

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

WATER HARVESTING CATCHMENT

(no.)
CODE 636

DEFINITION

A facility for collecting and storing runoff from precipitation.

PURPOSE

Provide water for livestock, fish, wildlife, and/or other purposes by sealing of the watersheds or contributing areas to increase, collect, and store runoff water for future use.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to areas where there is a need for additional or better quality water. The contributing area shall have a potential to furnish the quantity and quality of water required for the intended use.

It also applies to simple curbs and diversions constructed to collect and store runoff from high runoff areas such as rock outcrops, paved, or other impervious areas.

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 drainage and water rights, land use, pollution control, property easements, wetlands, Waters of the United States, preservation of cultural resources, and endangered species.

General. Each water-harvesting catchment shall be designed according to a plan suited to the water requirements and the site conditions. The following points shall be considered in designing water-harvesting catchments:

The area of the apron shall be large enough to yield the required amount of runoff from expected storms.

The apron shall be smooth and have low permeability to insure adequate runoff occurs. Aprons may be compacted and/or treated earth, plastic, asphalt, concrete, and other nontoxic durable materials.

Foreign runoff shall be diverted from the catchment area to prevent damage, excessive sedimentation and to protect catchment water quality.

Install overflow pipes and/or auxiliary spillways to prevent damage to the apron, dikes and/or conveyance system. Provide a sediment trap between the apron and storage basin.

The storage basin shall be, impermeable, durable, and of adequate size, to hold the water quantity and maintain water quality needed for the purpose. Construct storage basins from compacted earth, steel, concrete, plastic and/or similar durable materials. Earth dams shall have at least one foot of freeboard above design high water. Storage basins shall be protected from 10-year-frequency 24-hour duration storms. Provide overflow devices in storage basins.

Aprons, conveyance systems, and storage areas shall be protected from damage by weather, animals, vandals, wildlife, and traffic. Fencing shall be installed as necessary.

Water harvesting catchments for livestock drinking water must be designed under the direct supervision of an engineer, and must be stable for all reasonably expected load, weather, and operating conditions.

Conservation practice standards are reviewed periodically and updated if needed. The current version of this standard is posted on our website at www.sd.nrcs.usda.gov or may be obtained at your local Natural Resources Conservation Service.

CONSIDERATIONS

Consider effects the practice has on surface and ground water. Factors may include changes in evaporation, timing of releases from the catchment, and the impact of the type of catchment on surface or ground water.

Covers and other evaporation control measures may be needed to insure adequate water quality and volume for the purpose. Covers are particularly important where the purpose is maintaining livestock drinking water quality during hot dry weather.

PLANS AND SPECIFICATIONS

Plans and specifications for this practice shall meet this standard and include requirements needed to achieve its purpose.

OPERATION AND MAINTENANCE (O&M)

A site specific O&M plan must be prepared for use by the owner/operator. Include the following:

Inspecting and testing valves, pumps, and other appurtenances;

Maintaining erosion protection at outlets;

Checking for debris, minerals, algae, and other materials that may restrict system flow or water quality;

Draining and/or providing for cold weather operation of the system;

Controlling vegetation, wildlife, rodents, and burrowing animals from the apron;

Maintaining fences; and

Inspecting flexible liners and/or covers for signs of ultraviolet degradation.

Testing water quality as appropriate for the purpose.