'By Charlie Schwindamann, Wastewater Tech

Sewer Ordinances Are the "Operating Rules" for Wastewater Systems

There's a large leak in the collection system here because of the amount of smoke that is escaping. It was later corrected as part of a large collection system improvement project.

Sewer Use Ordinances are important to operators to help maintain a well-operated wastewater system. The Ordinances are the rules, or wastewater permits, that need to be followed by the utility. Most sewer use ordinances are about eight pages in length. While all sections of the ordinance are important, I want to review several of the sections that seem to cause the most issues with systems.

First, the ordinance should be reviewed annually to ensure it still has the intended purpose, usually to provide direction for operating the collection and treatment system in the utmost efficient way possible. While reviewing your ordinance, write down questions and ask your attorney for interpretation; in many cases, it may be modified to be more understandable.

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This photo shows one of many types of taps that are utilized by wastewater systems to provide a watertight, secure seal to the sewer main.

Wastewater ordinances should have a DEFINITIONS section; this is typically one of the very first sections of the ordinance. This will define building sewers, BOD, TSS as well as provide a description of normal BOD, TSS, and pH as well as other parameters. BOD and TSS will usually be described as "normal" at less than 300 mg/l, although the normal is between 200- 250 mg/l. The 300 mg/l means any reading over that will most likely require pretreatment to meet the less than 300 mg/l to allow the facility to properly treat the wastewater. The pH falls in the 5.0 to 9.0 range for normal in most ordinances and anything out of that range may require pretreatment as well. High BOD and TSS can come from many places such as local locker plants, schools, and restaurants. Locker plants dispose of blood that is very high in BOD at more than 100,000 mg/l. Even small amounts can affect the wastewater treatment facility to meet permit limits, especially those with lagoon type treatment. The pH can be raised or lowered by the use of acids or alkali sometimes used in metal preparation for painting.

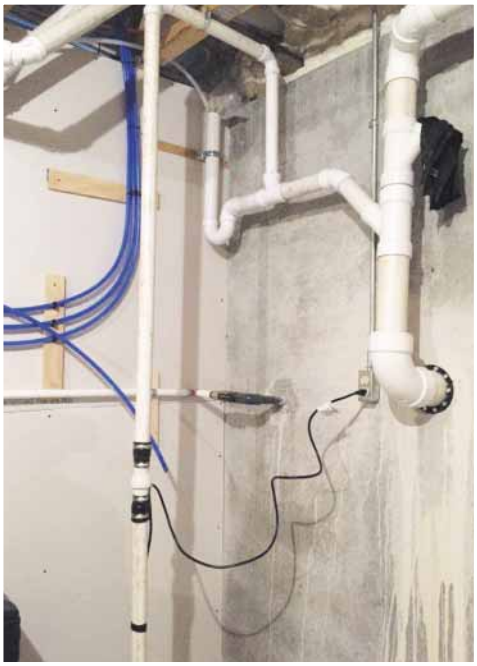
Service connections to sanitary sewers are usually required when a sanitary sewer is within 100 feet of the property. I have seen some to be within 150 feet of the property. This is not from the building to be served; it is measured from the PROPERTY line to the sanitary sewer. This is often confused by a potential customer when they purchase a large property and the building to be served is quite a distance from the sewer main.

Service connection fees and costs are usually contained in the wastewater ordinance. If the cost to make the connection is more than the ordinances stated connection fees, it is time to review and change the ordinance. This is one reason why the ordinance should be reviewed yearly. Some systems have opted to incorporate fees as "actual cost" depending on who is making the connections. If the property owner is required to pay for all costs, a standard fee is more likely to be used. If the city provides the taps and excavates the lines, then the "actual cost" is sometimes the basis for the charges.

For service connections and replacement, the question as to who is responsible for what frequently arises. This is often when the tap is broken and the question is who pays for what. In most cases, the system states they are only responsible for the pipe, and the customer for all else. In older systems, the connection was a tee or wye. In such cases, it usually goes to lawyers to decide. This can be clarified. I recommend the system maintain one foot of service line from the main, which is easy to measure and should be readily defined. I also recommend that if it can not be readily defined by your ordinance that the cost for repairs be shared equally by the property owner and the system for better public relations. For service connections to existing mains, some systems require specific apparatuses to be used to make the connections and either provide those to the contractor or inspect the tap connections to ensure the proper apparatuses are used. Some systems make the service tap to ensure proper installation.

I have been contacted several times with the question of what can be done when the homeowner has a sewer back up and sewage overflows onto their property. Very few sewer ordinances address this issue and those that do have to provide a written letter to the property owner with a date to have the issue corrected. The process can require weeks – and sewage is being discharged on the ground.

I have found that most systems also have a nuisance ordinance that covers this type of issue and immediate action can be required. The nuisance ordinance is usually for trash in yards, dangerous structures – those types of things, but also includes "excrement" which is what a sewer backup discharging to the ground would be considered. When I was working for the City of Marysville, we had a customer with this issue and they stated they could not afford a plumber. The city agreed that the city would pay for the plumber and then add it to the customer's bill until paid. The customer agreed and a short contract/agreement was written and signed by both parties. I recommend that immediate repair become part of the sewer use ordinance, or at least referenced for a guide to proper ordinance such as "See/refer to Nuisance Ordinance 123, section 1 part b".



This photo shows how the piping from a sump pump is connected to the sanitary sewer. One sump pump can add more than 2,300 gallons of inflow per hour of operation.

KRWA has smoke tested many systems. The most frustrating to me is when we find no major issues with the collection system, even after closed-circuit televising has been completed, and the system still has significant inflow and infiltration.

I have no doubt that the excessive inflow is due to storm sewer sump pumps connected to the customers' sewer line and then the sanitary sewer system. These connections are prohibited by all sewer use ordinances. I realize it is a public relations headache to try to enforce this part of the ordinance, but in my opinion, it is probably the most important part of the entire ordinance to enforce. Just a few of these connections can cause a system's failure to meet discharge permit limits. They can cause backup into other customers' homes or businesses, which can result in lawsuits.

Charlie Schwindamann has been a Wastewater Tech at KRWA since September 1999. Charlie holds Class II Water and Class I Wastewater Operator certification. He has also served as a member of the Marysville, Kansas city council.