



FATS, OILS AND GREASE (FOG) REFERENCE DOCUMENT TO PCWRA'S CODE OF RULES AND REGULATIONS

1. Purpose and Background

The purpose of this document is to outline PCWRA's Code of Rules and Regulations (Code) and provide producers of fats, oils and grease (FOG) with information on how to minimize the pollution of FOG into the sanitary sewer system. When FOG enters the sanitary sewer system, it can solidify and stick to the sides of kitchen drains and sewer pipes. The most common accumulation comes from daily dishwashing. Over time, the buildup of FOG can plug pipes, cause sewer back-ups into the business and lead to sanitary sewer overflows (SSOs), resulting in a public health issue.

The primary purpose of the Plum Creek Water Reclamation Authority's (PCWRA) Industrial Pretreatment Program is to protect the wastewater collection system and wastewater treatment plant from any adverse impacts from discharges to the sanitary sewer system. This is accomplished by monitoring discharges from users, such as Food Service Establishments (FSEs), in PCWRA's service area. PCWRA's service area includes: the Town of Castle Rock, Castle Pines Metropolitan District, Castle Pines North Metropolitan District, Silver Heights Water and Sanitation District and Castleton Center Water and Sanitation District.

2. Scope and Applicability

This document applies to ALL FSE's in PCWRA's service area. PCWRA sets forth requirements for users and ensures its service area complies with applicable state and federal laws, including the Clean Water Act (33 United States Code §1251 et seq.) and the General Pretreatment Regulations (40 Code of Federal Regulations, Part 403).

2.1. Non-Domestic Users

All non-domestic users in PCWRA's service area that have the potential to produce and discharge FOG are required to comply with the Code. Examples of these facilities include but are not limited to:

Restaurants, bakeries, coffee shops, cafeterias, cafes, commercial kitchens, delicatessens, meat shops (any business in which meat processing occurs), pizza, fast food outlets, sandwich shops, school cafeterias, fraternal organization meeting houses, churches, hospitals and daycare centers. Also included are any private living quarters, dwelling unit or other residential facility where such premises include a kitchen that is used for any type of commercial, nonprofit, or governmental food preparation.

2.2. Domestic Users

This document does not apply to domestic users. However, the best management practices (BMPs) set forth in the Code and referenced in this document are recommended for domestic users to assist in keeping the collection system and private sewer lines flowing freely.

3. Definitions and Acronyms

3.1. Definitions

Best Management Practices (BMPs) – Schedule of activities, prohibitions or practices, maintenance procedures, and other management practices; it also includes treatment requirements, operating procedures, and practices to control plant runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.

BMP Inspection – Facility inspection to ensure BMPs are properly implemented.

Board – PCWRA Board of Directors.

Clean Water Act (CWA) – In 1972, the United States Congress passed the “Water Pollution Control Act” for the purpose to “restore and maintain” the quality of our nation’s water. The Water Pollution Control Act was amended in 1977 and renamed the “Clean Water Act”. Amendments to the Clean Water Act included requirements limiting the types and concentrations of pollutants that industries are allowed to discharge into the sanitary sewer.

Code – PCWRA’s Code of Rules and Regulations.

Domestic User – Any private residential user that discharges wastes derived from ordinary processes excluding any commercial or industrial wastes.

Fats, Oil and Grease (FOG) – Organic polar compounds derived from animal and/or plant sources that contain multiple carbon chain triglyceride molecules. These substances are detectable and measurable using analytical test procedures established in the United States Code of Federal Regulations 40 CFR 136, as may be amended from time to time. All are sometimes referred to herein as "grease" or "greases".

Food Service Application (FSA) - Those forms specific to Food Service Establishments required for PCWRA’s review and record-keeping purposes.

Food Service Establishment (FSE)- Any non-residential facility that includes a kitchen for the preparation of food, including, but not limited to restaurants, cafeterias, cafes, bakeries, commercial kitchens, delicatessens, meat shops (or any business in which meat-processing occurs), pizza and fast food outlets, sandwich shops, school cafeterias, fraternal organization meeting houses, churches, hospitals, and daycare centers. Also included are any private living quarters, dwelling unit or other residential facility where such premises include a kitchen that is used for any type of commercial, nonprofit, or governmental food preparation.

General Pretreatment Program Regulations – 40 CFR Part 403; In 1978, the Environmental Protection Agency (EPA) established the “General Pretreatment Program Regulations”. These regulations and amendments require States and local wastewater districts to enforce national pretreatment regulations.

National Pollutant Discharge Elimination System (NPDES) – A permit issued under the National Pollutant Discharge Elimination System for Discharge of Wastewaters to the Navigable Waters of the United States pursuant to the Act.

Non-domestic User – Any user that does not meet the criteria for categorization as a domestic user shall be considered a non-domestic user.

Notice of Violation (NOV) - Whenever PCWRA finds that any person has violated or is violating this Code, or any prohibition, limitation or requirement contained herein, it may serve upon such person a written notice stating the nature of the violation and providing a reasonable time, not to exceed thirty (30) days, for the satisfactory correction thereof.

Oil/Grease Interceptor (OGI) – Plumbing device designed to intercept oil, grease and food solids before they enter the wastewater collections system.

Publicly Owned Treatment Works (POTW) – The wastewater system owned by PCWRA. This definition includes any sewer that conveys wastewater to the POTW treatment plants, except private sewers. For the purposes of this Code, POTW shall also include any sewers that convey wastewater to the POTW from persons outside the POTW boundaries who are by contract or agreement with the POTW actual users of the POTW.

Users – Any person who contributes, causes or permits the contribution of wastewater into the POTW.

3.2. Acronyms

BMPs – Best Management Practices

CWA – Clean Water Act

FOG – Fats, Oil and Grease

FSA – Food Service Application

NPDES – National Pollutant Discharge Elimination System

OGI – Oil/Grease Interceptor

PCWRA – Plum Creek Water Reclamation Authority

POTW – Publicly Owned Water Treatment Works

WGB – Waste Grease Bin

4. Roles and Responsibilities

4.1. PCWRA

PCWRA is responsible for implementing the Code in order to maintain compliance with the CWA, General Pretreatment Regulations, and PCWRA's NPDES Permit. Responsibilities include reviewing building plans, inspecting applicable users for compliance, and enforcement.

4.2. Users

Users identified in Section 3.0, shall comply with all requirements in the Code. The User shall permit inspections by PCWRA with or without notice for the purposes of determining applicability and/or compliance with the Code.

5. Food Service Application

5.1. FSA Requirements

FSAs are required for all FSEs in PCWRA's service area and shall be submitted along with OGI and plumbing plans for approval prior to any of the following:

- Sale or transfer of ownership of the business;
- Modification or installation of a new OGI;
- Construction of a new building;
- Change in the trade name under which the business is operated;
- Change in the nature of the services provided or building use that affects the potential to discharge FOG; and/or
- Remodeling of the FSE that may result in an increase in flow or FOG loading or that otherwise requires the FSE to submit plans or specifications for approval through a building or zoning department, or any other formal approval process of a city, county, or other jurisdiction.

5.2. FSA Submittal Requirements

Diagram 1 set forth in Appendix B of the Code and § 6.1 of this document shall be used as a reference for design and construction/installation of the OGI. The following information must be submitted to PCWRA to obtain approval:

- Detailed plans of OGI and piping;
- Number, type, and size of fixtures and drains connected;
- Proposed OGI location;
- Proposed OGI size;
- Sizing calculations; and
- Manufacturer and model no. of OGI (existing or to be installed).

6. Oil/Grease Interceptor Requirements

An OGI is a plumbing device that is installed to intercept oil, grease and food solids before they enter the wastewater collections system. An OGI is located underground outside the facility and can typically be recognized by two manhole lids labeled "SEWER".

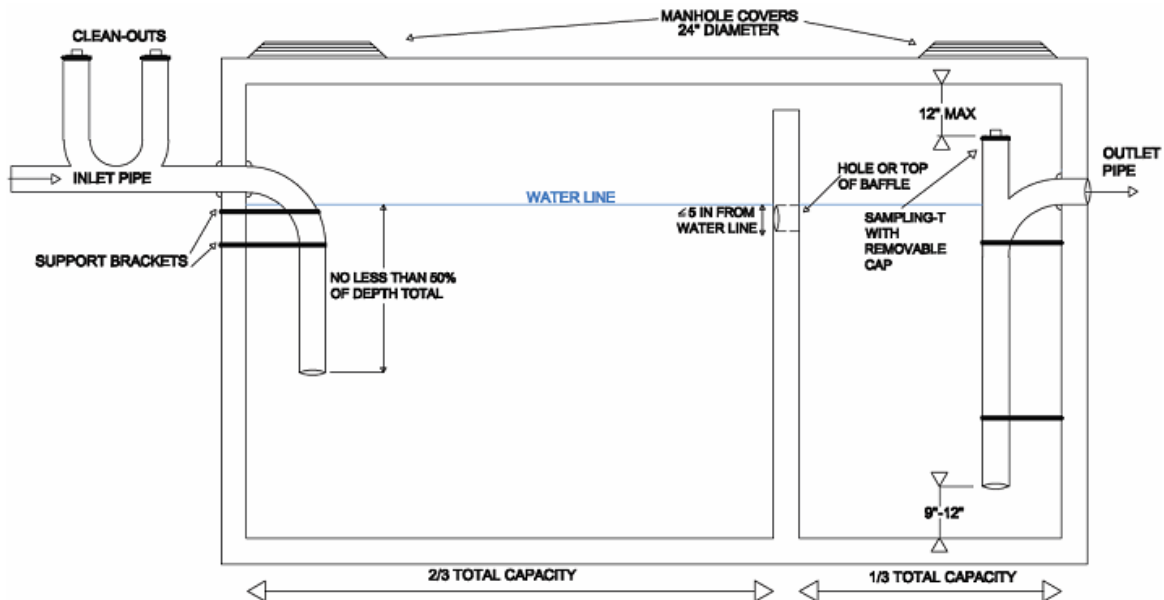
Note: PCWRA does not allow facilities to install an OGI with a capacity smaller than 750 gallons.

6.1. Sizing, Plumbing and Structural Requirements

6.1.1. A properly functioning OGI in conjunction with BMPs (section 7.0 of this document) provides the following:

- Necessary retention time for the wastewater to separate into three basic levels: oil and grease floats on top, solids sink to the bottom, and the clearer mid-water flows out into the sanitary sewer as depicted below.

Note: Please see Appendix B of the Code for complete specifications and requirements for OGIs. The Code may be accessed at <http://pcwracolorado.org/Pretreatment.html>



6.2. Maintenance of OGI

- 6.2.1. Maintenance of the OGI is ultimately the responsibility of the record owner of the property to which the sanitary sewer tap has been issued, and the property owner must ensure that any tenant business owner or operator maintains the OGI in accordance with Appendix A the Code.
- 6.2.2. OGIs must be maintained by regularly scheduled cleanings so that the interceptor properly operates as intended in order to efficiently intercept FOG from the user's wastewater and prevent the discharge of FOG into the wastewater collection system.
- 6.2.3. Maintenance of OGIs is ultimately the responsibility of the record owner of the property to which the sanitary sewer tap has been issued, and the property owner must ensure that any tenant business owner or operator maintains the OGI in accordance with this Appendix A. The OGI must be evacuated entirely when the depth of waste grease in the first pit is 25% of the total depth of the OGI (e. g. if the operating depth is 30 inches, the OGI must be pumped when grease layer is 7.5 inches). All OGIs must be evacuated a minimum of every three (3) months unless grease accumulation (25% of depth) requires more frequent evacuation or, subject to approval by PCWRA, it is determined that less frequent pumping is sufficient. Contents shall be hauled and disposed of properly, and legally, off-site and in accordance with Appendix C and all Federal and Local laws and ordinances.

Note: for a list of PCWRA Approved Grease Haulers, please visit pcwracolorado.org

7. Best Management Practices

The purpose of BMPs is to minimize the discharge of FOG and other prohibited materials into the OGI and the sanitary sewer system. The BMPs in this document are authorized by the Code. The following BMPs shall be implemented by all applicable facilities:

- **Installation of drain screens:** Drain screens shall be installed on all drainage pipes in food preparation areas. This includes kitchen sinks, floor drains and mop sinks. Drain screens shall be cleaned as needed.
- **Segregation and collection of waste cooking oil and grease:** All waste cooking oil and grease shall be collected, segregated and stored properly in WGBs or similar devices.
- **Kitchen Signage:** Signs shall be posted above all sinks prohibiting the discharge of oil, grease and food waste down the drains.
- **Dishes:** Food shall be scraped off dishes into the garbage. Pots, pans, dishware and work areas shall be “dry-wiped” before washing to remove grease.
- **Disposal of food waste:** Food wastes shall be disposed of directly into the garbage and not down the drain.
- **Employee training:** Employees shall be trained and made aware of the requirements listed in this document and the Code.

8. Facility Inspections

8.1. Annual BMP Inspection

8.1.1. On an annual basis, a PCWRA inspector will conduct a BMP inspection on all facilities that have the potential to discharge FOG into the sanitary sewer. These inspections may take anywhere from 30 minutes to 1 hour, depending on the size of the facility.

8.1.2. Inspections ensure BMPs are properly implemented and verify the following:

- Identification and description of plumbing fixtures;
- Identification of FOG reduction procedures;
- Identification of bacterial or enzymatic users;
- FSE facility hours of operation

8.2. OGI Inspection

8.2.1. On a quarterly basis, unless otherwise determined by PCWRA, an inspector will conduct OGI inspections on all facilities that have an OGI or grease trap. Inspections verify the following:

- Location and accessibility;
- Approximate capacity;
- Identification of inlet and outlet compartments, where applicable;
- Identification of inlet and outlet piping systems;
- Identification of bacterial or enzymatic uses; and
- Approximate depth of accumulated solids and grease layer.

9. Enforcement

PCWRA has the authority to enforce the requirements within this document and in conjunction with the Code. Written notices of non-compliance shall be issued to the facility owner/manager and property owner. Failure to comply may result in penalties or may cause the sewer service to the premises in question to be terminated.

10. Variations

Please see Appendix A, Section L of PCWRA's Code of Rules and Regulations. <http://www.pcwracolorado.org/Pretreatment.html>