United States Department of Agriculture
Natural Resources Conservation Service

2010 Ranking Period 2

Animal Enhancement Activity – ANM12 – Shallow water habitat

Enhancement Description
Construct or renovate small, shallow sites to impound or hold water seasonally, typically from late winter through early summer (e.g., vernal pools).

Land Use Applicability
Cropland, pastureland, rangeland and forestland

Benefits
Shallow water habitats are used by amphibians, reptiles, birds, mammals and other species in completing their life cycles. Most species of amphibians need shallow water areas to lay their egg masses. These seasonal pools of water do not provide year-round water habitat that would support fish that could prey on the egg masses.

Criteria
This enhancement requires the construction or renovation of small, shallow sites to impound or hold water seasonally, typically from late winter through early summer (e.g., vernal pools).

1. Soil & Site Considerations: Shallow water habitat sites should be located where water can be impounded or regulated by diking, ditching, flooding, pumping, or excavation. Soils must have low permeability or seasonal high water tables to inhibit subsurface drainage and allow for maintenance of proper water levels. These aquatic habitats must be located adjacent to or within wildlife-friendly cover or natural habitats. This activity does not apply on existing wetlands.

2. Size/Depth/Season/Composition: There are no area limitations, although larger aquatic habitats provide greater ecological benefits.
   a. The shallow water habitats must be clustered in groups of two or three with approximately ¼ to 1/3 mile between each pool within a cluster. There will be 1 cluster per each 20 acres of applicable land. Each pool must be between 0.1 and ½ acre in size. As a minimum there must be at least 0.2 acres of shallow water habitat per 20 acres of applicable land use.
   a. Maximum depth shall not exceed 30 inches and the average depth should be between 6 and 18 inches.
   b. These aquatic habitats must be designed and managed to hold water at a minimum from late winter through early summer, however it should not hold water all year long.

c. Irregular substrate surfaces are preferred over smooth substrate surfaces to create diverse plant communities and habitat structure.
d. A combination of open water and natural vegetation, including moist soil and wetland plants, is desired within the wetted perimeter.
e. A ratio of about 50% open water to 50% vegetation is ideal (acceptable range is 30-70%). Habitat complexity can be enhanced by the addition of logs or rocks that provide resting and basking sites.

Refer to Conservation Practice Standard, Shallow Water Development and Management (646) for additional management information and Dike (356), or Water and Sediment Control Basin (638) for additional information on water impoundment structures for this enhancement.

Operation and Maintenance
The contributing watershed and/or water supply shall provide clean water free of harmful pollutants. Apply conservation treatments to the contributing watershed to ensure minimal erosion and sediment delivery. Buffer these aquatic habitats with wildlife-friendly perennial vegetation dense enough to retard erosion and trap sediments before entering the water.

Manage water levels by artificially raising or lowering in order to produce desired habitat conditions. Manage the areas to control reed canarygrass, purple loosestrife and other undesirable invasive plants. Manage dense vegetation such as cattails and prairie cordgrass so that 50-70% open water is maintained.

Documentation Requirements
1. Site description including a location map, a detailed map or sketch including surrounding land uses, with dimensions, water depth and estimate of area.
2. Description of management activities and dates completed.
3. Maintenance plan.

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Provide copies of any required permits or a written statement verifying that any required permits necessary to construct the shallow water habitat were obtained.

A 35' vegetated buffer (minimum) shall be required around the shallow water areas.

See Wisconsin Agronomy Technical Note 5 and/or 6 for buffer seed mixes:

ftp://ftp-fc.sc.egov.usda.gov/WI/technotes/agronomy-tn5.pdf
ftp://ftp-fc.sc.egov.usda.gov/WI/technotes/agronomy-tn6.pdf