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V. Eligible Practices

B. Resource Concerns

1. **Sheet and Rill/Gully Erosion**

Sheet and Rill/Gully Erosion needs to be addressed to help stop potential land degradation and to assist with water quality protection.

Sheet and Rill Erosion: The unwanted removal of layers of soil from the land surface by the action of rainfall and runoff. It is the first stage of water erosion. Funds will be requested based on the total number of acres treated in the field.

Gully Erosion: The process whereby the unwanted removal of soil is characterized by large, incised channels in the landscape; severe erosion in which trenches are cut into the soil. These practices are measured by the number of actively eroding gully sites. Funds are requested based on the number of gullies treated.

2. **Grazing Management**

Grazing management is used in pastureland where non-woody, permanent vegetative cover is established. The practices are designed to promote economically and environmentally sound agricultural land management on pastureland by demonstrating the best use of soil and water resources through the use of rotational grazing, the reduction or prevention of soil erosion, and water quality protection. Funds are requested based on the number of acres in the fields that will be improved with the grazing practice.

3. **Irrigation Management**

Irrigation is the artificial application of water to land to assist in the production of crops. Irrigation management needs to be addressed to help protect water quality through efficient and uniformly applied water to control runoff, appropriate application of nutrients and chemicals, and conservation of water supplies. Funds are requested based on the number of acres in the field that will be addressed.

4. **Animal Waste Management**

Animal waste management practices are designed to reduce or prevent degradation of the soil and water resources from animal waste runoff formed during intensive agricultural production. Such systems are planned to preclude discharge of pollutants to surface or groundwater and to recycle waste through correct soil application on agricultural land. Funds are requested based on the number of systems that need to be installed.

5. **Nutrient and Pest Management**

Nutrient and pest management preserve and protect water quality by demonstrating the environmental and economic advantages of following a nutrient management or pest management plan. The practices provide cooperators an incentive to encourage the adoption of new management techniques and/or technologies for applying commercial fertilizer, pesticide or herbicide on agricultural land.

When nutrients or chemicals in the soil (or applied to an area) are managed for their best and appropriate use, less nutrient and chemical runoff and leeching of the soil into streams occurs after a rainfall event. Funds are requested based on the number of acres that need a management plan applied.

6. **Sensitive Areas**

Sensitive areas are areas of agricultural land where current management has impacted erosion, surface water, and/or ground water, and improved land use practices can increase environmental quality. Practices in sensitive areas assist in the protection of water quality through buffers that collect and filter out sediment and other nutrients, herbicides, and pesticides that could run off of crop fields. The exclusion of livestock from streams protects the streambank from soil degradation and keeps animal waste out of streams, which prevents high nutrient and E. coli content. Funds are requested based on the number of acres that will be addressed within the field.

7. **Woodland Erosion**

Woodland erosion is the process that occurs when the removal of soil or vegetation (including trees), through animal presence or tree harvesting, allows soil to become susceptible to Sheet and Rill/Gully Erosion. Woodland erosion is addressed by excluding livestock from woodland areas, and by developing a plan for harvesting trees in an appropriate manner to protect soil integrity and water quality. Funds are requested to treat the number of woodland acres that need protection.

C. Partner Funding

1. **Maximum Funding**

Cost-share assistance may supplement federal cost-share funding for a practice only if combined federal and state funding does not exceed 75% of the estimated cost of the practice.

2. **Disclosure to Program Office**

The program office must be informed of intentions to partner prior to cooperator discussions or contract submittal within MoSWIMS to ensure the partner program's intent, maintenance requirements, pricing structures, etc. are compatible. If cost-share is provided in conjunction with another program, the cooperator must be informed that the entire practice (including portions funded by another program) must be maintained in compliance with commission policy for the duration of the maintenance life as defined in the SWCP cost-share contract.

D. Practices Across Property Lines

1. **Written Agreement**

A practice may need to be located on or across property lines. The district may cost-share on the practice, provided a written agreement signed by all parties is filed with the district office before approving assistance.

It is the cooperator's responsibility to draft the written agreement. It is highly recommended that district staff do not provide legal opinions or advice on the written agreement.

2. **Notarization**

The written agreement needs to be notarized and include the following information:

- a. The names of the cooperators involved.
- b. The proposed practice.
- c. The location of the practice and the involved area.
- d. Roles of the cooperators throughout the maintenance life of the practice.

E. Existing Fence

Existing fence is defined as having at least 50% of the materials present and usable compared to the original construction of the fence. An existing fence is one that is functioning and achieving the purpose of the practice addressing the resource concern. If an existing fence is cleared by the current landowner prior to an evaluation of the fence by planning staff, cost-share assistance is not available to replace the fence for three years. The latest aerial maps can be used to help determine when the fence was cleared or the landowner providing documentation of when the fence was cleared.

F. Reseeding

1. Assistance for reseeding is only eligible to restore practices to NRCS standards and specifications that were originally cost-share practices through the state program, which includes critical area reseeding in addition to practices for establishment and enhancement.
2. Assistance is available for reseeding when, due to conditions beyond the cooperator's control, the seeding practice did not establish so as to perform its conservation function of controlling erosion. The DSL-15 No-Till Systems practice is excluded from this policy.
3. Fields contained in the original contract are only eligible to reseed once.
4. If there is a change in ownership within the one-year establishment period for the seeding, the board of supervisors may approve assistance to the new cooperator to reseed the practice.
5. The reseeding must be a new and separate contract with all other supporting documentation. The district must choose "Reseeding" from the Special Practice Description dropdown and enter the practice's original contract number in the Original Contract(s) field. "Acres Served" is reported as zero for all practices except DSP 3.5 due to the per acre limitation. "Extent Installed" is reported as the actual acres reseeded, "Erosion" should be listed as zero since this was reported on a previous contract. A note should be placed in MoSWIMS to justify the reseeding.
6. Practices are considered established within one year of the original practice completion date. Documentation of the failed seeding must be contained in the district board meeting minutes within the one year time frame.

7. For reseeding critical areas, the components “Reseeding” or “Native Warm Season Grass Reseeding” must be utilized. The cost-share for the reseeding component is based on the grouped components for Pasture Seeding, regardless of the original species planted.
8. Assistance cannot be approved for lime and fertilizer components. Any nutrients must be applied at the cooperator’s expense.
9. The maintenance lifespan of the practice starts when the payment is issued for the reseeding. If the cooperator violates the maintenance agreement on the practice, the amount of repayment is computed based upon the amount the cooperator received for the original contract payment and the amount received for the reseeding.

G. Reconstruction

1. If a storm event damages a practice while it is being constructed, the board may approve a change order to increase the extent approved for those components that sustained damage and must be replaced in order to meet NRCS standards and specifications within commission policy. A note must be entered in MoSWIMS to justify the reconstruction.
2. Reconstruction assistance is available for practices that failed during the maintenance life of the practice. Districts must request cost-share if a single storm event causes widespread failure of state cost-shared structural practices. The request must document the seriousness and the extent of the damage, along with estimates of costs for repairs. The request to provide assistance for reconstruction must be approved by the commission before the board approves the contract. The district must attach a copy of the approval letter to the Documents section of the MoSWIMS contract.
3. The board may not approve assistance for reconstruction for any component(s) that is not technically necessary to implement the practice to comply with current commission policies and NRCS standards and specifications. The cooperator is not entitled to assistance for components that were not cost-shared on as a part of the original practice.
4. The reconstruction practice must be a new and separate contract with all other required supporting documentation. The district must choose “Reconstruction” from the Special Practice Description dropdown menu; and enter the original contract number in the Original Contract(s) field. “Acres Served” is reported as zero since this was reported on a previous contract. Extent installed should be reported as the extent actually reconstructed.
5. The maintenance lifespan of the practice starts when the payment is issued for the reconstruction. If the cooperator violates the maintenance agreement of the practice, the repayment amount is computed based on state cost-share funds received for the original contract payment and the amount received for reconstruction.

H. Buffer Extension Incentive

1. An extension for a one-time per-acre incentive to maintain the established buffer for the N386 Field Border, N391 Riparian Forest Buffer, N393 Filter Strip and/or the WQ10 Stream Protection practices not under a current maintenance agreement.

Practices must be reenrolled during the two fiscal years following the end of the maintenance life.

2. Practice policies remain the same, except that the Commission maximum incentive payment is \$500/acre for all practices.
3. The Buffer Extension must be a new and separate contract. The district must choose “Buffer Extension” from the Special Practice Description dropdown and enter the practice’s original contract number in the Original Contract(s) field. “Acres Served” is reported as zero since this was reported on a previous contract. “Extent Installed” for the N386, N391, and N393 practices is reported as the actual acres of buffer being maintained. “Extent installed” for the WQ10 practice is reported as the linear feet of stream excluded. “Erosion” should be listed as zero since this was reported on a previous contract.
4. The maintenance lifespan of the practice starts when the payment is issued for the buffer extension. If the cooperator violates the maintenance agreement on the practice, the amount of repayment is computed based upon the incentive payment the cooperator received for the buffer extension.

I. Failed Spillway Pipe

The district may add or replace failed spillway pipes on water impoundment reservoirs or sediment retention, erosion, or water control structures.

1. The structure in need of repair must have been constructed as a grade stabilization structure to control gully erosion, and not solely for livestock watering purposes. Cost-share is only available for structures not under a current maintenance agreement.
2. The structure must be rebuilt according to current NRCS standards and specifications within commission policies. The structure must have been originally designed and constructed to meet NRCS Standards and Specifications in place at the time of construction. The maintenance lifespan of the practice begins when the payment is issued for pipe replacement.
3. The eligible cost-share components for this practice are: principle spillway pipe, anti-seep collars, critical area seeding, and the earthwork to bring the structure up to current NRCS standards and specifications. Dredging of the structure to remove sediment is not an eligible cost-share component.
4. Fence and livestock watering facilities are not eligible components for this practice. A fence may be required to be installed at the cooperator’s expense to exclude livestock.
5. The pipe replacement practice must be a new and separate contract with all other required supporting documentation. The district must choose “Pipe Replacement” from the Special Practice Description dropdown; and enter the original contract number in the Original Contract(s) field. If the original contract number is not available, enter information that pertains to the funding source of the original contract. “Acres Served” is reported as zero since this was reported on a previous contract. Extent installed should be reported as the cubic yards of earthwork for the pipe replacement. A note must be placed in MoSWIMS to justify the pipe replacement.

J. Adding Tile to Existing Sod Waterway or Terrace

1. Cost-share is only available for structures not under a current maintenance agreement. The request to approve assistance for installation of tile in an existing waterway or terrace must be approved by the commission in writing before the board approves the contract.
2. Technical staff must certify that the existing waterway or terrace requires the addition of tile to preserve the practice, or the tile is necessary to control erosion. The request must document the seriousness and the technical need, along with estimates of costs for necessary components.
3. The eligible components for this practice are the required tile and trenching necessary for the structure to be in compliance with current NRCS standards and specifications. Any additional elements required for the practice to meet NRCS standards and specifications are at the cooperator's expense.
4. The completed waterway or terrace must be rebuilt according to current NRCS standards and specifications within commission policy. The maintenance lifespan of the practice begins when payment is issued for the tile installation.

K. Animal Waste Systems

1. **Permits**
 - a. Cooperators are eligible to receive cost-share assistance on a waste management system, providing the Department of Natural Resources does not require a permit.
 - b. A waste management system falls under the National Pollution Discharge Elimination System (NPDES) law once a permit is issued. Once a permit is issued, only environmental problems not associated with the permit are eligible for cost-share.
 - c. For more information on this issue, contact the Department of Natural Resources, Water Protection Program at 573-751-1300.

L. Soil Tests and Fertilizer

1. **Soil Testing Laboratories**
 - a. The commission requires soil test analyses to be completed by a laboratory certified by the Missouri Soil Testing Association Accreditation Program. All lime and nutrient recommendations must be completed by the University of Missouri's Soil and Plant Testing Laboratory. Districts can obtain a list of approved soil testing laboratories from the local University Extension or FSA office.
 - b. The University of Missouri Extension program does NOT endorse any recommendations offered in conjunction with soil test results by a soil testing laboratory NOT identified on the approved list.
 - c. Soil samples required for N340 Cover Crop practice must be submitted to University of Missouri Soil Health Assessment Center (SHAC).

M. Chemical Application

Chemicals used in carrying out practices shall be federally, state, and locally registered and must be applied strictly in accordance with authorized registered uses, directions on the label, and other federal or state policies and requirements.

N. Cost-Share Practice Policies

The following pages contain the commission's policies for the eligible, approved state cost-share practices.

DSL-01 Permanent Vegetative Cover Establishment

Purpose

Reduce soil erosion and improve water quality.

Applicability

Applies to lands to be established in permanent vegetative cover where forage production and/or conservation is feasible.

Erosion Requirements

Practice is eligible for cost-share based on sheet and rill erosion or ephemeral gully erosion. Erosion must be in excess of tolerable soil loss. Post-installation erosion rates must be less than pre-installation erosion rates.

Sheet & Rill Erosion Checks: PRE-INSTALL > POST-INSTALL

PRE-INSTALL > T

Specifications

The completed practice must meet the NRCS Standards and Specifications for Forage and Biomass Planting (512) contained in the Field Office Technical Guide.

Policies

1. On land where the slope exceeds 2 percent (2%), all cultural operations shall be performed on the contour, except where the district, in consultation with NRCS, determines this unnecessary.
2. Grazing must be delayed until the new seeding has attained good growth. Further grazing should be controlled throughout the season to ensure good growth before winter.
3. ***Cost-share is authorized for:***
 - a. Pasture Seeding. Permanent vegetative cover based on the pasture seeding components.
 - b. Lime. Assistance is limited to the minimum requirements to establish adequate cover to control erosion. Limestone shall be applied in accordance with minimum needs based on establishment recommendations, as determined by a soil test. For those test results that have an effective neutralizing material (ENM) requirement of less than 600 pounds per acre, the cooperator has the option to apply the requirement.
 - c. Fertilizer. Nutrient requirements shall be based on the minimum requirements for establishment of grass/forage. Fertilizer application according to a soil test may be waived if the individual nutrient requirement is less than 25 pounds per acre *and* the total application amount is less than 50 pounds per acre.
 - d. Preparation of a seedbed may consist of plowing, disking, or spring-toothed; or chemical methods in a no-till system of grass establishment. The cooperator may use any seedbed preparation method, but the assistance amount is based on the Pasture Seeding components.
 - e. Reseeding, under the conditions listed in Section V, subsection E.

4. ***Cost-share is not authorized for:***

- a. Conversion from woodland or forest to pasture. Cost-share cannot be provided for dozing or cutting of trees. If an area has been cleared, the cooperator must establish permanent vegetative cover at their own expense. To be eligible for the DSL-01 practice in the case of conversion from woodland to pasture, the land must have been in crop or pasture/hayland for three years prior to contract approval.
- b. Clearing of rocks or other obstructions from the area to be seeded.
- c. Fence.
- d. Nutrient build-up. Fertilizer application is to be consistent with one year's nutrient requirements for a four or eight year nutrient buildup plan.
- e. Nutrient application based on crop production goals rather than establishment recommendations.
- f. Vegetative cover that consists of only legumes.
- g. Land established in permanent vegetative cover that is under a maintenance agreement for a seeding practice on the same acres.

Maximum State Cost-Share

Assistance is not to exceed 75% of the state average cost or as directed by the Commission.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of "MAP" in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to "installed" prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under "SUPPORTING DOCUMENTATION"

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage seeded to permanent vegetative cover.

Extent Installed

Acreage seeded to permanent vegetative cover.

Maintenance Life

5 years for pasture seeding component.

10 years for native warm season grass pasture seeding component.

DSL-02 Permanent Vegetative Cover Improvement

Purpose

Reduce soil erosion and improve water quality.

Applicability

Applies to lands needing permanent vegetative cover improvement where forage production and/or conservation is desired and feasible.

Erosion Requirements

Practice is eligible for cost-share based on sheet and rill erosion. Erosion must be in excess of tolerable soil loss. Post-installation erosion rates must be less than pre-installation erosion rates.

Sheet & Rill Erosion Checks: PRE-INSTALL > POST-INSTALL
PRE-INSTALL > T

Specifications

The completed practice must meet the NRCS Standards and Specifications for Forage and Biomass Planting (512), and Prescribed Grazing (528) contained in the Field Office Technical Guide.

Policies

1. Grazing must be delayed until the new seeding has attained good growth. Further grazing should be controlled throughout the season to ensure good growth before winter.
2. ***Cost-share is authorized for:***
 - a. Interseed Legumes. Permanent vegetative cover based on the Interseed Legumes component.
 - b. Lime. Assistance is limited to the minimum requirements to establish adequate cover to control erosion. Limestone shall be applied in accordance with minimum needs based on establishment recommendations, as determined by a soil test. For those test results that have an effective neutralizing material (ENM) requirement of less than 600 pounds per acre, the cooperators has the option to apply the requirement.
 - c. Fertilizer. Nutrient requirements shall be based on the minimum requirements for establishment of grass/forage. Fertilizer application according to a soil test may be waived if the individual nutrient requirement is less than 25 pounds per acre *and* the total application amount is less than 50 pounds per acre.
 - d. Reseeding, under the conditions listed in Section V, subsection F.
3. ***Cost-share is not authorized for:***
 - a. Measures which would constitute complete reestablishment of the cover.
 - b. Fence.
 - c. Nitrogen.
 - d. Nutrient build-up. Fertilizer application is to be consistent with one year's nutrient requirements for a four or eight year nutrient buildup plan.
 - e. Nutrient application based on crop production goals rather than establishment recommendations.

- f. Normal maintenance measures, such as annual top dressings with fertilizers or other mineral elements.
- g. Land established in permanent vegetative cover that is under a maintenance agreement for a seeding practice or grazing system on the same acres.

Maximum State Cost-Share

Assistance is not to exceed 75% of the state average cost or as directed by the Commission.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage seeded to improve vegetative cover.

Extent Installed

Acreage seeded to improve vegetative cover.

Maintenance Life

5 years.

DSL-04 Terrace System

Purpose

Reduce soil erosion.

Applicability

Applies to cropland where:

1. Soil erosion by water is a problem.
2. Soils and topography are such that terraces can be constructed and farmed with reasonable effort.
3. Excess runoff is a problem.

Erosion Requirements

Practice is eligible for cost-share based on sheet and rill erosion or gully erosion. To qualify for this practice based on sheet and rill erosion, erosion rates must be in excess of tolerable soil loss; and post-installation erosion rates must be less than pre-installation erosion rates. To qualify for this practice based on gully erosion, post-installation erosion rates must be less than pre-installation erosion rates.

Sheet & Rill Erosion Checks: PRE-INSTALL > POST-INSTALL
PRE-INSTALL > T

Gully Erosion Checks: PRE-INSTALL > POST-INSTALL

Specifications

The completed practice must meet the NRCS Standards and Specifications for Critical Area Planting (342), and Terrace (600) contained in the Field Office Technical Guide.

Policies

1. A protective outlet or waterway installed solely as an outlet for the terrace system with no other conservation purpose should be entered under this practice. A protective outlet or waterway that solely solves a conservation problem and serves as an outlet for the terrace system should be cost-shared under the practice of DWP-01 Sediment Retention, Erosion, or Water Control Structures or DWP-03 Sod Waterway.
2. Farming operations must be parallel to terraces, with the exception of planting crops over terraces in areas where the slope is less than three (3) percent. All other ground contact farming practices have to be on the contour with the terraces with the exception of incidental crossing of the terraces such as planting end rows and point rows.
3. ***Cost-share is authorized for:***
 - a. Terraces and necessary leveling/filling to permit installation of an effective system.
 - b. Removal of stone walls or hedgerows only when absolutely necessary to permit installation of an effective system.
 - c. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components or native warm season grass seeding.
 - d. Conversion of existing system, if not serving the intended conservation purpose.
 - e. Topsoiling on all soil types is allowed in accordance with the district board's policy.

- f. Reconstruction, under the conditions listed in Section V, subsection G.
- 4. ***Cost-share is not authorized for:***
 - a. Maintenance or conversion of an existing system to accommodate changes in cropping pattern or equipment.

Maximum State Cost-Share

Assistance is not to exceed 75% of the state average cost or as directed by the Commission.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage draining into the system.

Extent Installed

Linear feet of terrace system.

Maintenance Life

10 years.

DSL-44 Terrace System with Tile

Purpose

Reduce soil erosion.

Applicability

Applies to cropland where:

1. Soil erosion by water is a problem.
2. Soils and topography are such that terraces can be constructed and farmed with reasonable effort.
3. Suitable outlet can be provided.
4. Excess runoff is a problem.

Erosion Requirements

Practice is eligible for cost-share based on sheet and rill erosion or gully erosion. To qualify based on sheet and rill erosion, erosion rates must be in excess of tolerable soil loss; and post-installation erosion rates must be less than pre-installation erosion rates. To qualify based on gully erosion, post-installation erosion rates must be less than pre-installation erosion rates.

Sheet & Rill Erosion Checks: PRE-INSTALL > POST-INSTALL
PRE-INSTALL > T

Gully Erosion Checks: PRE-INSTALL > POST-INSTALL

Specifications

The completed practice must meet the NRCS Standards and Specifications for Critical Area Planting (342), Terrace (600), and Underground Outlet (620) contained in the Field Office Technical Guide.

Policies

1. A protective outlet or waterway installed solely as an outlet for the terrace system with no other conservation purpose should be entered under this practice. A protective outlet or waterway that solely solves a conservation problem and serves as an outlet for the terrace system should be cost-shared under the practice of DWP-01 Sediment Retention, Erosion, or Water Control Structures or DWP-03 Sod Waterway.
2. Farming operations must be parallel to terraces, with the exception of planting crops over terraces in areas where the slope is less than three (3) percent. All other ground contact farming practices have to be on the contour with the terraces with the exception of incidental crossing of the terraces such as planting end rows and point rows.
3. ***Cost-share is authorized for:***
 - a. Terraces and necessary leveling/filling to permit installation of an effective system.
 - b. Removal of stone walls or hedgerows only when absolutely necessary to permit installation of an effective system.
 - c. Materials and installation of underground pipe outlets and other mechanical outlets.
 - d. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components or native warm season grass seeding.

- e. Conversion of existing system, if not serving the intended conservation purpose.
 - f. Topsoiling on all soil types is allowed in accordance with the district board's policy.
 - g. Reconstruction, under the conditions listed in Section V, subsection G.
4. ***Cost-share is not authorized for:***
- a. Maintenance or conversion of an existing system to accommodate changes in cropping patterns or equipment use.

Maximum State Cost-Share

Assistance is not to exceed 75% of the state average cost or as directed by the Commission.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of "MAP" in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to "installed" prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under "SUPPORTING DOCUMENTATION"

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage draining into the system.

Extent Installed

Linear feet of terrace system.

Maintenance Life

10 years.

DSL-05 Diversion

Purpose

1. Break up concentrations of water on long slopes, on undulating land surfaces, and on land that is generally considered too flat or irregular for terracing.
2. Protect terrace systems by diverting water from the top terrace where topography, land use, or land ownership prevents terracing the land above.
3. Intercept surface and shallow subsurface flow.
4. Reduce runoff damages from upland runoff.
5. Divert water away from active gullies or critically eroding areas.

Applicability

Applies to agricultural land where surface runoff water control and/or management is needed. It also applies where soils and topography are such that the diversion can be constructed and suitable outlet is available or can be provided. Diversion shall not be substituted for terraces on land requiring terracing for erosion control.

Erosion Requirements

Practice is eligible for cost-share based on sheet and rill erosion or gully erosion. To qualify based on sheet and rill erosion, erosion rates must be in excess of tolerable soil loss; and post-installation erosion rates must be less than pre-installation erosion rates. To qualify based on gully erosion, post-installation erosion rates must be less than pre-installation erosion rates.

Sheet & Rill Erosion Checks: PRE-INSTALL > POST-INSTALL
PRE-INSTALL > T

Gully Erosion Checks: PRE-INSTALL > POST-INSTALL

Specifications

The completed practice must meet the NRCS Standards and Specifications for Critical Area Planting (342), Dam Diversion (348), Diversion (362), Pond (378), Grade Stabilization Structure (410), Subsurface Drain (606), and Underground Outlet (620) contained in the Field Office Technical Guide.

Policies

1. ***Cost-share is authorized for:***
 - a. Diversions, ditches, dikes or subsurface drains where necessary for the proper functioning of the diversion.
 - b. Leveling and filling to install an effective system.
 - c. Removing portions of stone walls or hedgerows, if necessary, to permit establishment of the practice. To avoid losses to wildlife habitat, stonewalls and hedgerows will be removed only when absolutely necessary for the successful completion of the practice.
 - d. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components or native warm season grass seeding.
 - e. A protective outlet or waterway installed solely as an outlet for a diversion system and serves no other conservation purpose as a component of this practice. A protective outlet

or waterway which, by itself, solves a conservation problem and also serves as an outlet for a diversion system should be cost-shared under the practice DWP-01 Sediment Retention, Erosion, or Water Control Structure or DWP-03 Sod Waterway.

- f. Reconstruction, under the conditions listed in Section V, subsection G.
- 2. ***Cost-share is not authorized for:***
 - a. Ditches or dikes designed to impound water or part of a regular irrigation system.

Maximum State Cost-Share

Assistance is not to exceed 75% of the state average cost or as directed by the Commission.

Map Requirements

- 1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
- 2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage that drains into the structure.

Extent Installed

Linear feet of diversion.

Maintenance Life

10 years.

DSL-11 Permanent Vegetative Cover — Critical Area

Purpose

Where establishing permanent vegetation is needed on sites that have high erosion rates and/or conditions that prevent the establishment of vegetation with normal practices.

Applicability

Applies to accomplish one or more of the following:

1. Stabilize areas with existing high rates of soil erosion by water or wind.
2. Rehabilitate and vegetate naturally degraded sites that cannot be stabilized through normal farming practices.
3. Erosion conditions that are a result of naturally occurring erosion.

Erosion Requirements

Practice is eligible for cost-share based on sheet and rill erosion or gully erosion. To qualify based on sheet and rill erosion, erosion rates must be in excess of tolerable soil loss; and post-installation erosion rates must be less than pre-installation erosion rates. To qualify based on gully erosion, post-installation erosion rates must be less than pre-installation erosion rates.

Sheet & Rill Erosion Checks: PRE-INSTALL > POST-INSTALL
PRE-INSTALL > T

Gully Erosion Checks: PRE-INSTALL > POST-INSTALL

Specifications

The completed practice must meet the NRCS Standards and Specifications for Critical Area Planting (342), Fence (382), and livestock exclusion under Access Control (472) contained in the Field Office Technical Guide.

Policies

1. The area must be protected from overgrazing.
2. When critical area treatment is used to address gully erosion problems associated with existing terrace systems located in pastures and hay lands, the following requirements apply:
 - a. Removal of terraces in pastures and/or hay lands to correct gully erosion limited almost entirely to outlets of terraces should be supported by a cost comparison.
 - b. Removal of the terrace system must be supported by visible sheet, rill and/or gully erosion within the pasture or hay land that can be directly attributed to ineffective terraces.
3. ***Cost-share is authorized for:***
 - a. Measures needed in pastures, hay lands, and field borders to stabilize a source of sediment, such as:
 - 1) Grading and shaping.
 - 2) Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components or native warm season grass seeding.
 - 3) Trees or shrubs.

- b. Assistance to install components that will significantly reduce erosion and maintain or improve the quality of water in a stream, lake, pond, or other water sources.
- 4. ***Cost-share is not authorized for:***
 - a. Conversion from woodland or forest to pasture. Cost-share cannot be provided for dozing or cutting of trees. If an area has been cleared, the cooperator must establish permanent vegetative cover at their expense.

Maximum State Cost-Share

Assistance is not to exceed 75% of the state average cost or as directed by the Commission.

Map Requirements

- 1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
- 2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage seeded.

Extent Installed

Acreage seeded.

Maintenance Life

5 years.

DSL-111 Permanent Vegetative Cover — Critical Area: Confined Animal Feed Lot

Purpose

Where establishing permanent vegetation is needed on sites associated to animal confinement areas. The sites are expected to have high erosion rates and/or have conditions that prevent the establishment of vegetation with normal practices.

Applicability

Applies to accomplish one or more of the following:

1. Stabilize areas with existing or expected high rates of soil erosion by water or wind.
2. Rehabilitate and vegetate degraded sites that cannot be stabilized through normal farming practices.

Erosion Requirements

Practice is eligible for cost-share based on sheet and rill erosion or gully erosion. To qualify based on sheet and rill erosion, erosion rates must be in excess of tolerable soil loss; and post-installation erosion rates must be less than pre-installation erosion rates. To qualify based on gully erosion, post-installation erosion rates must be less than pre-installation erosion rates.

Sheet & Rill Erosion Checks: PRE-INSTALL > POST-INSTALL
PRE-INSTALL > T

Gully Erosion Checks: PRE-INSTALL > POST-INSTALL

Specifications

The completed practice must meet the NRCS Standards and Specifications for Critical Area Planting (342), Fence (382), and livestock exclusion under Access Control (472) contained in the Field Office Technical Guide.

Policies

1. The area must be protected from overgrazing.
2. ***Cost-share is authorized for:***
 - a. Erosion problems associated with animal confinement areas, feedlots, hog pens, and other areas where livestock have been confined or allowed continued access.
 - b. Measures needed in pastures, hay lands, and field borders to stabilize a source of sediment, such as:
 - 1) Grading and shaping.
 - 2) Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components.
 - 3) Trees or shrubs.
 - c. Assistance to install components that will significantly reduce erosion and maintain or improve the quality of water in a stream, lake, pond, or other water sources.

Maximum State Cost-Share

1. Assistance is not to exceed 75% of the state average cost or as directed by the Commission.
2. Assistance is limited to 5 acres per area. Contiguous lots greater than 5 acres in size cannot be broken down into multiple 5 acre practices.
3. The maximum amount of cost-share that can be provided will be limited to \$500 per acre, with a maximum of \$2,500 for the practice.
4. Utilize the Practice Limits Detail report in MoSWIMS to ensure compliance with applicable maximums.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage seeded.

Extent Installed

Acreage seeded.

Maintenance Life

10 years.

DSL-15 No-Till System

Purpose

To support one or more of the following purposes:

1. Reduce sheet and rill erosion.
2. Reduce wind erosion.
3. Stop or reduce pollution from sediment and chemically contaminated runoff from agricultural nonpoint sources.

Applicability

Applies to cropland where grain crops are planted.

Erosion Requirements

Practice is eligible for cost-share based on sheet and rill erosion. Erosion must be in excess of tolerable soil loss. Post-installation erosion rates must be less than pre-installation erosion rates.

Sheet & Rill Erosion Checks: PRE-INSTALL > POST-INSTALL
PRE-INSTALL > T

Specifications

The completed practice must meet the NRCS Standards and Specifications for Residue and Tillage Management No-Till (329) contained in the Field Office Technical Guide.

Policies

1. The land involved must be protected by crop residue or temporary cover of at least 30% ground cover from the time of harvest until after the next crop is planted.
2. ***Cost-share is authorized for:***
 - a. A cooperator to receive an educational benefit from system implementation.
3. ***Cost-share is not authorized for:***
 - a. Producers who have utilized a no-till system.

Maximum State Cost-Share

1. Assistance for this practice shall not be approved for a cooperator for more than two years, nor exceed 40 acres in any one-year period. For purposes of this practice, the federal fiscal year, October 1 through September 30, will be used. Any assistance received by the cooperator from a federal program counts toward these limits.
2. Incentive cannot exceed \$15 per acre, for a maximum of 40 acres in any one federal fiscal year. The maximum assistance that the cooperator can receive for this practice, in any one federal fiscal year, is \$600.
3. Utilize the Practice Limits Detail report in MoSWIMS to ensure compliance with applicable maximums.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage no-tilled.

Extent Installed

Acreage no-tilled.

Maintenance Life

1 year.

DWC-01 Water Impoundment Reservoir

Purpose

Stabilize the grade and control gully erosion in natural or artificial channels.

Applicability

Applies to agricultural land where the concentration and flow velocity of water requires a water impoundment reservoir to stabilize the grade in channels or to control gully erosion not contained in dense forest cover. For the purposes of this practice, CRP land surrounding the water impoundment reservoir site is considered agricultural land.

Erosion Requirements

Practice is eligible for cost-share based on gully erosion. Post-installation erosion rates must be less than pre-installation erosion rates.

Gully Erosion Checks: PRE-INSTALL > POST-INSTALL

Specifications

The completed practice must meet the NRCS Standards and Specifications for Critical Area Planting (342), Pond (378), Fence (382), Grade Stabilization Structure (410), livestock exclusion under Access Control (472), Livestock Pipeline (516), and Watering Facility (614) contained in the Field Office Technical Guide.

Policies

1. Cost-share is authorized for:

- a. Structures that provide erosion control benefits.
- b. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components or native warm season grass seeding.
- c. Installation of livestock watering facilities.
 1. Cost-share is limited to one livestock watering tank or hydrant or limited access watering point. A supply pipe may also be installed in addition to a limited access watering point. Cost-share is limited to 300 feet of pipe from the dam to the livestock watering facility.
 2. To qualify for cost-share, a livestock watering facility must be installed during construction. Livestock watering facilities installed at any time during the maintenance life of the practice is the cooperator's responsibility.
- d. Exclusion fence to protect from livestock. Grazing is not allowed at any time in the excluded area.
 - 1) Required if cost-share is authorized to install a livestock watering tank or hydrant.
 - 2) To qualify for cost-share, fence must be installed during construction. Fence installed any time during the maintenance life of the practice is the cooperator's responsibility.
- e. Reconstruction, under the conditions listed in Section V, subsection G.
- f. Replacement of failed spillway pipe, under the conditions listed in Section V, subsection I.
- g. **Gully Repair in Emergency Spillway**
 - 1) If gully erosion is present at the emergency spillway and needs repaired, in order to be eligible, the original structure must have been built according to NRCS

standards and specifications. Cost-share is only eligible on structures not under a current maintenance agreement. The maintenance life of the practice starts when the payment is issued for repair of the spillway.

- 2) The practice must be a new and separate contract with all other required supporting documentation. The district must ensure the Special Practice Description of “Reconstruction” is chosen from the dropdown and state the contract number of the original practice in the Original Contract(s) field. A note shall be placed in MoSWIMS to justify the reconstruction.
2. ***Cost-share is not authorized for:***
 - a. Any reservoir for erosion control in forested areas, except for woody draws impacted by crop and pasture fields. Forested areas are defined in this policy, as shown on the latest available aerial map, as tree canopy completely covering the proposed pond site. Heavy clearing is not an approved component for this practice.
 - b. Construction of a reservoir when agricultural activity does not surround the structure site.
 - c. Any reservoir designed for aesthetic or recreational purposes.
 - d. Any structure site cleared by the cooperator prior to eligibility approval.
 - e. Any reservoir designed primarily for flood control or storm water retention.
 - f. Pipelines or troughs to furnish water to farm buildings.
 - g. Any fence that serves as the perimeter or property line.

Maximum State Cost-Share

1. Assistance is not to exceed 75% of the state average cost or as directed by the Commission.
2. The maximum assistance that can be paid for this practice is \$26,000.

Map Requirements

1. Mapping Tool link must be saved in the Notes section of the contract prior to eligibility approval. Practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
 - a. All planned and existing items that pertain to contract eligibility should be included on the map. This includes farm boundary, dam, and pool area.
2. Mapping Tool link must be saved in the Notes section of the contract prior to contract approval. Practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status, and fiscal year.
 - a. In addition to eligibility requirements, all planned and existing items that pertain to contract approval should be included on the map including fence (both perimeter and interior), pipeline, watering facility (specify if tank or hydrant in attribute table), and power sources if installing electric fence.
3. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. In addition to the above installed and existing items, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled

- 3) Section, Township, Range or coordinates
 - b. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - c. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - d. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage that drains into the structure.

Extent Installed

Cubic yards of earthwork.

Maintenance Life

10 years

DWP-01 Sediment Retention, Erosion, or Water Control Structure

Purpose

1. Reduce watercourse and gully erosion.
2. Trap sediment.
3. Reduce and manage onsite and downstream runoff.
4. Improve downstream water quality.

Applicability

Applies to sites where:

1. Topography is generally irregular.
2. Sheet and rill erosion is controlled by other conservation practices.
3. Runoff and sediment damage land and improvements.
4. Adequate outlets can be provided.
5. Water and sediment control basins shall not be used in place of terraces.

Erosion Requirements

Practice is eligible for cost-share based on gully erosion. Post-installation erosion rates must be less than pre-installation erosion rates.

Gully Erosion Checks: PRE-INSTALL > POST-INSTALL

Specifications

The completed practice must meet the NRCS Standards and Specifications for Critical Area Planting (342), Fence (382), Grade Stabilization Structure (410), livestock exclusion under Access Control (472), and Water and Sediment Control Basin (638) contained in the Field Office Technical Guide.

Policies

1. ***Cost-share is authorized for:***
 - a. Sediment detention or retention structures, such as erosion control dams, sediment basins, or similar structures.
 - b. Channel linings, chutes, drop spillways, drop pipes, and tile that dispose of excess water.
 - c. Exclusion fence.
 - d. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components or native warm season grass seeding.
 - e. Leveling and filling to permit the installation of the structure.
 - f. Measures that will contribute significantly to maintaining or improving soil or water quality.
 - g. Drop pipes with a 12-foot top width, even when less is required by NRCS Standards and Specifications, if the board believes the width is needed to address safety concerns or if there is a potential to create an erosion problem with a lesser top width.
 - h. Drop pipes that outlet into a channel controlled by a legal drainage district. Cost-share is limited to the top width of the embankment required by the legal drainage district or NRCS Standards, whichever is greater.
 - i. Elbow or weir box, or both an elbow and weir box on the same contract if they are both technically necessary for the location.

- j. Reconstruction, under the conditions listed in Section V, subsection G.
 - k. Replacement of a failed spillway pipe, under the conditions listed in Section V, subsection I.
2. ***Cost-share is not authorized for:***
- a. Irrigation structures that are part of a distribution system for irrigation water.
 - b. Any structure built that stores water.

Maximum State Cost-Share

Assistance is not to exceed 75% of the state average cost or as directed by the Commission.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage that drains into the structure.

Extent Installed

Cubic yards of earthwork.

Maintenance Life

10 years.

DWP-03 Sod Waterway

Purpose

1. To convey runoff from terraces, diversions, or other water concentrations without causing erosion or flooding.
2. To reduce gully erosion.
3. To protect/improve water quality.

Applicability

Applies to agricultural land where added water conveyance capacity and vegetative protection are needed to control erosion resulting from concentrated runoff.

Erosion Requirements

Practice is eligible for cost-share based on gully erosion. Post-installation erosion rates must be less than pre-installation erosion rates.

Gully Erosion Checks: PRE-INSTALL > POST-INSTALL

Specifications

The completed practice must meet the NRCS Standards and Specifications for Critical Area Planting (342), Grassed Waterway (412), and Lined Waterway or Outlet (468) contained in the Field Office Technical Guide.

Policies

1. ***Cost-share is authorized for:***
 - a. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components.
 - b. Subsurface drains that are necessary for proper functioning of the waterway.
 - c. Berm (side dike) removal in accordance with the following guidelines:
 - 1) If the design criteria calls for berms over one foot (12 inches) in height, and this is clearly shown in the drawings and/or specifications, then the district may cost-share on the removal of the berm.
 - 2) Removal of the berm does not extend the maintenance lifespan of the original practice. The contract for construction of a sod waterway with berms that are greater than one (1) foot in height must list berm removal as a component of the practice. The contract should show the appropriate extent of earthwork approved for the berm removal that is technically necessary to meet NRCS standards and specifications. This component should show CS% of 0 on the original contract.
 - 3) The extent of earthwork approved on the contract for the removal of the berm cannot exceed the extent approved on the contract for construction of the waterway. Only the berm removal component is listed on the new contract. The board should not approve the contract until the cooperator is ready to remove the berms. "Berm Removal" should be chosen from the Special Practice Description dropdown, and the original contract number should be typed in the Original Contract(s) field of the cost-share contract. Acres served, extent installed, and erosion values are reported as 0 since they were already reported on a previous contract.

- d. Reseeding, under the conditions listed in of Section V, subsection F.
- e. Reconstruction, under the conditions listed in of Section V, subsection G.
- 2. ***Cost-share is not authorized for:***
 - a. State cost-share is not eligible for berm removal on waterways cost-shared on by federal programs.

Maximum State Cost-Share

Assistance is not to exceed 75% of the state average cost or as directed by the Commission.

Map Requirements

- 1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
- 2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage that drains into the waterway.

Extent Installed

Acres of waterway installed.

Maintenance Life

10 years.

N332 *Contour Buffer Strips*

Purpose

1. Reduce sheet and rill erosion.
2. Reduce transport of sediment and other water-borne contaminants down slope, on site, and off site.

Applicability

Applies to cropland.

Erosion Requirements

Practice is eligible for cost-share based on sheet and rill erosion. Erosion must be in excess of tolerable soil loss. Post-installation erosion rates must be less than pre-installation erosion rates.

Sheet & Rill Erosion Checks: PRE-INSTALL > POST-INSTALL
PRE-INSTALL > T

Specifications

The completed practice must meet the NRCS Standards and Specifications for Contour Buffer Strips (332).

Policies

1. Field borders are required in conjunction with this practice.
2. ***Cost-share is authorized for:***
 - a. Pasture Seeding. Permanent vegetative cover based on the pasture seeding components or native warm season grass seeding.
 - b. A one-time out of production incentive.
3. ***Cost-share is not authorized for:***
 - a. Use on undulating to rolling topography.

Maximum State Cost-Share

1. Assistance for components is not to exceed 75% of the state average cost or as directed by the Commission.
2. Incentive cannot exceed \$800 per acre planted.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of "MAP" in MoSWIMS prior to contract payment submission.

- a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
- b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
- c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
- d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
- e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage draining into the contour buffer strips.

Extent Installed

Acreage draining into the contour buffer strips.

Maintenance Life

5 years for pasture seeding component.

10 years for native warm season grass pasture seeding component.

N340 Cover Crop

Purpose

Provide operators an incentive to encourage the adoption of cover crops for reducing soil erosion, improving water quality and soil health.

The definition of operator for the purpose of this practice is any individual farming the land, who has incurred the expenses for the cover crops. The operator's name should also be listed on file with FSA as the operator of such land.

Applicability

Applies to cropland acres where row crops are grown, and soil erosion needs to be prevented, or water quality and soil health improved.

Erosion Requirements

Practice has no erosion requirements to qualify. However, pre- and post-erosion rates need to be recorded in MoSWIMS to capture the erosion benefits of the practice.

Specifications

The completed components of the practice must meet the NRCS Standards and Specifications for Conservation Crop Rotation (328) and Cover Crop (340) contained in the Field Office Technical Guide.

Policies

1. The contract must contain the name of the legal owner.
2. Cover crops are encouraged to be no-tilled or broadcast seeded with either ground or aerial equipment to get the full soil health benefits of using cover crops. However, minimal soil disturbance is allowed during the establishment of the cover crops. The minimal disturbance will be based on the tillage having a Soil Tillage Intensity Rating (STIR) value of 20 or less as calculated in RUSLE2. The calculation of the STIR value will be for establishment of the cover crop, not the whole cropping rotation.
3. Production crop following the cover crops must be planted using a no-till system on the contracted acres. Applicable no-till equipment is listed in standard 329 for Residue and Tillage Management No-Till. Tillage is allowed on up to 25% of the acres in a field to smooth ruts caused by harvest equipment.
4. Payment can be issued after no-till planting of the production crops into the (terminated) cover crops or after April 1st if the production crop has not yet been planted. If payment is made using this option, the N340 Payment Acknowledgement Form must be filled out and attached to the contract prior to contract payment submittal.
5. Cooperators must adopt cover crops in compliance with the **Cover Crop (340)** standard as part of this practice. In addition:
 - a. All cover crop seedings must be planned with a minimum of 25% cool-season annual grass, small grain component or warm season grass. (Caution should be taken when selecting Annual Ryegrass for a cover crops mix.)

- b. Spring planted cover crops must have been planted at least 60 days prior to being terminated.
 - c. Cover crops will be terminated as late as practical to maximize plant biomass production and nutrient uptake. Cooperators need to take into consideration timing for next crop and crop insurance requirements.
 - d. Cover crops will not be harvested for grain, seed or hayed.
 - e. Cover crops may be grazed once the forages have reached a minimum height of 6–8 inches with enough biomass produced to justify grazing. However, grazing should not occur if it will damage the forages so that their effectiveness as a cover crop would be impacted. Grazing will need to stop once the forages have been grazed down to 4 inches.
 - f. Tillage cannot be used to terminate the cover crops.
 - g. N595 Pest Management practice may be utilized to terminate the cover crops. The pest management plan must be developed to address the termination of the cover crop and all pest issues that may occur during the next production crop growing season.
 - h. A soil sample for the Initial Standard Soil Health Package test through the Missouri Soil Health Assessment Center (SHAC) must be taken on each field prior to seeding cover crops. The Initial Standard test only needs to be taken one time per field(s) which will be on the first contract when they are enrolled in the practice. If a field that previously was not included on a contract is added with fields that have had the Initial Standard test completed, the new field(s) that are being added to the contract will also need to have the Initial Standard test completed. The number of samples per field will be determined by the sampling requirements provided by SHAC. The cooperator needs to make payment for their soil sample(s) prior to receiving their cost-share payment. When processing the contract payment, and if the cooperator cannot produce the paid receipt, the district can use the spreadsheet from the SHAC to verify if the cooperator submitted samples and made payment. Submitting samples and appropriate payment is a requirement of the cover crop practice and must be done to receive the cost-share payment.
 - i. There is a second soil health test through SHAC called Follow-Up Standard Soil Health Package that cooperators are required to do after four consecutive years of implementing cover crops on a field. There can be multiple samples if there were multiple initial samples on the original contract(s). The number of samples per field will be determined by the sampling requirements provided by SHAC.
 - j. Cover crops may be planted on newly constructed terraces. Ground disturbance associated with construction of a terrace is not considered as seedbed preparation for seeding cover crops.
6. The MO NRCS Cover Crop Implementation Requirement (Code 340) documentation must be scanned into MoSWIMS as supporting documentation when the contract is submitted for review.
 7. The Missouri NRCS Cover Crop Certification (Code 340) must be attached as supporting documentation in MoSWIMS prior to the contract being submitted for payment review.
 8. Districts should use the DNR-SWCP N340 Cover Crop Practice Checklist – Landowner/Operator to make sure all steps and policies are being followed for the cover crop practice. The checklist is available in the appendix and at: <https://mosoilandwater.land/sites/mosoilandwater/files/n340-cover-crop-checklist-management.pdf>.

9. ***Cost-share is authorized:***

- a. For incentive payments for cooperators who implement all required components of the Cover Crop practice.
- b. For soil health assessment testing through the University of Missouri SHAC for either the Initial Standard Soil Health Package or Follow-Up Standard Soil Health Package.

10. ***Cost-share is not authorized for:***

- a. Cover crops in pasture or hayland.

Maximum State Cost-Share

1. Cooperators participating in the Cover Crop practice will be eligible for 75% of the component cost of the test through SHAC and an incentive payment of \$30/acre/year for a 1 or 2 species cover crop mix or \$40/acre/year for 3 or more species cover crop mix with an annual maximum total payment of \$5,000 per operator. Utilize Practice Limits Detail report in MoSWIMS to ensure compliance with applicable maximums.

Map Requirements

1. Any acres in a field not planted in cover crops should not be included on map or contract. Examples of excluded features could be waterways, fencerows, tree lines, buildings or roads.
2. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
3. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage planted in cover crops.

Extent Installed

Acreage planted in cover crops.

Maintenance Life

This practice is completed upon contract payment; therefore, the contract will not have a maintenance life.

N380 *Windbreak/Shelterbelt Establishment*

Purpose

1. Reduce soil erosion from wind.
2. Improve irrigation efficiency.

Applicability

1. *Limited to Butler, Scott, Stoddard, Mississippi, New Madrid, Dunklin, and Pemiscot counties.*
2. Applies to areas where linear plantings of woody plants are desired and suited for controlling wind erosion.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Windbreak/Shelterbelt Establishment (380), Tree/Shrub Site Preparation (490), and Tree/Shrub Establishment (612) contained in the Field Office Technical Guide.

Policies

1. *Cost-share is authorized for:*
 - a. A one-time incentive per linear foot of established buffer length.

Maximum State Cost-Share

Incentive cannot exceed \$1.50 per linear foot of established buffer length, not per shrub or tree row length.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of "MAP" in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to "installed" prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:

- 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
- e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage of tree/shrub planted.

Extent Installed

Linear feet of tree/shrub planted.

Maintenance Life

10 years.

N410 Drop Pipe

Purpose

1. To stabilize the grade and control erosion in natural or artificial channels.
2. To prevent the formation or advancement of gullies when installed to complete a water disposal system.
3. Reduce and manage runoff and sedimentation entering drainage systems.
4. Lower the water from a field elevation to a deeper outlet channel.
5. Improve downstream water quality.

Applicability

1. **Limited to Bollinger, Butler, Cape Girardeau, Dunklin, Mississippi, New Madrid, Pemiscot, Ripley, Scott, Stoddard, and Wayne counties; or other areas of the state as approved by program staff.**

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Grade Stabilization Structure (410), Water and Sediment Control Basin (638), Critical Area Planting (342) contained in the Field Office Technical Guide.

Policies

1. ***Cost-share is authorized for:***
 - a. Drop pipes with a 12-foot top width, even when less is required by NRCS Standards and Specifications, if the board believes the width is needed to address safety concerns or if there is a potential to create an erosion problem with a lesser top width.
 - b. Drop pipes that outlet into a channel controlled by a legal drainage district. Cost-share is limited to the top width of the embankment required by the legal drainage district, local governing body, or NRCS Standards and Specifications, whichever is greater.
 - c. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components. For drop pipes installed where farming practices or drainage ditch maintenance prevents the establishment of permanent vegetation, the structure does not require seeding.
 - d. Elbow or weir box, or both an elbow and weir box on the same contract if they are both technically necessary for the location.
 - e. Watertight flap gates shall be installed when required by the local drainage district.
 - f. Reconstruction, under the conditions listed in Section V, subsection F.
 - g. Replacement of a failed drop pipe not under a current maintenance agreement.
2. ***Cost-share is not authorized for:***
 - a. Structures that are part of a distribution system to control the rate of flow or regulate the water level for irrigation water.

Maximum State Cost-Share

Assistance is not to exceed 75% of the state average cost or as directed by the Commission.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage that drains into the structure.

Extent Installed

Each drop pipe.

Maintenance Life

10 years.

N585 *Contour Stripcropping*

Purpose

To support one or more of the following:

1. Reduce sheet and rill erosion.
2. Reduce transport of sediment and other water-borne contaminants.

Applicability

Applies to cropland.

Erosion Requirements

Practice is eligible for cost-share based sheet and rill erosion. Pre-installation erosion rates must be less than or equal to tolerable soil loss.

Sheet & Rill Erosion Checks: PRE-INSTALL < OR = T

Specifications

The completed practice must meet the NRCS Standards and Specifications for Stripcropping (585).

Policies

1. Assistance is authorized for this practice only on lands with sheet and rill erosion equal to or less than the “T” value.
2. Incentive for the acreage affected by the practice.

Maximum State Cost-Share

Incentive cannot exceed \$15 per acre for each year established.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled

- 3) Section, Township, Range or coordinates
- e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage planted.

Extent Installed

Acreage planted.

Maintenance Life

1 year.

DSP-02 Permanent Vegetative Cover Enhancement

Purpose

1. Reduce soil erosion and improve water quality.
2. Improve the productive cover of existing pastureland with the demonstration of no-till, inter-seeding of legumes by the use of no-till drills; to protect the soil and prevent the pollution of air, land or water from agricultural uses.

Applicability

1. Applies to pastureland and hay land only where non-woody, permanent vegetative cover is in poor or very poor condition, with less than thirty percent (30%) introduced legumes, to be improved to good condition; or to fescue pastureland in better than poor condition with less than thirty percent (30%) introduced legumes and where fescue-endophyte fungus infestation levels are greater than thirty percent (30%) and less than seventy percent (70%). The argument has been made that during certain times of the year, a particular fescue stand will show lower levels of endophyte infestation than what is actually present. The board, with the help of University Extension, should make every effort to inform the cooperator of the proper method and timing of taking the endophyte test. The purpose of the endophyte test is to determine the level of infestation. The test should not be taken just to qualify for cost-share.
2. In the case of fescue eligibility, the percent legume in the fescue pasture must be less than thirty percent (30%). Lespedeza is excluded from the measurement. The fescue-endophyte infestation level must be greater than thirty percent (30%) and less than seventy percent (70%) as determined by a proper endophyte test. Refer to NRCS Technical Note No. 17.
3. For purposes of this practice, poor pasture condition shall include an individual indicator Score of "1" and "2" with numeric values of 25 or less as determined by the use of the NRCS Pasture Condition Score sheet.

Erosion Requirements

Practice is eligible for cost-share based sheet and rill erosion. Pre-installation erosion rates must be less than or equal to tolerable soil loss.

Sheet & Rill Erosion Checks: PRE-INSTALL < OR = T

Specifications

The completed practice must meet the NRCS Standards and Specifications for Pasture and Hay Planting (512), Prescribed Grazing (528) contained in the Field Office Technical Guide.

Policies

1. Haying is permitted to manage and maintain the legume when grazing alone does not control grass and weed growth.
2. ***Cost-share is authorized for:***
 - a. Limestone and fertilizer. Assistance is limited to the minimum requirements based on legume establishment recommendations, as determined by a soil test. Cost-share for limestone may be approved for the amount needed up to a maximum of 1,500 pounds per acre of effective neutralizing material (ENM). Any amount over 1,500 pounds of ENM

- is the cooperator's responsibility. For those tests which have an ENM requirement of less than 600 pounds per acre, the cooperator has the option of applying the requirement.
- b. Interseed Legumes. Permanent vegetative cover based on the DSP-02 Interseed Legumes component.
 - c. Reseeding, under the conditions listed in Section V, subsection F, for a maximum of 80 acres.
3. ***Cost-share is not authorized for:***
- a. Measures which would constitute complete re-establishment of existing cover.
 - b. Nitrogen.
 - c. Nutrient application based on crop production goals rather than establishment recommendations.
 - d. Nutrient build-up. Fertilizer application is to be consistent with one year's nutrient requirements for a four or eight year nutrient buildup plan.
 - e. Chemicals.
 - f. Broadcast or aerial sowing of legume seed.
 - g. Woody or rocky fields where a no-till drill would not perform adequately.
 - h. Fields where woody vegetation has been cleared and no improvements or maintenance of soil cover has since been performed.
 - i. Land already established in permanent vegetative cover that is under a maintenance agreement for a seeding practice or grazing system on the same acres.
 - j. Fields with pre-install erosion rates above "T."
 - k. Harvest of grass or legume seed.

Maximum State Cost-Share

1. Assistance cannot exceed 160 acres per cooperator for all farms owned by that cooperator. If the land changes ownership, the new owner would be eligible to receive cost-share for the practice provided the land qualifies and the new owner has not previously met the cost-share maximum for the practice. It is the board's responsibility to see that the commission's intent that no more than 160 acres of DSP-02 is demonstrated per cooperator.
2. Assistance is not to exceed 75% of the state average cost or as directed by the Commission.
3. Utilize the Practice Limits Detail report in MoSWIMS to ensure compliance with applicable maximums.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of "MAP" in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to "installed" prior to creating the Mapping Tool report.

- c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
- d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
- e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage seeded.

Extent Installed

Acreage seeded.

Maintenance Life

5 years.

DSP 3.1 Grazing System Water Development

Purpose

1. Improve or maintain desired species composition and vigor of plant community.
2. Improve or maintain surface and/or subsurface water quality and quantity.
3. Improve or maintain riparian and watershed function.
4. Reduce accelerated soil erosion and maintain or improve soil condition.

Applicability

Applies to pastureland where permanent vegetative cover is established and can be enhanced through the use of a planned grazing system. The system operator must follow an approved grazing system plan. The system operator must attend an approved grazing school provided by University of Missouri, in conjunction with NRCS, prior to the district's submittal of a contract for review.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Critical Area Planting (342), Pond (378), Fence (382), livestock exclusion under Access Control (472), Prescribed Grazing (528), and Water Well (642) contained in the Field Office Technical Guide.

Policies

1. Cooperators must have an approved grazing plan prior to contract board approval.
 - a. A system may be approved for land where livestock do not currently graze; however, the district must verify that the system has livestock within the first year after meeting the Prescribed Grazing (528) standard and specifications.
 - b. After a grazing plan is developed, grazing practices may be installed independently of one another to work towards its implementation.
 - 1) Cost-share payments will be authorized as each practice is completed, according to NRCS standards and specifications within the grazing plan.
 - c. The entire grazing system must meet the standard and specifications for Prescribed Grazing (528) within three years after payment of the first contract or the entire amount of cost-share received must be repaid. The district should give funding priority to cooperators working toward the Prescribed Grazing (528) standard and specifications.
 - d. The size and number of paddocks will be determined by the grazing system plan, which must be designed for appropriate grazing height and rest periods as listed in the NRCS "Grazing Management Guidelines." The planner and district should encourage the cooperator to develop an effective system that meets the programs and cooperator's objectives and enables the cooperator to stay in compliance. There is no time limit for adding to existing systems.

2. **Wells**
 - a. It is not required that wells constructed under this practice be utilized solely for livestock watering.
 - b. All new wells must be registered according to state requirements.
3. **Cost-share is authorized for:**
 - a. Water source development (well, pond, and/or connection to a public water supply) for a planned grazing system.
 - b. The least cost alternative, based on the size and type of water source needed. Consideration must be given to existing water sources. If a water source exists, documentation explaining further development of the current source or need for another source of water must be entered in MoSWIMS.
 - c. Pond and well construction for all newly approved grazing systems, in addition to existing systems that meet NRCS standards and specifications for Prescribed Grazing, (528). Construction of a water source will only be allowed on an existing system if paddock numbers are increased or if acreage is added so that the existing water source is no longer adequate.
 - d. Connection to Public Water Supply System (PWSS). Includes water meter, backflow preventer valve, labor, and installation costs. Districts that cost-share on water meters must contact the Public Water Supply District (PWSD) to obtain cost-data for water meter installation for that specific PWSD. The district must enter the cost for the DSP 3.1 PWSS Water Meter and Setup component in MoSWIMS. The component cost will need to be updated prior to a contract being developed if the meter installation is in a different PWSD than the previous contract. Written documentation of the PWSD cost data must be scanned into MoSWIMS as supporting documentation prior to submitting the contract for contract review. The state average cost will continue to be used for pipeline, trenching and backfill, and boring costs for the service lines.
 - e. Pond reconstruction if deemed the least cost alternative.
 - f. Well reconstruction if deemed the least cost alternative.
 - g. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components.
 - h. One-time payment of \$75 for attending an approved grazing school, when the cooperator receives payment on any grazing system contract. The incentive payment will be included in the total cost-share dollars received and included in the practice per acre maximums.

Maximum State Cost-Share

1. Assistance is not to exceed 75% of the state average cost or as directed by the Commission.
2. Maximum of \$150 per acre. The acres to be considered for the maximum will be the acreage within the paddocks served by the water source.
3. Utilize the Practice Limits Detail report in MoSWIMS to ensure compliance with applicable maximums.

Map Requirements

1. A Mapping Tool link must be saved in the Notes section of the contract prior to contract approval. Practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.

2. All planned and existing items that pertain to the contract should be included on the map. This includes farm boundary, fence (both perimeter and interior), pipeline, watering facilities, seed application, lime application, power sources if installing electric fence, and water source(s) (wells, springs, streams, and/or ponds).
 - a. All existing water sources must be labeled as adequate or inadequate
3. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. In addition to the above installed and existing items, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - b. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - c. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - d. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy. If a public water supply and water meter is developed as a water source, a District Specialist must certify and sign the contract.

Acres Served

Acreage established in permanent vegetative cover within the paddocks where water is delivered from the constructed water source that did not previously contain an adequate water source. Heavily forested acreage and cropland are not eligible.

Extent Installed

Acreage established in permanent vegetative cover within the paddocks where water is delivered from the constructed water source that did not previously contain an adequate water source. Heavily forested acreage and cropland are not eligible.

Maintenance Life

10 years.

DSP 3.2 Grazing System Water Distribution

Purpose

1. Improve or maintain desired species composition and vigor of plant community.
2. Improve or maintain surface and/or subsurface water quality and quantity.
3. Improve or maintain riparian and watershed function.
4. Reduce accelerated soil erosion and maintain or improve soil condition.

Applicability

Applies to pastureland where permanent vegetative cover is established and can be enhanced through the use of a planned grazing system. The system operator must follow an approved grazing system plan. The system operator must attend an approved grazing school provided by University of Missouri, in conjunction with NRCS, prior to the district's submittal of a contract for review.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Livestock Pipeline (516), Prescribed Grazing (528), Stream Crossing (578) and Watering Facility (614) contained in the Field Office Technical Guide.

Policies

1. Cooperators must have an approved grazing plan prior to contract board approval.
 - a. A system may be approved for land where livestock do not currently graze; however, the district must verify that the system has livestock within the first year after meeting the Prescribed Grazing (528) standard and specifications.
 - b. After a grazing plan is developed, grazing practices may be installed independently of one another to work towards its implementation.
 - 1) Cost-share payments will be authorized as each practice is completed, according to NRCS standards and specifications within the grazing plan.
 - c. The entire grazing system must meet the standard and specifications for Prescribed Grazing (528) within three years after payment of the first contract or the entire amount of cost-share received must be repaid. The district should give funding priority to cooperators working toward the Prescribed Grazing (528) standard and specifications.
 - d. The size and number of paddocks will be determined by the grazing system plan, which must be designed for appropriate grazing height and rest periods as listed in the NRCS "Grazing Management Guidelines." The planner and district should encourage the cooperator to develop an effective system that meets the programs and cooperator's objectives and enables the cooperator to stay in compliance. There is no time limit for adding to existing systems.

2. All losing streams and streams that have a perennial pool or permanent flow that lie within paddocks served by a water source through a DSP 3.2 must be fenced to exclude livestock.
 - a. When properly designed and installed, the operator may limit access to the excluded area for “flash” grazing if specific, brief time periods are defined in the grazing plan.
 - b. Streams may be fenced out with the DSP 3.3 in any paddock within the grazing system.
3. The following applies to fencing and providing additional water to paddocks. Enter documentation into MoSWIMS as appropriate.
 - a. Water may be provided where a paddock is subdivided, or acreage is added to create a new paddock without a water source.
 - b. Additional livestock watering facilities may not be added to paddocks where a water source exists.
 - c. A livestock watering facility may be provided in a paddock where a fenced pond has never been utilized for watering and the cooperators has utilized water in an adjacent field.
 - d. If a pond has been used a water source and a watering facility is planned to be brought to the paddock that contains the pond, the pond must be fenced for those acres to be eligible for the DSP 3.2 contract. N472 is eligible to be used for fencing in these situations.
4. ***Cost-share is authorized for:***
 - a. Components needed to install pipeline and a water distribution point(s) for livestock watering from a water source.
 - b. All newly approved grazing systems and existing systems (systems that meet NRCS Standards and Specifications for Prescribed Grazing, Code 528).
 - 1) Watering facilities are allowed in an existing system if paddock numbers are increased, or acreage is added. An exception is if water is to be distributed to paddocks that previously did not contain a water source (such as systems that involve moving livestock through lanes/paddocks to a central water source). Justification must be entered into MoSWIMS.
 - 2) One watering facility may be installed per paddock.
 - c. One-time payment of \$75 for attending an approved grazing school, when the cooperator receives payment on any grazing system contract. The incentive payment will be included in the total cost-share dollars received and included in the practice per acre maximums.
5. ***Cost-share is not authorized for:***
 - a. Pipeline and/or components that serve lots, buildings, or areas outside of the grazing system.
 - c. Watering facilities to be enhanced or added to paddocks that currently contain an adequate watering facility. An exception would be if a pond/spring cannot provide water for the duration of the grazing period designated in the grazing plan. Justification must be entered in MoSWIMS.

Maximum State Cost-Share

1. Assistance is not to exceed 75% of the state average cost or as directed by the Commission.
2. Maximum of \$180 per acre. The acres to be considered for the maximum will be the acreage within the paddocks served by the water distribution system.
3. Utilize the Practice Limits Detail report in MoSWIMS to ensure compliance with applicable maximums.

Map Requirements

1. A Mapping Tool link must be saved in the Notes section of the contract prior to contract approval. Practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. All planned and existing items that pertain to the contract should be included on the map. This includes farm boundary, fence (both perimeter and interior), pipeline, watering facilities, seed application, lime application, power sources if installing electric fence, and water source(s) (wells, springs, streams, and/or ponds).
 - a. All existing water sources must be labeled as adequate or inadequate
3. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. In addition to the above installed and existing items, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - b. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - c. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - d. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage established in permanent vegetative cover within the paddocks where water is delivered via the constructed pipeline that did not previously contain an adequate water source. Heavily forested acreage and cropland are not eligible.

Extent Installed

Acreage established in permanent vegetative cover within the paddocks where water is delivered via the constructed pipeline that did not previously contain an adequate water source. Heavily forested acreage and cropland are not eligible.

Maintenance Life

10 years.

DSP 3.3 Grazing System Fence

Purpose

1. Improve or maintain desired species composition and vigor of plant community.
2. Improve or maintain surface and/or subsurface water quality and quantity.
3. Improve or maintain riparian and watershed function.
4. Reduce accelerated soil erosion and maintain or improve soil condition.

Applicability

Applies to pastureland where permanent vegetative cover is established, and forage management can be enhanced through the use of a new planned grazing system or intensification of an existing system. The practice is not intended to be used to replace or maintain existing fence. The system operator must follow an approved grazing system plan. The system operator must attend an approved grazing school provided by University of Missouri, in conjunction with NRCS, prior to the district's submittal of a contract for review.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Fence (382) and Prescribed Grazing (528) contained in the Field Office Technical Guide.

Policies

1. Cooperators must have an approved grazing plan prior to contract board approval.
 - a. A system may be approved for land where livestock do not currently graze; however, the district must verify that the system has livestock within the first year after meeting the Prescribed Grazing (528) standard and specifications.
 - b. After a grazing plan is developed, grazing practices may be installed independently of one another to work towards its implementation.
 - 1) Cost-share payments will be authorized as each practice is completed, according to NRCS standards and specifications within the grazing plan.
 - c. The entire grazing system must meet the standard and specifications for Prescribed Grazing (528) within three years after payment of the first contract or the entire amount of cost-share received must be repaid. The district should give funding priority to cooperators working toward the Prescribed Grazing (528) standard and specifications.
 - d. The size and number of paddocks will be determined by the grazing system plan, which must be designed for appropriate grazing height and rest periods as listed in the NRCS "Grazing Management Guidelines." The planner and district should encourage the cooperator to develop an effective system that meets the programs and cooperator's objectives and enables the cooperator to stay in compliance. There is no time limit for adding to existing systems.
2. All losing streams and streams that have a perennial pool or permanent flow that lie within paddocks served by a water source through a DSP 3.2 must be fenced to exclude livestock.

- a. When properly designed and installed, the operator may limit access to the excluded area for “flash” grazing if specific, brief time periods are defined in the grazing plan.
 - b. Streams may be fenced out with the DSP 3.3 in any paddock within the grazing system.
3. The following applies to fencing and providing additional water to paddocks. Enter documentation into MoSWIMS as appropriate.
 - a. Water may be provided where a paddock is subdivided, or acreage is added to create a new paddock without a water source.
 - b. Additional livestock watering facilities may not be added to paddocks where a water source exists.
 - c. A livestock watering facility may be provided in a paddock where a fenced pond has never been utilized for watering and the cooperators has utilized water in an adjacent field.
 - d. If a pond has been used a water source and a watering facility is planned to be brought to the paddock that contains that pond, the pond must be fenced.
4. ***Cost-share is authorized for:***
 - a. Deterrent fence to create or intensify a grazing system where livestock graze on both sides of the installed fence in accordance with the grazing plan.
 - 1) Construction of fence on an existing system if paddock numbers are increased or acreage is added.
 - 2) Cost-share on the least cost wire component. If the board of supervisors determines that fence other than high tensile electric is the minimum necessary for system, then cost-share can be provided to install other types of deterrent fence. The board’s justification must be properly documented in MoSWIMS as a General note type.
 - 3) The number of strands of wire allowed must be appropriate for the livestock species in the grazing system. Additional strands may be added at a later date if the species changes or for allowance of co-grazing. Fence must meet Standards and Specifications for deterrent of species as listed in the NRCS *Wire Height and Spacing* table.

Wire Height & Spacing

Fence Type	Livestock Type	Purpose	Min Number of Wires	Height of Top Wire	Suggested Wire Spacing
Barbed Wire (12.5 gauge standard; 12.5 gauge, 2 strand, twisted, barbles; or 15.5 gauge high tensile)	Cattle	Containment	4	48”	12,12,12,12
		Deterrent	4	48”	12,12,12,12
	Sheep/Goats	Containment	6	48”	6,6,6,8,10,12
		Deterrent	5	36”	6,6,6,8,10
	Horses	Containment	4	48”	12,12,12,12
		Deterrent	4	48”	12,12,12,12

Fence Type	Livestock Type	Purpose	Min Number of Wires	Height of Top Wire	Suggested Wire Spacing
Woven wire (Conventional -- top & bottom strands 12.5 gauge with 14.5 wire for intermediate strands with verticals every 4 – 12”) (High tensile - all 12.5 gauge high tensile wire with verticals every 6 – 24”)	Cattle	Containment	39” woven + 1 barb or HTE	48”	4 (woven), 5
			32” woven + 2 barbs or HTE	48”	4 (woven), 6, 6
	Sheep/Goats	Containment	39” woven + 1 barb or HTE	48”	2 (woven), 7
			36” woven + 2 barbs or HTE	48”	2 (woven), 2, 8
			32” woven + 2 barbs or HTE	48”	2 (woven), 6, 8
		Deterrent	36” woven	36”	0-2”
			32” woven + 1 barb or HTE	36”	0-2”(woven), 4
	Horses	Containment	39” woven + 1 barb or HTE	48”	4 (woven), 5
		Deterrent	32” woven + 1 barb or HTE	42”	4 (woven), 6
Permanent Electric (12.5 gauge high tensile, 12.5 gauge vinyl coated, or 16 gauge multi-strand braided cable)	Cattle	Containment	2	36-48”	18-24”, 18-24”
		Deterrent	1	26-36”	26-36”
	Sheep/Goats	Containment	5	38-40”	6-8,6-8,8,8,8,8-10
		Deterrent	3	30-32”	8-10, 10, 10-12
	Horses	Containment	3	48”	24,12,12
		Deterrent	2	40-44”	24,16-18

- b. One-time payment of \$75 for attending an approved grazing school, when the cooperator receives payment on any grazing system contract. The incentive payment will be included in the total cost-share dollars received and included in the practice per acre maximums.
- 5. ***Cost-share is not authorized for:***
 - a. Property line/perimeter fence.
 - b. Fence that cannot be grazed on both sides. The only exception is fence along a stream within a paddock.
 - c. Fence to create paddocks within dense woodlands.
 - d. Fence along roads/lanes utilized to access a residence.
 - e. Fence along crop fields where the primary grain crop is mechanically harvested.
 - f. Fence to exclude a pond. Utilize the N472 Use Exclusion practice to exclude an existing pond.
 - g. Replacement of existing fence which is being used as a component of a current forage management plan.

Maximum State Cost-Share

- 1. Assistance is not to exceed 75% of the state average cost or as directed by the Commission.
- 2. Maximum of \$100 per acre. The acres to be considered for the maximum will be the acreage of paddocks where new fence is installed.
- 3. Utilize the Practice Limits Detail report in MoSWIMS to ensure compliance with applicable maximums.

Map Requirements

- 1. A Mapping Tool link must be saved in the Notes section of the contract prior to contract approval. Practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
- 2. All planned and existing items that pertain to the contract should be included on the map. This includes farm boundary, fence (both perimeter and interior), pipeline, watering facilities, seed application, lime application, power sources if installing electric fence, and water source(s) (wells, springs, streams, and/or ponds).
 - a. All existing water sources must be labeled as adequate or inadequate
- 3. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. In addition to the above installed and existing items, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - b. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - c. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - d. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage established in permanent vegetative cover within the paddocks where fence is installed. Heavily forested acreage and cropland are not eligible.

Extent Installed

Acreage established in permanent vegetative cover within the paddocks where fence is installed. Heavily forested acreage and cropland are not eligible.

Maintenance Life

10 years.

DSP 3.4 Grazing System Lime

Purpose

1. Improve or maintain desired species composition and vigor of plant community.
2. Improve or maintain surface and/or subsurface water quality and quantity.
3. Improve or maintain riparian and watershed function.
4. Reduce accelerated soil erosion and maintain or improve soil condition.

Applicability

Applies to pastureland where permanent vegetative cover is established and can be enhanced through the use of a planned grazing system. The system operator must follow an approved grazing system plan. The system operator must attend an approved grazing school provided by University of Missouri, in conjunction with NRCS, prior to the district's submittal of a contract for review.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Prescribed Grazing (528) contained in the Field Office Technical Guide.

Policies

1. Cooperators must have an approved grazing plan prior to contract board approval.
2. Lime applications shall be based on soil test recommendations to achieve minimum forage Cover improvement specified by NRCS planning criteria.
3. ***Cost-share is authorized for:***
 - a. Lime application on existing systems that meet NRCS standard and specifications for Prescribed Grazing (528).
 - b. One-time application of lime in accordance with minimum cover improvement needed, as determined by a soil test.
 - 1) If determination is made that requires application of greater than 1,500 lbs. of ENM per acre, the cooperator is required to apply a minimum of 1,500 lbs. of ENM per acre. Cost-share may be provided for more than 1,500 lbs. of ENM, not to exceed the maximum of \$75 per acre.
 - 2) If lime is applied in split application when large amounts of ENM are required, the contract must remain unpaid until all lime is applied.
 - c. One-time payment of \$75 for attending an approved grazing school, when the cooperator receives payment on any grazing system contract. The incentive payment will be included in the total cost-share dollars received and included in the practice per acre maximums.
4. ***Cost-share is not authorized for:***
 - a. Fertilizer.
 - b. Lime, if N590 Nutrient Management was previously completed.

Maximum State Cost-Share

1. Assistance is not to exceed 75% of the state average cost or as directed by the Commission.
2. Maximum of \$75 per acre for a one-time application of limestone and in accordance with the soil test recommendations for a planned grazing system.
3. Utilize the Practice Limits Detail report in MoSWIMS to ensure compliance with applicable maximums.

Map Requirements

1. A Mapping Tool link must be saved in the Notes section of the contract prior to contract approval. Practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. All planned and existing items that pertain to the contract should be included on the map. This includes farm boundary, fence (both perimeter and interior), pipeline, watering facilities, seed application, lime application, power sources if installing electric fence, and water source(s) (wells, springs, streams, and/or ponds).
 - a. All existing water sources must be labeled as adequate or inadequate
3. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. In addition to the above installed and existing items, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - b. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - c. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - d. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff have the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage established in permanent vegetative cover that is treated with lime. Heavily forested acreage and cropland are not eligible.

Extent Installed

Acreage established in permanent vegetative cover that is treated with lime. Heavily forested acreage and cropland are not eligible.

Maintenance Life

5 years.

DSP 3.5 Grazing System Seed

Purpose

1. Improve or maintain desired species composition and vigor of plant community.
2. Improve or maintain surface and/or subsurface water quality and quantity.
3. Improve or maintain riparian and watershed function.
4. Reduce accelerated soil erosion and maintain or improve soil condition.

Applicability

Applies to pastureland where permanent vegetative cover is established and can be enhanced through the use of a planned grazing system. The system operator must follow an approved grazing system plan. The system operator must attend an approved grazing school provided by University of Missouri, in conjunction with NRCS, prior to the district's submittal of a contract for review.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Forage and Biomass Planting (512), and Prescribed Grazing (528) contained in the Field Office Technical Guide.

Policies

1. ***Cost-share is authorized for:***
 - a. Interseed Legumes. Permanent vegetative cover based on the Interseed Legumes component.
 - b. Reseeding, under the conditions listed in Section V, subsection F.
 - c. One-time payment of \$75 for attending an approved grazing school, when the cooperator receives payment on any grazing system contract. The incentive payment will be included in the total cost-share dollars received and included in the practice per acre maximums.
2. ***Cost-share is not authorized for:***
 - a. Fertilizer. Fertilizer must be applied according to soil test requirements.
 - b. Land established in permanent vegetation that is under a maintenance agreement for a seeding practice on the same acres.

Maximum State Cost-Share

1. Assistance not to exceed 75% of the state average cost or as directed by the Commission.
2. Maximum of \$40 per acre for a one-time interseeding of legumes for a grazing system.
3. Utilize the Practice Limits Detail report in MoSWIMS to ensure compliance with applicable maximums.

Map Requirements

1. A Mapping Tool link must be saved in the Notes section of the contract prior to contract approval. Practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. All planned and existing items that pertain to the contract should be included on the map. This includes farm boundary, fence (both perimeter and interior), pipeline, watering facilities, seed application, lime application, power sources if installing electric fence, and water source(s) (wells, springs, streams, and/or ponds).
 - a. All existing water sources must be labeled as adequate or inadequate
3. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. In addition to the above installed and existing items, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - b. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - c. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - d. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage established in permanent vegetative cover that is interseeded with legumes. Heavily forested acreage and cropland are not eligible.

Extent Installed

Acreage established in permanent vegetative cover that is interseeded with legumes. Heavily forested acreage and cropland are not eligible.

Maintenance Life

5 years.

DSP 3.6 Native Warm Season Forage

Purpose

1. Provide or increase forage supply during periods when cool season grasses are not productive.
2. Reduce soil erosion
3. Improve water quality
4. Improve soil health
5. Increase drought resiliency for pastureland in a grazing system.

Applicability

Applies to pastureland where permanent vegetative cover is established and can be enhanced through the use of a planned grazing system with Native Warm Season Forage (NWSF). The system operator must follow an approved grazing system plan. The system operator must attend an approved grazing school provided by University of Missouri, in conjunction with NRCS, prior to the district's submittal of a contract for review. When selecting sites land type and slope susceptible to erosion must be taken into consideration to not induce soil loss during the conversion and establishment period. If excessive amount of erosion is expected alternative practices should be considered.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Pasture and Hay Planting (512), and Prescribed Grazing (528) contained in the Field Office Technical Guide.

Cooperators should generally follow the site selection and management practices as outlined in University of Missouri publication M169 "A Guide to the Common Forages and Weeds of Pastures" <https://extension.missouri.edu/publications/m169>

Policies

1. Only 20% of open grazable acres per grazing system are eligible for conversion into NWSF with this practice. Any grazable acres already established in NWSF for the grazing system need to be included in the 20% when determining eligibility.
2. Planned use of the newly established stand should be avoided during the establishment year.
3. Residual stand heights must be maintained at a minimum of 6" to 8" of height during the maintenance life of the practice.
4. Care should be used to verify that only labeled pesticides are used on these plantings.
5. Technical staff are required to make annual visits to the site in 3 of the first 5 years of establishment to verify the practice is being maintained.
6. Harvesting of seed is not allowed during the maintenance life of the practice.
7. Haying shall be limited to no more than once every three years.
8. Farm must currently have a grazing system in place that meets the NRCS 528 specification to qualify for this practice.

9. Only the use of Native Warm Season Forage is eligible for this practice.
 10. Contract is eligible for payment after seeding has been completed.
 11. Conversion of the qualifying site must not have begun before the contract is board approved.
 12. Preparation of a seedbed may not consist of plowing, disking, or conventional working of ground. Establishment shall be only by standard no-till practices or by broadcasting seed during the winter dormant period.
2. ***Cost-share is authorized for:***
- a. Native Warm Season Grass Seed. Permanent vegetative cover based on the Native Warm Season Grass Pasture Seeding component.
 - b. Lime. Assistance is limited to the minimum requirements to establish adequate cover to control erosion. Limestone shall be applied in accordance with minimum needs based on establishment recommendations, as determined by a soil test. For those test results that have an effective neutralizing material (ENM) requirement of less than 600 pounds per acre, the cooperator has the option to apply the requirement.
 - c. Fertilizer. Nutrient requirements shall be based on the minimum requirements for establishment of the selected Native Warm Season Grass/forage. Fertilizer application according to a soil test may be waived if the individual nutrient requirement is less than 25 pounds per acre and the total application amount is less than 50 pounds per acre.
 - d. Reseeding, under the conditions listed in Section V, subsection F.
 - e. One-time payment of \$75 for attending an approved grazing school, when the cooperator receives payment on any grazing system contract. The incentive payment will be included in the total cost-share dollars received and included in the practice per acre maximums.
3. ***Cost-share is not authorized for:***
- a. Cool Season Grass establishment
 - b. Land established in permanent vegetation that is under a maintenance agreement for a seeding practice on the same acres.
 - c. Cropland
 - d. Conversion from woodland to pasture. Cost-share cannot be provided for dozing or cutting of trees. If an area has been cleared, the cooperator must establish permanent vegetative cover at their own expense.
 - e. Clearing of rocks or other obstructions from the area to be seeded.
 - f. Nutrient application based on crop production goals rather than establishment recommendations.

Maximum State Cost-Share

1. Assistance is limited to 75% of the state average cost or as directed by the Commission.
2. Utilize the Practice Limits Detail report in MoSWIMS to ensure compliance with applicable maximums.

Map Requirements

4. A Mapping Tool link must be saved in the Notes section of the contract prior to contract approval. Practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
5. All planned and existing items that pertain to the contract should be included on the map. This includes farm boundary, fence (both perimeter and interior), pipeline, watering facilities, seed application, lime application, power sources if installing electric fence, and water source(s) (wells, springs, streams, and/or ponds).
 - a. All existing water sources must be labeled as adequate or inadequate
6. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. In addition to the above installed and existing items, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - b. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - c. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - d. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage seeded to Native Warm Season Forage

Extent Installed

Acreage seeded to Native Warm Season Forage

Maintenance Life

10 years.

N430 Irrigation Water Conveyance

Purpose

Prevent erosion or loss of water quality or damage to the land, to make possible proper management of irrigation water, and reduce water conveyance losses.

Applicability

1. All pipelines shall be planned and located to serve as an integral part of an irrigation water distribution or conveyance system designed to facilitate the conservation use and management of the soil and water resources.
2. Water supplies, water quality, and rates of irrigation delivery for the area served by the pipeline shall be sufficient to make irrigation practical for the crops to be grown and the irrigation water application method to be used.
3. Areas must be suitable for irrigation with quantity of water available.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Irrigation Pipeline (430) contained in the Field Office Technical Guide.

Policies

1. ***Cost-share is authorized for:***
 - a. System components including underground pipeline, trenching and backfill, outlets, check valves, pressure-relief valves, air-release valves, joints and connections.

Maximum State Cost-Share

1. For fields that have been irrigated at least three of the last five years, assistance is not to exceed 75 % of the state average cost or as directed by the Commission.
2. Up to 50% cost-share for fields that have not been irrigated at least three of the last five years.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.

- c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
- d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
- e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage served by underground pipe.

Extent Installed

Acreage served by underground pipe.

Maintenance Life

10 years.

N442 *Irrigation System, Sprinkler*

Purpose

1. Efficiently and uniformly apply irrigation water to maintain adequate soil water for the desired level of plant growth and production without causing excessive water loss, erosion, or water quality impairment.
2. Applying chemicals, nutrients, and/or wastewater.

Applicability

The sprinkler method of water application is suited to most crops, irrigable lands, and climatic conditions where irrigated agriculture is feasible. Areas must be suitable for irrigation or sprinkler water application and have an adequate supply of suitable quality water or other liquid as appropriate, available for the intended purpose(s). Soils and topography shall be suitable for the irrigation of the planned crop.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Sprinkler System (442) and Irrigation Water Management (449) contained in the Field Office Technical Guide.

Policies

1. Cooperators must have an irrigation water management plan.
2. ***Cost-share is authorized for:***
 - a. Replacement of existing sprinklers or nozzles with those that increase system efficiency.
 - b. Fields that have been irrigated at least three of the last five years.

Maximum State Cost-Share

1. Assistance is not to exceed 75% of the state average cost or as directed by the Commission.
2. A limit of four pivots is allowed per cooperator and/or farm.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.

- c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
- d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
- e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage irrigated by the system.

Extent Installed

Acreage irrigated by the system.

Maintenance Life

10 years.

N443 Irrigation System, Surface and Subsurface

Purpose

1. Efficiently convey and distribute irrigation water to the surface point of application without causing excessive water loss, erosion, or water quality impairment.
2. Efficiently convey and distribute irrigation water to the subsurface point of application without causing excessive water loss or water quality impairment.
3. Apply chemicals and/or nutrients as part of an irrigation system (secondary benefit).

Applicability

Areas must be suitable for irrigation with water of suitable quality for the purpose intended. Water supplies must be sufficient in quantity and quality to make irrigation practical for the crops to be grown and the application methods to be used.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Irrigation System, Surface and Subsurface (443), and Irrigation Water Management (449).

Policies

1. Cooperators must have an irrigation water management plan.
2. ***Cost-share is authorized for:***
 - a. Surge valves and/or improved water distribution pads for furrow irrigation systems.
 - b. Establishment of a side-inlet flood irrigation system.
 - c. Only fields that have been irrigated at least three of the last five years.

Maximum State Cost-Share

1. Assistance is not to exceed 75% of the state average cost or as directed by the Commission.
2. Lay Flat Tubing is a one-time cost-share payment, not to exceed 75% cost-share up to \$3 per acre, and up to 80 acres.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.

- b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
- c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
- d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
- e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage irrigated by the system.

Extent Installed

Acreage irrigated by the system.

Maintenance Life

10 years.

N447 Irrigation System, Tailwater Recovery

Purpose

1. Conserve irrigation water supplies.
2. Improve water quality by collecting water from field surface.

Applicability

Applies to lands that are served by a properly designed and installed irrigation system where recoverable irrigation runoff and/or rainfall runoff flows can be anticipated under current or expected management practices.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Irrigation System, Tailwater Recovery (447) contained in the Field Office Technical Guide.

Policies

1. ***Cost-share is authorized for:***
 - a. Installation of pipeline and appurtenances, water control structures, earthen reservoirs or delivery system, pumps, and pump stations.
 - b. Fields that have been irrigated at least three of the last five years.

Maximum State Cost-Share

1. Assistance is not to exceed 75% of the state average cost or as directed by the Commission.
2. The maximum assistance that can be paid for the practice is \$25,000.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of "MAP" in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to "installed" prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:

- 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
- e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage irrigated by the system.

Extent Installed

Acreage irrigated by the system.

Maintenance Life

10 years.

N554 Drainage Water Management

Purpose

1. Reduce nutrient, pathogen, and/or pesticide loading from drainage systems into downstream receiving waters.
2. Reduce wind erosion.

Applicability

Practice applies:

1. To farmlands where drainage is required for increased utilization of nutrients applied.
2. Where soil contains enough depth and permeability to allow installation of an effective and economically feasible system.
3. Where installation and operation of a water control structure will not impact adjacent fields or drainage systems.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Drainage Water Management (554), Structure for Water Control (587) and Subsurface Drain (606) contained in the Field Office Technical Guide.

Policies

1. The cooperator must be able to show crop history for three of the last five years.
2. The cooperator must keep records to verify adherence to a nutrient management plan, pest management plan, and water management plan for the duration of the maintenance life of the practice.
3. The effect of drainage systems on wetlands should be evaluated and documented by the USDA Wetland Conservation Certification form "AD-1026."
4. ***Cost-share is authorized for:***
 - a. The cost of main and lateral line materials; installation of main and lateral lines; and pipes and appurtenances. Assistance should not exceed 75% of \$650 per acre.
 - b. In addition, assistance is allowed on Water Control Structures and their installment at 75% of county average cost.
 - c. Cost-share is also authorized at 75% for piping, animal guards and trenching/backfill as separate components. These should **ONLY** be used for components that are needed to run pipe from the water control structure to the outlet point.
5. ***Cost-share is not authorized for:***
 - a. Land leveling or reshaping of the surface of land.
 - b. Costs incurred to develop or implement an irrigation water management plan.
 - c. Costs incurred to develop or implement a nutrient management plan. The cooperator can receive incentives through the N590 Nutrient Management practice.
 - d. Costs incurred to develop or implement a pest management plan. The cooperator can receive incentives through the N595 Pest Management practice.

Maximum State Cost-Share

Assistance is, not to exceed 75% of the state average cost or as directed by the Commission.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage managed by the water control structure.

Extent Installed

Acres managed by the water control structure.

Maintenance Life

10 years.

N587 Structure for Water Control

Purpose

Practice may be applied as a management component of a water management system to control the stage, discharge, distribution, delivery or direction of water flow. Decrease nutrient and chemical loading to downstream surface waters through proper retention of water on agricultural lands.

Applicability

Applies wherever a permanent structure is needed as an integral part of a water control system to serve one or more of the following functions:

1. Convey water from one elevation to a lower elevation within, to, or from a water conveyance system such as a ditch, channel, canal or pipeline designed to operate under open channel conditions (typical structures: drops, chutes, turnouts, surface water inlets, head gates, pump boxes, and stilling basins).
2. Control the elevation of water in drainage or irrigation ditches (typical structures: checks, flashboard risers, and check dams).
3. Control the division or measurement of irrigation water (typical structures: division boxes and water measurement devices).

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Structure for Water Control (587) contained in the Field Office Technical Guide.

Policies

1. ***Cost-share is authorized for:***
 - a. Pipe materials, weir boxes added to existing grade stabilization structures, and permanent pads.
2. ***Cost-share is not authorized for:***
 - a. Head cut control.
 - b. Grade stabilization.

Maximum State Cost-Share

Assistance is not to exceed 75% of the state average cost or as directed by the Commission.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.

2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage draining to the water control structure.

Extent Installed

Acreage draining to the water control structure.

Maintenance Life

10 years.

N312 Beef and Small Ruminant Waste Management

Purpose

Manage waste from agricultural production in a manner that prevents or minimizes degradation of soil and water resources. Such systems are planned to preclude discharge of pollutants to surface or ground water and to recycle waste through correct soil application to agricultural land.

Applicability

Practice applies on farms where:

1. Wastes are generated by agricultural production.
2. Soil, water and plant resources are adequate to properly manage the waste.
3. A denuded feedlot or feeding area is currently in use, with an excess amount of manure and waste.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Waste Storage Facility (313), Critical Area Planting (342), Roofs and Covers (367), Nutrient Management (590), and Heavy Use Area Protection (561) contained in the Field Office Technical Guide.

Policies

1. The intent of this practice is to store animal waste. Therefore, a signed “N312 Operation and Maintenance Statement” (which can be found in the Appendix) must be completed prior to the board’s approval of the contract. This document must be attached prior to submitting contract payment. Only contracts for lagoons are exempt from the form requirement.
2. All nutrients applied must be in accordance with the Nutrient Management (590) standard. A Comprehensive Nutrient Management Plan (CNMP) must be completed and signed by the producer prior to developing a contract for a N312 practice.
3. Design plans must be scanned into MoSWIMS as a document type of “Design Plans” prior to submission for contract approval.
4. NRCS computation sheet used for sizing must be attached as supporting document prior to contract submission.
5. CNMP design cannot be greater than current system numbers at time of application and must match animal units used for barn sizing. Extents beyond the minimum requirements will be at landowner expense.
6. The contract submitted must address all livestock present in the system.
7. If N312 practice is placed on acres currently under a maintenance agreement for a grazing system or any other practice a prorated repayment will be required for acres and components no longer meeting practice policy.
8. If existing feeding area is not reflected in currently available imagery, pictures must be attached that clearly reflect current conditions when submitting for contract approval.
9. If planned N312 structure cannot be placed in the current feeding location, the existing feeding area must be converted to permanent vegetation managed through grazing or haying to ensure the area will not continue to be an animal waste resource concern.
10. Planning and sizing of the winter-feeding facilities for cattle will be based on the following information. For small ruminants utilize the NRCS comp sheet.

Manure Weights/Volumes

Manure weights and volumes to be boundedⁱ by Part 651 Agricultural Waste Management Field Handbook Subpart D-Agricultural Waste Characteristics

Figure 651D-9b: Beef waste characterization-as excreted by cow and growing calf in **units per day per 1,000 lb. animal unit**

Components	Units	Beef cow	Growing calf
Weight	lb/d/1000 lb AU	104	77
Volume	ft ³ /d/1000 lb AU	1.7*	1.2*

*Volumes include both manure and wasted hay

Manure Collection Rates

Fund up to 47% capture of daily manure production (this includes both manure and waste hay).

Space Needed Per Animal

For cows, growing calves, and bulls use 25 Sq Ft per 1000 lb. AU.

11. *Cost-share is authorized for:*

- a. 75% cost-share for:
 - 1) Whole barn excluding feed bunk areas and bedding areas of the barn. Floor space utilized to store dry waste generated in the feeding facility.
 - 2) Roof to cover dry storage area. The square footage of the roofing must equal the square footage of floor space, as specified above.
 - 3) Wall necessary to enclose dry storage area.
 - 4) Collection gutter or basin from feedlot to storage area.
- b. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components.
- c. An incentive of \$2,000 to help defray the cost of the development of a CNMP by an approved Technical Service Provider. There is no incentive payment for development of a CNMP without following through with an animal waste system practice. The incentive payment will be made when a cooperator receives a state cost-share payment for the completed animal waste management practice. The incentive payment will be included in the total cost-share dollars received and applied to the maximum for the practice.

12. *Cost-share is not authorized for:*

- a. Permitted animal waste systems, under the conditions listed in Section V, subsection K.
- b. Any components of the animal waste system above the minimum and necessary for the number of animals at the time of application.
- c. Isolated structures not considered a component of a waste management system.
- d. Bedding and bunk feeding areas, including roof.
- e. Mobile agitation, pumping, and related equipment.

Maximum State Cost-Share

1. Assistance is not to exceed 75% of the state average cost or as directed by the Commission.
2. Not to exceed a lifetime maximum of \$100,000 per cooperator.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
 - a. Existing feedlot or feeding area must be located on map using system acre feature labeled as existing with “feedlot” or “feeding area” listed in comments and location of planned structure must be reflected with the Animal Waste Structure Point.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.

- c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
- d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
- e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff have the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage of pre-existing feeding area that is closed

Extent Installed

Animal Units

Maintenance Life

10 years

N312 *Dairy Waste Management*

Purpose

Manage waste from agricultural production in a manner that prevents or minimizes degradation of soil and water resources. Such systems are planned to preclude discharge of pollutants to surface or ground water and to recycle waste through correct soil application to agricultural land.

Applicability

Practice applies on farms where:

1. Wastes are generated by agricultural production.
2. Soil, water, and plant resources are adequate to properly manage the waste.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Waste Storage Facility (313), Critical Area Planting (342), Waste Treatment Lagoon (359), Roofs and Covers (367), Pumping Plant (533), Nutrient Management (590) and Heavy Use Area Protection (561) contained in the Field Office Technical Guide.

Policies

1. The intent of this practice is to store animal waste. Therefore, a signed “N312 Operation and Maintenance Statement” (which can be found in the Appendix) must be completed prior to contract board approval. Contracts for lagoons only are exempt from the form requirement.
2. All nutrients applied must be in accordance to the Nutrient Management (590) standard. A Comprehensive Nutrient Management Plan (CNMP) must be completed and signed by the producer prior to developing a contract for a N312 practice.
3. Design plans must be scanned into MoSWIMS as a document type of “Design Plans” prior to submission for contract approval.
4. ***Cost-share is authorized for:***
 - a. 75% cost-share for:
 - 1) Flush tanks.
 - 2) Conveyance of waste to treatment area (such as reception tank, gutter or storage tank).
 - 3) Waste storage tank and/or pond.
 - 4) Solids separator.
 - 5) Solids storage area, including roof.
 - b. 50% cost-share for:
 - 1) Area of the floor utilized for collection of waste in feeding and travel areas.
 - 2) Roof and gutter covering travel areas. The square footage of the roofing must equal the square footage of floor space, as specified above.
 - c. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding component.

- d. An incentive of \$2,000 to help defray the cost of the development of a CNMP an approved Technical Service Provider. There is no incentive payment for development of a CNMP without following through with an animal waste system practice. The incentive payment will be made when a cooperator receives a state cost-share payment for the completed animal waste management practice. The incentive payment will be included in the total cost-share dollars received and applied to the maximum for the practice.
5. ***Cost-share is not authorized for:***
 - a. Permitted animal waste systems, under the conditions listed in Section V, subsection K.
 - b. Bedding and bunk feeding areas, including roof.
 - c. Any components of the animal waste system above the minimum and necessary for the number of animal units at the time of application.
 - d. Irrigation systems, spreading equipment, and other components required for field application.
 - e. Mobile agitation, pumping, and related equipment.

Maximum State Cost-Share

1. Assistance is not to exceed 75% of the state average cost or as directed by the Commission.
2. Not to exceed a lifetime maximum of \$100,000 per cooperator.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage is equal to zero.

Extent Installed

Existing Animal Units.

Maintenance Life

10 years.

N312 Poultry Waste Management

Purpose

Manage waste from agricultural production in a manner that prevents or minimizes degradation of soil and water resources. Such systems are planned to preclude discharge of pollutants to surface or ground water and to recycle waste through correct soil application to agricultural land.

Applicability

Practice applies on farms where:

1. Wastes are generated by agricultural production.
2. Soil, water, and plant resources are adequate to properly manage the waste.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Waste Storage Facility (313), Critical Area Planting (342), Roofs and Covers (367) and Nutrient Management (590) contained in the Field Office Technical Guide.

Policies

1. The intent of this practice is to store animal waste. Therefore, a signed “N312 Operation and Maintenance Statement” (which can be found in the Appendix) must be completed prior to the contract’s board approval. Only contracts for lagoons are exempt from the form requirement.
2. All nutrients applied must be in accordance to the Nutrient Management (590) standard. A Comprehensive Nutrient Management Plan (CNMP) must be completed and signed by the producer prior to developing a contract for a N312 practice.
3. Design plans must be scanned into MoSWIMS as a document type of “Design Plans” prior to submission for contract approval.
4. ***Cost-share is authorized for:***
 - a. 75% cost-share for:
 - 1) Floor space utilized to store dry waste.
 - 2) Roof to cover dry storage area. The square footage of the roofing must equal the square footage of floor space, as specified above.
 - 3) Wall necessary to enclose dry storage area.
 - 4) Loading ramp.
 - b. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components.
 - c. An incentive of \$2,000 to help defray the cost of the development of a CNMP by an approved Technical Service Provider. There is no incentive payment for development of a CNMP without following through with an animal waste system practice. The incentive payment will be made when a landowner receives a state cost-share payment for the completed animal waste management practice. The incentive payment will be included in the total cost-share dollars received and applied to the maximum for the practice.

5. ***Cost-share is not authorized for:***

- a. Permitted animal waste systems, under the conditions listed in Section V, subsection K.
- b. Any components of the animal waste system above the minimum and necessary for the number of animals at the time of application.
- c. Floor area utilized for anything other than dry waste storage, based on current animal units.
- d. Clean bedding storage (such as sawdust, wood chips, etc.).
- e. Waste facility or “high-rise” house for layers.
- f. Mobile agitation, pumping, and related equipment.
- g. Composter. Cost-share is authorized under N317 Composting Facility.

Maximum State Cost-Share

1. Assistance is not to exceed 75% of the state average cost or as directed by the Commission.
2. Not to exceed a lifetime maximum of \$100,000 per cooperator.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage is equal to zero.

Extent Installed

Animal Units.

Maintenance Life

10 years.

N312 Swine Waste Management

Purpose

Manage waste from agricultural production in a manner that prevents or minimizes degradation of soil and water resources. Such systems are planned to preclude discharge of pollutants to surface or ground water and to recycle waste through correct soil application to agricultural land.

Applicability

Practice applies on farms where:

1. Wastes are generated by agricultural production.
2. Soil, water, and plant resources are adequate to properly manage the waste.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Waste Storage Facility (313), Waste Treatment Lagoon (359), Critical Area Planting (342), Roofs and Covers (367), Pumping Plant (533), Nutrient Management (590) and Heavy Use Area Protection (561) contained in the Field Office Technical Guide.

Policies

1. The intent of this practice is to store animal waste. Therefore, a signed “N312 Operation and Maintenance Statement” must be completed prior to the contract’s board approval. Only contracts for lagoons are exempt from this requirement.
2. All nutrients applied must be in accordance to the Nutrient Management (590) standard. A Comprehensive Nutrient Management Plan (CNMP) must be completed and signed by the producer prior to developing a contract for an N312 practice.
3. Design plans must be scanned into MoSWIMS as a document type of “Design Plans” prior to submission for contract approval.
4. ***Cost-share is authorized for:***
 - a. 75% cost-share for:
 - 1) Flush tanks.
 - 2) Conveyance of waste to treatment area (such as reception tank, gutter, or storage tank).
 - 3) Solids separator.
 - 4) Solids separation basin.
 - 5) Solids storage area, including roof.
 - 6) Waste storage pond and/or lagoon.
 - 7) Pit storage and underground collection associated with farrowing, growing, gestation, feeding, finishing, or nursery buildings.
 - b. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components.
 - c. An incentive of \$2,000 to help defray the cost of the development of a CNMP by an approved Technical Service Provider. There is no incentive payment for development of

a CNMP without following through with an animal waste system practice. The incentive payment will be made when a cooperator receives a state cost-share payment for the completed animal waste management practice. The incentive payment will be included in the total cost-share dollars received and applied to the maximum for the practice.

5. ***Cost-share is not authorized for:***

- a. Permitted animal waste systems, under the conditions listed in Section V, subsection K.
- b. System elements utilized for anything other than treatment, storage, and collection of animal waste.
- c. Any components of the animal waste system above the minimum and necessary for the number of animal units at the time of application.
- d. Irrigation systems, spreading equipment, or field application components.
- e. Slatted floors.
- f. Mobile agitation, pumping, and related equipment.

Maximum State Cost-Share

1. Assistance is not to exceed 75% of the state average cost or as directed by the Commission.
2. Not to exceed a lifetime maximum of \$100,000 per cooperator.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage is equal to zero.

Extent Installed

Animal Units.

Maintenance Life

10 years.

N316 *Incinerator*

Purpose

To incinerate livestock and poultry carcasses as part of a waste management system and to decrease nonpoint source pollution of surface and groundwater resources.

Applicability

Practice applies where:

1. Animal carcass disposal must be addressed as part of a waste management system for the operation, only dead animals may be incinerated, any other type of waste is NOT allowed.
2. On-farm treatment and disposal is permitted by federal, state, and local laws.
3. A Comprehensive Nutrient Management Plan (CNMP) must be completed and signed by the producer prior to developing a contract for a N316 practice.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Animal Mortality Facility (316) contained in the Field Office Technical Guide.

Policies

1. Minimum capacity of the incinerator shall be based on the average daily weight of animal mortality and the expected death loss of the largest animals of the operation. Incinerators should not be designed for catastrophic death losses.
2. ***Cost-share is authorized for:***
 - a. Permitted animal waste systems, under the conditions listed in Section V, subsection K.
 - b. Assistance is authorized for the cost of the incinerator based on the capacity determined necessary.
 - c. An incentive of \$2,000 to help defray the cost of the development of a CNMP by an approved Technical Service Provider. There is no incentive payment for development of a CNMP without following through with an animal waste system practice. The incentive payment will be made when a cooperator receives a state cost-share payment for the completed animal waste management practice. The incentive payment will be included in the total cost-share dollars received and applied to the maximum for the practice.
3. ***Cost-share is not authorized for:***
 - a. Roof.
 - b. Fuel storage.
 - c. Fuel/electric hookup.
 - d. Payment in conjunction with an N317 Composting Facility.

Maximum State Cost-Share

1. Assistance is not to exceed 75% of the state average cost or as directed by the Commission.
2. Utilize the Practice Limits Detail report in MoSWIMS to ensure compliance with applicable maximums and policies.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage is equal to zero.

Extent Installed

Each.

Maintenance Life

10 years.

N317 Composting Facility

Purpose

1. To treat waste organic material biologically by producing a humus-like material that can be recycled as a soil amendment and fertilizer substitute or otherwise utilized in compliance with all laws, rules and regulations.
2. Waste organic material for composting may include livestock and poultry manure, dead animal carcasses, and food processing wastes where feed is processed as part of normal farming operations.
3. Reduce the pollution potential of agricultural wastes to surface and ground water.

Applicability

Practice applies where:

1. Organic waste material is generated by agricultural production or processing.
2. Composting facility is a component of a planned agricultural waste management system.
3. Composting is needed to manage the waste organic material properly.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Animal Mortality Facility (316), Roofs and Covers (367), Critical Area Planting (342) and Nutrient Management (590) contained in the Field Office Technical Guide.

Policies

1. All nutrients applied must be in accordance to the Nutrient Management (590) standard.
2. Design plans must be scanned into MoSWIMS as a document type “Design Plans” prior to submission for contract approval.
3. ***Cost-share is authorized for:***
 - a. Permitted animal waste systems, under the conditions listed in Section V, subsection K.
 - b. Grading/shaping necessary to divert surface runoff from outside areas around the compost facility.
 - c. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components.
 - d. An incentive of \$2,000 to help defray the cost of the development of a CNMP by an approved Technical Service Provider. There is no incentive payment for development of a CNMP without following through with an animal waste system practice. The incentive payment will be made when a cooperator receives a state cost-share payment for the completed animal waste management practice. The incentive payment will be included in the total cost-share dollars received and applied to the maximum for the practice.
4. ***Cost-share is not authorized for:***
 - a. Payment in conjunction with an N316 Incinerator.

Maximum State Cost-Share

1. Assistance is not to exceed 75% of the state average cost or as directed by the Commission.
2. Utilize the Practice Limits Detail report in MoSWIMS to ensure compliance with applicable maximums and policies.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage is equal to zero.

Extent Installed

Each.

Maintenance Life

10 years.

N590 Nutrient Management

Purpose

1. Demonstrate the environmental and economic advantages of following a nutrient management plan.
2. Provide operators an incentive to encourage the adoption of new management techniques and/or technologies for applying manure and fertilizer. The definition of operator for the purpose of this practice is any individual farming the land, that has incurred the expenses for the nutrients applied. The operator's name should also be listed on file with FSA as the operator of such land. The contract must contain the name of the legal owner.

Applicability

Applies to lands where plant nutrients (commercial fertilizers and/or manure) have been improperly applied and the cooperator is utilizing a new approach in the application of nutrients. **The land must be eroding at or below the tolerable soil loss level.**

Erosion Requirements

Practice is eligible for cost-share based sheet and rill erosion. Pre-installation erosion rates must be less than or equal to tolerable soil loss.

Sheet & Rill Erosion Checks: PRE-INSTALL < OR = T

Specifications

The completed practice must meet the NRCS Standards and Specifications for Nutrient Management (590) contained in the Field Office Technical Guide.

Policies

1. Contracts must be board approved between January 1 - April 15, prior to application of any nutrients. The Nutrient Management Plan must be developed prior to the application of nutrients. Contract payments can be issued after October 31 or after the crop is harvested, whichever date is later.
 - a. **Example 1:** If a contract for cropland is approved on April 1 the contract payment cannot be approved until November 1 of that year. If the nutrients have been applied and yield records for that growing season are complete the operator is eligible for contract payment. Proper documentation is required.
 - b. **Example 2:** If a contract for cropland is approved on April 1 and the crop is harvested on December 15, the cooperator would be eligible for payment after December 15 allowing crop nutrient withdrawals to be accounted for in the nutrient balances. Proper documentation is required.
2. All recommendations must be based on realistic yield goals. Realistic yield goals shall be based on the following criteria:
 - a. Actual yield data collected from the field for 5 or more years. Ignore highest and lowest years and calculate the mean of the remaining three. Add 10 percent to the mean yield to allow for potential to improve yield.
 - b. Crop yield estimates from county soil survey adjusted by soil-based crop productivity indices.

- c. County average yield data collected by the National Agricultural Statistics Service.
3. The complete nutrient management plan must be developed to cover the life of the soil test (four years) prior to the operator signing the initial cost-share contract. The soil test used to develop the plan must be less than 2 years old. The nutrient management plan must be developed based on soil test phosphorus levels, not phosphorus index. The plan must be updated to reflect alternate crops planted and to illustrate the actual withdrawals for the crop/hay/forage produced.
 4. Soil test analysis for nutrient status must be performed by a Missouri Soil Testing Association (MSTA) approved laboratory. A current list of approved laboratories may be found at <http://soilplantlab.missouri.edu/soil/mstacertified/htm>.
 5. The nutrient applications for each year must be within 10 pounds per acre of the nutrient plan recommendations for N, P, and K. Unutilized P and K is not factored into a nutrient management plan the first year. Yield goals and recommendations can be adjusted to meet economic situations of a cooperator; however, the plan must be adjusted accordingly in the planning for the next year and nutrient balances must be reflected accordingly.
 - a. **Example:** If a cooperator reviews the plan based on soil tests and is not comfortable applying the recommended 120-60-60 then yield goals can be adjusted to reduce the recommended N, P, and K to meet his/her economic situation.
All nutrients (N,P,K) should be reduced proportionately when establishing realistic reduced yield goals based upon the cooperator's economic situation (i.e., reduce the yield goal on a forage crop from 4 tons per acre to 2 tons per acre).
 6. Nutrient credits from all sources (hay feeding, previous legume crops, etc.) shall be included in the nutrient budget and shall be deducted from amounts of nutrient required.
 7. Nitrogen application rates for cool season grasses may be applied at 75% of soil test recommendations.
 8. Fertilizer application, according to the nutrient management plan, may be waived if the following criteria are met. Individual nutrient requirement is less than 25 pounds per acre *and* the total amount of the application less than 50 pounds per acre.
 9. Phosphorous and potassium may be applied for future planned crops. This includes all planned row crop, cool season grass and warm season grass rotations. The nutrient budget must indicate a proper balance of P and K at the end of the soil test cycle.
 10. If the soil test indicates a need of 600 or more pounds of ENM per acre, the lime must be applied in the first year to be eligible for payment. If more than 1,200 pounds of ENM per acre is required, the lime applications can be split between the 1st and 2nd year of the plan. If less than 600 pounds of ENM per acre is required, the cooperator may elect not to apply it. Fields with only rice grown will not have to apply lime according to soil test.
 11. A nutrient budget report shall be developed in Manure Management Planner or NRCS 590 IR and specify all sources, amount, timing, and method of application for all nutrients both commercial and manure or organic by-products required by the Nutrient Management Standard (590).
 12. May be used in conjunction with N595 Pest Management and with the seeding practices of DSL-01 Permanent Vegetative Cover Establishment, DSL-02 Permanent Vegetative Cover Improvement, DSP-02 Permanent Vegetative Cover Enhancement, or DSP 3.5 Grazing System Seed beginning one year after contract payment of the seeding practice.
 13. The nutrient management plan for a particular field must be followed in consecutive years.
 14. Items for Contract Payment:

- a. Copies of soil test reports from a MSTA-certified soil testing laboratory, including nutrient recommendations and where those recommendations originated, to be maintained in the district office.
 - b. Receipts (fertilizer, lime) indicating the quantity and blending analysis of the fertilizer purchased. The corresponding field numbers must be shown on the receipts, to be maintained in the district office.
 - c. Records showing harvest date, yield and any sources of nutrients that will credit or deduct from the nutrient balance (hay feeding, legume crop or cover crop) for the applicable season, to be maintained in the district office.
 - d. Copies of the Field Nutrient Balance report generated from Manure Management Planner (MMP) or NRCS 590 IR shall be scanned and attached to the contract payment. A copy shall be distributed to cooperators with the copy of the contract payment.
 - e. A completed dated, nutrient management plan that documents the safe and effective application of nutrients for crop/hay/forage production, to be maintained in the district office.
15. ***Cost-share is authorized for:***
- a. Incentive payments, following one complete growing season where the operator (including landowner-operators) can produce documentation that the nutrients were applied in accordance with the nutrient management plan and the crop nutrient withdrawals are based on the crop/forage yields.
16. ***Cost-share is not authorized for:***
- a. Reimbursement for soil testing as a stand-alone component.

Maximum State Cost-Share

- 1. Incentive Payment
 - a. Not to exceed \$20 per acre per year for new contracts approved after January 1, 2011.
 - b. Cooperators are eligible to receive a lifetime maximum of \$10,000 from the N590 Nutrient Management practice. District boards should consider limiting cooperators to participation for multiple years.
- 2. Utilize the Practice Limits Detail report in MoSWIMS to ensure compliance with applicable maximums.

Map Requirements

- 1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
- 2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.

- d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
- e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage treated by nutrient management plan.

Extent Installed

Acreage treated by nutrient management plan

Maintenance Life

This practice is completed upon contract payment therefore the contract will not have a maintenance life.

N595 *Pest Management*

Purpose

To minimize entry of chemical contaminants in ground and surface water by following a pest management plan. The pest management plan will assist the operator in determining whether, when, and how an application of pesticides (herbicide, fungicide, insecticide) should occur for the crop. The definition of operator for the purpose of this practice is any individual farming the land that incurred the farm operating expenditures. The cooperator's name should also be listed on file with FSA as the operator of such land. The contract must contain the name of the legal owner.

Applicability

Applies to cropland/hay land/pastureland where pesticides have been inappropriately managed.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet NRCS Standards and Specifications for the Integrated Pest Management (595) contained in the Field Office Technical Guide.

Policies

1. Contracts must be board approved between January 1- October 1, prior to application of any treatments. Contract payments can be issued after October 31.
2. Spraying of fence rows is not eligible for payment.
3. All acres of the field included in the pest management plan are eligible for incentive when spot treatments are applied on at least 75% of the field.
4. A pesticide application on the crop/forage must be planned in order to qualify for the Pest Management incentive. Biological controls are not considered pesticide treatments.
5. N590 Nutrient Management and N595 Pest Management can be utilized on the same fields in the same year.
6. ***Cropland – *A crop needs to be planted to participate in this incentive.***
 - a. As a minimum, crop scouting will require field visits and written reports by a trained individual (preferably a Certified Crop Advisor, CCA) during critical periods such as pre-plant, post-plant, mid-season, high risk pest infestation periods, and post-season. ALL crop fields receiving payment must be scouted a minimum of four times.
 - b. To be eligible for the pest management incentive, the pest management plan must indicate that a chemical application is planned for the crop or pasture. If proper scouting indicates that an application does not need to be made, the operator is still eligible for the incentive.
 - c. Incentive payments are not authorized when only mechanical or biological pest control practices are planned.
7. ***Grassland/Hay Land***
 - a. To be eligible for participation in the Pest Management incentive, the Cool Season and Warm Season Grass fields must meet either the Forage and Biomass Harvest

Management (511) or the Prescribed Grazing (528) specification in the Field Office Technical Guide.

- b. A pest (weeds, fungus, insects etc.) inventory from the previous crop should be available before the pest management plan is developed.
 - c. May be used in conjunction with a grazing system during the maintenance life of the practice.
 - d. A pest inventory must be done pre and post chemical application.
8. Items for Contract Payment:
- a. Receipts for the pesticide applied, to be maintained in the district office. The corresponding field numbers must be shown on the receipts.
 - b. Signed copies of the Pest Management Check sheet contained in the Appendix of the Cost-Share Handbook must be scanned and attached to the contract payment.
9. ***Cost-share is authorized for:***
- a. Incentive payments, following one complete growing season of an established pest management plan. This period begins with the board approval of the contract and continues through the growing season. For the purpose of cost-share, at a minimum the growing season will encompass the timeframe of April 15 – October 31.
Example: A contract must be approved by the board by October 1, and the contract payment cannot be approved prior to October 31 of the same calendar year.
10. ***Cost-share is not authorized for:***
- a. Utilization of any cost-share program to re-establish legumes in cool season or warm season grass fields receiving the pest management incentive until five years after receiving the incentive payment. The operator should be informed that he or she would incur the entire expense to reestablish legumes in their cool season or warm season grass stands prior to the fifth year of receiving the incentive payment.

Maximum State Cost-Share

- 1. Incentive Payments
 - a. Not to exceed \$10 per acre per year. The lifetime maximum a cooperator can receive from this practice is \$5,000.
 - b. The cooperator does not have to participate in consecutive years. District boards should consider limiting operators to participation for multiple years. The definition of cooperator for the purpose of this practice is any individual farming the land (listed as the operator in the FSA office) and incurring the expense if pesticides need to be applied.
- 2. Utilize the Practice Limits Detail report in MoSWIMS to ensure compliance with applicable maximums.

Map Requirements

- 1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
- 2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.

- b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
- c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
- d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
- e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage treated by the pest management plan.

Extent Installed

Acreage treated by the pest management plan.

Maintenance Life

This practice is completed upon contract payment therefore will not have a maintenance life.

C650 *Streambank Stabilization*

Purpose

1. Protect streambanks from accelerated erosion.
2. Provide adequate streambank vegetation.
3. Improve water quality.

Applicability

1. Applies to agricultural land along streams where significant streambank erosion problems exist.
2. Eligibility will be determined by the appropriate technical authority. NRCS is able to offer technical assistance. MDC is able to offer technical assistance within their priority watersheds. A private, Missouri licensed Professional Engineer (PE) with significant streambank stabilization experience may also be used for technical assistance.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet MDC Policies and Procedures for MDC 650 Streambank restoration if MDC staff is the technical authority; and NRCS Standards and Specifications for Fence (382), livestock exclusion under Access Control (472), Tree/Shrub Site Preparation (490), Streambank and Shoreline Protection (580), and Tree/Shrub Establishment (612), and Riparian Herbaceous Cover (390) contained in the Field Office Technical Guide. Please use the Pre-Screening Tool #1 or Pre-Screening Tool #2 found in the appendix.

Policies

1. The required buffer area will be protected from fire, haying and livestock throughout the life of the practice.
2. Stabilization structures will remain in place for the life of the practice. Cost-share for reconstruction will not be available.
3. A vegetated buffer area must be maintained for a minimum of 50 feet from the top of the streambank.
4. The C650 Streambank Stabilization Engineer/ Contractor Information sheet found in the cost-share handbook appendix should be made available to the landowner and engineer for clarification of responsibilities. This form should be signed and returned to the district.
5. ***Cost-share is authorized for:***
 - a. Components necessary for cedar tree revetments, rock riprap, and bioengineering materials.
 - b. Seedling or other plantings needed to stabilize the constructed area.
 - c. Exclusion fence.
 - d. Grading and shaping
 - e. Hourly engineering incentive if a private PE is used. Engineering incentive is \$3,000 for up to 29 hours, \$4,000 for 30-39 hours and \$5,000 for 40 or more hours. Engineering incentive component may not exceed \$5,000 per site.

6. ***Cost-share is not authorized for:***

- a. Any stream with substantial watershed or in-channel problems, such as channelization or excessive streambank erosion.
- b. Planting of trees for commercial production.
- c. Fence that does not serve the purpose of excluding livestock, such as property lines, rights-of-way, or farm road boundaries.
- d. Clearing of rocks or other obstructions from the areas to be treated.
- e. Labor, material, and equipment supplied at no charge by any agency or organization.

Maximum State Cost-Share

1. Assistance is not to exceed 75% of the state average cost or as directed by the Commission.
2. Not to exceed \$50,000 per landowner and/or farm annually.
3. Utilize the Practice Limits Detail Report in MoSWIMS to ensure compliance with applicable maximums.
4. If the cooperator hires an engineer to design and oversee a project, cost-share assistance can be provided for the engineering assistance not to exceed \$5,000. However, any amount paid for engineering will be included in the \$50,000 maximum.

Map Requirements

1. The engineering planning documents are required for contract approval.
2. All planned and existing items that pertain to the contract should be included on the map. This includes farm boundary, fence (both perimeter and interior), buffer area (shown by system acres polygon), pipeline, watering facilities, power sources if installing electric fence.
3. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
4. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. In addition to the above installed and existing items, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be visible
 - 3) Section, Township, Range or coordinates
 - b. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - c. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - d. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

MDC, NRCS, SWCD Engineer, or a private Missouri Licensed PE have the responsibility for determining the need for the practice, the design of the stabilization and certifying the completed construction meets the design. The practice design should be based on the minimum extents necessary for all features of the practice. Private Engineers are not to sign the contract, change orders or payments. Approval signatures on State Cost-Share documents shall be completed by

District Specialists with appropriate Ecological Science Job Approval Authority (ESJAA) for the non-engineering components on the contract to verify the practice meets NRCS standards and specifications within commission policy. The signature shall be done after receiving certification from the engineer on the stabilization structure. Upon final inspection of the practice, PEs shall provide to the SWCD certification documentation to be used for payment submittal. At a minimum this documentation shall include a certification on letterhead, sealed completed drawings, and detailed component quantities installed as part of the stabilization.

Acres Served

Acreage is equal to zero.

Extent Installed

Linear feet of stream treated.

Maintenance Life

10 years.

DSP-31 Sinkhole Improvement

Purpose

Prevent or reduce erosion and prevent or reduce pollution of the land or water from agricultural or silvicultural nonpoint sources.

Applicability

1. **Limited to Cape Girardeau, Perry, and Ste. Genevieve counties.**
2. Applies to specific problem areas on farms where runoff to sinkholes causes gully erosion and carries substantial amounts of sediment or runoff containing pesticides or nutrients, which constitute a significant pollution hazard.
3. According to the Geological Survey and Resource Assessment Division, the drainage modifications must not overwhelm the karst drainage system; and the use of the practice should be limited to sinkholes having chronic drainage problems that cannot be alleviated by other reasonable alternatives. Stormwater drains or drainage wells should be kept as shallow as possible. They should serve to enhance entry of storm water into the caves, conduits or other openings that the sinkholes would ordinarily drain into even if the drainage structures were not used. Drains or drainage wells should not penetrate bedrock any appreciable depth and should not be used to drain storm water into zones deeper than the shallow karst drainage system.

Erosion Requirements

Practice is eligible for cost-share based on gully erosion. Post-installation erosion rates must be less than pre-installation erosion rates.

Gully Erosion Checks: PRE-INSTALL > POST-INSTALL

Specifications

The completed practice must meet the NRCS Standards and Specifications for Critical Area Planting (342), Filter Strip (393), and Vertical Drain (630) contained in the Field Office Technical Guide.

Policies

1. ***Cost-share is authorized for:***
 - a. Crevice-type sinkholes compatible with the proposed structures.
 - b. Active gullies with an annual erosion rate of 10 tons or more.
 - c. Sinkhole structures part of an approved conservation plan that addresses the entire sinkhole area.
 - d. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components.
2. ***Cost-share is not authorized for:***
 - a. Sinkholes utilized as garbage dumps or to dispose of other wastes and contaminants.
 - b. Sites that receive runoff contaminated by animal waste from lots or buildings.
 - c. Vertical drains that would cause a change in water delivery, such as blocking a sinkhole and delivering runoff to a second sinkhole.

Maximum State Cost-Share

Assistance is not to exceed 75% of the state average cost or as directed by the Commission.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Drainage Acres.

Extent Installed

Cubic yards of earthwork.

Maintenance Life

10 years.

BDSP-31 Buffer Sinkhole Improvement

Purpose

Provide an incentive to be used for continuing protection of sinkholes that have been stabilized using the DSP-31 Sinkhole Improvement practice.

Applicability

1. **Limited to Cape Girardeau, Perry and Ste. Genevieve counties.**
2. Applies to specific problem areas where a buffer needs to be maintained to prevent serious impacts to sinkholes and groundwater quality. This practice will ensure that threatened and endangered species and karst cave systems are not adversely impacted by agricultural activity.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Filter Strip (393) contained in the Field Office Technical Guide.

Policies

1. A one-time incentive per sinkhole to re-establish or maintain the minimum 25-foot buffer surrounding the DSP-31 Sinkhole Improvement practice not under a current maintenance agreement.
2. The original contract number needs to be included in the “Original Contract” field in MoSWIMS.

Maximum State Cost-Share

Incentive cannot exceed \$300 per sinkhole.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.

- d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
- e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage is equal to zero.

Extent Installed

Each.

Maintenance Life

10 years.

N351 Well Decommissioning

Purpose

1. Prevent entry of vermin, debris, fertilizer, pesticides or other foreign substances into the well or well bore hole.
2. Prevent entry of contaminated surface water to ground water.

Applicability

1. Applies to any drilled, dug, driven, bored, or otherwise constructed vertical water well subject to agricultural nonpoint source contamination.
2. Not applicable to wells that were used for waste disposal, or if evidence of contamination still exists. Sampling of the fluids in the well may be required.
3. Not applicable to wells that contain contaminant levels that exceed state or federal water quality standards.
4. Treatment of contamination source(s) is required before a well is decommissioned.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Water Well Decommissioning (351) contained in the Field Office Technical Guide.

Policies

1. The cooperator must record the decommissioned well with the Department of Natural Resources Geological Survey Program, Wellhead Protection Section, by submitting the "Water Well/Heat Pump Plugging Registration Report." Contact the Wellhead Protection Section for more information concerning registration procedures.
2. ***Cost-share is authorized for:***
 - a. Incentive for the decommissioned well.
3. ***Cost-share is not authorized for:***
 - a. Cisterns.

Maximum State Cost-Share

Incentive cannot exceed \$800 per decommissioned well.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of "MAP" in MoSWIMS prior to contract payment submission.

- a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
- b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
- c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
- d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
- e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage is equal to zero.

Extent Installed

Each.

Maintenance Life

10 years.

N380 Windbreak/Shelterbelt Establishment

Purpose

1. Reduce soil erosion from wind.
2. Improve irrigation efficiency.

Applicability

1. **Limited to Butler, Scott, Stoddard, Mississippi, New Madrid, Dunklin and Pemiscot counties.**
2. Applies to areas where linear plantings of woody plants are desired and suited for controlling wind erosion.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Windbreak/Shelterbelt Establishment (380), Tree/Shrub Site Preparation (490) and Tree/Shrub Establishment (612) contained in the Field Office Technical Guide.

Policies

1. ***Cost-share is authorized for:***
 - a. A one-time incentive per linear foot of established buffer length.

Maximum State Cost-Share

Incentive cannot exceed \$1.50 per linear foot of established buffer length, not per shrub or tree row length.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of "MAP" in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to "installed" prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:

- 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
- e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage of tree/shrub plantation.

Extent Installed

Linear feet of windbreak/shelterbelt.

Maintenance Life

10 years.

N386 *Field Border*

Purpose

1. To protect soil and water quality.
2. Reduce erosion from wind and water.

Applicability

Applies around the perimeter of fields; can support or connect other buffer practices within and between fields.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Critical Area Planting (342), Field Border (386), and Forage and Biomass Harvest Management (511) contained in the Field Office Technical Guide.

Policies

1. Only the acreage converted from cropland to permanent vegetative cover is eligible for the out of production incentive for this practice.
2. The field borders can be hayed or mowed according to the Forage and Biomass Harvest Management (511) standard. Limited grazing is allowed as incidental use when crop field residue is being grazed after harvest.
3. Land coming out of CRP would not qualify for the incentive.
4. When field slope exceeds five percent, end rows shall be eliminated, and crops shall be planted on the contour.
5. The maximum width for the incentive is 60 feet; the minimum is 30 feet. In areas where the field border exceeds 60 feet, the incentive will be based on 60 feet.
6. The field border out of production incentive cannot be paid on more than 25% of the acreage contained in the field. However, cooperators can receive cost-share for establishing permanent vegetative cover on more than 25% of field.
7. Field borders can be utilized for minimal equipment use when conditions allow.
8. ***Cost-share is authorized for:***
 - a. A one-time out of production incentive.
 - b. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components or native warm season grass component.
 - c. Fields that currently contain small grain/row crops are eligible to have a field border established.
 - d. Buffer Extension Incentive, under the conditions listed in Section V, subsection H.

Maximum State Cost-Share

1. Assistance for components is not to exceed 75% of the state average cost or as directed by the Commission.
2. A one-time out of production incentive cannot exceed \$780 per acre.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage of drainage.

Extent Installed

Acres planted.

Maintenance Life

10 years.

N391 Riparian Forest Buffer

Purpose

1. Reduce excess amounts of sediment, organic material, nutrients and pesticides in surface runoff, and reduce excess nutrients and other chemicals in shallow ground water flow with a secondary benefit of streambank stabilization.
2. Reduce pesticide drift entering the water body.

Applicability

Applies to areas adjacent to permanent or intermittent streams, public drinking water reservoirs and natural wetlands. Assistance for excluding ponds is not applicable.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Fence (382), Riparian Forest Buffer (391), livestock exclusion under Access Control (472), Tree/Shrub Site Preparation (490), Livestock Pipeline (516), Stream Crossing (578), Tree/Shrub Establishment (612), Watering Facility (614), and Water Well (642) contained in the Field Office Technical Guide.

Policies

1. Maximum width for incentive is 180 feet. In the Missouri and Mississippi Floodplain the maximum width for incentive is 300 feet.
2. Tree plantation is required.
3. ***Cost-share is authorized for:***
 - a. **Water Source**

Development of a watering source(s) for livestock when the stream is fenced to exclude livestock. More than one watering source may be developed on farms where pipeline and trenching costs would exceed \$8,000, or when crossing roads or streams with pipeline is not recommended. Development of watering sources may not exceed \$8,000 each for a pond, well, or connection to a public water supply. Designated stream crossings for livestock are authorized.

 - 1) Pond(s). This may include placement of a water line through an impoundment dam of an existing pond or reconstruction of ponds that no longer provide adequate livestock water.
 - 2) Well(s). The following are procedures and guidelines that must be followed if a well(s) is to be constructed:
 - a) The components that will be allowed under each well construction are limited to \$8,000, which include the well drilling, casing, grout, liner, electrical lines from the pump control box to the pump, and miscellaneous well components. Miscellaneous well components include the well cap, drive shoe, inverted bell, cement, fittings, and seals for the well itself.

- b) All wells must be constructed and registered according to state requirements.
Any type of state certification fee is not eligible for cost-share.
- 3) Connection to Public Water Supply System (PWSS). Includes water meter, backflow preventer valve, labor, and installation costs. Districts that cost-share on water meters must contact the Public Water Supply District (PWSD) to obtain cost-data for water meter installation for that specific PWSD. The district must enter the cost for the PWSS Water Meter and Setup component in MoSWIMS. The component cost will need to be updated prior to a contract being developed if the meter installation is in a different PWSD than the previous contract. Written documentation of the PWSD cost data must be scanned into MoSWIMS as supporting documentation prior to submitting the contract for contract review. The state average cost will continue to be used for pipeline, trenching and backfill, and boring costs for the service lines.
- b. Permanent Water Distribution
 - 1) Standard cost-share reimbursement applies for the pipeline from existing/new well(s) and ponds to the tank(s).
 - 2) Tanks are limited to one per field adjacent to the qualifying stream excluded by the N391 practice. If a dependable water source is available in an adjacent field, the cooperators is not eligible for a tank in that field.
 - 3) All livestock watering facilities should be a minimum of 25 feet from the exclusion fence and a minimum of 100 feet from the high bank of the qualifying stream.
- c. Limited access. If it is the least cost alternative, limited access may be authorized to allow controlled access to a stream or pond.
- d. Exclusion fence.
- e. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components.
- f. Buffer Extension Incentive, under the conditions listed in Section V, subsection H.
- 4. ***Cost-share is not authorized for:***
 - a. Spring development. Spring development must be completed under the N574 Spring Development practice.

Maximum State Cost-Share

- 1. Assistance for components is not to exceed 75% of the state average cost or as directed by the Commission.
- 2. A one-time out of production incentive cannot exceed \$1560 per acre.

Map Requirements

- 1. Mapping Tool link must be saved in the Notes section of the contract prior to contract approval. Practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
- 2. All planned and existing items that pertain to the contract should be included on the map. This includes farm boundary, fence (both perimeter and interior), buffer area (shown by system acres polygon), pipeline, watering facilities, power sources if installing electric fence
 - a. Water sources within fields adjacent to the stream exclusion must be labeled as inadequate if installing a watering facility

3. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. In addition to the above installed and existing items, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - b. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - c. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - d. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy. If a public water supply and water meter is developed as a water source, a District Specialist must certify and sign the contract.

Acres Served

Acreage on which the incentive is paid.

Extent Installed

Acres on which the incentive is paid.

Maintenance Life

10 years.

N393 *Filter Strip*

Purpose

1. To reduce suspended solids and associated contaminants in runoff.
2. To reduce dissolved contaminants loadings in runoff.

Applicability

Applies to areas situated below cropland, hay land, or grazing land where sediment, nutrients, pesticides, and animal waste may leave these areas and enter environmentally sensitive areas.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Critical Area Planting (342), Fence (382), Filter Strip (393), livestock exclusion under Access Control (472), and Forage and Biomass Harvest Management (511) contained in the Field Office Technical Guide.

Policies

1. Only the acreage converted from cropland to permanent vegetative cover is eligible for the out of production incentive for this practice.
2. The maximum width for the incentive is 100 feet; the minimum is 25 feet. In area where the filter strip exceeds 100 feet, the incentive will be based on the 100 feet.
3. ***Cost-share is authorized for:***
 - a. A one-time out of production incentive.
 - b. Exclusion fence.
 - c. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components or native warm season grass seeding.
 - d. Buffer Extension Incentive, under the conditions listed in Section V, subsection H.
4. ***Cost-share is not authorized for:***
 - a. Filter strips that are remnants of what was previously meadow.
 - b. Field borders or turn-rows that do not function down slope from tilled cropland. Field borders or turn-rows may be established under N386 Field Border.

Maximum State Cost-Share

1. Assistance for components is not to exceed 75% of the state average cost or as directed by the Commission.
2. A one-time out of production incentive cannot exceed \$1300 per acre for filter strips managed according to Forage and Biomass Harvest Management (511).

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acres of drainage to the filter strip.

Extent Installed

Acreage of incentive paid.

Maintenance Life

5 years for critical area seeding.

10 years for native warm season grass seeding

N574 Spring Development

Purpose

Protect and enhance water quality through proper collection and distribution of the ground water resource.

Applicability

Practice applies where livestock have free access to a spring or seep and the development will provide a dependable supply of suitable water for distribution.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Critical Area Planting (342), Fence (382), livestock exclusion under Access Control (472), Livestock Pipeline (516), Spring Development (574), and Watering Facility (614) contained in the Field Office Technical Guide.

Policies

1. ***Cost-share is authorized for:***
 - a. Pipe and trenching from the end of the collection point to the livestock watering tank, including the outlet pipe, may not exceed 300 feet unless SWCP staff approve cost-share exceeding 300 feet if the location warrants the need for additional pipe to obtain a stable outlet.
 - b. One distribution point.
 - c. Exclusion fence.
 - d. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components.
2. ***Cost-share is not authorized for:***
 - a. Pumps or similar devices used for the distribution of water.

Maximum State Cost-Share

Assistance is not to exceed 75% of the state average cost or as directed by the Commission.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of "MAP" in MoSWIMS prior to contract payment submission.

- a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
- b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
- c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
- d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
- e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy

Acres Served

Acreage is equal to zero.

Extent Installed

Each.

Maintenance Life

10 years.

N604 Saturated Buffer

Purpose

Reduce nitrate loading to surface water from subsurface drain outlets.

Applicability

1. Applies to crop land with a subsurface drainage system that can be adapted to discharge to a vegetated area.
2. Soils and topography that is capable of maintaining a raised water table without adverse effects to channel banks, shorelines, or adjacent lands.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Saturated Buffer 604, Drainage Water Management Code 554, Structure for Water Control 587, Critical Area Planting Code 342, and Subsurface Drain 606.

Policies

1. Vegetation in the area must be harvested or grazed annually at a minimum and timed based on the saturation conditions to not damage the vegetation.
2. Minimum buffer zone width is 30 ft.
3. Periodic removal of invasive trees or shrubs to reduce distribution line from plugging is required.
4. The practice may be installed in a suitable area already established in permanent vegetation.
5. ***Cost-share is authorized for:***
 - a. Treatment of subsurface drainage flow from row crop fields where there is a need to reduce nitrate concentration.
 - b. Water control structure(s) to maintain the designed water table elevation.
 - c. Pipe and trenching for lateral lines and overflow.
 - d. Critical Area Seeding: Permanent vegetative cover establishment based on the critical area seeding components.
6. ***Cost-share is not authorized for:***
 - a. Treatment of surface drainage from primarily surface inlets that are utilized by practices such as terraces, diversions, and water and sediment control structures.
 - b. Treatment of animal waste, or septic system discharges.

Maximum State Cost-Share

1. Assistance for components is not to exceed 75% of the state average cost.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acres that drain into the saturated buffer.

Extent Installed

Length of lateral line pipe installed.

Maintenance Life

10 years.

N605 Denitrifying Bioreactor

Purpose

To improve water quality by reducing the nitrate nitrogen content of subsurface agriculture drainage flow.

Applicability

The practice applies to sites where there is a need to reduce nitrate nitrogen concentration in subsurface drainage flow.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Denitrifying Bioreactors (605), Drainage Water Management (554), Structure for Water Control (587), Critical Area Planting (342), and Subsurface Drain (606) contained in the Field Office Technical Guide.

Policies

1. The bioreactor will need to be identified with signage or posts to keep equipment off the bioreactor.
2. If wood chips are utilized as the media, no wood chips that have been treated for ground contact may be used. Additionally, high tannin content wood chip such as oak, cedar, or redwood may not be used.
3. Geotextile or plastic lining must be used in the top, bottom, and sides of the bioreactor.
4. Adequate cover of soil must cover the top of the bioreactor.
5. Excess soil excavated during the installation process should be disposed of by blending into surrounding landscape or hauling away from the site.
6. Seeding of the area must be done at the time of installation.
7. ***Cost-share is authorized for:***
 - a. Treatment of subsurface drainage flow from row crop fields where there is a need to reduce nitrate nitrogen concentration.
 - b. Critical Area Seeding: Permanent vegetative cover establishment based on the critical area seeding components.
 - c. Water control structure box(es) needed to maintain the water elevation.
 - d. Wood chips or appropriate carbon media.
 - e. Excavation of media chamber.
8. ***Cost-share is not authorized for:***
 - a. Treatment of surface drainage from primarily surface inlets that are utilized by practices such as terraces, diversions, and water and sediment control structures.

Maximum State Cost-Share

1. Assistance for components is not to exceed 75% of the state average cost.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acres draining into the bioreactor.

Extent Installed

Square footage of bioreactor.

Maintenance Life

10 years.

N725 *Sinkhole Treatment*

Purpose

1. Improve quality of recharge waters entering the groundwater system.
2. Improve chemical and nutrient management within sinkhole watersheds.
3. Reduce soil erosion within sinkhole watersheds.

Applicability

Practice applies where karst features (sinkholes) are present which exhibit the potential to deliver surface water pollutants or contaminants to the groundwater system.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Fence (382) and Access Control (472) contained in the Field Office Technical Guide.

Policies

1. Livestock will be excluded from the designated area.
2. ***Cost-share is authorized for:***
 - a. Exclusion fence.
 - b. A one-time out of production incentive.

Maximum State Cost-Share

1. Assistance is not to exceed 75% of the state average cost.
2. Incentive cannot exceed \$300 per acre, with a limit of \$1,200 per sinkhole.
3. Utilize the Practice Limits Detail report in MoSWIMS to ensure compliance with applicable maximums.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of "MAP" in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to "installed" prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.

- d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
- e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage on which the incentive is paid.

Extent Installed

Acreage on which the incentive is paid.

Maintenance Life

10 years.

WQ10 Stream Protection

Purpose

Reduce excess amounts of sediment, organic material, nutrients, and pesticides in surface runoff; and reduce excess nutrients and other chemicals in shallow groundwater flow, with a secondary benefit of streambank stabilization.

Applicability

Applies to areas immediately adjacent to permanent, losing, or intermittent streams that have a defined stream bed where livestock have uncontrolled access for watering purposes.

Erosion Requirements

This practice has no erosion requirements.

Specifications

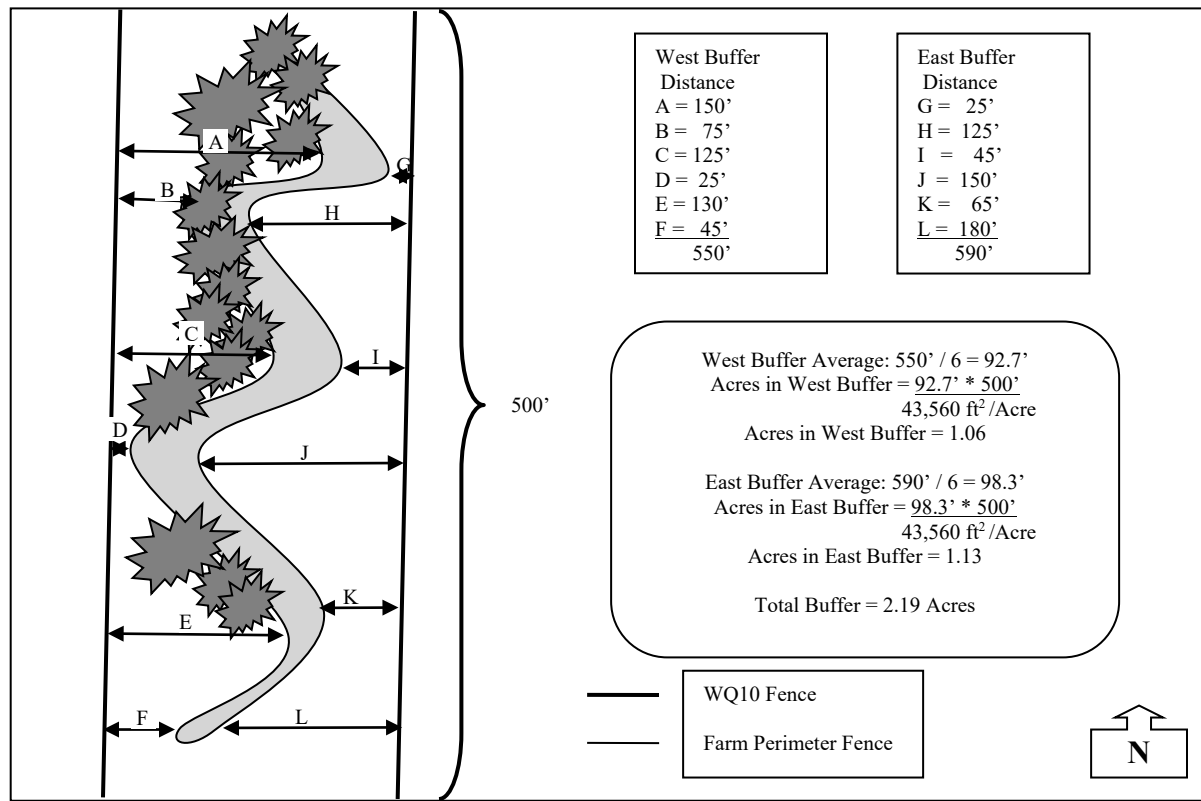
The completed practice must meet the NRCS Standards and Specifications for Critical Area Planting (342), Pond (378), Fence (382), livestock exclusion under Access Control (472), Livestock Pipeline (516), Stream Crossing (578), Watering Facility (614) and Water Well (642) contained in the Field Office Technical Guide.

The Soil and Water Conservation Program strongly encourages the construction of High-Tensile Electric (HTE) exclusionary fence due to the flood prone nature of this practice's applicable location(s).

Policies

1. The area where the practice will be applied must currently have evidence of livestock presence to qualify.
2. The area to be excluded must have an adequate boundary fence or natural barrier(s) that contain livestock to the property prior to installment of the exclusion fence.
3. A one-time out of production incentive for livestock exclusion is available for cooperators who allow the riparian area to regenerate naturally or maintain it as a conservation buffer. Buffer acres are measured from the high-flow bank of the qualifying stream to the completed fence using the measurement criteria in 3a and 3b of this section.
 - a. Excluded area on each side of the qualifying stream must be a minimum of 25 feet. The incentive may be paid up to a maximum of a 150-foot average from the high bank. Incentive is available for both sides of the qualifying streams.
 - b. The maximum area on which the incentive may be paid cannot exceed a 150-foot average, with 180 feet as the maximum allowed in the averaging calculation (see Figure 1).

Figure 1



4. Both sides of the qualifying stream must be excluded from livestock access.
5. The excluded area may be flash grazed beginning one year after contract payment. Livestock access to the excluded area outside of the approved dates is a violation of the maintenance agreement, except for designated stream crossing points.
6. Grazing should not occur under wet weather conditions to prevent manure from being carried to the streams by runoff or floodwaters.
 - a. Cool-season grasses (CSG) may be grazed for a single 3-day period between April 15th and May 7, and again for a single 3-day period between September 1 and October 1. The average minimum grazing height is 6 inches for CSG. Strip grazing of the excluded area using temporary fence may be utilized during the above spring and fall periods as long as livestock graze each strip only one time for 3 or fewer days and maintain a 6 inch average minimum grazing height.
 - b. Warm-season grasses (WSG) may be grazed for a single 3-day period between July 15 and August 15. The average minimum grazing height is 8 inches for WSG. Strip grazing as indicated above may also be carried out for WSG.
 - c. Grazing dates may be restricted further due to establishment of a planted buffer. Consideration should be given to wildlife when flash grazing is practiced.
 - d. Livestock stocking rates should be reevaluated based on the grazing area that remains after exclusion of the riparian area.
 The upland acres remaining will be under greater grazing pressure. Reducing livestock numbers, and/or implementation of a grazing system is recommended to prevent upland erosion.

7. Spraying is allowed to control noxious weeds: along fence lines for maintenance purposes and for suppression of fescue and/or weeds in existing WSG or tree/shrub planting for erosion control or wildlife benefit. Prescribed burning of WSG stands is an allowed maintenance practice. Chemicals utilized for maintenance are not eligible for cost-share.
8. Mowing within the buffer incentive area is prohibited except for fence maintenance and should be limited to a single swath along the fence.
9. **Cost-share is authorized for:**
 - a. Water Source

Development of a watering source(s) for livestock when the qualifying stream is fenced to exclude livestock. More than one watering source may be developed on farms where pipeline and trenching costs would exceed \$10,400; or when crossing roads or streams with pipeline is not recommended. Development of watering sources may not exceed \$10,400 each for a pond, well, or connection to a public water supply. Designated stream crossings for livestock are authorized.

 - 1) Pond(s). This may include placement of a water line through an impoundment dam of an existing pond or reconstruction of ponds that no longer provide adequate livestock water.
 - 2) Well(s). The following are procedures and guidelines that must be followed if a new or existing well is to be used for livestock watering purposes:
 - a) The cost of components allowed for the upgrade and use of an existing well or construction of each new well is limited to \$10,400, which include(s) the well drilling, casing, grout, liner, electrical lines from the pump control box to the pump, and miscellaneous well components. Miscellaneous well components include the well cap, drive shoe, inverted bell, cement, fittings, and seals for the well itself.
 - b) All wells must be constructed or upgraded and registered according to state requirements. Any certification fees are not eligible for cost-share.
 - 3) Connection to Public Water Supply System (PWSS). Includes water meter, backflow preventer valve, labor, and installation costs. Districts that cost-share on water meters must contact the Public Water Supply District (PWSD) to obtain cost-data for water meter installation for that specific PWSD. The district must enter the cost for the PWSS Water Meter and Setup component in MoSWIMS. The component cost will need to be updated prior to a contract being developed if the meter installation is in a different PWSD than the previous contract. Written documentation of the PWSD cost data must be scanned into MoSWIMS as supporting documentation prior to submitting the contract for contract review. The state average cost will continue to be used for pipeline, trenching and backfill, and boring costs for the service lines.
 - b. Permanent Water Distribution
 - 1) Standard cost-share reimbursement applies for the pipeline from existing/new well(s) and ponds to the tank(s).
 - 2) Tanks are limited to one per field adjacent to the qualifying stream excluded by the WQ10 practice. If a dependable water source is available in an adjacent field, the cooperator is not eligible for a tank in that field.
 - 3) All livestock watering facilities should be a minimum of 25 feet from the exclusion fence and a minimum of 100 feet from the high bank of the qualifying stream.
 - c. Limited access. If deemed the least cost alternative, a limited access area may be authorized to allow controlled access to a qualifying stream or pond.

- d. Stream crossing(s).
- e. Exclusion fence.
- f. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components.
- g. Buffer Exclusion – Out of Production
 - 1) Grazeable grassland areas adjacent to the qualifying stream and within the buffer area are eligible for the out of production incentive (see Figure 2).
 - 2) Grassland fields and a narrowly wooded riparian corridor adjacent to the excluded qualifying stream are eligible for the incentive (see Figure 3).
 - 3) Incentives are not authorized for stream segments within heavily wooded areas that exceed ten acres (see Figure 4). Heavily wooded areas that exceed ten acres should be evaluated for an N472 Livestock Exclusion practice.
 - 4) Incentives cannot be used in conjunction with other incentive practices for the same fenced area. Buffer Extension Incentive, under the conditions listed in Section V, subsection H.

Figure 2

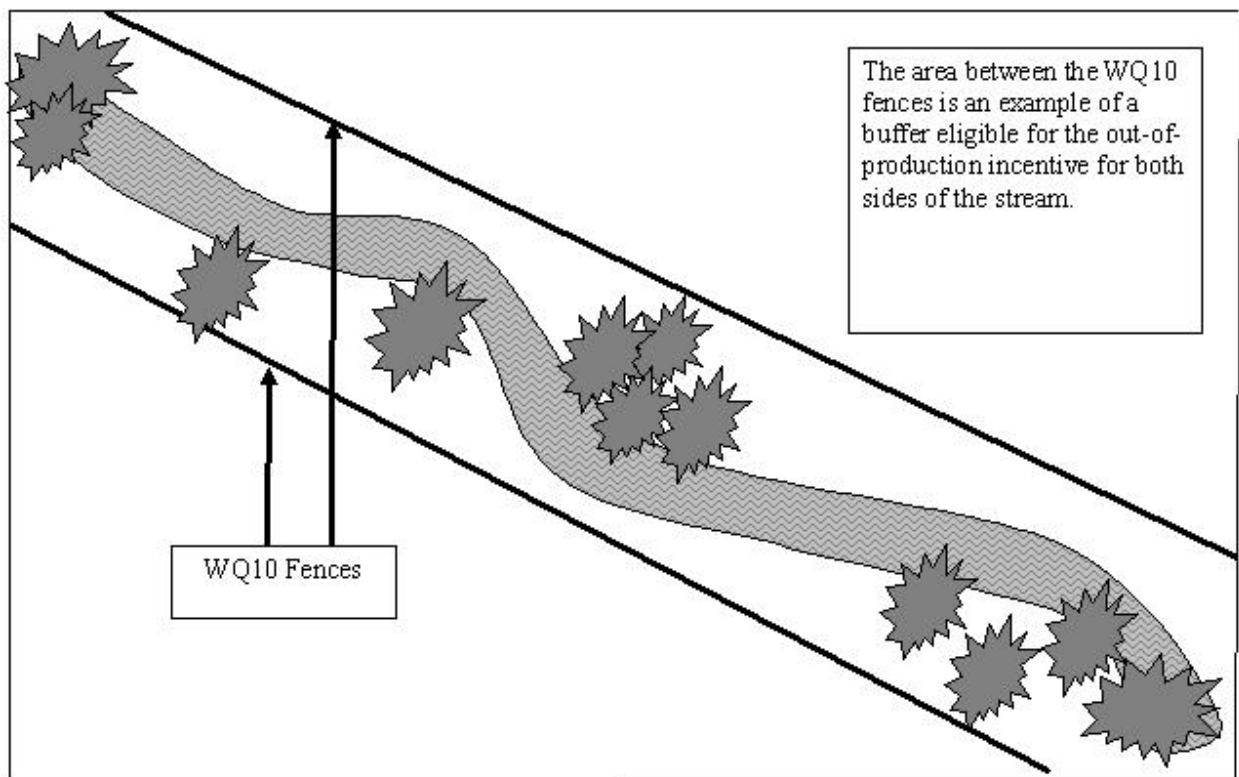


Figure 3

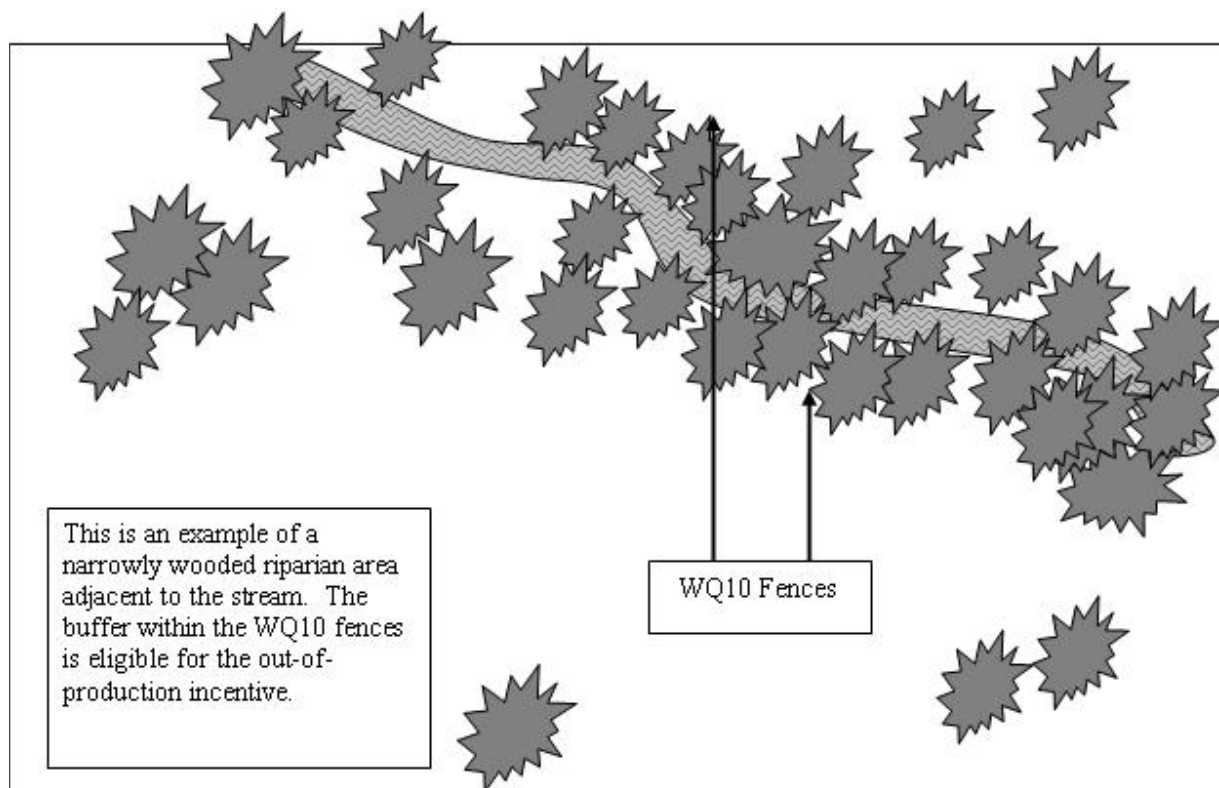
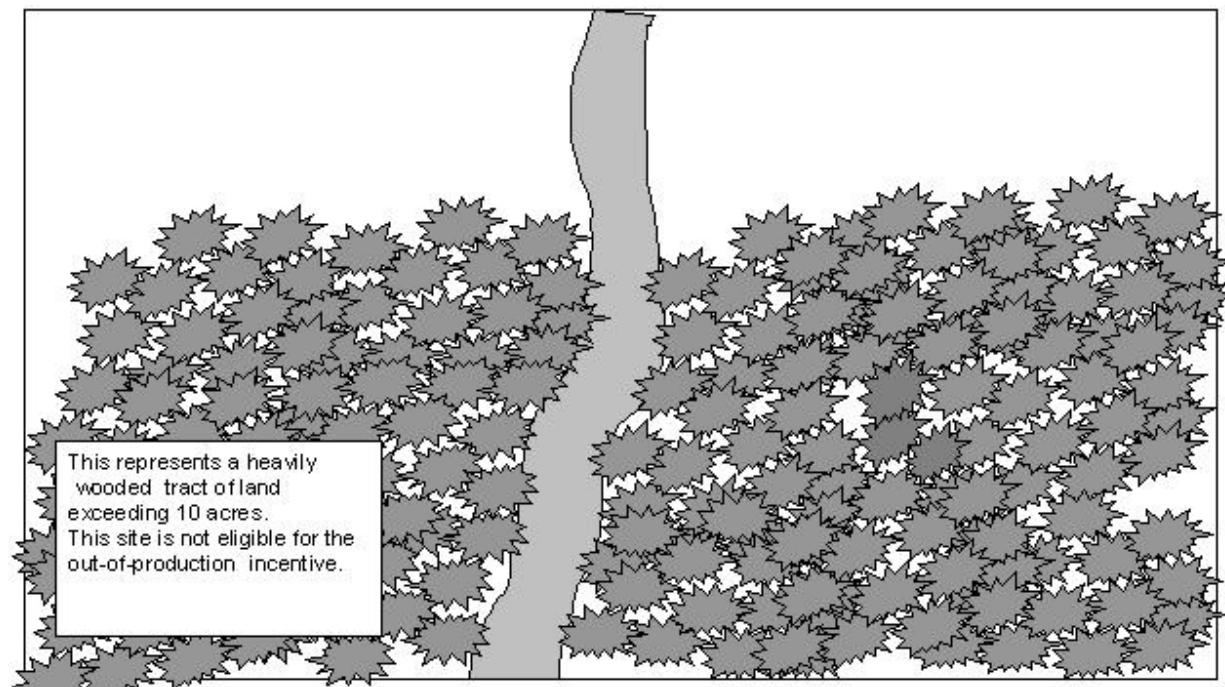


Figure 4



10. Cost-share is not authorized for:

- a. Spring Development. Cost-share is authorized under the N574 Spring Development practice.
- b. Exclusion costs for fields dedicated to the harvest of crops or forage production.
- c. Reconstruction: The Soil and Water Conservation Program will not pay for the rebuilding of fence. High Tensile Electric (HTE) is recommended to lower the cooperators' costs if a rebuild is necessary.

Maximum State Cost-Share

1. Assistance for components is not to exceed 75% of the state average cost or as directed by the Commission. Each watering source is limited to \$10,400.
2. The out of production incentive cannot exceed \$650 per acre of buffer exclusion, as described in 9.g.

Map Requirements

1. Mapping Tool link must be saved in the Notes section of the contract prior to contract approval. Practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. All planned and existing items that pertain to the contract should be included on the map. This includes farm boundary, fence (both perimeter and interior), buffer area (shown by system acres polygon), pipeline, watering facilities, power sources if installing electric fence
 - a. Water sources within fields adjacent to the stream exclusion must be labeled as inadequate if installing a watering facility
3. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of "MAP" in MoSWIMS prior to contract payment submission.
 - a. In addition to the above installed and existing items, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - b. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - c. All planned features associated with the contract payment should be changed to "installed" prior to creating the Mapping Tool report.
 - d. Additional maps may be added under "SUPPORTING DOCUMENTATION"

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for the design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy. If a public water supply and water meter is developed as a water source, a District Specialist must certify and sign the contract.

Acres Served

Total acreage excluded from livestock access. The acres served may be more than the maximum area on which the incentive is paid.

Extent Installed

Linear feet of the stream excluded.

Maintenance Life

10 years.

C100 Timber Harvest Plan

Purpose

Proper design and implementation of best management practices on logging roads, stream crossings, and log landings, and other constructive measures during timber harvest.

Applicability

Applies to land where the cooperators is planning to conduct a timber sale (payment after timber sale).

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must be certified by MDC staff.

Policies

1. The cooperator will be responsible for insuring implementation as recommended in the harvest plan.
2. Use of equipment or vehicles must be avoided within 100 feet of the top of the streambank in order to protect the riparian area of streams and waterways.
3. The harvest plan should include a map showing approximate locations of the harvest area, stream crossings, forest roads, skid trails and log landings. If a cooperator fails to follow any part of the harvest plan, he or she is not eligible for the incentive.
4. Landing areas must be located greater than 200 feet from any stream, pond, lake, sink hole, spring, cave, or wetland.
5. ***Cost-share is authorized for:***
Incentive on planned timber harvest acres.
6. ***Cost-share is not authorized for:***
Timber acres that have been harvested within the past 5 years unless multiple harvests on the same acreage are specified necessary by a professional forester.

Maximum State Cost-Share

1. When the practice is implemented on 20-75 acres, incentives cannot exceed \$20 per acre. Payments on 75+ acres will be for \$1,500, plus \$15 per acre for tracts over 75 acres.
2. The maximum incentive payment shall not exceed \$3,000 per farm or cooperator per year. The cooperator is eligible to receive a total of \$9,000 for this practice.
3. Utilize Practice Limits Detail Report in MoSWIMS to ensure compliance with applicable maximums.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

MDC technical staff has the responsibility for design of the harvest plan, provides oversight of the plan implementation, and to certify that the completed practice meets harvest plan requirements within commission policy.

Acres Served

Acreage harvested.

Extent Installed

Acreage harvested.

Maintenance Life

10 years.

DFR-04 Forest Plantation

Purpose

1. Protect the soil.
2. Encourage the conversion of marginal soils to less intensive use.
3. Soil erosion from agricultural sources.
4. Improve water quality.

Applicability

Applies to land to be converted to woodland.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Fence (382), livestock exclusion under Access Control (472), Tree/Shrub Preparation (490) and Tree/Shrub Establishment (612) contained in the Field Office Technical Guide.

Policies

1. ***Cost-share is authorized for:***
 - a. Tree plantation.
 - b. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components.
 - c. Exclusion fence that lies within an existing functional interior or property line fence.
2. ***Cost-share is not authorized for:***
 - a. Site preparation used to clear or remove undesirable tree species so that desirable species can be planted.
 - b. Planting of trees for commercial production.
 - c. Fence that does not serve the purpose of excluding livestock, such as property lines, rights-of-way, or farm road boundaries.
 - d. Bringing electrical power to the site.
 - e. Clearing of rocks or other obstructions from the area.
 - f. Planting materials and/or equipment supplied at no charge by any agency or organization.
 - g. Reforestation on land where timber has been harvested.
 - h. Planting less than one acre.

Maximum State Cost-Share

Assistance is not to exceed 75% of the state average cost or as directed by the Commission.

Map Requirements

1. Mapping Tool link must be saved in the Notes section of the contract prior to contract approval. Practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.

- a. All planned and existing items that pertain to the contract should be included on the map. This includes tract boundary, field boundaries, field numbers, fence (both perimeter and interior), location of site, and power sources if installing electric fence.
2. Practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
3. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage of tree plantation.

Extent Installed

Acreage of tree plantation.

Maintenance Life

10 years.

N472 Livestock Exclusion

Purpose

Protect soil and plant resources from grazing by livestock.

Applicability

Applies to existing ponds, woodlands, sinkholes, streams, or sensitive areas where vegetation, soil condition, and water quality are in need of protection from livestock.

Erosion Requirements

Practice has no erosion requirements.

Specifications

The completed practice must meet the NRCS Standards and Specifications for Fence (382) and livestock exclusion under Access Control (472) contained in the Field Office Technical Guide.

Policies

1. The area where the practice will be applied must currently have livestock to qualify.
2. Spraying is allowed to control noxious weeds along fence lines for maintenance purposes. Prescribed burning of warm season grass stands is an allowed maintenance practice. Prescribed burning of woodland areas is allowed when part of a timber management plan and only in areas that leaf litter removal will not increase erosion processes.
3. The area excluded must have boundary fence or natural barriers that contain livestock to the property prior to installing exclusion fence.
4. Annual grazing must occur next to the exclusion area for the maintenance life of the practice. Grazing is not allowed at any time in the excluded area.
5. ***Cost-share is authorized for:***
 - a. Exclusion fence that lies within an existing functional interior or property line fence/natural barrier.
6. ***Cost-share is not authorized for:***
 - a. Fence that does not serve the purpose of excluding livestock, such as property lines, rights-of-way, farm road boundaries or livestock lanes.
 - b. Bringing electrical power to the site.
 - c. Clearing of rocks or other obstructions from the area.
 - d. Tree plantation.
 - e. Reconstruction: The Soil and Water Conservation Program will not pay for the rebuilding of fence. High Tensile Electric (HTE) is recommended in areas where fence is likely to be damaged to lower the cooperators' cost if reconstruction is necessary during the maintenance period.

Maximum State Cost-Share

1. Assistance for components is not to exceed 75% of the state average cost or as directed by the Commission.

Map Requirements

1. Mapping Tool link must be saved in the Notes section of the contract prior to contract approval. Practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. All planned and existing items that pertain to the contract should be included on the map. This includes farm boundary, fence (both perimeter and interior), exclusion area (shown by system acres polygon), power sources if installing electric fence
3. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. In addition to the above installed and existing items, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - b. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - c. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - d. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage excluded from livestock access.

Extent Installed

Acres.

Maintenance Life

10 years.

N655 Restoration of Skid Trails, Logging Roads, Stream Crossings, and Log Landings

Purpose

Non-industrial private forest cooperators for implementing practices for controlling gully erosion on skid trails, logging roads, stream crossings and log landings that have been improperly constructed during a timber harvest.

Applicability

Applies to control or prevent erosion on land with existing tree cover where improper harvest has taken place. The timber harvest that initiated the gully erosion must have occurred prior to contract approval.

Erosion Requirements

Practice is eligible for cost-share based on gully erosion. Post-installation erosion rates must be less than pre-installation erosion rates.

Gully Erosion Checks: PRE-INSTALL > POST-INSTALL

Specifications

The completed practice must meet the NRCS Standards and Specifications for Critical Area Planting (342) and Forest Trails and Landings (655) contained in the Field Office Technical Guide.

Policies

1. The cooperator should be encouraged to conduct future logging activities through C100 Timber Harvest Plan practice to prevent erosion from improper harvest.
2. ***Cost-share is authorized for:***
 - a. Active gully areas on eroding skid trails, logging roads, stream crossings and log landings.
 - b. One contract per gully treatment area.
 - c. Critical Area Seeding. Permanent vegetative cover based on the critical area seeding components.

Maximum State Cost-Share

1. Cost-share payments shall not exceed \$1,500 per gully.
2. Cooperators are eligible to receive a lifetime maximum of \$6,000 dollars for this practice.
3. Utilize the Practice Limits Detail report in MoSWIMS to ensure compliance with applicable maximums.

Map Requirements

1. Farm name polygon indicating farm perimeter, practice polygons, lines, and/or points for the practice must be drawn on the map. All associated report attributes must be completed for the contract being submitted, including contract number, status of the practice (existing, installed, or planned), and fiscal year.
2. A map and associated report from the Mapping Tool showing the completed practice must be attached as the document type of “MAP” in MoSWIMS prior to contract payment submission.
 - a. Before creating the Mapping Tool report, the transparency of any shaded polygons should be adjusted, if necessary, to adequately view the land cover beneath them.
 - b. All planned features associated with the contract payment should be changed to “installed” prior to creating the Mapping Tool report.
 - c. If multiples of the same practice are shown on the map, clearly identify which practice is associated with the contract payment.
 - d. In addition to all installed and existing items that are associated with the contract payment, all maps must contain the following information:
 - 1) Cooperator Name
 - 2) Field numbers must be clearly labeled
 - 3) Section, Township, Range or coordinates
 - e. Additional maps may be added under “SUPPORTING DOCUMENTATION”

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage is equal to zero.

Extent Installed

Each gully site treated.

Maintenance Life

10 years.
