

Grease Interceptors

The Journey Continues

Introduction

Obe Tejada

Sewer Collections
Superintendent

City of Moab



Other People of Note...



Colby Means
Sewer Service Worker III



Marcie Mason
*Public Works
Administrative Assistant*

We are going to talk about....

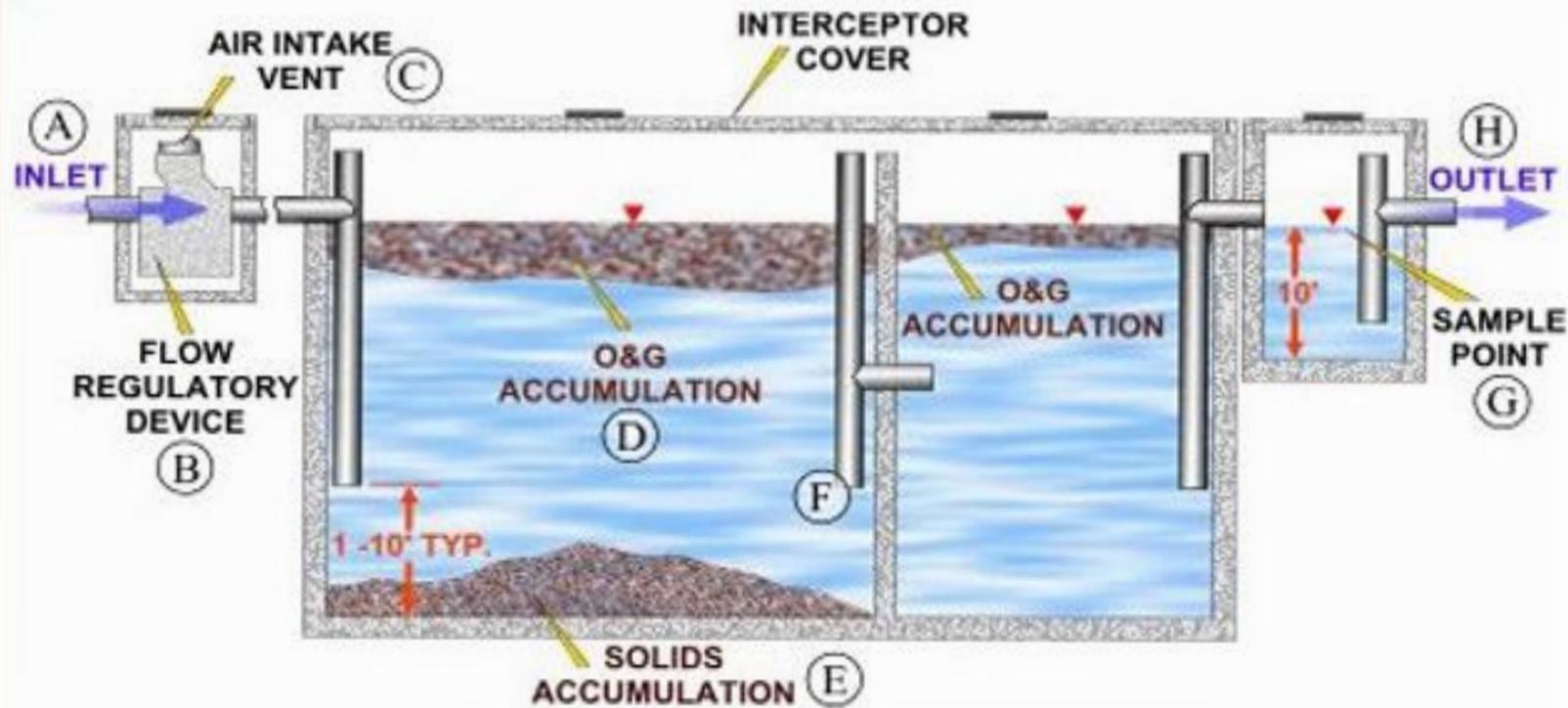
- Best Practices, Cleaning, and Retrofitting
- Moab's Grease By the Numbers...
- Codes and Documents Related to Grease Regulation
- Tests, Inspections, Compliance Letters, and Fines

What is a Grease Interceptor/Trap?

A **grease trap** (also known as **grease interceptor**) is a plumbing device (a type of **trap**) designed to intercept most greases and solids before they enter a wastewater disposal system. ... These reduce the amount of fats, oils and greases (FOGs) that enter sewers.

How do they work?

As the wastewater cools, the fat, oil, and **grease** (FOG) harden and the food solids settle. The FOG, being lighter than water, floats to the top of the **grease trap**. ... The FOG fills the **grease trap** from top down, displacing the wastewater from the middle of the **grease trap** and into the sanitary sewer or septic system.



Grease Interceptor VS Mechanical Grease Trap

Mechanical Grease Trap:

- Smaller, usually located under a sink or in a crawl space
- Easier and cheaper to install
- Need to be cleaned a lot more often (every few days to daily)

Grease Interceptor:

- Large, (350 gal.+) usually located outside
- More expensive to install
- Need to be cleaned less often (every month to 6 months)

Mechanical Grease Traps





Grease Interceptors







Best Practices

The less you put in the less you take out...

1. Scrape plates aggressively with a rubber scraper/spatula into the trash before washing them
2. Train staff to be aware of the grease they put down the drain



Tips for better performance

Extend dip tube to within 12" of the bottom of the trap on the outlet



Tips for better performance

Increase the size of the dip tube to slow the velocity around the outlet



Tips for better performance

Use screens in your sink drains to prevent solids from entering your grease trap

Cleaning Mechanical Grease Traps

Cleaning mechanical grease traps:

1. Drain trap completely into a container accepted by an approved grease hauling company
2. Scrape all grease/scum off of the walls of the trap.
3. Put the trap back into service



Cleaning Grease Interceptors

Grease interceptors need to be cleaned by an approved grease hauler

Make sure they scrape the walls of the interceptor and clean the outlet structure



Additives=Bad

Emulsifiers, Enzymes, and Bacteria are not allowed

- They only move grease into the mains where they re-coagulate on the sewer mains causing backups



Establishments in Moab with Commercial Kitchens (According to the Health Dept.)

- 82 Food Service Establishments (FSEs)
 - 47 restaurants
 - 8 Hotels (with a commercial kitchen)
 - 5 Convenience Stores/Gas Stations
 - 4 Coffee Shops
 - 6 Governmental/NGOs
 - 3 Grocery Stores
 - 6 Other (Tour Companies, ext..)

Of Those 82 FSEs...

There are :

- 42 grease interceptors/traps in 36 FSEs
- 24 of the interceptor/trap are testable in 21 FSEs
- 46 FSEs with no grease Interceptor/trap at all

Regulatory Authority

The City of Moab Sewer Department uses two city codes and one guiding document:

1. City of Moab Code 13.20.200 Wastewater connection, prohibited discharges, and pretreatment.
2. City of Moab Code 13.20.220 Enforcement.
3. City of Moab Sanitary Sewer Management Plan

These documents can be found on the City of Moab Website

City Code 13.20.200

Wastewater connection, prohibited discharges, and pretreatment

- C. **The discharge into the city wastewater treatment system of the following materials shall be unlawful:** lye, alkaline materials (pH of ten or greater), acids (pH of five or lower), oil, gasoline, fertilizers, pesticides, paint, garbage, sand, dirt, **grease**, chemical or industrial wastes, flammable materials, toxic pollutants as defined by U.A.C. R317-8-7.6, liquids with a temperature of one hundred twenty degrees Fahrenheit or higher, agricultural wastes, or **any substances which are deemed by the city to be: (1) injurious to the treatment works;** or (2) likely to cause or contribute to a violation of applicable Utah Pollution Discharge Elimination System (UPDES) permits.
- D. **Food service establishments (FSE) that have a potential to discharge cooking oil or grease into the city wastewater treatment system may be required to install and maintain a grease/oil trap:** (1) in conjunction with new construction or remodeling requiring a building permit; or (2) where inspection reveals grease/oil buildup or the plugging of a wastewater pipeline.
- F. **The city has authority to enter private property and periodically inspect for the purposes of verifying compliance with this chapter.** Inspections may include effluent sampling, physical inspections, and/or records reviews, as needed. (Ord. 17-30 (part), 2017: Ord. 17-25 (part), 2017)

City Code 13.20.220

Enforcement

1. The city may assess a civil fine which shall not exceed the sum of five hundred dollars per violation. In the event of continuing or repeat violations, the fine shall be capped at five hundred dollars per day.
3. The city may commence an action for damages, repair costs, or recovery of other losses resulting from the violation.

Each day of violation or noncompliance shall constitute a separate offense and may be prosecuted accordingly

Sanitary Sewer Management Plan

Section 3- Fat, Oil, Grease, and Sand Management Plan

“For oil and grease, the typical residential discharge has less than 100 mg/L of oil and grease for any sample taken. Greater concentrations would be enrichment. Also, a significant buildup of oil and grease in the lateral would indicate enrichment.”

“The Public Works Department shall inspect and test the grease trap on a periodic basis”

“Should the testing reveal grease and oil in excess of 100 mg/L, a fine of \$500 will be assessed to the FSE that is determined to have discharged the grease, oil or other harmful substance into the sanitary sewer system”

How Will New Grease Traps Be Sized?

All new grease traps will be sized according to the building code



Inspection vs Test

For the purposes of grease management in the City of Moab Inspections and test will be defined as two different actions

Tests occur when an actual sample of waste effluent is removed from an interceptor/trap and send to a third party lab for analysis of grease content. These are used to justify fines.

Inspections occur when the interceptor/trap, service lateral, or downstream sewer mains are checked visually for grease build up, either through CCTV inspection, core testing or other means. These are used to justify the installation or modification of traps.

Interceptor Cores

An interceptor core shows how full an interceptor is. The interceptors ability to trap grease can be extrapolated from this.

If the interceptor/trap is more than 25% full it will no longer trap grease effectively



How are samples taken?

Samples are taken with a few different techniques depending on the configuration of the trap.

They can be taken from:

1. the outlet dip tube
2. the the air gap between the trap and the floor drain
3. Testing manholes

Examples of Sampling

Interceptors



Traps





What Do The Results Mean?

Results show the amount of grease in the effluent at the time they were taken

Any result over 100 mg/L is a violation

How Will The Grease Trap Program Be Administered?

Some grease traps will be tested monthly

Locations that violate the allowable grease limit will be sent a notice

Locations that fail will be tested the next month

Locations that fail the second test will be assessed a \$500 fine

Failing locations will be retested monthly until a passing result is returned, a \$500 fine will be assessed for each failed result.

NOTICE OF VIOLATION #19-000

PLANNING AND ZONING DEPARTMENT | CODE COMPLIANCE
217 East Center Street | Moab, Utah 84532
PH 435-259-5129 | WEB www.moabcity.org | EMAIL compliance@moabcity.org

<p>Property Owner / Responsible Party OWNER NAME OWNER ADDRESS OWNER CITY ST ZIP</p>	<p>Location of Violation Parcel Address: PARCEL ADDRESS Parcel Number: PARCEL NUMBER Date of Violation: DATE OF VIOLATION</p>
<p>Notice This Notice of Violation has been issued to you for violating the Moab City Code. You have been given reasonable time to correct the violation(s) and a reinspection of the property will be performed on or about compliance date. If you are unsure about any requirements necessary to correct this violation(s), please contact the City of Moab Code Compliance personnel at 217 East Center Street, Moab, Utah 84532 or call 435-259-5129 between the hours of 8:30 am and 4:30 pm, Monday through Friday.</p>	
<p>Violation(s) * *see reverse for specific code sections Violation of City grease trap policy</p>	
<p>Corrective Action(s) The following actions are necessary to bring the property into compliance:</p> <ol style="list-style-type: none"> Current grease trap(s) are to be brought into compliance within twenty-one (21) days from date of this notice. <p>Failure to abate the violations within the time allowed will result in further action by the City. To make an appointment to discuss this notice of violation and/or to respond that the property has been brought into compliance, please call the City of Moab at 435-259-5129 [press 3]. It is your responsibility to reply to the Code Compliance Specialist when you have brought the property into compliance, including photos when required. Fines may continue to accrue until the violation is corrected and inspected for compliance.</p>	
<p>To Be Corrected By Twenty-one days from notice</p>	<p>Certified Mail # 7017 3380 0000 5408 0000</p>
<p>Acknowledgement of Violation</p> <p style="text-align: right;">MONA POMPILL, CODE COMPLIANCE SPECIALIST _____ DATE _____</p>	
<p>Penalty Any person violating any of the provisions of the Moab City Code shall be guilty of a Class B misdemeanor and upon conviction thereof shall be punished by a fine not to exceed the then maximum fine for a Class B misdemeanor as prescribed by Utah State Law or imprisonment in the Grand County Jail for not more than six months or both fine and imprisonment and a minimum fine as established by resolution. Moab Municipal Code 17.78.030 Violation—Penalty. Ord. 06-11 (part), 2006; Ord. 93-15 § 3, 1993</p>	

MOAB MUNICIPAL CODE SECTION(S)

**Moab Municipal Code Title 13 Public Services | Chapter 20 General Use Regulations
13.20.200(D) Wastewater connection, prohibited discharges, and pretreatment.**

D. Food Service Establishments (FSE) that have a potential to discharge cooking oil or grease into the city wastewater treatment system may be required to install and maintain a grease/oil trap: (1) in conjunction with new construction or remodeling requiring a building permit; or (2) where inspection reveals grease/oil buildup or the plugging of a wastewater pipeline.

13.20.210(A) Enforcement.

A. Violations of this chapter may be enforced as follows:

- The city may assess a civil fine which shall not exceed the sum of five hundred dollars per violation. In the event of continuing or repeat violations, the fine shall be capped at five hundred dollars per day.
- The city may commence a civil action to enjoin or abate any violation, or compel any person to come into compliance. In any such proceeding the city need only establish proof of the violation to obtain relief, which shall be granted without the posting of bond.
- The city may commence an action for damages, repair costs, or recovery of other losses resulting from the violation.
- In conjunction with the above remedies the city may add any sums that are owing to the water/sewer service account which serves the property where the violation(s) occurred. Failure to pay the sums owing may result in disconnection of culinary water service to the subject property until such time as all sums are paid, subject to the procedures specified in Section 13.24.050.
- In lieu of civil enforcement, the city may prosecute any violation of this chapter, which shall be punishable as a Class B misdemeanor, as otherwise provided by Utah law.



A Few Parting Notes...

No fine will be assessed until January 1st, 2019 **BUT** we are currently recovering cleaning costs

Some FSEs will need to bring their interceptor/trap into compliance before 1/1/2019

Now is the time to figure out what works in your location

Drop Me a Line...

Contact info

Obe Tejada

435-259-7485

otejada@moabcity.org