

**Training Course Title:** U.S. Department of Agriculture sponsored National Fats, Oils and Grease (FOG) Training Program and Abatement Technical Assistance: Serving Small Communities to Address Common Maintenance and Management Challenges Associated with FOG.

**Location:** On Line/Virtual

**Dates of Training:** February 8, 10, 16 & 17, 2022

**Duration:** 8 hours

<b>FOG AM Session 1</b>	<b>What Does it Cost and Why Do We Care?</b>
<b>FOG AM Session 2</b>	<b>Operations &amp; Maintenance Cost, Staff Cost and Data Acquisition &amp; Management</b>
<b>FOG PM Session 3</b>	<b>Program Development, Your Stakeholders and Your Legal Authority</b>
<b>FOG PM Session 4</b>	<b>Effective Pretreatment, Grease Removal Devices, Inspections and Preferred Pumper Program</b>

*(two hour sessions)*

### **The Purpose of this Training.**

Fats, Oils, and Greases (FOG) from food service establishments (FSEs) results in significant increased treatment and sewer infrastructure replacement costs at the Publicly Owned Treatment Works (POTW). In addition, FOG accumulation over time causes significant blockages to wastewater conveyance systems which result in health risks due to sanitary sewer overflows. Small, rural communities typically lack the knowledge and resources to prevent FOG from entering their wastewater systems. Therefore the Pacific Northwest Pollution Prevention Resource Center (PPRC), a 501(c)3 not-for-profit organization, proposes to conduct three main activities, under the FY 2021 Technical Assistance and Training and Solid Waste Management Grant Program, to help these small, rural communities address these specific issues. The purpose of this project is primarily to provide FOG abatement training and resources to pretreatment coordinators, publicly owned treatment works personnel, plumbers, pumper companies, public officials such as city or county commissioners, and any other professional that has an interest in FOG abatement. This program is national in scope, and will specifically target communities that include eligible, small, rural, economically disadvantaged communities (including tribes) throughout the entire United States. The proposed FOG Abatement Program has three components: 1) Organize and conduct 20 FOG Abatement Technical Trainings across the nation (10 virtual and 10 in-person), all with interactive components, and to create and provide a new access-based tool so trainees can establish and maintain a data-driven FOG Abatement Program, 2) Enhance the National Resource Reference Guide (NRRG), the online, supplemental information resource that programs use for further clarification, details, instruction and best management practices following training to enhance implementation of their FOG abatement program, and 3) Measure Success of programs trained in FY21 and past years.

### **Will this Training be Conducted In-Plant?**

Virtual

### **Training Course Location**

On Line

### **Name of Organization Providing Training**

Pacific Northwest Pollution Prevention Resource Center, <https://pprc.org/>

Western States Alliance, <https://westernstatesalliance.org/>

### **Contact Person:**

Patrick Bryan, 559-940-5270

[pbryan@pprc.org](mailto:pbryan@pprc.org)

**Address**

13751 Lake City Way NE, Suite 305  
Seattle, Washington 98125

**How does this training relate to operation, maintenance or management of a wastewater treatment plant?**

Fats, Oils, and Greases (FOG) from food service establishments (FSEs) and households result in significant increased treatment and sewer infrastructure replacement costs at the Publicly Owned Treatment Works (POTW). In addition, FOG accumulation over time causes significant blockages to wastewater conveyance systems which result in health risks due to sanitary sewer overflows.

**How is attendance monitored and verified?**

Registration and in course training polls. Throughout all four sessions attendees are required to respond to a series of questions which will certify training attendance and course participation.

**Satisfactory program completion demonstrated by?**

Participants are required to respond to a series of poll questions which will certify training attendance and course participation.

# Course Agenda, or a Completed Course Time Line

## *Fats, Oils and Grease (FOG) Pretreatment Training Outline*

### **SESSION I**

**(1 hour)** Fats, Oils, Grease – What’s the problem with FOG? • Sources – FSE, Industry, Residential • Blockages – leads to SSOs, reduces wastewater capacity, city-paid maintenance • Treatment – somewhat difficult to treat, impacts efficiency of POTW • Renewable energy source – FOG has value, don’t waste it Is it necessary to have a FOG Abatement program (regulation of FSE)? •

**(1 hour)** How often does the city clean sewers due to FOG? • How many pump stations are impacted by FOG? • What is the cost of this? • How many SSOs occur? • What is the impact on the WWT facility? • What is the lost potential energy recovery? • Is it fair for taxpayers to pay for this treatment from individual FSEs?

### **SESSION II**

**(1 hour)** History and evolution of the interceptor • Grease first valued as a resource in WWII • Army developed gravity-differential separation of free floating Fats, Oils, and Grease • Clean Water Act in 1972 • facilitated elimination of individual residential sewage treatment to POTW • Effluent from POTW must meet Clean Water Standards (NPDES) • gives POTW regulatory authority over industry effluent that comes to POTW •

**(1 hour)** Manufacturer of septic tanks pivots to sell tanks as grease traps o Sizing not based on actual testing or engineering design o In 2005, IAPMO task force reviewed grease interceptor sizing o Results were new term (Hydromechanical Grease Interceptor) and new sizing • In 2006, Schier launched Great Basin series of high-capacity HGIs that are third-party tested and rated; others follow • Comparison of FOG capacity for GGI versus HGIs Product Standards and Testing; Rating Protocols for HGI Sizing/selecting the HGI • Evaluate the FSE – how much grease is generated? • Assure all fixtures are connected

### **SESSION III**

**(1 hour)** Who should regulate FOG? • Plumbing codes, product standards, and Jurisdictional Authority • Overlapping of Plumbing code, pretreatment program, and public health authority • Plumbing code • Specifies capacity and standards for building the facility • Standards provide testing and rating of equipment •

**(1 hour)** Industrial Pretreatment Regulates “significant” industrial users that discharge to POTW ▪ If “significant” users, formal Pretreatment program is required • If no “significant” users, can still have goals, outreach, and local ordinance under this authority (must still meet NPDES permit for the city) • Inspection staff • Authority for enforcement Build the FOG Abatement Program • Develop program • Identify costs (business case to justify program)

### **Session IV**

**(1 hour)** Identify stakeholders (FSEs and city admin and council) • Communicate with stakeholders; city management • Implement program • Use phased approach with tasks outlined over 3-5 years • Use Focused Effort (triage) • New construction voluntary plan review ▪ Inspection and follow-up •

**(1 hour)** Evaluate most problematic areas for initial inspections/outreach o Priority pump stations • SSOs Frequency of clean-out • Plan to inspect 15-20% of establishments (largest producers) ▪ Update city agreements • Outreach • Set Performance Goals ▪ Initial and annual inspections ▪ Results-oriented inspections and follow-up • Provide education/training for FSEs • BMPs are important but not adequate • Help them understand costs/benefits of FOG recycling • Consider Preferred Pumper Program • Measure outcomes and report to stakeholders • Data management Systems

## **Trainer Information/Bios**

**Ed Gonzalez** is Executive Director of the Pacific Northwest Pollution Prevention Resource Center (PPRC). The Western States Alliance (WSA) is a regional, wastewater membership network under the control of PPRC. Ed has more than 20 years of experience working in the environmental and health fields, managing programs and projects in Texas, New Mexico, Nevada, California, Washington, Oregon, Idaho, and Alaska. Ed's projects include providing access to potable water and health care for impoverished families in Juarez, Mexico and he has developed many training curriculums.

**Clayton Brown**, a principal PPRC FOG trainer, is WSA Program Manager, and the former Source Control Manager for Clean Water Services, a sanitary sewer and surface water management public utility district serving over 560,000 customers in Washington County, Oregon. He was responsible for Industrial Wastewater Pretreatment, Industrial Stormwater, Pollution Prevention, and water quality investigations. Clayton has extensive content knowledge and is a principal trainer.

**Ken Grimm**, a principal PPRC FOG trainer, is PPRC Industry Outreach Manager with 18 years' experience serving in different training and technical roles, including national trainer for FOG abatement and for spray paint efficiency, as well as database and measurement system development. Ken also provides web services and maintenance for PPRC and WSA websites.

**Ed Gilmore**, a principal PPRC FOG trainer, is a PPRC Program Manager with 20 years of experience in industrial pretreatment, stormwater and pollution prevention programs with Water Environment Services of Clackamas County, Oregon, and the City of Portland. He developed and implemented the FOG program for the sewer district and assisted in FOG program development across the Portland metro area.

**David James**, FOG trainer and PPRC Program Manager with 45 years of experience providing environmental technical and compliance assistance to public and private industrial pretreatment, storm water and pollution prevention programs. Worked 26 years for the Texas Commission on Environmental Quality. 12 years' experience WWTP O & M, BS and MS, Civil Engineering, Texas A&M University, Owner-Wastewater Training and Consulting Services.

**Jean Waters**, a PPRC FOG trainer, is a PPRC Project Manager with more than 20 years' experience in pollution prevention technical assistance and training in multiple sectors, developing national, online resources, creating partnerships, and measuring outcomes.

**Patrick Bryan**, PPRC Technical Program Manager and FOG trainer, with extensive experience serving as a wastewater and storm water inspector from the County of Fresno, California, with 25 years of experience as a municipal regulatory inspector. With a background in commercial and development programs, agency inspection coordination, program development and regulatory training. He understands the disconnection that occur between the communities we serve such as Food Service Establishment's (FSEs). These disconnects can occurs within municipal agency departments. Building a relationship within agency departments and private stakeholders is essential for a successful FOG Program.