

Pretreatment Program Economics- Costs, Fees, Surcharges

California Regional Water Quality
Board

Colorado River Basin Training

April 2010





Federal Regulations

- Funding- 40 CFR 403.8(f)(3)
 - The POTW shall have sufficient resources and qualified personnel to carry out the authorities and procedures described
 - Intent of Regulation- Funds must be provided to sustain the pretreatment program



Legal Authority Established?

- City must review its Sewer Use Ordinance to determine the types of fees that can be charged to commercial and industrial users.
- Investigate other possible restrictions on fee assessment.



Types of Funding

- Wastewater Surcharge (excessive strength waste)
- Permit Fees
- Sampling & Monitoring Fees
- Inspection Fees
- Industrial or Commercial Wastewater Rates
 - Based on Facility type
 - Based on Wastewater flow
- Cost Recovery Fees
 - Sewer Line Cleaning
 - Corrosion issues



Wastewater Surcharge

- A charge for compatible pollutants that are above domestic background concentrations or WWTP design capacity.
- These funds are necessary to fund sampling and monitoring activities for surcharge calculations and to cover cost of treatment of the excessive strength compatible waste.



Case Study: Surcharge and Limits

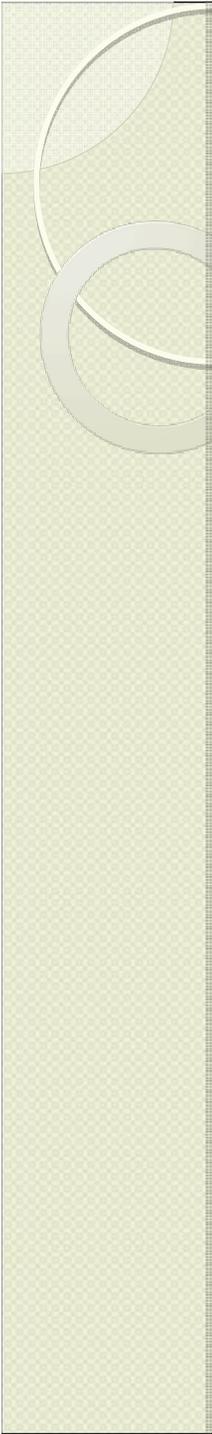
Example:

- WWTP has exceeded hydraulic and organic design capacity of the WWTP.
- BOD5, ammonia, and TSS effluent violations have occurred. A surcharge program for compatible pollutants is in place. The WWTP is scheduled to have a WWTP expansion completed in 2 years. What should the WWTP do?



Pollutants for Wastewater Surcharge

- Biochemical Oxygen Demand (5 day)
- Total Suspended Solids
- Oil and Grease
- COD
- TKN
- Ammonia
- Phosphorus
- **Flow** (in some cases Cities have permit flow limit, and if exceeded then a surcharge fee occurs, or NOV is issued)



Example Surcharge Calculation

- Total Suspended Solids Limit: 300 mg/L
- Cost of TSS: \$0.12 per pound above limit
- Industry Z results for the month:
 - TSS concentration: 985 mg/L
 - Flow: 3,455,700 gallons

Example Calculation:

$$((985-300) \times 3.4557 \times 8.34) \times 0.12 =$$

\$2,369

Surcharge Survey Results- U. S. EPA Region 4 (38 WWTPs)

	Average \$ per lb.	Range of \$ per lb		Average Concentration for start of surcharge (mg/L)	Concentration Range for start of surcharge (mg/L)
BOD5	\$ 0.232	\$0.030	\$ 0.68	281	200 - 450
TSS	\$ 0.186	\$0.035	\$ 0.68	301	200 - 500
O & G	\$ 0.291	\$0.030	\$ 1.05	94	50 - 200
Ammonia	\$ 0.561	\$0.040	\$ 1.55	25	12 - 45
TKN	\$ 1.170	\$0.14	\$ 2.00	39	30 - 60
Phosphorus	\$ 1.320	\$0.64	\$ 2.00	10	10
COD	\$ 0.107	\$0.05	\$ 0.15	672	450 - 800



Permit Fees

- Industrial User Permit Fees have wide range (*ranges from \$50-\$2,500, or higher*)
- Permit fees may be due annually or just at time of renewal for permit.
- Considerations:
 - Administration costs
 - Complexity of industrial processes
 - Wastewater Flow characteristics (if not already on commercial or industrial wastewater rate)



Permit Fees

- Permit fees may vary based on class of non-domestic user
 - FSE
 - Commercial
 - Industrial
- For those WWTPs that do charge a FOG permit fee the average annual cost is \$120.



Sampling and Monitoring Fees

- Cost Recovery for sampling and analyses
- Cost can be charged annually, at time of sampling and analysis, or with equal payments over a 12 month period.
- POTW must have the following information to determine the fee:
 - Sampling equipment cost
 - Sampling personnel cost



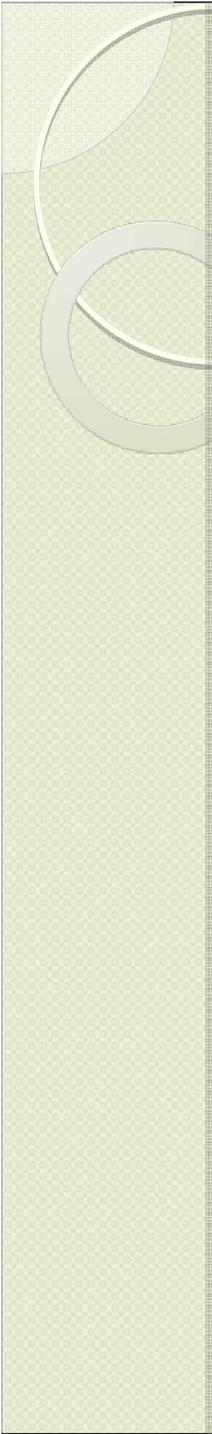
Inspection Fees

- Similar to Sampling and Monitoring Fees, cost recovery for field and administrative time to conduct inspections.
- Some inspection fees are based on the size of the facility, or type of operation.
- Range of inspection fees is \$50 to \$500.



Cost Recovery Fees

- Sewer Line and Sewer Pump Station Maintenance Costs
- Sewer Line Corrosion



Questions?