United States Department of Agriculture
Natural Resources Conservation Service

2014 Ranking Period 1

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

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

ANM31 - Drainage Water Management:

Considerations:

- Potentially suitable on flat (less than 1% slope) areas.
- Flooded areas should have an average depth of six (6) to 10 inches.
- Flooding and drawdown should occur over 2-3 week period.
  - See IN FOTG 646 - Shallow Water Management for Wildlife Job sheet (http://www.in.nrcs.usda.gov/technical/biology/Shallow%20Water%20Development%20and%20Management%20Jobsheet%2010-2012.doc) for further guidance.