SECTION 9

SOURCE CONTROL

9-01 GREASE, OIL AND/OR SOLIDS REMOVAL DEVICES

CCCSD may require any non-domestic user to install a grease, oil and/or solids removal device according to guidelines set forth below and in Title 10 of the CCCSD Code in order to prevent grease, sand, flammable liquids, and other substances which are likely to restrict the flow or create a hazard from entering the sanitary sewer system.

A. Food Service Facilities

Any commercial establishment with common food preparation facilities shall have a grease interceptor and/or grease trap(s) installed, as specified by CCCSD. The size of all grease interceptors and/or grease traps will be determined by CCCSD on a case by case basis using objective criteria such as the size and type of facility, volume of business or operation, plumbing fixtures, and cooking fixtures and estimated flow rate (reference Uniform Plumbing Code, latest edition). Standards for grease traps and grease interceptors for food service facilities are presented below.

1. Grease Interceptors (Gravity Grease Interceptors per UPC)

The term "grease interceptor" shall mean a prefabricated or cast-in-place grease interceptor with a minimum capacity of one thousand (1,000) gallons conforming to ANSI Z1001-2007, American National Standard for Prefabricated Gravity Grease Interceptors, and DWG-37 of the Standard Drawings.

All grease interceptors shall be installed in accordance with Section 15.03400 of these Specifications as well as with the manufacturer’s specifications.

All non-domestic drain inlets including, but not limited to, floor drains, floor sinks, sinks, mop sinks and drains serving dishwashers, wash areas, trash enclosures and/or trash compactors, shall be plumbed to the grease interceptor.

All domestic waste inlets shall be plumbed separately from non-domestic waste inlets and connected either to the building side sewer downstream of the grease interceptor or directly to the main sewer.

Systems to add enzymes, microbes, or other materials intended to remove grease from a grease interceptor are prohibited. Use of such material to treat drain lines served by a grease interceptor are acceptable provided

that the dosage is appropriate for drain line cleaning and not removal of grease from the grease interceptor.
The grease interceptor shall be installed in a location that is readily accessible for periodic cleaning, inspection, and/or sampling. Typical installations of grease interceptors are outside of the building. Proposals for installations within the interior of the building will be considered on a case-by-case basis subject to the approval of the Contra Costa County Health Services Department.

If the grease interceptor is located in an area subject to vehicle traffic, the grease interceptor shall be designed with a minimum of an H-20 traffic rating. Alternatively, an appropriately designed traffic cover shall be installed over the grease interceptor in accordance with DWG-39 of the Standard Drawings.

A sampling structure shall be installed immediately downstream of the grease interceptor in accordance with DWG-40 of the Standard Drawings.

Grease interceptors shall be filled with clean water after installation and refilled with clean water after each cleaning for the purpose of minimizing odors.

2. Grease Traps (Hydromechanical Grease Interceptors (HGI) per UPC)

The term "grease trap" shall mean a rust/corrosion resistant grease removal device conforming to ASME A112.14.3 and/or ASME A112.14.4.

Grease traps shall be installed in accordance with the manufacturer's specifications with a minimum grease containment capacity of forty (40) pounds and minimum flow rating of twenty (20) gallons per minute (gpm).

The grease trap shall be connected to specific plumbing fixtures or drains as required by CCCSD.

Dishwashers shall not be plumbed to a grease trap.

Garbage disposals/grinders shall not be plumbed to a grease trap and are prohibited in any commercial establishment with common food preparation in which the kitchen plumbing is not served by a grease interceptor.

Domestic waste shall not be plumbed to a grease trap.

The inlet pipe to the grease trap shall be equipped with a flow control fitting. The flow control fitting shall be designed so that the flow through the fitting does not exceed the designed input rate of the grease trap. The flow control fitting shall be installed to be readily accessible for inspection, cleaning and maintenance, including in-ground installations. A flow control fitting that has adjustable or removable parts is prohibited.

Systems to add enzymes, microbes, or other materials intended to remove grease from a grease trap are prohibited. The use of such material to treat drain lines served by a grease trap is prohibited. The installation of a grease draw-off valve on a grease trap is prohibited.

The grease trap shall be installed in a location that is readily accessible for periodic cleaning, inspection, and/or sampling.

3. Automated Grease Traps (Grease Removal Devices (GRD) per UPC)

The term “automated grease trap” shall mean a device that is designed to remove grease from wastewater using mechanisms that do not rely on gravity to achieve the separation. All of the requirements specified above for grease traps, except for the prohibition on grease draw-off valves, shall apply to automated grease traps.

The installation of an automated grease trap requires Special Approval from the CCCSD Source Control Section.

B. Other Commercial Businesses

Any commercial establishment that has the potential to discharge waste and/or wastewater which may contain oil, grease, and/or prohibited solids (e.g., vehicle service, heavy or light industrial, car washes, engine washings, etc.) shall have a sand-oil interceptor and/or separator(s) installed, as specified by CCCSD. Standards for sand-oil interceptors and separators are presented below.

1. Sand-Oil Interceptors:

The term “sand-oil interceptor” shall mean a prefabricated or cast-in-place grease, oil, and/or solids removal device with a minimum capacity of three hundred twenty (320) gallons as shown on DWG-38 of the Standard Drawings.

The sand-oil interceptor shall be designed in accordance with the following performance-based standards:

- The interceptor shall have the capacity for a thirty (30) minute retention time, based on the maximum influent flow rate.
- The interceptor shall be designed to reduce turbulence of the flow through the unit.
- The interceptor shall provide for the removal of floatables and settleables from the wastewater to the maximum extent practicable using multiple sedimentation chambers, pipe elbows installed between chambers, and/or other pretreatment design elements.

Alternative designs of sand-oil interceptors may be submitted to CCCSD for consideration. The specifications, operation, and effectiveness for the proposed application of the alternative design must be certified by a licensed professional engineer prior to approval by CCCSD.

All plumbing fixtures which may discharge wastewater containing oil, grease, and/or solids to the sanitary sewer system including, but not limited to, floor drains, service sinks, mop sinks, and drains serving wash areas and/or trash enclosures shall be connected to the sand-oil interceptor.

All domestic waste inlets shall be plumbed separately from non-domestic waste inlets and connected either to the building side sewer downstream of the sand-oil interceptor or directly to the main sewer.

Systems to add enzymes, microbes, or other materials intended to remove grease or oil from a sand-oil interceptor are prohibited without the Special Approval from CCCSD. Use of such material to treat drain lines served by a sand-oil interceptor are acceptable provided that the dosage is appropriate for drain line cleaning and not for the removal of grease from the sand-oil interceptor.

The sand-oil interceptor shall be installed in a location that is readily accessible for periodic cleaning, inspection, and/or sampling. Typical installations of sand-oil interceptors are outside of the building. Proposals for installations within the interior of the building will be considered on a case-by-case basis.

If the sand-oil interceptor is located in an area subject to vehicular traffic, the sand-oil interceptor shall be designed with a minimum of an HS-20 traffic rating. Alternatively, an appropriately designed traffic cover shall be installed over the sand-oil interceptor in accordance with DWG-39 of the Standard Drawings.

A sampling structure shall be installed immediately downstream of the sand-oil interceptor in accordance with DWG-40 of the Standard Drawings.

2. Separators

The term “separator” shall mean a rust/corrosion resistant grease, oil, and/or solids separation device, with a minimum flow rating of twenty (20) gallons per minute (gpm).

The design, specifications, operation, and effectiveness of the separator for the proposed application must be certified by a licensed professional engineer prior to approval by CCCSD.

The separator shall be connected to specific plumbing fixtures or drains as required by CCCSD.

Sanitary waste shall not be plumbed to a separator.

The inlet pipe to the separator shall be equipped with a flow control fitting. The flow control fitting shall be designed so that the flow through the fitting does not exceed the designed input rate of the separator. The flow control fitting shall be installed to be readily accessible for inspection, cleaning and maintenance, including in-ground installations. A flow control fitting that has adjustable or removable parts is prohibited.

The inlet to the separator shall be equipped with a solids capturing device (e.g. screen or basket).

Systems to add enzymes, microbes, or other materials intended to remove grease or oil from a separator are prohibited. Use of such material to treat drain lines served by a separator is also prohibited.

The separator shall be installed in a location that is readily accessible for periodic cleaning, inspection, and/or sampling.

The discharge from a separator shall have a sampling location installed as follows:

- A sample valve shall be installed on the effluent line from the separator for above-ground installations.
- A sampling structure shall be installed on the effluent line from the separator for in-ground installations in accordance with DWG-40 of the Standard Drawings.

3. Hair Traps

Barbershops, beauty salons, pet groomers, animal care facilities, and any other commercial facility that discharges wastewater containing significant amounts of hair and/or fibers shall install a hair trap or other pretreatment device as specified by CCCSD.

4. Clay/Ceramic/Granite/Marble Traps

Classrooms, manufacturing or any other commercial facilities that discharge wastewater containing significant amounts of clay, ceramic, granite, marble or other similar material residuals shall install a trap or other pretreatment device as specified by CCCSD.

5. Dental Practices

Amalgam Separators - Dental practices that generate amalgam wastes shall install an amalgam separator on the effluent line of the vacuum system(s) serving the facility. The amalgam separator shall meet the ISO 9003 standards that are effective at the time of installation. The discharge from an amalgam separator shall have a sampling location installed as follows:

- The effluent line from the separator shall discharge to a floor sink, or,
- A sample valve shall be placed on the effluent line from the amalgam separator.

Plaster Traps - Dental practices that discharge wastewater containing plaster residuals shall install a plaster trap.

9-02 SAMPLING STRUCTURES

A. Sampling structures, or other required sampling locations shall be installed immediately downstream of all grease interceptors, sand-oil interceptors, separators, and other pretreatment devices as specified in this Section and in accordance with DWG-40 of the Standard Drawings.

B. Sampling structures may also be required by CCCSD on a case-by-case basis for the following additional applications:

1. Process waste lines and/or immediately downstream of any pretreatment units (e.g., silver recovery system, pH adjustment system).
2. Sanitary sewer laterals serving a shell building constructed in an area zoned for light or heavy industrial use.
3. A business operation classified by CCCSD as a Permitted Industrial User (reference Title 10 of the CCCSD Code). Contact CCCSD's Source Control Section for specific requirements.

9-03 SEWER CONNECTIONS IN OUTDOOR AREAS

A. General Requirements

To avoid dedicating wastewater collection and treatment capacity to handling of clean water, Title 10 of the CCCSD Code prohibits the discharge of unpolluted water, including, but not limited to rainwater and storm water run-off to sanitary sewers. Standards for the connection of outdoor areas to the sanitary sewer are as follows:

1. Any outdoor area with a drain to the sanitary sewer shall be bermed, raised, and/or sloped to prevent the introduction of storm water.

The outdoor area shall be roofed or equipped with a cover to prevent rainwater from entering the sanitary sewer system. Roof leaders shall not discharge to the sanitary sewer.

2. The enclosed outdoor area shall be secured from public access to prevent the illicit dumping of restricted materials to the sanitary sewer. CCCSD will consider waiving this requirement on a case-by-case basis when securing the outdoor area drain from public access is not feasible.

3. CCCSD may consider an alternative positive storm water control method in lieu of a fixed roof or cover for an outdoor area on a case-by-case basis. The business shall provide CCCSD with detailed design drawings, equipment specifications, and operation descriptions, including standard operation and maintenance procedures, for the proposed alternative positive storm water control method. In all cases, CCCSD has the authority to either approve, or disapprove a proposed alternative positive storm water control method.

4. The installation of a positive storm water control method other than a fixed roof/cover or a complete wastewater recycling system may subject the business operation to the monitoring and reporting requirements of an Industrial User Permit, including the payment of permit fees and additional oversight by CCCSD.

5. Area drains shall not discharge to the sanitary sewer. It is recommended that area drains be discharged to landscape and/or on-site drainage areas.

B. Wash Areas

1. Outdoor wash areas shall be adequately sized to capture all of the wastewater generated by the washing operations performed in that area.

2. All sanitary sewer drains in the outdoor wash area shall discharge to an appropriately designed and sized grease, oil, and/or solids removal device as specified by CCCSD.

C. Trash Enclosures

1. All sanitary sewer drains in an outdoor trash enclosure located on property zoned and/or used for food service facilities shall discharge to a grease interceptor or grease trap as specified by CCCSD and as shown on DWG-41 of the Standard Drawings.

2. All sanitary sewer drains in an outdoor trash enclosure located on property zoned for light/heavy industrial use, vehicle service, or used by any facility that may generate wastes containing oil, grease, flammable liquids, or other restricted materials shall discharge to an appropriately designed and sized grease, oil, and/or solids removal device as specified by CCCSD.

D. RV/Trailer Holding Tank Dump Station

1. The installation of a centralized RV/Trailer holding tank dump station at a commercial location may subject the business to the assessment of additional CCCSD Sewer Service Charges and to the monitoring and reporting requirements of a CCCSD Industrial User Permit, including the payment of fees and additional oversight by CCCSD.

2. The RV/Trailer holding tank dump station drain shall be installed per the requirements of DWG-36 of the Standard Drawings and be kept capped at all times unless being used for the disposal of RV/Trailer holding tank waste. No other types of waste shall be discharged to the drain.

E. Outside Utility Equipment Areas

1. All discharges of polluted water from outside utility equipment areas (roof ventilation systems, boiler blowdown, etc) shall be discharged to a raised floor sink or similarly raised floor drain to prohibit the discharge of unpolluted water (rainwater, storm water run-off) to the sanitary sewer.

2. The discharge of air conditioner condensate to the sanitary sewer is prohibited.

9-04 PARKING STRUCTURES

Standards for the connection of parking structures to the sanitary sewer system are as follows:

A. Drainage from uncovered areas that are exposed to rainwater and/or storm water run-off shall be directed into the storm drainage system. This includes, but is not limited to, trench drains placed at the entrance and/or exit of parking structures.

B. All interior floor drains and/or catch basins which are plumbed to the sanitary sewer shall be connected to an appropriately designed and sized sand-oil interceptor as specified by CCCSD.

C. Sand-oil interceptors for parking structures shall be filled with clean water after installation and refilled with clean water after each cleaning for the purpose of minimizing odors.

9-05 SWIMMING POOLS, SPAS AND FOUNTAINS

A. A swimming pool or spa connected to the public sewer shall be equipped with a two-inch (2") maximum diameter discharge pipe and an approved air gap separation to prevent the backflow of sewage into the swimming pool or piping system.

B. The draining of water from swimming pools, spas and/or fountains to the sanitary sewer shall only be conducted under a special permit issued by CCCSD. The

discharge shall be controlled with a valve and/or the use of an approved temporary connection such as a hose into a sanitary sewer clean-out.

C. The valve for direct connections shall be kept in the closed position at all times unless a permit is obtained to discharge the water.

D. The discharge of pool, spa and/or fountain water is restricted to a flow rate of twenty gallons per minute (20 gpm) or the capacity of the sewer line, whichever is less, in order to avoid surcharge at any portion of the sewer system. A flow restrictor or valve shall be installed on the discharge piping of the system to maintain the required flow rate.

E. Passive overflow drains shall not be connected to the sanitary sewer system, but rather shall be discharged to landscaped areas.

F. Filter Backwash

All filter backwash media shall be prevented from entering the sanitary sewer system.

1. Diatomaceous Earth Filters - Wastewater from the backwash of diatomaceous earth filters shall pass through a solids separation system approved by CCCSD prior to discharge to the sanitary sewer system.
2. Sand Filters - Wastewater from the backwash of sand filters shall pass through a sump or similar device approved by CCCSD to capture any sand prior to the discharge to the sanitary sewer system.

G. Outdoor Shower Areas

1. Any outdoor shower area with a drain to the sanitary sewer shall be bermed, raised and/or sloped to prevent the introduction of storm water.
2. The outdoor shower area shall be roofed or equipped with a cover to prevent rainwater from entering the sanitary sewer system.

- END OF SECTION -