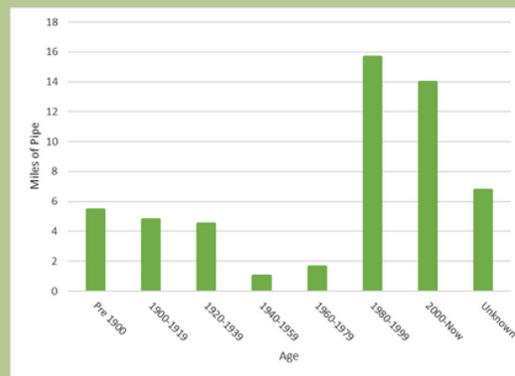


# SEWER OVERFLOW UPDATE

## WHAT CAUSES A SANITARY SEWER OVERFLOW?

- Overflows are caused by surplus water getting into the sewer system and overwhelming existing infrastructure. Despite Ashland having separate storm and sanitary sewers, these are often caused by rain events. So how does rainwater enter the sanitary sewers?
- Ashland's water infrastructure is very old, and it allows rainwater in through flaws and damages. Think of how much water could come in through an improperly connected sump pump or roof drain, and how many cracks, or defects must be found in a system that dates back to pre-1900.



## HOW MUCH RAIN IS GETTING IN?

- Ashland uses ~0.6 million gallons (MG) of water each day (About 1 Olympic swimming pool). Between the treatment plant and the detention pond, the city can handle up to 12.3 MG of water.
- An overflow does not occur until there is more than 11 MG (17 Olympic swimming pools) of rainwater entering the system through flaws and damages that have formed over the last 100+ years.
- Rain water in the system has been a problem for decades. The treatment plant was built in 1992 with an 8.5 MG detention pond in order to reduce the risk of overflows (shown in the aerial of treatment plant below).



## WHAT DOES THE DETENTION POND DO?

- Contrary to popular belief, sanitary sewer overflow water is not untreated sewage. Because an overflow occurs from the detention pond, the water is actually partially treated and heavily diluted.
- The pond acts sort of like a septic tank or bioreactor. It allows solids to settle out and microbes to start breaking down contaminants.
- The detention pond was designed to minimize overflows and mitigate their effects, and it does that. But storms are getting more severe and the system is continuing to age, meaning the only real solution is to address the underlying cause and update the system.

## HOW ARE BEACH CLOSURES RELATED?

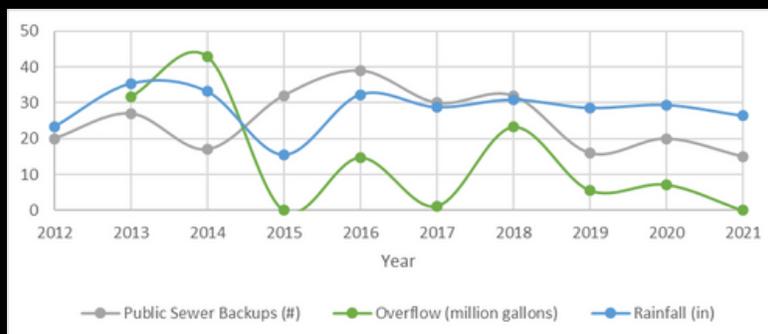
- Beach closures occur when routine testing comes back with a level of bacteria that is considered unsafe. Similar to overflows, this often coincides with heavy rain.
- This is an example of correlation rather than causation. Beach closures and overflows are related to weather patterns, but they are not related to each other.
- But if not overflows, where does this bacteria come from?
- According to genetic markers, mainly water fowl and upstream farmland. The bacteria found can be traced to animals, not people.



## WHAT HAS BEEN DONE AND HAS IT HELPED?

Aging infrastructure cannot be fixed overnight, but the city has been working diligently to address the cause and end sewer overflows in Ashland. These efforts are planned to continue in coming years.

- Since 2019, 10-18 miles of sewer were cleaned each year for a total of 82.9% of the system. This reduces sewer backups and increases system capacity.
- In the last 3 years, 1.36 miles of sewer have been replaced (new pipe) and 10.41 miles have been rehabilitated (liner). That's nearly 20% of the system repaired, and no longer contributing rain water, in the last 3 years.



The efforts have mattered. Ashland has not had an overflow in two years and we have seen a major decrease in sewer backups.