



OPERATION AND MAINTENANCE PLAN
FOR
AGRICULTURAL Pond Repair/Retrofit



Cooperator Name: _____

Date: _____

Tract/Field: _____

County: _____

The purpose of this plan is to provide guidelines on the routine operation and maintenance of an Agricultural Water Supply/Reuse Pond.

- Routine maintenance is required to achieve the intended function, benefits and life of the practice.
- The minimum life span of the practice is 10 years.
- The landowner/operator is responsible for establishing and implementing an inspection and maintenance program for the entire life of the practice.
- Lack of operation and maintenance may cause severe damage to the dam and spillway, potentially resulting in complete failure.
- Inspections should be carried out after significant storm events and at least annually to identify repair and maintenance needs.
- Damaged components should be promptly repaired or replaced. Contact the local Soil and Water Conservation District (SWCD) for assistance.
- The primary function of the pond is to provide a water supply source for agricultural uses. The pond may be used for recreational purposes so long as the recreational use does not interfere with the primary function of the pond.

Items to inspect and maintain during the 10-year life of the practice include, but are not limited to, the following:

- Maintain vegetative cover on embankments and spillway. Mow frequently and fertilize as needed to encourage vigorous growth. Bare patches should be reestablished as soon as possible.
- Prevent weeds, trees and brush from growing on embankments and in the spillway areas. Control undesirable vegetative growth by hand cutting, mowing, or herbicide applications. Consult NC Cooperative Extension for herbicide application recommendations.
- Fill rills and gullies on the embankments and in the auxiliary spillway with suitable material and compact thoroughly. Reseed or re-sod these areas and fertilize as needed.
- Inspect the dam frequently for the presence of burrowing animals such as groundhogs, muskrats, and beavers. When found, remove the burrowing animals. Contact the SWCD for guidance on replacing embankment materials and reseeding.
- Inspect dam face and banks for signs of serious washing or sloughing resulting from wave action. If erosion does occur repair the affected area by smoothing and vegetating or install riprap. Contact the SWCD for assistance.

- Pipes, trash racks, outlet structures, valves, and the auxiliary spillway should remain free of logs, brush and other trash at all times.
- Inspect for any seepage through or under the dam, as well as along any pipes through the embankment. Consult the SWCD immediately if seepage is evident so that adequate corrective measures can be taken before serious damage occurs.
- Periodically inspect the dam for cracks, slides, sloughing, settlement, or misalignment. If any of these structural concerns are evident contact the SWCD for assistance.
- Repair or replace damaged fences to exclude livestock from the pond and dam, where applicable.
- Limit vehicular traffic on the grass spillway. Trails or ruts made by such traffic could become large gullies when outflow occurs in the spillway.
- Roads along or on the crest of the dam should be maintained in passable condition and to prevent damage to the embankment. A road may need to be improved with a proper base and surface to minimize damage by vehicular traffic.
- Keep the water in your pond as clean and unpolluted as possible. Do not permit unnecessary trampling by livestock. Divert drainage from barn lots, confined feeding areas, or any other source of contamination away from the pond. Stabilize adjacent potential sediment sources. Maintain a grass filter around the perimeter of the pond to trap sediments and nutrients.
- Specific Recommendations:

I acknowledge by my signature below that I am responsible for the operation and maintenance procedures listed above for at least the entire life of the AgWRAP contract; 10 years from the date of final certification of pond construction.

PRINT NAME: _____

SIGNATURE: _____ DATE: _____



OPERATION AND MAINTENANCE PLAN
FOR
**AGRICULTURAL WATER SUPPLY/REUSE
POND**



Cooperator Name: _____

Date: _____

Tract/Field: _____

County: _____

The following table lists the components and areas of the pond that should be evaluated as part of maintenance inspections. If any of the potential problems are observed take the appropriate action to repair or consult the Soil and Water Conservation District for assistance.

Inspections should be carried out after significant storm events and/or at least annually to insure the pond is functioning properly and identify potential problems.

Pond Component or Area	Potential Problem
Principal Spillway	<ul style="list-style-type: none"> ➤ Damage to trash rack or gates ➤ Obstructions blocking trash rack or gates ➤ Signs of seepage around siphon or riser/barrel pipes ➤ Separation of joints in siphon or riser/barrel pipes ➤ Cracks or breaks in siphon or riser/barrel pipes ➤ Inadequate flow or excessive drawdown time during or after significant storm events.
Auxiliary Spillway	<ul style="list-style-type: none"> ➤ Signs of any erosion ➤ Sedimentation in the spillway ➤ Presence of weeds, small trees, logs, fences and other obstructions that reduce channel capacity or may block flow ➤ Head cut development in exit channel or along receiving hill slope around outlet stream
Reservoir Area	<ul style="list-style-type: none"> ➤ Fallen or cut trees ➤ Undesirable vegetative growth ➤ Other floating or lodged debris

<p>Embankments</p>	<ul style="list-style-type: none"> ➤ Settlement, cracking or "jug" holes ➤ Unstable side slopes – slumps or bulges ➤ Erosion, washing or sloughing resulting from wave action ➤ Damage from burrowing animals ➤ Seepage or leakage ➤ Lack of vegetative cover ➤ Undesirable vegetation- trees, bushes or weeds ➤ Deterioration in condition and function of toe drains, if applicable
<p>Outlet Channel</p>	<ul style="list-style-type: none"> ➤ Bank cutting or head cut development due to auxiliary spillway flow ➤ Sedimentation ➤ Fallen trees or other debris accumulation ➤ Adjacent property damage ➤ Undermining or displacement of riprap, if applicable ➤ Damage or deterioration of riprap and plunge pool, if applicable ➤ Side slope stability of plunge pool, if applicable
<p>Fences and Gates</p>	<ul style="list-style-type: none"> ➤ Loose or damaged posts ➤ Loose or broken wires ➤ Open or damaged gates
<p>Additional items of importance specific to this pond:</p>	