

## Animal Enhancement Activity – ANM31 – Drainage water management



### Enhancement Description

This enhancement consists of seasonal hydrology management during non-cropping periods for wildlife habitat on working lands.

### Land Use Applicability

Crop

### Benefits

Maintaining flooded or saturated soil conditions during non-cropping periods can have multiple benefits. Flooded fields can provide important

habitat for migratory waterfowl and other species that benefit from temporarily flooded land. Flooded areas provide food, cover and resting areas for wildlife, especially waterfowl during their migration.

### Conditions Where Enhancement Applies

This enhancement applies to cropland that has been artificially drained (surface or subsurface) and which is flat enough that significant portions can be flooded or saturated by controlling outflow from the drainage system.

### Criteria

Refer to the criteria in Conservation Practice Standard, Drainage Water Management (554), Shallow Water Management for Wildlife (654), Upland Wildlife Habitat Management (645), Wetland Wildlife Habitat Management (644), and Structure for Water Control (587) for the requirements for drainage/water control structures, their management and vegetative management to be used with this enhancement. Contact your local conservationist for assistance with Conservation Practice Standards.

1. Develop a plan that:
  - a. Identifies the targeted species or suite of species (e.g., giant gartersnake, shorebirds, waterfowl, other waterbirds)
  - b. Provides for the installation, retrofitting of existing, or utilization of existing water-supply and water-control structures, including pumps and irrigation gates for precise water-level control such that seasonal shallow water is assured.
  - c. Establishes the optimum flooding or saturation including timing, frequency, depth, and duration of ponding and/or soil saturation that provides at least
    - i. Ponding of 1/3 of the surface area of the cropped field
    - ii. Ponding for 45-days during the target season
    - iii. Final drawdown is extended over at least a 2-week period
  - d. Provides wildlife food through the management of crop residues, or plantings of wildlife friendly cover-crops

### **Adoption Requirements**

This enhancement is considered adopted when drainage control structures are in place on all fields where the enhancement will be implemented and fields are flooded such that ponding or saturated conditions meet the target hydrologic conditions in the plan.

### **Documentation Requirements**

1. Plan developed for the target species,
2. List of fields where this enhancement was implemented,
3. The surface area of each field that is ponded,
4. List of equipment installed, retrofitted, or utilized for water level control and where it is located,
5. Dates when fields were ponded and when final drawdown began and when completed, and
6. Photographs of the impounded area(s). Photos must be dated and labeled with field number.

### **References**

Elphick, C.S., O. Taft and Pedro M. Lourenço. 2010. Management of Rice Fields for Birds during the Non-Growing Season. *Waterbirds* 33(sp1):181-192. <http://www.bioone.org/doi/pdf/10.1675/063.033.s114>

National Audubon Society, Monsanto and the Monsanto Fund. 2007. *Waterbirds on Working Lands: Recommended Practices for Rice Production*.

[http://web4.audubon.org/bird/waterbirds/pdf/recommended\\_practices\\_for\\_rice\\_production.pdf](http://web4.audubon.org/bird/waterbirds/pdf/recommended_practices_for_rice_production.pdf)

Taft, O.W. and C.S. Elphick. 2007. *Waterbirds on Working Lands: Literature Review Bibliography*. National Audubon Society. 46 pp. <http://web4.audubon.org/bird/waterbirds/downloads.html>



United States Department of Agriculture  
Natural Resources Conservation Service

**Conservation Stewardship  
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**South Dakota Goals:**

**Create seasonally flooded conditions to provide habitat for migratory waterfowl.**

Seasonal hydrology management must be placed on land with a topographic slope ranging from zero percent to two percent.

At a minimum, the following components shall be included:

- Farm and field information that includes field boundaries, soil map unit boundaries, drainage system layout, and delineation of the area served by the drainage system;
- A topographic map with 0.5- or 1.0-foot contours, depending on field slope, at the same scale as the drainage system map;
- A map showing the location, size, and impacted area of each planned control structure;
- Profile(s) showing the elevations of the subsurface drains, control structures, control elevation, ground surface, etc.
- The control elevation shall be defined as the elevation of the soil surface at the lowest spot in the area of the field impacted by the operation of the structure for water control.
- The drained area shall be defined by the lateral spacing recommendations specified by the local NRCS office based on predominant soil type, or the actual lateral spacing, whichever is less.
- The outer boundary of the drained area shall be a distance of one-half the recommended or actual lateral spacing away from the tile line(s).
- The impacted area shall be defined as the drained area contained within the control elevation of the given structure, up to the control elevation of the structure immediately above the given structure, on the same drain line, or two feet above the control elevation for the given structure, whichever is less.

**\*Wildlife management plan required for this enhancement.** A wildlife management plan is a conservation plan emphasizing wildlife and wildlife habitat management actions. Waterbirds (including shorebirds and waterfowl) are the targeted guilds.