Retrofit of On-Going Animal Operations

Definition/Purpose

Retrofits of On-Going Animal Operations are modifications of waste storage impoundments to increase capacity or to correct design flaws to meet current standards. This practice may also be used to close waste impoundments on on-going operations, including the safe removal of existing waste and waste water and the application of this waste on land in an environmentally safe manner. (DIP)

Policies

Existing, on-going operations which desire to close or retrofit existing waste impoundments to meet current standards, regulations, or rules are eligible for cost share reimbursement under the following guidelines:

1. For closure of waste impoundments, contracts must adhere to the following guidelines:

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

        i. Waste impoundment closure plan.

        ii. Phosphorus Loss Assessment Tool (PLAT) results for each application field.

        iii. Cooperator acknowledgement form.

        iv. Biosolids Impacts to Land Acknowledgement Form for each leased application field.

        v. Division waste impoundment closure plan approval letter.

        vi. Waste impoundment specification question form.

        vii. A profile of the dam and how it is to be breached, if applicable.

        viii. A design of the spillway(s) and installation guidelines, if converting to a freshwater pond.

        ix. Division engineering approval letter for freshwater pond conversions.

        ~~x. Two estimates from established contractors, using the 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 biosolids (i.e. sludge), biosolids should be excavated. Estimates should include information regarding how waste is to be removed (i.e. drag line, agitate and pump, etc.).~~

~~xi.~~x. **A statement signed by the applicant/landowner and a technical specialist with the appropriate designation documenting the facility will have adequate storage volume for operation capacity after the closure of the waste impoundment.**

~~xii.~~xi. To close waste impoundments on inactive confined animal operations utilize the Waste Impoundment Closure BMP.

b. Phosphorus Loss Assessment Tool (PLAT) shall be used to assess phosphorous application rates for all planned fields according to NC NRCS Conservation Practice Standard No. 590 "Nutrient Management," April 2024 or any subsequent amendment as described in the CPS – 360 Waste Facility Closure standard.

c. 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.

d. The District or a Technical Specialist shall prepare the waste impoundment closure plan in accordance with applicable NC NRCS standards and the State of North Carolina, using the latest version of NC Nutrient Management Planning Software program. The plan must address removal of transfer pipes and installation of a spillway, if needed. The planned waste application may not cause excessive zinc or copper soil levels and shall occur within the animal waste application window based on SB1217 guidance document.

e. 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 biosolids, pump to water off then agitate, dredge biosolids, etc.). If it is determined that a different methodology will be used after development of the plan, the plan shall be revised and approved by the division prior to land application of waste. The revised plan approval must be included in the project file.

f. All land application setbacks according to 15A NCAC 02T .1304 and SB1217 guidance document shall be observed in the development of the waste application plan and adhered to during land application of waste.

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

h. 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.

i. Breaching of any diked or dammed impoundments is optional; however, all disturbed areas will be vegetated to permanent grass, trees, or wildlife plantings according to NRCS 342 Critical Area Planting Standard. NCACSP policies and NRCS Standards will apply to all vegetated areas.

j. Districts may write contracts for waste impoundment closures based on the lowest bid that is technically acceptable. Payments will be based on actual cost shown on receipts. Total charge to NCACSP is restricted to no more than the maximum cost share for the practice listed in the NCACSP average cost list.

k. Copies of ~~receipts,~~ waste application records, DSWC certification of closure form and DWR closure report form must accompany the Request for Payment.

l. The TRC subcommittee for waste management measures will review lagoon/pond closure contracts that exceed $50,000. The District will be notified of the subcommittee's decision. Closure activities covered by the contract shall not begin until the District has received the approval from the Division.

m. A signed copy of the waste impoundment closure plan must be sent to the appropriate DWR Regional Office and to animal.operations@deq.nc.gov prior to starting the closure process. The permittee shall notify the appropriate DWR Regional Office at least twenty-four (24) hours prior to beginning closure of the waste impoundment.

n. Maintenance period requirements are based on closure method as described below:

   i. When a waste impoundment is closed to meet the NRCS 360 Waste Facility Closure standard per breach or backfill final decommissioning method, a one-year site maintenance period is required to ensure proper practice function and any necessary vegetative establishment to stabilize the site is achieved prior to land or site use conversions.

   ii. When a waste impoundment is closed to meet the NRCS 360 Waste Facility Closure standard criteria per freshwater pond conversion final decommissioning method, then a 10-year maintenance period is required of the resulting pond impoundment. The pond impoundment may receive funding for repair during the maintenance period.

o. In addition to above, for waste impoundments converting to a freshwater pond:

i. The pond must be designed and certified by a professional engineer to meet the specifications listed in NC NRCS 378 Pond Standard.

ii. The landowner is responsible for acquiring any appropriate local, state and federal permits.

iii. 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)

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

v. 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.

vi. 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.

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

viii. 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.

ix. An Operation and Maintenance Plan is required.

x. Livestock shall be excluded from the pond. Ponds without livestock access do not require fencing.

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

xii. 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.

xiii. For waste impoundments being converted to a freshwater pond, a Certificate of Completion must accompany the Request for Payment.

~~xiv. Eligible pond conversion costs will be based on the approved engineering design within the maximum cost share for the practice listed in the NCACSP average cost list.~~

p. Costs for closing the waste impoundment are based on average cost, not to exceed the maximum cost share for the practice listed in the NCACSP average cost list. Refer to the average cost list for closure and stabilization of breach and freshwater pond conversion component rates. Payment will be based on gallons documented in the waste application record during the closure process.

2. For retrofitted waste impoundments, Cost Share Program funds may be used for removal/disposal of waste and other components necessary to bring the lagoon/waste storage pond up to current NC NRCS Standards. A copy of the waste analysis report and land application records must accompany Requests for Payments (NC-ACSP-3) if land application of waste shall occur to complete retrofit. Funds may also be used to make the required structural upgrades (clay liner, emergency spillway, etc.) and for required compaction test. The removal of trees is correction for a lack of maintenance and is not considered a retrofit.

   a. All waste impoundment retrofit designs and completed construction must be certified by a professional engineer.

   b. Retrofits shall be designed to meet the appropriate NC NRCS Standards.

   c. Any retrofit of a waste impoundment associated with a permitted animal facility, shall submit the retrofit design to Division of Water Resources (DWR) Animal Feeding Operations (AFO) and receive approval prior to start of construction.

   d. A Certificate of Completion must accompany the Request for Payment (RFP).

   e. Retrofitted waste storage impoundments shall have a 10-year maintenance period.

RETROFIT OF ONGOING ANIMAL OPERATIONS	
Maintenance Period	1 year – Breach/Backfill of Closed Impoundment 10 years- Pond Conversion or Retrofit of Waste Impoundment
BMP Units	EACH
Required Effects	ANIMAL TYPE ANIMAL UNIT ACRES_AFFECTED N and P Waste Managed

JAA	Professional Engineer OR NRCS - ECS - 590 - Nutrient Management NRCS - ENG -360 - Waste Facility Closure NRCS - ENG - 313 - Waste Storage Facility NRCS - ENG - 359 - Waste Treatment Lagoon
NRCS Standards & Reference Materials	NRCS - CPS - 590 - Nutrient Management NRCS - CPS - 360 - Waste Facility Closure NRCS - CPS - 313 - Waste Storage Facility NRCS - CPS - 359 - Waste Treatment Lagoon NC Dam Safety Law (15a NCAC 02k. 0100) Lagoon Closure Steps DSWC Guidelines for Lagoon Closure Plan Development
CS2 Reference Materials	NC-ACSP-11 Signature Page Map with BMP location, fields, and roads ~~Two bids~~ **For Closure of Waste Impoundments:** NC-ACSP-1C Form Waste Storage Capacity Certification Waste Impoundment Specification Questions Form Cooperator Acknowledgement Form Waste Impoundment Closure Plan Approval Letter Waste Impoundment Closure Plan ~~Receipts (for RFP)~~ DWR Closure Form (for RFP) Waste Application records (for RFP) DSWC Certification of Closure Form (for RFP) **For Conversion to freshwater pond closure also include:** Operation and Maintenance Plan Division Engineer Approval Letter Pond Conversion Design Certification of Completion Form (for RFP) **For Retrofit of Waste Impoundments:** Approved Engineered Design of Retrofit Waste Analysis Report (for RFP) if applicable Waste Application Records (for RFP) if applicable Certification of Completion Form (for RFP)
Additional Spot-check Requirements	All waste management systems for operations not permitted by the Division of Water Resources must be spot-checked annually for five years following implementation.