NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

SHALLOW WATER MANAGEMENT FOR WILDLIFE

(acre)

CODE 646

DEFINITION

Managing shallow water on agricultural lands and moist soil areas for wildlife habitat.

PURPOSE

This practice may be applied as part of a resource management system to support the following purposes:

- To provide open water areas on agricultural fields and moist soil areas to facilitate waterfowl resting and feeding.
- To provide habitat for reptiles and amphibians and other aquatic species which serve as important prey species for waterfowl, raptors, herons, and other wildlife.

CONDITIONS WHERE PRACTICE APPLIES

On agricultural and moist soil areas where water can be impounded or regulated by diking, ditching, or flooding.

This practice can be used to facilitate the conservation of declining wetland dependent and threatened and endangered species.

This practice does not apply to: Wetland Restoration (657) intended to rehabilitate a degraded wetland where the soils, hydrology, vegetative community, and biological habitat are returned to original conditions; Wetland Enhancement (659) intended to rehabilitate a degraded wetland where specific functions and/or values are enhanced beyond original conditions; or Wetland Creation (658) for creating a wetland on a site location which historically was not a wetland or on a site which was formerly a wetland but will be replaced with a wetland type not naturally occurring on the site.

CRITERIA

- Soils should have low permeability to inhibit subsurface drainage and allow for maintenance of proper water levels.
- Shallow water impoundments require an adequate water supply for reflooding and a water control structure for removing water when necessary.
- Landowner shall obtain all local, state, and federal permits necessary.
- If pumping, water rights must be assured.
- The Standards and Specifications for Dike (356), Pumping Plant for Water Control (533), and Structure for Water Control (587) will be used as appropriate. Refer to Chapter 6, “Structures,” in the Engineering Field Handbook for additional design information. Existing drainage systems will be utilized, removed, or modified as needed to achieve the intended purpose.
- The potential for occurrence of threatened or endangered species shall be evaluated for each site. Sites providing critical habitat for threatened or endangered species will not be managed under this standard unless it can be demonstrated that the impact will benefit the species at risk.

CONSIDERATIONS

To insure that foods are available to dabbling ducks, impoundments should be gradually flooded to a depth of 6 - 18 inches.

Consider the effects of the timing of the flooding and drawdown, as well as the type of

drawdown, on plant species composition (moist soil areas).

Consider the species flooding tolerances and the composition of seed in the soil at the site (moist soil areas).

Consider effects on wetlands or wildlife habitats, especially habitat critical to endangered species that would be associated with or affected by the practice.

Consider the effects of residual herbicides (moist soil areas).

Consider the targeted plant species' tolerances with respect to timing and type of drawdown.

Consider effects on movement of dissolved substances to groundwater and to downstream surface waters.

Consider effects on downstream flows that would affect other water uses or users.

PLANS AND SPECIFICATIONS

Development of management options will be based on the use of the Aquatic & Terrestrial Habitat Evaluation Guide (Biology Technical Note 14). This habitat evaluation process will result in a quality rating for habitat based on a Resource Management System (RMS). The RMS must meet the minimum acceptable level as listed in Section III of the Field Office Technical Guide.

Specifications will be developed for each site. The specifications will be prepared in accordance with the criteria for the Standard and shall describe the requirements for applying the Practice to achieve its intended use. Appropriate job sheets, narrative statements in the conservation plan, or other acceptable documentation, will be used to record the items needed to carry out this practice. Requirements for operation and maintenance of the practice will be incorporated into site specifications.

The conservation plan will:

1. Designate the location and amount of land managed as shallow water for wildlife.

2. List the targeted wetland plant community types and their dominant species.

3. List those practices necessary to retain and manage the shallow water for wildlife.

4. If water control structures are used, specify the timing and level- required for the establishment of desired hydrologic conditions or for management of vegetation.

5. Where appropriate, haying and/or livestock grazing plans will be developed so as to allow for the establishment, development, and management of any associated buffers and upland vegetation.

6. Include an inspection schedule for embankments and structures, if built, to assess condition and functionality.

7. Define the depth of sediment accumulation to be allowed before removal is required.

OPERATION AND MAINTENANCE

The impoundment should be dewatered and disked or burned at 2 to 3 year intervals to control the invasion by undesirable plants. If the impoundment is burned, all state and Federal laws must be followed and permits obtained.

The following actions shall be carried out to insure that this practice functions as intended throughout its expected life. These actions include normal repetitive activities in the application and use of the practice (operation), and repair and upkeep of the practice (maintenance).

Any use of fertilizers, mechanical treatments, prescribed burning, pesticides and other chemicals to assure the shallow water or moist soil area function shall not compromise the intended purpose. Only a licensed pesticide applicator shall dispense chemicals within the area managed. Those chemicals must have labels identifying them for use in aquatic environments.

Biological control of undesirable plant species and pests (e.g., using predator or parasitic species) shall be implemented where available and feasible.

Operation and maintenance shall include monitoring and management of the site as well as structural components.

REFERENCES

Dring, Timothy, Rachel Maggi, Martha Chaney and Mark Schuller, 2000. Biology Technical Note 14, Aquatic & Terrestrial Habitat Evaluation Guide, NRCS Washington.

USDA-NRCS NEH (650) Engineering Field Handbook, Chapter 6: Structures.

Stratman, David, October 2000. USDA-NRCS Indiana Biology Technical Note No. 1, Using Micro and Macrotopography in Wetland Restoration, Indianapolis, Indiana, 7 Pages.