

Introduction to the Department

Welcome to the first edition of the Town of Northfield Sewer Department Newsletter. There's much ado about everything and we are now at a place where we can begin group communication.

Who we are: The Sewer Department is:

- A Town Department, with Town Employees and Town voted Commissioners.
- We support and maintain the operational aspects of the Plant and Pipes.
- Our org chart reports to the Town Administrator, the DEP is a stakeholder.
- Compliance reporting and regulations report to the Dept of Environmental Protection (DEP).
- The rate payors support the day-to-day operational budget, such as salaries, lab supplies, chemicals, indirect costs for back-office services, etc.
- The Town supports large capital projects. The Sewer Dept. is a Town Department, just like the Highway department, School, etc.

Who we are not:

- We are not a private entity.
- We are not a country club. (Yes, I had 2 people ask me if we operated like a Club).
- We are not a .com or .org .net or LLC.
- We do not have a Corporate Charter or Articles of Incorporation.

It's important for everyone, not just the Department and Commission, to learn, grow, understand, and be involved with change. This is not an easy or inexpensive future project. Many meetings and updated newsletters are unfolding.

Additional newsletters and public tours will be on the calendar. You are hereby invited. More details to follow.

Most folks in their day to day lives have very little understanding about 6 feet down, under the streets, ground, and sidewalks. Why would we? We have a beautiful town with a gorgeous international waterway coursing through it. It's a staple. We're all just used to it.

There's a living, breathing, troublesome infrastructure 6 feet (or more) down that is expensive and needs maintenance. How did we get here? Let's start with some history.

History Tour-Prior to 1948 and 1972.

The water preservation focus was a disaster. Sewage and industrial waste flowed directly into open water supplies. Local area folks can recall the stench of such waterways as the Connecticut River, the Ashuelot River to our north and the Millers River to our southeast. And there's many more examples. Every day these environments wreaked of filth and toxic odors. Automobiles required windows rolled up all the time when passing by.

1948 and 1972 Clean Water Act.

<https://www.epa.gov/laws-regulations/summary-clean-water-act>

The 1948 Federal Water Pollution Control Act was the basis act. "The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters."

The 1972 Act amended and reorganized the 1948 CWA. It then became known as the as the Clean Water Act.

What does this mean and why the history lesson?

The Clean Water Act propagated an explosion of Treatment plants throughout the country. Big, small, and every size in between. There are over 16,000 plants nationwide. Approximately 15,000 plants are medium to small, processing under 1 million gallons per day (mgd) of volume. The plants popped up around 1972 and hit the ripe old age of 50 in 2022. The estimated figure to upgrade these plants is over 3 trillion dollars.

The well needed Acts produced a pop-up or kick starter business in what seemed like overnight.

At that time, no one had a full grasp on what this would mean 10 to 50 years down the road. In essence, all the plants are the Environmental Sciences Industry, Model A.

Economies of Scale, Large Environments vs Tiny Environments.

Somerville Mass population is around 77,000. They are urban/suburban. The average cost to replace a 4-foot manhole, 4 feet deep is \$5000.00, whether you live in Somerville or Northfield.

Some rough math as an example:

If half of Somerville's population contributes to the treatment works, that equates to 38500. Northfield has approximately 850 supporting people. The price of the manhole is still \$5000.00.

Small Treatment plants are similar to small Hospitals. They still have to pay employees, upgrade the infrastructure and the physical plant. Large environments host larger amounts of customers.

Important to know - Northfield is not alone in this small plant challenge.

Industrial vs Municipal Plants.

One of the biggest challenges is a shortage of skilled staff. The average age of Treatment operators is 58. That means the top of the bell curve is 48 to 68 years of age. Add to this, Industrial/Private corporations have the ability to pay significantly more money to retain workers.

At one point, our operator was earning approximately 27.00/hour. Private companies were paying about \$45 and shelling out signing bonuses in the thousands.

In conclusion, it took 50 years to reach this pinnacle of problems. It's going to take years to solve the problems. Funding cannot be rates alone and will need to be subsidized by Town approved Grants and low-cost USDA bond loans. The upgrades are a capital project infrastructure improvement.

And again – Northfield is not alone in this situation. We have 14,999 friends in it with us.

Next steps:

Good Accounting, better data management, team building, solid timelines, communication, regular check points, and changing the business model at a high level (in the ethos) are some examples of what needs to happen to move forward and not repeat history.

We cannot:

- stay where we are.
- change history.
- repeat history.
- attribute one pivotal action that caused this problem.

However, we must move forward, together.

A Sincere Thanks!!!

Over the past 12-15 months, the Herculean team effort of Michele Turner (Treasurer/Collector), Erin Degnan (Financial Assistant), Beth Walker (Assessor), Amanda Lynch (Town Clerk), Mallory Sullivan (Grant Director), and Sandra Woods (Office Manager) have jumped in to save the day.

The Sewer Department could NOT have done this alone!

We've developed:

- bi-weekly detailed review of the budget line items.
- significantly reduced gobs of paper usage.
- automated easy data feeds.
- reviewed every document and cleaned them with more reviews to follow.
- now managing changes at the margins.
- a Team approach to checks and balances.
- and a grant application has begun.

This massive back-office cleanup allowed the Sewer Department to accurately defend financial data so that we can successfully begin applying for grants and loans.

Other Sites for Exploration

A plant visit.

<https://www.usgs.gov/special-topics/water-science-school/science/a-visit-a-wastewater-treatment-plant>

Waste Water Basics – U-Tenn

https://www.epa.gov/sites/default/files/2015-06/documents/epa-mou_wastewater_basics_101.pdf

PodCast

<https://stuffyoushouldknow.com/episodes/>

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Scroll down to Episodes and search for: **How Waste Water Treatment Works**

Cuyahoga River Fire

<https://www.smithsonianmag.com/history/cuyahoga-river-caught-fire-least-dozen-times-no-one-cared-until-1969-180972444/>

Reversing the Chicago River

<https://www.npr.org/local/309/2019/10/14/769630864/floods-carp-and-crap-the-environmental-impacts-of-the-chicago-river-reversal>

<https://voices.uchicago.edu/findingchicago/2022/09/09/the-reversal-of-the-chicago-river-the-environmental-effects/>

<https://werehistory.org/reversing-a-river-how-chicago-flushed-its-human-waste-downstream/>

[100 Best Documents at the Illinois State Archives \(ilsos.gov\)](#)