

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD
FISHPOND MANAGEMENT**

(Ac.)

CODE 399

DEFINITION

Managing impounded aquatic habitat and water quality for the production of fish.

PURPOSE

- To provide favorable habitat for fish and other aquatic organisms which help sustain the fish population.
- To develop and maintain a desired species composition and ratio.
- To develop and maintain a desired level of production.

CONDITIONS WHERE PRACTICE APPLIES

In warm and cold water ponds, lakes, and reservoirs not managed for commercial aquaculture purposes.

CRITERIA

General Criteria Applicable to All Purposes

Ponds must meet the requirements of Conservation Practice Standard 378, Pond.

Livestock shall be excluded from the pond.

Protect the site from flooding, sedimentation, and contamination.

A buffer that meets the Filter Strip (393) or Riparian Herbaceous Cover (390) standard must be established and maintained around a majority of the pool area.

Control undesirable aquatic vegetation. Refer to section on aquatic weed control in the current "Guide for Weed Management" in Nebraska.

Control nuisance species in compliance with state and local regulations. Refer to the Invasive Fish Control Design Procedures (399DP) for requirements on the control of

common carp to enhance the habitat quality of wetlands and shallow lakes.

Comply with state and local regulations when selecting species to be stocked. Contact the Nebraska Game and Parks Commission for additional information.

Discharges from ponds, lakes, and reservoirs will meet state water quality standards.

Prevent the fish in the pond from escaping or being introduced into adjoining waters where native species might be adversely affected in accordance with state and local regulations.

Criteria to Develop and Maintain a Desired Species Composition and Ratio

Limit species for stocking to those that are locally adapted for use in ponds, lakes or reservoirs.

Based on client objectives and local regulations develop a pond management plan that specifies species selection, stocking rates and ratios.

Develop species selection, stocking rates, and ratios with respect to the size, depth, water temperature, and water quality of the pond to be stocked.

Criteria to Develop and Maintain a Desired Level of Production

Maintain the desired level of production through liming, fertilization, slot limits or other harvest restrictions, harvesting, or supplemental feeding. Address water quality conditions (e.g., dissolved oxygen level, total hardness, pH, alkalinity, phytoplankton bloom, etc.) based on local conditions using the pond management plan.

Aquatic organism health issues directly affect production levels and need to be included in the pond management plan. Follow proper diagnostic sampling procedures during fish

Conservation practice standards are reviewed periodically and updated if needed. To obtain the current version of this standard, contact your Natural Resources Conservation Service [State Office](#) or visit the [Field Office Technical Guide](#).

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kills and when submitting samples to diagnostic labs.

CONSIDERATIONS

Use native species whenever possible.

Nonnative game fish can escape ponds and severely affect adjacent ecosystems.

Consider alternatives to the use of pesticides in the drainage area above the site, which may have negative impacts to water quality and aquatic organisms.

Consider the use nutrient and pest management practices in the watershed to maintain water quality.

Consider the use of sediment basins or constructed wetlands in the upper portions of impoundments to trap silt and nutrients.

Consider the effect of additional uses (e.g., livestock watering, recreation, irrigation, etc.) on the fish and/or aquatic organism population.

Consider limited access points or using off-site water to prevent excessive livestock use of shoreline habitats.

Consider the use of supplemental aeration equipment to improve gas transfer, water quality, and minimize fish stress within the impoundment.

Consider providing additional fish and wildlife habitat within or around the impoundment for cover and breeding purposes. A vegetated buffer around the pond can provide multiple benefits, such as nesting and escape cover, reduced bank erosion, improved water quality, and more.

Use the Farm Pond Habitat Evaluation Worksheet (NE-CPA-45) to determine if the planned condition of the existing pond will meet the quality criteria requirements for wildlife habitat (food, water cover, etc.) in Section III of the FOTG. The planned condition must provide a total rating of 0.5 or higher for the conservation treatment unit.

Grassy cover around the impoundment that may provide nesting habitat should not be mowed until after the primary nesting season.

PLANS AND SPECIFICATIONS

A pond management plan will be prepared using approved specification sheets, job sheets, technical notes, narrative statements in the conservation plan, or other documentation.

The plan will include:

- A location map and plan view of the site;
- Statement of purpose that describes the species(s) desired and management goals;
- Evaluation methods (observation, seining, electroshocking, harvest records, etc.) for determining the population dynamics of fish and other aquatic organisms;
- Reference to Nebraska Aquatic Nuisance Species Management Plan recommendations; and
- Permit requirements and regulations, if applicable.

Refer to Nebraska Biology Technical Note 78 - [Nebraska Pond Management](#) published by the Nebraska Game and Parks Commission for information on pond construction, management, maintenance, and fish stocking for use in development of a pond management plan.

OPERATION AND MAINTENANCE

Develop an operation and maintenance plan that includes the following actions that are required for the successful management of the pond, lake, or reservoir:

1. Evaluation of habitat conditions on a regular basis.
2. Management of fish or other aquatic organism populations.
3. Supplemental feeding where applicable.
4. Removal of undesirable and overpopulated organisms.
5. Management and control of aquatic vegetation.
6. Monitoring and maintenance of desired water quality conditions (e.g., dissolved oxygen level, total hardness, pH, alkalinity, phytoplankton bloom, etc.).

7. Periodic inspection and maintenance of structural components (e.g., water level control equipment).
8. Detection and identification of fish pathogens and instructions for collecting and preserving samples.
9. Operation and maintenance procedures for water treatment and escape-control mechanisms at discharge points.

REFERENCES

A Manual of Fish Culture. Fish Culture Section, American Fisheries Society, 1999.

Farm Pond Ecosystems – Fish and Wildlife Habitat Management Leaflet #29. Natural Resources Conservation Service, Wildlife Habitat Management Institute, May 2005.

Inland Fisheries Management in North America, Second Edition. Chapter 21, Small Impoundments. Kohler, C.C. and W.A. Hubert, editors. American Fisheries Society, 1999.

Managing Aquatic Vegetation with Grass Carp. J.R. Cassani, editor. American Fisheries Society, 1996.

Mississippi Interstate Cooperative Resource Association: Summary of Permit Authority and Prohibited Species by State with Special Emphasis on Asian Carp. Aquatic Nuisance Species Task Force, 2000.

Nebraska Aquatic Nuisance Species Management Plan. Nebraska Invasive Species Council, August 2010.

Nebraska Pond Management. (Nebraska Biology Technical Note 78) Nebraska Game and Parks Commission, May 2006.

Suggested Procedures for the Detection and Identification of Certain Finfish and Shellfish Pathogens (Blue Book). Fish Health Section, American Fisheries Society, 2004.