

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD**

**VERTICAL DRAIN**

(No.)

**CODE 630**

**DEFINITION**

A well, pipe, pit, or bore in porous, underground strata into which drainage water can be discharged.

A suitable filter system, desilting basin or other means necessary for removing sediment from the water shall be provided before it enters the well.

Well casings shall be of adequate strength and longevity to serve planned needs.

**PURPOSE**

Provide an outlet for drainage water from a surface or subsurface drainage system.

**CONSIDERATIONS**

Significant diversions into underground storage areas may have an effect on the peak discharge rate from a watershed. Planners should consider this, and take steps to mitigate any potential negative effects this may have on riparian habitat downstream from the structure.

Significant additions to subsurface water sources may raise local water tables or cause undesirable surface discharges down gradient from the vertical drain.

**CONDITIONS WHERE PRACTICE APPLIES**

This practice is applicable in locations where the underlying strata can receive, transmit or store the design drainage flow and other drainage outlets are not available and cannot be provided at a reasonable cost. This practice is also applicable where natural "sinkholes" are the vertical drain and erosion control or treatment of surface runoff is a concern.

**PLANS AND SPECIFICATIONS**

Plans and specifications for installing vertical drains shall be in keeping with this standard, and shall describe the requirements for properly installing the practice to achieve its intended purpose.

This practice is applicable only in locations where a determination has been made that it is not contrary to state laws or regulations, and that it will not cause pollution of underground waters.

**CRITERIA**

The number, size and location of vertical drains shall be adequate to discharge the design drainage flow into the underlying stratum or strata, and shall be based on a field determination of the depth, permeability, porosity, thickness and extent of the strata.

**OPERATION AND MAINTENANCE**

The inlets to vertical drains shall be inspected periodically to insure that they are not plugged or damaged. Vegetative filters, sediment basins and other filters shall be maintained as per Operation and Maintenance requirements for each of the respective practice standards.

The minimum diameter of shallow uncased wells shall be 6 in. and of deep cased wells, 4 in.