

# CLOSURE OF WASTE IMPOUNDMENTS

(No.)  
Code 360

Natural Resources Conservation Service  
Conservation Practice Standard

## I. Definition

The closure of waste impoundments (treatment lagoons and liquid storage facilities), that are no longer used for their intended purpose, in an environmentally safe manner.

## II. Purpose

This practice may be applied as part of a conservation management system to support one or more of the following purposes.

- To protect the quality of surface water and groundwater resources.
- To eliminate a safety hazard for humans and livestock.
- To safeguard the public health.

## III. Conditions Where Practice Applies

This practice applies to agricultural waste impoundments and structures that are no longer needed as a part of a waste management system and are to be permanently closed or converted.

Where these impoundments and structures are to be converted to fresh water storage and the original facility was not constructed to NRCS standards, this practice will only apply where an investigation and evaluation shows structural integrity.

## IV. Federal, State, and Local Laws

The closure of waste impoundments or structures shall comply with all federal, state, and local laws, rules or regulations. The operator is responsible for securing required permits. This standard does not contain the text of the federal, state, or local laws governing closure of waste impoundments or structures.

## V. Criteria

- A. Waste impoundment or structure closure will require a site-specific design and inspection during closure. Additional procedures may be

required for remediation. A local permit may be required for the closure operation. The minimum procedure for closure shall include:

1. Removal and proper disposal of accumulated wastes in the facility in accordance with NRCS, Field Office Technical Guide (FOTG), Section IV, Standard 590, Nutrient Management.
  2. Soil that is mixed with waste shall be removed and uniformly spread on cropland.
  3. An additional 6 inches to 24 inches of soil shall be removed from the sides and bottom of the facility. The amount of soil to be removed shall be determined by the color and consistency indicating permeation or saturation with waste. Removed soil shall be uniformly spread on cropland.
  4. Concrete or synthetic liners may be buried in the existing facility if the following requirements are met.
    - a. The liner is broken up or holes are made to allow movement of water through the profile after the facility is closed. A minimum of one outlet per 50 square feet of liner is required.
    - b. Soil borings are made below the liner to check for soil mixed with waste. If soil mixed with waste is present, the liner must be pulled back to allow for the removal of the soil as stated in 3 above.
- The liner material may then be buried in the closed facility. If the liner is removed from the closed site, it must be properly disposed of according to Wisconsin Department of Natural Resources (WDNR) regulations.
5. The transfer system shall be permanently plugged or removed and replaced with compacted earth material.

6. Waste storage structures shall be demolished or disassembled or otherwise altered to such an extent that no water can be impounded.

Disassembled or demolished materials may be stored or disposed of offsite in such a manner that they do not pose a hazard to animals or humans.

Materials buried onsite, outside the footprint of the structure, are to be covered with one foot of soil, and the backfill sufficiently mounded such that runoff will be diverted around the site after the backfill settles. After backfilling, the site shall also be covered with salvaged topsoil.

7. Concrete floors for above-ground facilities may be left in place if water is not impounded on the floor surface and the conditions listed in paragraph V.A.4.b. are satisfied.
8. Below-ground impoundments shall be filled with clean mineral soil meeting the compaction requirements contained in Wisconsin Construction Specification 3, Earthfill, and shaped to insure surface drainage away from the site. A minimum of 5 percent settlement shall be included.

Brick, building stone, concrete, reinforced concrete, broken pavement, and unpainted or untreated wood may be used in the fill pursuant to Chapter NR 500.08 (Wisconsin Administrative Code); however, they shall be covered with 3 feet of clean mineral fill. The top one foot of the backfill shall be constructed of the most impermeable material. After backfilling, the site shall also be covered with salvaged topsoil.

- B. **Conversion.** The waste storage impoundment may be converted to other uses if applicable groundwater standards are met. The converted impoundment shall meet the requirements as set forth in the applicable NRCS, FOTG, Section IV, practice standard for the intended purpose.

C. **Safety.**

1. Precautions (fencing and warning signs) shall be used to ensure that a facility converted to fresh water storage is not used for incompatible purposes such as

swimming and livestock watering until water quality is adequate for these purposes.

2. Personnel shall not enter an enclosed waste impoundment. If personnel must enter an enclosed waste impoundment, Confined Space Entry procedures published by the US Occupational Safety and Health Administration must be followed.

D. **Protection.**

1. All disturbed areas not returned to crop production shall be seeded and mulched in accordance with NRCS, FOTG, Section IV, Standard 342, Critical Area Planting, or other suitable measures used to control erosion and restore the aesthetic value of the site.
2. Measures shall be taken during construction to minimize site erosion and pollution of downstream water resources. This may include such items as silt fences, hay bale barriers, temporary vegetation, and mulching.

VI. **Considerations**

Additional recommendations relating to design which may enhance the use of or avoid problems with this practice, but are not required to ensure its basic conservation function, are as follows.

1. Minimize the impact of odors associated with emptying and land-applying wastewater and sludge from a waste impoundment by using an incorporation application method at a time when the humidity is low, when winds are calm, and when wind direction is away from populated areas.
2. Soil to fill excavated ponds should not come from important farmlands (prime, statewide, local, and/or unique).
3. Breached embankments may detract from the overall aesthetics of the operation. Embankments should be removed and the site returned to its original grade.
4. Materials should be recycled when possible.

## **VII. Plans and Specifications**

Plans and specifications shall be prepared in accordance with the criteria of this standard and shall describe the requirements for applying the practice to achieve its intended use. A construction plan and inspection plan are required.

## **VIII. Operation and Maintenance**

The proper closure of a waste impoundment should require little or no operation and maintenance; however, if it is converted to another use, such as a fresh water pond, operation and maintenance shall be in accordance with the needs as set forth in the NRCS conservation practice standard for the intended purpose.

## **IX. References**

United States Department of Agriculture, Natural Resources Conservation Service, Agriculture Waste Management Field Handbook, Part 651, 1992.

United States Department of Agriculture, Natural Resources Conservation Service, Wisconsin Field Office Technical Guide, Section IV.

Wisconsin Administrative Code, Chapter NR 500, General Solid Waste Management Requirements.