

## New York City Environmental Protection's CSO Advisory Web Page

### Introduction

New York City's sewer system collects wastewater (sanitary sewage) from homes, businesses and factories and carries it to treatment facilities that remove pollutants and return the cleaned water to the environment. In most areas of the City, the same sewer system also collects stormwater runoff from streets and properties when it rains. During storms, huge amounts of stormwater can be collected—sometimes more than the treatment facilities can handle. When that happens, the excess amount of mixed sewage and stormwater can discharge untreated to the City's waterways from relief points known as "CSOs" (combined sewage outfalls). For more information about CSOs and a map of where they exist, please follow this link: [http://home2.nyc.gov/html/dep/html/stormwater/combined\\_sewer\\_overflow.shtml](http://home2.nyc.gov/html/dep/html/stormwater/combined_sewer_overflow.shtml)

Pollution from CSOs can make it unsafe for people to come into contact with the water, not just when the CSO discharge is happening, but also for a time afterward, until the pollution dissipates. During this time, people should avoid coming into contact with the water—even if it's limited contact, like fishing or canoeing—because pollution in the water could make them sick. This web page identifies "CSO Advisories" so people can see when and where CSO pollution could be a problem due to current and recent rainfall. This web site does not issue CSO Advisories based on weather forecasts.

### How do you use this web page?

When you first access this web page, you will see a city-wide map showing all of NYC's major waterbodies and a graphic showing recent rainfall at Jamaica Wastewater Treatment Plant, LaGuardia Airport, and Central Park. Any waterbody that is colored red is currently under a CSO Advisory and people should avoid contact with that waterbody.

To see whether people should avoid contact with water in a certain waterbody or location, you can either zoom in on the map, type the name of the waterbody, or select a waterbody directly from the list. If you type in a name or select a waterbody from the list, the web page will automatically zoom in on that waterbody and will also show how much rain has fallen recently at the nearest National Weather Service or DEP weather station.

The web page automatically color-codes all waterbodies to show whether CSO-pollution levels are expected to be high enough that people should avoid contact with them, and if so, for how long, based on measured rainfall and computer simulations. When a "CSO Advisory" is in effect for a particular waterbody, that waterbody will be colored red on the map and notation under the map will display the expected duration of the CSO Advisory based on rainfall measured up to the current time. People should avoid contacting water in a waterbody while a CSO Advisory is in effect.

### What do the color codes on the map mean?

**Red:** When a waterbody is colored red on the map, a CSO Advisory is currently in effect for that waterbody. This means that the waterbody is currently receiving or has recently received enough CSO pollution that people should avoid contact with the water through the date and time noted under the map, if all rain stopped now. If rain continues, the CSO Advisory may be extended later. These CSO Advisories are based only on rainfall measurements, not weather forecasts, and on computer simulations, not direct analysis of water samples taken from the waterbody.

**Blue:** When the waterbody is colored blue on the map, no CSO Advisory is currently in effect for that waterbody. This means that the waterbody is not or has not recently received enough CSO pollution that people should avoid contact with the water, based on rainfall measurements and computer simulations. This web page does NOT consider the weather forecast and additional rainfall may cause a problem. If a waterbody is colored blue (no CSO Advisory) it does NOT mean that it is safe to drink the water or to swim in the water now or at any time. Also, even if there is not a CSO Advisory in effect, it does not mean there could be other problems with the waterbody. Finally, people should avoid CSO outfalls, which in NYC are designated with a sign that looks like this:



## **What does a “CSO Advisory” mean?**

When this web page shows that a “CSO Advisory” is in effect for a particular waterbody, it means that people should avoid even limited, “secondary contact” with water (like canoeing and fishing) in that waterbody because enough rain has fallen that CSO pollution could be high enough to sicken people who come in contact with the water. These CSO Advisories are based on rainfall measurements (not weather forecasts) and on computer simulations (not direct analysis of water samples taken from the waterbody). Unusual factors that do not have to do with CSOs, such as illegal dumping or chemical spills, are NOT accounted for in these CSO Advisories, so people should always use caution when planning to use the waterways. Also, this web page is NOT intended to show whether it is safe to swim in a particular waterbody. For swimming, please refer to the Department of Health website for information on swimming at beaches at: <http://www1.nyc.gov/site/doh/health/health-topics/beach.page>

## **What does “Secondary Contact” mean?**

The United States Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation (DEC) require various water-quality standards for waterbodies depending on the designated uses of the waterbody. For example, waterbodies that provide drinking water must be of higher quality than waterbodies that are used for industrial shipping. “Secondary contact” is a designated use that refers to activities for which immersion in the waterbody or ingestion of the water is unlikely. Examples of secondary-contact activities include boating, wading, and fishing. This web page does not indicate whether it may be safe to engage in so-called “primary-contact” activities, such as swimming, water skiing, skin-diving and surfing, which involve likely immersion or ingestion of water. For advisories about primary-contact recreational activities in designated swimming areas, please refer to the Department of Health website at: <http://www1.nyc.gov/site/doh/health/health-topics/beach.page>

## **How does this web page work?**

This web page automatically checks how much rain has fallen recently and then, based on measured rainfall and computer simulations, indicates whether or not people should avoid contact with that waterbody for a period of time due to expected levels of CSO pollution. If levels of CSO pollution are expected to be too high for people to safely have limited “secondary contact” with the water (such as through canoeing or fishing), this web page indicates that a “CSO Advisory” is in effect and shows how long that advisory is expected to remain in effect.

This web page updates at least hourly by checking rainfall measurements made at NYC’s National Weather Service rain gauges located at LaGuardia Airport and in Central Park, and at DEP’s rain gauge at Jamaica Wastewater Treatment Plant. For each waterbody, rainfall measurements at the nearest weather station are compared to threshold rainfall values associated with unsafe levels of CSO pollution in the waterbody, according to computer simulations. Specifically, this web page computes the “storm-total rainfall” as the total rainfall during periods separated by no more than 12 dry hours. This storm-total rainfall is what the web page compares to values determined by computer simulations that cause levels of CSO pollution that are unsafe for secondary contact activities such as canoeing and fishing. For each waterbody, the storm-total rainfall thresholds and the associated duration of time that unsafe conditions in the waterbody may exist are shown in a table below.

After an extended period of dry weather, no CSO Advisory will exist, waterbodies will be color-coded blue on the map, and a notation below the map will read “No Advisory.” When rainfall occurs, the hourly history of the rainfall measured at the nearest weather station will appear in a graphic on the web page. If the storm-total rainfall exceeds a certain threshold for a waterbody, that waterbody will be color-coded red on the map and a notation below the map will read “CSO Advisory Through [Time/Date].” The CSO Advisory will be in effect until such time has passed since the end of the storm that CSO pollution is expected to return to levels that are safe for secondary contact (like canoeing and fishing), based on the computer simulations. At that time, the waterbody color-coding on the map will revert to blue with the notation “No Advisory.”

Waterbody	Rainfall* Triggers (inches) with Associated Durations For Waterbody CSO Advisories			
	12 Hrs	24 Hrs	36 Hrs	48 Hrs
Bergen Basin	0.10	0.25	2.50	N/A
Bronx River	0.60	N/A	N/A	N/A
East River	N/A	N/A	N/A	N/A
Flushing Bay	0.80	1.30	N/A	N/A
Flushing Creek	0.40	1.00	1.25	1.50
Fresh Creek	0.75	1.25	2.50	N/A
Gowanus Canal	0.15	0.40	0.45	0.60
Harlem River	N/A	N/A	N/A	N/A
Head of Bay	1.00	1.40	2.50	N/A
Hendrix Creek	N/A	N/A	N/A	N/A
Hudson River	N/A	N/A	N/A	N/A
Hutchinson River	0.70	N/A	N/A	N/A
Jamaica Bay	N/A	N/A	N/A	N/A
Kills	N/A	N/A	N/A	N/A
Little Neck Bay	N/A	N/A	N/A	N/A
Lower Bay	N/A	N/A	N/A	N/A
Mill Basin	2.50	N/A	N/A	N/A
Newtown Creek	0.10	0.20	0.80	1.30
North Jamaica Bay	2.00	2.50	N/A	N/A
Paerdegat Basin	0.10	0.15	0.25	0.75
Sheepshead Bay	1.00	N/A	N/A	N/A
Shellbank Basin	1.40	2.50	N/A	N/A
Shellbank Creek	N/A	N/A	N/A	N/A
Spring Creek	1.40	2.50	N/A	N/A
Thurston Basin	0.10	0.30	1.00	N/A
Upper Bay	N/A	N/A	N/A	N/A
Westchester Creek	0.25	0.60	N/A	N/A
Western Long Island Sound	N/A	N/A	N/A	N/A

\* Values shown correspond to storm sizes required to cause a Waterbody Advisory for secondary-contact recreation as a result of CSO discharges. Storms are defined as periods with fewer than 12 consecutive rainless hours. "N/A" means that no analyzed storm condition caused an advisory. Insufficient information is available for storms in excess of 3.5 inches.