

Are the Volume and Frequency of Combined Sewer Overflows Changing Over Time?

Answer: Yes. They have decreased since 1996.



CSO outfall at Back Cove, Portland.

Why Is Combined Sewer Overflow Abatement Important?

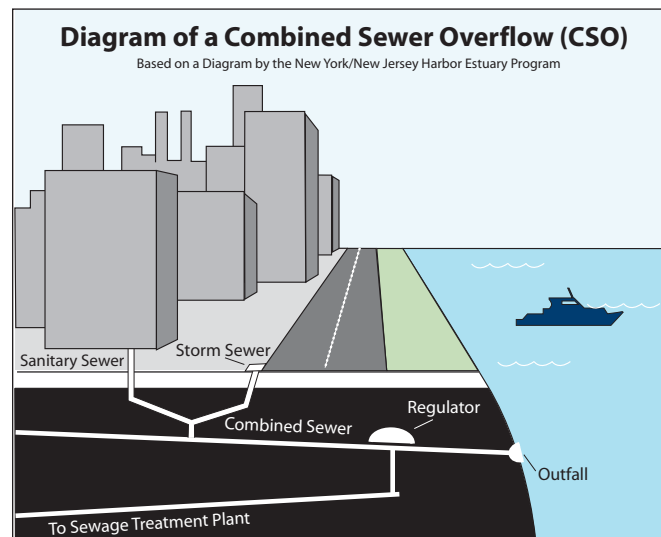
Stormwater drainage systems can convey stormwater alone or stormwater mixed with sanitary waste (a combined sewer). In the 1970's, networks of underground pipes that used to direct stormwater and untreated wastes directly into rivers and the Bay were "intercepted" and directed to sewage treatment plants before discharge. When heavy rains overwhelm the capacity of the treatment plants or the conveyance system, a portion of the combined sewage and stormwater flow is diverted without treatment through relief points known as combined sewer overflows (CSOs). These overflows result in the introduction of millions of gallons of polluted water to rivers and the Bay annually, including bacteria and viruses from sewage. These pathogens can lead to human health threats, beach and shellfish bed closures and aesthetic impacts. Reducing this source of polluted water is an important goal of the Casco Bay Plan. The United States Environmental Protection Agency (EPA) 1994 CSO Control Policy requires communities to establish a set of minimum controls and to develop long-term plans for achieving compliance with the Clean Water Act.

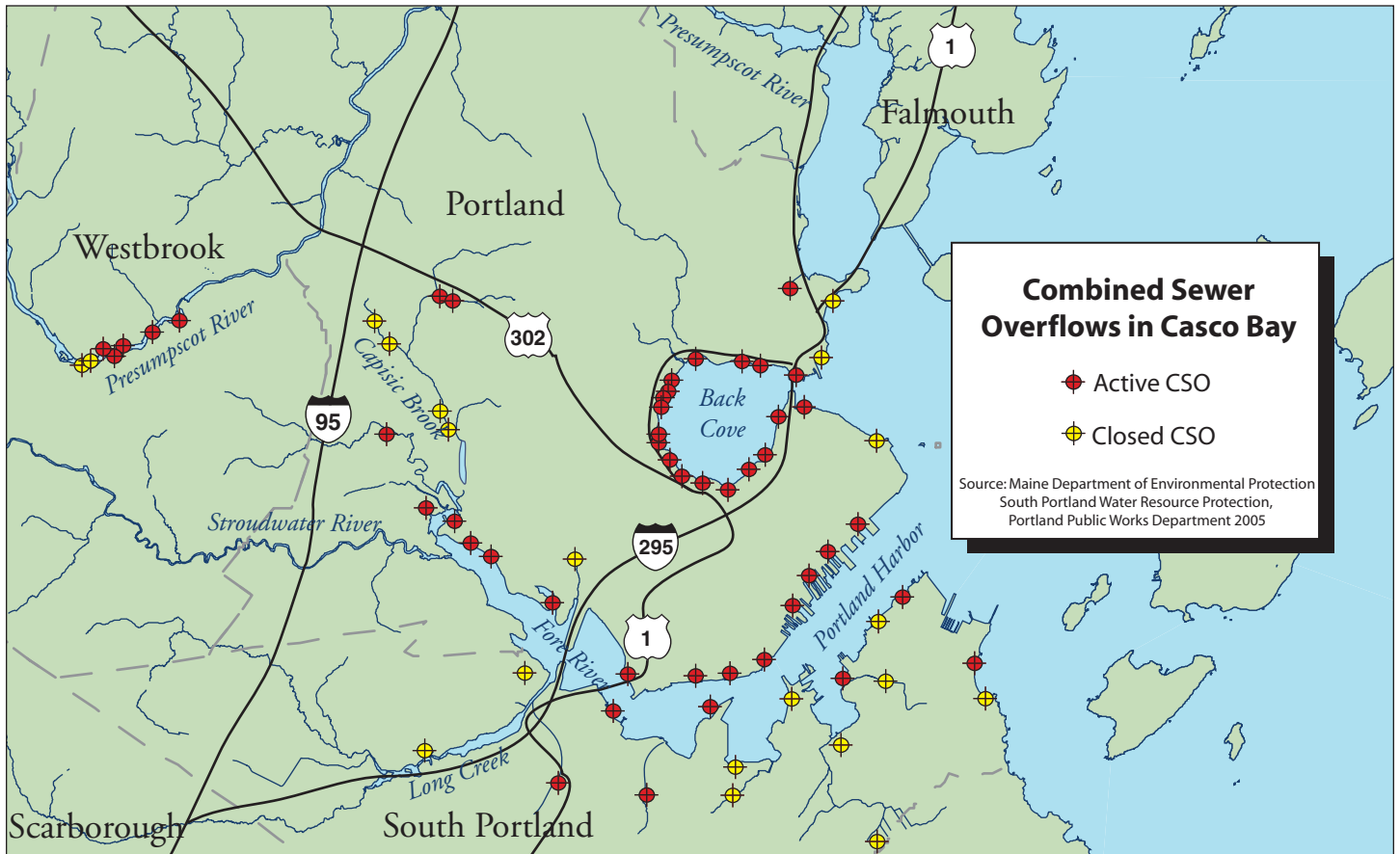
Where Are There Combined Sewer Overflows in the Casco Bay Watershed?

Forty-one communities in Maine currently have CSOs. In the Casco Bay watershed, active CSOs are found in Portland, South Portland and Westbrook. Portland's CSO flows comprised 42% of the total flows for the state in 2004 (Maine DEP). Over the last decade, each of these cities has made major strides towards reducing the number, volume and frequency of combined sewer overflow events.

What Progress Has Been Made Towards Elimination of CSOs?

When the Casco Bay Plan was written in 1996, Portland had 42 CSOs contributing an estimated 720 million gallons of combined sewage and stormwater overflowing each year. Portland currently has a population of 64,249. The City covers 20 square miles, of which 4,200 acres drain to combined sewers. The City's Master Plan for CSO elimination aims to reduce the total number of active CSOs to 10, to reduce CSO volumes from 720 million gallons per year to 87 million gallons per year, and to demonstrate an 85% reduction in CSO events.



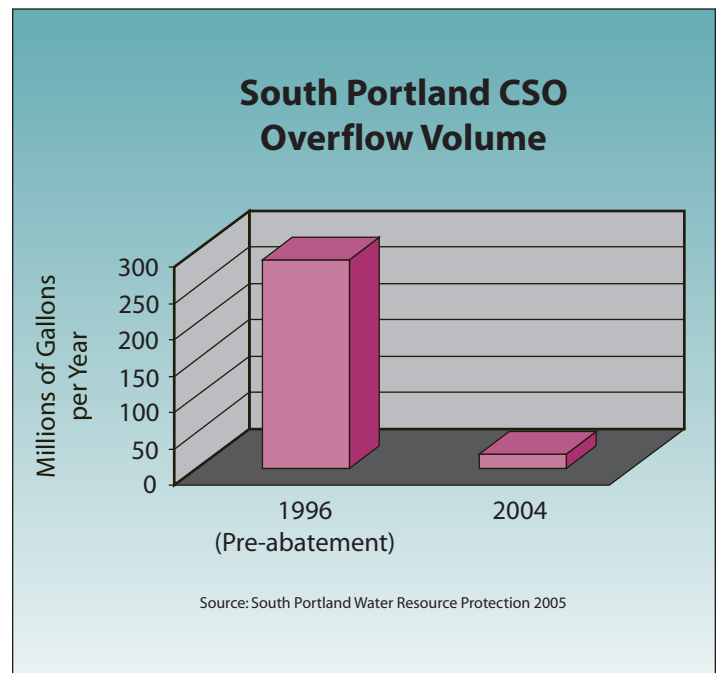


Locations of active and closed Combined Sewer Overflows in Casco Bay communities. A total of 20 CSOs have been eliminated since the early 1990s.

To date, Portland has spent \$36 million dollars implementing Phase 1 of their three phase CSO abatement plan, with a total of 8 active CSOs eliminated to date. The City expects to spend \$59 million implementing Phase 2 and additional funding on Phase 3. In 2004, a very rainy year, the total volume from all combined sewer overflow events in Portland was estimated at approximately 607 million gallons (Portland Department of Public Works).

In the early 1990s, the City of South Portland had 15 active combined sewer overflows, discharging as much as 280 million gallons per year. There were two additional combined sewer overflows in South Portland owned by the State. Since that time, a total of ten active CSOs have been eliminated, one by the State and nine by the City. These include CSOs impacting Willard Beach and Trout Brook. Of the City of South Portland's six remaining CSOs, two are expected to be eliminated this year. In 2004, measured overflows were about 20 million gallons per year (South Portland Water Resource Protection).

The City of Westbrook had seven combined sewer overflows, discharging up to 49 million gallons a year into the Presumpscot River. As of 2004, 2 of these active CSOs have been



eliminated and the CSO overflows reduced to under one million gallons per year (Maine Department of Environmental Protection).