

**NATURAL RESOURCE CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD**

**DAM, DIVERSION**

(Feet)

CODE 348

**DEFINITION**

A structure built to divert part of all of the water from a waterway or stream into a different watercourse, an irrigation canal or ditch, or a waterspreading system.

**SCOPE**

This standard applies to structures of a permanent nature, having an expected life span consistent with the purpose for which the structure is designed. It does not include Diversion, Floodwater Retarding Structure, or Grade Stabilization Structure.

**PURPOSE**

The purpose of a diversion dam is (1) to divert part of all of the water from a waterway in such a manner that it can be controlled and applied to a beneficial use, or (2) to divert periodic damaging flows from a watercourse to another watercourse having characteristics which reduce the damage potential of the flows.

**CONDITIONS WHERE PRACTICE APPLIES**

- Where a diversion dam is needed as an integral part of an irrigation system or a water spreading system which has been designed to facilitate the conservation use of soil and water resources.
- Where it is desirable to divert water from an unstable watercourse to a stable watercourse.
- Where the water supply available is adequate for the purpose for which it is to be diverted.

- Where the construction of a dam and the diversion of water are permitted by applicable state statutes and regulations.
- Special attention will be given to maintaining or improving habitat for fish and wildlife where applicable.

**DESIGN CRITERIA**

**Materials**

All materials to be used in construction of the diversion dam and appurtenances shall have the strength, durability, and workability required to meet the installation and service conditions of the site.

**Outlet Works**

Where partial diversions are required, the outlet works must provide for positive control of both maximum and minimum diversions consistent with the purpose for which the diversion is made. Where all the flow is to be diverted, the outlet works must provide for safe diversion of all expected flows based on site conditions.

**By-Pass Works**

The by-pass works must be capable of passing all flows needed to satisfy downstream priorities, and all flows in excess of diversion requirements. This may require a combination of orifices, weirs, and gates designed to meet the requirements of the site.

**Special Purpose Works**

Where debris, bed load materials, or sediments are present under flow conditions subject to diversion, provision shall be made to bypass or

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remove these materials which may be detrimental to the functioning of the outlet works, or to other portions of the works or areas to which diversion is made. This may involve the use of settling basins, debris traps, trash guards, or sluiceways, depending on the site conditions.

### **State Laws**

Laws concerning water use and pollution abatement shall be complied with.

### **PLANS AND SPECIFICATIONS**

Plans and specifications for installation of Diversion Dams shall be in keeping with this standard and shall describe the requirements for application of the practice to achieve its intended purpose. See page S-348-1 for items to be considered in development of specifications.