Summary

Report to the Legislature - January 15, 2016

Wastewater infrastructure needs and capital costs

What is the issue?

About 75% of the wastewater generated in Minnesota by households and businesses is collected in sanitary sewer systems, flows to municipal wastewater treatment plants, and is treated and discharged to the environment.

Many of the state's aging wastewater treatment facilities and sewer systems must be repaired and upgraded to provide for a growing population, accommodate business and industrial needs, and meet new water quality standards.

Why is it important?

Wastewater treatment protects and improves Minnesota's water quality and safeguards human health. Sewage treatment reduces or eliminates organic matter, excess nutrients, disease-causing organisms, and other pollutants in wastewater before it's released into the environment.

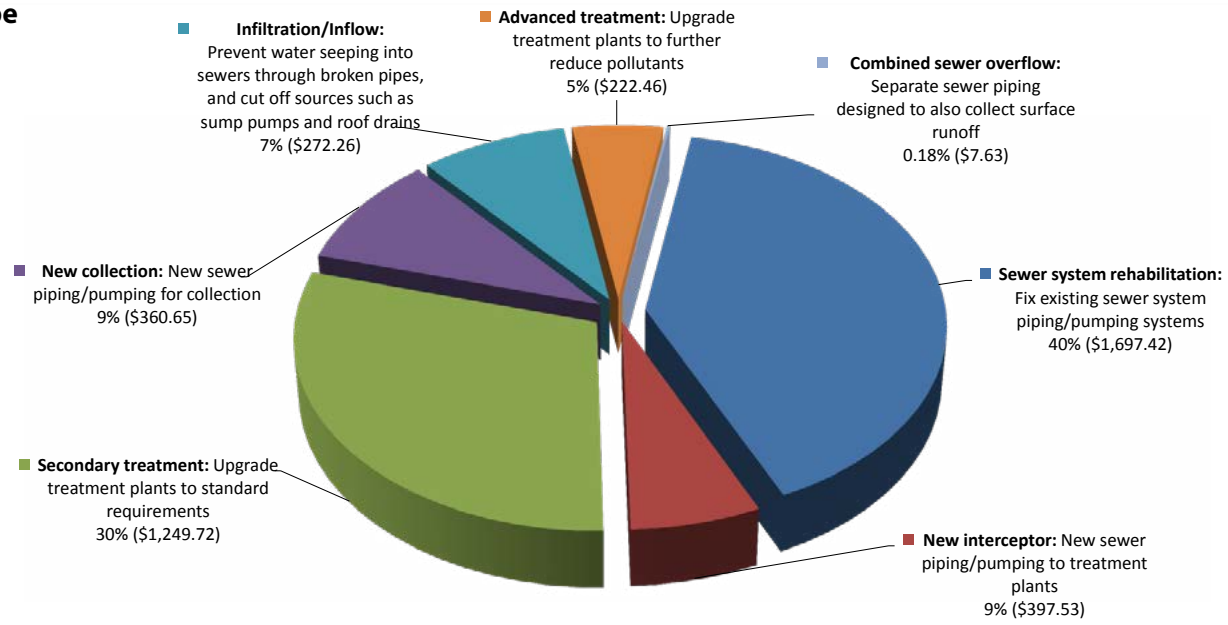
Inadequate wastewater treatment capacity hinders economic growth and development. Many industries — such as food processing, paper manufacturing, and power generation — depend on access to clean water. If a community's wastewater treatment is insufficient, its companies may incur extra costs or relocate to where the water infrastructure is reliable.

Statewide infrastructure needs

In response to 2015 MPCA survey, Minnesota's communities identified more than **1,300 needed wastewater treatment and collection system projects, costing more than $4.2 billion**.

These projects are necessary to rehabilitate, expand, and improve wastewater sewer systems and treatment facilities and to extend sewer systems to newly developed or existing unsewered areas.

Cost by type of project ($million)



The MPCA's Project Priority List identifies projects to be built in the next five years for which municipalities are seeking state funding; the current lists identifies 293 projects totaling $1.4 billion. The MPCA has ranked the projects based on environmental and public health criteria, so that state loan and grant funds from the Minnesota Public Facilities Authority are targeted to the highest priority projects.

Community challenges

Project affordability — Wastewater treatment systems are expensive for communities to build, operate, and maintain. Residential sewer charges vary widely between communities for a variety of reasons, many of which are beyond a community's control: Different receiving water standards and discharge limits, advanced treatment needed to meet specific water body protection and restoration goals, and economies of scale that generally lead to higher costs per household for small communities. Most financial assistance is provided in the form of low-interest loans, with limited grant funds available based on per household affordability criteria.

New receiving water standards — Increasingly, wastewater treatment facilities are charged with removing more contaminants from discharges to address downstream water quality impairments. These new discharge limits, which are necessary to meet state water quality goals, are prompting cities to improve treatment facilities and add costly advanced wastewater treatment methods.

Age of collection sewers — Sewers installed more than 50 years ago are often beyond their useful life and do not perform at current standards. The age and condition of sewer systems varies widely between communities. Minnesota sewer systems at 50+ years:

- 83% of the Minneapolis and St. Paul system
- 17% of systems in suburban metro communities
- 30% of systems in Greater Minnesota

Age of treatment facilities — Major components of wastewater treatment facilities have an expected useful life of 40 years. As these structures deteriorate, effectiveness declines, operating and maintenance costs increase, and the potential grows for permit violations and unintended discharges. In Greater Minnesota, 16% of treatment facilities are more than 40 years old. Without reconstruction projects, that percentage would reach approximately 30% in 10 years.

Full report

Future Wastewater Infrastructure Needs and Capital Costs:

https://www.pca.state.mn.us/sites/default/files/lrwq-wwtp-1sy16.pdf

Contact person

Bill Dunn

651-757-2324

bill.dunn@state.mn.us