

The City of Portland's Long-Term Control Plan

Purpose and Need to Improve our Wastewater System

The importance of public water systems:

Excerpts from *Liquid Assets: Community Toolkit Outreach Guide*

Cities and towns across America rely on one basic resource—water. Modern civilization and life itself would be impossible without it. **Water infrastructure is vital for disease and fire protection, basic sanitation, economic development and quality of life.** *Largely out of sight, out of mind, water infrastructure is aging and needs immediate attention at the local and national level.*

Water infrastructure consists of three complex and interconnected systems. One system cleans and delivers drinking water; another collects, treats, and reintroduces wastewater back into the watershed; and the third (sometimes combined with the wastewater system) transports stormwater.

Drinking Water

Every community's safe drinking water relies on having a clean watershed—an area of land where water from rain or snowmelt drains downhill into a body of water.

Wastewater

Once water is used, it contains pollutants that must be removed and treated before release. Historically, Americans counted on its streams, rivers, and even the ocean to dilute and carry away their waste. Today, throughout the country, multimillion-dollar wastewater treatment plants clean wastewater by removing solids, settling out microscopic particles, decomposing toxic materials, and disinfecting. When effluent (treated wastewater) is released back into the watershed, it combines with other waters that households and businesses. It is an endless hydrologic cycle.

Stormwater

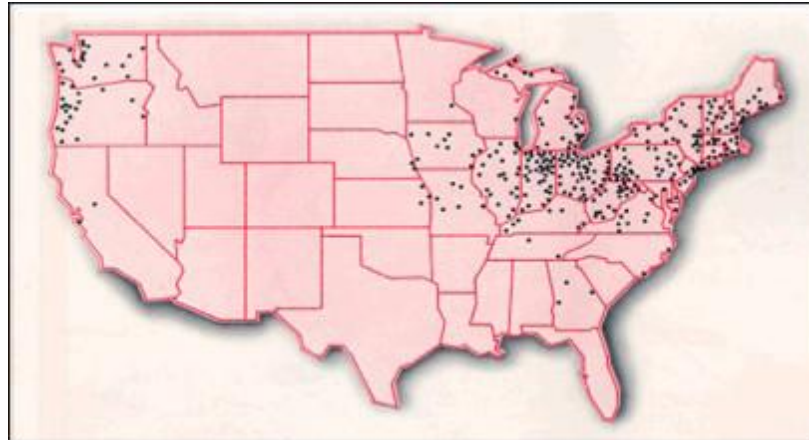
Communities must also manage rainwater to minimize flooding. Because concrete and other impervious surfaces prevent water from naturally soaking into the land, American cities engineered ways to transport stormwater away from population centers. In a combined system, wastewater and stormwater travel through the same pipes. When overloaded, these systems were designed to overflow directly into our waterways.

What is a CSO?

Combined sewer systems (CSS) are sewers that are designed to collect rainwater runoff, domestic sewage, and industrial wastewater in the same pipe. Most of the time, combined sewer systems transport all of their wastewater to a sewage treatment plant, where it is treated and then discharged to a water body. During periods of heavy rainfall or snowmelt, however, the wastewater volume in a combined sewer system can exceed the capacity of the sewer system or treatment plant. For this reason, combined sewer systems are designed to overflow occasionally and discharge excess wastewater directly to nearby streams, rivers, or other water bodies.

These overflows, called combined sewer overflows (CSOs), contain not only stormwater but also untreated human and industrial waste, toxic materials, and debris. They are a major water pollution

concern for the approximately 772 cities in the U.S. and over 108 communities in the State of Indiana that have combined sewer systems.



Environmental Protection Agency (EPA) – Map of CSO communities in the United States

Why did the City of Portland create a Long-term Control Plan?

To sustain water resources, communities practice “asset management,” a planning process to maintain and manage existing and future infrastructure. It would be impossible to dig up everything that is already in place all at once, and it is not usually necessary to do so; therefore, communities must make long-term plans for repair, renewal, and rehabilitation. The Environmental Protection Agency's CSO Control Policy, published April 19, 1994, is the national framework for control of CSOs. The Policy provides guidance on how communities with combined sewer systems can meet Clean Water Act goals. In order to assist EPA in meeting its goals in Indiana, the Indiana Department of Environmental Management (IDEM) has prepared a workplan, incorporating EPA's targets and priorities as relevant to conditions in Indiana.

The City of Portland, as a CSO community, was mandated to develop a Long-term Control Plan to eliminate CSOs. To adhere to this plan, the City of Portland must complete a series of phased sewer separation projects. The Agreed Order signed with the Indiana Department of Environmental Management sets milestones that mirror the schedule in the approved Long Term Control Plan. Penalties for failure to meet the Agreed Order will be assessed if the City does not comply.

How does Sewer Separation work?

Sewer separation is the practice of separating the combined, single pipe system into separate sewers for sanitary and storm water flows. In a separate system, storm water is conveyed to a storm water outfall for discharge directly into the receiving water. Based on a comprehensive review of a community's sewer system, separating part or all of its combined systems into distinct storm and sanitary sewer systems may be feasible. Communities that elect for partial separation typically use other CSO controls in the areas that are not separated.

Positive impacts resulting from sewer separation include: reduction or elimination of basement and street flooding; reduction or elimination of sanitary discharges to receiving waters; decreased impacts to

aquatic species and habitat; decreased contact risk with pathogens and bacteria from domestic sewage in the receiving water; and relief from CSO regulations.

Why has this become an issue now?

Sewer overflows were traditionally considered an acceptable practice when sewer systems were first being constructed throughout our nation as a way to handle wet weather backup. This was long before current environmental regulations and advancements in technology and engineering. Due to the importance of Clean Water, for the health and wellness benefits, the EPA has worked diligently on legislative actions and education efforts to address the CSO issues across the country.

What are the benefits to our community?

- Completing projects in the Long-Term Control Plan will ensure that the City of Portland remains in compliance with the Agreed Order with IDEM.
- Completing the required sewer separations will reduce pollution in our waterways and will provide a healthier community.
- Completing the projects will address water quality for our families and future residents.
- Without adequate water and wastewater infrastructures, a community will suffer economically.
- By ensuring the City of Portland has the necessary infrastructure, then economic development can occur so that jobs could potentially come to the community.
- Completing projects will minimize overflows, basement flooding, and sewer backups which could potentially increase property values and the quality of life for residents and businesses.

What is the cost?

The City of Portland's Long-Term Control Plan has approximately \$30 million in wastewater system improvements that are committed over a 20 year period. The City of Portland has and will continue to investigate potential sources of funding, but rate increases are a possibility for several reasons: 1) Funding is needed to complete mandated projects in compliance with the schedule of the IDEM Agreed Order, 2) If federal or state funding is received, local match funds will be needed, 3) A revision of the rate structure will ensure all customers are paying fair and equitable rates to maintain and operate the necessary infrastructure system for the community.

***Through our treatment process, we strive to make tomorrow's water quality,
the best possible for our future generations.***

Sources:

US Environmental Protection Agency: National Pollutant Discharge Elimination System (NPDES)

Indiana Department of Environmental Management (IDEM)

Liquid Assets: Community Toolkit Outreach Guide, Penn State Public Broadcasting