



**CONSERVATION ENHANCEMENT ACTIVITY**

**E646B**

**CONSERVATION STEWARDSHIP PROGRAM**

Extend retention of captured rainfall for migratory waterfowl and wading bird late winter habitat

**Conservation Practice 646: Shallow Water Development and Management**

**APPLICABLE LAND USE: Crop (Annual & Mixed)**

**RESOURCE CONCERNS: Animals**

**PRACTICE LIFE SPAN: 5 years**

**Enhancement Description:**

When flooded to shallow depths during fall and winter, agricultural fields provide ideal foraging habitat for myriad species of waterfowl and wading birds. Harvested and idled agricultural lands, notably those occurring within rice rotations, contain high densities of residual (i.e., waste) grain and natural seeds following harvest. In addition, flooded conditions promote establishment of aquatic invertebrate populations, a protein-rich food source for shorebirds as well as waterfowl and wading birds. Flooded conditions across the broader landscape promote a network or continuity of habitat that is available to migratory waterfowl and wading birds. Benefits may become greatest during late winter and early spring as birds are assimilating nutrient and fat reserves in preparation for northward migration. However, agricultural fields flooded during fall-winter are typically drained during late January or February in advance of spring planting. This often results in a rapid reduction in available habitat and may constrain ability of migratory birds to adequately prepare for migration, with greatest impacts likely occurring during years of low winter precipitation. Retention of water on agricultural lands into early spring will produce maximum benefits to migratory waterfowl and shorebirds by providing high quality habitat during a time when habitat may otherwise be in low abundance.

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**Criteria:**

This enhancement applies to crop land use acres with leveed fields capable of holding water at an average depth of 6 to 18 inches for the duration of the activity.

- Develop a wildlife habitat management plan for the targeted species suite.
- Water control structures affecting the subject land use are to be closed by mid-fall and remain closed until late winter to early spring.
  - Water depths of 6 to 10 inches provide maximum benefit to targeted species.
  - Water depths shall not exceed 18 inches for any extended period.
- A Wildlife Habitat Evaluation Guide (WHEG) specific to shallow water habitat on cropland must be used to show that implementation of the Enhancement will improve wildlife habitat value from fair (planning criteria = 0.5) to good (planning criteria greater than 0.5 and less than or equal to 0.6) or from good to very good (planning criteria greater than 0.6).

*Note: This Enhancement may be grouped with E647A - Manipulate vegetation on fields with captured rainfall for waterfowl and wading bird winter habitat. If not grouped with E647A, this Enhancement may also be grouped with E646C – Manipulate vegetation and maintain closed structures for shorebird mid-summer habitat or E646D – Manipulate vegetation and maintain closed structures for shorebird late summer habitat.*

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## Documentation and Implementation Requirements:

### Participant Will:

- Prior to implementation, ensure water control structures are in proper working order.
- Prior to implementation, meet with NRCS to review results of the wildlife habitat assessment conducted by NRCS and discuss range of management alternatives that would improve wildlife habitat conditions.
- Prior to implementation, meet with NRCS to obtain and review the Wildlife Habitat Management Plan.
- During implementation, follow the Wildlife Habitat Management Plan including opening / closing water control structures as specified in order to hold water at the proper time and at the proper depth.
- During implementation, maintain a field log to include:
  - Crops grown and the harvest date for the crops grown on the applicable acres;
  - Date/time the water control structure was closed;
  - Date/time of each field visit and observed water levels or percent holding capacity and average water depths;
  - Date/time when the water control structures were opened
  - Digital photographs documenting the condition of the structures and the habitat provided.
- After implementation, provide the field log to NRCS for review to verify enhancement was implemented to meet criteria.

### NRCS Will:

- As needed, provide additional technical assistance to the participant.
- Prior to implementation, verify this enhancement will be applied to cropland acres with leveed fields capable of holding water at an average depth of 6 to 18 inches for the duration of the activity.
- Prior to implementation, assess the habitat condition using the Wildlife Habitat Evaluation Guide to calculate current WHEG score and anticipated WHEG score after implementation of

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Enhancement; Existing WHEG score = \_\_\_\_\_

Planned Post Implementation WHEG score = \_\_\_\_\_

- Prior to implementation, review the results of the wildlife habitat evaluation with the participant, and discuss range of management alternatives that would improve wildlife habitat conditions.
- Prior to implementation, develop a Wildlife Habitat Management Plan for targeted suite of species.
- Prior to implementation, meet with participant to review the Wildlife Habitat Management Plan.
- After implementation, reassess habitat condition using Wildlife Habitat Evaluation Guide; **Post Implementation WHEG score = \_\_\_\_\_**
- After implementation, review field log to verify enhancement was implemented to meet criteria.

### NRCS Documentation Review:

I have reviewed all required participant documentation and have determined the participant has implemented the enhancement and met all criteria and requirements.

Participant Name \_\_\_\_\_ Contract Number \_\_\_\_\_

Total Amount Applied \_\_\_\_\_ Fiscal Year Completed \_\_\_\_\_

\_\_\_\_\_  
NRCS Technical Adequacy Signature

\_\_\_\_\_  
Date

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**IOWA SUPPLEMENT TO  
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**Additional Criteria for Iowa**

- Contact the Iowa NRCS, State Resource Conservationist, for the appropriate Wildlife Habitat Evaluation Guide (WHEG). [Kevin.McCall@usda.gov](mailto:Kevin.McCall@usda.gov) or Phone: 515-284-4262.