

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

SEDIMENT BASIN

(no.)
CODE 350

DEFINITION

A basin constructed to collect and store debris or sediment.

PURPOSE

The purpose of this standard is to preserve the capacity of reservoirs, ditches, canals, diversions, waterways, and streams; to prevent undesirable deposition on bottom lands and developed areas; to trap sediment originating from construction sites; and to reduce or abate pollution by providing basins for deposition and storage of silt, sand, gravel, stone, agricultural wastes, and other detritus.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies where physical conditions or land ownership preclude treatment of a sediment source by the installation of erosion-control measures to keep soil and other material in place or where a sediment basin offers the most practical solution to the problem.

This practice also applies to the trapping and temporary storage of debris, sediment, and agricultural waste.

CRITERIA

Laws and Regulations. This practice must conform to all federal, state, and local laws and regulations. Laws and regulations of particular concern include those involving water rights, land use, land disturbed by construction, pollution control, property easements, wetlands, preservation of culture resources, and endangered species.

The capacity of the sediment basin shall equal the volume of sediment expected to be trapped at the site during the planned useful life of the basin or the improvements it is designed to protect. If it is determined that periodic

removal of sediment will be practicable, the capacity may be proportionately reduced.

The design of dikes, dams, spillways, and drainage facilities shall be according to Natural Resources Conservation Service (NRCS) standards Dike (356), Pond (378), and Grade Stabilization Structure (410), or according to the requirements in TR-60, as appropriate for the class and kind of structure being considered.

Temporary basins having drainage areas of five acres or less and a total embankment height of five feet or less, may be designed with less conservative criteria if conditions warrant. The embankment shall have a minimum top width of four feet and side slopes 2:1 or flatter. An outlet shall be provided of earth, pipe, stone, or other devices adequate to keep the sediment in the trap and to handle the 10-year frequency, 24-hour duration discharge without failure or significant erosion.

Provisions shall be made for draining sediment pools if necessary for safety and vector control. Fencing and other safety measures shall be installed as necessary to protect the public from floodwater, soft sediment, and agricultural wastes. Consideration shall be given to good visual resource management.

Where the sediment basin is part of a Comprehensive Nutrient Management System (CNMS), the sediment basin must meet the NRCS standard for Waste Storage Facility (313), and the overall system must not discharge during a 25-year frequency, 24-hour duration storm.

CONSIDERATIONS

The size and type of solids suspended in the liquid has a major effect on the settlement time needed and efficiency of a sediment basin to remove solids.

Conservation practice standards are reviewed periodically and updated if needed. The current version of this standard is on our eFOTG web site available at www.sd.nrcs.usda.gov or may be obtained at your local Natural Resources Conservation Service.

PLANS AND SPECIFICATIONS

Plans and specifications for installing sediment basins shall meet this standard and shall describe the requirements to achieve the intended purpose.

OPERATION AND MAINTENANCE

An operation and maintenance plan shall be prepared for use by the owner/operator. The plan shall provide specific instructions for operating and maintaining the system to insure that it functions properly. The plan shall also provide for periodic inspection and repair or replacement of damage.