Preventing Water Pollution

Proper Handling of Fat, Oils, and Grease

Water Pollution Prevention Tips
for the Food Service Industry

Why is Water Pollution Prevention Improrant?

It's in everyone's best interest to reduce the amount of chemicals, hazardous substances and food wastes that flow into the sewer system. It's good for the earth, it's good for our pocketbooks, and it's good for our communities. Nebraska's waterways are fragile environmental systems that need our care and protection. Over the last 50 years, local governments and businesses have made tremendous investments in sewage treatment to keep pollution out of lakes, streams and rivers. But just because the facilities are in place doesn't mean we can ignore our responsibilities toward our waterways. It's critical that in homes and businesses we pay attention to the impact of our actions on water quality.

Sanitary Sewers

The fundamental reason we have to be careful about what goes into sanitary sewers is that even the best sewage treatment facility has limitations. Nebraska's sewage treatment systems are designed primarily to handle sanitary or domestic sewage. Bacteria provide "treatment" by breaking down organic matter in the water. We need to remember that:

- Treatment facilities can't treat many chemicals, so the substances may pass untouched into the environment. This may threaten fish, wildlife and vegetation, as well as people using polluted water sources for drinking and recreation.
- Some chemicals can destroy the bacteria in the treatment process – leaving the facility unable to ferform its designed operation. This not only endangers the environment – it means tremendous expense to community ratepayers.
- If the facility receives too much of one type of waste at a time, it will not be able to process the organic matter. Again, this creates environmental hazards, and the community may need to invest in greater treatment capacity.
- Some chemicals in the sewage treatment system put system employees at risk. Exposure to chemicals can cause health problems, and some substances may cause explosions and fires.

How the Food Service Industry can Affect Sewer Systems

Every commercial cooking operation produces waste products of fats, oils and grease (FOG). On a small scale, we all know what can happen when heated grease congeals in kitchen pipes – the pipes plug up, blocking passage of liquid and creating unsanitary backups into the kitchen.

On a larger scale, the same thing can happen to sewer systems. Most blockages in wastewater collection systems can be traced to FOG. The result can have damaging effects throughout the system, creating sewage spills, manhole overflows or back-ups into homes and businesses. Too much grease and oil also can create the need for increased maintenance of sanitary lines, increasing costs to all customers.

Restaurant personnel often use chemicals during clean-up that can impact the sewage treatment system – and ultimately lakes, streams or rivers. It's always best to reduce chemical use, and make sure those chemicals you do use are friendly to the environment.

Storm Drains

In all Nebraska communities, storm drains flow directly into waterways without passing through a treatment plant. Anything in the storm drain – from leaves to motor oil – can contribute to water pollution.

Cleaning chemicals washed into storm drains and storm sewers can also impact water quality, as can debris from outdoor eating areas. Leaves,
grass and motor oil from parking lots can also be washed into the storm drains and have a negative impact on rivers and streams.

Grease and oil escaping through the exhaust system will be collected in rain water and carried into the sewers and waterways.

How Can Pollution Prevention Help Businesses' Bottom Line?

Many businesses find that taking steps to prevent pollution – including keeping FOG materials out of the sewer system - saves money.

- Keeping FOG out of your drains will reduce the likelihood of grease related plumbing problems.
- An establishment causing a FOG spill to the storm sewer may be eligible for fines.
- Fats, oils and grease can often be recycled, reducing disposal costs.
- Some agencies will bill a business for excess sewer line maintenance if the agency can tract the source of the problem to that establishment.
- Ultimately, we all pay if we need to build more treatment system capacity. We all save by keeping materials out of the sewer system.

- Post "No Grease" signs above sinks and in front of dishwashers. Frequent reminders can help educate employees about the importance of keeping FOG out of sinks and drains.

- Dry wipe pots, pans and dishes. Get as much oil and grease as possible off the cookware before it hits the water. Send it into the trash for disposal in the solid waste system.

- Recycle waste cooking oil and other food wastes. Call your local sewerage agency for businesses in your area that collect and recycle cooking oil.

- Use lower water temperatures. Water over 140 degrees will dissolve grease, sending it down the drain in wastewater. Inevitably, this grease will congeal – either in your pipes or in the public sewer system.

- Use a three-sink dishwashing system. Design a series of sinks for washing, rinsing and sanitizing with a 50-10 ppm bleach solution. This system allows you to use water temperatures below 140 degrees, lowering your water heating cost, and better controlling the amount of FOG and food wastes that are washed down the drain.

- Install and properly maintain grease traps and interceptors. State and local laws require restaurants to install and maintain grease traps, interceptors or both, depending on the size and type of the food service. Contact your local health department or your local sewerage agency to find out local requirements and to make sure you are in compliance with all regulations.

Some Rules for Maintenance

Clean under sink grease traps weekly. If grease traps are more than 50 percent full after one week, increase how frequently you clean and maintain the trap. You also may want to consider ways to reduce the amount of FOG reaching the sink drain.

Have interceptors cleaned at least twice a year. It may be necessary to have interceptors cleaned more often. If more frequent cleanings are needed, consider installing a better trap or an interceptor with larger capacity or using other techniques to keep FOG out of the drains.

Make sure maintenance is done correctly. At least one employee in each facility should be knowledgeable about cleaning procedures for traps and interceptors. That employee should observe maintenance contractors, haulers and recyclers to make sure all procedures are carried out fully and effectively.

Keep grease dumpsters and storage containers an adequate distance from storm drains. The farther away you keep these units from a storm drain, the more time there will be for someone to clean up a spill or leak before it reaches the sewer system. Do not use materials like kitty litter to absorb grease or oil. This can be washed into the sewer system. Use absorbent pads or clothes to clean up any spills or leaks.

How to Keep FOG out of the Sewer System

- Keep kitchen exhaust filters clean. Grease and oil escaping through the exhaust system can accumulate on the roof, ultimately getting washed into the storm sewers. Establish a routine schedule and a record-keeping system for cleaning exhaust filters.

- Make sure that wastewater from washing is routed into the interceptor, where oil and grease can be collected before it reaches the sewer system.

- Be cautious about outside cleaning. Do not conduct outside cleaning activities where wastes can flow into storm drains.

- Don't throw wastewater down storm drains. Train employees and contractors to dispose of wastewater appropriately. Water used for mopping, for carpet cleaning and for washing hood filters should be disposed of through the sanitary sewer system – never in storm drains. To protect the municipal treatment system, limit cleaning chemicals and use the least hazardous products available.

For more information on the City of Beatrice's Stormwater Management Plan, contact:

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