King County Department of Natural Resources and Pa Wastewater Treatment Division

Why do CSOs happen?

Historical solutions create modern problems.

In the older parts of King County's wastewater system, relief points called "combined sewer overflows," or CSOs, are built into the pipes. The CSOs release polluted water in local waterways when heavy rains fill the pipes. This release prevents sewer backups into homes and streets.

It made sense at the time...



From the late 1800s through the 1940s, engineers designed sewers to carry sewage and stormwater to the nearest body of water. At that time, planners believed that diluted pollution would not harm the water bodies. The system took care of horse manure and garbage on the streets along with human waste.

Roof drain	Combined Sewer System
To treatment plant	Dry Weather
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Later, engineers built treatment plants to clean this water before sending it to the environment. And they built large pipes, called "combined sewers," to bring all this water to a wastewater treatment plant.



When heavy rains fill the "combined sewers," relief points (outfall pipes) send the extra sewage and stormwater out into rivers, lakes, or Puget Sound.

Roof drain Sewage pipe To treatment plant	Storm drain
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Today, cities in King County build separate pipes; one to carry sewage to a treatment plant and another to carry stormwater to the nearest water body. However, there are still combined sewers in the oldest neighborhoods in Seattle.

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Clean Water Plan Making the right investments at the right time

King County

Department of Natural Resources and Park Nastewater Treatment Division