

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 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 such high runoff areas as rock outcrops or existing paved or impervious areas.

CRITERIA

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:

1. Registration is required with the Utah State Engineer Water Rights Office, prior to constructing a catchment facility.
2. The area of the apron shall be large enough to yield the required amount of runoff from the expected storms.
3. The apron shall be smooth and impervious to insure that adequate runoff occurs. Compacted earth, treated earth, wax, rubber, plastic, asphalt, concrete, steel, and other such suitable materials are acceptable for this purpose.
4. Foreign runoff shall be diverted from the catchment area to prevent damage and excessive sedimentation.
5. An overflow pipe or auxiliary spillway will be installed to prevent damage to the apron from runoff in excess of that needed to maintain the design capacity of the conveyance system. A sediment trap and/or a debris screen will be installed between the apron and the storage basin or tank.
6. The storage basin or tank shall be of adequate size, impermeable, and durable to hold water for the intended purpose. Earth basins and tanks constructed of steel, concrete, butyl rubber, and similar facilities are acceptable. Earth dams shall have at least 1 foot of freeboard above the design high water. All storage basins shall be protected from 10-year-frequency storms. An overflow device shall be installed in all storage basins.
7. The apron and storage areas shall be protected from damage by weather, animals, vandals, wildlife, and traffic. Fencing shall be installed as necessary.
8. Water collected in these systems are not suitable for human consumption without treatment and should be labeled as such. Any such treatment shall comply with applicable drinking water standards.
9. Catchments constructed as part of a building or storage shed for equipment shall comply with building codes.

CONSIDERATIONS

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

NRCS, UTAH
June 2010

Consider the 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 water versus ground water.

Evaporation control measures may be needed to insure that adequate storage capacity is maintained.

Consider covered storage and/or storage tanks to store runoff.

PLANS AND SPECIFICATIONS

Plans and specifications for water-harvesting catchments shall be in keeping with this standard and shall describe the requirements for installing the practice to achieve its intended purpose.

OPERATION AND MAINTENANCE

An O&M plan specific to the type of installed water-harvesting catchment shall be provided

to the landowner. The plan shall include, but not be limited to, the following provisions:

1. Inspecting and testing valves, pumps, and other appurtenances;
2. Maintaining erosion protection at outlets;
3. Checking for debris, minerals, algae and other materials that may restrict system flow;
4. Draining and/or providing for cold weather operation of the system;
5. Controlling all vegetation, wildlife, rodents, or burrowing animals from the apron;
6. Maintaining all fences to prevent unauthorized human or livestock access; and
7. Inspecting the catchment area for signs of ultraviolet degradation of flexible materials.