Industrial Pretreatment for Public WWTP

Philip Wacholz, P.E.
City of Albert Lea

City of Albert Lea WWTP

- Plant built in 1983, funded by US EPA
- Activated Sludge Plant plus nitrification basins and sand filters with UV Disinfection
- Design Capacity based on Existing Slaughter House

<table>
<thead>
<tr>
<th></th>
<th>Observed</th>
<th>Design</th>
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<tbody>
<tr>
<td>AWW Flow</td>
<td>5 MG</td>
<td>18 MG</td>
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<tr>
<td>ADW Flow</td>
<td>3 MG</td>
<td>9 MG</td>
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<tr>
<td>CBOD₅</td>
<td>350 mg/L</td>
<td>194 mg/L</td>
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Delegated Authority

- Federal Regulations – 40 CFR 400
- Minnesota Rule - Chapter 7049
- Local Ordinances

Allows the City to require an industry pretreat wastes before discharging to the City’s system.

Industrial Users

- Significant Industrial Users (SIU’s)
  - Discharges an average of 25,000 gpd process water
  - Produce 5% or more of WWTP treatment capacity
  - Special designation by the City as likely to cause upsets
  - City has ability to exercise discretion
  - Users billed for strengths over domestic concentration
- Categorical Industrial Users (CIU’s)
  - Users that do not meet the flow and strength requirements of SIU’s but pose an environmental risk or a potential for upsets.
  - Examples: Metal finishing, Electroplating, Petroleum refining, Timber products processing, landfills.
Pretreatment Permit Requirements

- Must notify the City if:
  - Slug flow or accidental discharge
  - Permit modification
  - Violation has occurred
  - Annual reporting
- Industry executives and staff can be help criminally responsible for non compliance.

Pretreatment Tours

- Education on processes used
- Inspection
- Observe
- Build relationships
Pretreatment Sampling

- City collects weekly samples
- Certified Lab
- BOD, TSS, TKN, pH, FOG
- Compliance and Billing

Industrial Users

- 7 SIU’s
  - 5 food industries
  - 2 biorefineries
- 4 CIU’s
  - Metal finishing
  - Electoiplating
Industrial Users

• Food Industries
  • Meat packaging
  • Meat Processing
  • Food Drying
  • Salads, Dips, and Mashed Potatoes
  • Margarine

• Refineries
  • Biodiesel
  • Ethanol
Industrial Users

- Pretreatment Equipment
  - Biomethonator
  - Diffused Air Filtration (DAF)
  - Equalization Tank and DAF
  - Various pH Adjustment systems
  - Grease Traps
  - Alternate Methods
    - Solid waste streams
    - Composting

Industrial Users

- Public information
- Trade Secrets and Confidentiality
Pretreatment Program Administration

- City Manager
- Director Of Public Works/
  City Engineer
- WWTP Superintendent
- Pretreatment Coordinator
- Sampling and Lab Technician

Pretreatment Case Studies

- FOG most frequent violation
- Violations affect the collection system
- Industry handicaps
- Unpermitted FOG Violators – Truck wash
- Inflow and Infiltration
- Unique Permits
- New permittees – Growth into permitting
- Unauthorized Users
Pretreatment Permitting

- Protect the City’s plant and collection system
- Protect the public
- Protect the environment
Questions?

Philip Wacholz
Civil/Environmental Engineer
City of Albert Lea
507-377-4325
pwacholz@city.albertle.org