



INDUSTRIAL PRETREATMENT

City of Roseville

Environmental Utilities Department

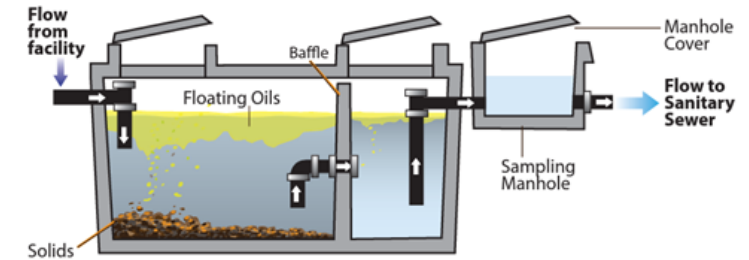
Wastewater Division

INTRODUCTIONS

- ▶ Frank Dittrich
- ▶ Industrial Waste Analyst for the City of Roseville
- ▶ Responsible for implementing the Industrial Waste Program for the City, SPMUD and Placer County within the SPWA service area
- ▶ Employed with the City of Roseville since August 2021
- ▶ B.A. in Environmental Studies & Planning, Water Resource Management, Sonoma State University
- ▶ 6 + years experience with various municipal pretreatment and stormwater quality programs
- ▶ Current resident of Roseville, living in Northern California my entire life



WHAT IS PRETREATMENT?



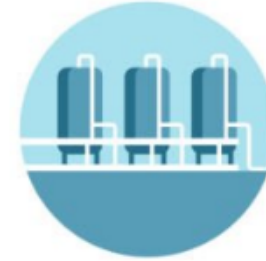
- ▶ Federally required program for operators of a Publicly Owned Treatment Works (POTW)
- ▶ Outlined in the National Pollutant Discharge Elimination System (NPDES) permits for each of our two POTWs
 - ▶ Pleasant Grove Wastewater Treatment Facility
 - ▶ Dry Creek Wastewater Treatment Facility
- ▶ NPDES permits allow us to discharge treated wastewater to the environment
- ▶ An Industrial Pretreatment Program regulates **INDUSTRIAL** wastewater that discharge to the sanitary sewer systems
- ▶ Some Commercial wastewater flows are also regulated & monitored



INDUSTRIAL FACILITY



SEWER COLLECTION SYSTEM
(SPMUD)



WASTEWATER TREATMENT FACILITY
(CITY OF ROSEVILLE)



RECYCLED WATER
(PURPLE PIPE)



BIOSOLIDS
(LAND APPLICATION)



RELEASE TO THE ENVIRONMENT



INDUSTRIAL
PRETREATMENT





WHAT DO WE DO?

- ▶ Our goal through the Industrial Pretreatment Program is to protect our POTWs, sewer collection infrastructure, public health, and the environment.
- ▶ We do this by inspecting industrial and commercial facilities, analyzing wastewater samples, monitoring the design of industrial treatment systems, and developing sewer use policies with regional partners.
- ▶ We operate throughout the entire region as we collect wastewater from Roseville, Rocklin, Granite Bay, Southern Lincoln, Penryn, and Newcastle.
- ▶ 20 permitted industrial facilities and growing
- ▶ 1,300 "high risk" facilities

RECEIVED
OCT 21 1988
S.P.M.U.D.
AGREEMENT FOR INDUSTRIAL WASTE
PRETREATMENT PROGRAM
FILED
AUG 26 1988
CITY OF ROSEVILLE
BY dlm

This Agreement is made this 19th day of August,
1988, by and between the City of Roseville, a municipal
corporation ("CITY"), Placer County ("COUNTY"), and South Placer
Municipal Utility District ("DISTRICT"), and

W I T N E S S E T H:

WHEREAS, the City is responsible for operation and
maintenance of a Regional Wastewater Treatment Plant, and

WHEREAS, domestic and industrial waste waters from outside
the jurisdiction of the City are treated in the Regional
Wastewater Treatment Plant, and

WHEREAS, an Industrial Wastewater Pretreatment Program in
compliance with Title 40, Code of Federal Regulations, Part 403,
is required to monitor and control industrial wastewater at the
point of waste generation, and

WHEREAS, the City has developed and implemented an
Industrial Wastewater Program, and

WHEREAS, the County and District desire to adopt and
participate in the City's Industrial Wastewater Program, and

WHEREAS, the County and District desire to delegate
administration and enforcement of the Industrial Wastewater
program to the City.

WHY IS THE CITY OF ROSEVILLE OPERATING IN THE SPMUD SERVICE AREA?

- Agreement for the Industrial Waste Program is included an Exhibit of the Operations Agreement and is dated 19 August 1988.
- SPMUD and the County adopted into the City's Program and delegated administration and enforcement of the Program to the City.
- All sewer service areas that drain to the City of Roseville's POTWs are under the scope of the Program.



DRY CREEK WASTEWATER TREATMENT FACILITY

- ▶ Treats an average dry weather flow of 8.5 Million Gallons/Day (MGD) and permitted for 18 MGD
- ▶ Consists of primary screening, primary clarification, aeration, secondary clarification, carbon filtration, and UV disinfection.
- ▶ All the solids pulled out of our wastewater is anaerobically digested and land applied as a type of compost for regional ranches near Wilton, CA.



PLEASANT GROVE WASTEWATER TREATMENT FACILITY

- ▶ Also treats an average 8.5 MGD of dry weather wastewater flow and is permitted for 12 MGD
- ▶ Consists of primary screening, primary clarification, oxidation ditches, secondary clarification, sand filtration, and UV disinfection.
- ▶ Recent plant upgrades allow us to anaerobically digest the solids removed and land apply the waste in the same fashion as the Dry Creek facility.

WHAT TYPE OF INDUSTRY DO WE WORK WITH?

- ▶ Industrial and Commercial Customers Include:
 - ▶ Manufacturing Facilities
 - ▶ Machine Shops
 - ▶ Car Washes / Auto Maintenance Facilities
 - ▶ Breweries / Wineries / Distilleries
 - ▶ Medical Facilities
 - ▶ Dental Offices
 - ▶ Food Service Establishments
 - ▶ Other miscellaneous facilities that discharge high strength or regulated wastewater.



BREWERY & WINERY WASTEWATER STUDY

- ▶ Working alongside SPMUD's Technical Services Department, we studied the effects of brewery and winery wastewater on the regional sewer collection and treatment system
- ▶ What was found is that brewery and winery wastewater is ~20x more concentrated in conventional pollutants than typical domestic sewage
 - ▶ This leads to increased rates of corrosion, obstruction, and increased risk of sewer overflow
- ▶ In response, we have begun permitting and educating our breweries on feasible methods to reduce the concentration of pollutants in their wastewater. This is being achieved in a cost effective manner that benefits both the customer and the regional utilities

BREWERY / WINERY STUDY CONTINUED



Corrosion in manhole channels lead to exposed aggregate



Heavy solids discharge lead to a blockage resulting in a sewer overflow

BREWERY / WINERY STUDY CONTINUED



Zoogleal film found downstream of all known brewery / winery locations. This is believed to be caused by low pH and sugar rich conditions.

BREWERY / WINERY STUDY CONTINUED



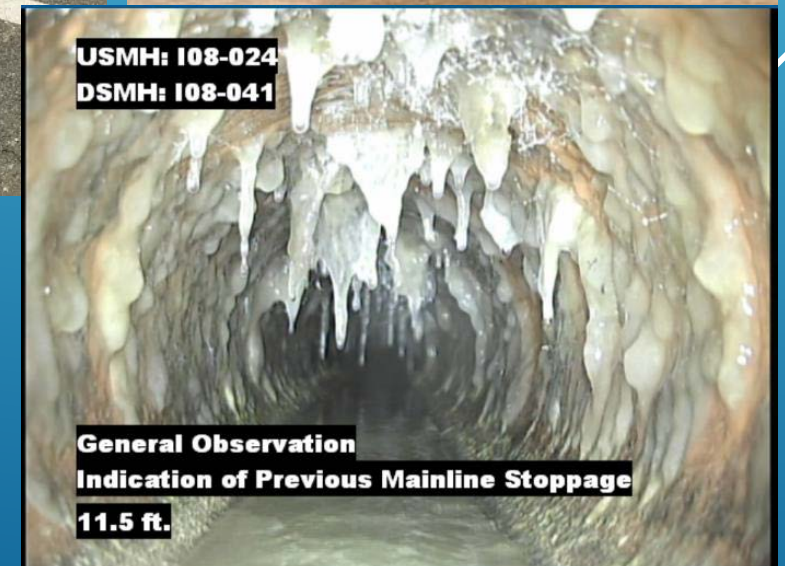
*Wine waste full capture system.
Now a zero-discharge process.*



*Brewery solid waste collection
bin. All heavy solids are removed
from their wastestreams.*

WHAT ARE THE BENEFITS OF THIS PROGRAM TO SPMUD?

- ▶ Reduce cleaning frequencies due to less pollutant buildup
- ▶ Reduce the risk of sewer overflows
- ▶ Sustain the health of sewer pipelines and lift stations
- ▶ Ensures appropriate connection fees and billing methods are being applied to customers
- ▶ Helps to reduce treatment and maintenance resulting in lower sewer rates and connection fees
- ▶ Allows for technical treatment guidance to local customers and SPMUD staff



Proper pretreatment design and implementation can help prevent these maintenance situations



WHAT ARE THE BENEFITS TO OUR CUSTOMERS?

- ▶ We can educate our customers on proper waste disposal and treatment BEFORE they discharge
 - ▶ Saves the customer money from having to replumb or retrofit their facility after they begin operations
- ▶ Improves the longevity of their own private sewer infrastructure
- ▶ Avoids having to pay costly fees or citations from the State and other regional regulating bodies
- ▶ May control the rate in which sewer fee increases are issued

QUESTIONS?

Frank Dittrich

Industrial Waste Analyst

City of Roseville – Environmental Utilities Department

(916) 746-1882

fadittrich@roseville.ca.us