

Project Water DROP

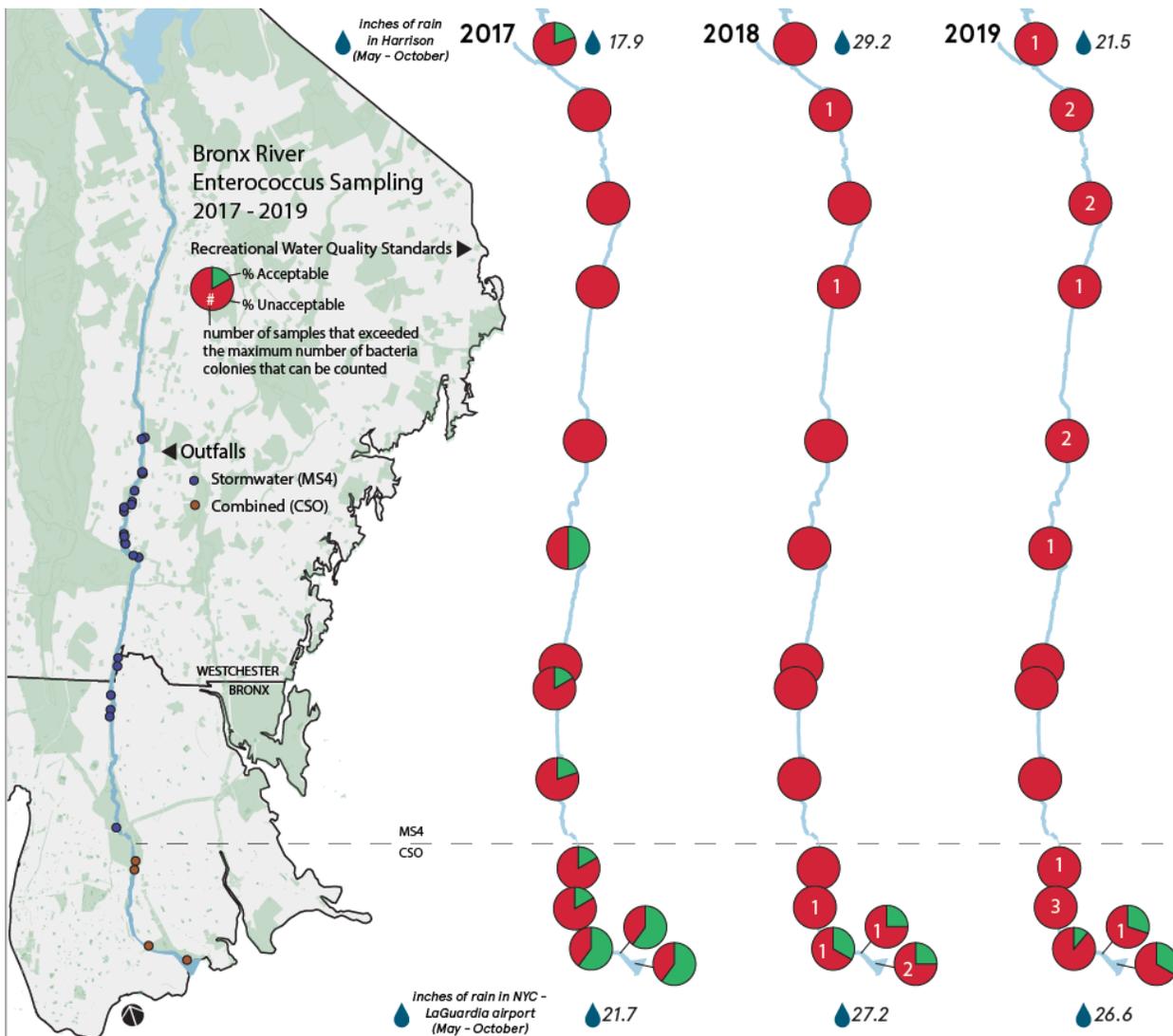


Detecting River Outfalls & Pollutants

Volunteer water quality stewards monitor the Bronx River, allowing the Alliance to track water pollution over time and across the watershed. Project Water DROP analyzes water samples for fecal bacteria to identify the levels of sewage pollution in the river. With this information we are better able to locate sources to prevent fecal pollution from flowing in, which will improve the water quality of the Bronx River.

Fecal bacteria levels are high throughout the river

Looking at the map below, the more red you see, the higher the fecal bacteria (*Enterococcus*) levels are in the river, and the number in the middle at some sites indicates the times the actual values were too high to measure. What we see is that water quality is getting worse as rainfall levels increase, which is a disturbing trend given projected impacts from climate change. The Alliance is working with partners to help address these sewage contamination issues before they pose a major health risk.



Source: Bronx River Alliance. Precipitation from Weather Underground, LaGuardia Airport Station. Map developed by Korin Tangtrakul.



How do our sewers work?

That's a great question! In the Bronx River watershed **we have two different types of sewers**: combined sewers, where stormwater and sewage are combined in the same pipe, and separate sewers, where sewage and stormwater go into two different pipes (see graphic below).

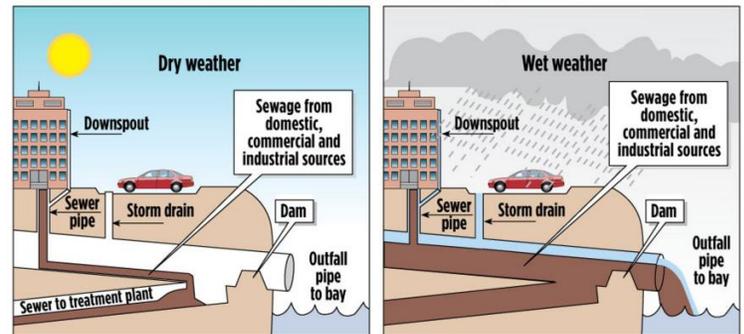
What happens when it rains?

When it rains, too much water in the combined sewer system causes **Combined Sewer Overflows (CSOs)** where a mixture of untreated sewage and runoff from our streets is released directly into the river.

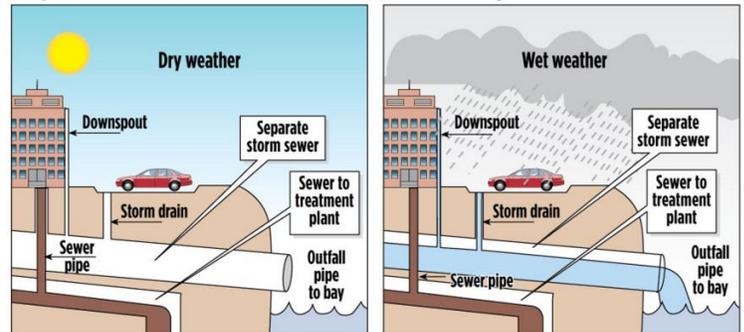
In separate systems, stormwater picks up trash and other pollutants from street runoff before stormdrains discharge directly to the river.

CSO pipes are located in the southernmost three miles of the Bronx River, while the rest of the watershed has separate sewers. Therefore we should only find high levels of bacteria in the CSO portion of the river after wet weather. **This means there are other sources of sewage pollution besides just CSOs.**

Combined sewer and storm water runoff system



Separated sewer and storm water runoff system



Source: <https://www.pressherald.com/2018/01/07/a-legacy-problem-combined-sewer-stormwater-overflows-challenges-portland/>

DID YOU KNOW?

It takes as little as 1/2" of rain to cause untreated sewage to flow into our local waterways. In the Bronx River, this is approximately **455 million gallons each year.**

This is equivalent to roughly 9.1 million bathtubs worth of pollution or 1.7 Empire State Buildings!

What is the Alliance doing about pollution and how can I help?

We plant trees and create raingardens to soak up excess stormwater to help prevent CSOs, and Project Water DROP helped **identify and stop one pipe from dumping sewage straight into the river!**

Ways you can help:

- Become a water quality steward! Contact: Christian.Murphy@bronxriver.org
- Washing laundry, dishes, and other water-heavy activities on rainy days **increases the strain on our sewers.** Every drop counts, save those types of activities for a sunny day!
- If you see a rainbow sheen on the surface of the water or you see someone dumping anything into the river, call the NY State DEC Hotline immediately at 800-457-7362 or 311 in NYC.
- For more information about Project Water DROP, visit our website at bronxriver.org