

**STATE OF CONNECTICUT DEPARTMENT OF PUBLIC HEALTH
DRINKING WATER SECTION**

GREASE TRAPS/INTERCEPTORS NEAR PUBLIC DRINKING WATER SOURCES

Effective Date: February 16, 2011

Authority: Section 19-13-B51(d) of the Regulations of Connecticut State Agencies (RCSA) requires that wells meet separating distance to sources of pollution

Applicable Regulation: RCSA Section 19-13-B51(d)

Purpose: The intent of this guidance document is to avoid separating distance violations for public water supply wells that could be created when grease traps are installed under the Connecticut Department of Environmental Protection's "General Permit for the Discharge of Wastewater from Food Preparation Establishments". This general permit requires that grease traps/interceptors be installed no later than July 1, 2011. The intent is also to clarify Section 5(b)(1)(K) of the General Permit which states:

"The grease trap/interceptor shall be located so as to maintain separation distances from well water supplies based on flow at the distances set forth in RCSA Section 19-13-B51d of the Public Health Code. "

Background:

It has come to the Department of Public Health's attention that the installation of grease traps to comply with "General Permit for the Discharge of Wastewater from Food Preparation Establishments" has occurred within the protective sanitary radius of some wells at certain food service establishments, creating a violation of the RCSA Section 19-13-B51d for any potable well. Food service establishments served by on-site wells are more likely to be impacted. These systems are typically classified as Transient or Non-Transient Non-Community Public Water Systems and are under the jurisdiction of the Connecticut Department of Public Health. The potential exists for any drinking water well including private wells to be impacted but this situation is more likely to occur in areas that are served by public sewers with the water being supplied by on-site wells and no water service available from water utility mains and distribution systems.

Definitions:

These definitions are taken from the Connecticut Department of Environmental Protection's "General Permit for the Discharge of Wastewater from Food Preparation Establishments" dated September 30, 2005 which is available at the following link:

http://www.ct.gov/dep/lib/dep/Permits_and_Licenses/Water_Discharge_General_Permits/food_prep_establishment_gp.pdf

"*AGRU*" or "*Automatic grease recovery unit*" means an interior grease interceptor that separates grease from the wastewater by active mechanical or electrical means.

"*Fats, oils and grease*" or "*FOG*" means any fats, oils and grease generated from the food preparation process.

"*Food preparation establishment*" means a Class III and IV food service establishment as defined by Section 19-13-B42 of the State of Connecticut Public Health Code or any other facility discharging fats, oil, and grease above the effluent limits in Section 5(c)(2) of this general permit such as but not limited to restaurants, hotel kitchens, hospital kitchens, school kitchens, bars, factory cafeterias, retail bakeries and clubs.

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“Grease trap/interceptor” means any device or equipment designed to separate fats, oils and grease from wastewater while allowing water to flow through.

Outside passive grease interceptor (grease trap) as a source of pollution

Outside passive grease interceptors (grease traps) are considered sources of pollution under RCSA Section 19-13-B51d. For the outside passive grease interceptor (grease trap) units, the following minimum separating distances as identified in the Public Health Code Sec. 19-13-B51d would apply:

<u>Required Withdrawal Rate</u>	<u>Minimum Separating Distance</u>
Up to 10 gallons per minute (gpm)	75 feet
10 to 50 gallons per minute (gpm)	150 feet
Over 50 gpm	200 feet

If the above-noted separating distances cannot be met then only the installation of indoor automatic grease recovery units (AGRU) should be considered.

There may be situations where the installation of piping as part of the outside passive grease interceptor (grease trap) units would not meet the above noted separating distances. Reduced separating distance scenarios should only be considered for the piping if they meet the criteria detailed in the table below identifying what is considered to be of tight pipe construction. Note that this consideration for the reduced separating distances only applies to the piping since the grease trap itself must meet the separating distances noted above even if considered watertight. The following is a list of reduced separating distances as identified in RCSA Section 19-13-B51(d).

<u>Required Withdrawal Rate</u>	<u>Minimum Separating Distance</u>
Up to 10 gallons per minute (gpm)	25 feet
10 to 50 gallons per minute (gpm)	75 feet
Over 50 gpm	100 feet

In addition to the piping listed in Section 5(b)(1)(G) of the General Permit, Piping would be considered tight if it met the criteria detailed in the document entitled “**Technical Standards for Subsurface Sewage Disposal Systems**” (Revised January1, 2011).

This document is also available on the DPH website at the following link:

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_engineering/pdf/Technical_Standards_2011_Final_Master.pdf

The two tables pertinent to tight pipe are attached to this guidance document under Appendix A. You will note that Table 2A pertains to accepted sewer pipe for public sewer laterals within the sanitary radius of a water supply well including requirements specific to the installation of acceptable sewer piping between the building and the outdoor grease trap. Note the double-starred higher grade piping for this application. Table 2B pertains to accepted sewer pipe for public sewer mains within the sanitary radius of a water supply well.

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Automatic Grease Recovery Unit (AGRU):

If the separating distances noted in the previous section of this document cannot be met for outside passive grease interceptors (grease traps) then only the installation of indoor automatic grease recovery units (AGRU) should be considered. For food establishments opting to install indoor automatic grease recovery units (AGRU), separating distance requirements would not apply unless the well is located within the building. Situations with wells located within buildings would be evaluated on a case by case basis.

Useful References and Links:

Link to Department of Public Health circular letter in regards to grease traps:
(wait for letter to be posted)

Link to General Permit for the Discharge of Wastewater from Food Preparation Establishments” dated September 30, 2005:

http://www.ct.gov/dep/lib/dep/Permits_and_Licenses/Water_Discharge_General_Permits/food_prep_establishment_gp.pdf

Link to fact sheet in regards to Discharge of Wastewater from Food Preparation Establishments:

http://www.ct.gov/dep/lib/dep/Permits_and_Licenses/Factsheets_Water_Discharges/FOGfs10-11.pdf

Link to RESOURCE DOCUMENTS FOR THE DISCHARGE OF WASTEWATER ASSOCIATED WITH FOOD PREPARATION ESTABLISHMENTS:

http://www.ct.gov/dep/lib/dep/water_regulating_and_discharges/industrial_wastewater/resourceguide.pdf

Link to “On-site Sewage Disposal Regulations, and Technical Standards for Subsurface Sewage Disposal Systems”:

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_engineering/pdf/Technical_Standards_2011_Final_Master.pdf

APPENDIX A:

Table 2-A

Accepted Sewer Pipe* for Public Sewer Connections/Laterals within the Sanitary Radius of a Water Supply Well

All sewer lines installed within the sanitary radius of a water supply well shall be inspected and approved by the local director of health or sewer inspector prior to back filling.

USE	PIPE DESCRIPTION	ACCEPTABLE JOINT	REMARKS
<p>Public sewer connections/laterals within the sanitary radius of a water supply well, spring, or domestic water suction pipe.</p> <p>Note: The following minimum distances shall be maintained from wells, springs, or domestic water suction pipes based on withdrawal rates: <10 gpm: 25 feet 10 – 50 gpm: 75 feet >50 gpm: 100 feet</p> <p>Note: Exterior pump chambers, septic tanks, and grease traps/interceptors are sources of pollution and shall be located at least 75 feet from <10 gpm water supply wells. Increased separating distances required for wells with withdrawal rates of 10 gpm or greater (See PHC Sec. 19-13-B51d)</p> <p>Note: Force mains shall use pressure pipe rated for the particular application.</p> <p>**Acceptable sewer pipe between building and pump chamber, septic tank, or grease trap/interceptor effective January 1, 2011.</p>	Cast iron hubless ASTM A 888**	Cast iron split sleeve bolted connector with rubber gasket, MG coupling or equal to 3” wide, heavy-duty stainless steel banded coupling with rubber gasket; Clamp-all, ANACO SD 4000, or equal	Roll-on “donut type” gaskets not acceptable if used within 75 feet of well. Pipe shall be properly bedded in accordance with pipe manufacturer’s specifications, laid in a straight line on a uniform grade
	Cast iron bell and spigot, ASTM A 74**	Rubber compression gaskets	
	Ductile iron ANSI A21.51**	Rubber compression gasket	
	Extra strength PVC pressure water pipe AWWA C 900** (PC 100 psi min.)	Rubber compression gasket	
	Schedule 40 or 80, PVC ASTM D 1785** or ASTM D 2665**	Rubber compression gasketed couplings, Harco Mfg., ASTM D 3139 or equal OR Solvent weld couplings/ fittings using proper two step PVC solvent solution procedure	Use of 3” wide approved stainless steel banded couplings on PVC Schedule 40 ASTM D 1785 is acceptable ABS Schedule 40 is not acceptable Joints shall meet ASTM D 3212 specifications
PVC ASTM D 2241: SDR 21, 17 or 13.5			
PVC ASTM F 1760, Schedule 40** or SDR 35			
PVC ASTM D 3034, SDR 35			
PVC ASTM F 789	Integral rubber compression gaskets or roll-on compression gaskets	Bedding in accordance with ASTM D 2321 for PVC pipe	
PVC ASTM F 679			
PVC, CONTECH A-2026, ASTM F 949	Elastomeric gasket meets ASTM F 477	Joints meet ASTM 3212	
PVC, CONTECH A-2000, ASTM F 949	Gaskets meets ASTM F 477	Joints meet ASTM 3212	
PE, ASTM D 3035, SDR 11 or lower	No joints, Heat butt fused connections ok		

*Accepted sewer pipe list originally prepared as guidance prepared jointly between the Department of Environmental Protection & the Department of Public Health (DPH), and issued to Local Health Departments & Water Pollution Control Authorities. Other pipes can only be considered acceptable if approved by DPH’s Drinking Water Section for applications near public water supply wells, or by DPH’s Private Well Program for all other water supply wells.

Table 2-B
Accepted Sewer Pipe* for Public Sewer Mains within the Sanitary Radius of a Water Supply Well

All public sewer mains installed within the sanitary radius of a water supply well shall be low-pressure air tested in the presence of the design engineer.
 A report of the test results should be submitted to the local director of health.

USE	PIPE DESCRIPTION	ACCEPTABLE JOINT	REMARKS
Public sewer mains within the sanitary radius of a water supply well, spring, or domestic water suction pipe. Note: The following minimum distances shall be maintained from wells, springs, or domestic water suction pipes based on withdrawal rates: <10 gpm: 25 feet 10 – 50 gpm: 75 feet >50 gpm: 100 feet Note: Force mains shall use pressure pipe rated for the particular application.	Cast iron hubless pipe ASTM A 888	Cast iron split sleeve bolted connector with rubber gasket MG coupling or equal or 3”-wide heavy duty stainless steel banded coupling with rubber gasket; Clamp-All ANACO SD 4000 or equal	Roll-on “donut type” gaskets not acceptable if used within 75 feet of well. Pipe shall be properly bedded, in accordance with pipe manufacturer’s specifications, laid in a straight line on a uniform grade
	Ductile iron ANSI A21.51	Rubber compression gaskets	
	Extra strength PVC pressure water pipe AWWA C 900 (PC 100 psi min.)	Rubber compression gaskets	
	Reinforced concrete water pipe, steel cylinder type, not pre-stressed AWWA C-300	Rubber compression gaskets	
Note: Pump stations/structures are sources of pollution and shall be at least 75 feet from <10 gpm water supply wells. Increased separating distances required for wells with withdrawal rates of 10 gpm or greater (See PHC Sec. 19-13-B51d)	Schedule 40, PVC ASTM D 1785 or ASTM D 2665	Rubber compression gasketed couplings, Harco Mfg., ASTM D3139 or equal*	*Use 3”-wide stainless steel banded couplings on PVC Schedule 40 ASTM D 1785 is acceptable ABS Schedule 40 is not acceptable Joints shall meet ASTM D 3212. Bedding in accordance with ASTM D 2321 for PVC pipe Joint meets ASTM D 3212 Joint meets ASTM D 3212
	PVC ASTM D 2241: SDR 21, 17 or 13.5	OR	
	PVC ASTM F1760, Schedule 40 or SDR 35 PVC ASTM D 3034, SDR 35 PVC ASTM F 789 PVC ASTM F 679	Solvent weld couplings/fittings using proper two step PVC solvent solution procedure	
	PVC, CONTECH A-2026, ASTM F 949 PVC, CONTECH A-2000, ASTM F 949	Elastomeric gasket meets ASTM F 477 Gaskets meet ASTM F 477	
	PE, ASTM D 3035, SDR 11 or lower	No joints, Heat butt fused connections ok	

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