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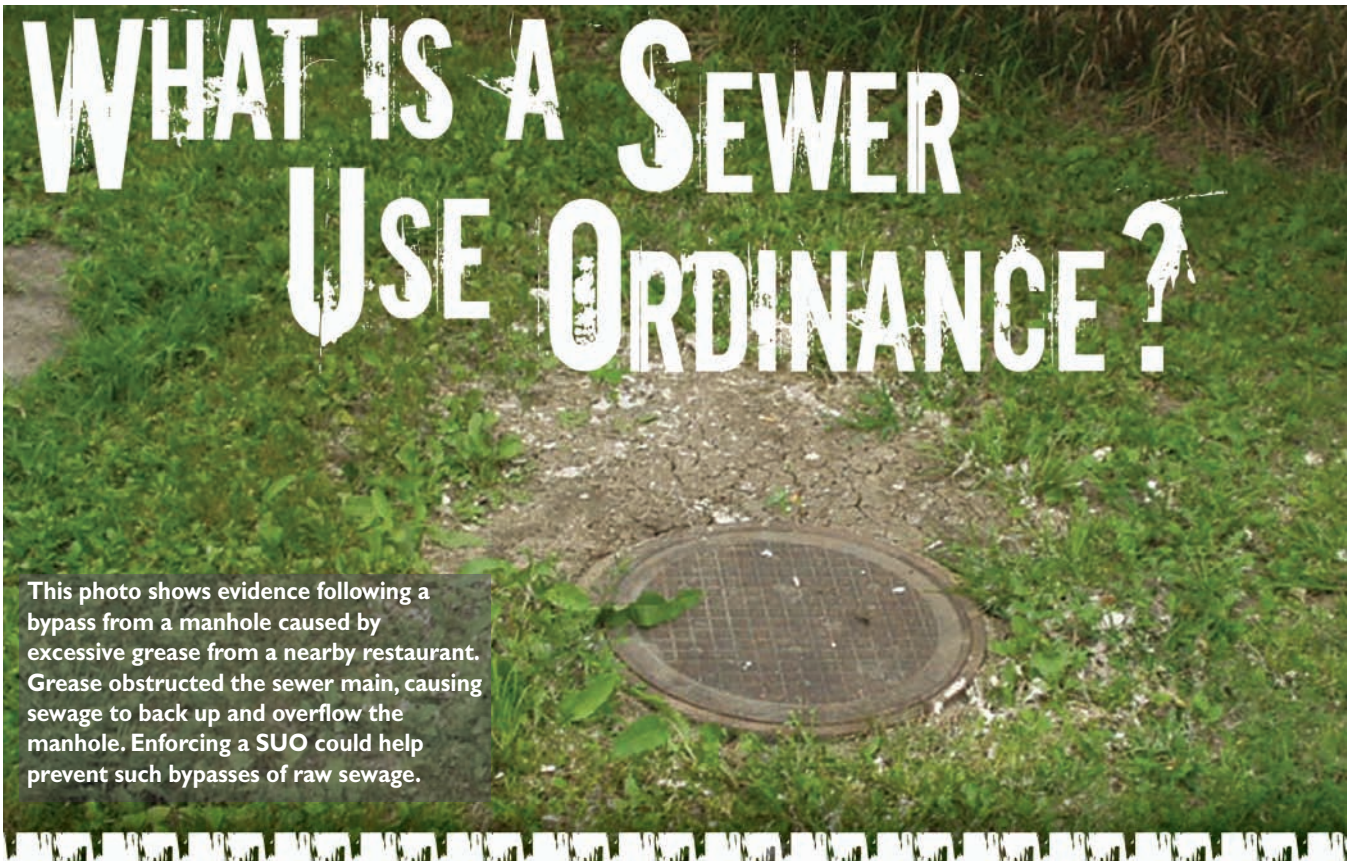
What is a Sewer Use Ordinance?



This photo shows evidence following a bypass from a manhole caused by excessive grease from a nearby restaurant. Grease obstructed the sewer main, causing sewage to back up and overflow the manhole. Enforcing a SUO could help prevent such bypasses of raw sewage.

A Sewer Use Ordinance (SUO) establishes the requirements for using public sewage collection and treatment systems. As such, it regulates the use of both public and private sewers. It also usually regulates most private on-site treatment systems (like septic tanks). Typically it defines the types and strength of wastes that can be discharged to the collection system by imposing limits, especially on industrial wastes. It also establishes criteria for homeowners to connect to the public collection system. Finally, it has a section that provides for enforcement of the ordinance. Thus, it is a legally binding document. Most SUOs do not establish the amount customers are charged each month for sewage service. That is usually delineated in a separate ordinance.

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A SUO can be a very valuable tool to both the utility's governing body and operating staff. Almost all cities in Kansas have one, but occasionally staff is not aware that such an ordinance exists. If a wastewater utility ever applied for a grant, especially during the 1970's to upgrade or build a new treatment system, then that community likely has a SUO as it was a condition for receiving grant money. The purpose of this article is to discuss in detail the components needed in a SUO to make it an effective tool. I encourage wastewater utility managers and operators find their system's copy in the near future and read it as it gives systems a considerable amount of responsibility and authority.

Prohibiting illegal discharges

First and foremost, a SUO must prohibit the illegal discharge of human or animal wastes in an unsanitary manner. This is usually addressed in the first section of the document. This includes discharges onto both public and private property. This section also prohibits discharges to a roadside ditch, storm sewer or any natural outlets. Such discharges typically come from failing septic tank/lateral field systems. They can also originate from homes and businesses connected to the public sewer, but having a broken service line that has not been repaired. This section also prohibits construction of privies (outhouses), cesspools or any other vault to be used for sewage disposal.

A very important part of this first section is a description of the criteria that requires property owners to connect to the wastewater system. This requirement is very important when a new collection and treatment system are first constructed as some property owners may refuse to connect. Property owners are typically given 90 days after official notice to connect as long as public sewers are within 100 feet of their

property line. Occasionally, this distance requirement is increased, but rarely more than 200 to 250 feet. The cost for connecting is the responsibility of the property owner.

Regulating private on-site treatment systems

The next section of most SUOs covers the construction and maintenance of private on-site sewage treatment systems. Typically these are septic tank/lateral field systems, but could also include small, one-cell lagoons that do not discharge. Such systems are limited to those properties that are not in close proximity to public sewers. Property owners are usually required to submit plans, specifications and any other information deemed necessary to obtain a permit to build an on-site treatment system. Several inspections are made during construction. Approval of such private systems usually has a condition that should public sewers become available in the future, connection must be made to the public sewers and the on-site treatment system properly abandoned.

Believe it or not, there is a manhole located under all that sewage! Due to excessive infiltration and inflow, raw sewage is bypassing from the manhole. Utilities should use their SUO to prohibit illegal connections such as roof drains and sump pumps that can hydraulically overload collection and treatment systems.

Regulating how connections are made

SUOs usually have a section that defines how and what can be connected to public sewers. First, connections cannot be made without the utility's approval. Typically, each home or business must have its own private service line. The size, slope, alignment and materials for service lines must be approved by the utility. Construction methods are also usually defined in this section. A very important part of this section prohibits the connection of potential infiltration and inflow sources such as roof downspouts, interior and exterior foundation drains, areaway drains or any other sources of water.

Control of high-strength, objectionable wastes

The next section of most SUOs applies mainly to industrial discharges to public sewers. Since some industrial wastes can present treatment and/or safety problems, they must be regulated. In small cities, these wastes can include whole blood from locker plants, milk from dairies or bottling plants, whey from cheese plants, grain from pet food manufacturing, and even excess grease from restaurants. The following wastes are generally prohibited from being discharged to public sewers:

- Any gasoline, fuel oil or other flammable or explosive liquid, solid or gas.
- Any wastes containing toxic materials in sufficient quantity to interfere with the utility's sewage treatment process.
- Any wastes having a pH lower than 5.5 that could damage structures or equipment, or present a safety hazard to operating staff.
- Solid or viscous substances that are capable of obstructing flow in sewers. The discharge of excess grease from a restaurant for example, is prohibited under this section. SUOs also allow utilities to require the installation and maintenance of commercial grease traps.

This section can also establish numerical limits on the discharge of any wastes to the public collection system. Again this is to prevent damage to structures and equipment, ensure a safe working environment for operating staff and to prevent long-term damage to the biological treatment process. Such limits also help prevent poor quality effluent causing adverse impacts downstream of the treatment facility. Examples of limits imposed by this section include:

- Any liquid or vapor with a temperature greater than 150 degrees F.
- Any wastes containing fats, wax, grease or oils (emulsified or not) greater than 100 mg/L
- Any solids that have not been properly shredded.
- Any wastes containing strong acid pickling wastes or concentrated plating solutions.
- Any wastes containing iron, chromium, copper, zinc or other similar toxic substances.
- Any wastes containing phenols.
- Any radioactive wastes.
- Any wastes with a pH exceeding 9.5

- Materials prohibited which exert or can cause:
  - High concentrations of suspended solids (such as lime slurries, grain, mud, etc.)
  - Excessive discoloration (such as dyes)
  - Unusual BOD in such quantities as to constitute a significant loading on the treatment facility. Most SUOs limit discharged waste BODs to 300 mg/L, but quantity of the wastes must also be taken into consideration. Another consideration is if the daily flow from any single customer is greater than two percent of the total average flow of the system. Such instances can be reviewed on a case-by-case basis by the utility. This section allows discretion to require the discharger, at their expense, to provide some form of pre-treatment to reduce the BOD and/or TSS of the waste stream before discharging to the system.

If any discharges to the collection system contain the aforementioned substances or possess such characteristics, the utility has four options:

- Reject the waste, requiring the owner to find other means of proper disposal.
- Require pretreatment to acceptable levels before discharge to the system.
- Require control over the quantities and rate of discharge.
- Require payment to cover the added costs of handling and treating wastes not covered by the utility's existing sewer service charge for collecting and treating typical residential wastewater.

A SUO should also allow the wastewater utility to require construction of a control manhole to facilitate sampling of wastes from a specific customer. Again, this is usually a business or industry. Typically, the cost to construct such a manhole is the responsibility of the customer. The purpose of such a manhole is to allow sampling of wastewater from a specific customer, prior to their waste stream mixing with wastewater from other customers. Without such a control manhole, it is impossible to determine if a customer discharging high-strength wastewater is in compliance with the numerical limits mentioned previously.

Other sections of most SUOs prohibit willful or negligent damage to any part of the public sewer system. This also includes tampering with any part of the system. Any person violating this section is subject to disorderly conduct charges. A section authorizing employees, bearing proper credentials and identification, the right to enter into and upon private property for purposes of inspection, observation and testing is also included in most SUOs.

Finally, the last section of most SUOs provides for enforcement of the rest of the ordinance. The utility is required to provide written notice to a customer of any violation and allow a reasonable amount of time for correction. Any customer who continues to violate the ordinance beyond the deadline established in the written notice, is guilty of a misdemeanor and subject to a fine. The fine is usually not a large amount, typically $100. However, the violator is subject to a $100 fine on a daily basis, with each 24-hour period constituting a separate offense. Hopefully this part of the SUO will never be needed. The fact that the utility has authority to issue fines is usually enough motivation to get most customers to comply.

I again urge wastewater utility managers to locate a copy of their Sewer Use Ordinance, and read it. It can be a very helpful document if ever needed. KRWA has posted a model ordinance on the KRWA Website at www.krwa.net under "Technical Assistance" and then "Water and Wastewater Systems". Please also contact me at jeff@krwa.net for other comments or questions.

Jeff Lamfers began work for KRWA in November 2008. Jeff has more than 30 years of regulatory experience in the oversight and operation of water and wastewater systems with the Kansas Department of Health and Environment. He is a graduate of the University of Kansas with a degree in Environmental Studies with an emphasis in aquatic biology.