

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

IRRIGATION PIT OR REGULATING RESERVOIR

**Irrigation Pit
(number)
CODE 552A**

DEFINITION

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

PURPOSE

- Collect and store water until it can be used beneficially to satisfy crop irrigation requirements

CONDITIONS WHERE PRACTICE APPLIES

This standard applies to open pits excavated below the ground surface to intercept and store either surface water or unconfined groundwater for irrigation.

It applies to pits if part of the water is impounded above natural ground, provided that the depth of water above the ground surface, as measured at the spillway crest elevation, does not exceed 3 feet.

This standard establishes the minimum acceptable level for the planning and functional design of irrigation pits.

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

- a. The existing water supply available to the irrigated area is insufficient to meet conservation irrigation requirements during part or all of the irrigation season.
- b. Construction of an irrigation pit is the most practical means of obtaining a needed additional supply of water.
- c. An adequate supply of quality water is available for storage from surface runoff,

streamflow, or from a subsurface source.

d. Topographic, geologic, water table, and soils conditions at the site are satisfactory for the feasible development of the irrigation pit.

e. 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(s) being irrigated. In computing capacity requirements, 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 the portion 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 conservation practice standard and specification Pond (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.

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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Vegetation. Disturbed areas shall be established to grass as soon as practicable after construction. Seedbed preparation, seeding, fertilizing, and mulching shall be according to conservation practice standard and specification Critical Area Planting (342).

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.

Irrigation pits shall be constructed according to the specifications from conservation practice standard Pond (378).

OPERATION AND MAINTENANCE

The following University of Missouri Agricultural Guide provides information on operating and maintaining structures with embankment dams:

1548 "Maintaining Small Dams"