

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

WILDLIFE WATERING FACILITY

(Number)

CODE 648

DEFINITION

Developing, improving, or modifying watering places and systems for wildlife.

PURPOSES

- Provide adequate drinking water, during critical periods, for wildlife.
- Create, expand, or enhance suitable habitat for wildlife.
- Improve water quality and accessibility for wildlife.

CONDITIONS WHERE PRACTICE APPLIES

In areas where new, additional, or improved watering places are needed to increase the range or distribution of wildlife, improve the habitat of wildlife, or attract wildlife by meeting their water requirements.

Where lack of adequate water has been identified as the limiting habitat component.

Water developments are of little or no benefit to wildlife without adequate habitat, especially cover.

CRITERIA

General criteria applicable to all purposes named above

Because each facility is unique to species, habitat, topography, and climate, watering facilities must be planned and installed according to a plan and adapted to the specific site.

Designs for watering facilities shall be according to the following principles:

The distribution and spacing of facilities shall be based on topography; required travel distance to water; and the home range, territory size, and distribution of the target species. All habitat needs will be provided for the target species.

Design shall be sized to accommodate the expected and/or anticipated consumptive rates of target and non-target species. See Biology Technical Note #21 for specific recommendations.

The facility must provide accessible and dependable water of suitable quality during the critical period.

Escape ramps shall be installed in open water troughs and tanks where danger from drowning exists.

Design shall include appropriate safety features to minimize the hazards of the facility.

Facilities will be designed and installed in compliance with all state and federal laws including water rights.

Watering facilities will be fenced to prevent damage by livestock where danger of damage exists.

Facilities must be inspected annually to insure proper functioning.

The facility must be designed to withstand freezing or must be winterized annually.

CONSIDERATIONS

The principal types of wildlife watering facility developments are:

- a. Guzzlers and rain traps-typically plastic or fiberglass catchments with storage and drinking facilities. See Biology Technical Note # 21.
- b. Spring and seep development. Refer to Spring Development (574) standard.
- c. Tanks and troughs supplied by a pipeline or well. Refer to Trough or Tank (614), Pipeline (516), and Well (642) standards.
- d. Float or vacuum valve controlled drinking basins. May be installed in new or existing facilities to address wildlife needs.
- e. Excavated or embankment ponds. Refer to Pond (378) standard.

General Considerations

Consider the effects of concentrated grazing, predation, hunting etc. on the target population and the ecosystem.

Consider adapting existing water sources for wildlife water.

Consider protecting the facility from non-target species including livestock. Refer to Livestock Exclusion (472).

Consider the effect of noxious weed or brush encroachment.

Consider the accessibility of the site for installation and maintenance.

Consider the effects of freezing.

Consider the period of planned use (summer vs. winter ranges).

Consider the esthetics of the installation. Troughs, tanks, or other structures should be located such that it does not detract from the natural viewscape.

In special situations, a permanent watering facility may be supplied by hauling water. Regular, dependable delivery must be stressed. Locating such facilities near an access road is advisable.

Water Quantity Considerations

Consider effects on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, deep percolation, and ground water recharge.

Consider effects on downstream flows or groundwater that could affect other water users or associated aquatic sites.

Consider the impacts of heavy equipment-compaction of the construction and surrounding area on the water bearing zone.

Water Quality Considerations

Consider the potential for water quality degradation from non-point source pollutants including sediment and livestock waste.

Consider the effects on the movement of dissolved substances to ground water.

Consider the effects on wetlands and other aquatic sites.

Site Considerations

Consider using vegetative measures to protect and enhance the site.

Consider the target species need for escape cover or for open visibility when planning cover near the watering facility.

Consider the distribution of food, cover, terrain, ecological barriers, disturbance, and other factors that affect wildlife movement and survival.

Consider the site's aspect and exposure and their effect on temperature, wind, evaporation, and snow drift patterns.

Facilities should be located away from disturbance areas where human activity could discourage use

by wildlife. Screen plantings may be considered if appropriate.

Whenever possible, ponds, guzzlers, and rain traps should be located where excavation can be easily accomplished. A gentle slope for installation of water collection aprons is also desirable. Facilities should not be located where sediment or debris laden runoff will flow into the tank.

wildlife. Pages 674-680 in T.A. Bookhout, ed. Research and Management Techniques for Wildlife and Habitats. The Wildl. Soc., Bethesda, MD.

PLANS AND SPECIFICATIONS

Plans and specifications shall be prepared in accordance with the criteria of this standard and shall describe the requirements for applying the practice to achieve its intended use. The following items shall be the minimum documentation requirements for an applied practice.

- Location
- Target species
- Type of facility developed

OPERATION AND MAINTENANCE

The operation and maintenance plan shall include the following:

Facilities shall be checked at least annually to insure proper function.

Inspect the area adjacent to the facility to make sure the area is well protected and not subject to erosion, and correct as needed.

Facilities not designed to withstand or operate during freezing weather shall be winterized prior to winter conditions.

Periodically monitor water quality to insure acceptable water quality is maintained. Flush or clean tanks and troughs as needed. Damaged tanks, collection aprons, pipes, and appurtenances will be repaired.

Remove accumulated debris and sediment as needed.

Clear or manage vegetation that obstructs wildlife access to water.

REFERENCES

Kie, J.G., V.C. Bleich, A.L. Medina, J.D. Yoakum, and J.W. Thomas. 1996. Managing rangelands for