

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD**

**DAM, MULTIPLE-PURPOSE**

(no.)  
CODE 349

**DEFINITION**

A dam constructed across a stream or a natural watercourse that has a designed reservoir storage capacity for two or more purposes, such as floodwater retardation and irrigation water supply, municipal water supply, and recreation.

**PURPOSE**

This standard applies to dams that have separate storage allocation for two or more purposes. Sediment storage is not considered a separate purpose except for Sediment Basin (350).

A multiple-purpose dam must provide distinct and specific storage allocations for two or more of the following purposes: floodwater retardation, irrigation, recreational, improve habitat or environment, municipal, industrial, and other uses. (A reservoir for which multiple use is made of the same storage allocation is not a multiple-purpose dam; however, a dam designed for joint-use storage is a multiple-purpose dam.)

**CONDITIONS WHERE PRACTICE APPLIES**

Sites must meet all the following criteria:

Topographic, geologic, hydrologic, and soil conditions must be satisfactory for the dam and reservoir.

The watershed must be protected from erosion so sediment yield will not shorten the planned effective life of the reservoir.

Water must be available from surface runoff or subsurface storage in adequate quantity and quality to satisfy the intended purposes.

**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 cultural resources, and endangered species.

**General.** Multi-purpose dams shall meet the Natural Resources Conservation Service (NRCS) standard for Ponds (378) or TR-60, as appropriate.

**Floodwater retarding pool and spillway.**

Dams having a floodwater retarding purpose shall meet or exceed the requirements of NRCS standard for Floodwater Retarding Dam (402).

**Outlet works.** Outlet works shall have adequate capacity to carry the peak flow resulting from the combined demands at any time.

**Storage.** The usable storage capacity shall be adequate for all purposes. Consider seasonal demand and losses from seepage and evaporation.

**Sediment storage.** Storage capacity must include storage for sediment accumulation for the design life of the structure in addition to storage required for all other purposes.

**Type of structures.** All dams and appurtenances shall be designed to meet NRCS standards for the specific type and class of structure applicable to each purpose.

**CONSIDERATIONS**

Consider the effects of pollutants such as sediments, pesticides, pathogens, human and animal waste on recreation and other uses. Also consider downstream effects including changes in oxygen levels, temperature, and flow volumes.

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](http://www.sd.nrcs.usda.gov) or may be obtained at your local Natural Resources Conservation Service.

## **PLANS AND SPECIFICATIONS**

Plans and specifications for multiple-purpose dams shall meet this standard and shall describe the requirements needed for each 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.