

Constructing infiltration systems

The final step when all contributing drainage areas have been stabilized

Noncompliant construction

In these pictures, **inlets to the infiltration basin were not protected**, and sediment enters the basin from exposed soils on the still active construction site. The basin was not protected from sedimentation, and sediment runs off the side slopes and is deposited in the basin.



Sediment entering the basin from exposed soils on the construction site and from the side slopes **logs the system**.



Months later, the construction project is complete. **The basin captures rainfall from a small rain event but it doesn't infiltrate**. Costly repairs are required in order for it to function properly.



Avoid using heavy equipment to construct infiltration systems. **Heavy equipment will compact soils in the system** and infiltration rates will decrease or stop altogether. Once at final grade, the infiltration system should be staked off and marked so that heavy vehicles or equipment do not compact the soils.



Compliant construction

Heavy equipment should work from outside of the infiltration basin so soils are not compacted. In this photo, the basin has been over-excavated as designed. The excavator sits outside the basin and uses a frost ripper to loosen the soils. The same process is used to incorporate a sand/compost mix into the basin.



Identifying infiltration areas with signs notifies staff, subcontractors and others to keep heavy machinery out, ensuring that soils are not compacted.



This photo shows a system that has been properly protected after construction. **Contributing drainage areas have been stabilized and the basin has been protected** with the orange silt fence from both sedimentation and compaction from vehicle traffic.



Infiltration is prohibited in certain areas – check the permit!

- ✗ Areas that receive discharges from vehicle fueling and maintenance
- ✗ Areas with less than 3 feet of separation from the bottom of the system and seasonally saturated soils, wetlands, and bedrock.
- ✗ Areas that receive discharges from industrial facilities not authorized to infiltrate under an Industrial Stormwater Permit
- ✗ Areas where high levels of contaminants in soil or groundwater will be mobilized by infiltration
- ✗ Areas with clay soils
- ✗ Karst Areas
- ✗ Drinking Water Supply Management Area (DWSMA)
- ✗ Areas where infiltration rates are more than 8.3 inches/hour