
DETECTING ILLEGAL POLLUTION DISCHARGES AT STORM DRAIN OUTFALLS



Storm Drain Inlet

In most suburban-urban areas stormwater runoff is carried away from streets and parking lots via a system of buried pipes known as *storm drains*. Stormwater enters the system at inlets along street curbs, in the middle of parking lots, etc. The runoff flows by gravity a n d

eventually discharges at the head of a dry channel or into a waterway. The discharge point is called the *outfall*. Collectively the pipes are called a *storm drain system*.



Storm Drain Outfall

Most storm drain systems are small. They only carry runoff during and shortly after a storm. When several days have passed since runoff ceased there should not be any liquid flowing from an outfall. Usually when a discharge is present it is merely groundwater that has seeped in through the very leaky joints between sections of storm drain pipe. If you find liquid flowing from an outfall then use the following simple tests to determine if it is simply groundwater or if it contains pollutants.

PLEASE BE CAREFUL. Do NOT let your skin come in direct contact with a discharge. Do NOT spend more than a brief moment breathing the air very near a discharge.

APPEARANCE

If the discharge is anything other than clear than it could be carrying pollutants. Note any coloration, cloudiness or if you see objects floating in the discharge. Bits of toilet paper may indicate the presence of human sewage. ***If the discharge is not clear then proceed no further.*** Instead, notify your state pollution control agency so they can do further testing.

ODOR

Again, only proceed to this second step if the discharge is clear. Take a cotton swab. Soak the swab in the discharge then very carefully take a short, quick sniff then move the swab away from you. If you smell a distinct odor then try to describe it: oily, rotten-eggs, gasoline, fishy, etc. If you're uncertain whether an odor is present then try soaking the swab again and take another sniff. ***If the discharge is not odorless then proceed no further.*** Instead, notify your state pollution control agency so they can do further testing.



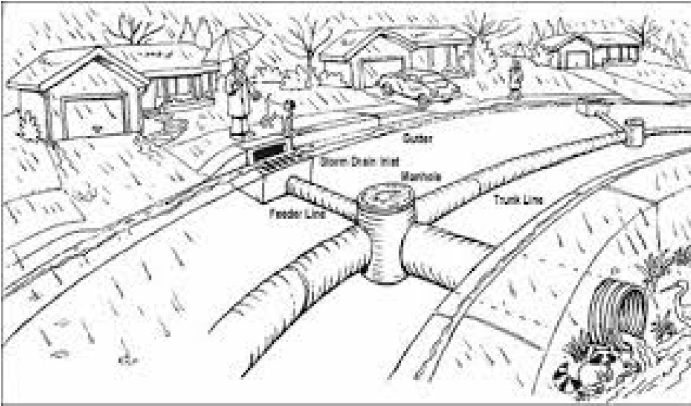
TEMPERATURE

A discharge may contain liquids from air-conditioners or water used to cool industrial equipment. These waters can be very cold or very hot. Carefully place your hand, palm down, above the surface of the discharge but don't let your palm touch the surface. Do you detect any heat or excessive cold? ***If the discharge is hot or cold then proceed no further.*** Instead, notify your state pollution control agency so they can do further testing.

TRACING A DISCHARGE TO A SOURCE



If a discharge is substantial and noisy you may be able to trace it to a source. Storm drain systems are constructed with access-maintenance points known as *manholes*. They occur every several hundred feet or wherever the pipe take a turn. Access is limited by heavy metal manhole covers. ***Please NEVER attempt to remove a manhole cover.*** Instead, you're going to walk uphill from manhole cover to manhole cover following the sound of the flowing discharge. While standing at the outfall, look up the pipe to see which direction it is heading. Now walk uphill in that direction until you find the first manhole cover, which should be marked *Storm Sewer, Storm Drain, etc.* If the cover is marked *Sanitary Sewer* then you're following the wrong pipe system.



Usually the cover will have holes which may allow the sound of flowing water to reach you. If you have trouble hearing then get your ear closer to the cover. ***But if the cover is in a street then you must have a partner watching for oncoming vehicles.*** If a street has lots of traffic then try listening at storm drain inlets. If you hear flowing water then walk uphill to the next cover. Eventually you may come to two covers quite close which could indicate the system has branched. If you can detect the branch will flowing liquid then continue tracing the discharge. Whether you locate the source or not, let your state pollution control agency know what you found.

REPORTING DISCHARGES

Please enter your findings into the Citizens Outfall Database at: ceds.org/outfall. This database will be used to track discharges and action to correct those releasing pollutants into nearby waterways.

If you pin-point a discharge and you suspect it is carrying pollution then you should contact your state pollution control agency. Chesapeake Bay watershed state-district hotlines are listed below:

- Delaware 800-662-8802
- Maryland 866-633-4686
- New York 800-847-7332
- Pennsylvania 866-825-0208
- Virginia 800-468-8892
- Washington, D.C. 202-535-2600
- West Virginia 800-642-3074

If you are uncertain whether a discharge is polluted or you are dissatisfied with the response then contact CEDS at 410-654-3021 or Help@ceds.org for further assistance.

Most state agencies are overwhelmed with their pollution workload. They must restrict the use of limited personnel and lab tests to those situations deemed a priority. CEDS can advise you on how to conduct the additional analysis needed to determine if a discharge should be a priority. In some cases it may even be appropriate to contact those responsible for the discharge directly. Our assistance is available free to volunteers seeking to solve pollution problems.

For further background on storm drains systems and pollution discharges see:

US EPA Illicit Discharge Detection and Elimination webpage: <http://water.epa.gov/polwaste/npdes/swbmp/Illicit-Discharge-Detection-and-Elimination.cfm>