STREAM PROTECTION MANAGEMENT MEASURES

A Stream Protection System means a planned system for protecting streams and streambanks which eliminates the need for livestock to be in streams by providing an alternative watering source for livestock to improve water quality. Benefits may include reduced soil erosion, sedimentation, pathogen contamination, and pollution from dissolved, particulate and sediment-attached substances. (DIP) System components may include:

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Note that specific Best Management Practices (BMPs) may reappear in other sections.

Policies

1. If new permanent fencing is a requirement for a BMP, then it may be cost-shared (see Livestock Exclusion).

2. Structural geotextiles shall meet the requirements of "Construction Specification 217 - Geotextiles" and "Interim Material Specification 592 - Geotextiles". Drainage geotextiles shall meet the requirements of N.C. Technical guide, Section IV Practice Standard 606, as shown in paragraph 606-8-5.

3. Technical staff shall have the responsibility for determining appropriate set-backs for cost shared fencing in accordance with Agriculture Cost Share Program policy and NRCS standards as follows:

    a. Cost shared fencing must be set back a minimum of five (5) feet from the top of the stream bank in accordance with NRCS standards. Some portions of streams in Critical Water Supply Watersheds require a minimum ten (10) foot set back distance.

    b. If livestock are concentrated in the vicinity of the stream or if runoff from areas of livestock concentration could reach the stream, then the cost

shared fence shall be set back a minimum of twenty (20) feet from the top of the stream bank (i.e. heavy use area protection measures, loafing lots, barns, feeding stations, watering facilities, stock trails). The only allowable exception to the 20 foot set back requirement for cost shared fencing is that if the tank, heavy use area, etc. is located a minimum of one hundred (100) feet from the top of the stream bank, the set back for cost shared fencing shall be ten (10) feet.

c. If stream riparian areas have been damaged or destroyed, then fencing should be set back far enough to permit establishment of woody vegetation on the stream banks.

d. If the stream bank or channel erosion is such that there exists the potential for the fence posts to be undermined by the stream during the life of the fence, then set backs should be increased significantly (field determination).

e. For all cost shared BMPs which require fencing, a statement indicating the set back distance from the stream bank must be included in the CPO. Also, the fencing set back distance should be indicated on the sketch included with the CPO. The sketch should also indicate the distance from the top of the bank to the tank, heavy use area, etc., if applicable. (Note: "Meets set back requirements" is not acceptable. Actual set back distances must be indicated.)

4. All fencing installed at the applicant's expense must either meet NC Technical Guide Standards or be deemed adequate by District staff.

5. If significantly less fencing than planned in the CPO is cancelled, expires or is not installed, a statement signed by the technician must be submitted to the Division explaining why the fencing was not installed, why significantly less fencing was installed, or indicating that fencing was installed at the cooperator's expense. The statement should indicate that a site visit was performed, along with the date of the site visit to establish the status of the required fencing. Failure to install required fencing constitutes non-compliance and procedure relative to non-compliance must be followed.

6. For other components required as an integral part of a BMP, use cost values for the appropriate component provided elsewhere in the average cost.

Heavy Use Area Protection

Definition/Purpose

Heavy Use Area Protection means an area used frequently and intensively by animals which must be stabilized by surfacing with suitable materials to improve water quality. Benefits may include reduced soil erosion, sedimentation and pollution from dissolved, particulate, and sediment-attached substances. (DIP)

Policies

1. When Heavy Use Area Protection is employed in conjunction with feeding areas and barn lots, a filter strip must be established before the practice is eligible for cost-sharing. **Heavy Use Area Protection is not approved for access roads**.

2. The requirement of fencing around a heavy use area is to be left to the technical staff as to whether it is needed.

3. Livestock exclusion in conjunction with heavy use area protection measures **(loafing lots, barns, feeding stations, watering facilities, stock trails, etc.) will be required to have a minimum set-back of 20 feet from the top of the stream bank.** A statement must be included on the contract indicating the established setback distance from the stream bank and must also indicate distance on sketch included with contract.

4. Heavy use areas which are components of .0200 waste management plans must meet additional buffer requirements as prescribed in the Interagency Guidance Memorandum.

5. BMP soil impact is required on the contract.

6. Minimum life of BMP is 10 years.

7. Structural geotextiles shall meet the requirements of "Construction Specification 217 - Geotextiles" and "Interim Material Specification 592 - Geotextiles". Drainage geotextiles shall meet the requirements of N.C. Technical Guide, Section IV Practice Standard 606, as shown in paragraph 606-8-5.

Specifications

N. C. Natural Resources Conservation Service (NRCS) Technical Guide, Section IV, Specification #561 (Heavy Use Area Protection) and #382 (Fencing).

Livestock Exclusion System

Definition/Purpose

A Livestock Exclusion System means a system of permanent fencing (board, barbed, high tensile or electric wire) installed to exclude livestock from streams and critical areas not intended for grazing to improve water quality. Benefits may include reduced soil erosion, sedimentation, pathogen contamination and pollution from dissolved, particulate, and sediment-attached substances.(DIP)

Policies

1. Livestock exclusion requires permanent fence and the average cost includes cost of all materials, gates, and labor for installation of fencing trails or walkways. It does not apply to livestock exclusion associated with heavy use areas which are less than one quarter acre in size and are located in pastures.

2. A landowner may, as part of a watering tank/trough system or stream crossing, **provide at his/her own cost** the livestock exclusion required in the contract if the technical representative certifies that the fencing is adequate to exclude livestock from the water course and meets current set-back requirements. **The livestock exclusion must be in place prior to submission of a Request for Payment for the tank/trough or stream crossing**.

3. Technical staff shall have the responsibility for determining appropriate set-backs for cost shared fencing in accordance with Agriculture Cost Share Program policy and NRCS standards as follows:

    a. Cost shared fencing must be set back a minimum of five (5) feet from the top of the stream bank in accordance with NRCS standards. In parts of Critical Water Supply Watersheds a minimum ten (10) foot set back distance is required.

    b. If livestock are concentrated in the vicinity of the stream or if runoff from areas of livestock concentration could reach the stream, then the cost shared fence shall be set back a minimum of twenty (20) feet from the top of the stream bank (i.e. heavy use area protection measures, loafing lots, barns, feeding stations, watering facilities, stock trails). The only allowable exception to the 20 foot set back requirement for cost shared fencing is that if the tank, heavy use area, etc. is located a minimum of one hundred (100) feet from the top of the stream bank, the set back for cost shared fencing shall be ten (10) feet.

    c. If stream riparian areas have been damaged or destroyed, then fencing should be set back far enough to permit establishment of woody vegetation on the stream banks.

d. If the stream bank or channel erosion is such that there exists the potential for the fence posts to be undermined by the stream during the life of the fence, then set backs should be increased significantly (field determination).

e. For all cost shared BMPs which require fencing, a statement indicating the set back distance from the stream bank must be included in the CPO. Also, the fencing set back distance should be indicated on the sketch included with the CPO. The sketch should also indicate the distance from the top of the bank to the tank, heavy use area, etc., if applicable. (Note: "Meets set back requirements" is not acceptable. Actual set back distances must be indicated.)

4. All fencing installed at the cooperator's expense must either meet NC Technical Guide Standards or be deemed adequate by District staff.

5. Cost Shared Fencing: Barbed or woven wire must be a minimum of 4 strands and meet NRCS Standard 382 for barbed or woven wire. Electric wire must be a minimum of 3 strands and meet NRCS Standard 382 for permanent electrified wire.
One or two wire electric may be used for stream crossing and for stream-side livestock exclusion fencing within the 100 year floodplain.

6. Livestock exclusion in conjunction with heavy use area protection measures **(loafing lots, barns, feeding stations, watering facilities, stock trails, etc.) will be required to have a minimum set-back of 20 feet from the top of the stream bank.** A statement must be included on the contract indicating the established setback distance from the stream bank and must also indicate distance on sketch included with the contract. In a pastured situation, only that localized area of the heavy use area protection measure must meet the minimum set-back requirement of 20 feet for livestock exclusion.

7. Heavy use areas which are components of .0200 waste management plans must meet additional buffer requirements as prescribed in the Interagency Guidance Memorandum.

8. Gates required to make a BMP function may be included.

9. Allowing livestock re-entry to streams or stream banks at any time during the 10-year life-of-a-practice for streambank protection systems is a violation of the maintenance agreement. **Using livestock to mow stream banks is never allowed!**

10. If cost share is received for cropland conversion to permanent vegetation the cooperator cannot receive cost share for livestock exclusion, watering facilities, etc., on the same field.

11. If significantly less fencing than planned in the CPO is cancelled, expires or is not installed, a statement signed by the technician must be submitted to the Division explaining why the fencing was not installed, why significantly less fencing was installed, or indicating that fencing was installed at the cooperator's expense. The statement should indicate that a site visit was performed, along with the date of the site visit to establish the status of the required fencing. Failure to install required fencing constitutes non-compliance and procedure relative to non-compliance must be followed.

12. ACSP funds shall not be used to cost share for fencing using used materials.

13. BMP soil impact is not required for this BMP.

14. Minimum life of BMP is 10 years.

Specifications

N. C. NRCS Technical Guide, Section IV, Specification #472 (Livestock Exclusion) and #382 (Fencing).

Spring Development

Definition/Purpose

Spring Development means improving springs and seeps by excavating, cleaning, capping or providing collection and storage facilities. (DIP)

Policies

1. Average cost is based on costs from water source to the junction box with a maximum of two (2) spring developments per trough/tank charged to NCACSP.

2. **Excavation time is to be paid only for the developing of the spring.** The hourly fee for excavation for spring development will be paid only for actual machine operating time viewed by authorized District personnel while present at the job site. (Average cost applies.) The hourly fee for excavation is to be used only for additional backhoe time required to locate water source and not for payment of pipe installation or trenching. If CPO contains more than one (1) tank per field, detailed justification must be included in the plan.

3. **Spring Development shall not be used as a means for draining pastures. Spring Development must be used for livestock watering only.**

4. Adequate fencing is required, or statement of exception on the contract.

5. BMP soil impact is not required for this BMP.

6. Minimum life of BMP is 10 years.

Specification

N. C. NRCS Technical Guide, Section IV, Specification #574 (Spring Development) and #382 (Fencing).

Stock Trails & Walkways

Definition/Purpose

A Stock Trail and Walkway means to provide a stable area used frequently and intensively for livestock movement by surfacing with suitable material to improve water quality. Benefits may include reduced soil erosion, sedimentation and pollution from dissolved, particulate, and sediment-attached substances. (DIP)

Policies

1. Adequate fencing is required.

2. Corrugated steel pipe shall be asphalt coated if more than one section is used. Aluminum or PVC pipe may be used at the discretion of the person planning the practice.

3. BMP soil impact is required for this BMP.

4. Minimum life of BMP is 10 years.

5. Cost share of earth fill is only allowed where it is necessary to haul fill material in dump trucks on public roads. It should not normally be used where scraper pans move fill.

6. Structural geotextiles shall meet the requirements of "Construction Specification 217 - Geotextiles" and "Interim Material Specification 592 - Geotextiles".

Drainage geotextiles shall meet the requirements of N.C. Technical Guide, Section IV Practice Standard 606, as shown in paragraph 606-8-5.

Specifications

N. C. NRCS Technical Guide, Section IV, Specification #575 (Stock Trail & Walkway) and #382 (Fencing).

Stream Crossings

Definition/Purpose

A Stream Crossing means a trail constructed across a stream to allow livestock to cross without disturbing the bottom or causing soil erosion on the banks. (DIP)

Policies

1. "Half-stream crossings" used as access points to provide water for livestock are **not allowed under the cost share program.** (NRCS Bulletin 210-2-4, April 13, 1992)

2. If cost share funds are used for gates on a stream crossing, two gates are required with the gate always closed on the side where the animals are grazing.

3. Adequate fencing is required. A landowner may, as part of a stream crossing **provide at his/her own cost** the livestock exclusion required in the contract if the technical representative certifies that the fencing is adequate to exclude livestock from the water course, and meets current set-back requirements. **The livestock exclusion must be in place prior to submission of a Request for Payment for the stream crossing**.

4. Cost share for earth fill is only allowed where it is necessary to haul fill material in dump trucks on public roads. It should not normally be used where fill is moved by scraper pans.

5. Corrugated steel pipe shall be asphalt coated if more than one section is used. Alumina,, or PVC pipe may used for this practice at the discretion of the person planning the practice.

6. BMP soil impact is not required for this BMP.

7. Minimum life of BMP is 10 years.

8. Structural geotextiles shall meet the requirements of "Construction Specification 592 - Geotextiles". Drainage geotextiles shall meet the requirements of N.C. Technical Guide.

Specifications

N. C. NRCS Technical Guide, Section IV, Specification #576 (Stream Crossing) and #382 (Fencing).

Trough or Tank

Definition/Purpose

A Trough or Tank means devices installed to provide drinking water for livestock at a stabilized location. (DIP)

Policies

1. This BMP shall not be used as a means for draining pastures.

2. Watering facilities will be required to have a minimum setback of 30 feet from the top of the stream bank (technical staff in the field determine the location of the top of the stream bank).

   A statement must be included on the contract indicating the established setback distance from the stream bank and indicate the setback distance from the stream bank on the sketch included with the contract.

3. Adequate fencing is required. A landowner may, as part of a watering tank/trough system, provide at his/her own cost the livestock exclusion required in the contract if the technical representative certifies that the fencing is adequate to exclude livestock from the watercourse and meets current setback requirements. The livestock exclusion must be in place prior to submission of a Request for Payment for the tank/trough.

4. A justification must be included in the plan for the number of tanks to be cost shared. The number of tanks specified must be based on planning factors such as topography, amount of water needed and available, cost, number of animals, grazing system etc..

5. BMP soil impact is not required for this BMP.

6. Minimum life of BMP is 10 years.

7. Structural geotextiles shall meet the requirements of "Construction Specification 592 - Geotextiles" and "Interim Material Specification 591 - Geotextiles". Drainage geotextiles shall meet the requirements of N.C. Technical Guide, Section IV Practice Standard 606, as shown in Paragraph 606-8-5.

Specifications

North Carolina NRCS Technical Guide, Section IV, Specification #614 (Trough/Tank), #382 (Fencing).

(Revised September 2008)

Well

Definition/Purpose

A Well means constructing a drilled, driven or dug well to supply water from an underground source. (DIP)

Policies

1. Installation of the well must include wellhead protection.

2. Average cost for pumps for wells includes all costs associated with installation and is based on actual cost. The maximum actual cost for a pump is $2,667 for all three areas. ($6,667 for solar powered pumps for all three areas).

3. Pumps, Solar Pumps, Wells & Windmills must have a qualifying statement that they will be used for agricultural use only. Wells must include well head protection. The cost for the pump includes all costs associated with pump installation, including the cost of getting electricity to the pump.

4. The solar powered pump installation is limited to sites where, due to the topography, property lines, etc., it is not possible to locate the tank or trough such that water may be supplied by gravity. The pump cost includes a submergible pump, photovoltaic panels, control box, support structure, pump cable, drop pipe, and fittings to make up plumbing at pump.

5. Life of the BMP is 10 years.

Specifications

North Carolina NRCS Technical Guide, Section IV, Specification # 642 (Wells)

(Revised March 2008)

Windmills

Definition/Purpose

A Windmill means erecting or constructing a mill operated by the wind's rotation of large vanes and used as a source of power for pumping water. (DIP)

Policies

1. Area Office Approval is required along with a statement from the Area Office that no practical alternative exists to supply water to livestock as part of a stream protection system. This statement must be included in the CPO.

2. Cost share is limited to 75% of actual cost not to exceed $2,400 charge to NCACSP. Receipts are required.

3. Pumps, Solar Pumps, Wells & Windmills used in conjunction with stream protection systems must have a qualifying statement that they will be used for livestock watering only. Wells must include well head protection. The costs for pumps include all costs associated with pump installation.

   The solar powered pump installation is limited to one per county per year until the system is fully evaluated. Installation is limited to sites where, due to the topography, property lines, etc., it is not possible to locate the tank or trough such that water may be supplied by gravity. The pump cost includes a submersible pump, photovoltaic panels, control box, support structure, pump cable, drop pipe, and fittings to make up plumbing at pump.

4. Life of the BMP is 10 years.

Specifications

Requires NRCS State Engineer approval.

Livestock Feeding Area

Definition/Purpose:
The Livestock Feeding Area is a sized concrete pad where feeders are located, surrounded by a Heavy Use Area. The Livestock Feeding Area is designed for the purpose of improving the lifespan of the heavy use area and to reduce the runoff of nutrients and fecal coliform to adjacent water bodies. The practice is to be used to address water quality concerns where livestock feeding areas are in close proximity to streams and where relocation or rotation of feeding areas is infeasible due to physical limitations (e.g., slope) and where other stream protection measures are insufficient to protect water quality.

Policies:

1. Feeding areas will be employed in conjunction with heavy use area protection and a filter strip.
2. Maximum size cost shared is based on the area necessary to accommodate current herd size.
3. Maximum cost share per pad is $3,000. This does not include the cost of other practices that are used in conjunction with the livestock feeding area.
4. A 100-foot setback from streams, creeks, and lakes shall be required.
5. This practice must be in conjunction with the exclusion of livestock from streams and inclusive of alternative watering sources, where applicable.
6. Minimum life expectancy is 10 years.
7. The installation of the Livestock Feeding Area will be contingent on the design approval from the NRCS area engineer, Division engineer, or a qualified professional engineer.
8. Water leaving the site must leave the site as diffuse flow.

Specifications:

NC NRCS Technical Guide, Section IV, Specification #575 (Animal Trails and Walkways), # 342 (Critical Area Planting), #382 (Fencing), #393 (Filter Strip), #561 (Heavy Use Area Protection), #574 (Spring Development), #728 (Stream Crossing), #642 (Water Well), #614 (Watering Facility), # 528A (Prescribed Grazing), and #590 (Nutrient Management).