Swine & Dairy Assistance Program
Closure - Waste Impoundments

Definition/Purpose

A Closure of Waste Impoundments Practice means the safe removal of existing waste and waste water and the application of this waste on land in an environmentally safe manner. This practice is only applicable to eligible NC Swine and Dairy Assistance Program participants for the closure of swine lagoons for swine operations that will not secure a contract with another swine integrator and will cease swine production, or for closure of dairy waste structures associated with dairy operations that will cease milk production.

Policies

1. Only swine and dairy producers with eligibility approved by NCDA&CS for the NC Swine and Dairy Assistance Program may receive cost share for this practice. (S.L. 2021-180, SECTION 10.8)

2. Cost share shall be limited to ninety percent (90%) of the lagoon closure cost, not to exceed one hundred thousand dollars ($100,000) per operation.

3. Applicants may request additional cost share to convert the decommissioned lagoon to an agricultural water supply pond. To be eligible, the applicant must demonstrate a need for additional water supply for agricultural uses. The additional cost share shall be limited to ninety percent (90%) of the actual cost of the conversion, not to exceed thirty thousand dollars ($30,000) per operation.

4. Applicants must follow these guidelines:

    a. Each contract must contain the following information and must be reviewed by the Division prior to approval:

        i. Waste impoundment closure plan.

        ii. Phosphorus loss potential (PLAT) results for each application field

        iii. Cooperator acknowledgement form.

        iv. Division waste impoundment closure plan approval letter.

        v. Division engineering approval letter for agricultural water supply pond conversions.

        vi. Volume of system based on length, width, depth of liquid/sludge and slopes.

        vii. Two estimates from established contractors, using entire volume of system as determined by the District and as included in the waste impoundment closure plan. In situations where pumping is impractical because of consistency of sludge (i.e. solid), sludge may be excavated. Estimates should include information regarding how waste is to be removed (i.e. drag line, agitate and pump, etc.)

viii. Surface area (acres) of the waste impoundment.

ix. A profile of the dam and how it is to be breached, if not converting to an agricultural water supply pond.

x. A design of the spillway(s) and installation guidelines, if converting to an agricultural water supply pond.

5. For all waste impoundment closures:

a. This practice shall not be used to apply waste at a rate exceeding the following maximums:

i. For sites with a phosphorus loss potential (per PLAT) of low or medium, waste shall be applied in accordance with a nitrogen-based waste application plan

ii. For sites with a phosphorus loss potential (per PLAT) of HIGH, waste shall be applied accordance to the phosphorus removal rate of the receiving crop.

iii. No application of waste is allowed for sites with a phosphorus loss potential (per PLAT) of VERY HIGH.

iv. Planning shall project the impact of the waste application to heavy metal critical levels based on soil index. Alternative application sites should be selected if projections indicate that metals may approach excessive levels.

v. In addition, the application shall not exceed the rate specified per acre in the plan nor the total nitrogen requirement of the receiving crop specified in the plan. If additional nitrogen is needed, consideration must be given to limit additional phosphorus application.

b. The District or a Technical Specialist shall prepare the waste impoundment closure plan in accordance with the current standards promulgated by the United States Department of Agriculture, Natural Resource Conservation Service and the State of North Carolina, using the latest version of NC Nutrient Management Software program. The plan must address removal of transfer pipes and installation of a spillway, if needed.

c. The plan shall be written according to the closure methodologies agreed upon by the producer and contractor (i.e. agitate and combine all liquid and sludge, pump top water off then agitate, dredge sludge, etc.). If it is determined that a different methodology will be used after development of the plan, the plan shall be revised prior to land application of waste.

d. All land application setbacks according to 15A NCAC 02T .1304 shall be observed in the development of the waste application plan and adhered to during land application of waste.

e. A pre-construction conference including the district technical representative, nutrient management plan developer, contractor and landowner shall be held prior to commencement of closure.

f. Cost Share Program funds will be used for the removal of waste and stabilization of site only (not for fill materials). Removal of foreign materials will be at the landowner's expense and must be removed according to state and federal guidelines.

g. All disturbed areas will be vegetated to permanent grass, trees, or wildlife plantings according to NRCS 342 Critical Area Planting Standard.

h. Districts shall write contracts for waste impoundment closures based on the lowest bid that is technically acceptable.

i. Payments will be based on actual cost with receipts. Receipts and a copy of the signed DWR Closure Report Form must accompany the Request for Payment.

6. In addition to above, for waste impoundment closures converting to agricultural water supply ponds:

   a. The pond shall be for agricultural use and includes all associated components to meet the intent of the design.

   b. An Inventory and Evaluation Form for Lagoon Conversions must be completed.

   c. A pre-construction conference including the district technical representative, designer, contractor and landowner shall be held prior to commencement of conversion.

   d. All pond designs and completed construction must be certified by a professional engineer or an individual with appropriate Job Approval Authority.

   e. The pond must be designed to meet the specifications listed below based on the hazard classification:

      i. Excavated Ponds– NRCS Standard 378

      ii. Low Hazard – NRCS Standard 378 OR NC Dam Safety Law (15A NCAC 02K .0100)

      iii. Intermediate Hazard – NC Dam Safety Law (15A NCAC 02K .0100)

      iv. High Hazard – NC Dam Safety Law (15A NCAC 02K .0100)

   f. A Jurisdictional Determination/Hazard Classification Request form may be required to determine hazard classification. The responsible design engineer is responsible for submitting the request to NC Dam Safety.

   g. Any pond dam that is classified as Intermediate or High Hazard, pursuant to NC Dam Safety Law, is required to be designed by a private engineer.

   h. Private engineer designs, except for High Hazard ponds, shall be submitted to a Division Engineer for review and approval of Job Approval Authority.

      i. Dam Safety design and construction approval shall serve as Job Approval Authority for High Hazard ponds.

   i. Upon completion of the project, copies of the as-built survey should be provided to the Soil and Water Conservation district, landowner and Division of Soil and Water

Conservation. The design engineer shall complete and return the Certification of Completion.

j. An Operation and Maintenance Plan is required.

k. Livestock shall be excluded from the pond.

l. Additional water can be used to fill ponds including stormwater runoff, wells, streams and other water resources.

m. For excavated ponds and those embankment dams with low hazard classification, trees six inches in diameter or greater can remain in the embankment if they are not dead or unhealthy, and if they are located such that they could not pose structural damage to the embankment, pipes, or spillway structures etc. All other trees, shrubs and woody vegetation shall be removed.

n. Districts shall write contracts for waste impoundment conversions to agricultural water supply ponds based on the lowest bid that is technically acceptable. Payments will be based on actual cost with receipts. Receipts, DWR Closure Form and the Certificate of Completion must accompany the Request for Payment.

o. Applicants that do not demonstrate a need for additional water supply for agricultural uses, may elect to convert the waste impoundment to a freshwater pond according to NRCS 378 Pond Standard, but will not qualify for the additional cost share to convert the decommissioned waste impoundment.

CLOSURE - WASTE IMPOUNDMENT	
BMP Units	EACH
Required Effects	• ANIMAL TYPE • ANIMAL UNITS • N and P WASTE MANAGED
JAA	• SWCC - 360 Closure of Waste Impoundments **OR** • NRCS-ENG - 360 Closure of Waste Impoundments **OR** • Technical Specialist Designation WUP/NM **OR** • Professional Engineer **For Conversion to Ag Water Supply Pond:** • Professional Engineer
CS2 Reference Materials	• NC-ACSP-11 Signature Page • Map with BMP location, fields, and roads. • NC-ACSP-WMP Form • Lagoon Specification Questions • Two bids • Cooperator Acknowledge Form • Receipts (for RFP) • DWR Closure Form (for RFP) **For Conversion to Ag Water Supply Pond also include:** • Water Balance Results • Operation and Maintenance Plan • Inventory and Evaluation Form (Irrigation or Livestock) • Certification of Completion (for RFP)
NRCS Standards & Reference Materials	• CPS – 360 Waste Facility Closure • CPS – 590 Nutrient Management • CPS – 342 Critical Area Planting • CPS – 378 Pond • NC Dam Safety Law (15a NCAC 02k .0100) • Lagoon Closure Steps • DSWC Guidelines for Lagoon Closure Plan Development