# VILLAGE OF EPHRAIM FOUNDED 1853



Wastewater Committee Agenda Monday, March 4<sup>th,</sup> 2024 - 9:00 AM Village Hall 9996 Water Street

NOTE: This Meeting of the Village Wastewater Committee will also be held via teleconferencing. It will be available to the public to attend in person or by computer, phone, tablet, or dial-in. Connection information is included below in this notice.

- 1. Call to order
- 2. Changes in Agenda
- 3. Previous minutes December 13, 2023
- 4. Visitors' comments
- 5. Ephraim Wastewater Operator in Charge Report.
- 6. Discussion of pumper truck replacement.
- 7. Visitors' comments
- 8. New business for the next meeting
- 9. Adjournment

## WW Committee Meeting

Mar 4, 2024, 9:00 – 11:00 AM (America/Chicago)

Please join my meeting from your computer, tablet, or smartphone. https://meet.goto.com/490808245

### You can also dial in using your phone.

Access Code: 490-808-245 United States: <u>+1 (224) 501-3412</u>

\*It is possible that a quorum of the Village Board or other Village Committees may be present at the meeting. However, no action will be taken by any other Board or Committee unless specifically noticed.

	Date <u>3/1/2024</u>
Andrea Collak, Clerk	X Village Administrative Office
	<u>X</u> Visitors' Center
	<u>X</u> Post Office
Kim Roberts, Deputy Clerk	<u>X</u> Website: www.ephraim.wi.gov
	X Emailed to WDOR/Peninsula Pulse

# VILLAGE OF EPHRAIM

FOUNDED 1853



## Wastewater Committee Minutes Wednesday, December 13, 2023, 10:00 AM

Present: Karen McMurtry- Chair, Michael McCutcheon, Bruce Nelson, Jim Peterman Absent: Dennis Jewell Staff: Brad Rasmusson – Wastewater Manager/Operator in Charge, Brent Bristol-Administrator Guests: Anthony Kappell, Ken Nelson

- 1. Call to order: The meeting was called to order by Chair McMurtry and a quorum was present for this meeting.
- 2. Changes in Agenda: None
- 3. Previous minutes Minutes from November 6, 2023 Peterman moved, Nelson seconded to approve November 6, 2023, meeting minutes as presented, all ayes, and the motion carried.
- 4. Visitors' comments: None
- 5. Ephraim Wastewater Operator in Charge Report: Rasmusson reviewed the WW, WWT, and SS OIC reports as included in the agenda packet. Wastewater duties were completed according to schedule.

On November 3, Oakley completed the annual thermometer calibration.

On November 9, the west clarifier for the season was taken down. While doing so it was found that one of the grease lines attached to the wall let loose causing damage to the flights and possibly the lower bearing. Sable Mechanical will be coming soon as they installed the lines last September.

On November 14, new influent pipe brackets were installed in the west basin by Lee's Contracting.

November 15, roof exhaust fans were greased, and belts changed. A new grinder lid on Diekman grinder that has a quick connection to avoid removing the lid every time water is dumped was installed.

November 17, EDMR was submitted.

November 21, the annual required sludge characteristics test was sent out.

On December 7, redirected flows to the west basin and transferred the east basin to the west in preparation for Lee's to continue changing rotten brackets.

## The month of November 2023:

There were 67 in-house bacteria tests completed, 67 water tests (973 for the year so far), and 0 clean water tests. 4 holding tank pump-outs and 0 septic pump-outs/problems. There were no emergency call-ins.

6. Discussion and recommendation regarding future projects with McMahon Engineering: Kappell from McMahon Associates, INC. noted that the draft of the Wastewater Collection and Treatment System Facility Needs Assessment to identify and prioritize needs was completed earlier this year. It was decided then to proceed with the Facility Plan Amendment because it was going to be required by the Department of Natural Resources (DNR) for any future spec approval submittals as well as if the Village decides to pursue project funding from the State. Kappell pointed out that this amendment does not have a cost analysis. The amendment is not based on cost but on the condition of the existing equipment at the Ephraim Wastewater Treatment Facility (EWWTF). The major upgrades are going to be financed in 2025 and beyond.

Kappell walked the committee through the Facility Plan Amendment preliminary draft. Kappell stated that the draft is 60-70% complete. The main objective is to determine the most cost-effective means of addressing the aging infrastructure and impending needs at the EWWTF. Applicable wastewater treatment alternatives should extend the service life of the existing facilities, improve operator safety, improve operability and maintainability, and maintain reserve treatment capacity for future growth as well as achieve compliance with permit effluent limits.

Kappell talked about federal and state requirements. He noted that based on the most recent regulations Kappell does not foresee a change in permit effluent limits for the Village of Ephraim.

In terms of reserve capacity, the existing treatment facility has an abundance of it going forward. Current wastewater flows to the WWTF during summer/peak season months (approximately 120,000 to 160,000 (gallons per day (gpd)) are well less than half of the facility's rated average design flow capacity (310,000 gpd), and loadings to the facility are less than quarter of the rated design capacity. In the Village of Ephraim, Infiltration/Inflow (I/I) is not perceived to be a big enough issue and is not considered excessive to be required to do a more detailed study for DNR.

Rasmusson added that DNR recommended to camera 20% of the system and that was put into the budget for 2024.

Based on an assessment of the existing preliminary treatment facilities, improvements are needed at the Influent Pump Station, Headworks, and Hauled-In Waste Receiving. Based on an assessment of the existing secondary treatment facilities, improvements are needed to the blowers, aeration piping and mixing, secondary clarifiers, and chemical feed systems. Based on an assessment of the existing tertiary treatment and effluent discharge systems, improvements are needed to the effluent discharge pumps. There need to be improvements made to the existing solids handling facilities and improvements to electrical, controls, and SCADA. McMahon is also proposing improvements to the main treatment building and site improvements.

Kappell noted that it is likely feasible to pair high and medium-priority projects with lowpriority projects to maximize cost-effectiveness.

Bruce Nelson asked whether it would be feasible to install solar on the top of the EWWTF. Kappell believes it has been done to offset some of the power needs but not run strictly on solar. There may be some opportunities for grants to do that. Kappell is not familiar enough

with solar technology and he does not know if the payback would be quick enough to justify it. However, it could be looked at, said Kappell.

Kappell said that if the committee agrees with the improvements that were discussed, McMahon will proceed with the opinion of probable cost. Once the opinion of probable cost is done, McMahon will develop a recommended plan with input from the Village of Ephraim. The Village needs to be looking at what the potential impact might be on sewer rates when making all the improvements in a short time. The plan should consider how to finance the improvements with the least amount of impact on the customers. If the improvements result in a 20% increase in sewer rates, the Village will be required to hold a Public Hearing to present the project and potential impact to the customers/residents.

Committee members agreed with the proposed plan.

Peterman moved, McCutcheon seconded that McMahon engineers proceed with a cost estimate for improvements they developed for EWWTF, all ayes and the motion carried.

- 7. Visitors' comments: None
- 8. New business for the next meeting: None
- 9. Adjournment

McMurtry moved, Nelson seconded to adjourn the meeting, all ayes, and the motion carried.

Recorded by, Andrea Collak- Clerk/Treasurer

## December 2023 – February 2024 Ephraim WW, WWT, SS Manager OIC Report



Po4 lab setup-complete with lab cleanup samples twice per week

EFF samples sent to Northern Lake Services for ammonia testing:

Ph testing: Five times per week as required.

TSS, BOD labs with lab cleanup: Twice per week as required.

Sent out and reported annual sludge characteristics report.

Submitted annual hazmat report to WI emergency management.

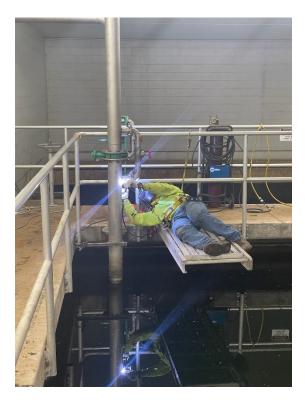
Submitted annual septage hauling report to WI DNR.

EDMR's have been submitted to the DNR monthly.

Dan set up and passed WSLH blind proficiency testing for BOD, TSS, and Po4.

On the first day of the bitter cold, we had in January the lab furnace went out, I discussed it with Brent and two days later Eagle Mechanical installed a new furnace for \$3,700 that came out of the replacement fund.

Lee's Contracting was on-site three different times because of having to switch tanks and flows back and forth, they installed new SS brackets on the influent pipes in all three tanks. They also installed the air bypass valves on all three tanks as well as the new skimmer bucket.





Dan, Justin, Jake, and I, have all done our proficiency testing for the Water Lab 2024

I updated the pumper truck emergency spill plan.

While coming back from a HT pump out the main air line blew off the top of the compressor for the air brakes on the pumper truck. Luckily, I made it back to the plant without getting too low on air causing the emergency brakes to activate. I just had to redo the compression fitting on top of the compressor, which cost about two dollars.

I made a drainpipe for the garage furnace, now we don't have to worry about an overflowing bucket.

Being that we don't have to do arsenic testing this year, we sent the ammonia test to Northern Lake Services. We are saving roughly \$200 per month.

After plugging the drain line from the digestor twice, one time we had to call Septic Maintenance to have the line jetted. We purchased a small jetter that will hook onto our pressure washer for a little over \$300. Hopefully the next time we can take care of this ourselves.

Sabel was here and inspected the west clarifier that was damaged when a grease line detached from the wall and got caught in the flights causing damage to 10 out of the 16 flights. They are currently getting pricing for the repairs.

## Totals for 2023

## Water Lab

1006 in-house bacteria test

30 outside water test

## Septage Pumping

58 Holding tank pumpouts

35 Septic tank pumpouts

## **Ephraim Well Water Testing, 2024**

Number of Water Tests: 60 In-House Bacteria: 60 Clean Water Testing: 0 **Ephraim Septage Service**: Holding Tank Pump Outs: 4 Septic Pump Outs: 1 **Emergency Call Ins**: 0 **Weather**: January & February Precip: 1.38 inches rain/snow Snow: 24.57 inches Max Temp: 51 Min Temp: -6

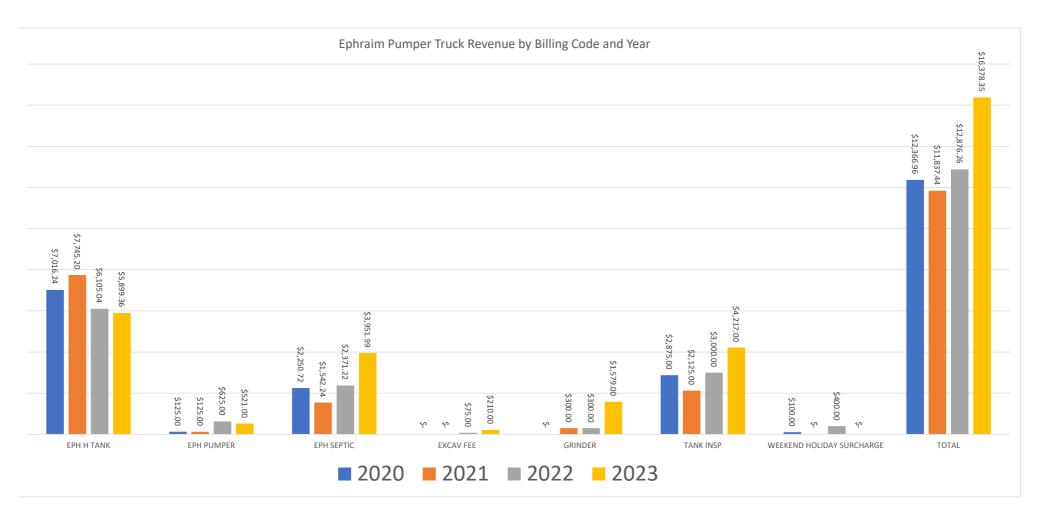
Respectfully submitted,

Brad Rasmusson Village of Ephraim, Wastewater Manager

	EPH H TANK		EPH H TANK EF		EPH PUMPER		EPH PUMPER EPH SEPTIC		EXCAV FEE		GRINDER		TANK INSP		WEEKEND HOLIDAY SURCHARGE		TOTAL	
2020	\$	7,016.24	\$	125.00	\$	2,250.72	\$	-	\$	-	\$	2,875.00	\$	100.00	\$	12,366.96		
2021	\$	7,745.20	\$	125.00	\$	1,542.24	\$	-	\$	300.00	\$	2,125.00	\$	-	\$	11,837.44		
2022	\$	6,105.04	\$	625.00	\$	2,371.22	\$	75.00	\$	300.00	\$	3,000.00	\$	400.00	\$	12,876.26		
2023	\$	5,899.36	\$	521.00	\$	3,951.99	\$	210.00	\$	1,579.00	\$	4,217.00	\$	-	\$	16,378.35		
TOTAL	\$	26,765.84	\$	1,396.00	\$	10,116.17	\$	285.00	\$	2,179.00	\$	12,217.00	\$	500.00	\$	53,459.01		

## HISTORICAL

	EPH H TANK		EPH H TANK		EF	PH PUMPER	E	PH SEPTIC	EXCAV FEE	GRINDER	1	ANK INSP	WEEKEND HOLIDAY URCHARGE	TOTAL
2016	\$	6,560.64	\$	250.00	\$	3,084.49	\$ -	\$ 1,350.00	\$	3,375.00	\$ 300.00	\$ 14,920.13		
2017	\$	6,469.52	\$	875.00	\$	2,990.03	\$ -	\$ 750.00	\$	3,075.00	\$ 400.00	\$ 14,559.55		
2018	\$	5,467.20	\$	1,125.00	\$	2,294.09	\$ 500.00	\$ -	\$	3,000.00	\$ 500.00	\$ 12,886.29		
TOTAL	\$	18,497.36	\$	2,250.00	\$	8,368.61	\$ 500.00	\$ 2,100.00	\$	9,450.00	\$ 1,200.00	\$ 42,365.97		







## IMPERIAL INDUSTRIESING

(800) 558-2945 / www.imperialind.com Mailing Address: P.O. Box 1685, Wausau, WI 54402 Shipping Address: 505 Industrial Park Ave., Rothschild, WI 54474

Sales Person: Schreiber, Cory P: (715) 359-0200 Extension: 426 F: N/A EMAIL: Cory@imperialind.com

QUOTE: 531425-01

			Ship To:		
Customer:					
VILLAGE OF EPHRAIM			VILLAGE	OF EPHRAIM	
			ADDRES	S:	Δ.
ADDRESS: 9996 WATER ST EPHRAIM, WISCONSIN 5421' UNITED STATES	1		UNITED S	, WISCONSIN 54211 TATES	
CONTACT: BRAD RASSMUSSON M: (920) 421-0123 brasmusson@ephraim.wi,gov	v		M: (920)	sSMUSSON 421-0123 on@ephraim.wi,gov	· ·
Job #	Order #	Quote #		Customer PO#	Project#
JOD #	U.U.U.	531425-01			

**Requested Date** 2/23/2024

IMPERIAL MAIN LOCATION

## Reference: TMV1850A 2025 Freightliner M2

## QUOTATION REMAINS VALID FOR 15 DAYS FROM QUOTE DATE UNLESS OTHERWISE NOTED.

Accessories Price Each Price T											
tom	Part Number	Quantity	UOM	Description	Price Each	Price Total					
10	Part Number 805084	Quantity 1	EA	<ul> <li>TMV1850A (ALUM) ASSEMBLY W/B500 BLOWER66" DIA X 123" CYLINDER WRAP</li> <li>Rib Free Exterior.</li> <li>1/4" 5454 Barrel.</li> <li>5/16" 5454 ASME Dished Heads.</li> <li>Full Length Skids.</li> <li>(2) Full Flanged &amp; Dished Heads For Baffles.</li> <li>(3) 6" Interior Channel Ribs.</li> <li>Full Doubler Plate (Bottom 1/3rd of Tank Double Plated)</li> <li>Hose Trays W/Rear Tail Light Sections.</li> <li>Primary 12" x 4" With Internal Airline.</li> <li>20" Top Manway.</li> <li>20" Rear Manway.</li> <li>6" Discharge Port, Flanged. W/Piston Valve, Manual Handle and Camlocks</li> <li>(2) Hose Guards.</li> <li>(2) Hose Guards.</li> <li>(3) 5" Sight Glasses.</li> <li>Rubber Sills.</li> <li>Toolbox,24"X24"X30" Aluminum.</li> <li>LED Light Kit. Marker/Stop/Tail/Signal/2 Work Lights</li> <li>-(4) Mud flaps.</li> <li>-2"x6" Rear Bumper.</li> <li>-3" Tubular Drive Shaft</li> <li>NVE B500 Blower Package</li> <li>PTO, RPM, Work light Controls on floor by Driver Door</li> <li>4 Mount Mounting Kit.</li> </ul>							
20	809001.2	1	EA	PTO WIRE KIT FOR FREIGHTLINER							

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Sales Person: Schreiber, Cory P: (715) 359-0200 Extension: 426 F: N/A EMAIL: Cory@imperialind.com

### QUOTE: 531425-01

-11.09.0	C. Decta Courses			Accessories		
ltem	Part Number	Quantity	UOM	Description	Price Each	Price Total
30	121727.16	1	EA	PTO,CHELSEA (1750/2500RDS) (104%) (NVE304/HXL4/MACK W/B500)		
40	PROGRAMMING	1	EA	PROGRAMMING AND/OR DIAGNOSTICS		
50	531439-01	1	EA	SERVICE WORK FOR BASELINE Upgrades Include: - Heated Valves - Sight Tube Front Driver Side - 50 Gallon Air Pressure Water Tank - Hose Reel with 50' of Hose and Nozzel		
60	TRUCK	1	EA	TRUCK Freightliner M2+ 4x2 Cummins B 300 HP (26000 GVWR)	<u> </u>	
70	809168.TM	1	EA	DOT KIT FOR SEPTIC TRUCK MOUNT		
					Quote Sub Total:	\$168,053.07
				Quote Sul	o Total Non-FET:	<b>\$168,0</b> 53.07
					Fet Tax:	\$0.00
					Sales Tax:	\$0.00
				Estimat	ed Total Freight:	\$0.00
					Quote Total:	<b>\$168,0</b> 53.07

#### Note:

For painted tanks - Color other that white and white to match - Extra

IMPERIAL

INDUSTRIES INC

- Freight charges will be confirmed at time of completion if no value is included in original quote. Any and all freight charges are the end users
- At the time of signed order and deposit, Imperial Industries Inc will order long lead time item(s) listed on the signed quote with lead times longer than 10 weeks. This will ensure item(s) will arrive on time for the project. In the case your project is changed from the original, leading to certain long lead time item(s) to be cancelled or revised, customer is responsible for all restock or cancellation fees. If an item(s) cannot be cancelled or restocked, customer will charged and take delivery of said item(s).
- Customer will be charged additional fees for relocating existing equipment on chassis and any frame alterations.
- As an industry standard, combination units with both water and waste compartments have weight distribution calculations based
- upon the industry standard of 100% full capacity on waste and 10% 20% capacity on water. These calculations are used to assist in the proper selection of the GVW necessary and for selecting the proper chassis. Anyone that is not abiding by these industry guidelines, could possibly incur over weight issues and or ground clearance issues. Imperial Industries, Inc. will not be held responsible if proper guidelines that were established by the industry, are not upheld by the owner/customer.

#### - State and Local Taxes will apply if applicable - Current Registered States: AL, AR, AZ, CA, CO, CT, FL, GA, IA, IL, IN, KS, KY, MA, MI, MN, MO, MS, NC, ND, NE, NJ, NM, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

#### SALES CONTRACT

By signing below, I agree to the specifications provided within this Sales Order. I have throughly reviewed the quotation and hereby authorize Imperial Industries, Inc. to enter this as an order and proceed. Approval Drawings will follow this acceptance of an order. Upon signing the Approval Drawings, the manufacturing of your order will take

#### (All chassis are subject to chassis surcharges at any time per chassis manufacture increase to Imperial Industries, Inc. & place. All material and components are subject to a surcharge at anytime.)



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Sales Person: Schreiber, Cory P: (715) 359-0200 Extension: 426 F: N/A EMAIL: Cory@imperialind.com

QUOTE: 531425-01

TERMS

All deposits are non-refundable 10% With Invoice, 90% Prior To Shipping F.O.B. Wausau, WI 54402-1685

Can make

CUSTOMER AUTHORIZED REPRESENTATIVE DATE SIGNED: IMPERIAL INDUSTRIES AUTHORIZED REPRESENTATIVE QUOTE DATE: 2/23/2024

CDL TRUCK - direct replacement for current truck ·

IIIIII



#### (800) 558-2945 / www.imperialind.com Mailing Address: P.O. Box 1685, Wausau, WI 54402 Shipping Address: 505 Industrial Park Ave., Rothschild, WI 54474 Sales Person: Schreiber, Cory P: (715) 359-0200 Extension: 426 F: N/A EMAIL: Cory@imperialind.com

QUOTE: 527666-04

#### Customer:

#### **VILLAGE OF EPHRAIM**

#### ADDRESS:

9996 WATER ST EPHRAIM, WISCONSIN 54211 UNITED STATES

#### CONTACT:

BRAD RASMUSSON M: (920) 421-0123

brasmusson@ephraim.wi,gov

#### Ship To:

**VILLAGE OF EPHRAIM** 

#### ADDRESS:

9996 WATER ST EPHRAIM, WISCONSIN 54211 UNITED STATES

#### CONTACT:

BRAD RASMUSSON

M: (920) 421-0123

brasmusson@ephraim.wi,gov

Job #	Order #	Quote #	Customer PO#	Project#
		527666-04		
Requested Date	Site	Location		

PARSONS KANSAS

## Reference: TMV2500A 2024 International MV

**IMPERIAL** 

**INDUSTRIES** INC

## QUOTATION REMAINS VALID FOR 15 DAYS FROM QUOTE DATE UNLESS OTHERWISE NOTED.

Accessories										
Item	Part Number	Quantity	UOM	Description	Price Each	Price Total				
10	805034	1	EA	TMV2500 (ALUM) COMPLETE ASSEMBLY WITH NVE607 MAX PAK						
				<ul> <li>Rib Free Exterior.</li> <li>1/4" 5454 Barrel.</li> <li>5/16" 5454 ASME Dished Heads.</li> <li>Full Length Skids.</li> <li>(2) Full Flanged &amp; Dished Heads For Baffles.</li> <li>(3) 6" Interior Channel Ribs.</li> <li>Full Doubler Plate (Bottom 1/3rd of Tank Double Plated)</li> <li>Hose Trays W/Rear Tail Light Sections.</li> <li>Primary 12" x 4" With Internal Airline.</li> <li>20" Top Manway.</li> <li>20" Rear Manway.</li> <li>20" Rear Manway.</li> <li>6" Discharge Port, Flanged. W/Piston Valve, Manual Handle and Camlocks</li> <li>(2) Hose Hooks.</li> <li>(2) Hose Guards.</li> <li>Ladder.</li> <li>(3) 5" Sight Glasses.</li> <li>Rubber Sills.</li> <li>Toolbox,24"X24"X36" Aluminum.</li> <li>LED Light Kit. Marker/Stop/Tail/Signal/2 Work Lights</li> <li>(4) Mud flaps.</li> <li>2"x6" Rear Bumper.</li> <li>Chelsea Hot Shift PTO.</li> <li>"Tubular Drive Shaft</li> <li>NVE 607 Fan Cooled Pump Package</li> <li>PTO, RPM, Work light Controls on floor by Driver Door</li> </ul>						
20	809001.1	1	EA	-4 Mount Mounting Kit. PTO WIRE KIT FOR INTERNATIONAL						



#### (800) 558-2945 / www.imperialind.com Mailing Address: P.O. Box 1685, Wausau, WI 54402 Shipping Address: 505 Industrial Park Ave., Rothschild, WI 54474 Sales Person: Schreiber, Cory P: (715) 359-0200 Extension: 426 F: N/A EMAIL: Cory@imperialind.com

### QUOTE: 527666-04

				Accessories		
ltem	Part Number	Quantity	UOM	Description	Price Each	Price Total
30	121727.8	1	EA	PTO,CHELSEA (3000RDS) (115%)		
40	PROGRAMMING	1	EA	PROGRAMMING		
50	531149-01	1	EA	SERVICE WORK FOR C-115963 Upgrades Include: - Heated Valves - 100 Gallon Air Pressure Water Tank - 50' Hose Reel with Hose and Spray Nozzel		
60	TRUCK	1	EA	TRUCK International MV607 4x2 Cummins L9 300 HP (33000 GVWR)		
70	809168.TM	1	EA	DOT KIT FOR SEPTIC TRUCK MOUNT		
				C	uote Sub Total:	\$170,510.1
				Quote Sub	Total Non-FET:	\$170,510.1
					Fet Tax:	\$0.0
					Sales Tax:	\$0.0
				Estimate	d Total Freight:	\$0.0
					Quote Total:	\$170,510.1

#### Note:

· For painted tanks - Color other that white and white to match - Extra

IMPERIAL

**INDUSTRIES** INC.

- Relocating existing equipment
- Frame alterations
- Freight charges will be confirmed at time of completion if no value is included in original quote. Any and all freight charges are the end users responsibility.
- As an industry standard, combination units with both water and waste compartments have weight distribution calculations based upon the industry standard of 100% full capacity on waste and 10% - 20% capacity on water. These calculations are used to assist in the proper selection of the GVW necessary and for selecting the proper chassis. Anyone that is not abiding by these industry guidelines, could possibly incur over weight issues and or ground clearance issues. Imperial Industries, Inc. will not be held responsible if proper guidelines that were established by the industry, are not upheld by the owner/customer.

- State and Local Taxes will apply if applicable - Current Registered States:

AL, AR, AZ, CA, CO, CT, FL, GA, IA, IL, IN, KS, KY, MA, MI, MN, MO, MS, NC, ND, NE, NJ, NM, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY

#### SALES CONTRACT

By signing below, I agree to the specifications provided within this Sales Order. I have throughly reviewed the quotation and hereby authorize Imperial Industries, Inc. to enter this as an order and proceed.

Approval Drawings will follow this acceptance of an order. Upon signing the Approval Drawings, the manufacturing of your order will take place.

## (All chassis are subject to chassis surcharges at any time per chassis manufacture increase to Imperial Industries, Inc. & All material and components are subject to a surcharge at anytime.)

TERMS

All deposits are non-refundable 10% With Invoice, 90% Prior To Shipping F.O.B. Wausau, WI 54402-1685



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QUOTE: 527666-04

and mille

IMPERIAL INDUSTRIES AUTHORIZED REPRESENTATIVE QUOTE DATE: 2/9/2024

CUSTOMER AUTHORIZED REPRESENTATIVE DATE SIGNED:





- Multi-Stage Front Mounted Hoist
- > Available In Carbon, Aluminum or Stainless Steel
- Available Top Hinging Full Open Rear Door
- Lightweight Aluminum Hose Trays (std. on steel & alum.)
- Deluxe Skirted Hose Tray/Fender Combination
- > 10 Year "No Leak" Tank Warranty
- Single, Tandem, Tri & Quad Axle Configurations
- Quality Construction From America's Heartland



Partners in Performance www.AdvancePump.com Phone: (563) 557-0957

## Standard Specifications

#### Vacuum/Pressure Tank Body

- Multi-Stage Front Mounted Hoist Cylinder
- Upper Half Baffles Std. On Steel Tanks
- 6" Discharge
- Primary Shutoff
- (3) 5" Removable Sight Glasses
- 20" Top Hatch
- Passenger Side Tank Ladder
- PTO Driven Hydraulic System w/Reservoir & Valve
- Deluxe Skirted Hose Tray/Fender Combination
- Stainless Steel Hose Tray Supports
- Work Lights Wired w/ Back-Up Lights
- All Lights Wired To Rear Mounted Junction Box
- Heavy Duty Steel Bumper
- 10 Year Tank Warranty

#### Vacuum/Pressure Pumping System

- Transmission Mounted PTO
- = 90° Gearbox Drive System
- Most Major Vacuum Pump Brands Available
- Oil Catch Muffler w/Drain

- Top Hinging Full Opening Rear Door
- Full Head Baffles Std. On Alum & Stainless Tanks
- 4" Rear Intake Port w/Internal Standpipe & SS Deflector
- External Vacuum Line (Opt. Internal Piped Vacuum Line)
- Rear Hose Hangers
- Full Length Reinforced Tank Sills
- Tank Mounted Pressure Relief
- DOT LED Lighting
- Polished Aluminum Hose Trays (Steel & Alum. Tanks)
- Rear Halogen Work Lights
- -Full Length Bed Liner Tank Protection (std. on steel tanks)
- Full Length Diamond Plate Tank Chip Protection (alum only)
- Under Tray Storage Cabinets, Mounted To Truck Frame
- Polyurethan Automotive Quality Paint Finish (std. on steel)
- Splined Driveshaft w/ Flanged Yoke Ends
- Drive Coupling
- -Vacuum/Pressure Operation
- In-Cab, Stainless Steel, PTO/Wiring Console



**Options:** 

- Mechanical & Digital Level Indicators
- Internally Piped Vacuum Line
- Light to Extreme Duty Rear Hitches
- Heated Valves
- Exhaust Deodorizer System
- Tray Mounted Cabinets
- Top Mounted Vacuum Booms



- Hydraulic Driven Tank Vibrator
- Hydraulic Rear Door Latches
- Belt or Hydraulic Drive
- Air Controlled Valves
- Line Jetting Systems
- Medium & High Pressure Wash Down Systems
- Additional DOT & Cabinet Lighting

Partners in Performance www.AdvancePump.com Phone: (563) 557-0957