

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

IRRIGATION PIT OR REGULATING RESERVOIR

(No.)
CODE 552A

DEFINITION

A small storage reservoir constructed to regulate or store a supply of water for irrigation.

PURPOSE

To collect and store water until it can be used beneficially to satisfy crop irrigation requirements.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies only to sites meeting all the following criteria and conditions:

1. The existing water supply available to the irrigated area is insufficient to meet conservation irrigation requirements during part of all the irrigation season.
2. Construction of an irrigation pit is the most practical means of obtaining a needed additional supply of water.
3. An adequate supply of good-quality water is available for storage from surface runoff, streamflow, or from a subsurface source.
4. Topographic, geologic, water table, and soils conditions at the site are satisfactory for the feasible development of the irrigation pit.
5. If surface runoff enters the pit, the contributing drainage area is or can be protected against erosion so that normal sedimentation does not materially shorten the planned life of the pit.

CRITERIA

Capacity. Irrigation pits shall be designed to have a usable capacity sufficient to satisfy irrigation requirements in the design area throughout the growing season of the crop or crops being irrigated. In computing capacity

requirements, due consideration shall be given, where applicable, to groundwater inflow, surface runoff, precipitation, evaporation, and seepage. Additional capacity shall be provided as necessary for sediment storage. The usable capacity of a pit that depends wholly on groundwater as a source of supply shall be that part of the pit that is below the static water level.

Pit design. Irrigation pits shall be designed according to the criteria for excavated ponds in the standard for Ponds (378).

Outlet works. Suitable outlet works shall be provided for the controlled release of irrigation water. The capacity of the outlet works shall be no less than that required to provide the outflow rate needed to meet peak period irrigation system demands.

State regulations. Storage of water is covered by applicable state statutes and regulations. Refer to "Regulations and Instructions" issued by the Wyoming State Engineer's Office. It shall be the owner's responsibility to comply with state laws.

CONSIDERATIONS

Water Quantity

1. Effects on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, deep percolation, and ground water recharge.
2. Effects on downstream flows or aquifers that would affect other water uses or users.
3. Potential for irrigation water management.

Water Quality

1. Effects on erosion and the movement of sediment,

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pathogens, and the soluble and sediment-attached substances carried by runoff.

2. Effects on the movement of dissolved substances to ground water.
3. Short-term and construction-related effects on the quality of downstream water courses.
4. Potential of uncovering or redistributing toxic material.
5. Effects on wetlands or water-related wildlife habitats.
6. Effects on the visual quality of water resources.

PLANS AND SPECIFICATIONS

Plans and specifications for irrigation pits shall be in keeping with this standard and shall

describe the requirements for properly installing the practice to achieve its intended purpose.

OPERATIONS 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. It should also provide for periodic inspections and prompt repair or replacement of damaged components.