

Hauled Waste: Pretreatment & Program Management Considerations

CSWEA Industrial Pretreatment Seminar

Wednesday
August 7, 2024



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Des Moines Metropolitan WRA

Discussion Topics

- Reasons to Control Hauled Waste
- Considerations for Accepting Hauled Waste
- Types of Waste
- Regulatory Considerations & Requirements
- Waste Haulers vs. Waste Generators
- Program Management
 - Pre-screening & Analysis
 - Waste Load Tracking
- Overview of WRA's Hauled Waste Program
- “Fun” hauled waste stories!



Reasons to Control Hauled Waste

- Plant capacity limitations
- Infrastructure limitations
- Prohibited discharge standards / local limits
- Waste hauler licensing requirements
- Permitting considerations
- Unknown wasteloads
- Disposal restrictions (loads / day)
- Discharge protocols
- Restriction on timing of wasteload disposals
- Haulers vs. Generators

**Hauled waste is
COMPLICATED**

Audience Poll:

- Who here currently has a hauled waste program?
- Who here accepts...
 - Residential septic waste and/or Portable toilets
 - Landfill leachate
 - Sand / oil interceptors (shop pits, carwash pits, etc.)
 - Restaurant FOG ...to headworks? ...to digesters?
 - High-strength industrial wastes (to digesters)
- How long has your hauled waste program been in place?
- How many loads per day?
 - 1-10? 11-50? 50+?

Acceptance Considerations

- Infrastructure (scales, flow monitor, etc.)
- Security & cameras
- Program capabilities
 - **Legal Authority (Local Ordinance)**
 - **Program Management**
 - **Hauled Waste Surveys (Profile Forms)**
 - Administrative & operations assistance
 - Sampling & monitoring
 - **Wasteload Tracking (Manifests)**
 - **Licensing & Permitting**
 - Disposal fees & invoicing

(**BOLD** = topics we'll address today)



Legal Authority

- Hauled waste authorization
- General pretreatment regulations
- General & specific prohibitions
- Specific hauled waste regulations
- Licensing requirements
- Schedule of administrative penalties



- Link to Des Moines WRA Hauled Waste Webpage: <https://www.dmmwra.org/180/Hauled-Waste>

Clean Water Act – Prohibited Discharges

Applies to all wastes discharged to a POTW (including hauled wastes)

40 CFR 403.5

- “The following pollutants shall not be introduced into a POTW”:

Pollutants which...

- 1) cause fire or explosion hazard
- 2) cause corrosive structural damage (pH < 5)
- 3) cause obstructions to flow
- 4) cause interference with POTW at a given concentration or flow
- 5) will inhibit biological activity at POTW due to heat
- 6) contain petroleum oils, cutting oils, or mineral oils in amounts that cause interference or pass through
- 7) result in the presence of toxic gases, vapors or fumes
- 8) may cause acute worker health & safety problems
- 9) are not disposed of at designated discharge points

Program Management

Types of Wastes

HEADWORKS

- Septic Tanks
- Portable Toilets
- Sand/Oil Separators, Carwash
- Sewer Cleaning
- Landfill Leachate
- Misc. Commercial/Industrial Waste

DIGESTER

- FSE FOG Waste
- High-Strength Industrial Waste
- Municipal Sludge
- De-packaged Food Waste
- Other?

Identify Haulers vs. Generators

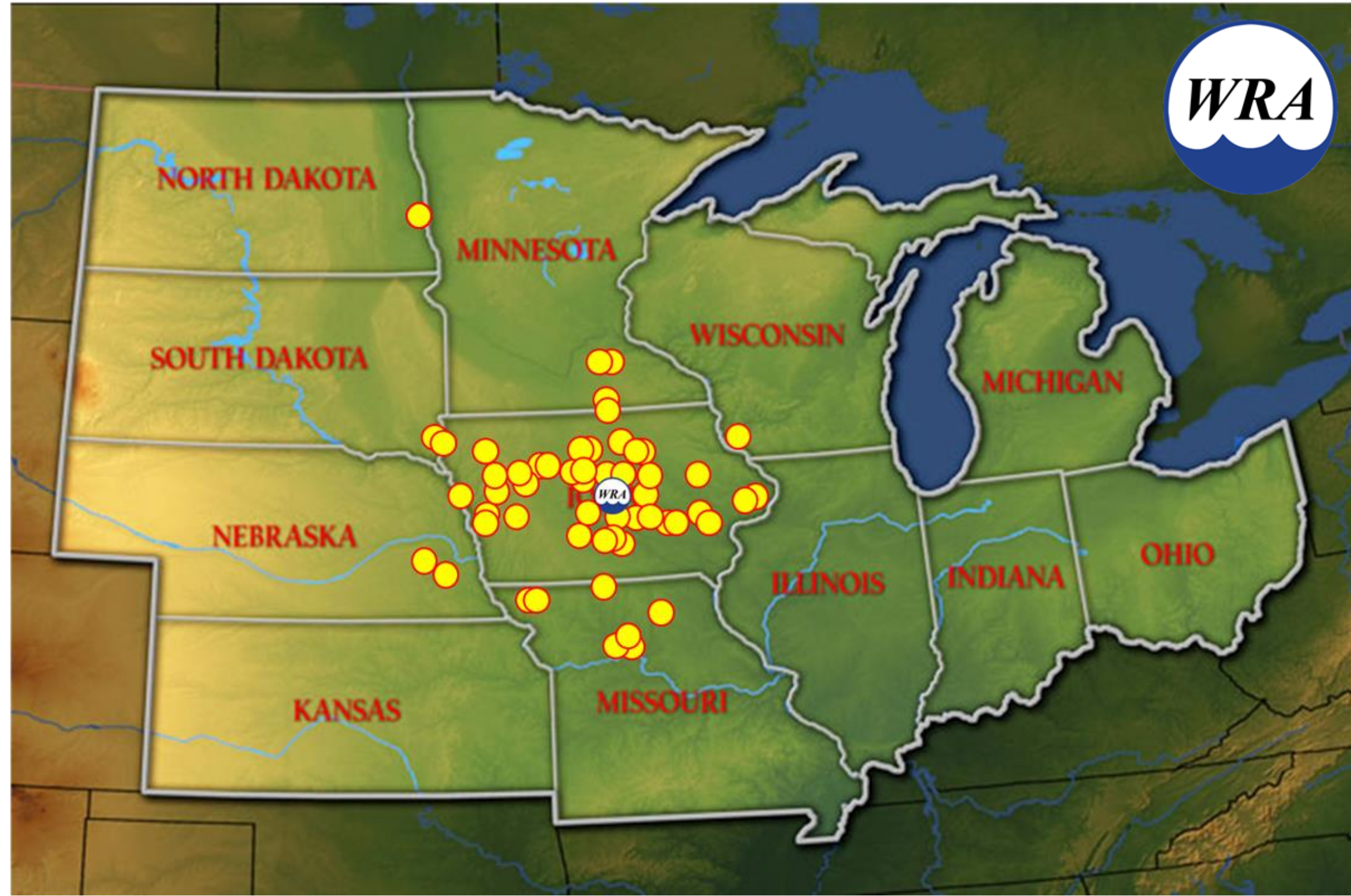
Waste Haulers	Waste Generators
Haul only; don't own the waste	Own the waste
Mainly commercial waste	Industrial waste
May act as subcontractor for Waste Gens.	Might use own trucks or use sub-hauler
Control Mechanism: <u>License</u>	Control Mechanism: <u>Permit or Dis. Auth.*</u>
License application (required, annual)	Permit application (if deemed necessary)

*Dis. Auth. = Discharge Authorization

WRA Hauled Waste Generators

(outside our local jurisdiction)

Hauled Waste Generators (IUs) outside your immediate local jurisdiction need to be treated as if they were local—they're an IU discharging process wastewater to your POTW.



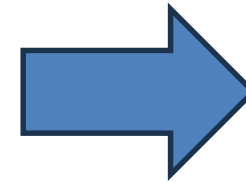
Waste Hauler Training

- Designated locations for specific wastes (?)
- Source: origin & type of waste
- Mixing of multiple sources:
 - FOG → **OK**
 - Portable Toilet → **OK**
 - Residential Septic → **OK**
 - Industrial → **Not OK**
- Trucks used for hauling hazardous waste cannot be used for hauling non-haz. materials



Formal Communications

- Who is the waste generator?
- What process is it from?
- What is the waste type?
- How much volume & how often?
- What's in it?



How do we collect this information?

Hauled Waste Profile Form (survey)

-
- Disposal location
 - How many loads per day
 - How frequently (space them out?)
 - General restrictions
 - Notification requirements
 - Disposal rate

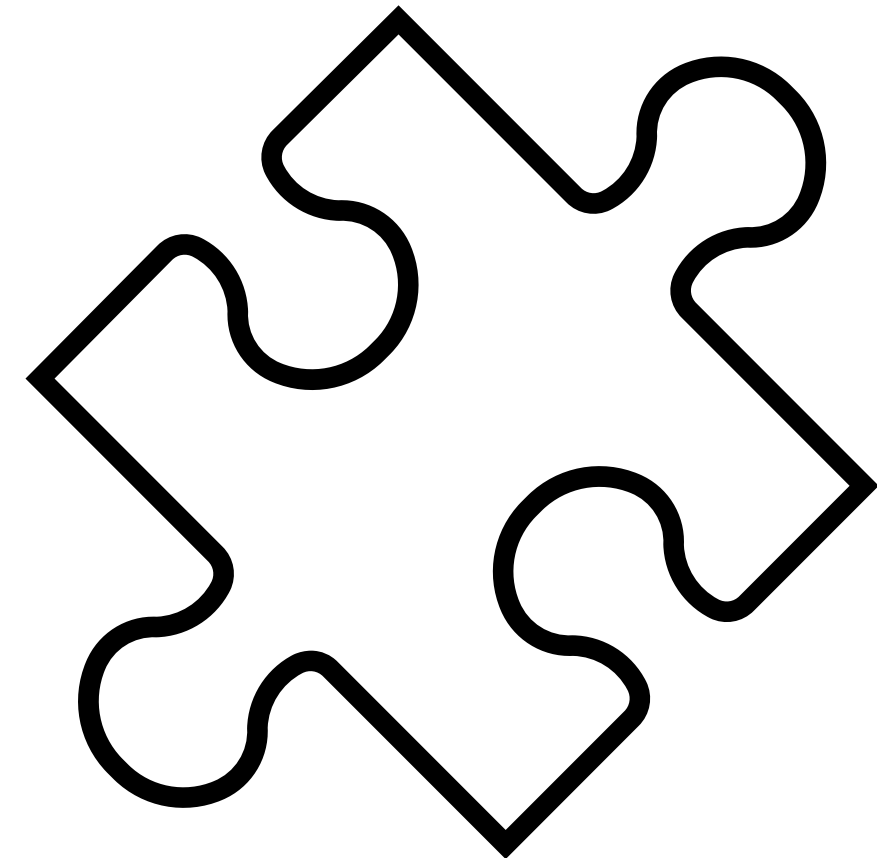
Where do we document this information?

Discharge Authorization or Permit

More on this later...

Prescreening & Analysis

- All waste loads and waste streams must be pre-approved by WRA
- Fill out Hauled Waste Profile Form (next slide)
 - Signed to certify info is true and accurate
 - Waste generator contact info
 - ID the waste streams & processes generating it
 - SIC codes
 - Volume & frequency
 - Hauler/transport information
 - Lab data
 - Declarations & certifications





DES MOINES METROPOLITAN WASTEWATER RECLAMATION AUTHORITY

3000 Vandalia Road, Des Moines, Iowa 50317
Ph: (515) 323-8133 FAX: (515) 323-8063

APPROVAL - WRA Use Only

WRF Treatment Mgr.

Date:

INDUSTRIAL HAULED WASTE PROFILE FORM

GENERATOR INFORMATION

Company Name:

Mailing Address:

City: State: Zip:

Waste Generation Address: If same as above, check here:

City: State: Zip:

Authorized Official representing Waste Generator:

Name: Title:

Telephone: email:

WASTE DESCRIPTION & PRODUCTION INFORMATION

Common Name of Waste: Waste #1:

Waste #2:

Process Generating Waste: Waste #1:

Waste #2:

Are the wastes in a flowable state? YES NO (Wastes must be able to gravity-flow through a 4-inch diameter hose.)

Is the process by which this waste is generated subject to Federal Categorical Pretreatment Standards?

YES NO

If yes, please identify process:

SIC Code(s) of Processes Generating the Waste(s):

- Waste Type: Industrial Process Waste—Organic, Industrial Process Waste—Inorganic, Food Production/Processing Waste, Pet/Livestock Food Manufacturing Waste, Biofuels Production Waste, OTHER (please describe):
Unused or Off-Spec Product, Contaminated Groundwater, UST or Spill-Related Waste, Confined Livestock Operation Waste

Anticipated Volume (gal): per: Day Week Month

One-Time Disposal or On-Going/Continuous? One-Time On-Going/Continuous

If One-Time, Anticipated Duration of Disposals: Days Weeks Months

Who will transport the waste? In-house trucks Private waste transporter

Name of private firm:

WASTE CHARACTERISTICS – Lab Data (Fill-in lab results below or attach analytical reports to this form.)

Table with 2 columns: Parameter (CBOD5, COD, Oil & Grease, pH, Phosphorus (T), TKN, TSS, Total Solids, Volatile Solids, Dissolved Solids (T), Chloride, Cyanide, Total BETX, TTOs (Sum of)) and Value (mg/L, S.U., %, mg/L, %). Second column: Metals (Arsenic, Barium, Cadmium, Chromium, Copper, Mercury, Molybdenum, Nickel, Lead, Selenium, Silver, Zinc) and Value (mg/L).

Has this waste been analyzed for Priority Pollutants? YES NO (If yes, please provide lab data.)

Has this waste been analyzed for PFAS compounds? YES NO (If yes, please provide lab data.)

DECLARATIONS & CERTIFICATIONS

Check all those which are likely to be present in your hauled waste stream(s).

- Acids and Alkalis, Biological Wastes, Chromium, Corrosives: Strong Acids, Corrosives: Strong Bases, Detergents, Explosive Chemicals, Flammable Chemicals, Grit and Sand, Halogenated Solvents, Heavy Metal Sludges, Hot Water (>150 F), Herbicides, Inks / Dyes, Mercury, Nonhalogenated Solvents, Noxious / Fuming Chemicals, Oil, Grease, and/or Fat, Oils and fuels, Organic Compounds, Oxidants, Paints / Pigments, Pesticides, PFAS/PFOS/PFOA Compounds, Pickling Liquors, Plating Wastes, Pretreatment Sludges, Radioactive Materials, Reductants, Resins, Silver, Solvents / Thinners, Tars / Creosotes / Pitch, Varnishes/Lacquers/Waxes, Zinc, Other (specify on separate page)

I hereby certify the following: The waste(s) identified in this Hauled Waste Profile Form for considerations for disposal at the Des Moines Metropolitan WRF does not contain any of the following pollutants: PFAS/PFOA/PFOS related compounds; pesticides or herbicides including Endrin, Methoxychlor, 2,4-D Lindane, Toxaphene, 2,4,5-TP (Silvex), Chlordane, or Heptachlor (and its Epoxide); does not contain PCBs; and does not contain any material at a concentration which would render it as hazardous as defined in 40 CFR 261.3.

Authorized Official's Initials:

SIGNATURE OF AUTHORIZED OFFICIAL

I have personally examined and am familiar with the information submitted in this document and attachments. To the best of my knowledge, the submitted information is true, accurate, and complete. I acknowledge that any changes from the stated pollutants, general pollutant concentrations, volumes, or other measures require immediate notification to and approval from the Des Moines Metropolitan WRA, and waste acceptance by the WRF is strictly limited to the wastes identified in this Hauled Waste Profile Form.

Name Title

Signature of Official Date

Does your WWTP Have Capacity?

- Maximum Allowable Headworks Loading (MAHL)
- Maximum Allowable Industrial Loading (MAIL)
- **Be sure to factor your hauled waste loadings into MAIL!**
- Know loading estimates

Example:

Portable toilet loads can have over 1,000 lbs of COD per 4,000 gal load!

$$(\text{--- mg/L})(8.34)(0.004) = \text{lbs./load}$$

Portable Toilet COD loading:

$$(37,000)(8.34)(0.004) =$$

1,234 lbs. COD
per 4,000 gal truckload

Pollutant Concentrations by Waste Type



		Pollutant average (2017-July 2020)					
HEADWORKS	Volume (gal)	COD (mg/L)	TSS (mg/L)	TS (%)	VS (%)	TKN (mg/L)	O&G (mg/L)
Industrial Waste (general)	27,062,878	37,822	18,947	2	61	851	4,053
Landfill Leachate	32,703,249	833	54	--	--	201	85
Portable Toilets	5,264,505	37,023	17,883	13	69	2,946	3,108
Sand/Oil Traps, pit waste	2,532,216	38,380	140,296	18	9	594	16,101
Septic tanks	1,574,921	28,687	27,176	1	69	856	3,457
Vactor/Sewer line cleanings	1,149,125	43,024	28,553	--	--	234	13,973

		Pollutant average (2017-July 2020)					
DIGESTERS	Volume (gal)	COD (mg/L)	TSS (mg/L)	TS (%)	VS (%)	TKN (mg/L)	O&G (mg/L)
Biodiesel Mfg., etc.	103,306,040	93,978	14,309	5	78	657	18,004
Restaurant FOG	63,126,258	40,588	21,801	13	86	1,034	11,444
Food Mfg.	99,877,759	168,672	47,368	9	85	3,071	35,761
Ethanol Mfg.	3,700,559	62,053	10,964	4	66	1,425	59,816
Municipal Sludge	1,778,619	58,100	--	5	64	2,170	--
Other	722,194	130,808	26,696	10	51	4,257	4,928

Permitting Decision (for Waste Generators)

- Same SIU determination as Indirect Dischargers
 - Permitting required if:
 - Categorical IU
 - >25,000 GPD (i.e. about 5 tanker loads/day)
 - >5% of organic loading (to headworks)
- Full permitting decision
 - HW Profile Form → Permit Application → Site Visit → Fact Sheet
 - Issue Hauled Waste Discharge Permit
 - Similar to Individual Permit for indirect discharger but additional code references and disposal stipulations
- Permit NOT deemed necessary
 - HW Profile Form → Discharge Authorization

Discharge Authorizations



**DES MOINES METROPOLITAN
WASTEWATER RECLAMATION AUTHORITY**

3000 Vandalia Road
Des Moines, Iowa 50317
Ph. (515) 323-8000

AUTHORIZATION TO DISCHARGE

WASTEWATER SOURCE INFORMATION:

COMPANY: Farley's Foods
PHYSICAL ADDRESS: 1220 Abby Drive, Luna, IA
MAILING ADDRESS: same
CONTACT: Kristopher Farley
PHONE #: (800) 222-8989
Email: KFarley@fermfoods.com

POLLUTANT NAME	CONCENTRATION <i>(please list units)</i>
1. COD	110,000 mg/L
2. TS	5.29%
3. VS	81.0%
4. TKN	1,500 mg/L
5. Oil & Grease	13,000 mg/L
6. pH	4.0-7.0 S.U. (adjusted to >5.0 S.U. with 50% NaOH)
7. Chloride	500 mg/L

WASTE DESCRIPTION: DAF float & sludge from human food manufacturing facility.

RATE: Disposal rate shall be \$0.0100/lb. or \$0.084/gal. Rates are reviewed annually and subject to change, given 30 days' notice, on July 1st. The WRA reserves the right to adjust rates accordingly if pollutant concentrations differ from what was originally disclosed.

VOLUME: Limit 1 tanker truck per day Monday-Friday; up to 3 tanker trucks per day Saturday-Sunday

DISCHARGE METHOD/LOCATION: Via hauled waste to the WRF: Headworks Digesters

The above wastewater may be discharged from 6/1/2023 to 5/31/2025 to the WRA POTW. Changes from the stated pollutants, pollutant concentrations, volumes, or other measures require immediate notification to and approval from this office. The WRA reserves the right to divert waste streams to different disposal/treatment locations at the WRF and at the current disposal rate for that location without advanced notice. The WRA also reserves the right to temporarily suspend or restrict the waste load volumes without advanced notice due to operational or maintenance reasons.

Signed: _____ Date: _____

Paul Ebert pcebert@dmgov.org
WRA, Industrial Pretreatment Department
Phone: (515) 323-8133
FAX: (515) 323-8063

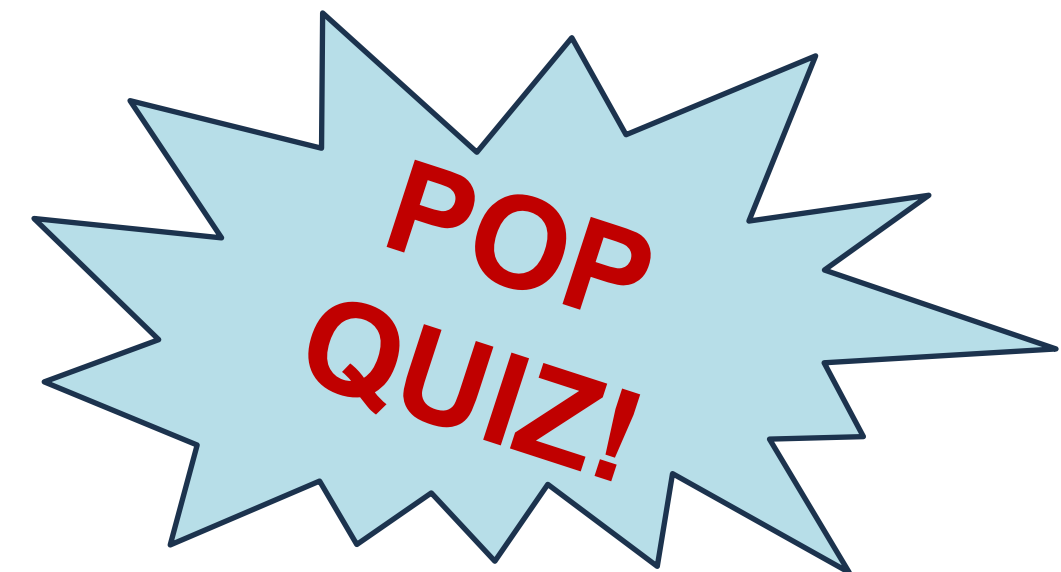
- Less formal control mechanism
 - Documents the waste type and approval
 - Identifies the approved waste type
 - States disposal limitations (loads/day)
 - Treatment charges/tipping fee
 - Duration of authorization

Control Mechanism Scenarios

Q: Would you or could you ever require a control mechanism for domestic waste?

A: Yes. Example:

A waste hauler is servicing the porta potties at large, multi-day music festival and is planning to bring the waste to your POTW. Issue a discharge authorization to the hauler with stipulations on load disposals (i.e. 1 load per hour between 6pm – 6am).



WRA's Waste Load Tracking

- Manifests (auto-generated from scales)
- Documents the:
 - Date & Time
 - Hauler
 - Waste Type
 - Source Information (handwritten)



MANIFEST NO. 3-2024-222

DES MOINES METROPOLITAN WASTEWATER RECLAMATION FACILITY
WASTE HAULER MANIFEST FORM

COMPANY: Septico, Inc.
 Vehicle ID: Septico 1
 Date / Time In: 3/23/24 14:22 am / pm
 Sample Bottle: 123 In Service Area: YES / NO

INSTRUCTIONS:

Indicate the **Waste Type** you are hauling, disclose the **Source Information** for all wastes onboard, **fill the sample bottle onsite** at the WRF, test & record the **pH** of your sample prior to unloading, **sign the manifest** and place it in designated lockbox, **unload at the proper location**, then **scale out**.

WASTE TYPE: (Select only one)

HEADWORKS (07 Dump Station & Vac Pad)

- Industrial Waste
- Portable Toilets
- Home Septic Tank
- Sand/Oil Trap, Carwash Pit
- Sewer Cleanings (vac waste)
- Landfill Leachate
- WASHOUT ONLY

DIGESTERS (Hauled Waste Tank @ Bldg. 70)

- Industrial Waste (high-strength organic waste)
- Restaurant FOG (Fats, Oils, & Grease)
- Municipal Sludge (from other treatment plants)

SOURCE INFORMATION: (where the waste is from—Business Name & City, State)

Wash pits -- XYZ Co., Des Moines, IA

TESTING: pH 8 DRIVER INITIALS TS

I HEREBY CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE AND THAT THE SAMPLE BOTTLE CONTAINS ONLY WASTE MATERIALS FROM THIS LOAD. I ALSO CERTIFY THAT THIS WASTE MATERIAL IS NOT AND DOES NOT CONTAIN RCRA HAZARDOUS WASTE UNDER 40 CFR PART 261.

SIGNATURE OF WASTE HAULER: Tom Smith

Weight In: 56,500 lbs. Weight Out: _____ lbs.

- Collect a sample from every load!
 - 500 mL sample bottle from every waste load
 - Allows for visual and/or analytical inspection of every load
 - "*Do you inspect every load?*"
 - Must be filled onsite prior to unloading, collected by driver
 - Driver tests pH before unloading (5.0 – 12.0) & records on manifest
- Analysis
 - Newer waste streams = more testing
 - 1 out of every 5 loads
 - Established, consistent waste streams = less testing
 - 1 out of every 20
 - COD, TS, VS, TSS, TKN, O&G, pH
 - Metals (if warranted)
 - Other tests as needed



Maintain an electronic database of all disposal transactions

- Hach WIMS (for example)

Waste Haulers Editor [opssql_plugin_3x v8.1.2] - PCEBERT @ WRAWIMSSQL.OPSDSMWHB

New 2/1/2024 3/1/2024 Refresh Des Moines Public Works SEE ALL VEHICLES SEE ALL PRODUCTS See Aspen About

Begin Transaction	End Transaction	Manifest	Source Address / Farmer	pH/ Acres	Special Fee	Company	Vehicle	Product	Weight, (lbs.)
2/27/2024 10:06:03 AM	2/27/2024 10:28:00 AM	3-2024-1988	WINDGARDNER ST DSM	8.0		Des Moines Public Works	FW VACTOR 4	HDWRKS-Sewer Cleanings	11520.00
2/23/2024 10:43:19 AM	2/23/2024 11:13:00 AM	3-2024-1811	35TH & FOREST	6.0		Des Moines Public Works	FW VACTOR 4	HDWRKS-Sewer Cleanings	10700.00
2/21/2024 1:44:49 PM	2/21/2024 2:02:00 PM	3-2024-1689	MSC 2 WASHOUT FOR STREET SWEEPER	5.0		Des Moines Public Works	FW VACTOR 5	HDWRKS-Sewer Cleanings	15340.00
2/20/2024 1:21:12 PM	2/20/2024 1:47:00 PM	3-2024-1629	5TH & UNIVERSITY	6.0		Des Moines Public Works	FW VACTOR 5	HDWRKS-Sewer Cleanings	11680.00
2/19/2024 10:54:17 AM	2/19/2024 11:35:00 AM	3-2024-1568		5.0		Des Moines Public Works	FW Vactor 3	HDWRKS-Sewer Cleanings	18640.00
2/14/2024 1:25:54 PM	2/14/2024 1:45:00 PM	3-2024-1397	POLK CITY & DSM - WELLS	6.0		Des Moines Public Works	FW VACTOR 5	HDWRKS-Sewer Cleanings	17660.00
2/14/2024 10:48:29 AM	2/14/2024 11:37:00 AM	3-2024-1378		7.0		Des Moines Public Works	FW 747	HDWRKS-Sewer Cleanings	2600.00
2/14/2024 10:39:24 AM	2/14/2024 11:04:00 AM	3-2024-1375	SEWER & STORM	6.0		Des Moines Public Works	FW VACTOR 6	HDWRKS-Sewer Cleanings	10640.00
2/13/2024 2:11:16 PM	2/13/2024 2:31:00 PM	3-2024-1332	50TH & PLEASANT	8.0		Des Moines Public Works	FW VACTOR 5	HDWRKS-Sewer Cleanings	3520.00
2/9/2024 8:05:34 AM	2/9/2024 8:25:00 AM	3-2024-1131		6.0		Des Moines Public Works	FW Vactor 3	HDWRKS-Sewer Cleanings	10860.00
2/7/2024 1:46:43 PM	2/7/2024 2:34:00 PM	3-2024-1071		7.0		Des Moines Public Works	FW 747	HDWRKS-Sewer Cleanings	7920.00
2/6/2024 2:44:46 PM	2/6/2024 3:11:00 PM	3-2024-1029	E 16TH & CLEVELAND	7.0		Des Moines Public Works	FW VACTOR 4	HDWRKS-Sewer Cleanings	5360.00
2/6/2024 1:32:15 PM	2/6/2024 1:47:00 PM	3-2024-1023	PUMP STATION BY AIRPORT	7.0		Des Moines Public Works	FW 747	HDWRKS-Sewer Cleanings	7060.00
2/6/2024 7:47:33 AM	2/6/2024 8:15:00 AM	3-2024-1005	STORM HYDRO	5.0		Des Moines Public Works	FW VACTOR 6	HDWRKS-Sewer Cleanings	13160.00
2/5/2024 1:28:23 PM	2/5/2024 1:51:00 PM	3-2024-979		6.0		Des Moines Public Works	FW 747	HDWRKS-Sewer Cleanings	6980.00
2/5/2024 10:54:34 AM	2/5/2024 11:18:00 AM	3-2024-964	Silty load from sewer construction on E 6th St	7.8		Des Moines Public Works	FW VACTOR 5	HDWRKS-Sewer Cleanings	14360.00
2/5/2024 7:56:07 AM	2/5/2024 8:13:00 AM	3-2024-955		6.0		Des Moines Public Works	FW Vactor 3	HDWRKS-Sewer Cleanings	10700.00
2/2/2024 8:08:38 AM	2/2/2024 8:24:00 AM	3-2024-897				Des Moines Public Works	FW VACTOR 4	HDWRKS-Sewer Cleanings	8580.00

Annual Waste Load Reviews & Data Analysis

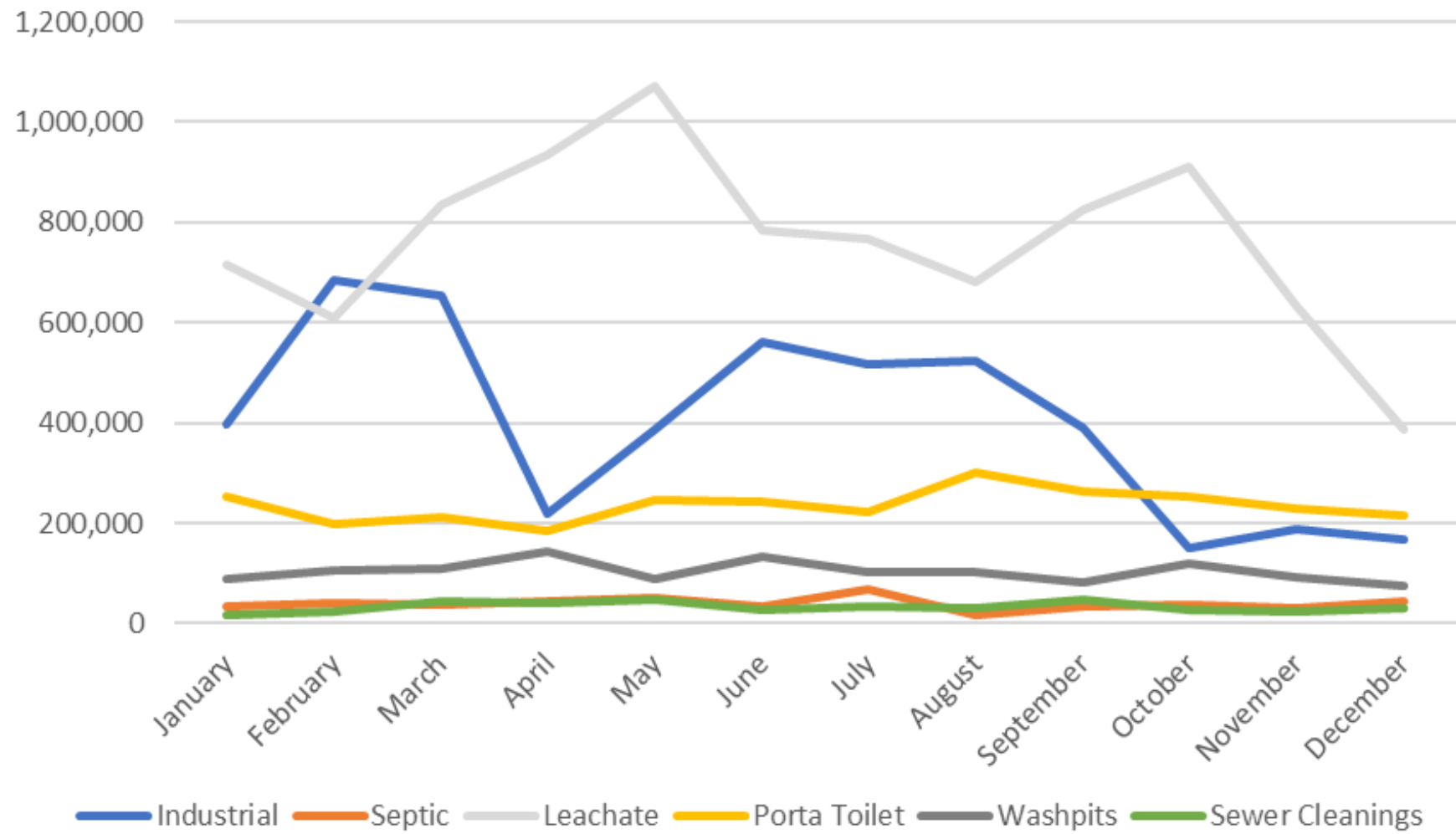
- Track and plot how much, from where, how often...

2023 Hauled Waste Loading Summary - HEADWORKS

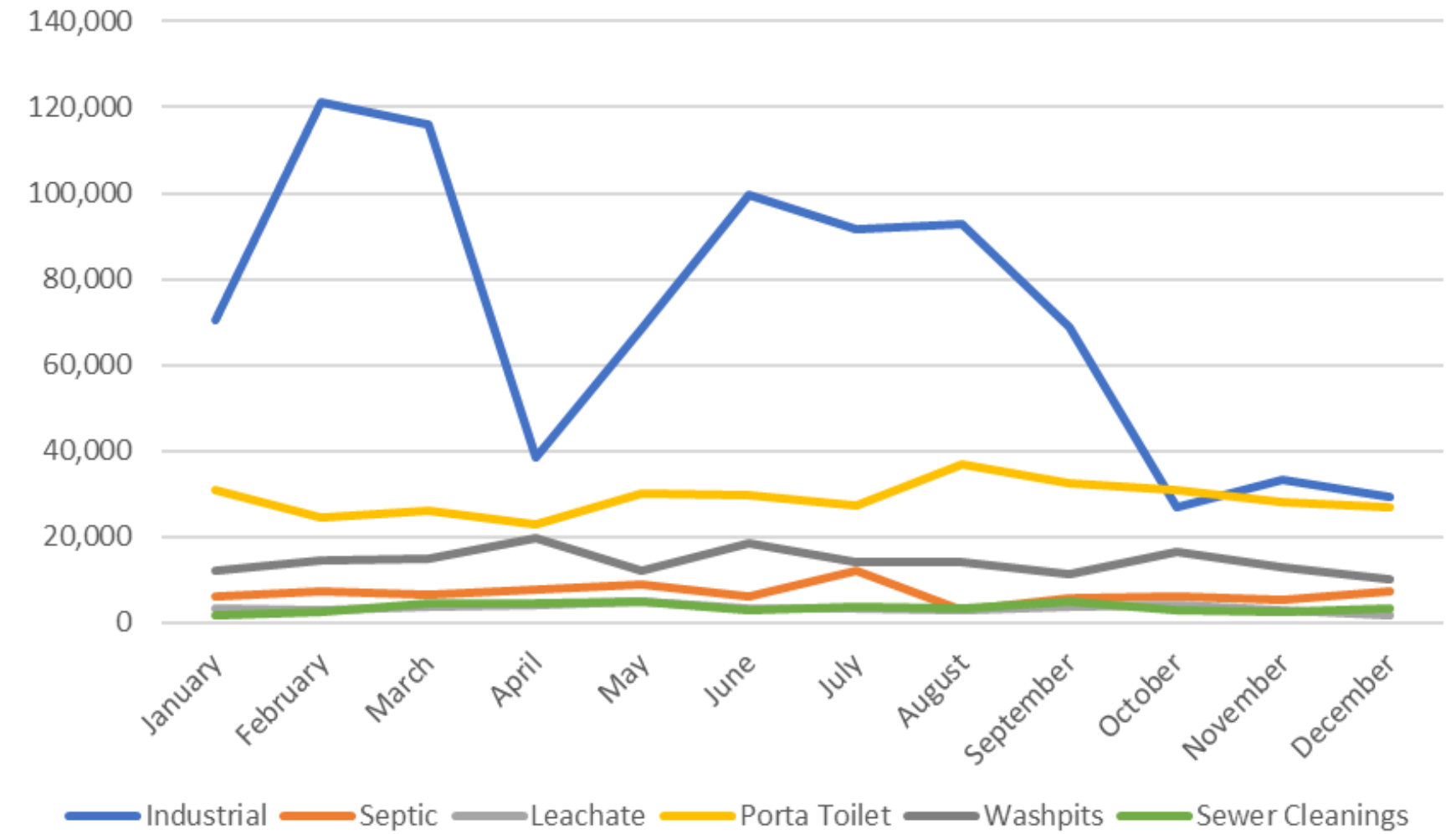
	HAULED WASTE Loadings (lbs./month) to Headworks for 2023						HAULED WASTE Loadings (lbs./day) to Headworks for 2023					
TOTAL	BOD	TSS	TS	VS	O&G	TKN	BOD	TSS	TS	VS	O&G	TKN
January	124,511	99,417	221,806	97,458	28,640	11,127	4,016	3,207	7,155	3,144	924	359
February	172,625	123,282	269,841	127,869	37,897	10,506	6,165	4,403	9,637	4,567	1,353	375
March	171,633	129,632	279,620	127,126	37,447	11,810	5,537	4,182	9,020	4,101	1,208	381
April	97,386	115,480	247,522	88,220	21,938	10,059	3,246	3,849	8,251	2,941	731	335
May	129,178	117,357	243,097	100,624	28,060	12,721	4,167	3,786	7,842	3,246	905	410
June	160,411	128,774	289,266	125,653	36,417	11,951	5,347	4,292	9,642	4,188	1,214	398
July	152,501	128,462	264,235	118,030	32,833	11,341	4,919	4,144	8,524	3,807	1,059	366
August	152,970	110,570	251,765	115,291	35,765	12,562	4,935	3,567	8,121	3,719	1,154	405
September	126,579	104,726	219,981	95,867	28,430	11,915	4,219	3,491	7,333	3,196	948	397
October	87,509	100,422	222,472	80,051	21,036	11,192	2,823	3,239	7,177	2,582	679	361
November	84,866	84,850	185,118	72,750	20,202	9,388	2,829	2,828	6,171	2,425	673	313
December	78,537	77,358	154,212	65,399	18,146	7,907	2,533	2,495	4,975	2,110	585	255

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
17														
18		HAULED WASTE Loadings (lbs./month) to Headworks for 2023						HAULED WASTE Loadings (lbs./day) to Headworks for 2023						
19		Industrial Waste	BOD (COD *.66)	TSS	TS	VS	O&G	TKN	BOD (COD *.66)	TSS	TS	VS	O&G	TKN
20		January	70,452	26,028	60,640	42,557	14,619	1,515	2,273	840	1,956	1,373	472	49
21		February	121,208	44,780	104,328	73,217	25,150	2,607	4,329	1,599	3,726	2,615	898	93
22		March	115,828	42,792	99,697	69,968	24,034	2,491	3,736	1,380	3,216	2,257	775	80
23		April	38,547	14,241	33,179	23,285	7,999	829	1,285	475	1,106	776	267	28
24		May	68,331	25,245	58,815	41,276	14,179	1,469	2,204	814	1,897	1,331	457	47
25		June	99,599	36,796	85,728	60,164	20,667	2,142	3,320	1,227	2,858	2,005	689	71
26		July	91,723	33,887	78,949	55,407	19,032	1,973	2,959	1,093	2,547	1,787	614	64
27		August	92,900	34,322	79,962	56,118	19,277	1,998	2,997	1,107	2,579	1,810	622	64
28		September	68,811	25,422	59,228	41,566	14,278	1,480	2,294	847	1,974	1,386	476	49
29		October	26,677	9,856	22,962	16,114	5,535	574	861	318	741	520	179	19
30		November	33,136	12,242	28,521	20,016	6,876	713	1,105	408	951	667	229	24
31		December	29,386	10,857	25,293	17,751	6,098	632	948	350	816	573	197	20
32		Septic	BOD (COD *.66)	TSS	TS	VS	O&G	TKN	BOD (COD *.66)	TSS	TS	VS	O&G	TKN
33		January	6,012	12,948	12,332	6,447	188	138	194	418	398	208	6	4
34		February	7,147	15,393	14,662	7,664	224	163	255	550	524	274	8	6
35		March	6,470	13,934	13,272	6,938	202	148	209	449	428	224	7	5
36		April	7,821	16,844	16,044	8,387	245	179	261	561	535	280	8	6
37		May	8,780	18,910	18,011	9,415	275	201	283	610	581	304	9	6
38		June	6,095	13,126	12,502	6,535	191	139	203	438	417	218	6	5
39		July	12,023	25,894	24,663	12,892	376	275	388	835	796	416	12	9
40		August	2,865	6,171	5,878	3,073	90	66	92	199	190	99	3	2
41		September	5,566	11,987	11,417	5,968	174	127	186	400	381	199	6	4
42		October	6,238	13,435	12,797	6,689	195	143	201	433	413	216	6	5
43		November	5,336	11,491	10,945	5,721	167	122	178	383	365	191	6	4
44		December	7,408	15,954	15,196	7,943	232	169	239	515	490	256	7	5
45		Leachate	BOD (COD *.66)	TSS	TS	VS	O&G	TKN	BOD (COD *.66)	TSS	TS	VS	O&G	TKN
46		January	3,177	13,075	37,671	4,332	--	3,378	102	422	1,215	140	--	109
47		February	2,698	11,102	31,986	3,678	--	2,868	96	397	1,142	131	--	102
48		March	3,696	15,211	43,824	5,040	--	3,930	119	491	1,414	163	--	127
49		April	4,146	17,060	49,151	5,652	--	4,408	138	569	1,638	188	--	147
50		May	4,752	19,554	56,337	6,479	--	5,052	153	631	1,817	209	--	163
51		June	3,479	14,319	41,254	4,744	--	3,699	116	477	1,375	158	--	123
52		July	3,398	13,985	40,292	4,634	--	3,613	110	451	1,300	149	--	117
53		August	3,016	12,411	35,757	4,112	--	3,206	97	400	1,153	133	--	103

Gallons per Month to Headworks
by Waste Type in 2023



BOD Loading (lbs./mo) to Headworks
via Hauled Waste in 2023



Overview of Hauled Waste at Des Moines WRF



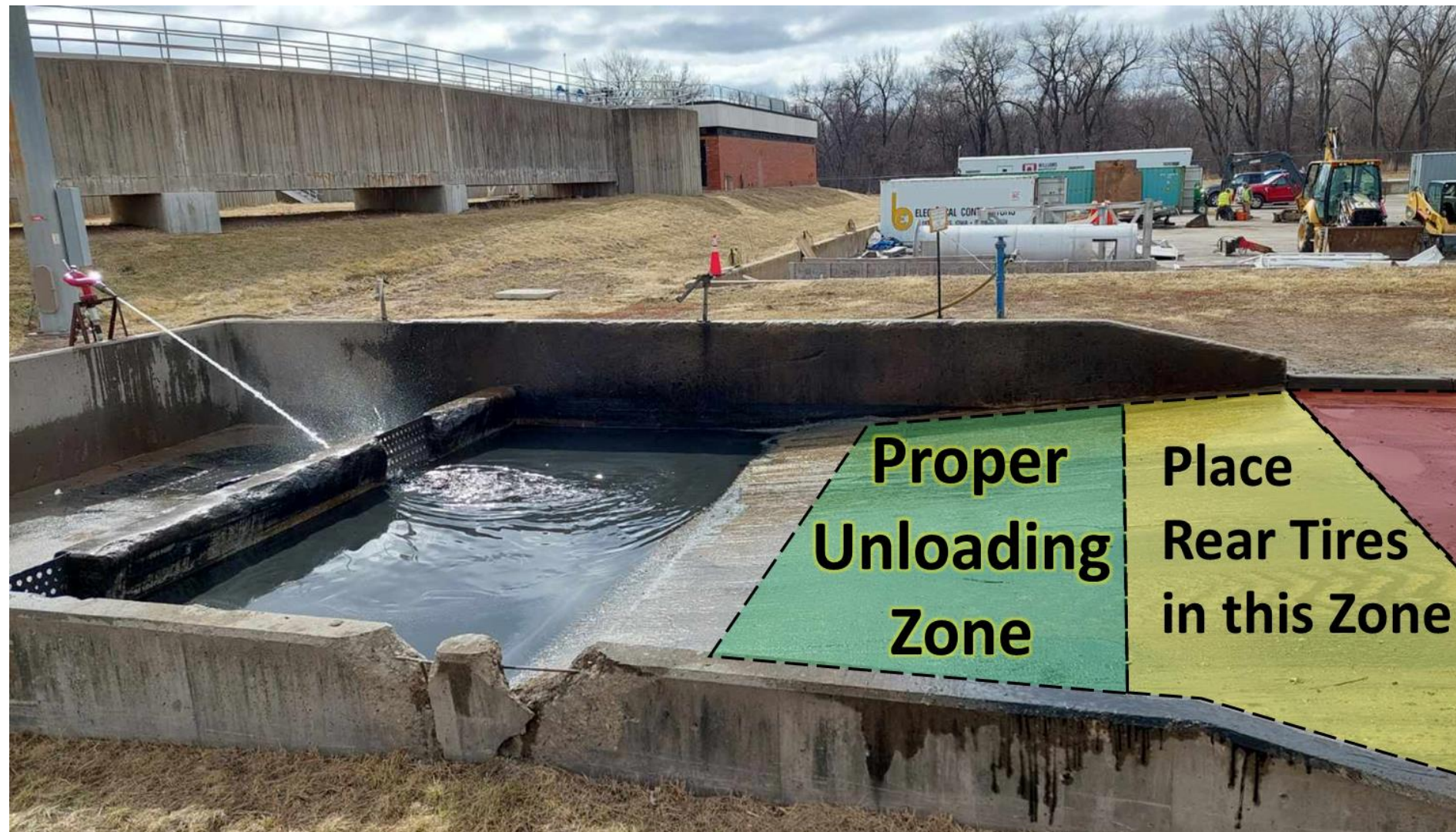
- Scaling-In:
 - **Headworks or Digesters** (Prior approval)
 - Swipe badge at reader
 - Enter sample bottle #
 - In-Service Area or Out of Service Area
 - Select Waste Type ID:
 - High Strength Industrial Waste (digesters)
 - Dilute Industrial Waste (headworks)
 - Portable Toilet
 - Residential Septic
 - Restaurant FOG
 - Sand/Oil Trap (shop pits, car washes)
 - Sewer Cleanings/Vac truck waste
 - Complete pass #1
 - Prints manifest in bldg.
- Ask permission from Ops. to begin unloading process





Old Vac Pit

- Designed to remove heavy solids/grit
- Settled solids removed with loader (to landfill)





Dump Station



- Designed for loads with low grit but larger floatables:
→ *trash, wipes, leaves, sticks, etc.*
- Has isolated bar screen



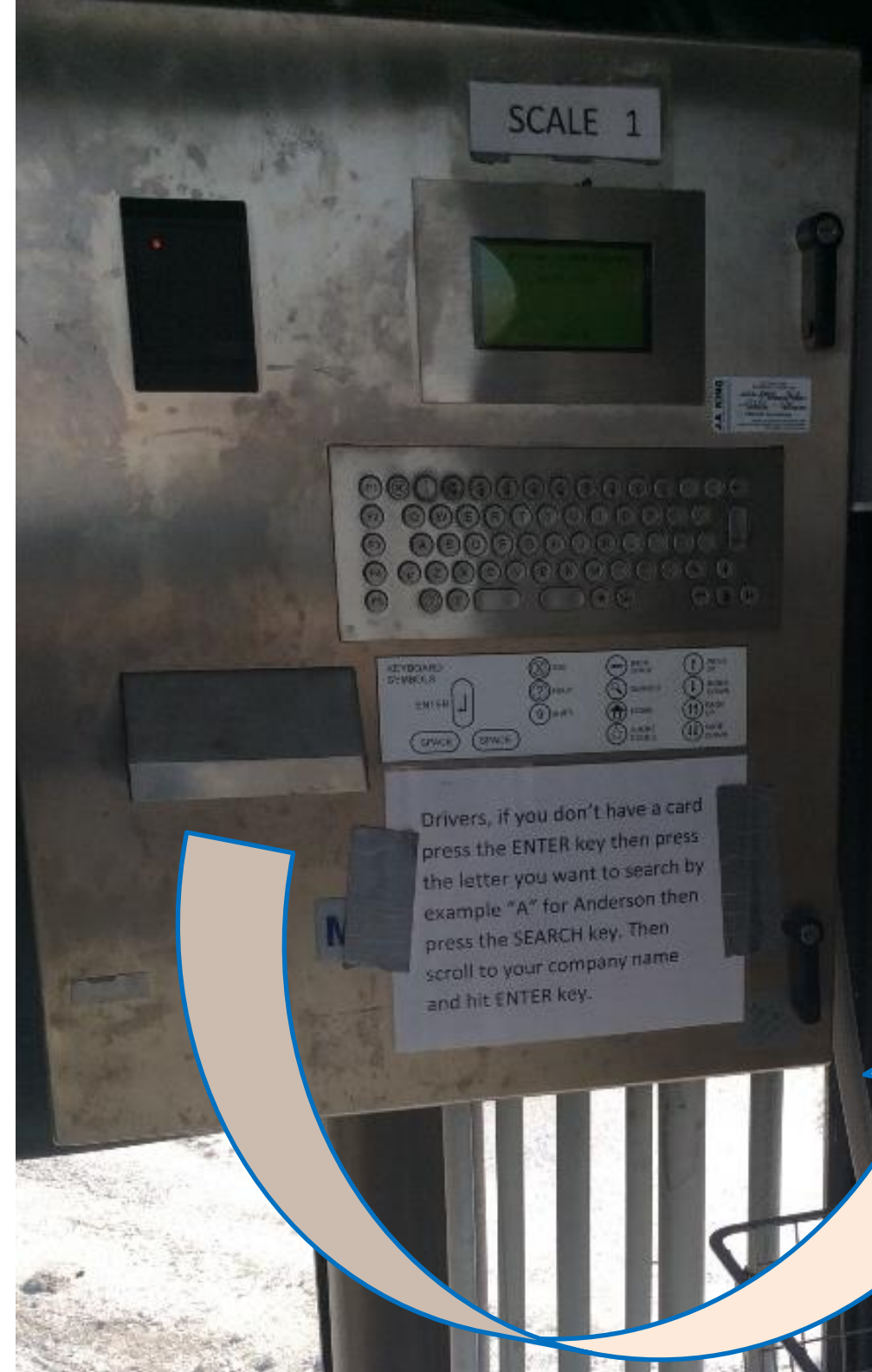
Digester unloading facility

- 3 unloading lanes
- 4" and 6" hook-ups
- Gravity drainage via hose
- Discharge to 140,000-gal. underground storage tank (allows for mixing of wastes)



Scaling-Out:

- Swipe badge at reader
(Completes Pass #2; closes transaction)
- Receipt prints in kiosk
(Driver keeps these)



DES MOINES WASTE WATER
RECLAMATION FACILITY
3000 VANDALIA RD.
DES MOINES, IA 50317

Ticket No.	3-5-1818
Scale No.	Kiosk 3
Date:	03/03/2015
Time In:	12:34 pm
Time Out:	1:09 pm
Vehicle No.	PW Vactor 1
Material	18
Vactor	
Account ID	9
Des Moines Public Works	
Transaction Type	TWO Pass

Gross Weight:	50,560 lbs
Tare Weight:	42,500 lbs
Net Weight:	8,060 lbs
Net Weight:	4.030 Tons

Sample Bottle No.: 258

Signature: _____

THANK YOU! Have A Great Day!

Hauled Waste Summary

- Physical & Legal Considerations
- License Haulers
- Document Generators of Waste
- Sample & Track Every Load
- Determine SIUs/issue permits
- Account for Loading/Impact to MAILs and MAHLs



Hauled Waste Group Discussion...

**Regulatory
Sampling from
Hauled Waste
Trucks**

**How do You
Determine Fees?**

**Hauled Waste &
Local Limits**

**Hauled Waste
Approval
Process**

**Loading
Considerations**

Hauled Waste Story Time 😊



Sight glass on viewing port randomly blew out.





Questions?

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