

ARTICLE III

LIMITATIONS ON DISCHARGE

1. GENERAL

- 1.1 Policy: All discharges of wastewater into the District's wastewater facilities shall comply with these Rules and Regulations, and more specifically the provisions set forth herein.
- 1.2 Prohibited Wastes: Discharge of any water or wastewater into the District's wastewater facilities containing substances prohibited by these Rules and Regulations or not meeting the requirements set forth in this Article III is prohibited.
- 1.3 Construction Modifications to Limit Harmful Waste: Some customers may be required to install pretreatment facilities, including, but not limited to, grease, sand, and/or oil interceptors into their building construction, as set forth in this Article III in order to prevent the discharge of such materials and other prohibited wastes into the District's wastewater facilities.

2. NATIONAL PRETREATMENT STANDARDS: PROHIBITED DISCHARGES

- 2.1 General Prohibitions: A User may not introduce into a POTW any pollutant(s) which cause Pass Through or Interference. These general prohibitions and the specific prohibitions in paragraph (2.3) of this section apply to each User introducing pollutants into a POTW whether or not the User is subject to other National Pretreatment Standards or any national, State, or local Pretreatment Requirements.
- 2.2 Storm water Prohibition: No person shall discharge, cause to be discharged or introduce into the District's wastewater facilities any storm water, surface water, ground water, artesian well water, roof runoff or subsurface drainage without prior written authorization by the District's Industrial Pretreatment Coordinator.
- 2.3 Specific prohibitions: No person shall discharge, cause to be discharged or introduce into the District's wastewater facilities cooling water, air conditioning, boiler blow-down or any other commercial or industrial wastewater unless the water meets the following standards:
 - 2.3.1 Must have an instantaneous pH value in the range of five (5.0) to ten (10.0) standard units. Must not contain

pollutants that will cause corrosive structural damage to the District's facilities.

- 2.3.2 Must not contain any solid, viscous or liquid wastes that allow or may cause obstruction to the flow in a main line or otherwise interfere with the proper operation of the District's facilities.
- 2.3.3 Must not contain prohibited materials including, but not limited to, all solid objects, material, refuse, and debris not normally contained in sewage.
- 2.3.4 Must not contain explosive mixtures consisting of liquids, solids, or gases which by reason of their nature or quantity are, or may be, sufficient either alone or by interaction with other substances to cause fire or explosion or be injurious in any other way to the operation of the District's facilities. At no time shall two (2) successive readings on an explosion hazard meter at the point of discharge into the District's wastewater system be more than five percent (5%), nor may any single reading be over ten percent (10%) of the lower explosive limit (L.E.L.) of the meter.
- 2.3.5 Must not contain pollutants that create a fire or explosion hazard in the District's facilities including, but not limited to, waste streams with a closed cup flashpoint of less than 60°C (140°F) using the test methods specified in 40 CFR § 261.21.
- 2.3.6 Must not contain heat in amounts that will inhibit biological activity in the POTW resulting in interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40°C (104°F). Must have a temperature between 32° to 150°F.
- 2.3.7 Must not contain grease, oil or other substances that will solidify or become viscous between 32° to 150° F.
- 2.3.8 Must not contain insoluble substances in excess of 10,000 ppm.
- 2.3.9 Must not contain total solids in excess of 20,000 ppm.
- 2.3.10 Must not contain insoluble substances having a specific gravity greater than 2.65.

- 2.3.11 Must not contain garbage that has not been ground or comminuted to such a degree that all particles will be carried freely in suspension under flow conditions normally prevailing in the District's wastewater facilities to which the user is connected. At all times, no garbage particle discharged into the District's facilities shall be greater than one-half inch (1/2") in any direction.
- 2.3.12 Must not contain gases or vapors either free or occluded in concentrations toxic or dangerous to humans or animals.
- 2.3.13 Must not have a chlorine demand greater than 15 ppm.
- 2.3.14 Under no condition shall any pollutant, including oxygen demanding pollutants (BOD, etc.) be discharged at a rate and/or concentration that will cause interference, pass-through of pollutants, sludge contamination, or endangerment of POTW workers.
- 2.3.15 Must not contain any toxic or irritating substance that will create conditions hazardous to public health and safety.
- 2.3.16 Must not contain in excess of 387 ppm, any grease or oil or any oily substance of petroleum, mineral, animal or vegetable origin including, but not limited to: cooking greases, fats and oils; cooling or quenching oils; lubrication oils; cutting oils; and non-saponifiable oils.
- 2.3.17 Must not contain toxic or poisonous solids, liquids or gases in sufficient quantity, either singly or by interaction with other wastes, which could injure or interfere with any sewage treatment process, or create any hazard in the receiving waters of the wastewater treatment plant, or contaminate the sludge of any wastewater treatment process, in order to protect worker health and safety.
- 2.3.18 Must not contain organic toxic pollutants, introduced by the intentional or accidental dumping of solvents into the District's facilities, used in operations involving degreasing, surface preparation, tank washing, paint thinning, paint equipment cleaning or any other process.
- 2.3.19 Must not contain storm water, surface water, ground water, roof runoff, or subsurface drainage, cooling water, air conditioning wastewater or any other commercial or industrial wastewater without first obtaining a wastewater

discharge permit from the control authority for such discharge.

2.3.20 The following limits shall apply to wastewaters that are discharged from the ground water cleanup of petroleum or gasoline underground storage tanks or other remediation wastewaters containing these pollutants or where these pollutants are appropriate surrogates.

| | |
|---------------|------------|
| Total Benzene | 0.050 mg/L |
| Total BTEX | 0.750 mg/L |

(1) BTEX shall be measured as the sum of benzene, ethylbenzene, toluene and xylene.

2.3.21 Other Local Limits:

NO SIGNIFICANT INDUSTRIAL USER SHALL DISCHARGE WASTEWATER THAT EXCEEDS THE FOLLOWING LIMITS AT ANY TIME FOR ANY LENGTH OF TIME.

Parameter Maximum Concentration (in any sample)

| | |
|----------------------|-----------|
| Total Oil and Grease | 387 mg/L |
| Total Arsenic | 0.23 mg/L |
| Total Cadmium | 0.47 mg/L |
| Total Chromium* | 3.04 mg/L |
| Hexavalent Chromium | 3.04 mg/L |
| Total Copper | 1.75 mg/L |
| Total Lead | 1.11 mg/L |
| Total Mercury | 0.04 mg/L |
| Total Molybdenum | 0.89 mg/L |
| Total Nickel | 3.49 mg/L |
| Total Selenium | 0.82 mg/L |
| Total Silver | 1.18 mg/L |
| Total Zinc | 4.96 mg/L |

* In the event of becoming aware of a Total Chromium violation, a resample shall be taken within 24 hrs for Hexavalent Chromium.

2.4 Origin of Discharge: All wastewater discharged to the District's facilities must originate from within the District's wastewater service area.

2.5 Trucked or Hauled Pollutants: All trucked or hauled wastewater shall be preapproved by the Industrial Pretreatment Coordinator and the District's

Board of Directors prior to discharge to the District's facilities, with the exception of domestic waste from RVs owned by District residents, and only at discharge points designated by the Industrial Pretreatment Coordinator. Approved trucked or hauled wastewater discharges shall meet all of the District's Prohibitive Waste Standards, be treated in a facility located within the District's service area, and only be discharged once an Industrial User has been issued a wastewater discharge permit.

- 2.6 Septic System Waste: No sludge, solids or other waste material removed from septic tanks or other similar facilities shall be discharged or otherwise placed in the District's facilities.
 - 2.7 Pretreatment Requirement May Apply: Compliance with the above numeric or narrative standards shall not relieve owners of property or users of the District's facilities from installation or construction of pretreatment facilities required by the District.
- 3. CONSTRUCTION MODIFICATIONS TO LIMIT THE DISCHARGE OF HARMFUL WASTES INTO THE DISTRICT'S FACILITIES: GREASE INTERCEPTORS/TRAPS AND SAND/OIL INTERCEPTORS/TRAPS**

3.1 General Requirements:

3.1.1 Policy: Property owners may be required to install a grease interceptor/trap and/or a sand/oil interceptor/trap on a waste line in order to protect the District's wastewater facilities from the introduction of excessive quantities of grease, sand and/or oil. A determination by the District that a grease interceptor/trap and/or sand/oil interceptor/trap is required to be installed on a waste line in order to protect the District's wastewater facilities from the introduction of grease, sand and/or oil shall be final and conclusive.

3.1.2 Property/Facilities Requiring Grease Interceptor or Trap: Where the District determines that a property owner is required to install a grease interceptor or trap, a District-approved grease interceptor/trap shall be installed on the waste line leading from sinks, drains and all other fixtures or equipment in food preparation establishments such as (but not limited to) restaurants, cafes, lunch counters, cafeterias, bars and clubs, hotels, hospitals, factory kitchens, school kitchens, church kitchens or other establishments where grease may be introduced into the District's facilities.

- 3.1.3 Property/Facilities Requiring Sand/Oil Interceptor: Where the District determines that a property owner is required to install a sand/oil interceptor, a District-approved sand/oil interceptor/trap shall be installed on the waste line for all parking and repair garages, filling stations, car washes, truck terminals with washout facilities, engine steam cleaning facilities, commercial laundries, and any other commercial or industrial establishments that have wash racks or oil producing waste products. These establishments shall also have facilities to prevent storm or surface water drainage from entering the waste line.
- 3.1.4 Residential Property: Residential property owners shall not be required to install grease interceptors/traps or sand/oil interceptors/traps for their dwelling units and associated structures, unless there is a likely probability of a significant grease, sand or oil discharge into the District's facilities.
- 3.1.5 District Approval: All grease interceptors/traps and sand/oil interceptors/traps shall meet specific requirements established by the District, and the installation of all grease and sand/oil interceptors/traps shall be subject to inspection and approval by the District. Additionally, all interceptors and traps must be approved by the District prior to installation. The District shall charge an inspection fee, as indicated in Section 7 of Appendix A to these Rules and Regulations, for the inspection and approval of all grease and sand/oil interceptor/trap installations. The District will supply the property owner with acceptable examples of interceptors and traps that meet District specifications.
- 3.1.6 Interceptor/Trap Maintenance: Proper maintenance and operation of all grease and sand/oil interceptors/traps shall be the responsibility of the owner and user, and the owner and user shall ensure that said interceptors/traps are maintained in proper working order. Maintenance of interceptor/trap contents shall be performed by a contractor licensed to perform such work. Maintenance shall entail removal of entire interceptor/trap contents. Partial removal of contents (*i.e.*, removal of grease layer, oil layer or sludge layer) is not allowed. Contents removed from interceptors/traps shall be hauled off site and disposed of in accordance with local, state and federal laws and regulations. Records of maintenance of interceptors/traps and of off-site hauling and removal of interceptor/trap

contents shall be kept by the user and shall remain on-site and accessible for review by District personnel. Records shall contain, at a minimum, the date on which the interceptor/trap was maintained and/or serviced including a description of the specific maintenance or service that was performed, a description of who performed the maintenance or service, the date on which the interceptor/trap contents were removed and hauled off-site including a description of who performed the removal and off-site hauling and where the contents of the interceptor/trap were hauled for disposal. Under no circumstances shall interceptor/trap contents be re-introduced to the District's facilities. Maintenance of all interceptors/traps shall be performed on an as-needed basis and at least once every six (6) months and the District may require maintenance of interceptors more than once every six (6) months if necessary for the protection of the District's facilities. Failure to properly maintain a interceptor/trap will result in enforcement action by the District to ensure compliance.

3.2 Technical Specifications and Design Criteria for Grease and Sand/Oil Interceptors/Traps:

3.2.1 Definitions:

3.2.1.1 Fixture Unit: A rating in terms of gallons per minute (gpm) representing the maximum amount of water that can flow from a fixture or piece of equipment in one minute. The value of one fixture unit (F.U.) is equal to 7.5 gpm.

3.2.1.2 Grease Interceptors - Types A & B: Two compartment interceptors normally located outside of a building and of the following sizes:

Type A: 750 - 1565 gallon capacity - see Appendix B, Drawing 1

Type B: 1566 + gallon capacity - see Appendix B, Drawing 2

3.2.1.3 In-Line Grease Traps: A prefabricated unit, generally made of metal, for the trapping of

grease normally set indoors under a sink or near the fixture connected to it. In-line grease traps are only allowed where it is not possible to go outside with a larger trap or where there is only a minor concern with grease (this will be determined only by the District). In-line grease traps may not be connected to any water source with a discharge temperature greater than 140° F (60° C).

3.2.1.4 Pretreatment Facilities: Structures, devices or equipment including, but not limited to, interceptors for neutralizing or removing deleterious wastes from wastewater prior to its discharge into the District's facilities.

3.2.1.5 Sampling: A periodic collection of wastewater as it flows through the District's facilities and/or a customer's service line.

3.2.1.6 Sand/Oil Interceptors - Types A & B: Two compartment interceptors normally located outside a building and of the following sizes:

Type A: 750 - 1565 gallon capacity - see Appendix C, Drawing 1

Type B: 1566 + gallon capacity - see Appendix C, Drawing 2

3.2.1.7 Testing: The laboratory analysis of wastewater. Analytical methods shall be those approved under 40 CFR 136.

3.2.2 General Design Criteria for Interceptors: Establishments required to install grease and/or sand/oil interceptors due to the nature of their operations shall use the following design criteria. The design criteria stated below represent the minimum requirements for interceptors and do not reflect special circumstances that may necessitate increased sizing.

3.2.2.1 All interceptor installations shall contain two manholes, one accessing the interceptor's discharge line and one

accessing the interceptor's influent line. These manholes shall be accessible to the District at all times, and provide ample room for conducting discharge sampling and flow measurement activities.

- 3.2.2.2 All interceptor installations shall meet the requirements of the District and all other local government requirements. The District will not be responsible for violations of these requirements.
- 3.2.2.3 Interceptor installation, including equipment, structural design, backfilling, safety provisions, etc., shall be the sole responsibility of the owner and its suppliers, contractors, and other agents.
- 3.2.2.4 Maintenance and removal of interceptor contents (*i.e.*, grease, oil, sand, and water) shall be the sole responsibility of the owner.
- 3.2.2.5 All interceptors shall be accessible for inspection by the District.
- 3.2.2.6 All interceptors shall be divided into two compartments, separated by a divider wall. The first compartment shall contain approximately two-thirds ($\frac{2}{3}$) of the interceptor's total volume.
- 3.2.2.7 All interceptors shall have a minimum capacity of 750 gallons, shall be concrete, unless otherwise specifically authorized by the District, and of a single, monolithic pour and shall be constructed in accordance with the District's detailed drawings attached hereto as Appendices B and C.
- 3.2.2.8 Inlet and outlet pipes for all interceptors shall be elbowed down below the water surface.
- 3.2.2.9 Grease interceptors shall have a first compartment grease volume equal to

approximately one-half (1/2) of the total first compartment water volume.

3.2.2.10 Grease interceptor divider walls shall extend a minimum of 10" above the first compartment water surface. Water transfer to the second compartment shall be via a 90° pipe elbow, turned down in the first compartment, with the bottom of the elbow located 6" to 12" above the floor depending on interceptor size.

3.2.2.11 In-line grease interceptors are not permitted unless specifically approved by the District.

3.2.2.12 Sand/oil interceptors shall have a full-size divider wall between the first and second compartments. Flow between the compartments must travel over the top of the divider wall or through slots or ports near the top of the divider wall.

3.2.3 Sizing Calculations for Grease Interceptors: Sizing calculations are to be prepared by the owner's engineer and submitted to the District per the following methods:

3.2.3.1 Where food is served and seating capacity can be determined, compute:

$(\text{Number of seats}) \times (0.9) \times (2.2) = \text{number of meals served per meal period.}$

0.9 = a full capacity factor

2.2 = turnover rate per meal period

or,

$(\text{Number of meals served per meal period}) \times (2.5 \text{ gallons per meal}) = \text{volumetric water capacity of the grease interceptor.}$

3.2.3.2 Where food is prepared and where seating capacity or number of meals cannot be adequately determined, the following rule shall apply: Table 1 of Appendix D establishes the fixture unit values for various

pieces of equipment that may require connection to a grease interceptor. The total number of fixture units shall be multiplied by 7.5 gpm to determine maximum rate of flow (gpm) into the grease interceptor. The volumetric water capacity of the unit shall be eight times the maximum rate of flow. Table 2 of Appendix D establishes the methodology for sizing grease interceptors for fixtures not described in Table 1 of Appendix D.

3.2.4 Sizing Calculations for Sand/Oil Interceptors: Sizing calculations are to be prepared by the owner's engineer and submitted to the District per the following method:

3.2.4.1 Total fixture units connected x 7.5 gpm x 5 minutes = interceptor size. The total fixture unit values shall be based on Table 3 of Appendix D.

3.3 Review of Plans for the Construction and Installation of Pretreatment Facilities:

3.3.1 Requirement of Plan Review: If any water or wastewater is discharged, or is proposed to be discharged, to the District's facilities (1) from restaurants or other food preparation establishments described above, or (2) that may contain the substances or exceed the limitations described in this Article III, it shall be the responsibility of the user and owner of the property, business or industry or an authorized representative to contact the Manager of the District's Industrial Pretreatment Program for the purpose of plan review. The plan review shall determine the need, method, and size of pretreatment facilities required to pretreat or otherwise control the wastewater to make it acceptable for discharge into the District's facilities.

3.3.2 Submission of Plans: Upon completion of the plan review, all applicants shall submit a set of complete plans for the pretreatment facilities and details of the proposed installation, including computations relative to sizing. Applicants shall retain a duplicate set of such records for the life of the pretreatment facility. The records shall remain with the property through changes of ownership or tenancy.

- 3.3.3 Additional Requirements: The District may require additional plans and/or information needed to determine the impact of the proposed wastes on the District's collection and treatment system and the required size and type of the pretreatment facilities.
 - 3.3.4 District Approval Required: Written approval of the District must be granted prior to construction of any pretreatment facility.
 - 3.3.5 Inspection: All interceptors must be inspected by the District at the time of installation and, where applicable, before the interceptor is buried.
- 3.4 Sampling Manholes: The installation of one or more discreet sampling manholes is recommended and may be required by the District. A sampling manhole is usually required to be located downstream of the domestic wastewater and the process wastewater tie-in point. In certain situations, a sampling manhole may be required to be placed at the end of the process wastewater discharge. All placements of sampling manholes must be approved by the District's Industrial Pretreatment Coordinator prior to installation.
- 3.5 Interceptor/Trap Maintenance:
- 3.5.1 Responsibility for Maintenance: It shall be the user's and owner's responsibility to ensure that grease and sand/oil interceptors/traps are maintained and in proper working order. The interceptors shall be unobstructed and available for periodic maintenance inspections and discharge sampling by the District.
 - 3.5.2 Inspection: Existing interceptor/trap installations shall be inspected to determine compliance with District's oil and grease discharge standards. Installations not able to achieve compliance with such standards due to improper design shall be modified or replaced in order to achieve compliance with District design and sizing criteria.
- 3.6 Interceptor/Trap Requirements for Existing Property/Facilities: If it becomes necessary for the District to require an existing property, business or industrial user or owner to install suitable pretreatment facilities, a written explanation for the requirement shall be furnished to the user, owner or an authorized agent. Such a case may arise when it becomes apparent that the existing pretreatment facility is deficient in size,

or waste emanating from the property, business or industry violates the District's Rules and Regulations and/or may cause harm to the District's facilities, or persons entering said facilities to perform maintenance, or to the treatment process and/or environment.

**4. CONSTRUCTION MODIFICATIONS TO LIMIT HARMFUL WASTES:
WASH RACKS/FLOOR SLABS**

- 4.1 Wash Rack Construction/Modification: In an effort to eliminate the introduction of storm and surface waters into the District's facilities, wash racks must be constructed or modified to drain into the District's facilities only those waters used in the washing process. All wash rack construction or modification plans must be approved by the District. The appropriate local building department (Commerce City or Adams County) must also be notified to ensure compliance with all applicable regulations. All wash racks and/or floor slabs used for cleaning vehicles, machinery or machine parts, with drainage to the District's facilities, shall be adequately protected against storm or surface water inflow. Such protection shall be achieved by the installation of roofing, or other means acceptable to the District.