

**NATURAL RESOURCES CONSERVATION SERVICE
INTERIM CONSERVATION PRACTICE STANDARD**

WILDLIFE WATERING FACILITY

(No.)

CODE 648

DEFINITION

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

PURPOSE

To provide adequate drinking water during critical periods for wildlife. Critical periods will generally be during spring, summer, and fall seasons.

To better utilize existing habitat for wildlife.

CONDITIONS WHERE PRACTICE APPLIES

In areas where new, additional, or improved watering places are needed to increase the range, distribution, improve the habitat of, or attract wildlife to meet their requirements. Also, where lack of adequate water has been identified as the limiting habitat component.

NOTE: Water developments are of little or no benefit to wildlife without adequate habitat, especially cover. If the planned habitat quality will not meet the minimum quality criteria in Section III of the FOTG, then drinking water is not limiting and this practice does not apply.

The principal types of wildlife watering facility developments are:

Guzzlers and rain traps- typically plastic or fiberglass catchments with storage and drinking facilities. See specification attached to this standard.

Spring and seep developments. Refer to Spring Development (574) standard.

Tanks and troughs supplied by a pipeline or well. Refer also to Trough or Tank (614), Pipeline (516), and Well (642) standards.

Float or vacuum valve controlled drinking basins. May be installed in new or existing facilities to address wildlife needs.

Excavated or embankment ponds. Refer also to Pond (378) standard.

CRITERIA

General Criteria for All Purposes

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:

- Watering facilities shall be planned and designed to meet the needs of one or more target species (refer to Table 1).
- The facility must provide accessible, permanent, dependable water for the critical period.
- Facilities that rely on precipitation and/or runoff as the primary water source shall include adequate storage.
- The distribution and spacing of facilities shall be based on topography and distance the target species will travel for water.
- Ramps shall be installed in open troughs and tanks when needed to allow wildlife access and escape.
- Design shall include appropriate safety features to minimize the hazards of the facility.

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

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- Facilities shall be designed and installed in compliance with all local state and federal laws.
- Facilities or components of facilities, such as water collection aprons, that may be damaged by livestock will be protected by fencing, but must also allow wildlife access.
- Facilities must be accessible in order to conduct maintenance and annual inspections.
- The facility must be designed to withstand freezing or must be annually winterized by draining.

CONSIDERATIONS

General Considerations

- Permanent water will usually be developed by exposing or pumping groundwater, capturing precipitation, or impounding runoff.
- Adaptation of existing water sources.
- Noxious weed or brush encroachment.
- Vegetative measures necessary to prevent erosion and enhance wildlife use of the site.
- Effects on wetlands or other aquatic sites.
- Aesthetics of the installation.

Water Quantity Considerations

- Factors related to water yield and water permanence including: volume and rate of runoff, infiltration, evaporation, transpiration, deep percolation, timing and amounts of precipitation, and ground water recharge.
- Effects on downstream flows or groundwater that could affect other water uses, users, or associated aquatic sites.
- Protection from floods.
- Water collection aprons may be needed to supply adequate water.

Water Quality Considerations

- Existence and maintenance of suitable water quality for the target species.

- Potential water quality degradation from nonpoint-source pollutants including sediment and livestock waste.
- Potential for ground water contamination.
- Adverse effects of soil disturbance and erosion.

Site Considerations

- Consider the distribution of food and cover, terrain, ecological barriers, disturbance, and other factors that affect wildlife movement and survival.
- Facilities should be located away from disturbance areas where human activity could discourage use by wildlife. Screen plantings may be considered if appropriate.
- Consider the target species need for escape cover or for open visibility when planning escape cover near the watering facility.
- 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.
- 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 should be considered.

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.

OPERATION AND MAINTENANCE

The operation and maintenance plan shall include the following:

- Facilities should be checked at least biannually to insure proper operation.

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- Damaged tanks, collection aprons, pipes, and appurtenances will be repaired.
- Remove accumulated sediment and debris as needed.
- Clear or manage vegetation that obstructs wildlife access to water.
- Inspect the area adjacent to the facility for erosion damage and correct as needed.
- Facilities not designed to withstand or operate during freezing weather should 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.

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Table 1 Water Requirements for Specific Wildlife Species
Nebraska Planning Considerations for Specific Wildlife Species

| Wildlife Species | Suggested Optimum Spacing (Miles) | Daily Water Consumption Requirements (Gallons) |
|----------------------------|--|---|
| * Elk | 1.0 | 5 - 8 per animal |
| * Deer | 0.5 | 1 - 2 per animal |
| * Antelope | 1.0 | 1 - 2 per animal |
| Sharptailed Grouse | 1.0 | 2 - 5 per facility |
| Greater Prairie Chicken | 1.0 | 2 - 5 per facility |
| * Turkey | 0.5 | 6 - 9 per facility |
| Pheasant | 0.5 | 2 - 5 per facility |
| * Mourning Dove | 0.5 | 2 - 5 per facility |
| Bobwhite Quail | 0.25 | 2 - 5 per facility |
| Gray (Hungarian) Partridge | 0.25 | 2 - 5 per facility |
| * Songbirds | 0.25 | 1 - 2 per facility |
| Waterfowl | NA | |
| Shorebirds | NA | |

* - Species that are known to benefit from water developments, provided cover is adequate and water is scarce or unavailable.

Example: A tract of land in Box Butte County has no permanent water within a 1 mile radius. The landowner wants to provide water to support deer and pheasants. The landowner and NRCS technician anticipate that the surrounding habitat could support 10 deer and one flock of pheasants. It is also likely that mourning doves and various songbird species will be nontarget water users. The local NGPC biologist was consulted and concurred that the landowner's wildlife objective was reasonable. Daily water consumption requirements were calculated using the table above as follows:

$$\begin{array}{rcl}
 10 \text{ Deer} \times 1.5 \text{ gallons} & = & 15 \\
 \text{Pheasants} & = & 3 \\
 \text{Doves} & = & 3 \\
 \text{Songbirds} & = & 1 \\
 \hline
 \text{Total daily consumption} & = & 22 \text{ gallons per day}
 \end{array}$$