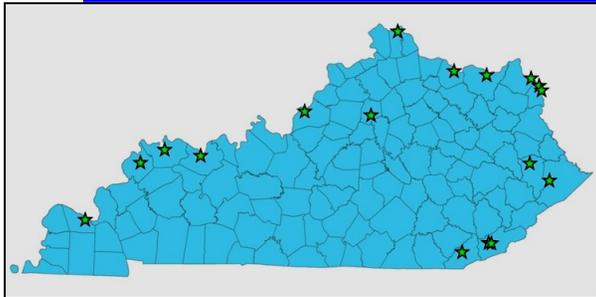
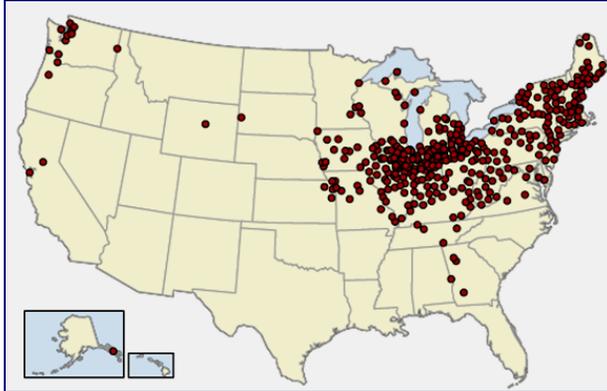


## We are not alone.

The City of Ashland is not alone. There are hundreds of communities across the nation that have combined sewers and more than a dozen communities in the State of Kentucky.



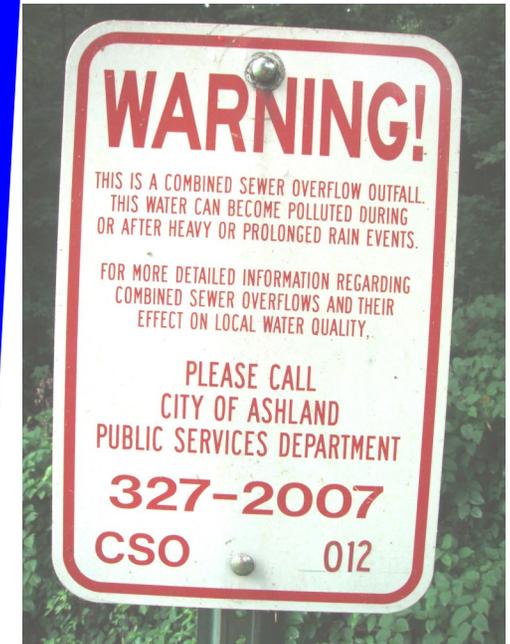
In order to comply with the current regulations, the City of Ashland is navigating through numerous obstacles like costly infrastructure projects, increased user rates, new operational and reporting requirements and disruption to existing City facilities.

Nearly all of these communities are experiencing similar obstacles on our path to compliance with the Clean Water Act.



### Department of Engineering and Utilities

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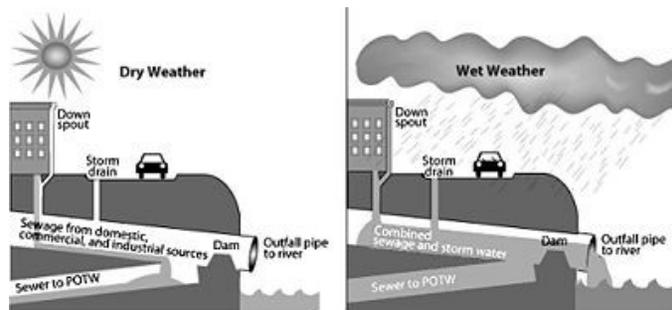
## Combined Sewers Fact Sheet

## What are combined sewers?

Combined sewers systems are sewer systems that carry both domestic, commercial and industrial wastewater; and storm water. Combined sewer systems were the norm for the mid- to late-19th century before centralized wastewater treatment became the solution to protecting public health of the increasing populations located in urban areas. If you have walked the streets of Philadelphia, New York or Paris, you have most likely walked over large, complex combined sewer systems without realizing it.



Originally, combined sewer systems discharged continuously into the streams and rivers at various outfalls along the system to minimize the contact between people and waste. The majority of the combined sewer systems in Kentucky are located along the Ohio River because most of these river towns are older. Also, some larger cities opted for combined sewers because they were the cheapest option. Now, separate sanitary sewers are the standard for transport of wastewater to a wastewater treatment facility. Storm water is conveyed by separate systems.

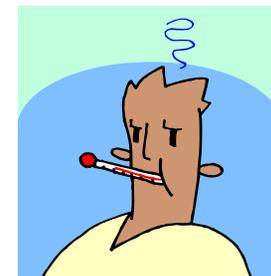


## What is a combined sewer overflow?

After centralized wastewater treatment became required for cities with combined sewer systems, adjustments were made that directed the dry weather flow to the treatment plant. However, the surface water outfall pipes were left in place with diversion structures such as weirs and dams to create “relief” points during times of increased precipitation or heavy rain. If the wastewater flow is too much for the sewer system to handle then wastewater will spill over the diversion structures and discharge directly to creeks or streams. These types of discharges are called combined sewer overflows, or CSOs (see the graphic above). Without the combined sewer outfall pipes, the wastewater and extra storm water would overwhelm the system and cause backups in basements, streets and other areas of public use. The City of Ashland has 8 permitted combined sewer outfalls to protect the public from contact with this waste.

## What are the risks associated with the discharge of raw sewage?

Raw sewage can carry a variety of human bacteria and viruses. Depending on the amount and concentration of the sewage and how long people are exposed to it, these bacteria and viruses can cause illnesses. Combined sewer overflows also contain a variety of chemicals, oils and other wastes which may cause harm to our rivers and streams. Most combined sewer overflow events occur during precipitation and are therefore diluted by rainwater and river water, but the potential for



health and environmental hazards is still present. The people most likely to be affected are the people who use the creeks and rivers for recreation.

There are water quality standards in Kentucky regulating the amount of certain bacteria in the water. When these standards are exceeded, the Division of Water, in conjunction with the Department for Health Services, issues advisories to alert the citizens of potential health hazards.