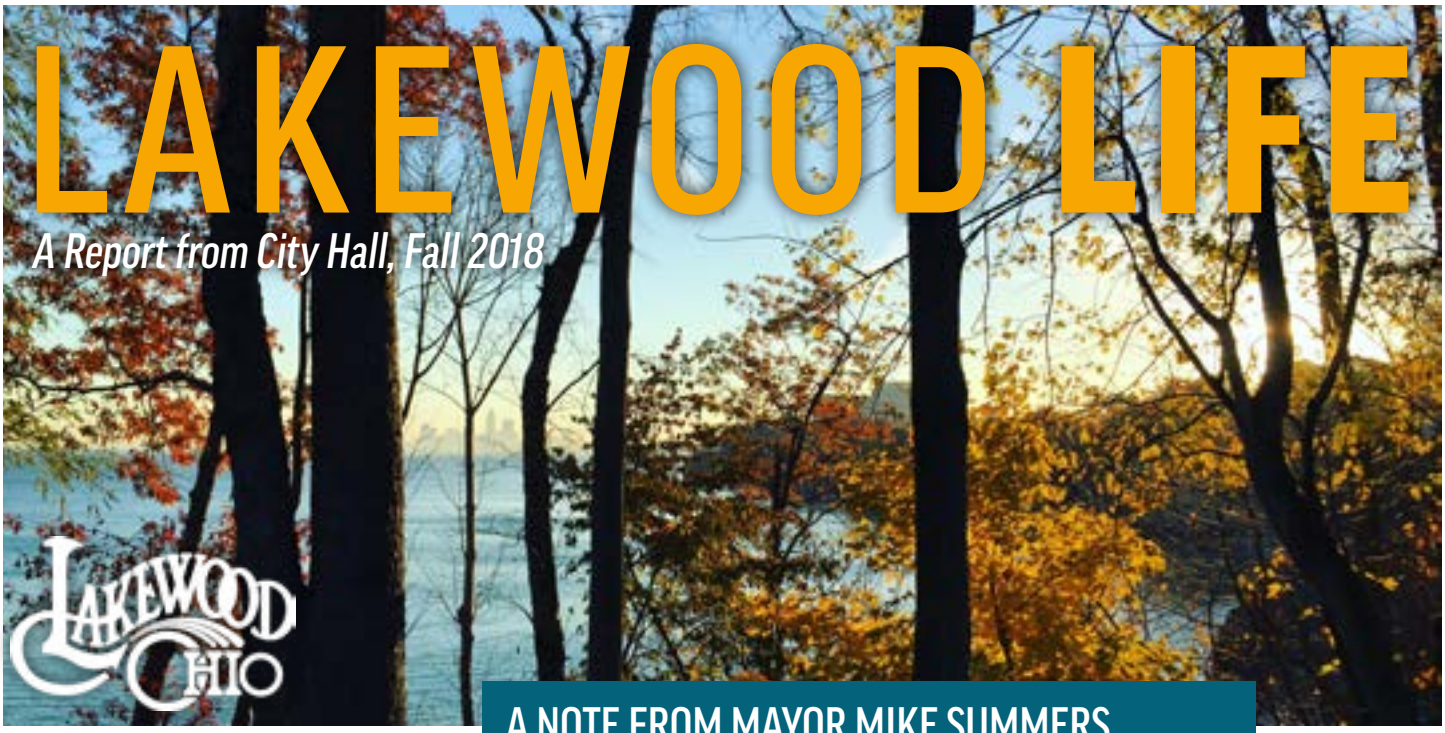


LAKEWOOD LIFE

A Report from City Hall, Fall 2018

INSIDE THIS ISSUE...

You're invited!

Community Meetings on the Clean Water Act: The Road Ahead for Lakewood

Tuesday, December 4, 2018
7 p.m.
Lakewood High School Cafeteria
&
Wednesday, January 16, 2019
7 p.m.
Lakewood High School Cafeteria

A NOTE FROM MAYOR MIKE SUMMERS

This edition of Lakewood Life focuses on the challenges for Lakewood to comply with the Clean Water Act of 1972. Our unique 100-year-old sewer system performs as designed. It is powered by gravity, has protected us from waterborne diseases and minimized basement flooding.

I remain impressed with our 1910-1930 sewer system design and workmanship. However, as environmental stewards we appreciate the requirements of the Clean Water Act. We understand the importance of and the value we find in our Great Lake. Our system performs very well in dry weather circumstances, but in large rain storms our system fills up and discharges an untreated combination of storm and some sanitary water into Lake Erie. This is illegal under the Clean Water Act.

On March 1, 2019, Lakewood is required to submit an engineering plan that will capture and treat substantially all water in dry and wet weather circumstances. Reengineering our system requires significant measuring, monitoring and modeling to capture the full effect of needed changes. Like other communities, we face large costs, disruptive digging and higher sewer rates to effectuate a redesigned system.

We need your input now and ultimately your help to advocate what is best for our city to the regulators (the Ohio EPA and U.S. EPA). The regulators must agree with the city as to which solutions are selected for compliance. Because the national "one-size-fits-all approach" will not work in Lakewood, we need to stand together and explain our position to the regulators.

Please join me and invest your valuable time to become an informed advocate about this once in a century challenge. Details on how you can be instrumental in this process are found throughout this edition.

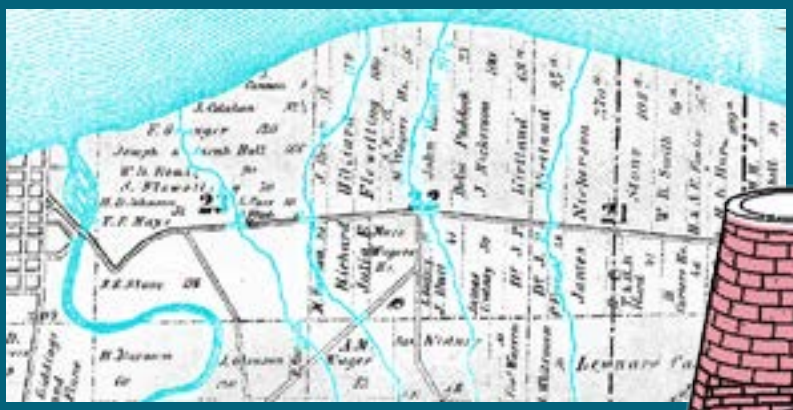
Read my full letter to council at the following link: https://bit.ly/2OSl0dp

LKWD

EARLY 1900s

1852

Below: This early map of Lakewood shows four streams that flowed through the city to the lake before they were culverted for development and flood control.

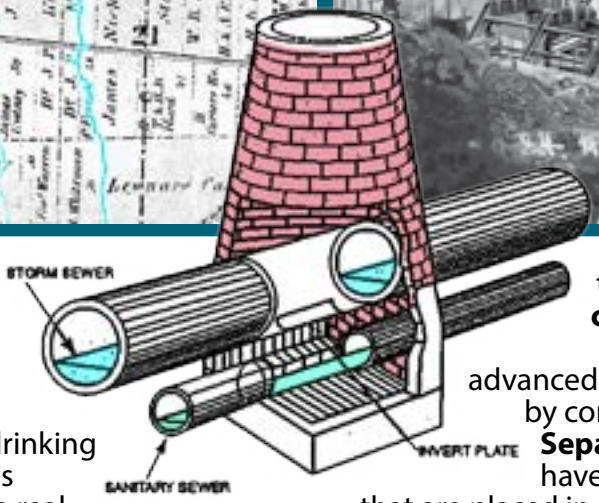


1930s

Left: Large combined interceptors were constructed to convey more flow to the wastewater treatment plant.

1916

Below: The construction of the wastewater treatment plant with the valley cliffs visible in the background.



In the early 1900s, governments were focused on health and sanitation. Outbreaks of diseases like typhoid and cholera spurred the development of hospitals, sanitary sewers and drinking water treatment. It was during this time that Lakewood experienced a real estate boom thanks in part to the streetcar system and the completion of the Detroit-Superior Bridge.

The earliest sewers built in Lakewood during this time were combined sewers. **Combined Sewers** are designed to collect rainwater runoff, domestic sewage, and industrial wastewater in the same pipe. The next iteration of sewer design came in the form of **over-under sewers** (see graphic). These used a common trench and placed the storm sewer immediately above the sanitary sewer. In order to gain access the sanitary sewer for maintenance, metal invert plates were placed on the bottom of the manhole. These sewers were also designed to overflow during large rainfall events.

Lakewood's wastewater treatment plant was built in 1916 at the lowest point in Lakewood, the Rocky River Valley, but only served a portion of the city. The city's sewers were retrofitted in the 1930s to flow to an **interceptor** running along the lakefront and riverfront and directing more flow to the treatment plant. During periods of heavy rain or snow melt, our sewers were designed to release excess storm and sanitary water into the lake to avoid basement backups, causing **combined sewer overflows**.

As time went on, sewer design advanced to account for the problems created by combined and over-under sewers. **Separate sewer systems** are those that have both the storm and sanitary sewers that are placed in separate trenches. These sewers also age and require maintenance, but are the current standard for building sewers.

Lakewood is not alone in dealing with an aging system with a design that is no longer considered best practice. With the passage of the Clean Water Act in 1972, overflows in cities like ours across the country were required to be controlled in order to make public waters fishable and swimmable.

Did you know?

Lakewood had several streams that ran through the city (as shown on the map above). One of the streams ran through Lakewood Park, seen in the photo at left. Another flowed through the area of what is now (appropriately named) Waterbury Avenue.

LKWD

1972 - TODAY

CLEAN WATER LAKEWOOD

Rebuilding the Pipeline for Our Future

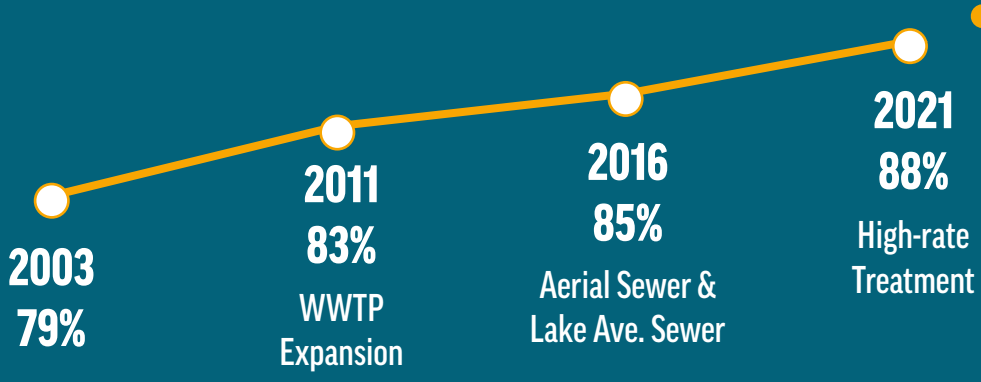
2016

Right: The construction of the aerial sewer shown in the photo addressed CSO 054 outfall, eliminating 3.5 million gallons of combined wastewater from entering the Rocky River.

2015

Above: The Clean Water Lakewood task force was put together in 2015 to help identify the best paths forward for water infrastructure in Lakewood.

The chart on the right shows percent capture of wastewater in Lakewood as projects have been implemented. The measurement started in 2003 when the hydraulic model was created.



Who's involved?

OHIO EPA & U.S. EPA	Enforcing clean water laws like the Clean Water Act of 1972. Regulating Lakewood's Sewer Department operations with a permitting process in 2019.
CITY HALL	Communicating to Lakewood residents about Ohio EPA and U.S. EPA requirements. Coordinating city, resident, consultant, and partner resources to comply with the Clean Water Act. Advocating affordability for Lakewood residents to Ohio EPA and U.S. EPA.
CONSULTANTS	Guiding the creation of an affordable and sustainable overflow control plan to comply with Ohio EPA and U.S. EPA enforcement of the Clean Water Act.
YOU	Getting informed and involved. This challenge impacts every resident in the City of Lakewood and every choice we make will have a lasting impact. Join the community discussion on December 4th at Lakewood High School.

Since the Clean Water Act's adoption, Lakewood has made substantial strides learning how our old patchwork sewer system operates – from our homes to our streets, and from our wastewater plant and to Lake Erie and the Rocky River. And we've implemented measures to protect those vital waters and achieve the spirit of the Clean Water Act sustainably and affordably.

Just since 2003 the city has spent $60 million to improve our sewer and wastewater system. Approved projects in process add an additional $23 million of improvement, including a high-rate treatment facility that will soon be constructed next to the wastewater plant.

These important projects have paid off and will continue to do so. Until 2006, the city's sewer system captured and treated 79 percent of all water – storm and sanitary – with the remaining 21 percent overflowing into the lake untreated as mostly rainwater and some sanitary water.

In 2011 the city invested $5 million in an expansion of the wastewater plant, which ultimately increased our rate of capturing and treating wastewater to 83 percent. In 2016 the city added the West End aerial sewer that eliminated a major overflow to the Rocky River, and in 2018 the city expanded the Lake Avenue sewer main that further increased the city's total wastewater capture and treatment to 85 percent. Projects in process will advance our capture-and-treatment percentage to 88 percent by 2021.

By comparison, communities nationwide are under federal orders requiring them to spend billions over decades with the goal of achieving 85 percent control – a level Lakewood has already surpassed.

All that is good news, but we know our work isn't done. The figures above reflect the enormity of the tasks ahead of us, not only to reach compliance with the Clean Water Act but also to do so without jeopardizing your financial well-being. You must play a role in the planning process that's before us. Read on to see how you can.

FUTURE

The city is creating a plan that will be submitted on March 1, 2019 which will propose future system improvements to achieve greater percent capture of wastewater.

2018

- **City Council Work Sessions**
  Council will gather to consider water and sewer rate increases necessary to implement the Integrated Wet Weather Improvement Plan
- **Stakeholder Meetings *(Clean Water Task Force/Resiliency Task Force/Planning Commission)***
  October 23rd, 2018 City Hall Auditorium 6:00 p.m.
  November 15th, 2018 Woman's Club Pavilion 6:00 p.m.
- **Community Round Table**
  December 4th, 2018 Lakewood H.S. Cafeteria 7:00 p.m.

2019

- **Open House**
  January 16th, 2019 Lakewood H.S. Cafeteria 7:00 p.m.
- **Submit the Plan**
  March 1st, 2019 Submit revised Integrated Wet Weather Improvement Plan to the U.S. and Ohio EPA

Once the plan is submitted, discussions will continue with the public and the Ohio and U.S. EPA throughout 2019 (including financing and our National Pollutant Discharge Elimination System permit).

Throughout the next year, our local elected officials and each of us as citizens will have a big role to play in Lakewood's future compliance with the Clean Water Act. The city's engineering and financial consultants have been busy over the last few years reviewing our current sewer infrastructure and the financial ability of the community to support the various sewer infrastructure options. The consultants have been working on optimizing alternatives that may include wastewater treatment plant upgrades, **green infrastructure** (using natural cycles such as infiltration and plants) and **grey infrastructure** (using pipes and storage).

As a community, we must prioritize what infrastructure projects we believe make the most sense for Clean Water Act compliance and are most affordable. We must also work with our state and federal regulators to ensure that they also agree on the solutions chosen for compliance.

While considering these new solutions we must not lose focus on the need to maintain investments in our current 2nd-century infrastructure plans. These plans involve improving our drinking water infrastructure, streets, century-old homes, parks and pools, and city buildings and equipment. The goal is to have an integrated plan that can combine multiple projects with the investments in the sewer system.

Beyond the public infrastructure projects, we must also acknowledge the need to consider how private improvements can be implemented within our community to help over time. For example, all new developments within the city are required to include stormwater controls. These requirements hold developers and contractors within the city to maintain the commitment we have to our waterways. Lake Erie is and will remain a valuable asset.

By making these tough decisions, we are preserving a future with access to clean drinking water, providing safe recreation opportunities, and ensuring the long-term health of our community.

Madison Park Green Infrastructure

RESILIENCY UPDATE

What is Resiliency? Resiliency is the ability of a system to absorb internal and external shocks – whether environmental, social, or economic. Purposeful planning with a focus on resiliency will address the local effects of climate change, globalization, population growth, overconsumption, housing insecurity, rising healthcare costs, and much more.

The Resiliency Task Force meets monthly to discuss long-range planning topics that have an impact on the City of Lakewood and its citizens. Each month, the task force hears from industry experts in a particular field who conduct a group discussion on the long-range challenges the city faces related to that topic. The task force then works to capture their thoughts on the topic and produce a "template" document. In addition to providing a synthesis of the group's notes, the template includes methods to measure progress, potential projects or policy changes identified, and partnerships the city must leverage to address the topic. To date, the Task Force has addressed energy, connectivity, housing, food, and waste. Meeting materials and draft template documents are available at:

www.onelakewood.com/resiliency

The public is invited and encouraged to attend all Resiliency Task Force meetings. On the evening of October 23rd, the Resiliency Task Force and Clean Water Task Force will hold a joint meeting on the topic of water, taking a deeper dive into the wastewater challenges explored in this issue of Lakewood Life. Join us!

Be on the lookout for future resiliency discussion topics including public spaces, culture & identity, economic development, engagement & inclusion, public safety, and more.

WASTEWATER TREATMENT PLANT IMPROVEMENTS

Lakewood's Wastewater Treatment Plant (WWTP) has undergone several improvement projects over the past few years and will continue to see investment in the future. The current WWTP treats all flow during dry weather and up to 40 million gallons/day during rainfall events. Many of the projects completed to date at the plant will save the city valuable resources by replacing energy intensive systems with energy-efficient systems. Other improvements allow the plant to treat more flows during rainfall events, preventing overflows into Lake Erie. The completed and planned project are as follows:

► The lights throughout the WWTP were recently replaced with energy efficient LED lights.

► New high-efficiency aeration blowers were installed. The blowers save about 1 million kWh of electricity per year. This means they will have a short payback period of about 8 years.

► The city is enhancing a large maintenance overhaul project on the plant's digesters to include using the methane gas produced there to generate 30 percent of the electricity needed to operate the plant.

► The new high-rate treatment addition will reduce combined sewer overflows to the lake by 16 million gallons per year by cleaning and disinfecting the water at a rate 20 percent faster than the standard treatment process.

Did you know? The upcoming high-rate treatment installation, working with the WWTP, can treat 70 million gallons per day. That's enough to fill Foster Pool at Lakewood Park 108 times!

Lakewood City Hall
12650 Detroit Ave.
Lakewood, Ohio 44107

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FALL LEAF COLLECTION

Leaf collection will begin November 5th and continue through December 14th.

More information can be found at:
www.onelakewood.com/leaf-collection-begins-monday-november-5th/

The most challenging aspect of fall leaf collection – besides parked cars – is the delay in the onset of leaf drop. This causes a scenario in which the majority of the leaves do not completely fall from trees until the beginning of December, which may often coincide with early season snow falls – placing great demands on city crews. If this is the case this fall, please be patient with our crews as they try to do two important jobs at once!

HALLOWEEN

Trick-or-Treating will be held October 31st from 6:00 p.m. - 8:00 p.m.

Please be safe!

- Parents should encourage their trick-or-treaters to be especially careful after sunset. If escorting their children, parents should carry a flashlight as an additional safeguard.
- Residents giving out candy and treats can help prevent accidents by reminding children to be especially careful crossing streets and to walk up and down steps, instead of running.
- Halloween night drivers should be especially vigilant. Motorists should drive more cautiously and be prepared to stop.