

Lansing's CSO Control Program

www.LansingCSO.com

CSO Hotline: 517.394.5566

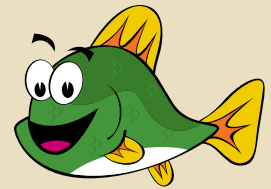


Virg Bernero, Mayor



WORKING TOWARD A
**CLEANER
GREENER
LANSING**

It's Working!



So many improvements have already been made, and when Lansing's Combined Sewer Overflow (CSO) Control Program is completed in 2020, we will have...

ELIMINATED

1.65 billion gallons
per year of combined
sewage overflow

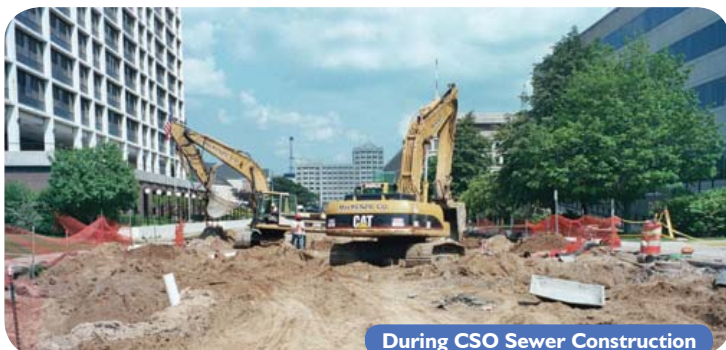
PROTECTED

the Grand and
Red Cedar Rivers,
and the Great Lakes

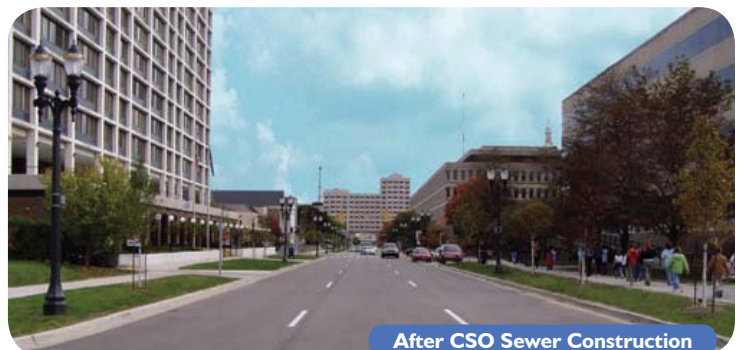
REVITALIZED

hundreds of miles
of sewers, water
mains, and roads

The CSO Control Program is a 30-year (1990-2020) sewer separation plan developed by the Lansing Public Service Department in conjunction with local engineering consultants. In 1994, Lansing won the second place national award from the U.S. EPA for CSO Control. In 1998, and again in 2007, independent engineering consultants reviewed and further supported Lansing's CSO Control Plan. This brochure provides information about the Program and its many benefits.



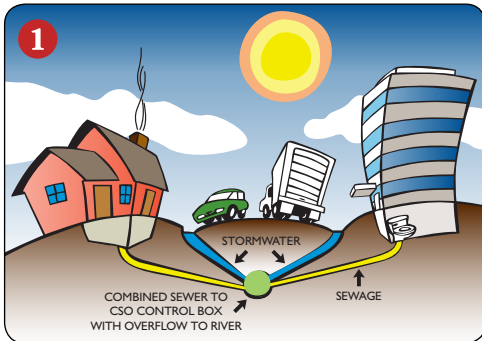
During CSO Sewer Construction



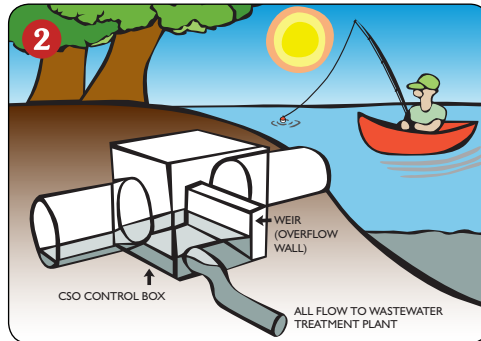
After CSO Sewer Construction

Lansing's CSO Solution

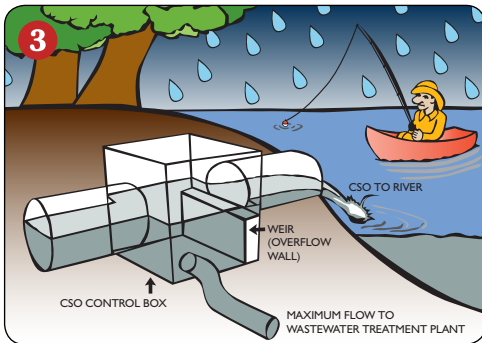
After extensive study and review in the late 1980s, sewer separation was determined to be the most cost-effective solution to prevent Lansing's combined sewers from overflowing. **The graphics below depict what happens during dry and wet weather in a combined sewer plant system, and how a separated sewer system works.**



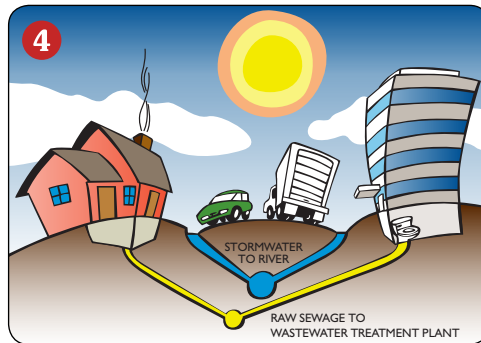
Combined Sewer System



Dry Weather - No Overflow



Wet Weather - CSO to River



Separated Sewer System

- 1 Combined sewer systems carry both sanitary sewage and stormwater in a single pipe.
- 2 During dry weather, all flow is directed to the wastewater treatment plant (WWTP).
- 3 Excess flow during wet weather is discharged to our rivers. To prevent this, the City is separating the combined system by constructing new sanitary sewers.
- 4 In the new separated sewer system, stormwater is discharged to local waterways using the existing (formerly combined) sewers. The new sanitary sewers transport sewage to the WWTP for treatment prior to discharge to the Grand River.

During the course of a 30-year program, it is easy to lose sight of the goals we set out to achieve. In the time required to complete this important undertaking, a new generation will be born, raised, graduated, married and ready to start families of their own. **As a reminder, the overall goals and resulting benefits of Lansing's CSO Control Program include:**

Accomplish the Plan: Complete approved activities to meet the legal requirements in the City's CSO Control permit.

Environmental Protection: By the end of the CSO Program, an average of 1.65 billion gallons of combined sewage will be prevented from entering the Grand and Red Cedar Rivers every year! This improves water quality for Lansing's citizens, visitors, downstream communities, and the Great Lakes.

Long-Term Service: A new sanitary sewer will last 80+ years. This will meet the community's needs for generations to come!

Do More for Less: Minimize total project cost by coordinating CSO work with other infrastructure projects.

New Streets: Road resurfacing and related improvements accompany CSO infrastructure upgrades. Our neighborhoods look better, and our drive home is smoother!

Beautification: The rain gardens in downtown Lansing are not only beautiful, they are a green way to help manage stormwater runoff.



Pedestrian-Friendly: Work includes improvements to sidewalks, pedestrian safety and barrier-free ramps to meet the requirements of the Americans with Disabilities Act (ADA).

Preserve, Upgrade, and Revitalize: Typical infrastructure improvements in CSO areas include new sanitary sewers, water mains, gas mains and replacement of non-standard water service leads. These new systems benefit residents and businesses and encourage city-wide revitalization. Sewer separation also reduces the risk of basement backups.

Quality of Life: In addition to the above, the City is continually improving its diversified communication plan to keep all stakeholders informed throughout construction.

Goals & Benefits



Surface Flooding and Sanitary Sewer Overflow



Keeping Our Rivers Clean for Everyone to Enjoy

Our Next Environmental Challenge: **Sanitary Sewer Overflow (SSO)**

As if it is not hard enough to remember all of the details and benefits of CSO control, it is time to address SSOs - Sanitary Sewer Overflows. Like CSOs, SSOs impact human and environmental health and must be controlled per State and Federal law. SSOs include overflows of raw sewage from sanitary manholes in Lansing’s separate sewer system areas, and may also include associated basement backups. SSOs may be caused by excessive stormwater inflow during wet weather, or by pipeline restrictions.

The City of Lansing has been studying and implementing measures to eliminate SSOs since the late 1970s. The “Out with the Inflow” program, described below, is our first line of defense against SSOs. Please read this information; your help is needed to make this program a success. If you want to learn more about SSOs, visit: www.deq.state.mi.us/csosso. Below is a quote taken from the DEQ’s web site:

“When an SSO occurs, raw sewage may be released into basements, city streets, properties, rivers, and streams. Most SSOs are associated with wet weather conditions, when sanitary sewer systems receive stormwater inflow or infiltrating groundwater.”

Out With The Inflow: Redirecting Stormwater

Stormwater (rain and snow melt) doesn’t belong in our sanitary sewer system. When stormwater enters sanitary sewers it is called “inflow.” Inflow typically comes from:

- Downspouts that “Disappear” Underground
- Catch Basins
- Loading Dock Drains
- Internal Roof Drains
- Yard Drains
- Pumped Footing Drains

**View the City’s
Inflow Removal
brochure online at
www.LansingCSO.com**

These inflow sources can lead to:

- Basement Backups
- Sanitary Sewer Overflows
- Unnecessary Costs to Treat Stormwater

Stormwater doesn’t need to be treated at the WWTP, so it makes economic sense to remove inflow. As part of the CSO Program, every property owner is required to remove all sources of inflow from their private property and to cover associated costs.



Redirected Downspout and Plugged Riser Pipe

You may have some of these inflow sources on your property. If so, the City will help coordinate inflow removal and will perform inspections as part of CSO design and construction. Property owners will be notified when it is time to remove inflow sources. The first of three informational mailings will be sent to property owners about 18 months prior to CSO construction in the area.

It is helpful if property owners can plan and budget for inflow removal in advance. **For more information, please call the City’s Inflow Removal Helpline at 517.394.5577.** Project representatives can help answer questions and offer advice on inflow removal strategies.

Resources • Updates • Links

- Visit www.LansingCSO.com for project information, schedules, contacts, and inflow removal details.
- Call the **CSO Hotline, 517.394.5566**, with questions and concerns, or to arrange for **on-site assistance**.
- Call the **Inflow Removal Helpline, 517.394.5577**, for answers, advice, and coordination for completing private property sewer separation.
- Watch for the first of three **Informational Mailings** about 18 months prior to the start of construction in your area.
- Attend the **Neighborhood Meetings** held in conjunction with each project to offer your input and have your questions answered. The first meeting is held in the fall/winter prior to construction.
- Request a **“Construction Coffee Meeting,”** which is held as-needed with affected businesses to share project progress and proposed schedules.
- Complete a **Post-Construction Survey** so we can improve how we communicate with you. The survey will be mailed to you or it can be completed on-line.

Information for: **Commercial Property Owners**

As part of the City’s communication with commercial property owners, several general meetings will be held for those affected by upcoming CSO construction. These meetings begin approximately one year in advance, with a one-on-one meeting scheduled with each individual owner 2-3 months prior to construction.

Commercial property owners will receive a business packet that includes a commercial property survey to help us accommodate your needs during CSO construction. The City will be incorporating information such as your business hours, disability accessibility, site access and typical delivery hours into our overall plan.

Commercial property owners will be responsible for removing all inflow sources from their site as part of construction. This includes all costs associated with private property sewer separation work. Steps owners need to take in advance of construction are:

1. Hire/Retain an engineer, architect, and/or plumbing contractor.
2. Verify preliminary findings from the City’s investigation.
3. Prepare a private property sewer separation plan.
4. Review proposed private property separation plan with the City.
5. Plan and budget for private property separation work.
6. Complete separation of sanitary and storm flows.
7. Coordinate private property construction with City construction.

Typical sources of commercial inflow include catch basins, loading docks, stairwell drains, large roof areas, internal roof drains, pumped footing drains, and disappearing downspouts. Questions can be directed to the Inflow Removal Helpline at 517.394.5577.



Take the **GO GREEN!** Personal Pledge

The **Go Green!** Personal Pledge asks you to commit to five simple things to reduce your environmental impact:

- Strive to use alternative transportation and consolidate trips when possible.
- Replace some of the incandescent lighting in your home with CFLs.
- Reduce waste.
- Recycle.
- Conserve energy by turning OFF lights and UNPLUGGING electronics.



For more information, please visit **GoGreenGoLansing.com** and join others pledging to **Go Green!**



Virg Bernero, Mayor

