

# CASE STUDY FOOD GRADE TRUCK WASH

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# Breakdown

1. West Fargo Treatment System Overview
2. Lagoon Decommissioning
3. Food Grade Trucking Company
4. Outreach





# West Fargo Treatment System

- Lagoons installed
  - 1957: 1&2
  - 1969: 3 & 4
  - 1972: 5 & 6
  - 1982: 7 & 8
  - 1994: 9
  - 2014: 10
- Holding capacities
  - 700 Million
- High Flow: 4.8 MGD-  
spring melt
- Low Flow: 3.3MGD
- High Record: 11MGD





# Decommissioning

Start: June 2021

Completion: 7- 10  
Years

- Draining & Pumping
- Grading/ Sloping
- 2021 Drought
- 2022 Very Wet Spring!!

# Bugs! aka “Bioaugmentation”

- 70,000 C  
Digested
- Sludge R  
inches
- 1 Million



**LAB**  
  
**UTIONS”**





# Total Cost

- Developed a new department to decommission lagoons
- Hired Out Cost: 20-30 Million
- In House Cost 7-12 Million





# 2021 Lagoon Decommissioning Video



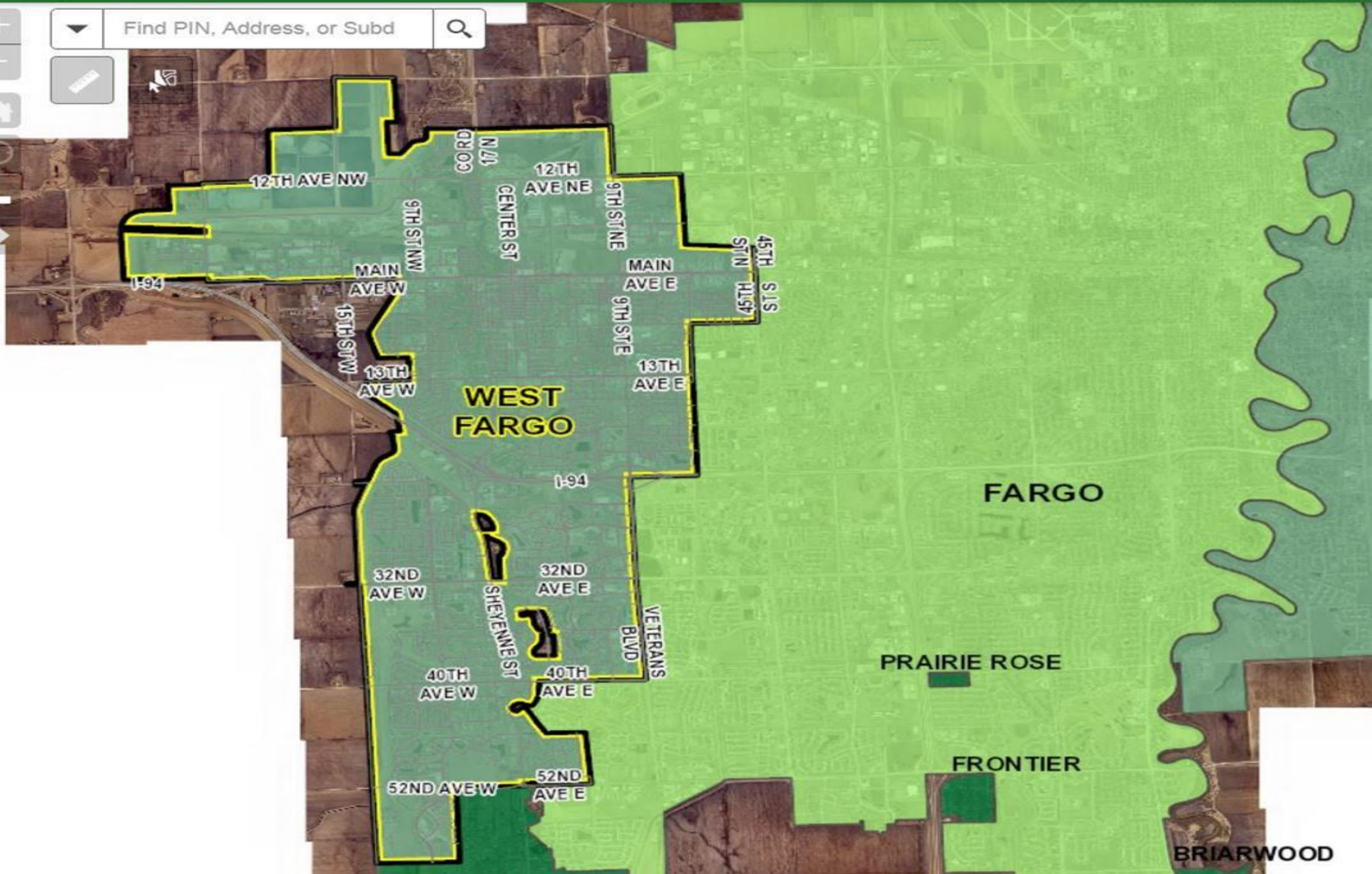


# Fargo Wastewater Treatment Plant

Fargo: 1.75 MGD

Lagoon System:  
2.5- 9.5 MGD

Map navigation controls including zoom in (+), zoom out (-), home, refresh, and pan arrows. A search bar contains the text "Find PIN, Address, or Subd" with a magnifying glass icon.



# Food Grade Trucking Company

- Washes 5-10 trucks a day
- Have 3 Locations: Iowa, Nebraska & West Fargo North Dakota
- Food Grade Liquids



Glycol/ Sugar Alcohol

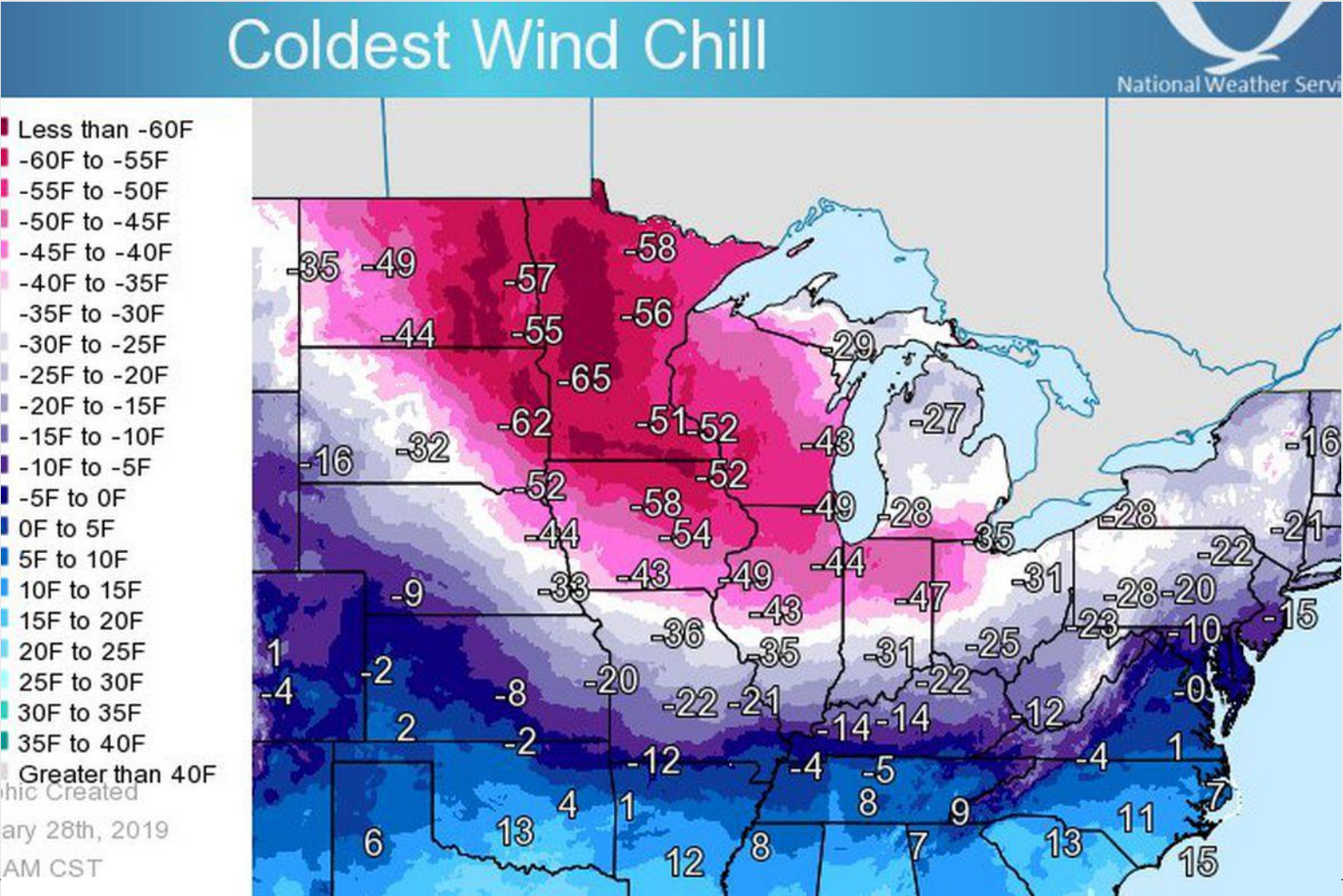


# Don't Forget the Oil!





# It Gets Chilly in North Dakota...





# Wash Bays



# Last Point of Discharge



# Last Point of Discharge

- 2 years had intermitted slugs of FOG
- Typically in the winter months



# Industry Process









# Butler Lift

1.5 Miles to lift





**TSS: 47,362mg/L**  
**BOD: 60,264mg/L**

**Total Surcharges: \$2,705.35**



# SAS Tank Installed 2018





# Final Solution



# Outreach

CITY OF WEST FARGO

## RAG FLUSHING 101

Products listed as flushable should always be placed in the trash.

### BREAKING IT DOWN:

Rags often don't break apart and disintegrate like toilet paper.

### FATBERG EFFECT:

This is a condition where wet wipes combine with fat, grease and other dirt trapped in the pipes. This creates a large solid mass in the sewer system that can lead to sewer backups.

### SEWER SYSTEM DRAINAGE:

Rags often get caught in the city's sewer system. This can cause lift stations to fail resulting in thousands of dollars of damages and potential residential sewer backup.



KEEP FROGS OUT OF THE SEWER

Fats  
Rags  
Oils  
Grease



## FATS, RAGS, OILS & GREASE



### WHAT ARE FROGS?

FROG stands for fats, rags, oils and grease. FROGS are a major problem for the City of West Fargo as they can form thick layers inside sewers constricting wastewater flow, similar to how cholesterol affects blood flow in our arteries and vessels.

### CLOGGED PIPES

Fats, rags, oils and grease can block your pipes by clogging your water flow, causing water to back up at the source. This can result in clogged pipes and expensive repairs. These blockages may be accompanied by foul odors, property damage and environmental damages.



### SANITARY SEWER OVERFLOWS

Sanitary sewer overflows (overflowing wastewater) release bacteria, viruses and other pathogens that may be dangerous to human health. This wastewater may be released into your business or home, or into our waterways, streets and parks. If it occurs on private property, the property owner is responsible for the clean-up.

### FATBERG EFFECT

This is a condition where wet wipes/rags combine with fat, grease and other dirt trapped in the pipes. This creates a large solid mass in the sewer system that can lead to sewer backups.