THE CITY OF GRAND FORKS INDUSTRIAL PRETREATMENT PROGRAM

Background
- The Environmental Protection Agency (EPA) was created in December 1970 through a Presidential Executive Order.
- The Clean Water Act (CWA), passed by Congress in 1972, required the elimination of discharge of pollutants into the Nation’s waters.
- The EPA National Pollutant Discharge Elimination System (NPDES) Permitting Program requires all point source discharges be permitted.
- The EPA National Pretreatment Program addresses indirect discharges from industry.

Industrial Discharges
- Direct discharges to a lake or river (point source).
- Indirect discharge to Publicly Owned Treatment Works (POTW).

National Pretreatment Program
- The National Pretreatment Program is a cooperative effort of federal, state, and local agencies that was established to protect water quality by reducing the level of pollutants discharged by industry and other non-domestic wastewater sources into municipal sanitary sewer systems.

Pretreatment Objectives
- To protect POTW's from industrial pollutants that may either pass through, and/or interfere with its operation, and the resulting negative impacts to rivers and lakes as well as to improve opportunities to recycle and reclaim municipal and industrial wastewaters and sludges.

Pretreatment Responsibilities

- Approval Authority (State/EPA)
  1. Oversee POTW and industrial user (IU) compliance
  2. Review POTW reports and submissions
  3. Inspect POTWs and IUs
  4. North Dakota Department of Health (NDDH)
     • Industrial Pretreatment Inspector
     • Jeff Roerick – jroecki@state.nd.us
  5. EPA Region 8
     • Al Garcia – Garcia.al@epa.gov

- Control Authority (POTW)
  1. Implement pretreatment program
  2. Regulate IUs
  3. Submit reports to approval authority
  4. City of Grand Forks
     • Melanie Parvey, Water Works Division Director – mparvey@grandforksgov.com
     • Bill Sukalski, Industrial Pretreatment Specialist – bsukalski@grandforksgov.com
     • Lisa Botnen, Environmental Manager – lbotnen@grandforksgov.com
     • Dennis Dunn, Wastewater Treatment Plant Supervisor – ddunn@grandforksgov.com
• Dave Kresel, Wastewater/Stormwater Superintendent – dkresel@grandforksgov.com

• Industrial User
  1. Comply with pretreatment requirements
  2. Submit reports to control authority

**Industrial User Classification**

• **Nonsignificant Industrial User**
  • Less than 100 gal/day flow
  • Domestic strength wastewater
    1. BOD<200 mg/l
    2. TSS<250 mg/l

• **Significant Industrial User (SIU)**
  • SIUs are those industries not listed as categorical, but are significant users in one of the following ways:
    1. Discharge 25,000 or more gallons of process wastewater per day to POTW
    2. Contribute 5% or more of the average dry weather hydraulic or organic load to POTW
    3. Have the potential to adversely affect POTW

• **Categorical Industrial User (CIU)**
  • CIUs are subject to categorical pretreatment standards (40 CFR Chapter 1, Subchapter N).
  • CIUs are required to pretreat their wastewater for certain pollutants to specific numerical values prior to discharging to a POTW.

**National Pretreatment Standards**

• The National Pretreatment Program consists of three types of national pretreatment standards established by regulation that apply to IUs. These included prohibited discharges, categorical standards, and local limits.

**Prohibited Discharges**

• General prohibitions [40 CFR 403.5(a)] forbid the discharge of any pollutant to a POTW that causes pass through or interference.
• Pass through means a discharge that causes a violation of any requirement of the POTW’s NPDES permit.
• Interference refers to a discharge that inhibits or disrupts the POTW, its treatment process or operations, or its sludge processes and that leads to a violation of the NPDES permit or any other applicable federal, state, or local regulation.
• Specific prohibitions [40 CFR 403.5(b)(1)-(8)] forbid the following eight categories of pollutant discharges to POTWs:
  1. Pollutants that create a fire or explosion hazard
  2. Pollutants that will cause corrosive structural damage
  3. Pollutants that will cause obstructions in the flow of discharges to the POTW
  4. Pollutants released at excessive rates of flow or concentration
  5. Excessive heat in amounts that inhibit biological activity

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6. Certain oils that cause interference or pass through
7. Pollutants which result in the presence of toxic gases, vapors or fumes
8. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

Categorical Standards
- Categorical standards are uniform, technology based, and applicable nationwide.
- Developed by EPA, these standards apply to specific categories of IUs and limit the discharge of specified toxic and nonconventional pollutants to POTWs.
- Categorical standards can be found at 40 CFR 405-471
  - 35 industrial sectors are listed
  - Pollutants regulated by categorical pretreatment standards are listed

Local Limits
- Local limits are developed by POTWs to enforce specific and general prohibitions, as well as state and local regulations.
- Designed to provide minimum acceptable level of control of IU discharges.
- They do not, however, take into account site-specific factors at POTWs that may necessitate additional controls.

Relationship of Local Limits to Categorical Standards
- Categorical standards and local limits are complementary types of pretreatment standards.
- Categorical standards are developed to achieve uniform technology based pollution control nationwide for selected pollutants and industries.
- Local limits are intended to prevent site-specific POTW and environmental problems due to non-domestic discharges.

Industrial Waste Permit – City Code 15-0408
- No SIU shall discharge wastewater to the public sewers without having a valid industrial waste permit issued by the city.

Permit Limits
- pH >5.5 S.U. and pH < 11.0 S.U.
- BOD <300 mg/l
- TSS <350 mg/l

Sampling Requirements
- Sampling and testing will be conducted at periodic intervals as specified in the industrial waste permit.
- Sampling and testing to be done on a minimum of a full day’s operation under normal operating conditions.
- If flow paced sampling is not possible, a grab composite should be taken. Grab intervals need to be at a minimum frequency of one every 15 minutes.
- The City is required to sample a minimum of one discharge event annually, however common practice has been to sample once per month.

Mass Loading Capacity at the Wastewater Treatment Plant (WWTP)
- Hydraulic capacity at the WWTP is 10 MGD (average daily flow) and 15 MGD (peak flow).
• Loadings are allocated to individual users by industrial waste permits. Allocation is based on available capacity, industry need, wastewater contribution, history of operation in the City, and other criteria as needed.

**Wastewater Flow Measurement – City Code: 15-0607**
• IU must furnish and install a wastewater meter satisfactory to the authorized City representative and shall discharge all wastewater through this meter.
• In default of installing a meter, the permittee shall be charged for the same number of gallons of water supplied to the premises as shown by the City water meter supplying water to the premises.

**Wastewater Fees and Charges – City Code: 15-0604**
• See current year fee schedule (attached)

**Industrial Waste Surcharge – City Code: 15-0607**
• Additional fees for treating wastewater above normal domestic strength.
• Surcharge rate applies to BOD, TSS, and TKN above the local limits.
• For other pollutants the rate will be determined by City Council when the need exists for special attention to treatment of other pollutants.
• For surcharge formula see City Code 15-0607(2)(D)
• See current year fee schedule (attached)

**Excess Strength Surcharge – City code: 15-0608**
• Applied to waste in excess of the maximum allowable limits on BOD, TSS or concentration of other pollutants greater than that provided by the current industrial waste permit.
• Normal surcharge rate is in effect up to the amount of the permit limit.
• The rate is 2 time that determined by the surcharge formula.
• Any person discharging waste which by its nature or toxicity causes damage to the treatment works or increases the cost of managing the effluent, sludge, or other products of treatment shall pay the costs of cleanup, restoration of such damage, and any increased treatment costs.

**Permit Fee – City Code: 15-0609**
• Annual fee is $135.00

**Violations – Industrial Pretreatment Program Manual**
• Notice of Violation (NOV)
• Significant noncompliance (SNC)
  • Technical Review Criteria (TRC) SNCs (33% over 6 months)
  • Chronic violation SNCs (66% over 6 months)

**Penalties**
• Public notice/reportable noncompliance
• City must publish annually a list of industrial users that have either demonstrated a pattern of noncompliance of pretreatment standards or had a SNC incident over the previous 12 months
• Reasons for public notice
City of Grand Forks  
2015 City Budget  
Supplemental (continued)  
Utility Fees

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<tr>
<th>Sanitation (Cont')</th>
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<th>2015</th>
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<tr>
<td>Landfill Rates:</td>
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<tr>
<td>Minimum Fee</td>
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<td>Ash (per ton)</td>
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<td>MSW (per ton)</td>
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| Miscellaneous Fees(*)                  |       |       |
| Extra Pickup, Minimum Fee (first 5 minutes) | 15.00 | 20.00 |
| $1.00 per minutes after first 5 minutes |       |       |
| Appliance Pickup, per appliance        | 15.00 | 20.00 |
| Asbestos, Minimum Fee                  | 120.00| 120.00|
| $15/cubic yard                         |       |       |
| Tires:                                 |       |       |
| Car Tire, per tire                     | 5.00  | 5.50  |
| Truck Tire, per tire                   | 10.00 | 10.50 |
| Tractor Tire, per tire                 | 15.00 | 15.50 |
| Container Services-Cleanout/Pressure Wash: |     |       |
| 90 Gallon                              | 15.00 | 20.00 |
| 300 Gallon                             | 20.00 | 25.00 |
| 1 yard                                 | 20.00 | 25.00 |
| 2 yard                                 | 25.00 | 30.00 |
| 4 yard                                 | 30.00 | 35.00 |
| 6 yard                                 | 35.00 | 40.00 |
| 22 yard                                | 100.00| 125.00|
| Compactor                              | 150.00| 220.00|

| Wastewater                             |       |       |
| Standard Rates (2013 = 3% increase)   |       |       |
| Base Fee, per month:                   |       |       |
| Residential                            | 13.17 | 13.83 |
| Commercial/Industrial                  | 13.32 | 13.99 |
| Heavy Industrial Use Class A           | 2682.51| 2816.64|
| Heavy Industrial Use Class B           | 1044.81| 1097.05|
| Residential Flow (per 1,000 gallons)   | 3.07  | 3.22  |
| Commercial/Industrial Flow (per 1,000 gallons) | 3.11  | 3.27  |
| Heavy Industrial Class A Flow (per 1,000 gallons) | 2.45  | 2.57  |
| Heavy Industrial Class B Flow (per 1,000 gallons) | 2.68  | 2.81  |
| Biochemical Oxygen Demand (BOD) (per pound) | 0.1450| 0.1450|
| Suspended Solids (SS) (per pound)      | 0.0731| 0.0731|
| Total Kjeldahl Nitrogen (TKN) (per pound) | 0.3132| 0.3132|
| Fats, Oils, and Grease Control (FOG) (per month): |     |       |
| Grease Interceptor                     | 2.75  | 2.75  |
| Grease Trap/Interceptor                | 11.95 | 11.95 |
| Without Device                         | 71.58 | 71.58 |
| Non-Active                             | 2.89  | 2.89  |