

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

FISHPOND MANAGEMENT

(Acre)

CODE 399

DEFINITION

Managing impounded water for the production of fish or other aquatic organisms.

PURPOSE

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

CONDITIONS WHERE PRACTICE APPLIES

Practice applies in warm and cold water ponds, lakes, and reservoirs not managed for commercial aquaculture purposes.

CRITERIA

General Criteria Applicable to All Purposes

New or existing structures will meet or exceed the requirements for Oklahoma NRCS Pond (378) or Dam (349) standards.

All Federal, State and local regulations will be followed and necessary permits obtained prior to constructing, stocking, etc.

Locate new ponds in areas that will have good water quality with minimum sedimentation and no contamination problems.

Ponds suitable for proper management will be at least one-half surface acre in size.

Provide some relatively deep water (at least 10 feet in depth) in order to minimize impacts from

freezing, evaporation and to provide more diverse habitat.

Install drainpipe in order to drawdown water for management purposes.

Install structures such as brush piles, concrete blocks, tile pipe, wooden pallets, and tire bundles for fish, and other aquatic organisms if adequate natural structure and submerged habitat is not available,.

Avoid stocking with fish species that are invasive or may become invasive in surrounding waters.

Control undesirable species of aquatic vegetation by use of biological, chemical, or mechanical methods.

Maintain 10 to 25 percent surface area coverage of desirable aquatic vegetation for fish, amphibian, and invertebrate habitat.

Treat excessively turbid or muddy water by controlling erosion on the drainage area or treating water with gypsum, alum, or organic matter to clear the water.

Criteria to Develop and Maintain a Desired Species Composition and Ratio

Species for stocking will be limited to those that are adapted for use in ponds, lakes or reservoirs within Oklahoma. These species typically include: largemouth bass, bluegill, and channel catfish.

Avoid stocking ponds with fish from other streams, lakes, or ponds. Such stocking methods increase the chances for introducing undesirable species or diseases.

Stocking rates shall follow the recommendations of the Oklahoma

Department of Wildlife Conservation (ODWC) or NRCS biologist.

General stocking rates for typical recreational fishing in Oklahoma are as follows:

- Stock 500 bluegill fingerlings per surface acre in the fall.
- Stock 100 channel catfish fingerlings per surface acre in the fall.
- Stock 100 bass fingerlings per surface acre the following spring.

Other stocking rates, fish species, and combinations may be appropriate depending on the size, depth, water temperature, and water quality of the area to be stocked.

Consult with ODWC or NRCS biologists for alternative species and stocking rates.

To maintain the desired species composition and species ratios a plan will be developed with the client to evaluate future species composition and species ratios through observations, seining and catch records.

Harvest fish after initial stocking using the following general guidelines for maintaining ratios in recreational ponds.

- Do not remove any largemouth bass until third year following stocking. Catch and release only before third year.
- After third year, do not remove more than 20 bass per year.
- Bluegill may be removed during first summer after stocking.
- Remove 8 to 10 pounds of bluegill for every one pound of largemouth bass removed from the pond.
- Catfish may be removed during second year after stocking.
- Do not remove more than 10 catfish per year.

Different ratios, harvest rates, and population numbers can be planned where the client is interested in managing for trophy bass, large bluegill, catfish or other special management objectives. Consult with ODWC or NRCS biologists for alternative harvest and population management recommendations

Maintain written records of number of fish that are harvested by species from the pond.

Periodically seine the pond to determine species composition, relative population numbers, and general health and condition of fish.

Adjust harvest numbers based on results of all available information.

Renovate pond to remove all fish and restock if desired species or population balance cannot be corrected through proper management.

Criteria to Obtain and Maintain a Desired Level of Production

The desired level of production will be maintained through fertilization, supplemental feeding, treatment of diseases, and maintenance of water quality.

CONSIDERATIONS

Consider the use of native fish species.

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

Consider establishing the drainage area of the pond in permanent vegetation in order to improve water quality and reduce sediment.

Consider the use of filter strips or other practices to ensure that discharges from ponds, lakes, and reservoirs will meet state water quality standards.

Consider methods to prevent the fish in the pond, lake, and reservoir from escaping into adjoining waters.

Consider maintaining shoreline on a 3 to 1 slope in order to reduce aquatic weed growth and maintain stable habitat for spawning fish.

Consider methods to prevent introduction of non-native species into adjoining waters where native species might be adversely affected or non-compatible species from entering the pond, lake or reservoir.

Consider using only species of fish or aquatic organisms that are specifically adapted to impounded waters.

Consider excluding livestock from the pond and creating a buffer by fencing the pond and installing a freeze proof tank as an alternative livestock watering facility.

PLANS AND SPECIFICATIONS

Plans and specifications for fish and other aquatic organism management will be in keeping with this standard and will describe the requirements for applying this practice to achieve its intended purpose. Specifications for this practice will be prepared for each site. Specifications will be recorded using approved specifications sheets, job sheets, narrative statements in the conservation plan, or other documentation.

Requirements for the operation and maintenance of this practice shall be incorporated into site specifications.

OPERATION AND MAINTENANCE

The client will receive a plan or specifications describing the management and corrective actions that are required for the successful management of the pond, lake or reservoir.

Operation and maintenance items to be included in the plan as necessary include the following:

- Pond construction techniques to improve habitat and reduce aquatic weed problems
- Recommended fish species and stocking rates
- Fish harvest and management guidelines.
- Supplemental feeding.
- Removing undesirable and/or overpopulated species.
- Aquatic plant control.
- Fertilizing.
- Treating turbidity and muddy water
- Techniques for adding fish structures for habitat improvement

REFERENCES

Oklahoma Department of Wildlife Conservation. 1995. "Managing Pond Fisheries in Oklahoma",

"Farm Pond Ecosystems", NRCS Fish and Wildlife Habitat Management Leaflet, Number 29, February, 2006.

Amphibians and Reptiles. NRCS Fish and Wildlife Habitat Management Leaflet Number 35, May 2006

Numerous Publications are available through Oklahoma Cooperative Extension Service and Langston University.