

**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.

PURPOSE

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

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

The minimum diameter of shallow uncased wells shall be 24 in. and of deep cased wells, 4 in.

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

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

CONSIDERATIONS

Water Quantity

1. Effect on the aquifer recharge.
2. Effect on the water table.
3. The effect on the volume of downstream flow to downstream users and uses.

Water Quality

1. The potential hazard to ground water quality from the discharge of drainage water containing dissolved substances.
2. The potential for land use changes that may impair aquifer quality.

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.

OPERATION AND MAINTENANCE

An operation and maintenance plan must be prepared for use by the owner or others responsible for operating the system. The plan should provide specific instructions for operating and maintaining the system to insure that it functions properly. The plan should also provide for periodic inspections and prompt repair of damaged components

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.