

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD AND SPECIFICATION**

STRUCTURE FOR WATER CONTROL

(no.)
CODE 587

DEFINITION

A structure in an irrigation, drainage, or other water management system that conveys water, controls the direction or rate of flow, or maintains a desired water surface elevation.

PURPOSES

- * Control the stage, discharge, distribution, delivery, or direction of flow of water in open channels or water use areas.
- * Control water quality such as sediment reduction or temperature regulation.
- * Protect fish and wildlife and other natural resources.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to structures normally installed in a well-planned irrigation or drainage system, wildlife wetland facility, or other water management system for the conveyance, flow control, or level regulation of water but not head cut control or grade stabilization.

This practice applies wherever a permanent structure is needed as an integral part of an irrigation, drainage, or other water-control system to serve one or more of the following functions:

1. To conduct water from one elevation to a lower elevation within, to, or from a ditch, channel, or canal. When the purpose is grade stabilization or head cut control, a GRADE STABILIZATION STRUCTURE (410) shall apply. Typical structures are: drops; chutes; turnouts; surface water inlets; head gates; pump boxes; and stilling basins.

2. To control the elevation of water in drainage or irrigation ditches. Typical structures are checks.

3. To control the division or measurement of irrigation water. Typical structures are division boxes and water measurement devices.

4. To keep trash, debris, or weed seeds from entering pipelines. Typical structures are debris screens.

5. To control the direction of channel flow resulting from high water or backflow from flooding. Typical structures are drainage gates.

6. To control the level of a water table or to remove surface or subsurface water from adjoining land, to flood land for frost protection, or to manage water levels for wildlife or recreation. Typical structures are water level control structures, pipe drop inlets, and box inlets.

7. To provide water control for recreation or similar purposes.

8. To convey water over, under, or along a ditch, canal, road, railroad, or other barriers. Typical structures are bridges, culverts, flumes, and inverted siphons.

9. To modify water flow to provide habitat for fish, wildlife, and other aquatic animals. Typical structures are deflectors, chutes, cold water release, and structures to make pools and riffles.

CRITERIA

General Criteria Applicable to All Purposes

Structures shall be designed on an individual job basis or the applicable NRCS standard drawing shall be adapted to meet site conditions and functional requirements. These structures shall be part of an approved, overall engineering plan for irrigation, drainage, wildlife habitat, recreation channel improvement, or similar purpose.

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version, contact the Natural Resources Conservation Service.
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The plan shall specify the location, grades, dimensions, materials, and hydraulic and structural requirements for the individual structure. Provisions must be made for necessary maintenance. Care must be used to insure that the area's visual resources are not damaged. If watercourse fisheries are important, special precautions or design features may be needed to insure continuation of fish migrations.

A protective cover of vegetation shall be established on all disturbed earth surface. If soil conditions preclude the use of vegetation, nonvegetative means, such as mulches or gravel, may be used. In some places, temporary vegetative cover may be used until permanent vegetation may be established. The structure shall be fenced when necessary to protect the vegetation. Seedbed preparation, weeding, fertilizing, and mulching shall comply with the NRCS practice standard CRITICAL AREA PLANTING (342).

CONSIDERATIONS

Select materials to construct the structure that will provide the desired lifespan for the site characteristics and purpose.

PLANS AND SPECIFICATIONS

Plans and specifications for installing structures for water control shall be in keeping with this standard and shall describe the essential requirements for properly installing each feature of the practice to achieve the intended purposes.

OPERATION AND MAINTENANCE

Inspect the structure annually. Repair any problems or concerns that would affect the integrity of the structure.

Maintain the functionality of the structure as necessary to achieve the intended purpose. Frequently remove debris, trash, or other materials that will restrict water flow through the structure.