet the new EPA regulations was one thing, but being able to tie the data back in to the SCADA for ultimate plant control was something entirely different - and something that would bring the renovated plant into an entirely new high-tech era of efficiency, effectiveness, and automation.



Aerial view of the Spring Creek Wastewater Treatment Plant

PHOTO:
Courtesy of Terry Farmer Photography



LITTLETON ENGLEWOOD, COLORADO

Objective:

Online Monitoring
of Ammonium
and Nitrate Helps
Facility Meet Strict
Discharge Limits

The Littleton Englewood Wastewater Treatment Plant

(LEWWTP) was founded in 1977 as a pure oxygen activated sludge plant, and is the third largest publicly owned treatment works in the state of Colorado. The plant receives sewage from Littleton and Englewood, as well as 21 smaller districts in the service area. In 2009, a \$110 million construction project was completed which transformed the plant into a fifty million gallons per day (mgd) trickle filter/solids contact facility with post nitrification and post denitrification capabilities.

The large advanced treatment plant is required to exceed secondary treatment requirements and remove ammonia from wastewater, working in compliance with local, state and federal regulations applicable to wastewater treatment and discharge.



Check out the Littleton Englewood
story in the following video:
<http://bit.ly/IQSNcolorado>

The Challenge

Daily maximum discharge limits for ammonia and total inorganic nitrogen (TIN) require exceptional performance at the LEWWTP. Operators needed a solution for monitoring and controlling nitrification and denitrification in real-time across their multiple-stage biological process.

The Solution

Online process monitoring is a key element of the LEWWTP process control strategy. The IQ SensorNet 2020 XT system from YSI was selected because it provided the most accurate results and involved the least amount of operator attention in side-by-side trials with competing dissolved oxygen monitoring systems. Furthermore, operators recognized that the network configuration and modularity of the equipment meant that the monitoring system could be easily expanded to help them solve problems with nitrification and denitrification.

By continuously measuring the amount of ammonia in the aeration basin, the team is able to monitor the contribution of ammonia from the return of anaerobic sludge dewatering centrate to the aeration basin. An ammonia concentration target is entered into the SCADA system and the centrate pump output is varied to attain the desired concentration in the aeration basin. By monitoring and controlling the amount of ammonia present, the ammonia loading to the nitrification process is kept within target ranges, which improves efficiency in the conversion of ammonia into nitrate.



IQSN sensors in effluent

The Results

DO, ammonium, and nitrate sensors were installed at critical locations to monitor the process and control distribution of wastewater for the most efficient treatment. Optical UV nitrate sensors were deployed at the influent and effluent of the solids contact tanks (SCT) where the objective was to remove BOD and push nitrification downstream to the nitrifying trickling filters (NTF) as intended. Ammonium ion selective electrode (ISE) sensors were installed in the centrate return to control transfer of stored centrate and to avoid overload of the biological treatment process. Ammonium sensors in the pre-chlorination tanks are used to control the bypass of ammonia-rich secondary effluent around the nitrification process, thereby maintaining the critical ammonia to chlorine ratio for efficient operation of the effluent chloramination disinfection process.

The versatility of the multi-sensor IQ SensorNet allows the facility to solve several problems using a single system, not only contributing significant cost savings, but also enabling multiple probes to be used in a variety of locations throughout the plant. The facility has also been able to automate sections of its treatment procedures based on the information that has been collected by the system, significantly accelerating processes. Due to the local weather conditions, the plant was previously unable to use probes that required water to be pumped from an outdoor location to an indoor analyzer as it was highly likely it would freeze in the winter. The IQ SensorNet does not have this problem and the plant can continue to function in freezing weather conditions.

Previously, data was manually retrieved from the field. Now it is automated with continuous monitoring and control via the IQ SensorNet system. The information that is collected from the various probes are analyzed for trends and patterns. This can be used to learn more about the finer details of the operation and further increase long term productivity and efficiency.



The IQ SensorNet 2020 XT Controller



ViSolid (total suspended solids) probe in insertion mount



The IQ SensorNet 2020 XT Controller enduring the Colorado winter

MISSOULA, MONTANA

Objective:

Optical DO
Monitoring Makes
Aeration Control
Optimization
Possible

The Missoula 12 mgd wastewater treatment plant is effectively reducing phosphorus with a low-cost solution that doesn't require chemicals or filtration. The plant utilizes the Johannesburg Process with a plug-flow arrangement of seven baffles cells.

The Challenge

The Missoula WWTP operations team could not rely on their 10-year-old dissolved oxygen (DO) probes. "Whenever there was a problem with the activated sludge aeration control system, the first thing we would do is check the DO probes; clean them, calibrate them and then wait half a day," according to Gene Connell, treatment supervisor. "We were spending four hours per week just maintaining the DO probes," Gene adds.



IQ SensorNet 2020 XT Controller showing DO measurements



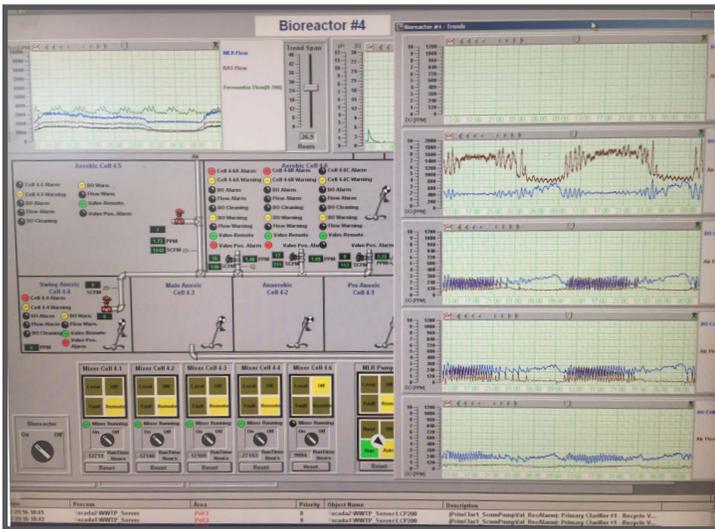
IQSN FDO Sensor

Acknowledgements:

Many thanks to Gene Connell, Missoula WWTP treatment supervisor, for providing his experience with the IQ SensorNet system and sensors.

The Solution

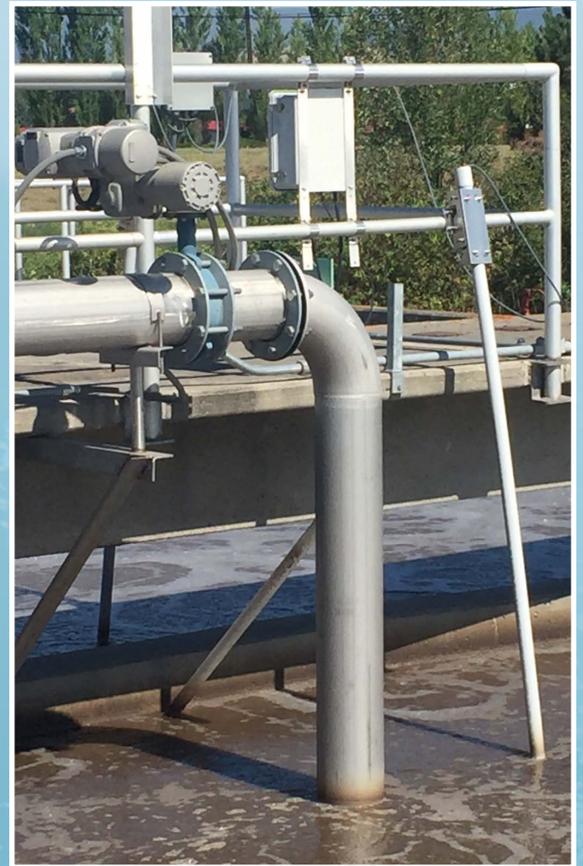
Missoula sought to achieve more reliable measurements and lower maintenance with modern optical DO technology. There are a lot of choices when it comes to wastewater process DO probes and the Missoula WWTP evaluated a couple of brands before they settled on the FDO sensor from YSI. The Missoula team was confident in the YSI brand, but one of the deciding factors was the innovative configuration of the IQ SensorNet (IQSN) system which allowed them to network all 20 DO probes together on the same controller, reducing hardware requirements and simplifying installation. Each of the monitoring locations is linked together with a single cable which sends both power and communications throughout the network. A local electrical contractor was hired to install the system. The contractor was very impressed with the IQSN system's ease of installation. The design of the system allows them to estimate installation costs with confidence making YSI their first choice for future projects.



Bioreactor #4 Trends, Displayed as Graphs

The Results

Maintenance requirements for the DO probes have been reduced to 1 hour per week, freeing up the team to focus on further optimization of the treatment process. Gene calls the new probes a “game-changer”. He adds, “We trust the DO measurement, it is right on.” The DO probes are installed towards the end of each aeration basin to keep the DO at or below the target range. As a result, energy efficiency has improved which has led to substantial cost savings. The total air flow has been reduced and the precision of the DO control system has increased. The team is pleased with the ability to better control the process.



IQ SensorNet FDO sensor in the aeration tank



Blowers run more efficiently by monitoring dissolved oxygen

OVERLAND PARK, KANSAS

Objective:

Total Suspended
Solids Monitoring
for Process Stability



Inside the Douglas L. Smith
Middle Basin Plant

Acknowledgements:

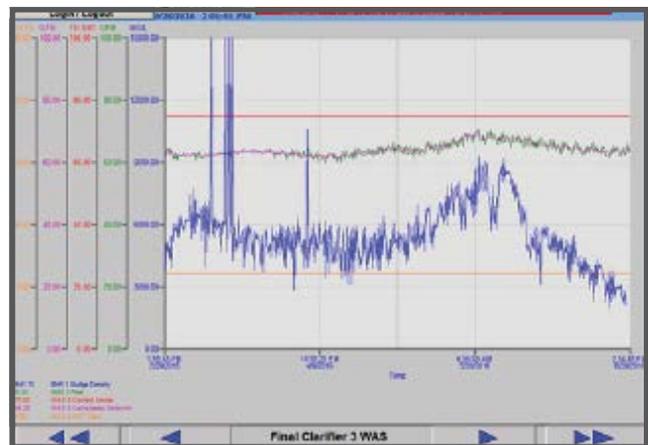
Many thanks to Doug Nolkemper, Operations Engineer at the Douglas L. Smith Middle Basin treatment plant, for providing his experience with the IQ SensorNet system and sensors.

The Challenge

Inconsistent secondary clarifier performance limited the quality of effluent that the **Douglas L. Smith Middle Basin** advanced wastewater treatment facility in Overland Park, Kansas, could produce. The Operations Engineer sought to achieve the lowest total suspended solids (TSS) and most consistent effluent by controlling the solids retention time (SRT). In order to implement this solution, a new monitoring system was required for continuous online measurement of TSS in the mixed liquor suspended solids (MLSS) and return activated sludge (RAS). The desired characteristics of the new monitoring system were long-term accuracy and simple maintenance. Furthermore, it had to be applicable at the other treatment facilities owned by Johnson County.

The Solution

Based on project specifications, three monitoring system suppliers were selected for an on-site demonstration. The competing TSS sensors were placed side-by-side in an aeration basin and performance was compared over a 2-month trial period. Accuracy was verified with gravimetric analysis of grab samples collected near the sensors and maintenance activities were logged. The IQ SensorNet (IQSN) system from YSI, had the highest accuracy and the least maintenance due to its unique, integrated self-cleaning system and was selected for permanent installation. IQSN ViSolid TSS sensors were installed at the oxic end of each of the four treatment trains to monitor MLSS. Additionally, insertion mounted ViSolid sensors were installed into RAS pipelines. According to Doug Nolkemper, the Operations Engineer, "If it works in MLSS it will work in RAS", because RAS is just concentrated mixed liquor. Measurements from the sensors are output to the SCADA system through 4-20 mA signals. The target SRT is maintained by automatic adjustment of the sludge wasting rate using a formula programmed into the Allen Bradley PLC and calculated using the online monitoring data.



Screen shot from SCADA system showing MLSS monitoring data and automated waste activated sludge control



Inside the Douglas L. Smith Middle Basin Plant

Results

The monitoring system at the facility has been operating reliably with minimal maintenance requirements. The UltraClean™ ultrasonic cleaning system effectively prevents fouling, without a wiper or any replaceable parts. Sensors are removed from the process and manually cleaned every 6 months. The long-term reliability of the measurement is important for automation. The design of the monitoring system is also important. According to Nolkemper, "The MLSS and RAS values from the sensors cancel each other out in the algorithm. It isn't the absolute accuracy that is critical as much as the consistency."

The IQ SensorNet system has also been successfully implemented at two other facilities owned by the utility. The Operations Engineer has been a steady, guiding force but admits that success cannot be achieved without team involvement when he states, "Proper implementation [of process monitoring and automation] requires a long-term relationship - champion it, believe in it, get it right, then get the operators on board." This attitude has produced award-winning performance. Two of the facilities owned by the utility have earned Platinum status from the National Association of Clean Water Agencies (NACWA) for excellence in permit compliance.

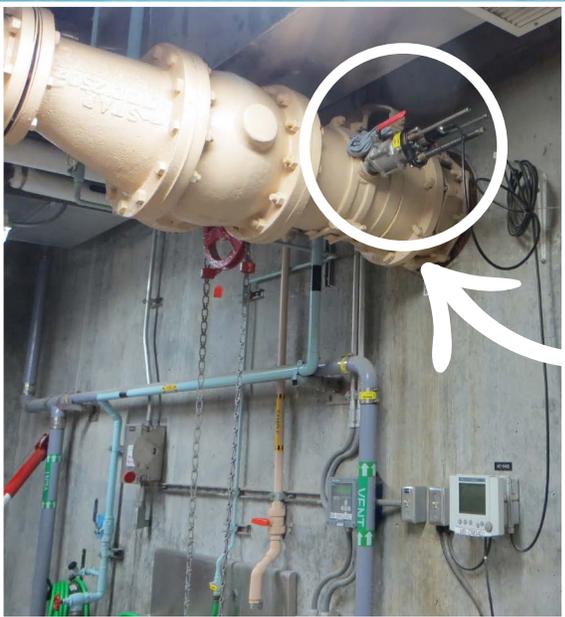


The IQ SensorNet system in this case study consists of the following solutions:

- IQ SensorNet Controller
- IQ 700 ViSolid Total Suspended Solids sensor
- MIQ/PS power supply module
- MIQ/CR3 output module
- WA 700/10 retractable armature



IQ 700 ViSolid total suspended solids sensor



ViSolid sensor insertion mount in RAS pipeline

NORTHEAST OHIO

Objective:

Keeping Operating Costs Low and Effluent Quality High



IQ SensorNet ultrasonic cleaning, UltraClean, is capable of preventing biofouling of the sensors in very harsh conditions saving time and money on sensor maintenance.

Northeast Ohio - Providing the best value to wastewater customers requires a team of operators that have a deep sense of ownership and are committed to continuous improvement. Such is the case for the operating team at one mid-sized wastewater treatment plant whose progressive attitude and a philosophy of “do it right” led them to an investment in online instrumentation and SCADA for compliance monitoring and control.

The Challenge

An advanced level of wastewater treatment is provided for an average daily flow of 2 mgd. The flow sheet consists of equalization, preliminary treatment, primary settling, trickling filters, a 2-stage activated sludge system, and tertiary filters. The National Pollutant Discharge Elimination System (NPDES) discharge permit requires monitoring of pH, total suspended solids (TSS), and 5-day carbonaceous biochemical oxygen demand (CBOD5) in the influent, and limits the pH and the concentration of TSS, CBOD5, ammonia-nitrogen (NH3-N), and dissolved oxygen (DO) in the treated effluent.

The Solution

The wastewater plant invested in SCADA and the YSI IQ SensorNet (IQSN) online process monitoring system several years ago. The superintendent liked the IQSN overall, especially the ability to measure up to 20 parameters on a single network. The original system installed consisted of a universal controller (2020 XT); seven sensors including two pH (Sensolyt), three DO (TriOxmatic), and two TSS (ViSolid); a Modbus module for communication with the PLC; and a spare sensor connection cable for calibrating sensors in the lab.

The most critical objective for any wastewater treatment plant is compliance with the discharge permit. Continuous measurements from a pH sensor in the influent, and pH and DO sensors in the effluent, directly satisfy discharge permit reporting requirements and verify compliance with discharge permit limitations. Additional sensors deployed in the treatment system enable operators to automatically control operating parameters to ensure cost-effective compliance. The activated sludge aeration system represents the bulk of treatment and the largest portion of operating costs. Therefore, as the superintendent puts it, “It seems unwise to not fine-tune the aeration system to the greatest extent possible.”

Mixed liquor suspended solids (MLSS) concentration and DO concentration are critical operating parameters for the activated sludge system. If the concentration of either is inadequate, treatment performance degrades and discharge permit violations occur. On the other hand, excessive levels result in wasted energy and higher operating costs that must be passed on to ratepayers.

A novel method is utilized to maintain the desired MLSS concentration in each stage of the activated sludge system by automated sludge wasting.

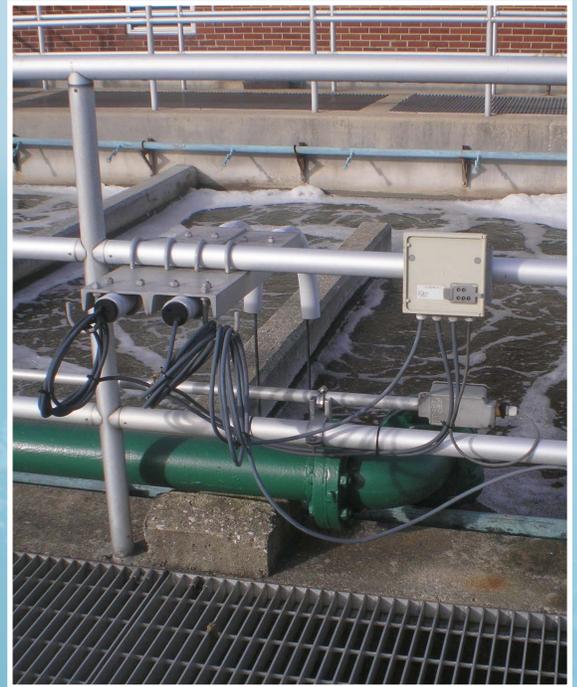
First, sludge is wasted every 8 hours on a timer. This is important to steady the operation of the biological system and reduce the potential for upset, especially over weekends and holidays when the plant is not fully staffed. Excess sludge from the first stage is wasted to the second stage; excess sludge from the second stage is co-settled in the primary settling tanks. Second, the amount of sludge wasted is based on the difference between the MLSS setpoint and the current reading from a ViSolid sensor located at the tail end of each stage. Third, the amount of sludge wasted is adjusted based on the most recent half hour settling test result entered by the operator to prevent too much or too little wasting if sludge settleability changes or the sensor calibration drifts unexpectedly.

The UltraClean ultrasonic cleaning system prevents fouling of the sensor. In total, maintenance requires not more than 15 minutes of operator attention per week.

Dissolved oxygen setpoints are also maintained automatically. Modulating valves on the air supply piping to each of the first and second stage aeration basins are adjusted directly in response to readings from TriOxmatic dissolved oxygen sensors installed at the tail end of each stage. Implementation of DO control in the activated sludge system, in addition to other improvements including installation of a smaller blower, has allowed realization of substantial energy saving.

In addition to verifying compliance with the discharge permit, measurements from the online DO sensor in the effluent are used to directly maintain compliance. An automated valve opens to increase air flow to the post aeration tank if effluent DO falls below the set point.

The plant's existing IQSN system was expanded after the original project to provide online monitoring of the treatment process. It was a simple matter of purchasing additional sensors, mounting them into the desired locations, and connecting them into the existing IQSN network. Two VisoTurb turbidity sensors were installed, one in the influent to the tertiary filters and the other in the final effluent channel to monitor the performance of the second stage activated sludge system and the tertiary filters. The turbidity sensors detect small changes in the quality of wastewater before it becomes visually apparent. Operators trend the measurements from the online turbidity sensors to stay ahead of the process and enable proactive adjustments before bigger problems could occur.



An IQ SensorNet module mounted tank side along with sensors for continuous process monitoring and control.

Results

The utility has not raised user fees in 15 years. A big reason for that is the commitment of the wastewater department team. It was their progressive attitude and desire to “stay ahead of the curve” that gave rise to the project to install the SCADA system and online sensors. The investment has paid off. At the time of project completion, user fees were above the median for the state. Today, user fees are 12 percent below the median. A high level of performance is also achieved despite substantial industrial wastewater loadings. Over 98% of TSS and CBOD5 are removed on average and monthly average effluent ammonia-nitrogen did not exceed 0.3 mg/L during the most recent three-year period.

LONDON, ONTARIO

Objective:

Plant Optimization
Leads to Increased
Energy Efficiency
and Cost Savings



The effluent channel with effluent probes, measuring DO, pH, temperature and TSS

Acknowledgements

Many thanks to Mark Spitzig for providing his experience with the IQ SensorNet system and sensors. Mark is the manager of Wastewater Treatment Operations/Maintenance for the City of London, Ontario.

The Challenge

As one of the largest cities in the Canadian province of Ontario, the City of London is home to over 300,000 people. And as is the case with many of the municipalities across North America, aging infrastructure presents tremendous challenges that need to be addressed.

Within the City of London, the Environmental Services Department (ESD) Wastewater Treatment Operations (WTO) Division manages six wastewater treatment plants located along the Thames River and Dingman Creek, along with 36 pumping stations. The Department takes great pride in the services they provide to the community, but the six plants (Greenway; Adelaide; Pottersburg; Vauxhall; Oxford; Southland), which collectively handle over 200,000 cubic meters of waste per day, range in age from at least 50 years old to over 100 years old.

It was essential for the City of London and the ESD to continue to provide efficient and cost-effective services to their residents, and the optimization of their facilities seemed to be the key component. Instead of being overwhelmed by the challenge, they took it on as an opportunity to make their facilities and services even better than they had been historically.

The Solution

To begin the plant optimization process, the city researched the benefits of the Process and Systems Upgrade (PSU) program offered by Ontario Power Authority (OPA) to tap into any available funding. London started with an assessment of the Vauxhall plant, which included a detailed engineering study (funded by OPA) to identify the equipment and technology necessary to address the needs of the facility. It was determined that the PSU would address energy optimization and ultimately plant efficiency utilizing online technology.

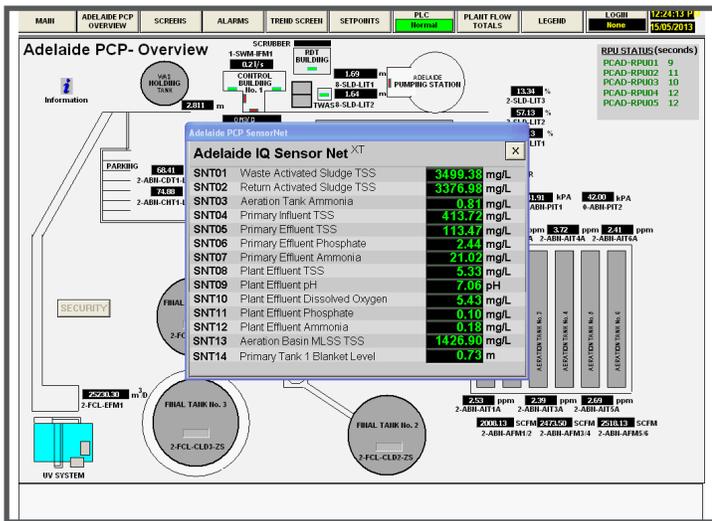
The ESD then established Adelaide as an online instrumentation pilot plant, and put out a bid to find the best supplier to partner with for the project. "YSI diligently put together a comprehensive monitoring solution that met our needs," says Mark Spitzig, Wastewater Treatment Operations/Maintenance manager for the City of London. YSI worked closely with plant's technical team and the local representative organization, SPD Sales Ltd., to determine the ideal instrumentation and probes to be installed in the channel and insertion mounted in key locations throughout the plant.

The sensors would measure typical parameters such as dissolved oxygen, temperature, total suspended solids, sludge level, pH and ammonia. All monitoring and online process instrumentation was tied in to a YSI IQ SensorNet 2020, a universal controller, which was then tied in to the SCADA system via Profibus DP.

According to Spitzig, the YSI products offered both short term ease of installation and long term benefits. "From the start, the YSI solution was an easy choice," says Spitzig. "The simple one-cable design - being able to run one cable that provides both power and data-transfer made so much sense. The system enables the addition of more probes or instrumentation at any point down the road, with minimal interruption to our day-to-day operations."

The new network also enables the Adelaide plant to tie in complimentary, non-YSI products without any rework or major adjustments. It's essentially plug and play.

Back at Vauxhall, the installation of the online monitoring probes in strategic locations will enable the monitoring of key parameters as often as necessary, allowing the plant to maintain compliance as well as optimize process efficiencies. Much of the new instrumentation provides the ability to set alarms when certain parameters reach pre-determined min/max levels.



Screen capture of the SCADA system PCP overview, showing various parameters measured by the online monitoring system.

Results

As with any upgrade to an existing facility, it is essential to keep the plant running smoothly during the renovation and upgrade process. The interference with plant operations during installation was minimal with the single-cable system, which incorporated some of the existing components within the plant but also deployed current, up-to-date technology.

Once the conduit, instrumentation and probes were installed, the new technology was tied into the existing plant SCADA system via Profibus, which now provides plant personnel with a clear picture of the online monitoring activity.



Two of the TSS probes from YSI, after 30 days in the channel. The probe at the top does not have UltraClean ultrasound technology; the probe at the bottom utilizes UltraClean technology.



Aerial view of the City of London, Ontario's Adelaide Wastewater Treatment Operation

Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're a global team unified in a common purpose: creating advanced technology solutions to the world's water challenges. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. Our products and services move, treat, analyze, monitor and return water to the environment, in public utility, industrial, residential and commercial building services settings. Xylem also provides a leading portfolio of smart metering, network technologies and advanced analytics solutions for water, electric and gas utilities. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise with a strong focus on developing comprehensive, sustainable solutions.

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IQSN MOBILE

Monitoring Made Mobile
for IQ SensorNet



YSI IQSN Mobile

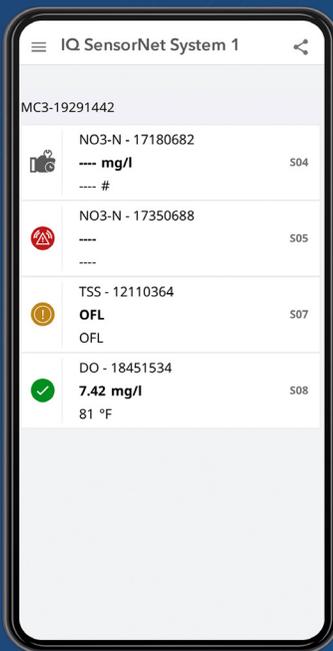
REMOTE PROCESS MONITORING & CONTROL FOR IQ SENSORNET





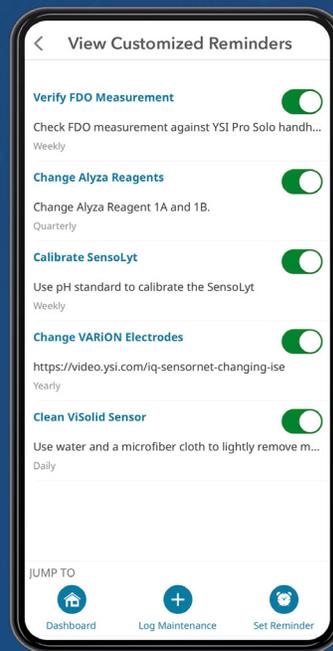
The Mobile Monitoring Solution for IQ SensorNet

IQSN Mobile is an application that provides instant access to an IQ SensorNet network of sensors and analyzers from a mobile device. This intuitive app displays live readings, data trends, sensor health notifications, maintenance reminders, and alarms. With IQSN Mobile, view process data from the comfort of your office, home, or anywhere with internet access on a cell phone or tablet.



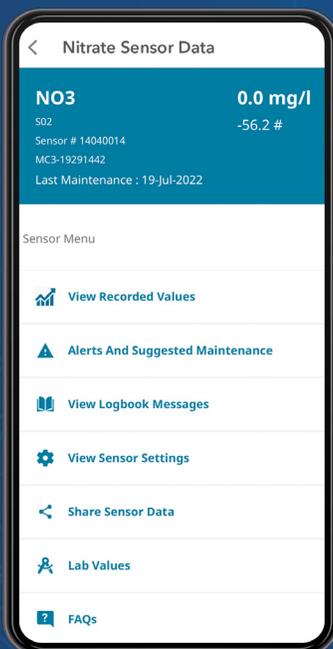
Sensor Health Monitoring

The app uses colored sensor health indicators and customizable push notifications for alerts, alarms, and reminders on your mobile device.



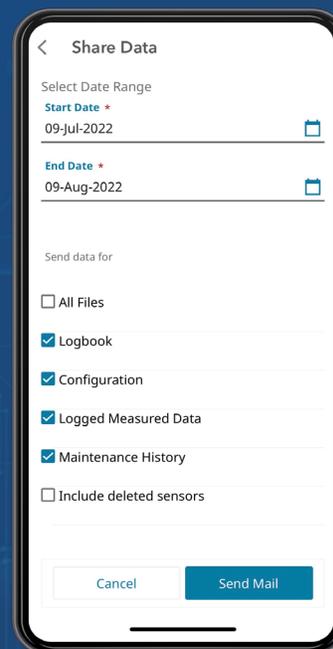
Proactive Maintenance

Stay on top of maintenance with factory default maintenance reminders and set customized alerts to clean and calibrate sensors.



Remote Data Visibility

Access IQ SensorNet data 24/7 - quickly respond to plant upsets and retain peace of mind - even away from the plant.



Mobile Data Management

Quickly export and share measured data, maintenance history, system configuration, and sensor logbooks at any time from the mobile app.

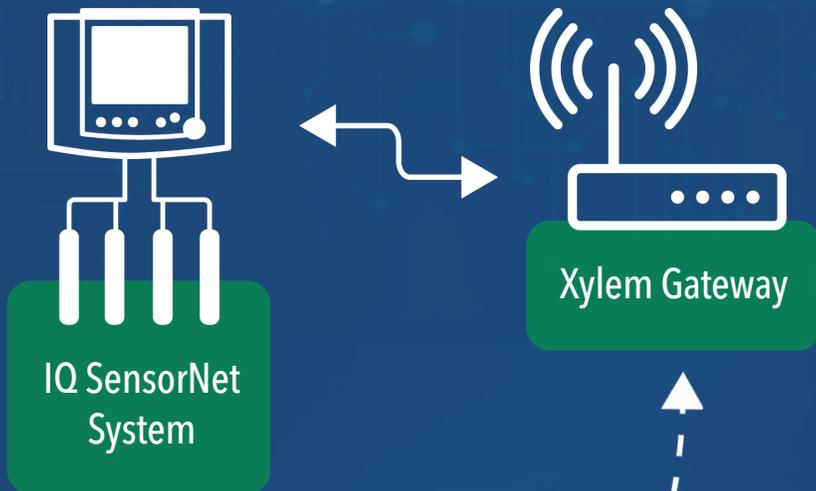
Access Live IQ SensorNet Data On-the-Go!

Away from your IQ SensorNet controller? You can relax – with **IQSN Mobile**, process data goes wherever you go. Accessing live readings and instrument data has never been more convenient – view IQ SensorNet data 24/7 on a mobile phone or tablet from anywhere with internet access and stay up to date on the condition of your process at all times.



System Requirements for IQSN Mobile

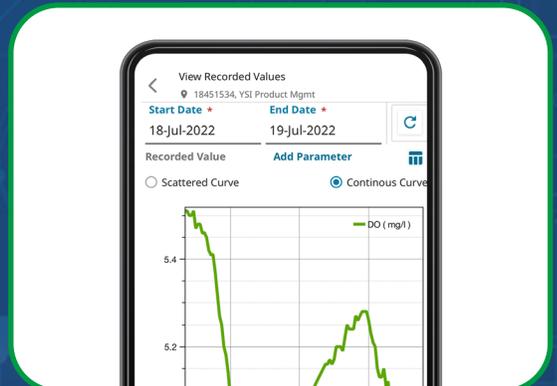
An **Ethernet connection** is required to connect the **IQ SensorNet** system to the **Xylem Gateway**. The Xylem Gateway, equipped with cellular service, transmits IQ SensorNet data to the **Xylem Cloud**. The Xylem cloud transmits data to the user's mobile device via the **IQSN Mobile** app.



IQ SensorNet Controller with Ethernet IP



Xylem Gateway



IQSN Mobile App

IQSN Mobile SYSTEM SPECIFICATIONS

POWER & COMMUNICATION	
Power	Input Voltage: 115 to 230 VAC Output Voltage (throughout system): 24 VDC
Power Consumption	2 W idle; 15 W maximum
Amps	1.7A
Network Type	4G LTE
IQ SensorNet Protocol	Ethernet TCP/IP
Ethernet Connections	4 maximum with Ethernet switch
GENERAL	
Enclosure Dimensions (LxWxH)	11.78in (300mm) x 7.85in (200mm) x 5.95in (151mm)
Gateway Dimensions (LxWxH)	5.47in (139mm) x 4.53in (115mm) x 1.81in (46mm)
Mounting	D2 DIN Rails (with enclosure)
Antenna	Ultra-wide band antenna
Materials	Enclosure - Fiberglass reinforced polycarbonate base and polycarbonate cover; Gateway - aluminum case; Antenna - PC/ABS UV Stable
Warranty	2 year warranty
System Requirements	DIQ/S 28X-E(F) Controller or MIQ/MC3(-XX) Microcontroller Module
ENVIRONMENTAL	
Water Rating	NEMA 4X with enclosure
Operating Temperature	-4°F (-20°C) to +158°F (+70°C)
Storage Temperature	-40°F (-40°C) to +185°F (+85°C)

Ordering Information

ITEM NO.	MODEL NO.	DESCRIPTION
473500-01	IQSN Mobile Kit 1	Xylem Gateway (xGW) for IQSN Mobile App with Outdoor Enclosure, Wide Range Power Supply, Cellular Antenna, and SIM card with one month of cellular data
473500-02	IQSN Mobile Kit 2	Xylem Gateway (xGW) for IQSN Mobile App with Outdoor Enclosure, Wide Range Power Supply, Ethernet Switch, Cellular Antenna, and SIM card with one month of cellular data
473537	App/Data Subscription	IQSN Mobile App and Cellular Data Plan, per year

Note: Consult YSI for mounting hardware and other accessories.

New to IQ SensorNet?

YSI's IQ SensorNet system is a network of online instrumentation designed for use in municipal water and wastewater plants. Continuously measure process water from the influent to the effluent, and send data back to one central location.

Learn more at [YSI.com/IQSN](https://www.ysi.com/IQSN).

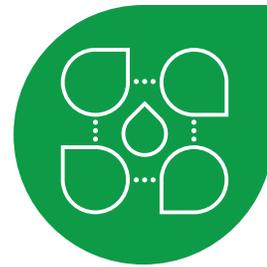


Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're a global team unified in a common purpose: creating advanced technology solutions to the world's water challenges. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. Our products and services move, treat, analyze, monitor and return water to the environment, in public utility, industrial, residential and commercial building services settings. Xylem also provides a leading portfolio of smart metering, network technologies and advanced analytics solutions for water, electric and gas utilities. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise with a strong focus on developing comprehensive, sustainable solutions.

For more information on how Xylem can help you, go to www.xylem.com



YSI
Municipal
Water

Proven. Reliable. Trusted.



YSI, a Xylem brand
1725 Brannum Lane
Yellow Springs, OH 45387

- +1.937.767.7241
- info@ysi.com
- YSI.com



YSI.com/IQSN-Mobile

Scope Change No. 1

Date: 1/15/2025
Client: City of Waverly
Engineer: JEO Consulting Group, Inc.
Project: Waverly New Well Siting
Project No.: 242161.00



Description of Addition to Scope of Services:

Addition of an hourly phase for Property Owner Coordination. Engineer's estimate of the hourly amounts that will become payable are only estimates for planning purposes, are not binding on the parties, and are not the minimum or maximum amounts payable to Engineer under the Agreement. Owner shall notify Engineer if they wish for the Engineer to reduce or stop providing hourly services. Engineer shall be paid for all services rendered up to being notified.

Change to Completion Dates:

Phase	Agreement Dates/Days	Prior Adjustments	Adjustments this Change	Completion Dates/Days
Project Kickoff Meeting	30 Days	None	None	30 Calendar Days from Notice to Proceed
Test Hole and Test Well Proposal Opening	90 Days	None	None	90 Calendar Days from Project Kickoff Meeting
Test Hole Data Review Meeting	90 Days	None	None	90 Calendar Days from Receipt of all TH Data
Test Well Data Review Meeting	90 Days	None	None	90 Calendar Days from Receipt of all TW Data
Council Meeting Update	30 Days	None	None	30 Calendar Days from TW Data Review Meeting

Change to Fees:

Phase	Fee Type	Fees per Agreement	Prior Adjustments	Adjustments this Change	New Fees
Project Management	Lump Sum	\$ 2,500.00	\$ -	\$ -	\$ 2,500.00
Test Well Program	Lump Sum	\$ 47,500.00	\$ -	\$ -	\$ 47,500.00
Test Hole and Test Well Drilling Support	Hourly	\$ 5,000.00	\$ -	\$ -	\$ 5,000.00
Property Owner Coordination	Hourly	\$ -	\$ -	\$ 5,000.00	\$ 5,000.00
Totals:		\$ 55,000.00	\$ -	\$ 5,000.00	\$ 60,000.00

Approval of this form shall constitute an amendment to the agreement dated December 10, 2024 between the parties identified and for the project listed at the top of this form.

Requested By:

 Tim Adams, PE
 Senior Project Manager

 Date

Approved By:

 City of Waverly, NE

 Attest: