
INFILTRATION BASINS

Maximizing the Benefits To Your Home & The Environment



Infiltration basins are among **THE** most effective measures for keeping stormwater pollution out of nearby waterways. Basins are usually constructed on sandy or other permeable soils. The basin should hold water no more than a day or two after each storm, thus negating mosquito problems. The runoff soaks down through the permeable soils on the basin bottom. In some basins you'll find a gravel structure resembling an infiltration trench which enhances the movement of runoff down through the basin floor.



As illustrated to the left, the basin concrete spillway is usually designed with the first opening (outlet) a foot or two above the basin floor. This allows the basin to store about 90% of all runoff until it can soak through the basin floor. Many infiltration basins have an observation well or two made of white, four- to six-inch plastic pipe, like that pictured to the right.



Observation Well

The amount of pollution washed by rain from a residential or commercial area can be two- to twenty-times greater than that from a forest. Runoff from rooftops, streets, parking lots and other impervious surfaces enters the basin via a system of pipes known as storm drains. As runoff percolates through the soil underlying the infiltration basin floor 80% to 95% of the pollutants washed from streets and other impervious surfaces are filtered out. The infiltrated water also maintains volume in wells and provides the dry-weather inflow essential to wetlands, streams and other waters.

Over time sediment and other material can accumulate within the stone trench and on the basin floor, depleting the area needed to store runoff until it can infiltrate underlying soil. Most basins will have a pretreatment system such as a forebay. If it appears that more than half the forebay original volume has been lost then it needs cleaning

KEEPING INFILTRATION BASINS HEALTHY IS EASY

1. If soil is exposed to erosive forces within the area draining to an infiltration trench, then the soil should be mulched-seeded as quickly as possible and runoff diverted away from the trench in the meantime.
2. An infiltration basin probably needs maintenance if:
 - a. Cattails or other wetland vegetation are present;
 - b. Water remains in an observation well more than 48 hours following a storm, or
 - c. The basin overflows into the concrete spillway when less than an inch of rain falls in a 24-hour period.
3. To report a maintenance issue Google the name of your county or city and "stormwater inspection" or contact CEDS.