

# 2018 Kentucky Soil & Water Quality State Cost Share Program Manual



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# Kentucky State Cost Share Best Management Practices

## **KCP1**

### **Livestock: Animal Feeding Operations (AFO) BMP**

#### BMP Introduction and Objective:

This practice will only be requested on sites that need animal waste storage, animal waste application practices, where pastures are overstocked with livestock, or when livestock are confined in buildings or lots. \*Please refer to the BMP Eligibility Criteria section for more clarity on when this BMP should be requested. The list of practices under the Livestock: Animal Feeding Operations BMP's focuses on solving soil erosion and water quality pollution problems resulting from concentrated livestock and/or the production, storage, or utilization of animal waste. Note that many practices under this BMP requires a Comprehensive Nutrient Management Plan (CNMP) or a Nutrient Management Plan (NMP) to be developed prior to submitting a cost share application. Producers may utilize the NRCS EQIP program to request cost share assistance in developing a CNMP or NMP, if applicable, prior to making a Kentucky Soil and Water State Cost Share application for these practices. To solve these animal waste related natural resource problems, it could require only one practice or multiple practices may be needed. It is recommended that changes in livestock management practices be fully evaluated prior to installing any cost share structural practices. Many times, changes in management may resolve the natural resource problems without the need of structural practices. Poor operation and maintenance of installed cost share practices will also result in the failure of the practice to solve the natural resource problem. This should be reviewed and discussed with cost share applicants prior to application.

All practices should be consistent with recommendations as part of a Kentucky Agriculture Water Quality Act plan and be installed according to approved engineering designs or job sheet recommendations.

#### Previous Kentucky State Cost Share Practices That Are Replaced by This BMP:

KCP5	Animal Waste Utilization
KCP8	Stream Crossing
KCP9	Sinkhole Protection
KCP13	Vegetative Filter Strips
KCP16	Agricultural Waste Control Facilities
KCP17	Closure of Agricultural Waste Impoundment

KCP18	Riparian Area Protection
KCP19	On-Farm Fallen Animal Composting

Current Eligible Practices That May Be Requested Under This BMP:

- Animal Mortality Facility (316)
- Compost Facility (317)
- Comprehensive Nutrient Management Plan - Written (CNMP) (102)
- Critical Area (342)
- Diversion (362)
- Fence (382)
- Filter Strip (393)
- Grade Stabilization Structure (410)
- Grassed Waterway (412)
- Heavy Use Area (561)
  - \*As a companion practice to a Waste Storage Facility (313)
  - \*Heavy Use Area around Watering Facilities
  - \*Heavy Use Area crossing for grassed waterway
- Lined Waterway or Outlet (468)
- Livestock Pipeline (516)
- Mulching (484)
- Nutrient Management (590)
  - \*Animal waste application ONLY
- Nutrient Management Plan – Written (104)
- Riparian Forest Buffer (391)
- Riparian Herbaceous Cover (390)
- Roof Runoff Structure (558)
- Roofs and Covers (367)
- Streambank and Shoreline Protection (580)
- Stream Crossing (578)
- Subsurface Drain (606)
- Trails and Walkways (575)
- Tree and Shrub Establishment (612)
- Tree and Shrub Site Preparation (490)
- Underground Outlet (620)
- Vegetative Treatment Area (635)
- Waste Facility Closure (360)
- Waste Storage Facility (313)
- Waste Transfer (634)
- Waste Treatment Lagoon (359)
- Water and Sediment Control Basin (638)
- Watering Facility (614)
  - \*Can only be requested to remove animals from contaminated water source or to improve waste management.

## BMP Eligibility Criteria:

A current Comprehensive Nutrient Management Plan (CNMP) or Nutrient Management Plan (NMP) is required to apply for this BMP and requested practices must be identified in the CNMP or NMP as needed to address livestock related natural resource issues at the site. Practice(s) should only be requested to solve existing natural resource problems.

Cost share assistance under this BMP will be utilized when current site conditions meets one of the following criteria:

1. Livestock:
  - a. are stabled or confined and fed or maintained for a period of 45 days or more in any 12-month period, and
  - b. crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season (April 1 – November 1) over any portion of the lot or facility. (Note: This should not apply to winter feeding areas in pastureland settings.)
2. If livestock stocking rates exceeds one cow/calf pair per 2 acres of pastureland or one stocker calf (400-750 lbs.) per 1 acre of pastureland or if KY Graze tool is used to calculate the stocking rates and they exceed 130% of the pastureland carrying capacity then this BMP would be requested rather than the Pastureland BMP.
3. Livestock are confined in buildings, structures, or lots and animal waste storage is needed.
4. Dead animal disposal is a current natural resource problem that needs addressing.
5. Animal waste application is a resource problem that needs improvement.

## Cost Share Rates and Limits:

The Kentucky Soil and Water Cost Share Program has established a 75% cost share rate limit based on actual expenses not to exceed the estimated payment rate.

A cost share limit of \$20,000 per applicant or operation is approved for any animal waste storage practices or \$7,500 per applicant or operation for all other practices that are needed to resolve the resource concerns associated with the animal feeding operation. Multiple cost share applications, by the same applicant or on the same land, is not permitted for this practice. The cost share payment on all practice components will be made at the time of practice completion and certification by the technical agency. Applicants found in non-compliance with the signed practice maintenance agreement will forfeit any future cost share payments and become ineligible for Kentucky Soil and Water Cost Share assistance until practices are restored to design standards and meets maintenance agreement requirements pending approval by the local Conservation District.

## Eligible Cost Share Practices:

The eligible practices listed below should only be requested to address existing natural resource concerns associated with animal feeding operations, animal waste storage or waste application and meets the BMP Eligibility Criteria for this practice. Other resource concerns associated with the pastureland, farmstead, cropland, and forestland should be requested under a different section of the cost share manual. All practices will be designed and installed according to NRCS Technical Guide Standards or other approved standards as identified in this manual. Employees assisting with the implementation of eligible cost share practices should have engineering job approval before installing or approving structural practices for program payment.

NRCS BMP Name and Practice Code	<b>Kentucky State Soil and Water State Cost Share Program</b>  Practice Guidance/Description
<p><b>Animal Mortality Facility (316)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$20,000</p>	<p>This practice can include a small rotary drum or a composting facility for poultry, turkey, swine and other livestock. A Comprehensive Nutrient Management Plan (CNMP) would be required before submitting an application containing this practice for funding. This practice is strictly designed to properly dispose of dead animals according to approved engineering plans and Kentucky state law requirements. More guidance on Kentucky Animal Mortality laws can be found at: <a href="http://www2.ca.uky.edu/enri/KWAM2004/Deadanimaldisposal.pdf">http://www2.ca.uky.edu/enri/KWAM2004/Deadanimaldisposal.pdf</a></p> <p>More guidance on composting large animals can be found at: <a href="http://www2.ca.uky.edu/agc/pubs/id/id166/id166.pdf">http://www2.ca.uky.edu/agc/pubs/id/id166/id166.pdf</a></p> <p>The Kentucky NRCS Technical Guidance Standard for Animal Mortality Facility (316) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Composting Facility (317)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$20,000</p>	<p>This practice is designed to compost manure, bedding, and other organic waste. A Comprehensive Nutrient Management Plan (CNMP) would be required before submitting an application containing this practice for funding. This practice can include a facility with a concrete, gravel, or compacted earthen floor and wood or concrete walls. This practice is strictly designed to properly dispose of organic waste according to approved engineering plans and Kentucky state law requirements:</p> <p>The Kentucky NRCS Technical Guidance Standard for Composting Facility (317) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Comprehensive Nutrient Management Plan (102)</b></p>	<p>This practice would assist with the development of a Comprehensive Nutrient Management Plan (CNMP) (102) to identify potential livestock pollution sources and the storage and management of animal waste and runoff from confined/concentrated livestock operations. The CNMP will address nutrient</p>

<p>5 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>needs of crops, current soil available nutrients, and potential nutrients available in the animal waste when waste is applied to the land. Also, if animal waste is applied to the land, the CNMP will identify potential application setbacks, application timing and placement of nutrients, and any other soil or water related nutrient concerns. A Comprehensive Nutrient Management Plan (102) is required prior to cost share approval for the many of the Livestock: Animal Feeding Operation BMP practices.</p>
<p><b>Critical Area Planting (342)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to grade, smooth, and seed eroded areas associated with concentrated livestock traffic or vegetating other conservation construction practices associated with this BMP. This practice will likely require Mulching (484) to enhance establishment and Fence (382) to exclude livestock.</p> <p>The Kentucky NRCS Technical Guidance Standard for Critical Area Planting (342) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Diversion (362)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be used to construct an earthen channel to divert clean water away from confined livestock feeding areas or animal waste storage facility to a safe outlet. It will be designed according to NRCS Technical Guide Standards. The practice will also require Critical Area Planting (342) and Mulching (484) to establish vegetation and Fencing (382) to protect from livestock damage.</p> <p>The Kentucky NRCS Technical Guidance Standard for Diversion (362) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Fence (382)</b></p> <p>20 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to protect sensitive areas (streams, sinkholes, ponds, trees, eroded areas) from concentrated livestock damage as part of an overall waste management system. This practice will also be utilized to protect newly constructed conservation practices, associated with animal feeding operations, from livestock damage. Fencing to protect streams or other water bodies or forestland areas from livestock damage, which does not meet the Livestock: Animal Feeding Operations BMP Eligibility Criteria, should be requested under the Livestock: Pastureland BMP practice. Cross fencing pastures to improve grazing distribution should NOT be requested under this BMP. Only Permanent Containment Fence is approved for cost share under this BMP.</p> <p>The Kentucky NRCS Technical Guidance Standard for Fence (382) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Filter Strip (393)</b></p> <p>5 year practice life</p>	<p>This practice would be utilized when animal feeding area runoff needs to be filtered prior to leaving the feeding area or waste storage site. This practice should be used to filter contaminants from runoff water prior to entering streams or other</p>

<p>Cost Share Limit: \$7,500</p>	<p>water bodies. Filter Strips must be designed according to RUSLE2 calculations and seeded according to the Filter Strip (393) Technical Guide Standard. Design guidance for Filter Strips (393) using RUSLE2 can be at: <a href="https://efotg.sc.egov.usda.gov/references/public/KY/KY393_Filter_Strip_(393)_National_Agron_Tech_Note_No_2.pdf">https://efotg.sc.egov.usda.gov/references/public/KY/KY393_Filter_Strip_(393)_National_Agron_Tech_Note_No_2.pdf</a></p> <p>The Kentucky NRCS Technical Guidance Standard for Filter Strip (393) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a>. After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Grade Stabilization Structure (410)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice should be utilized to prevent gully erosion from occurring as a result of water velocities being too rapid to be stabilized with grass. Grade Stabilization Structures (410) may serve to reduce gully erosion at the outlet of a grassed waterway or diversion. This practice will be installed according to NRCS Technical Guidance and engineering design criteria. Other practices that may be needed are Critical Area Planting (342), Mulching (484), and possibly Fence (382).</p> <p>The Kentucky NRCS Technical Guidance Standard for Grade Stabilization Structure (410) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a>. After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Grassed Waterway (412)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice would be utilized to control gully erosion from concentrated flow areas occurring as a result of an animal feeding operation. Critical Area Planting (342), Mulching (484), Fence (382), Filter Strip (393), Grade Stabilization Structure (410), Subsurface Drain (606), or Underground Outlet (620) may be needed along with this practice. Grassed Waterways (412) will be installed according to engineering design specifications.</p> <p>The Kentucky NRCS Technical Guidance Standard for Grassed Waterway (412) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a>. After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Heavy Use Area (561)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p><b>Heavy Use Traffic Areas:</b> Under the Livestock: Animal Feeding Operations BMP, the Heavy Use Area (561) practice can only be used as a companion practice to implement a Waste Storage Facility (313). A CNMP is required before applying for a Waste Storage Facility (313). Winter Feeding pads, a type of Heavy Use Area (561) should NOT be requested under this BMP unless it is part of a Waste Storage Facility (313). Winter Feeding pads are designed to be used in pastureland settings where livestock numbers are less concentrated, animals are only fed during winter months, and Waste Storage Facilities (313) are typically not needed. Winter Feeding pads or other Heavy Use Areas (561) not associated with a Waste Storage Facility (313) would be requested under the Pastureland BMP. A CNMP would be needed prior to requesting this practice with a Waste Storage</p>



	<p>Facility (313).</p> <p><b>Watering Facility pad and Equipment Crossings:</b> The HUA practice will also be used as a companion practice to establish a stable traffic area around livestock Watering Facilities (614) or as a livestock or equipment crossing for a Grassed Waterway (412) when these are needed according to practice requirements for this BMP. Crossings for streams will be requested under the Stream Crossing (578) practice.</p> <p>The Kentucky NRCS Technical Guidance Standard for Heavy Use Area (561) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Lined Waterway or Outlet (468)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice may be needed when gully erosion is occurring and a standard grassed waterway will not solve the problem due to excessive velocities or continuous seepage flow that cannot be managed with an Underground Outlet (620) or a Subsurface Drain (606). The resource problem that is to be addressed with this practice should be the result of damage created by an animal feeding operation. The practice would need to meet NRCS design and specifications.</p> <p>The Kentucky NRCS Technical Guidance Standard for Lined Waterway or Outlet (468) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Livestock Pipeline (516)</b></p> <p>20 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will only be used under this BMP when additional Watering Facilities (614) will aid in the development of a Waste Storage Structure (313) or improve the management of concentrated livestock movement and permit increased animal waste collection in a Waste Storage Facility (313). Livestock Pipeline can only be used in conjunction with a Livestock Watering Facility (614).</p> <p>The Kentucky NRCS Technical Guidance Standard for Livestock Pipeline (516) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Mulching (484)</b></p> <p>1 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice can only be used as a companion practice to assist with the vegetation establishment on conservation practices. This practice includes natural materials (hay or straw) and erosion control blankets.</p> <p>The Kentucky NRCS Technical Guidance Standard for Mulching (484) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Nutrient Management (590)</b></p>	<p>This practice would assist with the cost of properly applying animal waste, produced by an animal feeding operation, to the land according to a CNMP or NMP. An up-to-date CNMP or NMP will be required before submitting a cost</p>

<p>1-3 year practice life</p> <p>Cost Share Limit: \$7,500/year</p>	<p>share application for animal waste application assistance. Note: For farms that are accepting animal waste, but are not producing it, cost share assistance can be requested for the proper application of waste according to an approved NMP. Select the cost share item that best describes the waste application methods planned when estimating cost. Nutrient Management involving precision (variable rate) application of inorganic fertilizer to cropland would be requested under the Cropland BMP practice.</p> <p>The Kentucky NRCS Technical Guidance Standard for Nutrient Management (590) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Nutrient Management Plan- Written (104)</b></p> <p>5 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice would assist with the development of a Nutrient Management Plan (NMP) to identify nutrient needs of crops and current soil available nutrients within fields receiving animal waste that is imported to the farm. A NMP plan would be used instead of a CNMP when the animal waste is not produced on the farm, but utilized to provide nutrients to fields. The Nutrient Management Plan will also identify potential application setbacks, application timing and placement of nutrients, and any other soil or water related nutrient concerns. A Nutrient Management Plan (104) is required prior to cost share approval for the Nutrient Management (590) practice.</p>
<p><b>Riparian Forest Buffer (391)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to establish trees and shrubs along a stream, around a sinkhole, or other water body when land use conditions meets the Livestock: Animal Feeding Operations BMP Eligibility Criteria and this practice is needed to solve a water quality issues resulting from concentrated livestock. This practice will likely be used in conjunction with other practices as part of the overall waste management system. Design widths will be according to NRCS Technical Guide requirements. Tree and Shrub Site Preparation (490) and the Tree and Shrub Establishment (612) practice will be needed to complete this practice. Fencing (382) will also likely be needed to protect area from livestock damage. Kentucky Division of Forestry should be contacted to develop any tree planting plans.</p> <p>The Kentucky NRCS Technical Guidance Standard for Riparian Forest Buffer (391) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Riparian Herbaceous Cover (390)</b></p> <p>5 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be used to establish a grass vegetative buffer adjacent to a stream, sinkhole, or other water body when land use conditions meets the Livestock: Animal Feeding Operations BMP Eligibility Criteria and when a Filter Strip (393) practice cannot be designed due to site conditions. This practice will likely be used in conjunction with other practices as part of the overall waste management system. The seeding requirements of this practice will follow the guidance of the Critical Area Planting (342) or the Conservation Cover (327) practice depending on site conditions. The seeding width will follow NRCS</p>

	<p>Technical Guide requirements.</p> <p>The Kentucky NRCS Technical Guidance Standard for Riparian Herbaceous Cover (390) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Roof Runoff Structure (558)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be used to transfer roof runoff away from concentrated livestock feeding areas and animal waste storage areas or as a companion practice with a Waste Storage Facility (313), Composting Facility (317), or Animal Mortality Facility (316). This practice could include gutters and downspouts, concrete curbs, trench drains, and possibly storage tanks.</p> <p>The Kentucky NRCS Technical Guidance Standard for Roof Runoff Structure (558) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Roofs and Covers (367)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This is a companion practice of an animal waste management system to help protect a dry Waste Storage Facility (313), animal waste Compost Facility (317), or Animal Mortality Facility (316) from precipitation. A Comprehensive Nutrient Management Plan (CNMP) would be required before submitting an application containing this practice for funding. Roofing can only be used when it is a critical component for the proper function of the practice according to approved engineering plans. It is not to be used as a “stand alone” practice.</p> <p>The Kentucky NRCS Technical Guidance Standard for Roof and Covers (367) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Stream Crossing (578)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will only be used with this BMP when it is needed to move livestock across a stream from one animal feeding area to another. This practice should not be used to allow concentrated livestock numbers to have continuous access to a stream. Division of Water permits may be required when installing a stream crossing.</p> <p>You can find more information about Division of Water Floodplain permits at: <a href="http://water.ky.gov/floodplain/Pages/FloodplainConstruction.aspx">http://water.ky.gov/floodplain/Pages/FloodplainConstruction.aspx</a></p> <p>The Kentucky NRCS Technical Guidance Standard for Stream Crossing (578) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>

<p><b>Subsurface Drain (606)</b></p> <p>20 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice can only be used as a companion practice to improve soil drainage at a site to allow for vegetation establishment in areas that are experiencing damage from an animal feeding operation. Typically used in conjunction with a grassed waterway which has wet or saturated soils or to control seepage that is contributing to soil erosion.</p> <p>The Kentucky NRCS Technical Guidance Standard for Subsurface Drain (606) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Trails and Walkways (575)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice includes the use of gravel on geotextile to provide a stable surface and prevent soil erosion when livestock move to and from feeding areas associated with a Waste Storage Facility (313). Trails and Walkways (575) in pastureland settings, walkways to Winter Feeding pads, gate openings, or approaches to Stream Crossings (578), or to promote rotational grazing should be requested under the Pastureland BMP practice.</p> <p>The Kentucky NRCS Technical Guidance Standard for Trails and Walkways (575) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Tree and Shrub Establishment (612)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be used to establish trees around concentrated livestock facilities or animal waste storage areas to assist with odor problems, stabilize eroded areas, provide shade away from sensitive areas, redirect air movement, or improve visual appearance. This practice will be used in conjunction with the Tree and Shrub Site Preparation (490). Tree and Shrub plantings will follow Kentucky Division of Forestry or NRCS guidance. Kentucky Division of Forestry should be contacted to develop any tree planting plans.</p> <p>The Kentucky NRCS Technical Guidance Standard for Tree and Shrub Establishment (612) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Tree and Shrub Site Preparation (490)</b></p> <p>1 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice can only be used as a companion practice to prepare the site prior to Trees or Shrub Establishment when tree planting is needed to reduce soil erosion or provide water quality benefits as a result of concentrated livestock or animal waste related issues.</p> <p>The Kentucky NRCS Technical Guidance Standard for Tree and Shrub Site Preparation (490) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Underground Outlet (620)</b></p>	<p>This practice can only be used as a companion practice to help remove surface water through an underground pipe outlet to a stable or safe outlet when needed</p>

<p>20 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>with animal feeding areas. Typically used in conjunction with a Water and Sediment Control Basin (638) or possibly with Roof Runoff Structure (558) to transfer clean water to a safe outlet.</p> <p>The Kentucky NRCS Technical Guidance Standard for Underground Outlet (620) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Vegetative Treatment Area (635)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice can only be used as a companion practice with a Waste Storage Facility (313) or Heavy Use Area (561) when recommended as part of a CNMP to filter or treat liquid waste runoff from concentrated livestock feeding areas. Vegetative Treatment Areas must meet specific design criteria that gives consideration to type and volume of liquid waste applied, vegetation grown, and absorptive ability of the soils on the site. Vegetative Treatment Area (635) should be available for harvesting to remove excess nutrients captured in vegetation.</p> <p>The Kentucky NRCS Technical Guidance Standard for Vegetative Treatment Area (635) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Waste Facility Closure (360)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$20,000</p>	<p>This practice is designed to close an old waste storage pond or waste holding facility. If no livestock are present at the site, then a Nutrient Management Plan (NMP) will be required before submitting an application to assess the land that will be receiving the waste. If livestock are present at the site, then a CNMP may be required before submitting an application. This practice is designed to properly close an existing waste storage structure according to approved engineering plans and Kentucky state law requirements. Practice completion must follow NRCS Technical Guide specifications. This practice will likely require Critical Area Planting (342), Mulching (484) and possibly Fence (382) to protect from livestock damage.</p> <p>The Kentucky NRCS Technical Guidance Standard for Waste Facility Closure (360) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p> <p>University of Kentucky Guidance Document AEN125 can be found at: <a href="http://www2.ca.uky.edu/agc/pubs/AEN/AEN125/AEN125.pdf">http://www2.ca.uky.edu/agc/pubs/AEN/AEN125/AEN125.pdf</a></p>
<p><b>Waste Storage Facility (313)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$20,000</p>	<p>This practice includes any of the following practices: holding pond, manure tank, and dry stack pad. A Comprehensive Nutrient Management Plan (CNMP) would be required before submitting an application containing this practice for funding. Several other conservation practices may be needed with the Waste Storage Structure (313) to make it function properly. This practice is strictly designed to store animal waste according to approved engineering plans and Kentucky state law requirements. Any liquid waste holding structure requires a no-discharge</p>

	<p>permit from Kentucky Division of Water prior to construction. More guidance on Kentucky Division of Water no-discharge permits can be found at: <a href="http://dep.ky.gov/formslibrary/Documents/KNDOP(AFO)PermitPage.pdf">http://dep.ky.gov/formslibrary/Documents/KNDOP(AFO)PermitPage.pdf</a></p> <p>The Kentucky NRCS Technical Guidance Standard for Waste Storage Facility (313) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Waste Transfer (634)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$20,000</p>	<p>This practice includes the development of a collection pit and underground PVC pipe to allow for the transfer of liquid animal waste to a Waste Storage Facility (313) or to more environmentally desirable areas of the farm for application. A CNMP will be required before submitting a cost share application containing this practice.</p> <p>The Kentucky NRCS Technical Guidance Standard for Waste Transfer (634) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Waste Treatment Lagoon (359)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$20,000</p>	<p>This practice is designed to have both anaerobic and aerobic holding ponds to biologically treat animal waste prior to application. A Comprehensive Nutrient Management Plan (CNMP) would be required before submitting an application containing this practice for funding. Any liquid waste holding structure requires a no-discharge permit from Kentucky Division of Water prior to construction. More guidance on Kentucky Division of Water no-discharge permits can be found at: <a href="http://dep.ky.gov/formslibrary/Documents/KNDOP(AFO)PermitPage.pdf">http://dep.ky.gov/formslibrary/Documents/KNDOP(AFO)PermitPage.pdf</a></p> <p>The Kentucky NRCS Technical Guidance Standard for Waste Treatment Lagoon (359) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Water and Sediment Control Basin (638)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be installed when it is the best alternative to collect excessive runoff water or store accumulated sediment from eroded areas in a constructed basin near an animal feeding area. Typically, water is removed from the basin through an Underground Outlet (620) that safely disposes of excess water to an acceptable outlet. Water storage area and pipe outlets must be designed according to NRCS engineering standards.</p> <p>The Kentucky NRCS Technical Guidance Standard for Water and Sediment Control Basin (638) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Watering Facility (614)</b></p>	<p>This practice will only be used under this BMP when additional Watering Facilities (614) will aid in the development of a Waste Storage Structure (313) or improve the management of the animal feeding area and permit increased animal</p>

<p>20 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>waste collection in a Waste Storage Facility (313). This practice could also be used to remove livestock from polluted water sources that are currently being impacted by animal feeding operations.</p> <p>The Kentucky NRCS Technical Guidance Standard for Watering Facility (614) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
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# KCP2

## Livestock: Pastureland BMP

### BMP Introduction and Objective:

The Pastureland BMP is designed to address natural resource problems that are occurring on pastureland acres. The list of practices under the Livestock: Pastureland BMP's focuses on solving soil erosion and water quality pollution problems resulting from livestock grazing on these acres. This could require only one practice component, or multiple practice components may be needed to solve the soil and water related concern(s). It is recommended that changes in land management and/or stocking rates be fully evaluated prior to installing any cost share practices. Often, changes in the land management may resolve the natural resource problem(s) without the need for structural practices. Poor operation and maintenance of installed cost share practices will also result in the failure of the practice to solve the natural resource problem. This should be reviewed and discussed with cost share applicants. Please refer to the BMP Eligibility Criteria section to clarify when to request this BMP. This practice should not be requested for assistance with confined livestock feeding operations or where livestock stocking rates are significantly greater than forage production potential. Conservation Practices needed to address issues with concentrated livestock and/or animal waste, that does not meet the Pastureland BMP Eligibility Criteria requirements, should be requested under the Livestock: Animal Feeding Operation (AFO) BMP practice.

All practices should be consistent with recommendations as part of a Kentucky Agriculture Water Quality Act plan and be installed according to approved engineering designs or job sheet recommendations.

### Previous Kentucky State Cost Share Practices That Are Replaced by This BMP:

KCP2A	Heavy Use Area Protection
KCP2B	Winter Feeding Use Area
KCP3	Rotational Grazing System Establishment
KCP8	Stream Crossing
KCP9	Sinkhole Protection
KCP11	Pasture/Hay land Quantity/ Quality & Erosion Control
KCP13	Vegetative Filter Strips
KCP18	Riparian Area Protection



## Current Eligible Practices That May Be Requested Under This BMP:

Critical Area (342)  
Diversion (362)  
Fence (382)  
Forage and Biomass Planting (512)  
Grade Stabilization Structure (410)  
Grassed Waterway (412)  
Heavy Use Area (561)  
    \*Concrete Winter Feeding Area with hay feeding rack  
    \*Rock and Geotextile Winter Feeding Pad  
    \*Concrete Winter Feeding Pad  
    \*Heavy Use Area around Watering Facilities and Gate Openings  
    \*Heavy Use Area crossing for grassed waterway  
Lined Waterway and Outlet (468)  
Livestock Pipeline (516)  
Mulching (484)  
Pond (378)  
Riparian Forest Buffer (391)  
Riparian Herbaceous Cover (390)  
Spring Development (574)  
Stream and Shoreline Protection (580)  
Stream Crossing (578)  
Subsurface Drain (606)  
Trails and Walkways (575)  
Tree and Shrub Establishment (612)  
Tree and Shrub Site Preparation (490)  
Underground Outlet (620)  
Vegetative Treatment Area (635)  
Water and Sediment Control Basin (638)  
Watering Facility (614)  
Water Well (642)

## BMP Eligibility Criteria:

Cost share assistance under this BMP will be utilized when site conditions meets the following criteria:

Eligible land includes permanent pastureland, pastured hay land, and cropland acres planted to annual forages and grazed. This practice can only be requested on sites where livestock stocking rates are less than or equal to one cow/calf pair per 2 acres of pastureland or one stocker calf (400-750 lbs.) per 1 acre of pastureland or if KY Graze tool is used to calculate the stocking rate at 130% or less of the pastureland carrying capacity. If livestock stocking rates exceed these numbers on pastureland acres, then the applicant is ineligible for the Pastureland BMP practices and should request assistance under the Livestock: Animal Feeding Operation (AFO) BMP.

Practice(s) should only be requested to solve existing natural resource problems.

## Cost Share Rates and Payment Limits:

The Kentucky Soil and Water Cost Share Program has established a 75% cost share rate limit based on actual expenses not to exceed the estimated payment rate.

A cost share limit of \$7,500 per applicant is approved for any combination of practice components needed to solve the soil and water resource problems on pastureland acres. Multiple cost share applications, by the same applicant or on the same land, is not permitted for this practice. The cost share payment on all practices will be made at the time of practice completion and certification by the technical agency.

## Eligible Practices:

The eligible practices listed below should only be requested to address existing soil erosion and/or water quality issues resulting on pastureland acres as identified in the BMP Eligibility Criteria for this practice. Other resource concerns associated with Cropland, Farmstead, Forestland, or Livestock: Animal Feeding Operation (AFO) should be requested under a different section of the cost share program. All practices will be designed and installed according to NRCS Technical Guide Standards or other approved standards as listed in this manual. Employees assisting with the implementation of eligible cost share structural practices should have engineering approval before installing or approving these specific cost share practices for program payment.

<b>NRCS BMP Name and Practice Code</b>	<b>Kentucky State Soil and Water State Cost Share Program Practice Guidance/Description</b>
<b>Critical Area Planting (342)</b>  10 year practice life  Cost Share Limit: \$7,500	This practice will be utilized to grade, smooth, and seed eroded areas associated with livestock damage in pastureland settings or vegetating other conservation construction practices associated with this BMP. This practice will likely require Mulching (484) to enhance establishment and Fence (382) to exclude livestock.  The Kentucky NRCS Technical Guidance Standard for Critical Area Planting (342) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.

<p><b>Diversion (362)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be used to construct an earthen channel to divert runoff water to a stable outlet when hillside runoff in pastureland areas are creating soil erosion or sedimentation problems on adjoining bottomland areas. The diversion will be designed according to NRCS Technical Guide Standards. The practice will also require Critical Area Planting (342) and Mulching (484) to establish vegetation and may require Fencing (382) to protect from livestock damage and a Grade Stabilization Structure (410) for outlet protection.</p> <p>The Kentucky NRCS Technical Guide Standard for Diversion (362) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Fence (382)</b></p> <p>20 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to protect sensitive areas (streams, sinkholes, ponds, forestland, and eroded areas) located in or adjacent to pastureland areas from livestock damage and/or pollution. This practice will also be utilized to protect newly constructed conservation practices, in pastureland areas, from livestock damage. Cross fencing can also be requested under this practice to divide larger pastures into smaller fields that would encourage rotational grazing and improved pasture management. This practice can NOT be used to create small lots or feeding pens to control livestock movement for the purpose of feeding management. Only Permanent Fence is approved for cost share under this BMP.</p> <p>The Kentucky NRCS Technical Guide Standard for Fence (382) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Forage and Biomass Planting (512)</b></p> <p>5 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to improve forage species in existing pastureland where poor forage vegetation, weed species encroachment and soil erosion may be occurring. Landowners without livestock should apply for this practice under the Cropland BMP practice. This practice can only be used to create new pastures for expanded grazing acres or to plant existing pastures in improved forages by killing existing undesirable forage vegetation and/or weeds and introducing new forage species. If forage decline is the result of current overgrazing (verify with KY Graze tool) this practice should <u>not</u> be used to make improvements until after stocking rates are reduced to less than 130% KY Graze tool carrying capacities. This practice requires that existing weedy vegetation be controlled before introducing new species and erosive areas be repaired in pastureland acres as part of this practice.</p> <p>Fields established to new forage species using this practice would need to be managed according to the grazing heights and recommendations as established in the Prescribed Grazing (528) standard.</p> <p>The NRCS Technical Guide Standard for Forage and Biomass Planting (512) and Prescribed Grazing (528) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located</p>

	<p>under Section IV of the dropdown menu and in the Conservation Practices category.</p> <p>University of Kentucky AGR-18 providing guidance on seeding rates and seeding dates of various forages and AGR-1 Fertilizer and Lime recommendations can be found with other forage publications at:  <a href="http://www.uky.edu/Ag/Forage/ForagePublications.htm">http://www.uky.edu/Ag/Forage/ForagePublications.htm</a></p>
<p><b>Grade Stabilization Structure (410)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to prevent “head cutting” soil erosion as a result of significant grade changes. Grade Stabilization Structures (410) may serve to reduce gully erosion at the outlet of a grassed waterways and diversions or in areas where concentrate runoff is creating a “head cut” due to over fall. This practice will be installed according to NRCS Technical Guidance and engineering design criteria. Other practices that may be needed are Critical Area Planting (342), Mulching (484), and possibly Fence (382).</p> <p>The NRCS Technical Guide Standard for Grade Stabilization Structure (410) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Grassed Waterway (412)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to control gully erosion from concentrated flow areas occurring in pastureland areas. Critical Area Planting (342), Mulching (484), Fence (382), Filter Strip (393), Grade Stabilization Structure (410), Subsurface Drain (606), or Underground Outlet (620) may be needed along with this practice. Grassed Waterways (412) will be installed according to engineering design specifications.</p> <p>The NRCS Technical Guide Standard for Grassed Waterway (412) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Heavy Use Area (561)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to manage various heavy traffic resource problems occurring from livestock and equipment in pastureland settings.</p> <p><b>Rock and Geotextile or Concrete winter feeding pad:</b> This practice includes the use of gravel on geotextile, concrete pads, or concrete winter feeding pad with hay rack to manage resource concerns associated with winter feeding sites in pastureland settings. A KyNMP will be required to be completed prior to installing HUA for winter feeding areas to verify that nutrients can be managed appropriately on the available land. Refer to the BMP Eligibility Criteria for instructions to determine if stocking rates meets the pastureland criteria for this practice. If stocking rates exceeds the BMP Eligibility Criteria for this practice, then a winter feeding pad is not an eligible practice and the producer would need to request assistance under the Livestock: Animal Feeding Operation (AFO) BMP practice. Refer to the NRCS Technical Guide for sizing guidance, set-back requirements, and siting instructions. Heavy Use Areas associated with livestock</p>

	<p>traffic walkways should be requested under the Trails and Walkways practice.</p> <p>If the producer desires to install a concrete winter feeding pad with a hay feeding rack, then it must meet the Pastureland BMP Eligibility Criteria and also meet the siting criteria established for this type of feeding pad. The planning and siting requirements for Concrete Winter Feeding Areas with hay feeding rack can be found at the Kentucky NRCS SharePoint site under Programs→Kentucky State Cost Share Program→Practice Design Documents→Winter Feeding Area Planning and Design Criteria.</p> <p><b>Watering Facility Pad and Equipment Crossings:</b> The HUA practice will also be used as a companion practice to establish stable traffic areas around livestock Watering Facilities (614) or as a livestock or equipment crossing for a Grassed Waterway (412). Crossings for streams will be requested under the Stream Crossing (578) practice.</p> <p>The Kentucky NRCS Technical Guidance Standard for Heavy Use Area (561) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Lined Waterway or Outlet (468)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice may be needed when gully erosion is occurring and a standard grassed waterway will not solve the problem due to excessive velocities or continuous seepage flow that cannot be managed with an Underground Outlet (620) or a Subsurface Drain (606). The resource problem that is to be addressed with this practice should be the result of damage created by livestock in a pastureland setting. The practice would need to meet NRCS design and specifications.</p> <p>The Kentucky NRCS Technical Guidance Standard for Lined Waterway or Outlet (468) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Livestock Pipeline (516)</b></p> <p>20 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will only be used under this BMP when additional Watering Facilities (614) will aid in better livestock distribution resulting in improved pasture management according to the Prescribed Grazing (528) standard or to protect water source(s) or other sensitive areas from livestock water access and potential pollution. Livestock Pipeline can only be used in conjunction with a livestock Watering Facility (614).</p> <p>The Kentucky NRCS Technical Guidance Standard for Livestock Pipeline (516) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>

<p><b>Mulching (484)</b></p> <p>1 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice can only be used as a companion practice to assist with the vegetation establishment on conservation practices. This practice includes natural materials (hay or straw) and erosion control blankets.</p> <p>The Kentucky NRCS Technical Guidance Standard for Mulching (484) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Pond (378)</b></p> <p>20 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized when there is a lack of available livestock water on pastureland acres resulting in soil erosion or water quality concerns. Lack of livestock water should be resulting in spot grazing, eroding livestock paths, soil compaction, poor vegetation or other soil or water related issues. The pond practice should only be used when there is no other more economical or practical water supply sources available. Newly constructed pond(s) are required to be fenced and a pipeline and tank or livestock ramp installed and must help improve current livestock distribution on pastureland acres or cause new pastureland acres to become available for grazing.</p> <p>Companion practices such as Fence (382), Livestock Pipeline (516), Watering Facility (614), Critical Area Planting (342), and Mulching (484) will also likely be needed with this practice.</p> <p>The Kentucky NRCS Technical Guidance Standard for Pond (378) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Riparian Forest Buffer (391)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to establish trees and shrubs along a stream, around a sinkhole, or other water body when land use conditions meets the Pastureland BMP Eligibility Criteria and this practice is needed to solve a water quality issue(s). This practice will likely be used in conjunction with other practices as part of the overall pasture management system. Design widths will be according to NRCS Technical Guide requirements. Tree and Shrub Site Preparation (490) and the Tree and Shrub Establishment (612) practice will be needed to complete this practice. Fencing (382) will also likely be needed to protect area from livestock damage. Kentucky Division of Forestry should be contacted to develop any tree planting plans.</p> <p>The Kentucky NRCS Technical Guidance Standard for Riparian Forest Buffer (391) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>

<p><b>Riparian Herbaceous Cover (390)</b></p> <p>5 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be used to establish a grass vegetative buffer adjacent to a stream, sinkhole, or other water body when land use conditions meets the Pastureland BMP Eligibility Criteria and when a Filter Strip (393) practice cannot be designed due to site conditions. This practice will likely be used in conjunction with other practices as part of the overall pasture management system. The seeding requirements of this practice will follow the guidance of the Critical Area Planting (342) or the Conservation Cover (327) practice depending on site conditions.</p> <p>The Kentucky NRCS Technical Guidance Standard for Riparian Herbaceous Cover (390) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Stream Crossing (578)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will only be used with this BMP when it is needed to move livestock across a stream from one pasture area to another without causing streambank damage. This practice should not be used to improve livestock access to a stream unless the remaining streambanks are fenced and improvements to existing streambank conditions results. This practice may also be needed when there is no other source of livestock water available in a pasture field and it is the most practical alternative to solve the resource problem. Kentucky Division of Water permits may be required when installing a stream crossing.</p> <p>You can find more information about Division of Water Floodplain permits at: <a href="http://water.ky.gov/floodplain/Pages/FloodplainConstruction.aspx">http://water.ky.gov/floodplain/Pages/FloodplainConstruction.aspx</a></p> <p>The Kentucky NRCS Technical Guidance Standard for Stream Crossing (578) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Subsurface Drain (606)</b></p> <p>20 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice can only be used as a companion practice to improve soil drainage and to allow for vegetation establishment in pastureland areas that are experiencing damage from concentrated water flow and resulting in soil erosion. This practice is typically used in conjunction with a grassed waterway which has wet or saturated soils or to control seepage that is contributing to soil wetness in the waterway area.</p> <p>The Kentucky NRCS Technical Guidance Standard for Subsurface Drain (606) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Trails and Walkways (575)</b></p> <p>10 year practice life</p>	<p>This practice includes the use of gravel on geotextile to provide a stable surface and prevent further soil erosion when livestock move to and from pastureland areas. This includes Trails and Walkways (575) in pastureland settings, walkways to Winter Feeding pads, or approaches to Stream Crossings (578).</p>

<p>Cost Share Limit: \$7,500</p>	<p>The Kentucky NRCS Technical Guidance Standard for Trails and Walkways (575) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Tree and Shrub Establishment (612)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be used to establish trees when soil erosion or water quality issues can be resolved with this practice. This may include plantings to stabilize eroded areas, provide shade away from sensitive areas, or improve streambank or shoreline conditions. This practice will be used in conjunction with the Tree and Shrub Site Preparation (490). Tree and Shrub plantings will follow Kentucky Division of Forestry or NRCS guidance.</p> <p>The Kentucky NRCS Technical Guidance Standard for Tree and Shrub Establishment (612) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Tree and Shrub Site Preparation (490)</b></p> <p>1 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice can only be used as a companion practice to prepare the site prior to Trees or Shrub Establishment (612) when tree planting is needed to reduce soil erosion or provide water quality benefits in pastureland settings.</p> <p>The Kentucky NRCS Technical Guidance Standard for Tree and Shrub Site Preparation (490) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Underground Outlet (620)</b></p> <p>20 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice can only be used as a companion practice to help remove surface water through an underground pipe outlet to a stable or safe outlet when needed to address a soil erosion or water quality resource concern. This practice is typically used in conjunction with a Water and Sediment Control Basin (638) or possibly with Roof Runoff (558) to transfer clean water to a safe outlet.</p> <p>The Kentucky NRCS Technical Guidance Standard for Underground Outlet (620) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Vegetative Treatment Area (635)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice can only be used as a companion practice with a Heavy Use Area to filter runoff from winter feeding areas prior to entering a water source or other sensitive areas. Vegetative Treatment Area (635) should be available for harvesting to remove excess nutrients captured in vegetation.</p> <p>The Kentucky NRCS Technical Guidance Standard for Vegetative Treatment Area (635) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>



<p><b>Water and Sediment Control Basin (638)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be installed when it is the best alternative to collect excessive runoff water or store accumulated sediment from eroded areas in a constructed basin in a pastureland setting. Typically, water is removed from the basin through an Underground Outlet (620) that safely disposes of excess water to an acceptable outlet. Water storage area and pipe outlets must be designed according to NRCS engineering standards.</p> <p>The Kentucky NRCS Technical Guidance Standard for Water and Sediment Control Basin (638) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Watering Facility (614)</b></p> <p>20 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will only be used under this BMP when additional Watering Facilities (614) will aid in reducing soil erosion by limiting livestock travel paths, improving water quality by better distributing livestock grazing in fields or by removing livestock from a water source such as a stream, pond, sinkhole, or spring. Watering facilities should not be placed closer than 800 feet in the same pasture field unless it is located in an adjoining pasture fence line. Under the Pastureland BMP, watering facilities are not approved for cost share in feedlots, bull lots, or other small confinement areas. When Watering Facilities (614) are being installed to better distribute grazing, pastures should be managed according to the Prescribed Grazing (528) standard grazing heights requirements.</p> <p>The Kentucky NRCS Technical Guidance Standard for Watering Facility (614) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Water Well (642)</b></p> <p>20 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>Water wells under this BMP can only be developed to provide livestock water in pasture settings to better distribute grazing or provide other water quality benefits. Utilize this practice when no other economical source of water (public water line, spring, pond, stream, etc.) is available for livestock and geologic site conditions are conducive for a successful water well. Water wells that are drilled and do not produce water cannot receive a cost share payment. Water wells developed for confined livestock facilities or for irrigation purposes are not permitted under this BMP.</p> <p>In addition to the Water Well practice, Livestock Pipeline (516), Watering Facility (614), and Heavy Use Area (561) around the watering facility will likely be needed.</p> <p>The Kentucky NRCS Technical Guidance Standard for Water Well (642) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>

# KCP3

## Cropland BMP

### BMP Introduction and Objective:

This practice will only be requested on lands planted in annual crops, hay land acres, meadow areas, or other open areas that are in grasses, legumes, or forbs and are not used for pastureland. Cropland BMP's focuses on solving soil erosion and water quality pollution problems resulting from cropland runoff. This could require only one practice, or multiple practices may be needed to solve the soil and water related concern(s). Please refer to the BMP Eligibility Criteria for more clarity on when this BMP should be requested. The list of practices under the Cropland BMP's focuses on solving water quality pollution problems resulting from soil erosion or nutrient runoff associated with cropland areas. Note: some of the practices under this BMP may require a Nutrient Management Plan (NMP) to be developed prior to the application of the conservation practices. Producers may also utilize the NRCS EQIP program to request cost share assistance in developing a NMP, if applicable, prior to making a Kentucky Soil and Water State cost share application for these identified practices.

All practices should be consistent with recommendations as part of a Kentucky Agriculture Water Quality Act plan and be installed according to approved engineering designs or job sheet recommendations.

### Previous Kentucky State Cost Share Practices That Are Replaced by This BMP:

KCP7	Strip Intercropping System
KCP8	Stream Crossing
KCP9	Sinkhole Protection
KCP10	Cropland Erosion Control System
KCP13	Vegetative Filter Strips
KCP14	Integrated Crop Management
KCP18	Riparian Area Protection
KCP20	Soil Health/Quality Management
KMRBI1	Precision Nutrient Management Incentive
KMRBI2	Soil Health Cropping System

## Current Eligible Practices That May Be Requested Under This BMP:

Cover Crop (340)

Critical Area (342)

\*Practice Vegetation Establishment ONLY

Diversion (362)

Field Border (386)

Filter Strip (393)

Forage and Biomass Planting (512)

Grade Stabilization Structure (410)

Grassed Waterway (412)

Lined Waterway or Outlet (468)

Mulching (484)

Nutrient Management (590)

\*Inorganic fertilizer ONLY

Nutrient Management Plan (104)

Residue and Tillage (329)

\*Conversion to no-till or strip-tillage

Riparian Forest Buffer (391)

Riparian Herbaceous Cover (390)

Streambank and Shoreline Protection (580)

Stream Crossing (578)

Subsurface Drain (606)

Terrace (600)

Tree and Shrub Establishment (612)

Tree and Shrub Site Preparation (490)

Underground Outlet (620)

Water and Sediment Control Basin (638)

## BMP Eligibility Criteria:

Cost share assistance under this BMP will be utilized when site conditions meets the following criteria:

1. Eligible lands include fields with soil or water related resource problems that are planted in annual crops, abandoned crop fields, hay land acres, meadow areas, or other open areas that are not used for pastureland or accessed by livestock at any point during the year.

Practice(s) should only be requested to solve natural resource problems. This may require only one practice, or multiple practices may be needed. It is recommended that changes in land management be fully evaluated prior to installing any cost share structural practices. Many times, changes in the land management may resolve the natural resource problem(s) without the need of structural practices. Poor operation and maintenance of installed cost share practices will result in the failure of the practice to solve the natural resource problem. This should be reviewed and discussed with cost share applicants.

## Cost Share Rates and Limits:

The Kentucky Soil and Water Cost Share Program has established a 75% cost share rate limit based on actual expenses not to exceed the estimated payment rate.

A cost share limit of \$7,500 per applicant is approved for any combination of practice components that are needed to solve the cropland resource problems. Multiple applications by the same applicant or on the same land is not permitted. This cost share payment will be made on these practices at the time of practice completion and certification by the technical personnel.

## Eligible Practices:

The eligible practice components listed below should only be requested to address existing soil erosion and/or water quality issues resulting on cropland acres as identified in the BMP Eligibility Criteria for this practice. Other resource concerns associated with concentrated livestock and animal waste, pastureland, farmstead, and forestland should be requested under a different section of the cost share program. All practices will be designed and installed according to NRCS Technical Guide Standards or other approved standards as identified in this manual. Employees assisting with the implementation of eligible cost share structural practices should have engineering job approval and/or NRCS practice design approval before installing or approving structural practices for program payment.

<b>NRCS BMP Name and Practice Code</b>	<b>Kentucky State Soil and Water State Cost Share Program Practice Guidance/Description</b>
<p><b>Cover Crop (340)</b></p> <p>1 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be used to provide seasonal vegetative cover to protect the soil on annually planted cropland acres from soil erosion or to improve soil quality. This practice is not allowed for cost share assistance on fields that are considered highly erodible land (HEL) and that already require a cover crop to meet Food Security Act requirements. The cover crop cannot be harvested for hay or grain. Light grazing is allowed. No more than ½ of the cover crop growth can be removed by grazing livestock.</p> <p>Cover crops must be established according to NRCS specifications. Follow the appropriate NRCS cover crop job sheet recommendations when establishing a cover crop. Job Sheets describing the different cover crop options can be found under “Cover Crop (340) Job Sheets” in Section IV of the NRCS Technical Guide Standard for 340.</p> <p>The NRCS Technical Guide Standard for Cover Crop (340) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a>. After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Critical Area Planting (342)</b></p>	<p>This practice will be utilized to establish vegetation on newly constructed conservation practices by preparing a seedbed, seeding and fertilizing. This</p>

<p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>practice will likely require Mulching (484) to enhance establishment.</p> <p>The Kentucky NRCS Technical Guidance Standard for Critical Area Planting (342) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Diversion (362)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be used to construct an earthen channel to divert runoff water to a stable outlet when hillside runoff is creating erosion or sedimentation problems on adjoining cropland. The diversion will be designed according to NRCS Technical Guide Standards. The practice will also require Critical Area Planting (342) and Mulching (484) to establish vegetation. It also may require a Grade Stabilization Structure (410) for outlet protection.</p> <p>The Kentucky NRCS Technical Guide Standard for Diversion (362) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Field Border (386)</b></p> <p>5 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be used to establish a perennial vegetative border around annually planted crop fields to reduce end-row erosion and improve water quality leaving the field. This border can also be used for hay production or wildlife benefit. The field border will be seeded according to NRCS Technical Guide standards.</p> <p>The seeding requirements for this practice will follow the guidance of the Critical Area Planting (342) or the Conservation Cover (327) practice depending on site conditions.</p> <p>The Kentucky NRCS Technical Guide Standard for Field Border (386) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Filter Strip (393)</b></p> <p>5 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized when needed to create a grassed buffer area between cropland acres and streams, sinkholes, or other water bodies to help filter contaminated runoff from entering these sensitive areas. Filter Strips must be designed according to RUSLE2 calculations and seeded according to the Filter Strip (393) Technical Guide Standard. Design guidance for Filter Strips (393) using RUSLE2 can be at: <a href="https://efotg.sc.egov.usda.gov/references/public/KY/KY393_Filter_Strip_(393)_National_Agron_Tech_Note_No_2.pdf">https://efotg.sc.egov.usda.gov/references/public/KY/KY393_Filter_Strip_(393)_National_Agron_Tech_Note_No_2.pdf</a></p> <p>The NRCS Technical Guide Standard for Filter Strip (393) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>

<p><b>Forage and Biomass Planting (512)</b></p> <p>5 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to convert annually planted cropland acres to perennial vegetation. Seeding establishment will follow NRCS standards and University of Kentucky recommendations. Endophyte infected tall fescue (Ky-31 fescue) and annual grasses or annual legumes are not approved for cost share funding. All seeding must contain both perennial grasses and legumes. A soil test is required and fertilizer and lime must be applied according to University of Kentucky recommendations prior to seeding. Seeding rates will follow the NRCS Technical Guide standard for 512.</p> <p>The NRCS Technical Guide Standard for Forage and Biomass Planting (512) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p> <p><a href="http://www.uky.edu/Ag/Forage/ForagePublications.htm">University of Kentucky AGR-18 providing guidance on seeding rates and seeding dates of various forages and AGR-1 Fertilizer and Lime recommendations can be found with other forage publications at: http://www.uky.edu/Ag/Forage/ForagePublications.htm</a></p>
<p><b>Grade Stabilization Structure (410)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to prevent “head cutting” soil erosion as a result of significant grade changes. Grade Stabilization Structures (410) may serve to reduce gully erosion at the outlet of a grassed waterways and diversions or in areas where concentrate runoff is creating a “head cut” due to over fall. This practice will be installed according to NRCS Technical Guidance and engineering design criteria. Other practices that may be needed are Critical Area Planting (342) and Mulching (484).</p> <p>The NRCS Technical Guide Standard for Grade Stabilization Structure (410) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Grassed Waterway (412)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to control gully erosion from concentrated flow areas occurring in cropland areas. Critical Area Planting (342), Mulching (484), Filter Strip (393), Grade Stabilization Structure (410), Subsurface Drain (606), or Underground Outlet (620) may be needed along with this practice. Grassed Waterways (412) will be installed according to engineering design specifications.</p> <p>The NRCS Technical Guide Standard for Grassed Waterway (412) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Heavy Use Area (561)</b></p> <p>10 year practice life</p>	<p>This practice will be utilized, under the Cropland BMP practice, to install a stable equipment crossing for a Grassed Waterway (412). Crossings for streams will be requested under the Stream Crossing (578) practice. Other applications of the Heavy Use Area (561) practice will be requested under a separate BMP depending on the resource problem that is to be addressed.</p>

<p>Cost Share Limit: \$7,500</p>	<p>The Kentucky NRCS Technical Guidance Standard for Heavy Use Area (561) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Lined Waterway or Outlet (468)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice may be needed when gully erosion is occurring and a standard grassed waterway will not solve the problem due to excessive velocities or continuous seepage flow that cannot be managed with an Underground Outlet (620) or a Subsurface Drain (606). The practice would need to meet NRCS design and specifications.</p> <p>The Kentucky NRCS Technical Guidance Standard for Lined Waterway or Outlet (468) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Mulching (484)</b></p> <p>1 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice can only be used as a companion practice to assist with the vegetation establishment on conservation practices. This practice includes natural materials (hay or straw) or erosion control blankets.</p> <p>The Kentucky NRCS Technical Guidance Standard for Mulching (484) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Nutrient Management (590)</b></p> <p>1-3 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice would assist with the cost of precision applying inorganic fertilizer to cropland acres according to a NMP. A NMP will be required before submitting a cost share application. The method of nutrient application would need to be an improvement from existing conditions to be eligible for cost share assistance. Payment rates will be determined by the level of nutrient application improvements implemented on fields. Job Sheets describing the different precision nutrient management options can be found under “Job Sheets” in Section IV of the NRCS Technical Guide Standard for 590. Farms producing or accepting animal waste should apply for this practice under the Livestock: Animal Feeding Operations BMP. Cost share assistance to develop a NMP may be requested under the EQIP program or Kentucky State Cost Share Program.</p> <p>The Kentucky NRCS Technical Guidance Standard for Nutrient Management (590) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Nutrient Management Plan-Written (104)</b></p> <p>5 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice would assist with the development of a Nutrient Management Plan to identify nutrient needs of crops and current soil available nutrients within cropland fields. The Nutrient Management Plan will also identify potential application setbacks, application timing and placement of nutrients, and any other soil or water related nutrient concerns. A Nutrient Management Plan (104) is</p>

	required prior to cost share approval for the Nutrient Management (590) practice.
<b>Residue &amp; Tillage (329)</b>  1-3 year practice life  Cost Share Limit: \$7,500/year	<p>This practice will be used to convert to no-till or strip tillage planting methods in any annually planted crops where no-till or strip tillage have not been fully adopted by the producer. Crops could include grain crops, tobacco, small grains, or vegetables crops. The adoption of this practice should result in soil savings over the previous cropping system to be eligible for cost share. RUSLE2 may be used to verify soil savings over the previous cropping system.</p> <p>The Kentucky NRCS Technical Guidance Standard for Residue and Tillage (329) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<b>Riparian Forest Buffer (391)</b>  15 year practice life  Cost Share Limit: \$7,500	<p>This practice will be utilized to establish trees and shrubs along a stream, around a sinkhole, or other water body when land use conditions meets the Cropland BMP Eligibility Criteria and this practice is needed to solve a water quality issue(s). This practice will likely be used in conjunction with other practices as part of the overall cropland management system. Design widths will be according to NRCS Technical Guide requirements. Tree and Shrub Site Preparation (490) and the Tree and Shrub Establishment (612) practice will be needed to complete this practice. Kentucky Division of Forestry should be contacted to develop any tree planting plans.</p> <p>The Kentucky NRCS Technical Guidance Standard for Riparian Forest Buffer (391) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<b>Riparian Herbaceous Cover (390)</b>  5 year practice life  Cost Share Limit: \$7,500	<p>This practice will be used to establish a perennial vegetative buffer adjacent to a stream, sinkhole, or other water body when land use conditions meets the Cropland BMP criteria and when a Filter Strip (393) practice cannot be designed due to site conditions. The seeding requirements of this practice will follow the guidance of the Critical Area seeding (342) or the Conservation Cover (327) practice depending on site conditions.</p> <p>The Kentucky NRCS Technical Guidance Standard for Riparian Herbaceous Cover (390) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>



<p><b>Stream Crossing (578)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will only be used with this BMP when it is needed to establish a stable equipment crossing on a stream or erosive area to allow access to a crop field(s) without causing streambank erosion damage. An existing stream crossing resource problem must exist before this practice can be requested. This practice is not intended to be used to create new stream crossings unless it is solving an existing stream crossing resource concern. Kentucky Division of Water permits may be required when installing a stream crossing.</p> <p>You can find more information about Division of Water Floodplain permits at: <a href="http://water.ky.gov/floodplain/Pages/FloodplainConstruction.aspx">http://water.ky.gov/floodplain/Pages/FloodplainConstruction.aspx</a></p> <p>The Kentucky NRCS Technical Guidance Standard for Stream Crossing (578) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Subsurface Drain (606)</b></p> <p>20 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice can only be used as a companion practice to improve soil drainage at a site to allow for vegetation establishment in cropland areas that are experiencing damage from concentrated flow or resulting in soil erosion. It is typically used in conjunction with a grassed waterway which has wet or saturated soils or to control seepage that is contributing to soil erosion. This practice cannot be used to improve drainage in crop fields unless it is used in conjunction with another soil erosion control practice.</p> <p>The Kentucky NRCS Technical Guidance Standard for Subsurface Drain (606) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Terrace (600)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be used to control soil erosion as a result of long field slopes occurring in cropland areas that are creating soil erosion resource concerns. A stable outlet is required to discharge the runoff water collected by the terrace. A Grassed Waterway (412) or Grade Stabilization Structure (410) may be needed in conjunction with this practice. Terraces will be installed according to NRCS guidance.</p> <p>The Kentucky NRCS Technical Guidance Standard for Terrace (600) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Tree and Shrub Establishment (612)</b></p> <p>15 year practice life</p>	<p>This practice will be used to establish trees on cropland areas when soil erosion or water quality issues can be resolved with this practice. This practice may be used to remove areas from cropland production, to stabilize eroded areas, or to improve streambank, sinkhole, or shoreline conditions. This practice will be used in conjunction with the Tree and Shrub Site Preparation (490). Tree and Shrub plantings will follow Kentucky Division of Forestry or NRCS guidance. Kentucky Division of Forestry should be contacted to develop any tree planting</p>

<p>Cost Share Limit: \$7,500</p>	<p>plans.</p> <p>The Kentucky NRCS Technical Guidance Standard for Tree and Shrub Establishment (612) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Tree and Shrub Site Preparation (490)</b></p> <p>1 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice can only be used as a companion practice to prepare the site prior to Trees or Shrub Establishment (612) when tree planting is needed to reduce soil erosion or provide water quality benefits in cropland settings. Site preparation will follow Kentucky Division of Forestry plan recommendations.</p> <p>The Kentucky NRCS Technical Guidance Standard for Tree and Shrub Site Preparation (490) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Underground Outlet (620)</b></p> <p>20 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice can only be used as a companion practice to help remove surface water through an underground pipe to a stable or safe outlet when it is needed to address a soil erosion or water quality resource concern. It is typically used in conjunction with a Water and Sediment Control Basin (638) to transfer runoff water to a safe outlet.</p> <p>The Kentucky NRCS Technical Guidance Standard for Underground Outlet (620) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Water and Sediment Control Basin (638)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be installed when it is the best alternative to controlling gully erosion by collecting runoff water and storing accumulated sediment from eroding areas on cropland acres. Typically, the basin water is removed through an Underground Outlet (620) that safely disposes of excess water to an acceptable outlet. Water and Sediment Control Basins and pipe outlets must be designed according to NRCS engineering standards.</p> <p>The Kentucky NRCS Technical Guidance Standard for Water and Sediment Control Basin (638) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>

# KCP4

## Forestland BMP

### BMP Introduction and Objective:

This practice should only be requested on sites with soil or water natural resource problems that are occurring in woodland areas, harvested forestland sites, recently tree planted sites, early successional wooded sites, and any other non-pastured forested sites. BMP practices needed in woodland areas that are currently accessed by livestock should be requested under the Livestock: Pastureland BMP practice or Livestock: Animal Feeding Operation (AFO) BMP practice. Please refer to the BMP Eligibility Criteria under this practice for more clarity on when to request this BMP. Solving the resource concern(s) could require only one practice or multiple practices may be needed to solve the soil and water related issue(s).

All practices should be consistent with recommendations as part of a Kentucky Agriculture Water Quality Act plan and be installed according to approved engineering designs or job sheet recommendations.

### Previous Kentucky State Cost Share Practices That Are Replaced by This BMP:

KCP6	Forest Land Erosion Control System
KCP8	Stream Crossing
KCP9	Sinkhole Protection
KCP18	Riparian Area Protection

### Current Eligible Practices That May Be Requested Under This BMP:

Brush Management (314)  
Critical Area (342)  
Diversion (362)  
Forest Management Plan (106)  
Forest Stand Improvement (666)  
Grade Stabilization Structure (410)  
Grassed Waterway (412)  
Heavy Use Area (561)  
Lined Waterway or Outlet (468)  
Mulching (484)  
Riparian Forest Buffer (391)

Road/Trail/Landing Closure and Treatment (654)  
Stream Crossing (578)  
Tree and Shrub Establishment (612)  
Tree and Shrub Site Preparation (490)  
Underground Outlet (620)  
Water and Sediment Control Basin (638)

### BMP Eligibility Criteria:

Cost share assistance under this BMP will be utilized when site conditions meets the following criteria:

1. Eligible lands include areas with soil or water related resource problems that are currently in woody vegetation and are not accessed by livestock. This includes newly planted forest areas, natural successional areas, existing forestland, fruit or nut tree plantings, or other sites with trees or shrubs present.

Practice(s) should only be requested to solve natural resource problems. This may require only one practice, or multiple conservation practices may be needed. It is recommended that changes in land management practices be fully evaluated prior to installing any cost share structural practices. Improvements in land management practices may resolve the natural resource problem(s) without the need of structural engineering practices. Poor operation and maintenance of installed cost share practices will result in the failure of the practice to solve the natural resource problem. This should be reviewed and discussed with cost share applicants.

### Cost Share Rates and Limits:

The Kentucky Soil and Water Cost Share Program has established a 75% cost share rate limit based on actual expenses not to exceed the estimated payment rate.

A cost share limit of \$7,500 is approved for any combination of practice components that are needed to solve the forestland resource problems. Multiple applications by the same applicant or on the same land is not permitted. The cost share payment will be made on these practices at the time of practice completion and certification by the technical agency.

## Eligible Practices:

The eligible practices listed below should only be requested to address existing soil erosion and/or water quality issues resulting on forestland acres as identified in the BMP Eligibility Criteria for this practice. Other resource concerns associated with the concentrated livestock and animal waste, pastureland, farmstead, and cropland should be requested under a different section of the cost share program. All practices will be designed and installed according to NRCS Technical Guide Standards or other approved standards as identified in this manual. Employees assisting with the implementation of eligible cost share structural practices should have engineering job approval before installing or approving structural practices for program payment.

<b>NRCS BMP Name and Practice Code</b>	<b>Kentucky State Soil and Water State Cost Share Program Practice Guidance/Description</b>
<p><b>Brush Management (314)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized on existing woodland sites, newly tree planted areas, or natural regeneration areas to control invasive species that are hindering the growth and health of the forestland area. This practice will require a Forest Stewardship Plan developed by Kentucky Division of Forestry or a forestry consultant recommending the treatment of invasive species on the site where cost share is requested.</p> <p>The NRCS Technical Guide Standard for Brush Management (314) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Critical Area (342)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to grade, smooth, and seed eroded areas in forestland settings or vegetating other conservation construction practices associated with this BMP. This practice will likely require Mulching (484) to enhance establishment.</p> <p>The NRCS Technical Guide Standard for Critical Area (342) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Diversion (362)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be used to construct an earthen channel to divert runoff water to a stable outlet when hillside runoff in forestland areas is creating soil erosion or sedimentation problems on adjoining areas. The diversion will be designed according to NRCS Technical Guide Standards. The practice will also require Critical Area Planting (342) and Mulching (484) to establish vegetation.</p> <p>The NRCS Technical Guide Standard for Diversion (362) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>

<p><b>Forest Management Plan (106)</b></p> <p>5 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be used to help develop a Forest Management Plan to advise the landowner which practices may be need on forestland acres. This practice is required prior to requesting cost share for Brush Management (314) or Forest Stand Improvement (666).</p> <p>Forest Stewardship Plans that are developed by Kentucky Division of Forestry, at no cost to the landowner, are not eligible for cost share. This practice would only be requested when the availability or Kentucky Division of Forestry personnel are limited or due to the complexity of the forest plan, other private forestry consultants are needed to develop the plan.</p>
<p><b>Forest Stand Improvement (666)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7500</p>	<p>This practice will be used to improve the stand quality and health of forestland by killing or deadening undesirable or unhealthy tree species. This practice will require a Forest Stewardship Plan developed by Kentucky Division of Forestry or a forestry consultant recommending Forest Stand Improvement (666) on selected acres. Participants are expected to contact a private consultant forester to mark trees if Kentucky Division of Forestry is not available.</p> <p>The NRCS Technical Guide Standard for Forest Stand Improvement (666) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Grade Stabilization Structure (410)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to prevent “head cutting” soil erosion as a result of significant grade changes. Grade Stabilization Structures (410) may serve to reduce gully erosion at the outlet of a grassed waterways and diversions or in areas where concentrate runoff is creating a “head cut” due to over fall. This practice will be installed according to NRCS Technical Guidance and engineering design criteria. Other practices that may be needed are Critical Area Planting (342) and Mulching (484).</p> <p>The NRCS Technical Guide Standard for Grade Stabilization Structure (410) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Grassed Waterway (412)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to control gully erosion from concentrated flow areas occurring in forestland areas. Critical Area Planting (342), Mulching (484), Grade Stabilization Structure (410), or Underground Outlet (620) may be needed along with this practice. Grassed Waterways (412) will be installed according to engineering design specifications.</p> <p>The NRCS Technical Guide Standard for Grassed Waterway (412) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>

<p><b>Lined Waterway or Outlet (468)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice may be needed when gully erosion is occurring and a standard grassed waterway will not solve the problem due to excessive velocities or continuous seepage flow that cannot be managed with an Underground Outlet (620) or a Subsurface Drain (606). The practice would need to meet NRCS design and specifications.</p> <p>The NRCS Technical Guide Standard for Lined Waterway or Outlet (468) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Mulching (484)</b></p> <p>1 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice can only be used as a companion practice to assist with the vegetation establishment on conservation practices. This practice includes natural materials (hay or straw) and erosion control blankets.</p> <p>The NRCS Technical Guide Standard for Mulching (484) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Riparian Forest Buffer (391)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to establish trees and shrubs along a stream, around a sinkhole, or other water body when land use conditions meets the Forestland BMP Eligibility Criteria and this practice is needed to solve a water quality issue(s). This practice will likely be used in conjunction with other practices. Design widths will be according to NRCS Technical Guide requirements. Tree and Shrub Site Preparation (490) and the Tree and Shrub Establishment (612) practice will be needed to complete this practice. Kentucky Division of Forestry should be contacted to develop any tree planting plans.</p> <p>The Kentucky NRCS Technical Guidance Standard for Riparian Forest Buffer (391) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Stream Crossing (578)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will only be used with this BMP when it is needed to move equipment across a stream from one forested area to another without causing streambank damage. This practice should not be used to create new stream crossings without a present stream crossing (causing natural resource problems) that will be closed or removed. Kentucky Division of Water permits may be required when installing a stream crossing.</p> <p>You can find more information about Division of Water Floodplain permits at: <a href="http://water.ky.gov/floodplain/Pages/FloodplainConstruction.aspx">http://water.ky.gov/floodplain/Pages/FloodplainConstruction.aspx</a></p> <p>The Kentucky NRCS Technical Guidance Standard for Stream Crossing (578) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the</p>

	dropdown menu and in the Conservation Practices category.
<p><b>Tree and Shrub Establishment (612)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be used to establish trees or improve existing stands when soil erosion or water quality issues can be resolved with this practice. This may include stabilizing eroded areas or improving streambank and shoreline conditions. This practice will be used in conjunction with the Tree and Shrub Site Preparation (490). Tree and Shrub plantings will follow Kentucky Division of Forestry or NRCS guidance.</p> <p>The Kentucky NRCS Technical Guidance Standard for Tree and Shrub Establishment (612) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Tree and Shrub Site Preparation (490)</b></p> <p>1 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice can only be used as a companion practice to prepare the site prior to Trees or Shrub Establishment (612) when tree planting is needed to reduce soil erosion or provide water quality benefits in forestland settings.</p> <p>The Kentucky NRCS Technical Guidance Standard for Tree and Shrub Site Preparation (490) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Underground Outlet (620)</b></p> <p>20 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice can only be used as a companion practice to help remove surface water through an underground pipe outlet to a stable or safe outlet when needed to address a soil erosion or water quality resource concern. Typically used in conjunction with a Water and Sediment Control Basin (638) to transfer runoff water to a safe outlet without causing soil erosion.</p> <p>The Kentucky NRCS Technical Guidance Standard for Underground Outlet (620) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Water and Sediment Control Basin (638)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be installed when it is the best alternative to collect excessive runoff water or store accumulated sediment from eroded areas in a constructed basin in a forestland setting. Typically, water is removed from the basin through an Underground Outlet (620) that safely disposes of excess water to an acceptable outlet. Water storage area and pipe outlets must be designed according to NRCS engineering standards.</p> <p>The Kentucky NRCS Technical Guidance Standard for Water and Sediment Control Basin (638) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>



# KCP5

## Streambank BMP

### BMP Introduction and Objective:

The Streambank BMP is designed to address natural resource problems that are occurring within the stream channel and impacting or eroding the current streambank or shoreline. This BMP should only be selected when the NRCS practice Streambank and Shoreline Protection (580) is planned and active streambank erosion is worsening sediment loading into stream channels. Only Strahler Stream Orders 3 or less are eligible for this practice. Larger streams are ineligible due to NRCS engineering and design approval limits. The other companion practices listed with this BMP should only be used when needed to improve the function and/or life expectancy of the Streambank and Shoreline Protection (580) practice.

### Previous Kentucky State Cost Share Practices That Are Replaced by This BMP:

KCP12      Streambank Stabilization/Restoration

### Current Eligible Practices That May Be Requested Under This BMP:

Critical Area (342)  
Fence (382)  
Filter Strip (393)  
Grade Stabilization Structure (410)  
Mulching (484)  
Riparian Forest Buffer (391)  
**Streambank and Shoreline Protection (580)<sup>1</sup>**  
Stream Crossing (578)  
Tree and Shrub Site Preparation (490)

<sup>1</sup> This practice is required to be eligible for any of the other companion practices.

### BMP Eligibility Criteria:

Cost share assistance under this BMP will be utilized when site conditions meets the following criteria:

Eligible sites include stream segments with streambank erosion that are not larger than a Strahler Stream Order 3 and are determined to need the Streambank and Shoreline Protection (580) practices to stabilize streambank erosion.

Practice(s) should only be requested to solve existing natural resource problems.

### Cost Share Rates and Payment Limits:

The Kentucky Soil and Water Cost Share Program has established a 75% cost share rate limit based on actual expenses not to exceed the estimated payment rate.

A cost share limit of \$7,500 per applicant is approved for any combination of practice components needed to resolve the streambank and shoreline erosion resource concern(s). Multiple cost share applications, by the same applicant or on the same land, is not permitted for this practice. The cost share payment on all practices will be made at the time of practice completion and certification by the technical agency.

### Eligible Practices:

The eligible practices listed below should only be requested to address existing streambank or shoreline soil erosion as identified in the BMP Eligibility Criteria for this practice. Other resource concerns associated with the Cropland, Farmstead, Forestland, Livestock: Animal Feeding Operation (AFO), or Livestock: Pastureland should be requested under a different BMP of the cost share program. All practices will be designed and installed according to NRCS Technical Guide Standards or other approved standards as listed in this manual. Employees assisting with the implementation of eligible cost share structural practices should have engineering approval before installing or approving these specific cost share practices for program payment.

NRCS BMP Name and Practice Code	<b>Kentucky State Soil and Water State Cost Share Program Practice Guidance/Description</b>
<p><b>Critical Area Planting (342)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to grade, smooth, and seed eroded areas associated with streambank stabilization practices. This practice will likely require Mulching (484) to enhance establishment and possibly Fence (382) if livestock are present.</p> <p>The Kentucky NRCS Technical Guidance Standard for Critical Area Planting (342) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Fence (382)</b></p> <p>20 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to protect restored streambanks from livestock damage and/or pollution. Only Permanent Fence is approved for cost share under this BMP.</p> <p>The Kentucky NRCS Technical Guide Standard for Fence (382) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Filter Strip (393)</b></p> <p>5 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized when needed to create a grassed buffer area between cropland acres and restored streambanks to help filter contaminated runoff from entering these sensitive areas. Filter Strips must be designed according to RUSLE2 calculations and seeded according to the Filter Strip (393) Technical Guide Standard. Design guidance for Filter Strips (393) using RUSLE2 can be at: <a href="https://efotg.sc.egov.usda.gov/references/public/KY/KY393_Filter_Strip_(393)_National_Agron_Tech_Note_No_2.pdf">https://efotg.sc.egov.usda.gov/references/public/KY/KY393_Filter_Strip_(393)_National_Agron_Tech_Note_No_2.pdf</a></p> <p>The NRCS Technical Guide Standard for Filter Strip (393) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Grade Stabilization Structure (410)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to prevent “head cutting” soil erosion as a result of over falls or drops in elevations occurring adjacent to streambanks where field runoff water is entering the stream. This practice will be installed according to NRCS Technical Guidance and engineering design criteria. Other practices that may be needed are Critical Area Planting (342) and Mulching (484).</p> <p>The NRCS Technical Guide Standard for Grade Stabilization Structure (410) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>

<p><b>Mulching (484)</b></p> <p>1 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice can only be used as a companion practice to assist with the vegetation establishment on conservation practices. This practice includes natural materials (hay or straw) or erosion control blankets.</p> <p>The Kentucky NRCS Technical Guidance Standard for Mulching (484) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Riparian Forest Buffer (391)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to establish trees and shrubs along a stream when needed to enhance the Streambank and Shoreline Protection (580) practice. Design widths will be according to NRCS Technical Guide requirements. Tree and Shrub Site Preparation (490) and the Tree and Shrub Establishment (612) practice will be needed to complete this practice. Kentucky Division of Forestry should be contacted to develop any tree planting plans.</p> <p>The Kentucky NRCS Technical Guidance Standard for Riparian Forest Buffer (391) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Riparian Herbaceous Cover (390)</b></p> <p>5 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be used to establish a perennial vegetative buffer adjacent to a stream, sinkhole, or other water body when land use conditions meets the Cropland BMP criteria and when a Filter Strip (393) practice cannot be designed due to site conditions. The seeding requirements of this practice will follow the guidance of the Critical Area seeding (342) or the Conservation Cover (327) practice depending on site conditions.</p> <p>The Kentucky NRCS Technical Guidance Standard for Riparian Herbaceous Cover (390) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Streambank and Shoreline Protection (580)</b></p> <p>20 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to stabilize actively eroding streambanks (limited to stream orders 3 or less). Larger stream orders exceed the NRCS engineering approval and are ineligible for funding under this program. The Streambank and Shoreline Protection practice can be requested under any land use conditions (i.e. cropland, pastureland, and forestland).</p> <p>The Streambank and Shoreline Protection practice will require an approved engineering design by NRCS or other qualified engineer with input from a wildlife biologist/forester and Kentucky Division of Water representative before any construction occurs. Kentucky Division of Water permits may be required when conducting construction activities near streams channels or within floodplains.</p> <p>You can find more information about Division of Water Floodplain permits at: <a href="http://water.ky.gov/floodplain/Pages/FloodplainConstruction.aspx">http://water.ky.gov/floodplain/Pages/FloodplainConstruction.aspx</a></p>

	<p>The Kentucky NRCS Technical Guidance Standard for Streambank and Shoreline Protection (580) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Stream Crossing (578)</b></p> <p>10 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will only be used with this BMP when it is needed to establish a stable equipment crossing on a stream or erosive area to allow access to a crop field(s) without causing streambank erosion damage. An existing stream crossing resource problem must exist before this practice can be requested. This practice is not intended to be used to create new stream crossings unless it is solving an existing stream crossing resource concern. Kentucky Division of Water permits may be required when installing a stream crossing.</p> <p>You can find more information about Division of Water Floodplain permits at: <a href="http://water.ky.gov/floodplain/Pages/FloodplainConstruction.aspx">http://water.ky.gov/floodplain/Pages/FloodplainConstruction.aspx</a></p> <p>The Kentucky NRCS Technical Guidance Standard for Stream Crossing (578) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Tree and Shrub Establishment (612)</b></p> <p>15 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice will be utilized to plant trees in riparian zones following the installation of the Streambank and Shoreline Protection (580) practice. This practice will be used in conjunction with the Tree and Shrub Site Preparation (490). Tree and Shrub plantings will follow Kentucky Division of Forestry or NRCS guidance.</p> <p>The Kentucky NRCS Technical Guidance Standard for Tree and Shrub Establishment (612) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>
<p><b>Tree and Shrub Site Preparation (490)</b></p> <p>1 year practice life</p> <p>Cost Share Limit: \$7,500</p>	<p>This practice can only be used as a companion practice to prepare the site prior to Trees or Shrub Establishment (612) when tree planting is needed to reduce soil erosion or provide water quality benefits. Site preparation will follow Kentucky Division of Forestry or NRCS plan recommendations.</p> <p>The Kentucky NRCS Technical Guidance Standard for Tree and Shrub Site Preparation (490) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.</p>

# **KCP6**

## Farmstead BMP

*[Under development]*

# KRCPP1

## Comprehensive Nutrient Management Plan (CNMP) Assistance

### BMP Introduction and Objective:

The purpose of this practice is to provide financial assistance to producers/landowners to complete a Comprehensive Nutrient Management Plan (CNMP) as a first step in implementing their obligations under the Regional Conservation Partnership Program (RCPP) – Managing Poo.

### BMP Eligibility Criteria:

This practice will be considered for any landowner that is referred to the Division of Conservation for participation in the RCPP and that does not currently have a CNMP. Within this program, many applicants will first be required to obtain a CNMP before other BMP's may be installed. If it is determined by technical staff that a CNMP is indeed needed for an applicant's operation, this practice shall be used for financial assistance. Since funding for this specific program has been set aside, this practice will not be limited by traditional Kentucky State Cost Share annual deadlines, but will be considered on an ongoing basis. The landowner/producer applying for this practice must have a written recommendation (referral) from RCPP partner agencies.

### Cost Share Rates and Limits:

The Kentucky Soil and Water Cost Share Program has established a maximum of 75% cost share rate based on actual expenses not to exceed the estimated payment rate. Cost share limitation per program year: \$7,500.00 for each applicant or operation.

### Eligible Practices:

The single eligible practice listed below shall only be requested when the eligibility criteria is met. If the eligibility criteria outlined previously in this practice description is not met, then the applicant may inquire about other BMP's within the Kentucky Soil and Water Cost Share Program.

<b>NRCS BMP</b> Name and Practice Code	<b>Kentucky State Soil and Water State Cost Share Program</b>  Practice Guidance/Description
<b>Nutrient Management (590)</b>  1-3 year practice life  Cost Share Limit: \$7,500/year	This practice would assist with the cost of properly applying animal waste, produced by an animal feeding operation, to the land according to a CNMP or NMP when applicable. A CNMP or NMP will be required before submitting a cost share application, if the animal waste is produced on the farm. Note: For farms that are accepting animal waste, but are not producing it, cost share assistance for the proper application of waste or inorganic fertilizer will be addressed in the Cropland BMP of the cost share manual.  The Kentucky NRCS Technical Guidance Standard for Nutrient Management (590) can be found at: <a href="https://efotg.sc.egov.usda.gov/">https://efotg.sc.egov.usda.gov/</a> . After selecting the correct state and county from the map, practice standards are located under Section IV of the dropdown menu and in the Conservation Practices category.



# KENV

## Conservation District Environmental Grants

### BMP Introduction and Objective:

The purpose of this practice is to reduce agricultural non-point source pollution of surface or groundwater. This practice exists to be able to address specific, local environmental issues on the ground that do not fit into the other practices listed in this manual. This practice is intended for creativity in solving local, unique environmental issues and to utilize additional best management practices to assist applicants to fulfill their Ag Water Quality Plans.

This grant should be used for:

- Encouraging the adoption of new management techniques or measures that reduce the impact of agricultural pollutants on surface and groundwater.
- Educating the public about pollution problems while demonstrating effective alternatives to non-point source pollution practices.

### BMP Eligibility Criteria:

- Any applicable permits and renewals will be the responsibility of the landowner or conservation district prior to the receipt of cost share funds.
- Project funding must be requested with written documentation of community and natural resource need. If water quality, biological, or other monitoring data is available for support, this may be included with the application.
- Applications must identify pollutants that may be measured. Applicants should complete the state cost share form to provide information about the project, and supplement this form with a written summary/description. If project pollutants are not addressed on this form, then a summary of pollutants must be attached.
- Educational activities that support the proposed project should be addressed in the project application. The report should include targeted audience, material development, time schedules, etc.

### Cost Share Policy:

- Cost sharing is authorized for components necessary to implement an approved project. If the project includes existing best management practices from other programs, then applicable standards, specifications, and identified components will be followed.
- Cost sharing is not authorized for the purchase of equipment. Equipment necessary for project implementation may be obtained through other programs.
- Requests for cost share may only be partially funded at the discretion of the Commission.
- Cost share recipients must sign performance and maintenance agreements prior to payment.
- Practices implemented under Conservation District Environmental Grants shall be maintained for a minimum of 10 years if applicable.

### Cost Share Rates and Payment Limits:

The Kentucky Soil and Water Cost Share Program has established a maximum of 75% cost share rate based on actual expense of project implementation, not to exceed \$7,500 per program year.