United States Department of Agriculture

Vermont

Conservation Practice Overview

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Underground Outlet (Code 620)

A conduit or system of conduits installed beneath the ground surface to convey surface water to a suitable outlet.

Practice Information

The purpose of the underground outlet is to carry excess surface water to a suitable outlet from terraces, water and sediment control basins, diversions, waterways, surface drains, or other similar practices without causing damage by concentrated flow erosion, or flooding and ponding. An underground outlet can be installed when surface outlets are impractical because of stability problems, climatic conditions, land use, farmability, or equipment traffic. An underground outlet can be used as the only outlet for a structure or practice or it may be used in combination with other types of outlets.

The conduit for an underground outlet can be either solid or perforated pipe depending on the site-specific design. The inlet to an underground outlet can be constructed of many different types of materials but the most common are heavy duty perforated plastic risers. The outlet must have a section of solid heavy duty pipe and may have a headwall. The underground outlet must outlet into a stable watercourse that is protected from erosion caused by flows from the underground outlet. Both the inlet and outlet of an underground outlet should be protected from the entry of small animals. The outlet animal guard should be installed so that it does not impede the flow from the underground outlet.

Underground outlets can provide a direct conduit to receiving waters for contaminated runoff from crop land. Underground outlets and the accompanying structures or practices should be installed as part of resource management plan that addresses issues such as nutrient and pest management, residue management, and filter areas.

Common Associated Practices

NRCS Conservation Practice Standard (CPS) Underground Outlet (Code 620) is commonly applied with other conservation practices such as NRCS CPSs Terrace (Code 600), Grassed Waterway (Code 412), Water and Sediment Control Basin (Code 638), Diversion (Code 362), Roof Runoff Structure (Code 558), and Critical Area Planting (Code 342).

For further information, contact your local NRCS field office.