

APPENDIX 1

Grassed Waterways

DEFINITION: A natural or constructed channel that is shaped or graded to required dimensions and established with suitable vegetation. Applicable Natural Resources Conservation Service (NRCS) conservation practice standard: Code 412.

PURPOSES: This practice may be applied as part of a conservation management system to support one or more of the following purposes:

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

CRITERIA:

1. This General Permit (GP) does not authorize the construction of grassed waterways in perennial or natural intermittent streams.
2. The grassed waterway must be constructed along a similar flow route of the existing channel. Grassed waterways requiring substantial straightening of the flow route are not authorized under this GP.
3. The grassed waterway must be constructed with either parabolic or trapezoidal cross sections. Irregular or V-shaped cross sections are not authorized by this GP.
4. The average top width of the grassed waterway must not be less than 20 feet and the bottom width of the grassed waterway must not exceed 100 feet.
5. The constructed side slopes must not be steeper than 4:1.
6. This GP does not authorize waterways requiring subsurface drains or stone centers.
7. Grassed waterways requiring a grade stabilization structure or other suitable outlet may be authorized by this GP; however, the grade stabilization structure or alternate outlet design must be designed or approved by the NRCS according to their specific conservation practice standards.
8. Grassed waterways requiring temporary or permanent berms are authorized by this GP. Once the desired vegetation has become established, the temporary berms shall be removed and the earthen material shall be blended into the adjacent fields to allow free drainage into the waterway.
9. Grassed waterway seeding/plantings must be recommended by the local NRCS office, adapted to soil type and climate, and must not include exotic and invasive species, including Reed canary grass (*Phalaris arundinacea*).
10. Grassed waterways constructed in farmed channels, that are completely or partially plowed across and no longer exhibit continuous bed and bank features, may be seeded to a grass mixture that meets the producer's needs, provided the grass(es) are recommended by the local NRCS office.
11. Grassed waterway rehabilitation/maintenance is authorized by this GP.
12. Grassed waterways designed to replace an impaired channel and riparian zone, which exhibits bed and bank features, may require a seeding plan consisting exclusively of native grasses and vegetation adapted to the soil type and climate. The incorporation of a native grass seeding plan may be necessary to offset impacts to an intact tributary reach, however degraded.

APPENDIX 1 (cont'd)

- 13. NRCS recommended tree and shrub plantings included in the vegetation plan, must be retained or planted in the periphery of the grassed waterway to prevent interference with the hydraulic functions.
- 14. Grassed waterways that are constructed in conjunction with sod-busting operations in native prairie or rangeland are not authorized by this GP.
- 15. Erosion and sedimentation must be minimized by implementing the use of cover crops, mulch, hay bale dikes, filter fences, etc. as soon as conditions allow.

APPENDIX I SUMMARY TABLE

| Scenario / Application | Authorization under GP | Mitigation Required |
|---|-------------------------------|-------------------------------------|
| Grassed waterways constructed in perennial and natural intermittent streams | No | Not applicable |
| Grassed waterways requiring subsurface drains or stone centers | No | Not applicable |
| Grassed waterways constructed in channels that are completely or partially farmed | Yes | No |
| Grassed waterway rehabilitation/maintenance | Yes | No |
| Grassed waterways that replace impaired channels and riparian zones | Yes | Site specific, see criterion No. 12 |
| Grassed waterways requiring grade stabilization structures or other suitable outlets | Yes | Site specific, see criterion No. 12 |
| Grassed waterways constructed in conjunction with sod-busting operations in native prairie or rangeland | No | Not applicable |

APPENDIX 2 Grade Stabilization Structures

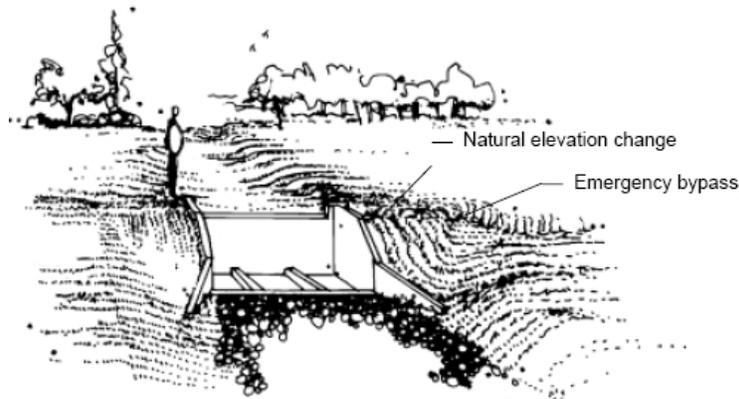
DEFINITION: A structure used to control the grade and head cutting in natural or artificial channels.

PURPOSE: To stabilize the grade and control erosion in natural or artificial channels, to prevent the formation or advance of gullies, headcuts, and to enhance environmental quality and reduce pollution hazards. Examples of grade stabilization structures authorized under this General Permit (GP) include drop spillways, block drop structures and rock chutes. Applicable Natural Resources Conservation Service (NRCS) conservation practice standard: Code 410.

CRITERIA: The following criteria are required for GP-40 authorization:

1. Structures proposed in conjunction with embankment ponds or other practices in waters of the United States (WUS), may be authorized, but will be evaluated as a component of the overall proposed project.
2. Grade stabilization structures constructed in or across drainage ways with perennial flow during normal years are not authorized under this GP.
3. The crest of the inlet must be set at an elevation that stabilizes upstream headcutting.
4. Structure must be designed to control the peak runoff from the 10-year storm or to meet the bankfull capacity of the channel, whichever is greater.
5. Disturbed areas, not covered with riprap, must be revegetated as soon as practicable, with plant species recommended by the local NRCS office, excluding Reed canary grass (*Phalaris arundinacea*) and other exotic and invasive species.

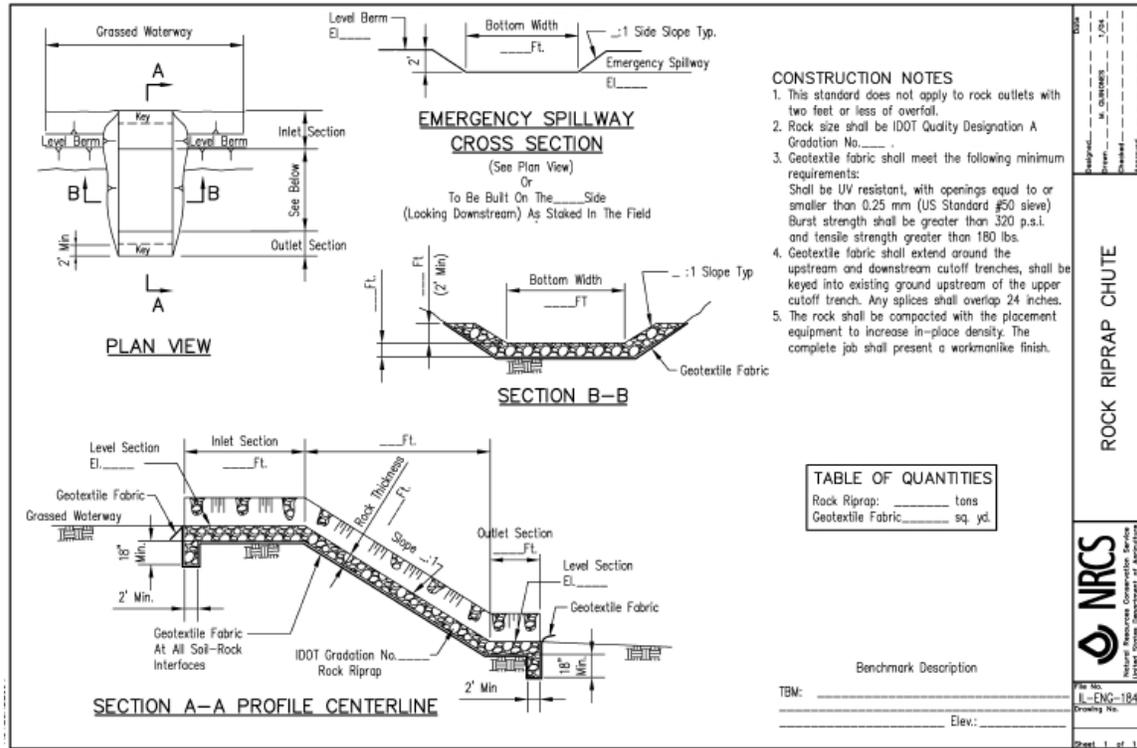
DRAWING 1: Drop spillway illustration. (Source: NRCS National Handbook of Conservation Practices, NRCS Planning and Design Manual, NRCS.)



**Reinforced Drop Spillway for Grade Stabilization with
Emergency Bypass and Downstream Protection
Perspective View**

APPENDIX 2 (cont'd)

DRAWING 2: Typical rock chute structure. (Source: NRCS Engineering Standard Drawings).



APPENDIX 2 SUMMARY TABLE

| Scenario / application | Authorization under GP | Mitigation Required |
|---|--|-------------------------|
| Grade stabilization structures constructed in conjunction with a proposed embankment pond or other practices in WUS | Yes, but must be evaluated as a single and complete project (Criterion No. 1). | Possible, site specific |
| Grade stabilization structures constructed in streams with perennial flow during normal years | No | Not applicable |
| Grade stabilization structures constructed in intermittent and ephemeral streams | Yes | Possible, site specific |

APPENDIX 3 Heavy Use Protection Areas

DEFINITION: The stabilization of areas frequently and intensively used by people, animals or vehicles by establishing vegetative cover, by surfacing with suitable materials, and/or by installing needed structures. Example drawings of heavy use protection areas are provided below. Applicable Natural Resources Conservation Service (NRCS) conservation practice standard: Code 561.

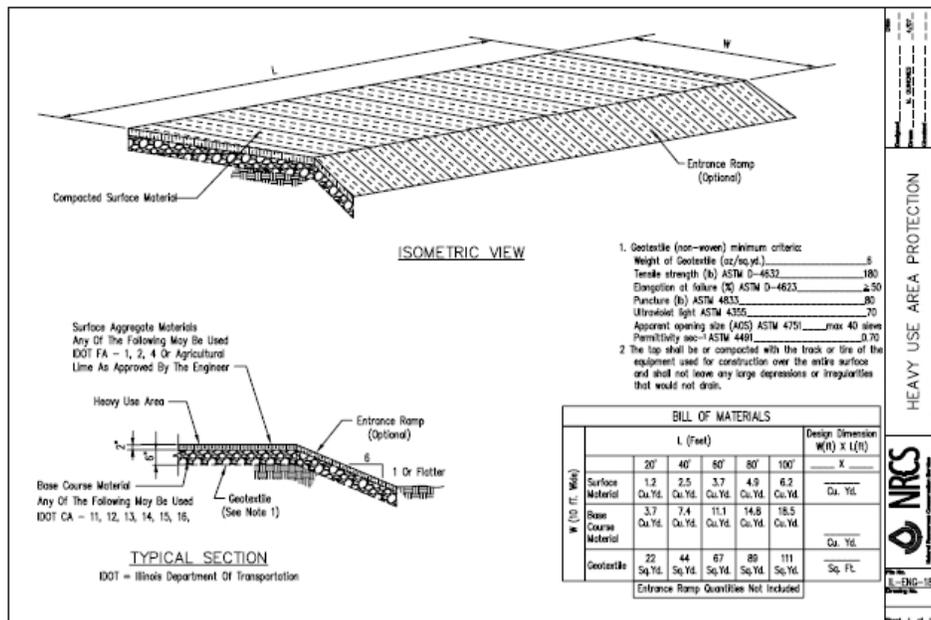
PURPOSES:

1. Reduce soil erosion
2. Improve water quantity and quality
3. Improve air quality
4. Improve aesthetics
5. Improve livestock health

CRITERIA:

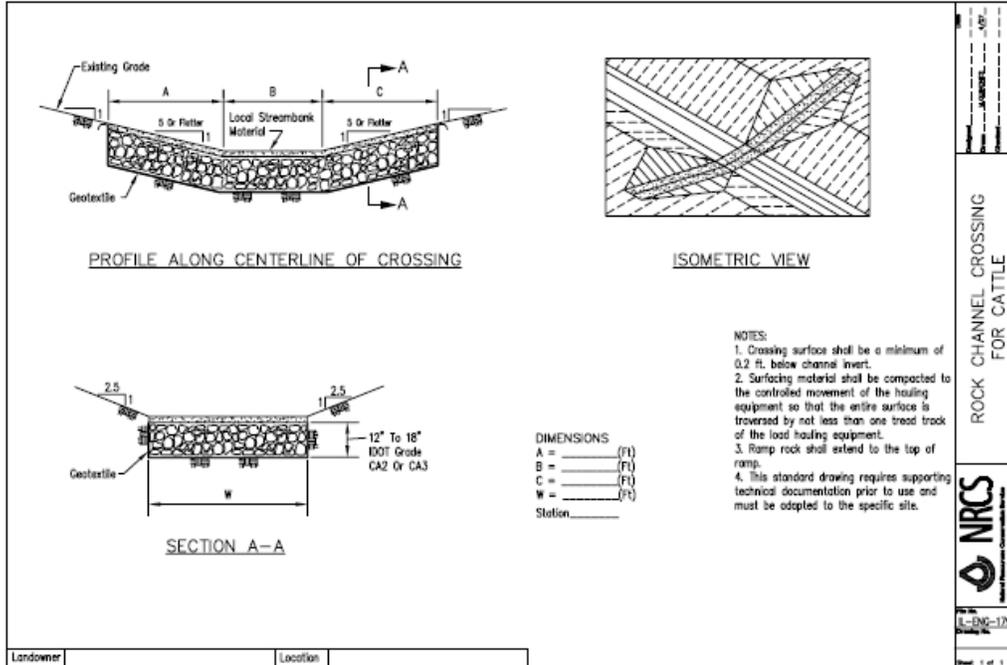
1. Heavy use protection areas requiring asphalt applications are not authorized under this General Permit (GP).
2. Disturbed areas, not covered with riprap, must be revegetated with grasses recommended by the local NRCS office, excluding Reed canary grass (*Phalaris arundinacea*) and other exotic or invasive species, as soon as practicable.
3. Heavy use protection areas designed for livestock crossing must not substantially disrupt the necessary life cycle movements of aquatic life, indigenous to the watershed.

DRAWING 1: Typical heavy use protection area for livestock access. (Source: NRCS Engineering Standard Drawings)



APPENDIX 3 (cont'd).

DRAWING 2: Typical heavy use protection area livestock crossing (Source: NRCS Engineering Standard Drawings)



APPENDIX 4
Pipelines

DEFINITION: A pipeline installed where it is desirable or necessary to convey water or manure in a closed conduit from one point to another. Applicable Natural Resources Conservation Service (NRCS) conservation practice standards: Codes 430DD; 430EE; 634; and 516.

PURPOSES:

1. Convey water from a supply source to points of use for livestock, wildlife, or recreation.
2. Transfer plant and animal waste for further utilization.
3. Convey and manage irrigation water and reduce water conveyance loss.

CRITERIA:

1. Pipelines constructed in wetlands must be backfilled with the material removed from the trench.
2. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States, including wetlands.
3. Trench excavation material may be temporarily sidecast in waters of the United States, for up to 3 months, provided the material is not placed in such a manner that it is dispersed by flows, currents, or other events.
4. Sidecast material must not inhibit flows into streams and/or wetlands.
5. Pipelines must avoid wetland impacts to the maximum extent practicable.
6. The written notification must include a detailed map depicting the location of all channel and/or wetland crossings.
7. The written notification must include a revegetation plan for the impacted riparian zones and will follow NRCS recommendations based on the Field Office Technical Guide standards. The seeding plan cannot include Reed canary grass (*Phalaris arundinacea*) or any other exotic or invasive species.
8. Pipelines with waste, must not discharge into waters of the United States, including wetlands.
9. Operation and/or maintenance corridors shall be limited to the minimal width necessary. The notification shall include rationale for the necessary width.

APPENDIX 4 SUMMARY TABLE

| Scenario / Application | Authorization under GP | Mitigation Required |
|---|------------------------|--|
| Pipelines with waste designed to discharge in waters of the United States | No | Not Applicable |
| Pipelines requiring temporary sidecasting in waters of the United States | Yes | No, criteria 3 & 4 address sidecast material |

APPENDIX 5 Spring and Seep Developments

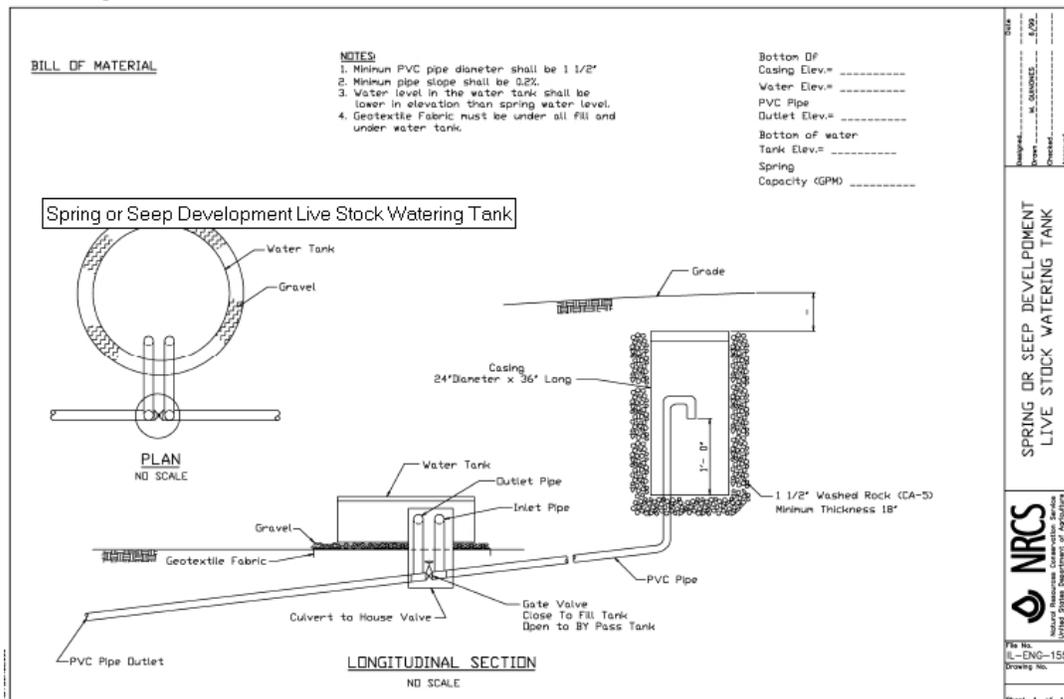
DEFINITION: Collection of water from springs or seeps to provide water for a conservation need. Typically, springs are defined as point source flows where ground water intercepts the surface. Seeps are generally broader areas where ground water intercepts the surface but does not provide a point source surface flow. Applicable Natural Resources Conservation Service (NRCS) conservation practice standard: Code 574.

PURPOSES: Improve the quantity and/or quality of water for livestock, wildlife, or other agricultural uses as well as the improvement of grazing distribution on rangeland.

CRITERIA:

1. Areas surrounding the created/improved watering facilities, where animal concentrations or overflow from the watering facility will cause resource concerns, must be protected to maintain or improve water quality.
2. Heavy use protection areas, in conjunction with the spring / seep development, are authorized by this GP.
3. Spring and seep developments, constructed in conjunction with pipeline conveyances, are authorized under this GP.
4. Spring and seep overflow shall be returned, via a stable outlet, to its original drainage course to ensure that aquatic habitats are preserved.
5. Spring and seep developments used to irrigate crops are not authorized under this GP.

DRAWING 1: Typical spring development (Source: NRCS Engineering Standard Drawings).



APPENDIX 6

Ponds

DEFINITION: A water impoundment made by constructing an embankment or by excavating a pit or dugout. Applicable Natural Resources Conservation Service (NRCS) conservation practice standard: Code 378.

PURPOSES: To provide water for livestock, fish and wildlife, fire control, and other related uses and to maintain or improve water quality.

EXEMPTIONS: Some ponds are exempt pursuant Section 404(f)(1)(c) and the Corps will make that determination.

CRITERIA:

1. Impoundments shall be constructed in environments where failures will not cause the loss of life, damage to homes, highways, roadways; or interruption of the use or service of public utilities.
2. Ponds that have storage capacities of greater than 15 acre feet, at the principal spillway elevation, are not authorized under this GP.
3. Written notification must include the intended purpose(s) of the proposed pond.
4. All exposed surfaces of embankments, auxiliary spillways, outlet channels, borrow areas, spoil, and other disturbed areas adjacent to the reservoir must be seeded to native grasses.
5. Native grasses and vegetation must be recommended by the local NRCS office, adapted to the soil type and climate, and must not include Reed canary grass (*Phalaris arundinacea*) or any other exotic or invasive species.
6. Exclusionary fencing shall be installed to prevent livestock access to the reservoir area, dam, and auxiliary spillway.
7. Ponds constructed for the sole purpose of recreation are not authorized under this GP.
8. The upstream and downstream side slopes of proposed embankments shall not be steeper than 3:1 and 2.5:1 respectively.
9. All impoundments authorized under this GP must meet the mandatory mitigation requirements set forth in stream mitigation guidelines/methods approved by the Corps of Engineers, Kansas City District (KCD).
10. Written notification must include the completed mitigation method worksheets, documenting the appropriate debits and credits associated with the project. The Kansas City District approved stream mitigation methods can be located on the District's Regulatory website at:
<http://www.nwk.usace.army.mil/Missions/RegulatoryBranch/StateofKansas.aspx>

APPENDIX 6 (cont'd)

APPENDIX 6 SUMMARY TABLE

| Scenario / Application | Authorization under RGP | Mitigation Required |
|---|--------------------------------|---|
| Multi-use ponds exceeding 15 acre feet storage capacity at the principle spillway elevation | No | Not applicable |
| Multi-use ponds with storage capacity \leq 15 acre feet at the principle spillway elevation | Yes | Yes, those set forth in the KCD approved stream mitigation methods/guidelines |
| Ponds constructed for the sole purpose of recreation | No | Not applicable |

APPENDIX 7 Diversions

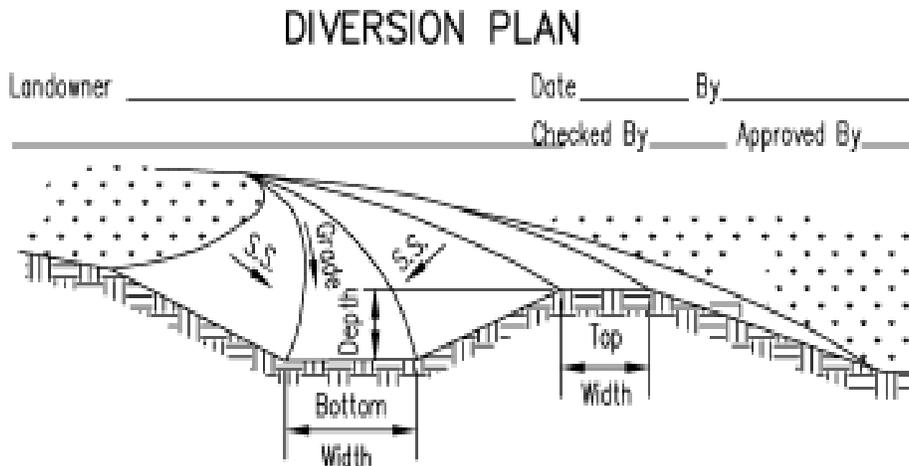
DEFINITION: An artificial channel constructed to divert water from a specific location and direct flow to a desired location. Applicable Natural Resources Conservation Service (NRCS) conservation practice standard: Code 362.

PURPOSE: Divert channel flows away from existing feedlot and/or KDHE registered animal feeding operation to eliminate water pollution and improve downstream water quality.

CRITERIA:

1. The proposed diversion must be constructed within an existing feedlot.
2. Diversions constructed to separate clean water runoff and flow from existing agricultural waste facilities are authorized by this GP.
3. Diversion channels built in conjunction with other agricultural waste treatment system improvements are authorized, provided the purpose of the diversion is not to accommodate expanding additions and facilities. Further, if the facility improvements or additions require the diversion of a clean water stream, the project is not authorized by this GP.
4. Diversion channels designed with permanently vegetated channels, must be seeded to grass(es) recommended by the local NRCS office, adapted to soil type and climate, and must not include exotic and invasive species, including Reed canary grass (*Phalaris arundinacea*).
5. Diversions constructed in conjunction with stable outlets such as grassed waterways, grade stabilization structures, waste storage facilities, solid/liquid waste separation facilities, waste treatment lagoons and wastewater treatment strips, are authorized by this GP.
6. Diversions that result in the loss of wetland resources are not authorized under this GP.

DRAWING 1: Typical diversion (Source: NRCS Engineering Standard Drawings).



APPENDIX 7 (cont'd)

APPENDIX 7 SUMMARY TABLE

| Scenario/ application | Authorization under RGP | Mitigation Required |
|---|--|----------------------------|
| Diversions constructed in existing feedlot/KDHE registered facilities | Yes, where the purpose is to separate clean water from contaminated water | Possible, case specific |
| Diversions constructed to relocate existing channels to accommodate the expansion of an existing feedlot/KDHE registered facility | No | Not applicable |
| Diversions constructed in association with a new feedlot/KDHE registered facility | No | Not applicable |
| Diversions constructed in conjunction with other NRCS approved waste treatment and conservation practices (Criterion No. 5) | Yes, where the purpose is to separate clean water from contaminated water as part of an overall improvement or conservation plan to an existing feedlot facility | Possible, case specific |

APPENDIX 8
Water and Sediment Control Basins

DEFINITION: An earthen embankment or a combination ridge and channel generally constructed across the slope and minor watercourses to form a sediment trap and water detention basin. Applicable Natural Resources Conservation Service (NRCS) conservation practice standard: Code 638.

PURPOSES:

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

CRITERIA:

1. This General Permit (GP) does not authorize the construction of water and sediment control basins in wetlands.
2. Water and sediment control basins constructed in conjunction with approved grassed waterways, diversions or other approved practices, are authorized under this GP.
3. Water and sediment control basins must be designed with approved spillways, underground outlets, or soil infiltration outlets.
4. Water and sediment control basins must be constructed in either artificial channels (diversions or waterways) or farmed channels. Those proposed for construction in natural stream channels are not authorized under this GP.
5. Disturbed areas and newly constructed structures must be seeded /planted to grass(es) recommended by the local NRCS office, adapted to soil type and climate, and must not include exotic and invasive species, including Reed canary grass (*Phalaris arundinacea*).

APPENDIX 8 SUMMARY TABLE

| Scenario / Application | Authorized under RGP | Mitigation Required |
|---|----------------------|--------------------------|
| Water and sediment basins constructed in wetlands or natural stream channels | No | Not applicable |
| Water and sediment basins constructed in conjunction with approved grassed waterways, diversions, or other approved practices | Yes | Possible, case specific. |

APPENDIX 9

Wetland Creation, Enhancement and Restoration

DEFINITION: The creation of a wetland on a site that was historically non-wetland; the rehabilitation of a degraded wetland, reestablishment of a wetland so that soils, hydrology, vegetative community, and habitat are a close approximation of the original natural condition; or the inundation of lands to provide habitat for fish and/or wildlife. Applicable conservation practice standards: Codes 356; 646; 657; 658; and 659.

PURPOSES:

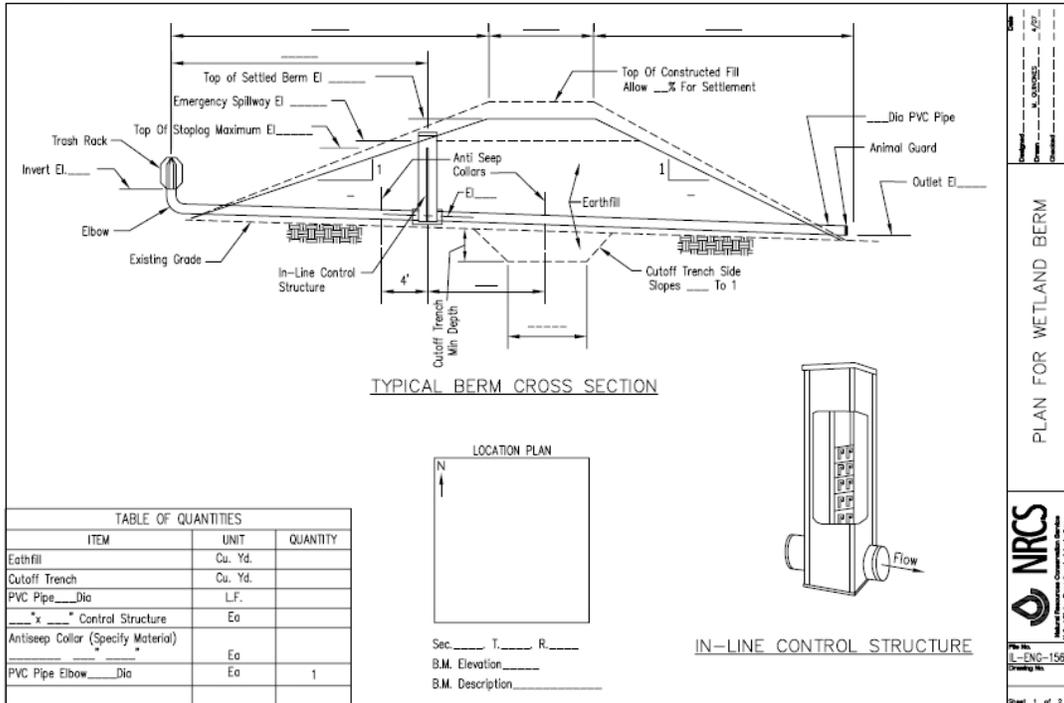
1. Create wetland functions
2. Restore wetland functions, values, habitat and diversity
3. Provide habitat for wildlife species such as shorebirds, waterfowl, wading birds, mammals, fish, reptiles, amphibians, etc.
4. Provide specific wetland conditions for targeted functions and species

CRITERIA:

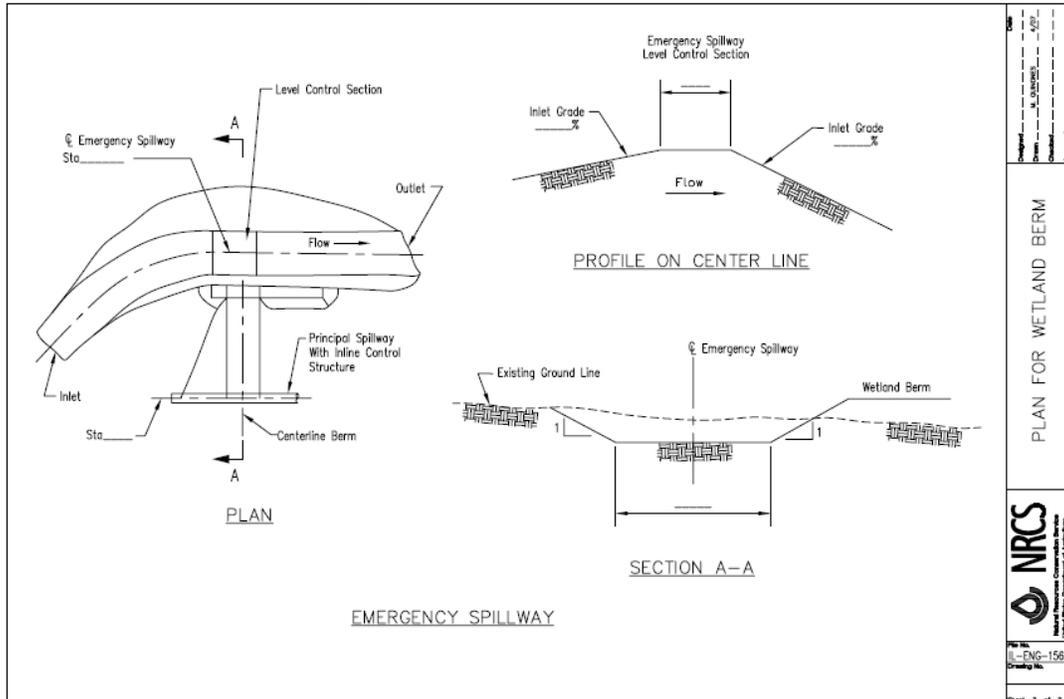
1. The conversion of natural wetlands to another aquatic habitat is not authorized under this General Permit (GP).
2. Activities must result in a net gain in aquatic resource functions and services for authorization under this GP.
3. Activities resulting in a net loss of wetlands are not authorized under this GP.
4. The written notification must include a vegetation plan that must consist entirely of native plant species that are endemic to the area, recommended by the local Natural Resources Conservation Service (NRCS) office, are adapted to the soil type and climate, and must exclude Reed canary grass (*Phalaris arundinacea*).
5. This GP does not authorize the diversion of water supply from other wetland resources.
6. The conversion of a stream to a wetland resource is authorized under this GP, provided the required mitigation requirements, as outlined in Kansas City District approved stream mitigation methods for the state of Kansas, are met. Written notification must include the completed mitigation method worksheets, documenting the appropriate debits and credits associated with the project. The Kansas City District approved stream mitigation methods are located on the District's Regulatory website at:
<http://www.nwk.usace.army.mil/Missions/RegulatoryBranch/StateofKansas.aspx>.
7. Wetlands constructed on streams, must not exceed 15 acre feet storage capacity at the principal spillway elevation.
8. Dikes constructed in association with approved wetland practices shall have a top width not less than 8 feet and side slopes not steeper than 2:1 horizontal to vertical.

APPENDIX 9 (cont'd)

DRAWING 1: Typical wetland berm cross section (Source: NRCS Engineering Standard Drawing).



DRAWING 2: Typical constructed wetland emergency spillway (Source: NRCS Engineering Standard Drawing).



APPENDIX 9 (cont'd)

| Scenario / Application | Authorization under RGP | Mitigation Required |
|---|--------------------------------|------------------------------|
| Restoration of a historic wetland site | Yes | No |
| Enhancement of an existing wetland resource | Yes | No |
| Conversion of natural wetlands to another aquatic habitat | No | Not applicable |
| Conversion of a stream to a wetland resource | Yes | Yes, see criteria Nos. 5 & 6 |

APPENDIX 10
Threatened & Endangered Species

The following locations and waters are located within the known range of Federally listed threatened, endangered, or candidate species. The requirements of special condition “e” apply to the following listed species:

- a. **Arkansas River** – That portion flowing through Barton, Cowley, Edwards, Finney, Ford, Gray, Hamilton, Kearny, Kiowa, Pawnee, Reno, Sedgwick and Sumner Counties, excluding that reach upstream of the Kansas Route 27 bridge in Hamilton County and a 12.4 mile reach within the City of Wichita metropolitan area, extending from the westbound land of Kansas Route 96 downstream to Interstate 35 (Arkansas River Shiner, *Notropis girardi*) (Interior Least Tern, *Sterna antillarum* in Sedgwick County only).
- b. **Cimarron River** - That portion flowing through Clark, Comanche, and Meade Counties (Interior Least Tern, *Sterna antillarum* and Arkansas River Shiner, *Notropis girardi*).
- c. **Cottonwood River** - From the point of discharge of Marion Dam to its confluence with the Neosho River in Lyon County (Neosho Madtom, *Noturus placidus*).
- d. **South Fork Cottonwood River** – Downstream of Bazzarr to confluence with Cottonwood River (Neosho Madtom, *Noturus placidus*).
- e. **Neosho River** - From the point where it discharges from Council Grove Reservoir in Morris County to the point where it leaves Lyon County and from the point where it discharges from John Redmond Reservoir in Coffey County to the Kansas-Oklahoma border in Cherokee County (Neosho Madtom, *Noturus placidus*).
- f. **Spring River** - The entire main stem portion within the state of Kansas in Cherokee County (Neosho Madtom, *Noturus placidus*).
- g. **Cow Creek and tributaries** - A 144 square mile area within Crawford County whose western boundary is highway K-7, whose southern boundary is the Crawford/Cherokee county line, whose eastern boundary is the Kansas/Missouri state line and whose northern boundary is highway K-57 east of the town of Girard extended to the state line. Also included in this area is all of Cow Creek in Cherokee County (Gray Bat, *Myotis grisescens*).
- h. **Kansas River** – From its origin in Geary County downstream to Lecompton in Shawnee County (Interior Least Tern, *Sterna Antillarum* and Piping Plover, *Charadrius melodus*). Portions of the lower Kansas River in Atchinson, Doniphan, Douglas, Jefferson, Leavenworth, and Wyandotte counties (Pallid sturgeon, *Scaphirhynchus albus*).
- i. **Missouri River** – Portions of the Missouri River in Atchinson, Doniphan, Douglas, Jefferson, Leavenworth, and Wyandotte counties (Pallid sturgeon, *Scaphirhynchus albus*).

- j. The following locations may contain the Topeka Shiner, *Notropis topeka*, which has been listed as endangered:
1. **Butler County** – Headwaters of the South Fork Cottonwood River (Sec. 4, 9, 16 & 21 T23S, R8E).
 2. **Chase County** – Bloody Creek, Collett Creek, Diamond Creek, Gannon Creek, Jack Creek, Little Cedar Creek, Mercer Creek, Mulvane Creek, Rock Creek, Schaeffer Creek, Shaw Creek, Unnamed tributary of Thurman Creek (Sec. 31 & 32 T22S, R9E), Unnamed tributary of Mercer Creek (Sec. 30 & 31 T22S, R 8E), Middle Creek, Unnamed tributary of Middle Creek (Sec. 4, 9 & 10 T19S, R6E), Unnamed tributary of Diamond Creek (Sec. 9 T19S, R7E), Unnamed tributary of Fox Creek (Sec. 31 T18S, R8E).
 3. **Dickinson County** – Cary Creek, Middle Branch Lyons Creek, Rock Springs Creek, West Brach Lyons Creek.
 4. **Geary County** – Rock Springs Creek, Davis Creek.
 5. **Greenwood County** – Thurman Creek, Unnamed tributaries of Thurman Creek (Sec. 6 T23S, R9E; Sec. 1 T23S, R8E).
 6. **Marion County** – Collett Creek, Middle Creek, Mud Creek.
 7. **Marshall County** - North Elm Creek, Clear Fork Creek.
 8. **Morris County** - Collett Creek, Middle Creek, Tributaries to Diamond Creek.
 9. **Pottawatomie County** - Clear Fork Creek.
 10. **Riley County** – Deep Creek, Seven-Mile Creek, Little Arkansas Creek, Walnut Creek, Wildcat Creek.
 11. **Shawnee County** – Mission Creek.
 12. **Wabaunsee County** – East Branch Mill Creek, Hendricks Creek, Illinois Creek, Kuenzli Creek, Loire Creek, Mission Creek, Mulberry Creek, Nehring Creek, Paw Paw Creek, Spring Creek (Paxico), Spring Creek (Tributary of West Branch Mill Creek), South Branch Mill Creek, West Branch Mill Creek.
 13. **Wallace County** - Willow Creek.
- k. The following waterways maintain critical habitat for the Whooping Crane, *Grus americana*:
1. **Walnut Creek** – in Ness, Rush and Barton Counties which feeds Cheyenne Bottoms.
 2. **Cheyenne Bottoms** – All water bodies within Cheyenne Bottoms.
 3. **Rattlesnake Creek** – in Edwards, Stafford and Pratt Counties which feeds Quivera National Wildlife Refuge.
 4. **Quivira National Wildlife Refuge** – All water bodies within Quivera National Wildlife Refuge.

5. In addition to the listed waterways, whooping cranes may be found in Clark, Cloud, Comanche, Decatur, Edwards, Ellis, Ellsworth, Finney, Ford, Graham, Gray, Harper, Harvey, Haskell, Hodgeman, Jewell, Kearny, Kingman, Kiowa, Lane, Lincoln, McPherson, Meade, Mitchell, Ness, Norton, Osborne, Ottawa, Pawnee, Phillips, Pratt, Rawlins, Reno, Republic, Rice, Rooks, Rush, Russell, Saline, Scott, Sedgwick, Seward, Sheridan, Smith, Stafford, Stanton, Sumner and Trego counties.
- l. The following counties contain confirmed populations of Meads milkweed, *Asclepias meadii* which has been listed as threatened.
 1. Allen, Anderson, Bourbon, Coffey, Crawford, Douglas, Franklin, Jefferson, Johnson, Leavenworth, Linn, Miami, and Neosho.
 - m. The following counties contain confirmed populations of Western prairie fringed orchid, *Platanthera praeclara* which has been listed as threatened.
 1. Douglas, Jefferson, Leavenworth, Linn, Miami, and Neosho.
 - n. The following counties contain populations of American burying beetle, *Nicrophorus americanus* which has been listed as endangered.
 1. Chautauqua, Elk, Montgomery, Labette and Wilson.
 - o. Logan County has a experimental population of Black Footed Ferrets (*Mustela nigripes*), which is listed endangered.
 - p. The following list includes locations, waterways or habitats for the Federal candidate species listed below:
 1. **Arkansas darter**, *Etheostoma cragini*, in vegetated wetlands and springfed pools in the mainstem and tributaries to the Arkansas, Cimarron, Medicine Lodge, Chikaskia, Ninnescah, and Spring Rivers in Barber, Barton, Cherokee, Clark, Comanche, Cowley, Harper, Kingman, Kiowa, Meade, Pratt, Reno, Rice, Sedgwick, Seward, Stafford, Morton and Sumner Counties.
 2. **Neosho mucket**, *Lampsilis rafinesqueana*, in riverine runs, shoals, and riffles with gravel substrates and moderate currents in the Fall, Verdigris, Neosho, Cottonwood, and Spring Rivers in Allen, Cherokee, Coffey, Elk, Greenwood, Labette, Montgomery, Neosho, Wilson, and Woodson Counties.
 3. **Spectaclecase**, *Cumberlandia monodonta*, in the Marais des Cygnes River in Linn County.
 4. **Lesser prairie-chicken**, *Tympanuchus pallidicinctus*, found in shortgrass and sandsage prairie and some cropland in Barber, Clark, Comanche, Edwards, Ellis, Finney, Ford, Gove, Grant, Gray, Greeley, Hamilton, Haskell, Hodgeman, Kearny, Kiowa, Lane, Logan, Meade, Morton, Ness, Pawnee, Pratt, Rush, Scott, Seward, Sherman, Stafford, Stanton, Stevens, Trego, Wallace, and Wichita counties.

APPENDIX 11

Subsurface Drainage

DEFINITION: A conduit, such as corrugated plastic tubing, tile, or pipe, installed beneath the ground surface to collect and/or convey drainage water. Applicable Natural Resources Conservation Service (NRCS) conservation practice standard: Code 606.

PURPOSE: To improve the soil environment for vegetative growth, reduce erosion, and improve water quality by:

1. Regulating water table and ground water flows.
2. Intercepting and preventing water movement into a wet area.
3. Serving as an outlet for other subsurface drains.

SPECIAL CONDITIONS:

1. Subsurface drains authorized by this GP must be constructed within a grassed waterway and meet requirements of Kansas Minimal Effect Exemption: KS-2 Terrace System Upgrade from Grassed Waterway/Vegetated Outlet to a Shaped Grassed Waterway with Subsurface Drainage Worksheet.
2. Disturbed areas must be revegetated with grasses recommended by the local NRCS office, excluding Reed canary grass (*Phalaris arundinacea*) and other exotic or invasive species, as soon as practicable.
3. Subsurface drains must discharge into an underground outlet or onto an area either stabilized with vegetation (i.e., grassed waterway, critical area planting, buffer vegetation), a vegetative splash pad as illustrated in the attachments for the Kansas Minimal Effect Exemptions, or other similar area approved by NRCS.
4. Subsurface drains **may not** discharge directly into a stream.
5. Trench excavation material may be temporarily side cast in waters of the United States, for up to 3 months, provided the material is not placed in such a manner that it is dispersed by flows, currents, or other events.
6. Subsurface drain rehabilitation/maintenance associated with the rehabilitation/maintenance of a grassed waterway is authorized by this GP.
7. This practice is limited to existing grassed waterways and other stable outlets built before December 23, 1985.
8. The drainage area must be equal to or less than 120 acres.

KANSAS MINIMAL EFFECT EXEMPTION: KS-2 TERRACE SYSTEM UPGRADE FROM GRASSED WATERWAY/VEGETATED OUTLET TO A SHAPED GRASSED WATERWAY WITH SUBSURFACE DRAINAGE WORKSHEET

| | | | |
|-----------|--|-------|--|
| Landowner | | Tract | |
| County | | Legal | |

1) Were the terraces and/or waterway installed before December 23, 1985

| | |
|--------------------------|--------------------------|
| Yes | No |
| <input type="checkbox"/> | <input type="checkbox"/> |

2) Is the potential wetland dominated by vegetation such as willow or cottonwood trees or reed canarygrass

| | |
|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|

If either 1 or 2 are No, the exemption does not apply

3) Is the waterway/vegetated outlet dominated by introduced grasses such as brome or fescue

| | |
|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|

4) Does the drainage area contribute to an impaired water body

| | |
|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|

If the answer to 4 is yes, list the impairment
<http://www.kdheks.gov/tmdl/index.htm>

If the answer to 4 is yes, have best management practices been considered to reduce the maximum pollutant load for the impairment

| | |
|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|

5) Exemption Calculation: Yes = 0.1, No = 0.3

a.) The area is an outlet for a terrace system

| | |
|--------------------------|--------------------------|
| Yes | No |
| <input type="checkbox"/> | <input type="checkbox"/> |

b.) Gully erosion (classic or ephemeral) is occurring within or parallel to the grassed waterway/vegetated outlet

| | |
|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|

c.) The grassed waterway/vegetated outlet is = or < 150 feet wide

| | | | |
|--------------------------|--------------------------|--------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Actual | |
|--------------------------|--------------------------|--------|--|

d.) Drainage area is '= or < 120 acres

| | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | |
|--------------------------|--------------------------|--|

e.) Grassed waterway/vegetated outlet grade is '= or > 3 percent

| | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | |
| 0.0 | | |

If the score is 0.5 it Meets the exemption
 If the score is 0.6 or more it Does Not meet the exemption

I certify the information in this Minimal Effect Exemption Worksheet.

Signature Date

Has the CPA-52 been completed: Yes No

NOTE: If questions 1 and 2 are answered yes, the area will be Prior Converted Cropland (reference National Food Security Act Manual, 514.30)

NOTE: For subsurface drain guidance or manure application to a crop field see Engineering Guidance Document for KS-1 and attachments

pw: water

APPENDIX 12

Underground Outlets

DEFINITION: A conduit installed beneath the surface of the ground to collect surface water and convey it to a suitable outlet. Applicable Natural Resources Conservation Service (NRCS) conservation practice standard: Code 620.

PURPOSE: To dispose of excess water from terraces, diversions, subsurface drains, surface drains, trickle tubes, principal spillways from dams (outside the dam area only), or other concentrations without causing damage by erosion or flooding.

SPECIAL CONDITIONS:

1. Underground outlets authorized by this General Permit (GP) must be constructed to meet requirements of Kansas Minimal Effect Exemption: KS-1 Terrace System Conversion from Grassed Waterway/Vegetated Outlet to Underground Outlet Worksheet.
2. Vegetation establishment associated with underground outlets must exclude Reed canary grass (*Phalaris arundinacea*) and other exotic or invasive species.
3. Underground outlets must discharge onto an area either stabilized with vegetation (i.e., grassed waterway, buffer vegetation), vegetative splash pad as illustrated in the attachments for the Kansas Minimal Effect Exemptions, or other similar area approved by NRCS.
4. Underground outlets **may not** discharge directly into a stream.
5. Trench excavation material may be temporarily side cast in waters of the United States, for up to 3 months, provided the material is not placed in such a manner that it is dispersed by flows, currents, or other events.
6. Drainage must be equal to or less than 80 acres.

**KANSAS MINIMAL EFFECT EXEMPTION: KS-1 TERRACE SYSTEM CONVERSION
FROM GRASSED WATERWAY/VEGETATED OUTLET TO UNDERGROUND OUTLET WORKSHEET**

| | | | |
|-----------|--|-------|--|
| Landowner | | Tract | |
| County | | Legal | |

1) Were the terraces and/or waterway installed before December 23, 1985

| | |
|--------------------------|--------------------------|
| Yes | No |
| <input type="checkbox"/> | <input type="checkbox"/> |

2) Is the potential wetland dominated by vegetation such as willow or cottonwood trees or reed canarygrass

| | |
|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|

If either 1 or 2 are No, the exemption does not apply

3) Is the waterway/vegetated outlet dominated by introduced grasses such as brome or fescue

| | |
|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|

4) Does the drainage area contribute to an impaired water body

| | |
|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|

If the answer to 4 is yes, list the impairment

If the answer to 4 is yes, have best management practices been considered to reduce the maximum pollutant load for the impairment

| | |
|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|

5) Exemption Calculation: Yes = 0.1, No = 0.3

| | |
|--------------------------|--------------------------|
| Yes | No |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |

- a.) The area is an outlet for a terrace system
- b.) Gully erosion (classic or ephemeral) is occurring within or parallel to the grassed waterway/vegetated outlet

c.) The grassed waterway/vegetated outlet is = or < 150 feet wide

| | | | |
|--------------------------|--------------------------|--------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Actual | |
|--------------------------|--------------------------|--------|--|

d.) Drainage area is = or < 80 acres

| | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | |
|--------------------------|--------------------------|--|

e.) Grassed waterway/vegetated outlet grade is = or > 3 percent

| | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | |
|--------------------------|--------------------------|--|

Score 0.0

If the score is 0.5 it Meets the exemption
If the score is 0.6 or more it Does Not meet the exemption

I certify the information in this Minimal Effect Exemption Worksheet

Signature Date

Has the CPA-52 been completed: Yes No

NOTE: If questions 1 and 2 are answered yes, the area will be Prior Converted Cropland (reference National Food Security Act Manual, 514.30)

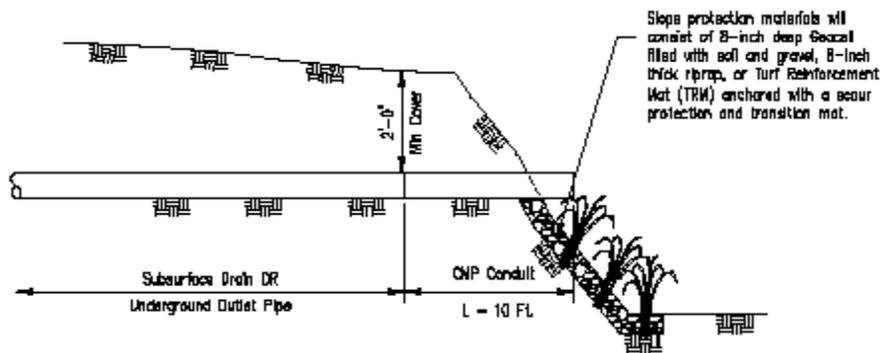
NOTE: If a terrace and underground outlet system is replacing a grassed waterway/vegetated outlet or manure is being applied to a crop field see Engineering Guidance Document for KS-1 Exemption and attachments

pw: water

Vegetated Splash Pad Designs for Subsurface Drain and Underground Outlets

Attachment #1 to Engineering Guidance Document for KS-1 Exemption,

Vegetated Splash Pad on Channel Bank

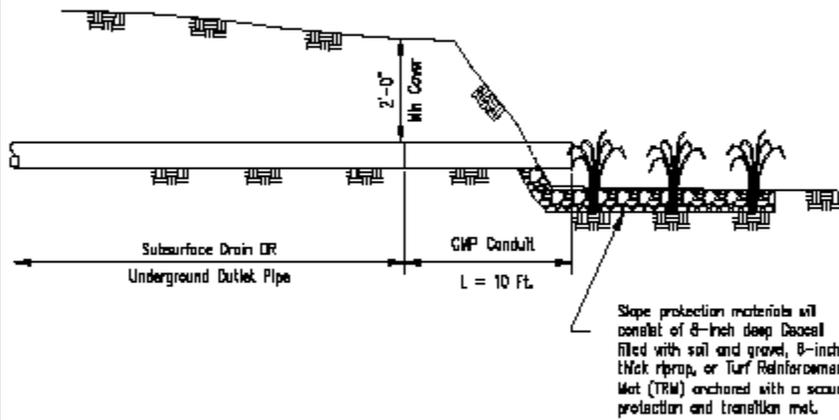


Notes:

1. Plant vegetation prior to placing 8-inch riprap or TRM, if used.
2. The 8-inch geocell will be filled with 2" of soil material at the bottom and then filled to the top of the geocell with 3-inch gravel material.
3. Plant vegetation in soil material prior to placement of gravel material.
4. Minimum width of slope protection will be 8 feet.
5. Minimum length of slope protection will be 10 feet.

| | | |
|--|---|--|
| <p style="font-size: small;">National Resources Conservation Service United States Department of Agriculture</p> | <p>VEGETATED SPLASH PAD DETAIL</p> <p>Outlet on channel bank</p> | <p>Checked: _____</p> <p>Drawn: _____</p> <p>Revised: _____</p> <p>Approved: _____</p> |
|--|---|--|

Vegetated Splash Pad near Channel Bottom



Notes:

1. Plant vegetation prior to placing 8-inch riprap or TRM, if used.
2. The 8-inch geocell will be filled with 2" of soil material at the bottom and then filled to the top of the geocell with 3-inch gravel material.
3. Plant vegetation in soil material prior to placement of gravel material.
4. Minimum width of slope protection will be 8 feet.
5. Minimum length of slope protection will be 10 feet.

| | | | |
|------------------------------------|---|---|--|
| <p>KS-1-016-2 Sheet 1 of 1</p> |  National Resources Conservation Service United States Department of Agriculture | <p>VEGETATED SPLASH PAD DETAIL Outlet on channel bottom</p> | <p>Checked _____ Drawn _____ Date/Rev _____ Project _____</p> |
|------------------------------------|---|---|--|