

## 4. Practices and Components

ACCESS ROAD (Code 560) .....	4-4
ANIMAL MORTALITY FACILITY (Code 316) .....	4-6
BRUSH CONTROL MANAGEMENT (Code 314A) .....	4-7
BRUSH MANAGEMENT (Code 314) .....	4-9
CHANNEL BANK VEGETATION (Code 322) .....	4-11
CLOSURE OF WASTE IMPOUNDMENTS (Code 360) .....	4-13
COMPOSTING FACILITY (Code 317) .....	4-14
CONCENTRATED NON-CONFINED LIVESTOCK (Code 390) .....	4-15
CONSTRUCTED WETLAND (Code 656) .....	4-16
CONTOUR BUFFER STRIPS (Code 332) .....	4-18
CONTOUR BUFFER STRIPS RESEEDING (Code 332r) .....	4-20
CRITICAL AREA PLANTING (Code 342) .....	4-22
CRITICAL AREA PLANTING RESEEDING (Code 342r) .....	4-24
DIKE (Code 356) .....	4-26
DIVERSION (Code 362) .....	4-27
DRY HYDRANT (Code 432) .....	4-29
ELIMINATION OF ABANDONED ON-SITE WASTEWATER SYSTEM (Code 110 A) ...	4-31
FENCING (Code 382) .....	4-34
FERTILIZER/PESTICIDE CONTAINMENT STRUCTURE .....	4-37
(SECONDARY CONTAINMENT: BARRIERS, OPERATIONAL AREA/LOADING/RINSATE PADS, STORAGE BUILDINGS) (Code 140) .....	4-378
FIELD BORDER (Code 386) .....	4-44
FIELD BORDER RESEEDING (Code 386r) .....	4-46
FILTER STRIP (Code 393) .....	4-48
FILTER STRIP RESEEDING (Code 393r) .....	4-50
FORAGE AND BIOMASS PLANTING (Code 512) .....	4-52
FORAGE AND BIOMASS RESEEDING (Code 512r) .....	4-54
FOREST STAND IMPROVEMENT (Code 666) .....	4-56
GRADE STABILIZATION STRUCTURE (Code 410) .....	4-57
GRASSED WATERWAY OR OUTLET (Code 412) .....	4-60
GRASSED WATERWAY RESTORATION (Code 412r) .....	4-62
HEAVY USE AREA PROTECTION (Code 561) .....	4-64

HERBACEOUS WEED CONTROL (Code 315) .....	4-66
IMPROVEMENT OF EXISTING WATER WELLS (Code 008) .....	4-68
IRRIGATION SYSTEM, TRICKLE (Code 441) .....	4-70
IRRIGATION WATER CONVEYANCE PIPELINE (Code 430DD) .....	4-71
IRRIGATION WATER CONVEYANCE PIPELINE (Code 430EE) .....	4-73
IRRIGATION WATER MANAGEMENT (Code 449) .....	4-75
LAND SMOOTHING (Code 446) .....	4-79
LINED WATERWAY OR OUTLET (Code 468).....	4-80
LIVESTOCK WASTE SYSTEM (Code 312).....	4-82
MONITORING WELL (Code 353).....	4-83
MULCHING (Code 484).....	4-85
NUTRIENT MANAGEMENT (Code 590).....	4-87
ON-SITE WASTEWATER SYSTEM, Code 110.....	4-90
PIPELINE (Code 516) .....	4-99
POND (Code 378).....	4-102
POND RESTORATION (Code 378r) .....	4-105
POND SEALING OR LINING (FLEXIBLE MEMBRANE, SOIL DISPERSANT,BENTONITE, NATURAL CLAY)(Code 521A,521B,521C,521D) .....	4-108
PRECISION LAND FORMING (Code 462) .....	4-109
PRESCRIBED GRAZING (Code 528) .....	4-110
PUMPING PLANT FOR WATER SUPPLY (Code 533).....	4-111
RANGE PLANTING (Code 550).....	4-114
RANGE PLANTING RESEEDING (Code 550r) .....	4-116
RESIDUE MANAGEMENT NO TILL/STRIP TILL/DIRECT SEED (Code 329A .....	4-118
RIPARIAN FOREST BUFFER (Code 391).....	4-120
ROOF RUNOFF STRUCTURE (Code 558).....	4-122
SEDIMENT BASIN (Code 350) .....	4-123
SPRING DEVELOPMENT (Code 574).....	4-124
STREAM CROSSING (Code 578) .....	4-127
STREAMBANK PROTECTION (Code 580) .....	4-129
STREAMBANK PROTECTION REPAIR (Code 580R) .....	4-131
STREAMBANK RIPARIAN BUFFER INCENTIVE PAYMENT (Code 004) .....	4-132
STREAMBANK SIGNING INCENTIVE PAYMENT (Code 001).....	4-134
STRUCTURE FOR WATER CONTROL (Code 587) .....	4-135
SUBSURFACE DRAIN (Code 606) .....	4-137
TERRACE (Code 600) .....	4-139

TERRACE RESTORATION (Code 600r) .....	4-141
TREE/SHRUB ESTABLISHMENT (Code 612) .....	4-143
UNDERGROUND OUTLET (Code 620) .....	4-145
UNDERGROUND OUTLET RESTORATION (Code 620r) .....	4-147
UNPERMITTED AND PERMITTED ABOVE GROUND FUEL STORAGE TANK (Code 700) .....	4-149
UNPERMITTED DUMP SITE REMEDIATION (Code 120) .....	4-156
VEGETATED TREATMENT AREA (Code 635).....	4-158
WASTE STORAGE FACILITY (Code 313) .....	4-160
WASTE TRANSFER (Code 634) .....	4-162
WASTE TREATMENT LAGOON (Code 359).....	4-163
WATER AND SEDIMENT CONTROL BASIN (Code 638) .....	4-165
WATER WELL (Code 642) .....	4-167
WATERING FACILITY (Code 614).....	4-170
WATERING FACILITY REPLACEMENT (Code 614r) .....	4-174
WELL DECOMMISSIONING (Code 351) .....	4-178
WETLAND CREATION (Code 658) .....	4-182
WETLAND ENHANCEMENT (Code 659) .....	4-184
WETLAND RESTORATION (Code 657).....	4-186
WINDBREAK/SHELTERBELT ESTABLISHMENT (Code 380) .....	4-188
WINDBREAK/SHELTERBELT RENOVATION (Code 650) .....	4-191

## **ACCESS ROAD (Code 560)**

### **NPS ONLY**

#### **1. DEFINITION**

An earthen roadway constructed by ground clearing and shaping for access to a relocated livestock facility.

#### **2. PURPOSE**

A travelway constructed to facilitate access to a relocated livestock holding or feeding area.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

The absence of an established roadway sufficient to provide all weather access to a relocated livestock facility. Must be in conjunction with a relocated livestock facility meeting DOC eligibility requirements. See Chapter 5 for livestock waste provisions.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

a. The following components are authorized for cost-share:

(When applicable, include labor when calculating county average cost.)

i. Shaping (acre)

- (1) Shaping required to prevent flooding or washout of the roadway.
- (2) Shaping to allow proper discharge and runoff.
- (3) County average cost is to be figured by the acre.

ii. Earthwork (cubic yard)

- (1) Includes earthwork involved in the structure.
- (2) County average cost is to be figured by the cubic yard of earth moved.

iii. Gravel or rock (cubic yard)

- (1) County average cost to be figured by cubic yard.

iv. Culvert (linear foot)

- (1) Culvert 18" – 36"
- (2) Culvert < 18"

- (3) Culvert > 36"
- (4) County average cost to be figured by linear foot.

v. Geotextile (square yard)

- (1) Woven fabric of synthetic fibers placed under rock fill and surface material.
- (2) County average cost to be figured by the square yard.

b. Associated Practices

- i. Critical Area Planting (see Code No. 342)
- ii. Other practices associated with a livestock waste system.

**5. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **ANIMAL MORTALITY FACILITY (Code 316)**

### **NPS ONLY**

#### **1. DEFINITION**

An on-farm facility for the treatment or disposal of livestock and poultry carcasses.

#### **2. PURPOSE**

To decrease non-point source pollution of surface and ground water resources.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies where animal carcass treatment or disposal must be considered as a component of a waste management system for livestock or poultry operations.

#### **4. COMPONENTS**

The following components are authorized for cost-sharing:

- a. Chest type freezer with removable trays for dead animals set on a concrete slab. (each)
  - i. County average cost is to be figured by the unit cost for each freezer installed.
- b. Dual burning incinerator approved for dead animals set on a concrete slab. (each)
  - i. County average cost is figured by the unit cost for each incinerator installed
- c. Concrete block lined disposal pit with a concrete slab cover and two chute openings. (Square Foot)
  - i. County average cost is figured on the square feet of pit area.

#### **5. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **BRUSH CONTROL MANAGEMENT (Code 314A)**

### **WR and NPS**

#### **1. DEFINITION**

Removal, reduction, or manipulation of non-herbaceous plants.

#### **2. PURPOSE**

This practice will be applied to accomplish one or more of the following purposes:

- Restore desired vegetative cover to protect soils, control erosion, reduce sediment, improve water quality, and/or enhance stream flow.
- Restore natural plant community balance.
- Reduce competition for space, moisture, and sunlight between desired and unwanted plants.
- Manage non-herbaceous plants on rangeland, and warm and cool season pasture and haylands.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies on rangeland, and warm and cool season pasture and haylands where removal or reduction of excessive woody (non-herbaceous) plants is desired. Where adjustments in grazing management, prescribed burning, and other conservation practices will not restore the kind of plant cover needed to attain conservation objectives within a reasonable time frame.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. County average cost is to be figured by the acre. The following components are authorized for cost-share:  
(When applicable, include labor when calculating county average cost.)
  - i. Mechanical Treatment High Infestation Level (acre)
  - ii. Mechanical Treatment Medium Infestation Level (acre)
  - iii. Chemical Ground Broadcast Treatment (acre)
  - iv. Chemical Ground Spot Treatment (acre)
  - v. Chemical Aerial Broadcast Treatment (acre)

b. Associated Practices

i. Prescribed Burning (Code No. 338) (DOC cost-share is not authorized.)

**5. POLICIES**

- a. This practice provides a cost-share incentive for the implementation of a brush management plan for the control of non-herbaceous plants on rangeland, and warm and cool season pasture and haylands.
- b. A NRCS prescribed burning plan will be followed, if applicable.
- c. A NRCS brush management plan shall be designed and certified using form KS-ECS-314.
- d. A Forage Balance Estimate Worksheet form, provided by the DOC or a NRCS Prescribed Grazing Plan Code 528, shall be completed prior to submitting the CS-3.
- e. An exclusion cage shall be installed in warm season pastures to NRCS Standards and Specifications prior to submitting the CS-4.
- f. Broadcast and aerial treatment will be eligible only where mechanical or spot treatments are not practical. If broadcast or aerial treatment is needed, justification will be documented in the producer's case file.
- g. To be eligible, the canopy cover of the species must be in the High or Medium Infestation Level according to the NRCS practice code for Brush Management.
- h. Grazing lands treated by this practice shall be maintained in permanent vegetation for a minimum of 10 years.
- i. The conservation district shall provide a KSU Extension publication on grazing management to each landowner under contract. Following are extension publications to consider:

MF1118 – Stocking Rate and Grazing Management,  
<http://www.ksre.ksu.edu/bookstore/pubs/mf1118.pdf>;

C402 - Smooth Brome Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/C402.pdf>;

C729 – Tall Fescue Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/c729.pdf>.

Districts should consult with their county extension agent on publications that would be applicable for their county.

- j. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a grazing workshop in the previous year.

## **BRUSH MANAGEMENT (Code 314)**

### **RW Only**

#### **1. DEFINITION**

Removal, reduction, or manipulation of phreatophytes in riparian areas.

#### **2. PURPOSE**

This practice may be applied to reduce competition for space, moisture, and sunlight between desired plants and phreatophytes in riparian areas. The practice will also be used to restore desired vegetative cover to protect soils, improve water quality and enhance stream flow.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies on rangeland, native or naturalized pasture, and pasture and haylands where removal or reduction of phreatophytes in riparian areas is desired and where removal of phreatophytes will conserve moisture.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. County average cost is to be figured by the acre. The following components are authorized for cost-share:  
(When applicable, include labor when calculating county average cost.)
  - i. Chemical spray mix (acre)
  - ii. Application cost (acre)
  - iii. Mechanical cost (acre)
- b. Associated Practices
  - i. Other phreatophytes management practices involving cultural and biological control may be considered by the DOC at the recommendation of the conservation district.
  - ii. Prescribed Burning (Code No. 338) (DOC cost-share is not authorized.)

#### **5. POLICIES**

- a. This practice provides a cost-share incentive for the implementation of a brush management plan for the control of phreatophytes on rangeland, pasture, and hayland within riparian areas.
- b. A NRCS prescribed burning plan will be followed, if applicable.

- c. A NRCS brush management plan shall be designed and certified using form KS-ECS-314.
- d. A Forage Balance Estimate Worksheet from, provided by the DOC or a NRCS Prescribed Grazing Plan Code 528, shall be completed prior to submitting the CS-3.
- e. An exclusion cage shall be installed to NRCS Standards and Specifications prior to submitting the CS-4.

## CHANNEL BANK VEGETATION (Code 322)

### NPS, RW

#### 1. DEFINITION

Establishing and maintaining vegetative cover on channel banks, berms, and associated spoil areas.

#### 2. PURPOSE

Stabilize channel banks and adjacent areas and reduce erosion and sedimentation.

#### 3. CONDITIONS WHERE PRACTICE APPLIES

This practice applies to establishing vegetation on channel banks, berms, and associated spoil areas. This practice is used in conjunction with Streambank and Shoreline Protection, Code 580.

#### 4. COMPONENTS AND ASSOCIATED PRACTICES

- a. The following components are authorized for cost-share:  
(When applicable, include labor when calculating county average cost.)
  - i. Planting (per tree/shrub)
    - (1) Tree – Bareroot (per tree)
    - (2) Tree – Containerized (per tree)
    - (3) Tree – Other (per tree)
    - (4) Shrub (per shrub)
    - (5) Tree components include planting site preparation, tree, shrubs, and planting costs.
    - (6) County average cost for tree components are to be figured per tree/ shrub
  - ii. Nut planting (acre)
  - iii. Seedbed Preparation – Tillage/Clean Tilled (by acre)
  - iv. Seedbed Preparation – Standing Cover (by acre)
  - v. Seedbed Preparation – Chemical/No-Till (by acre)
  - vi. Cover Crop (by acre)
  - vii. Nurse Crop (by acre)

viii. Seed Mix (by acre)

(1) Seed Mix #1 thru Seed Mix #10

ix. Seeding Cost (by acre)

**5. LIMITATIONS**

a. Cost-sharing is not authorized for:

i. Cover crops which are harvested for resale or consumption.

ii. Pure stands of legumes or interseeding of legumes.

**6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **CLOSURE OF WASTE IMPOUNDMENTS (Code 360)**

### **NPS ONLY**

#### **1. DEFINITION**

The closure of waste impoundments (treatment lagoons and liquid storage facilities) that are no longer used for their intended purpose in an environmentally safe manner.

#### **2. PURPOSE**

Protect the quality of surface water and ground water resources.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

Where agricultural waste impoundments are no longer needed as a part of a waste management system and are to be permanently closed.

#### **4. COMPONENTS**

The following components are authorized for cost-sharing:

- a. Earthwork (by cubic yard)
  - i. County average cost is to be figured by the cubic yard of total storage in the structure after the sludge is removed.

#### **5. POLICIES**

The closure shall comply with all federal, state, and local laws, rules, and regulations including pollutant discharge elimination system requirements.

## **COMPOSTING FACILITY (Code 317)**

### **NPS ONLY**

#### **1. DEFINITION**

A facility to process raw manure or other raw organic by-products into a biologically stable organic material.

#### **2. PURPOSE**

To reduce the pollution potential of organic agricultural wastes to surface and ground water.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies where all of the following are present:

- a. Organic waste material is generated by agricultural production or processing.
- b. A composting facility is a component of a planned agricultural waste management system.
- c. A composting facility can be constructed, operated, and maintained without polluting air and/or water resources.
- d. There is a need to improve air quality by reducing the emissions of odorous gases.
- e. The facility is operated as a component of an agricultural management system.

#### **4. COMPONENTS**

The following components are authorized for cost-sharing:

- a. Shaping (acre)
  - i. Includes all earthwork necessary to construct the structure to meet specification.
  - ii. County average cost is to be figured by the acre.
- b. Mechanical Composter set on a concrete slab (each)
  - i. County average cost is figured by the unit cost for each composter installed
- c. Structure Facility (square foot)
  - i. County average cost is figured on the square feet of the structure. Structure consists of concrete slab and walls, but not including the roof structure.

#### **5. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## CONCENTRATED NON-CONFINED LIVESTOCK (Code 390)

### WR and NPS

#### 1. DEFINITION

A state cost-share enhancement to the federal Environment Quality Incentive Program (EQIP) for the Concentrated Non-Confined Animal Waste resource concern.

#### 2. PURPOSE

To provide an additional incentive to landowners to increase participation in the EQIP cost-share program for the Concentrated Non-Confined Animal Waste resource concern.

#### 3. CONDITIONS WHERE PRACTICE APPLIES

This cost-share enhancement applies to landowners who have an approved EQIP contract under the Concentrated Non-Confined Animal Waste riparian resource concern.

#### 4. COMPONENTS

a. The following component is authorized for cost-share:

- i. Co-Pay EQIP
- b. Contact DOC when the district is ready to complete a contract under this practice. Include the landowners name and the total cost of the DOC eligible practices in the EQIP contract.

#### 5. POLICIES

- a. An EQIP contract for Concentrated Non-Confined Animal Waste may be enhanced by up to 20% for a cost-share maximum rate of 90%. Contract payment will be figured at the EQIP contract total cost for DOC eligible practices. The combination of the EQIP payment and the DOC contract payment cannot exceed 90%. Only DOC eligible practices that are part of the approved EQIP contract are eligible for the cost-share enhancement.
- b. This practice should be used to stimulate participation in the EQIP cost-share program for the Concentrated Non-Confined Animal Waste resource concern. For this to be effective, conservation districts should promote this practice prior to a landowner signing up for EQIP. A landowner that has already signed up for EQIP for this resource concern does not need this extra incentive to participate in the program.

#### 6. MAINTENANCE

The practice shall be maintained for ten (10) years.

## **CONSTRUCTED WETLAND (Code 656)**

### **NPS ONLY**

#### **1. DEFINITION**

A wetland constructed to treat wastewaters from confined animal operations.

#### **2. PURPOSE**

This practice treats waste waters from confined animal operations to include milkhouse wastewater and silage leachate by the biological, chemical, and physical activities of a constructed wetland for the primary purpose of water quality improvement.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. This practice applies where:
  - i. An overall waste management system has been planned, and
  - ii. Waste generated by agricultural production or processing needs treatment.
- b. See Chapter 5 for livestock waste provisions.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Earthwork (fill or excavation by cubic yard)
    - (1) Includes all earthwork involved in the structure, whether it be fill or excavation.
    - (2) County average cost is to be figured by the cubic yard of earth moved.
  - ii. Pipe (per linear foot)
    - (1) Pipe sizes eligible for cost-sharing are determined by the conservation district.
    - (2) County average cost is figured per linear foot.
  - iii. Water Level Control Structure (per unit installed)
    - (1) Inline water control structure, inlet and outlet pipe, manually tamped backfill, and other components required to complete this structure.

- (2) County average cost is figured per unit installed.
- iv. Drop Log Structure (each)
  - (1) Includes structure and all components necessary for installation.
  - (2) County average cost is figured by each structure.
- v. Hydrophytic vegetation (each)
  - (1) County average cost is to be figured per plant.

b. Associated Practices

- i. Critical Area Planting (see Code No. 342).
- ii. Waste Storage Facility (see Code No. 313)
- iii. Waste Treatment Lagoon (see Code No. 359)

## **5. POLICIES**

- a. Wastewater from all confined animal feeding, sewage treatment, or milkhouse operations must be treated in a lagoon or waste storage pond prior to discharge into a constructed wetland.
- b. The landowner shall obtain necessary local, state, and federal permits that apply before wetland construction, including water rights if required.

## **6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **CONTOUR BUFFER STRIPS (Code 332)**

### **WR and NPS**

#### **1. DEFINITION**

Strips of perennial vegetation alternated with wider cultivated strips that are farmed on the contour.

#### **2. PURPOSE**

To stabilize the soil, reduce erosion, trap nutrients and pesticides, and improve wildlife habitat.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. On cropland where sheet and soil erosion are problems and contouring is practical.
- b. As part of a livestock waste system for a confined animal feeding operation.

**\*NPS: As part of a livestock waste system for a confined animal feeding operation.**

#### **4. COMPONENTS**

- a. The conservation district may select components to develop a county average cost as a complete practice using components Complete Practice – Seed Mix #1 thru Seed Mix #5, excluding shaping; or for individual components. Seed mix refers to either single species or multiple grass species.
  - i. County average cost for a complete practice is to be figured by the acre.
  - ii. County average cost for individual components is to be figured by the unit of measure as indicated below in parenthesis.
- b. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Shaping (acre)
  - ii. Seedbed Preparation – Tillage/Clean Tilled (acre)
  - iii. Seedbed Preparation - Standing Cover (acre)
  - iv. Seedbed Preparation – Chemical/No-Till (acre)
  - v. Fertilizer - Lime (ton)
  - vi. Fertilizer - Nitrogen (pound)

- vii. Fertilizer - Phosphorus (pound)
- viii. Fertilizer - Potash (pound)
- ix. Cover Crop (acre)
- x. Nurse Crop (acre)
- xi. Seed Mix/Sprig (acre)
  - (1) Seed Mix #1 thru Seed Mix #5
- xii. Seeding Cost (acre)
- xiii. Sprigging Cost (acre)

## **5. POLICIES**

- a. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

## **6. LIMITATIONS**

- a. Cost-sharing is not authorized for:
  - i. Cover crops which are harvested for resale or consumption.
  - ii. Pure stands of legumes or interseeding of legumes.

## **7. MAINTENANCE**

The practice shall be maintained for ten (10) years. In the event of a vegetation kill by drifting herbicides, the landowner is responsible for re-establishment of the vegetation or repayment according to the maintenance agreement.

## **CONTOUR BUFFER STRIPS RESEEDING (Code 332r)**

### **WR ONLY**

#### **1. DEFINITION**

Strips of perennial vegetation alternated with wider cultivated strips that are farmed on the contour.

#### **2. PURPOSE**

To stabilize the soil, reduce erosion, trap nutrients and pesticides, and improve wildlife habitat.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

A one-time reseeding of a failed grass stand when the failure is due to conditions beyond the control of the landowner on previously state cost-shared seeding.

#### **4. COMPONENTS**

- a. The conservation district may select components to develop a county average cost as a complete practice using components Complete Practice – Seed Mix #1 thru Seed Mix #10, or for individual components. Seed mix refers to either single species or multiple grass species.
  - i. County average cost for a complete practice is to be figured by the acre.
  - ii. County average cost for individual components is to be figured by the unit of measure as indicated below in parenthesis.
- b. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Seedbed Preparation – Tillage/Clean Tilled (acre)
  - ii. Seedbed Preparation - Standing Cover (acre)
  - iii. Seedbed Preparation – Chemical/No-Till (acre)
  - iv. Fertilizer - Lime (ton)
  - v. Fertilizer - Nitrogen (pound)
  - vi. Fertilizer - Phosphorus (pound)
  - vii. Fertilizer - Potash (pound)

- viii. Cover Crop (acre)
- ix. Nurse Crop (acre)
- x. Seed Mix/Sprig (acre)
  - (1) Seed Mix #1 thru Seed Mix #5
- xi. Seeding Cost (acre)
- xii. Sprigging Cost (acre)

## **5. POLICIES**

- a. A one-time reseeding of a failed grass stand is eligible when the failure is due to conditions beyond the control of the landowner.
- b. A maximum of 50% cost-share rate is eligible for reseeding.
- c. All eligible components for this practice are eligible for reseeding.
- d. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

## **6. LIMITATIONS**

- a. Cost-sharing is not authorized for:
  - i. Cover crops which are harvested for resale or consumption.
  - ii. Pure stands of legumes or interseeding of legumes.

## **7. MAINTENANCE**

The practice shall be maintained for ten (10) years or the lifespan of the practice. In the event of a vegetation kill by drifting herbicides, the landowner is responsible for re-establishment of the vegetation or repayment according to the maintenance agreement.

## **CRITICAL AREA PLANTING (Code 342)**

### **WR, NPS, and RW**

#### **1. DEFINITION**

Establishing permanent vegetation such as grasses or legumes/forbs used as a part of a seed mixture on sites that have or are expected to have high erosion rates, and on sites that have physical, chemical or biological conditions that prevent the establishment of vegetation with normal practices.

#### **2. PURPOSE**

To stabilize areas with existing or expected high rates of soil erosion by water or wind.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

On areas with existing or expected high rates of erosion or degraded sites that usually cannot be stabilized by ordinary conservation treatment and/or management, and if left untreated, could be severely damaged by erosion or sedimentation or could cause significant off-site damage. An example of an applicable area is a gullied or denuded area, earthen dam, terrace or waterway where vegetation is difficult to establish by usual planting methods.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The conservation district may select components to develop a county average cost as a complete practice using components Complete Practice – Seed Mix #1 thru Seed Mix #5, excluding shaping; or for individual components. Seed mix refers to either single species or multiple grass species.
  - i. County average cost for a complete practice is to be figured by the acre.
  - ii. County average cost for individual components is to be figured by the unit of measure as indicated below in parenthesis.
  - iii. One time reseeding of a failed cover crop as determined by NRCS.
- b. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Shaping (acre)
  - ii. Seedbed Preparation – Tillage/Clean Tilled (acre)
  - iii. Seedbed Preparation - Standing Cover (acre)
  - iv. Seedbed Preparation – Chemical/No-Till (acre)

- v. Fertilizer - Lime (ton)
- vi. Fertilizer - Nitrogen (pound)
- vii. Fertilizer - Phosphorus (pound)
- viii. Fertilizer - Potash (pound)
- ix. Cover Crop (acre)
- x. Cover Crop Reseeding (acre) one time only
- xi. Nurse Crop (acre)
- xii. Seed Mix/Sprig (acre)
  - (1) Seed Mix #1 thru Seed Mix #5
- xiii. Seeding Cost (acre)
- xiv. Sprigging Cost (acre)

c. Associated Practices: Many practices may require Critical Area Planting.

## **5. POLICIES**

- a. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

## **6. LIMITATIONS**

- a. Cost-sharing is not authorized for:
  - i. Cover crops which are harvested for resale or consumption.
  - ii. Pure stands of legumes or interseeding of legumes.

## **7. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **CRITICAL AREA PLANTING RESEEDING (Code 342r)**

### **WR, NPS, and RW**

#### **1. DEFINITION**

Establishing permanent vegetation such as grasses or legumes/forbs used as a part of a seed mixture on sites that have or are expected to have high erosion rates, and on sites that have physical, chemical or biological conditions that prevent the establishment of vegetation with normal practices.

#### **2 PURPOSE**

To stabilize areas with existing or expected high rates of soil erosion by water or wind.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

A one-time reseeding of a failed grass stand when the failure is due to conditions beyond the control of the landowner on previously state cost-shared seeding.

#### **4. COMPONENTS**

- a. The conservation district may select components to develop a county average cost as a complete practice using components Complete Practice – Seed Mix #1 thru Seed Mix #5, excluding shaping; or for individual components. Seed mix refers to either single species or multiple grass species.
  - i. County average cost for a complete practice is to be figured by the acre.
  - ii. County average cost for individual components is to be figured by the unit of measure as indicated below in parenthesis.
- b. The following components are authorized for cost-sharing  
(When applicable, include labor when calculating county average cost.)
  - i. Shaping (acre)
  - ii. Seedbed Preparation - Clean Tilled (acre)
  - iii. Seedbed Preparation - Standing Cover (acre)
  - iv. Fertilizer - Lime (ton)
  - v. Fertilizer - Nitrogen (pound)
  - vi. Fertilizer - Phosphorus (pound)
  - vii. Fertilizer - Potash (pound)

- viii. Cover Crop (acre)
- ix. Nurse Crop (acre)
- x. Seed Mix/Sprig (acre)
  - (1) Seed Mix #1 thru Seed Mix #5
- xi. Seeding Cost (acre)
- xii. Sprigging Cost (acre)

## **5. POLICIES**

- a. A one-time reseeding of a failed grass stand is eligible when the failure is due to conditions beyond the control of the landowner.
- b. A maximum of 50% cost-share rate is eligible for reseeding.
- c. All eligible components for this practice are eligible for reseeding.
- d. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

## **6. LIMITATIONS**

- a. Cost-sharing is not authorized for:
  - i. Cover crops which are harvested for resale or consumption.
  - ii. Pure stands of legumes or interseeding of legumes.
  - iii. Cost-sharing is not authorized in conjunction with a LWM project.

## **7. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **DIKE (Code 356)**

### **NPS ONLY**

#### **1. DEFINITION**

An embankment constructed of earth or other suitable materials to protect land against overflow or to regulate water.

#### **2. PURPOSE**

To assist in regulating water for protection of feedlots and to make better use of drainage facilities.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

Class III dikes constructed in rural or agricultural areas to prevent floodwater from entering farmsteads and feedlots.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

a. The following components are authorized for cost-share:  
(When applicable, include labor when calculating county average cost.)

- i. Earthwork (cubic yard)
  - (1) Includes all earthwork involved in the structure.
  - (2) County average cost is to be figured by the cubic yard of earth moved.

b. Associated Practice: Critical Area Planting (see Code No. 342)

#### **5. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **DIVERSION (Code 362)**

### **WR, NPS\*, and RW**

#### **1. DEFINITION**

A channel constructed across the slope with a supporting ridge on the lower side.

#### **2. PURPOSE**

To divert excess water from one area for use or safe disposal in other areas.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies to sites where:

- a. Runoff damages cropland, pastureland, farmsteads, feedlots, or conservation practices such as terraces or strip cropping.
- b. Surface flow and shallow subsurface flow caused by seepage are damaging sloping upland.
- c. Runoff is in excess and available for use on nearby sites.
- d. A diversion is required as part of a livestock waste system.
- e. A diversion is required to control erosion and runoff on urban or developing areas and construction or mining sites.

**\*NPS: When required as part of a livestock waste system or when addressing a head cut coming out of a riparian area into a field under the Sediment Control project type.**

**Note: The location of a diversion and its outlet shall comply with Kansas State law. Diversions shall not outlet on the right-of-way of a public road or utility without written approval from the proper authority.**

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:
  - i. Earthwork (cubic yard)
    - (1) Earthwork – Gradient
    - (2) Earthwork – Level
    - (3) Includes all earthwork involved in the structure.
    - (4) County average cost is to be figured by the cubic yard of earth moved.

b. Associated Practices

i. Critical Area Planting (see Code No. 342)

ii. Underground Outlet (see Code No. 620)

**5. POLICIES**

a. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

**6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **DRY HYDRANT (Code 432)**

### **WR ONLY**

#### **1. DEFINITION**

A non-pressurized permanent pipe assembly system installed into water source that permits the withdrawal of water by suction.

#### **2. PURPOSE**

Provide access to water supplies for use in combating wildfire, and prescribed burning.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. Where a dependable source of water (capable of supplying 250 gallons per minute for a continuous 2-hour period), and where it is necessary to draft water for fire protection.
- b. Exceptions are allowed for underground 10,000 gallon tanks where surface water supplies are not available.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The conservation district will develop a county average cost per complete practice - each. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Hydrant head, end cap, suction hose support, riser, elbows, pipe, couplings, connections, pipe support, strainers, strainer cap, screens and labor.
- b. Associated Practice: Critical Area Planting (see Code No. 342)

#### **5. POLICIES**

- a. Permits may be required from the U.S. Army Corps of Engineers and the Kansas Department of Agriculture, Division of Water Resources.
- b. Water use agreement shall be secured from the legal property owner. Written permission should be developed in cooperation with the municipal, town or county attorney.

## **6. LIMITATIONS**

- a. Cost-share is not authorized for:
  - i. Access road
  - ii. Access road improvements
  - iii. Signage
  - iv. Guard rail/post

## **7. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **ELIMINATION OF ABANDONED ON-SITE WASTEWATER SYSTEM (Code 110 A)**

### **NPS ONLY**

#### **1. DEFINITION**

The elimination (permanent closure or removal) of abandoned, improperly constructed, or inactive seepage pits (rat holes), cesspools, drainage pits, lagoons and septic tanks used by a single family residence.

#### **2. PURPOSE**

Proper closure would eliminate a possible pathway of groundwater contamination, a safety hazard from possible collapse of the top or opening, and future problems with structural integrity for construction at or near the site. The use of seepage pits as an approved method of disposing of wastewater is not authorized. To eliminate contamination and safety hazards abandoned seepage pits, cesspools, drainage pits, lagoons and septic systems should be permanently closed or removed.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

The abandonment of a failing wastewater system to include seepage pits (rat holes), cesspools, drainage pits, lagoons and septic systems as a result of system renovation to meet standards or the abandonment of a home site. The county sanitarian, public health officer or other qualified official will determine if the existing onsite wastewater treatment system meets applicable standards (local code or Kansas regulations). A site assessment by the county sanitarian will confirm that a contamination potential exists of the abandoned system.

#### **4. COMPONENTS**

- a. The conservation district may select components to develop a county average cost as a complete practice or for individual components.
  - i. County average cost for a complete practice/closure is to be figured by the each.
  - ii. County average cost for individual components is to be figured by the unit of measure as indicated below in parenthesis.
- b. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Earthwork (cubic yard or per system)
    - (1) Removal of existing cesspool and/or septic tank covers.
    - (2) Crushing, removal and/or back fill of cesspool.

- (3) Disconnecting system from house.
- (4) Restore surface grade.
- (5) County average cost is to be figured by the cubic yard of earth moved or per system.

ii. Pumping (per gallon)

- (1) To empty the contents (water, semi solid or solid organic material) from the cesspool, lagoon or septic tank.
- (2) County average cost is to be figured on a per gallon or unit basis.

iii. Grout (bag)

- (1) Bentonite
- (2) Cement
- (3) Neat cement
- (4) County average cost is to be figured by the bag.

iv. Subsoil fill (cubic yard)

- (1) County average cost is to be figured by the cubic yard.

v. Aggregate fill (cubic yard)

- (1) Sand
- (2) Gravel (less than one inch diameter)
- (3) County average cost is to be figured by the cubic yard.

vi. Chlorine (gallon)

- (1) County average cost is to be figured by the gallon.

vii. Labor (hour)

- (1) County average cost is to be figured by the hour.

## 5. **POLICIES**

- a. The elimination or closure of cesspool procedures should follow rules established by KDHE for dug wells when groundwater is intercepted by the cesspool. The required plugging procedure is outlined in Extension bulletin *Plugging Abandoned Wells*, MF-935 (Revised) dated January 1998 available at local county extension offices. A plugging report is not required by KDHE as plugging cesspools is not addressed in Kansas law. However, if the structure intercepts groundwater, regardless of how it was used, it is a well and all requirements used for well plugging must be met including filing the WWC-5p report with KDHE.
- b. The recommendations contained in KSU Cooperative Extension Service Publication, *Plugging Cisterns, Cesspools, Septic Tanks and Other Holes*, MF-2246, dated July 1998, shall be followed on all 110A projects.
- c. Lateral lines may be left in place and considered dormant sewer lines.
- d. If assistance is unavailable from the county health department, contact the Division of Conservation, Kansas Department of Agriculture, KDHE State Office or the local Extension Agent.

**Note: Additional information is available in the *Environmental Health Handbook* that can be ordered from the KSU Cooperative Extension Service, 785.532.5813.**

## 5. **MAINTENANCE**

The practice shall be maintained for ten (10) years.

## FENCING (Code 382)

### WR, NPS, and RW

#### 1. DEFINITION

Enclosing or dividing an area of land with a suitable permanent structure that acts as a barrier to livestock (does not include temporary fences).

#### 2. PURPOSE

To exclude livestock from areas that should be protected from grazing, protect new seedlings and plantings from grazing, subdivide grazing land to permit use of grazing systems and utilize grazing management strategies to enhance grass conditions, or to prevent concentration of animals in the riparian zone.

#### 3. CONDITIONS WHERE PRACTICE APPLIES

Where practice is utilized:

- a. To exclude livestock from riparian and wetland areas.
- b. Relocate livestock feeding areas as a pollution control practice.
- c. As a cross-fence when implementing a grazing management plan.
- d. In conjunction with another eligible practice requiring fencing such as waste treatment lagoon or windbreak/shelterbelt establishment.
- e. Existing ponds are eligible for fencing if the pond meets NRCS design specifications or meets eligibility requirements using form KS-ENG-4a found in Section IV under Tools in the NRCS eFOTG. Must be constructed or installed to serve pastures 40 acres or larger.

**\*See Chapter 8 for project types and practice eligibility.**

**Note: Practices constructed without state cost-share, but meets DOC requirements are eligible for fencing under this practice code.**

#### 4. COMPONENTS

- a. County average cost is to be figured per linear foot. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Fencing (per linear foot)
    - (1) Wire – 4 Strand

- (2) Wire – 5 Strand
- (3) Wire – Woven
- (4) Permanent Power Fence.  
Includes wire, posts, bracing, fence fasteners, and labor.
- ii. Fencing for pond (per linear foot)
  - (1) Wire – 4 Strand (Pond)
  - (2) Wire – 5 Strand (Pond)
  - (3) Wire - Woven (Pond)
  - (4) Permanent Power Fence  
Includes wire, posts, bracing, fence fasteners, and labor.
  - (5) Heavy Use Area (Pond)  
Access lane fence to include posts, cattle panels or continuous steel pipe panels and cement for posts.
- iii. Waste Control Facilities - includes pipe posts, cable, pipe or steel crossbars and cement for posts (see Special Conditions below).

## 5. POLICIES

- a. In order to be eligible for cost-share on cross-fencing, the following conditions shall be met:
  - i. A legal perimeter fence such as a barbwire or similar fence shall be in place around the pasture to receive the cross-fence.
  - ii. A Forage Balance Estimate Worksheet form, provided by the DOC or a NRCS Prescribed Grazing Plan Code 528 signed by the landowner and the NRCS shall be implemented.
  - iii. An exclusion cage shall be installed to NRCS Standards and Specifications prior to submitting the CS-4 (not required in a cool season pasture).
  - iv. An exclusion cage must remain in the pasture for the 10-year duration of the contract maintenance agreement.
  - v. The permanent vegetation and grazing land served by the pond shall be maintained for a minimum of 10 years.

- b. Special Conditions: Fencing specifications for Waste Control Facility pipe and/or cable perimeter fencing are adopted from KSU recommendations and can be found in Chapter 5. Component applies only to site relocation when pipe and/or cable perimeter fencing was present at abandoned site.
- c. The conservation district shall provide a KSU Extension publication on grazing management to each landowner under contract. Following are extension publications to consider:

MF1118 – Stocking Rate and Grazing Management,  
<http://www.ksre.ksu.edu/bookstore/pubs/mf1118.pdf>;

C402 - Smooth Brome Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/C402.pdf>;

C729 – Tall Fescue Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/c729.pdf>.

Districts should consult with their county extension agent on publications that would be applicable for their county.

- d. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a grazing workshop in the previous year.
- e. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

## **6. LIMITATIONS**

- a. Cost-sharing is not authorized for:
  - i. Perimeter fencing except for those conditions stated in item 3 above.
  - ii. Temporary fencing.

## **7. MAINTENANCE**

The practice shall be maintained for ten (10) years.

**FERTILIZER/PESTICIDE CONTAINMENT STRUCTURE  
(SECONDARY CONTAINMENT: BARRIERS, OPERATIONAL  
AREA/LOADING/RINSATE PADS, STORAGE BUILDINGS) (Code 140)**

**NPS ONLY**

**1. DEFINITION**

Structures built around pesticide and fertilizer storage facilities as well as operational areas to include loading/rinsate pads designed to contain products that have escaped due to leaks, spills, equipment rinsing, impacts, vandalism or ruptured tanks.

**2. PURPOSE**

To describe minimum recommended pollution control practices for non-mobile/non-commercial pesticide storage and containment structures and non-mobile/non-commercial fertilizer storage and containment structures not subject to the requirements of Rules and Regulations authorized by K.S.A. 2-1226. (K.S.A. 2-1226 identifies permitting requirement thresholds that delineate point source pollution from non-point source pollution.). This practice will be limited to demonstration purposes only. One Fluid Fertilizer/Pesticide Containment structure is eligible for cost-share in each county participating in the NPS program.

**Guidelines for prioritizing selection of site:**

- a. Utilize a point system to determine a numeric value for surface water impacted on a site by site basis.
  - i. Drinking water supply (10 to 20 points)
  - ii. Agricultural and industrial water supply (5 to 10 points)
  - iii. Aquatic life support (5 to 10 points)
  - iv. Alluvial aquifer (5 to 10 points)
  - v. Recreation (5 to 10 points)
- b. Utilize a point system to determine a numeric value for groundwater impacted on a site by site basis.
  - i. Public water supply well (10 to 20 points)
  - ii. Industrial water supply well (5 to 10 points)
  - iii. Irrigation wells (5 to 10 points)

- iv. Livestock water supply wells (5 to 10 points)
- v. Domestic water supply wells (10 to 20 points)
- vi. Groundwater discharge to surface water (5 to 10 points)

### **3. CONDITIONS FOR PRACTICE ELIGIBILITY**

- a. A fertilizer secondary containment structure for any above ground fertilizer storage facility with less than 2,000 gallons total storage capacity.
- b. A fertilizer loading pad where less than 125 tons of bulk liquid fertilizer are received into or transferred out of one or more storage containers at a facility during any 365 consecutive days.
- c. Locations should be selected and/or barriers constructed to prevent discharge from fertilizer and/or pesticide storage to be in contact (fertilizers and pesticides must be stored separately and barrier in place to prevent mixing).
- d. A pesticide secondary containment structure for above ground pesticide storage facilities.
- e. Pesticide storage buildings.
- f. A pesticide loading/rinsate pad.
- g. All rinsate or spillage within a chemical secondary containment facility shall be disposed of as required by the product's label and labeling. If the chemical is classified as a hazardous waste, the rinsate or spillage shall be disposed of in a permitted hazardous waste facility according to existing state and federal regulations.
- h. Compliance with all state and federal regulations and label directions in the storage and handling of pesticides.
- i. Install all containment structures according to manufacturer's recommendations and guidelines.
- j. Conservation district or designated qualified representative shall witness installation to certify practice implementation.

### **4. POLICIES**

#### **Storage Secondary Containment:**

- a. Location
  - i. Recommend site be located above the 100 year floodplain. If it is not possible to locate the facility above the 100-year floodplain, a dike may be constructed to protect the facility from the 100-year flood.

- ii. In a geologically stable area.
- iii. Recommend at least 150 horizontal feet away from a groundwater source and horizontal feet from a surface water source. Vertical separation distance should be at least 100 feet above the seasonal high water table. Separation distance of 100 feet is recommended for rural water lines and utilities.
- iv. Recommend downhill and downwind from occupied areas. If the facility cannot be located downhill from occupied areas, it could be protected from the 25-year, 24 hour storm to prevent the entrance of storm water and subsequent overflow. (“downwind” means prevailing wind; normally facilities subject to wind drift are located south or southeast of occupied areas for odor control).

b. Design

- i. Each secondary containment facility shall have a minimum capacity of not less than 110% of the capacity of the largest single storage container, or multiple containers if they are connected, enclosed by the secondary containment facility.
- ii. Water storage tanks used for mixing pesticides for application shall be located outside any secondary containment barrier.
- iii. Each secondary containment facility shall be constructed of materials that are of a sufficient thickness and density and of an appropriate composition that is sufficient to confine any discharged or spilled liquid or solid material. The materials used in the construction of the secondary containment facility shall be compatible with the pesticide to be stored and the conditions of the storage. (Refer to Midwest Plan Service’s design recommendations titled, *Designing Facilities for Pesticides and Fertilizer Containment*).
- iv. The walls of each secondary containment facility shall be designed to withstand a full hydrostatic head of any discharged fluid and weight load of material used in construction.
- v. Provide a separate containment area around valves, pumps and mixing tanks to catch small leaks and spills that inevitably occur in these areas on a regular basis.

c. Rainwater Disposal

- i. Each outdoor storage and secondary containment facility shall have adequate rinsate storage to accommodate rainfall collecting in the contained storage area.
- ii. Roof and extraneous drainage must be diverted away from containment areas.

d. Loading/Rinsate Pads:

- i. Location
  - (1) Same location requirements as secondary containment.

- ii. Design
  - (1) Constructed with curbs and slopes to the sump and drain valve and have a capacity to hold 100 percent of the largest spray tank used.
  - (2) Each pad shall be designed to hold the entire mobile container during loading or unloading. The pad shall be designed to accommodate all reasonably foreseeable loading conditions to which it is exposed. Cracks and seams shall be kept sealed. Control joints should be used to prevent the concrete from cracking randomly.
  - (3) Each pad shall be designed to prevent accumulation and overflow resulting from precipitation.
  - (4) The curbed and paved surface of the loading pad or area shall form or drain into a liquid tight catch basin.

e. Rinsate/Spillage Disposal

- i. Pumped into a rinsate holding tank and used as a dilutant for a future spray mix that is legal on the crop and compatible with chemicals being applied.
- ii. Held in an applicator (sprayer) and applied to suitable land (e.g., idle field, same crop, etc.) In a very dilute form.
- iii. Trucked away by a licensed hazardous waste hauler.

**Fertilizer and Pesticide Storage. Building development is not eligible for cost-share.**

However, design recommendations are as follows:

- f. Design
  - i. The building material and design should be selected with fire resistance in mind.
  - ii. A sealed concrete floor with curbing is required to contain spills.
  - iii. Pesticide storage buildings shall be ventilated to reduce fumes and dust.
  - iv. The building should be insulated to prevent temperature extremes. Temperature control devices are recommended.
  - v. Explosion proof lights, switches and wiring may be required if flammable gasses or vapors are present in sufficient quantities.
  - vi. All storage tanks must be above ground type.

- vii. Storage containers shall be anchored, as necessary to prevent floatation or instability that might occur as a result of liquid accumulations within a secondary containment facility.
- viii. All valves and fittings must be compatible with and resistant to the chemical being stored and should be supported and protected to minimize potential for accidental discharge.

g. Organization

- i. Provide steel shelving or shelves sealed with enamel and segregate chemicals by type.
- ii. Placing pesticide containers in trays or pans may be all the secondary containment that is needed if small amounts are to be stored.
- iii. Pesticides labeled as flammable or combustible liquids should be stored according to the label and pertinent local, state and federal fire protection codes.

h. Security/Safety

- i. Each storage building or container in which pesticides are stored shall be clearly marked with a description of the contents. All descriptions shall be made in letters at least two inches high.
- ii. Every storage container connection shall be equipped with a shut-off valve located on the storage container as indicated by standard engineering practice except for any safety relief connection.
- iii. Fencing is required to secure rinsate tanks, pesticide mixing/loading equipment and empty pesticide containers held for disposal, unless the entire facility is enclosed inside a secured building. Place all valves, pipes and pumps inside the fence or building, if possible.

## **5. RECOMMENDED DESIGN STANDARDS**

Design standards and specifications for Fluid Fertilizer/Pesticide Containment adopted as policy by the DOC is available upon request to the DOC. The adopted standards and specifications are Midwest Plan Service's publication entitled *Designing Facilities for Pesticide and Fertilizer Containment*. Small storage building design specifications are adopted from Kansas State University recommended designs.

## **6. COMPONENTS**

Due to the complex and unique design requirements of this practice, contact the DOC for guidance/approval regarding the following eligible components:

- a. Labor

- b. Concrete
- c. Reinforcing Steel
- d. Rinsate Pump
- e. Rinsate Storage Tank
- f. Security Fence
- g. Excavation
- h. Pipe
- i. Valves and Fittings

## **7. DESIGN CERTIFICATION POLICY**

- a. A qualified representative shall be responsible for certification of Fluid Fertilizer/Pesticide Containment facilities. A qualified representative will include the following:
  - i. An employee of local, state or federal government receiving guidance from a licensed professional engineer and having the appropriate authority to approve the design.
  - ii. A licensed professional engineer.
- b. Practice design certification will consist of the following:
  - i. Verification that practices were installed according to minimum design specifications.
  - ii. Calculation of units and quantities of installed pollution control practices in accordance with DOC cost-share guidelines and policies.
  - iii. Required design documentation:
    - (1) Construction drawings
    - (2) Construction specifications
    - (3) Operation and maintenance plan
    - (4) Design approval certification
    - (5) Table of quantities

- c. If no qualified representative can be obtained to perform practice certification, the DOC shall be advised and will assume or assign responsibility for practice certification.

## **8. OPERATION AND MAINTENANCE GUIDELINES**

- a. All DOC cost-share Fluid Fertilizer/Pesticide Containment Structures require development and use of an Operation and Maintenance Plan. One copy of the plan will be kept on file at the district office and the facility owner will keep and use a copy. The following guidelines will be followed for Operation and Maintenance Plan development:

- i. Rainwater Elimination

- (1) When the rinsate pad is in use the discharge valve will remain closed (as normal) and contain all rinsate. At the end of the use period, the pad will be triple rinsed and the rinsate will be pumped into a holding tank and disposed by one of the methods described above. When the pad is clean, the discharge valve from the pad (or sump) can be left open and any rainwater that falls on the clean pad can be allowed to freely discharge into a grassed waterway.
    - (2) Roof and extraneous drainage must be diverted away from rinsate containment areas.

- ii. Security/Safety

- (1) The pesticide storage building must be locked when not in use and posted with pesticide warning signs.
    - (2) Lock all discharge valves when facility is not supervised or in use.

- iii. Inspection and Maintenance

- (1) Maintenance: The practice shall be maintained for a minimum of ten years or the manufacturers' life expectancy of the structure, whichever is greater.
    - (2) Inspection: At least monthly the operator of a storage facility shall routinely inspect storage facilities, storage containers and appurtenances to minimize the risk of discharge.

## **9. INFORMATION SOURCES**

Kansas Department of Health and Environment, Bureau of Water

Kansas Department of Agriculture

KSU Extension, Agricultural Engineering

Midwest Plan Service, *Designing Facilities for Pesticide and Fertilizer Containment*,  
Iowa State University, Ames, Iowa 515.294.4337.

## **FIELD BORDER (Code 386)**

### **WR and NPS\***

#### **1. DEFINITION**

Establishing a border or strip of perennial vegetation at or around the edge of a field by planting herbaceous vegetation.

#### **2. PURPOSE**

To control erosion, to reduce competition from adjacent woodland, if present, and to improve wildlife habitat.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

Field edges, especially edges of crop fields.

**\*NPS: As part of a livestock waste system for a confined animal feeding operation.**

#### **4. COMPONENTS**

- a. The conservation district may select components to develop a county average cost as a complete practice using components Complete Practice – Seed Mix #1 thru Seed Mix #5, excluding shaping; or for individual components. Seed mix refers to either single species or multiple grass species.
  - i. County average cost for a complete practice is to be figured by the acre.
  - ii. County average cost for individual components is to be figured by the unit of measure as indicated below in parenthesis.
- b. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Shaping (acre)
  - ii. Seedbed Preparation – Tillage/Clean Tilled (acre)
  - iii. Seedbed Preparation - Standing Cover (acre)
  - iv. Seedbed Preparation – Chemical/No-Till (acre)
  - v. Fertilizer - Lime (ton)
  - vi. Fertilizer - Nitrogen (pound)
  - vii. Fertilizer - Phosphorus (pound)

- viii. Fertilizer – Potash (pound)
- ix. Cover Crop (acre)
- x. Nurse Crop (acre)
- xi. Seed Mix/Sprig (acre)
  - (1) Seed Mix #1 thru Seed Mix #5
- xii. Seeding Cost (acre)
- xiii. Sprigging Cost (acre)

## 5. **POLICIES**

- a. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

## 6. **LIMITATIONS**

- a. Cost-sharing is not authorized for:
  - i. Cost-sharing is not authorized for cover crops which are harvested for resale or consumption.
  - ii. Pure stands of legumes or interseeding of legumes.

## 7. **MAINTENANCE**

The practice shall be maintained for ten (10) years. In the event of a vegetation kill by drifting herbicides, the landowner is responsible for re-establishment of the vegetation or repayment according to the maintenance agreement.

## **FIELD BORDER RESEEDING (Code 386r)**

### **WR ONLY**

#### **1. DEFINITION**

Establishing a border or strip of perennial vegetation at or around the edge of a field by planting herbaceous vegetation.

#### **2. PURPOSE**

To control erosion, to reduce competition from adjacent woodland, if present, and to increase production of wildlife by providing food and/or cover.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

A one-time reseeding of a failed grass stand when the failure is due to conditions beyond the control of the landowner on previously state cost-shared seeding.

#### **4. COMPONENTS**

- a. The conservation district may select components to develop a county average cost as a complete practice using components Complete Practice – Seed Mix #1 thru Seed Mix #5, or for individual components. Seed mix refers to either single species or multiple grass species.
  - i. County average cost for a complete practice is to be figured by the acre.
  - ii. County average cost for individual components is to be figured by the unit of measure as indicated below in parenthesis.
- b. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Seedbed Preparation – Tillage/Clean Tilled (acre)
  - ii. Seedbed Preparation - Standing Cover (acre)
  - iii. Seedbed Preparation – Chemical/No-Till (acre)
  - iv. Fertilizer - Lime (ton)
  - v. Fertilizer - Nitrogen (pound)
  - vi. Fertilizer - Phosphorus (pound)
  - vii. Fertilizer - Potash (pound)

- viii. Cover Crop (acre)
- ix. Nurse Crop (acre)
- x. Seed Mix/Sprig (acre)
  - (1) Seed Mix #1 thru Seed Mix #5
- xi. Seeding Cost (acre)
- xii. Sprigging Cost (acre)

**5. POLICIES**

- a. A one-time reseeding of a failed grass stand is eligible when the failure is due to conditions beyond the control of the landowner.
- b. A maximum of 50% cost-share rate is eligible for reseeding.
- c. All eligible components for this practice are eligible for reseeding.
- d. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

**6. LIMITATIONS**

- a. Cost-sharing is not authorized for:
  - i. Cost-sharing is not authorized for cover crops which are harvested for resale or consumption.
  - ii. Pure stands of legumes or interseeding of legumes.

**7. MAINTENANCE**

The practice shall be maintained for ten (10) years. In the event of a vegetation kill by drifting herbicides, the landowner is responsible for reestablishment of the vegetation or repayment according to the maintenance agreement.

## **FILTER STRIP (Code 393)**

### **WR, NPS, and RW**

#### **1. DEFINITION**

A strip or area of vegetation for removing sediment, organic matter, and other pollutants from runoff and waste water.

#### **2. PURPOSE**

To remove sediment and other pollutants from runoff or waste water by filtration, deposition, infiltration, absorption, decomposition, and volatilization, thereby reducing pollution and protecting the environment.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. Along perennial or intermittent streams, ponds, and lakes; at the lower edge of fields; or above conservation practices such as terraces or diversions.
- b. In areas requiring filter strips as part of a waste management system treating runoff or waste water.

#### **4. COMPONENTS**

- a. The conservation district may select components to develop a county average cost as a complete practice using components Complete Practice – Seed Mix #1 thru Seed Mix #5, excluding shaping; or for individual components. Seed mix refers to either single species or multiple grass species.
  - i. County average cost for a complete practice is to be figured by the acre.
  - ii. County average cost for individual components is to be figured by the unit of measure as indicated below in parenthesis.
- b. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Shaping (acre)
  - ii. Seedbed Preparation – Tillage/Clean Tilled (acre)
  - iii. Seedbed Preparation - Standing Cover (acre)
  - iv. Seedbed Preparation – Chemical/No-Till (acre)
  - v. Fertilizer - Lime (ton)

- vi. Fertilizer - Nitrogen (pound)
- vii. Fertilizer - Phosphorus (pound)
- viii. Fertilizer - Potash (pound)
- ix. Cover Crop (acre)
- x. Nurse Crop (acre)
- xi. Seed Mix/Sprig (acre)
  - (1) Seed Mix #1 thru Seed Mix #5
- xii. Seeding Cost (acre)
- xiii. Sprigging Cost (acre)

## **5. POLICIES**

- a. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

## **6. LIMITATIONS**

- a. Cost-sharing is not authorized for:
  - i. Cost-sharing is not authorized for cover crops which are harvested for resale or consumption.
  - ii. Pure stands of legumes or interseeding of legumes.

## **7. MAINTENANCE**

The practice shall be maintained for ten (10) years. In the event of a vegetation kill by drifting herbicides, the landowner is responsible for re-establishment of the vegetation or repayment according to the maintenance agreement.

## **FILTER STRIP RESEEDING (Code 393r)**

### **WR and RW**

#### **1. DEFINITION**

A strip or area of vegetation for removing sediment, organic matter, and other pollutants from runoff and waste water.

#### **2. PURPOSE**

To remove sediment and other pollutants from runoff or waste water by filtration, deposition, infiltration, absorption, decomposition, and volatilization, thereby reducing pollution and protecting the environment.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. A one-time reseeding of a failed grass stand when the failure is due to conditions beyond the control of the landowner on previously state cost-shared seeding.

#### **4. COMPONENTS**

- a. The conservation district may select components to develop a county average cost as a complete practice using components Complete Practice – Seed Mix #1 thru Seed Mix #5, or for individual components. Seed mix refers to either single species or multiple grass species.

- i. County average cost for a complete practice is to be figured by the acre.
  - ii. County average cost for individual components is to be figured by the unit of measure as indicated below in parenthesis.

- b. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)

- i. Seedbed Preparation – Tillage/Clean Tilled (acre)
    - ii. Seedbed Preparation - Standing Cover (acre)
    - iii. Seedbed Preparation – Chemical/No-Till (acre)
    - iv. Fertilizer - Lime (ton)
    - v. Fertilizer - Nitrogen (pound)
    - vi. Fertilizer - Phosphorus (pound)
    - vii. Fertilizer - Potash (pound)

- viii. Cover Crop (acre)
- ix. Nurse Crop (acre)
- x. Seed Mix/Sprig (acre)
  - (1) Seed Mix #1 thru Seed Mix #5
- xi. Seeding Cost (acre)
- xii. Sprigging Cost (acre)

**5. POLICIES**

- a. A one-time reseeding of a failed grass stand is eligible when the failure is due to conditions beyond the control of the landowner.
- b. A maximum of 50% cost-share rate is eligible for reseeding.
- c. All eligible components for this practice are eligible for reseeding.
- d. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

**6. LIMITATIONS**

- a. Cost-sharing is not authorized for:
  - i. Cost-sharing is not authorized for cover crops which are harvested for resale or consumption.
  - ii. Pure stands of legumes or interseeding of legumes.

**7. MAINTENANCE**

The practice shall be maintained for ten (10) years. In the event of a vegetation kill by drifting herbicides, the landowner is responsible for reestablishment of the vegetation or repayment according to the maintenance agreement.

## **FORAGE AND BIOMASS PLANTING (Code 512)**

### **WR and NPS**

#### **1. DEFINITION**

Establishing and re-establishing long-term stands of adapted species of perennial or reseeding forage plants. (Includes pasture and hayland renovation.)

#### **2. PURPOSE**

To reduce erosion.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

On existing pasture and hayland or on land that is converted from other uses.

#### **4. COMPONENTS**

- a. The conservation district may select components to develop a county average cost as a complete practice using components Complete Practice – Seed Mix #1 thru Seed Mix #10, excluding shaping; or for individual components. Seed mix refers to either single species or multiple grass species.
  - i. County average cost for a complete practice is to be figured by the acre.
  - ii. County average cost for individual components is to be figured by the unit of measure as indicated below in parenthesis.
  - iii. One time reseeding of a failed cover crop as determined by NRCS.
- b. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Shaping (acre)
  - ii. Seedbed Preparation – Tillage/Clean Tilled (acre)
  - iii. Seedbed Preparation - Standing Cover (acre)
  - iv. Seedbed Preparation – Chemical/No-Till (acre)
  - v. Fertilizer - Lime (ton)
  - vi. Fertilizer - Nitrogen (pound)
  - vii. Fertilizer - Phosphorus (pound)

- viii. Fertilizer - Potash (pound)
- ix. Cover Crop (acre)
- x. Cover Crop Reseeding (acre) one time only
- xi. Nurse Crop (acre)
- xii. Seed Mix/Sprig (acre)
  - (1) Seed Mix #1 thru Seed Mix #10
- xiii. Seeding Cost (acre)
- xiv. Sprigging Cost (acre)

## **5. POLICIES**

- a. A Forage Balance Estimate Worksheet form, provided by the DOC or a NRCS Prescribed Grazing Plan Code 528, shall be completed if the tract is going to be grazed.
- b. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

## **6. LIMITATIONS**

- a. Cost-sharing is not authorized for:
  - i. Cover crops which are harvested for resale or consumption.
  - ii. Pure stands of legumes or interseeding of legumes.

## **7. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **FORAGE AND BIOMASS RESEEDING (Code 512r)**

### **WR and NPS**

#### **1. DEFINITION**

Establishing and re-establishing long-term stands of adapted species of perennial or reseeding forage plants. (Includes pasture and hayland renovation.)

#### **2. PURPOSE**

To reduce erosion.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

A one-time reseeding of a failed grass stand when the failure is due to conditions beyond the control of the landowner on previously state cost-shared seeding.

#### **4. COMPONENTS**

a. The conservation district may select components to develop a county average cost as a complete practice using components Complete Practice – Seed Mix #1 thru Seed Mix #10, or for individual components. Seed mix refers to either single species or multiple grass species.

- i. County average cost for a complete practice is to be figured by the acre.
- ii. County average cost for individual components is to be figured by the unit of measure as indicated below in parenthesis.

b. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)

- i. Seedbed Preparation – Tillage/Clean Tilled (acre)
- ii. Seedbed Preparation - Standing Cover (acre)
- iii. Seedbed Preparation – Chemical/No-Till (acre)
- iv. Fertilizer - Lime (ton)
- v. Fertilizer - Nitrogen (pound)
- vi. Fertilizer - Phosphorus (pound)
- vii. Fertilizer - Potash (pound)
- viii. Cover Crop (acre)

- ix. Nurse Crop (acre)
- x. Seed Mix/Sprig (acre)
  - (1) Seed Mix #1 thru Seed Mix #10
- xi. Seeding Cost (acre)
- xii. Sprigging Cost (acre)

## **5. POLICIES**

- a. A one-time reseeding of a failed grass stand is eligible when the failure is due to conditions beyond the control of the landowner.
- b. A maximum of 50% cost-share rate is eligible for reseeding.
- c. All eligible components for this practice are eligible for reseeding.
- d. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

## **6. LIMITATIONS**

- a. Cost-sharing is not authorized for:
  - i. Cover crops which are harvested for resale or consumption.
  - ii. Pure stands of legumes or interseeding of legumes.

## **7. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **FOREST STAND IMPROVEMENT (Code 666)**

### **RW ONLY**

#### **1. DEFINITION**

The manipulation of species composition, stand structure, and stocking by cutting or killing selected trees and understory vegetation.

#### **2. PURPOSE**

To improve the forest stand in riparian areas to increase the quality of a riparian forest buffer.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

Forest areas within a riparian zone where forest stand regeneration and understory reestablishment increase the stabilization of stream banks and improve the water quality buffering capacity of the riparian zone.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

a. The following components are authorized for cost share:

- i. Tree thinning - Consisting of cutting and/or treating with herbicide (by tree).
  - (1) County average cost is to be figured by the tree.
- ii. Weed and underbrush treatment (by acre).
  - (1) County average cost is to be figured by the acre.

b. Associated Practice: Fencing (see Code No. 382)

#### **5. POLICIES**

Spacing, density, size class, number and amounts of trees and understory species to be retained will follow established guidelines for the intended purposes.

#### **6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **GRADE STABILIZATION STRUCTURE (Code 410)**

### **WR, NPS\* and RW**

#### **1. DEFINITION**

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

#### **2. PURPOSE**

To stabilize the grade and control erosion in natural or artificial channels, to prevent formation or advance of gullies, and to enhance environmental quality and reduce pollution hazards.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. In areas where the concentration and flow velocity of water require structures to stabilize the grade in channels or to control gully erosion.
- b. In areas where acceptable, grade stabilization structures may be used as a form of terrace outlet.

**\*NPS: As part of a livestock waste system for a confined animal feeding operation or when addressing a head cut coming out of a riparian area into a field under the Sediment Control project type.**

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Earthwork (fill or excavation - per cubic yard)
    - (1) Includes all earthwork involved in the structure, whether it be fill or excavation.
    - (2) County average cost is to be figured per cubic yard of earth moved.
  - ii. Pipe and other components associated with pipe installation.  
The conservation district shall determine the method of computing county average costs. Either of the following methods or a combination of the two are available:
    - (1) Develop average costs for selected pipe sizes including all components associated with pipe. County average cost for pipe, including all components is to be figured per linear foot of pipe. The numbers below refer to grouped components.

- (a) 4/ - Complete with trash rack, canopy inlet, plastic PVC barrel, anti-seep collars, pipe support, and manually tamped backfill of the barrel.
- (b) 5/ - Complete with trash rack, canopy inlet, CMP barrel, connecting bands, anti-seep collars, pipe support, and manually tamped backfill of the barrel.
- (c) 6/ - Complete with trash rack, riser (base and 4' barrel), CMP barrel, connecting bands, anti-seep collars, pipe support, and manually tamped backfill of both the riser and barrel.

- (2) Develop individual average costs for selected pipe sizes and each associated component. County average cost for pipe and individual components is to be figured on a per unit basis.

- iii. Concrete (per block or cubic yard)
  - (1) Concrete – Cubic Yard
  - (2) Concrete – Block #1
  - (3) Concrete – Block #2
  - (4) Concrete – Block #3
  - (5) Includes concrete and any necessary reinforcing to meet specification.
  - (6) County average cost is to be figured per block or cubic yard of concrete.
- iv. Complex formed structure (cubic yard)
  - (1) Includes concrete and any necessary reinforcing to meet specification.
  - (2) County average cost is to be figured per cubic yard of concrete.
- v. Rip Rap (ton)
  - (1) County average cost is to be figured by the ton.
- vi. Reinforced steel (pound)
  - (1) County average cost is to be figured by the pound.
- vii. Timber wall (per constructed wall/each)
  - (1) Includes materials and labor
  - (2) County average cost is to be figured per constructed wall.

- viii. Gabion (cubic yard)
  - (1) Includes excavation, baskets, lids, rock, gravel, fabric, labor, and other necessary components.
  - (2) County average cost is to be figured per cubic yard of rock.
- ix. Geotextile (square yard)
  - (1) Woven fabric of synthetic fibers placed under rock fill and surface material.
  - (2) County average costs to be figured by the square yard.
- x. Turf Reinforcement Mat (square yard)
  - (1) Woven fabric of synthetic fibers placed to provide added soil erosion protection to areas being seeded.
  - (2) County average costs to be figured by the square yard.

b. Cost-sharing is not authorized for single components of this practice, except when practice is designed as a form of terrace outlet.

c. Associated Practices

- i. Fencing (see Code No. 382)
- ii. Critical Area Planting (see Code No. 342)

## **5. POLICIES**

a. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

## **6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **GRASSED WATERWAY OR OUTLET (Code 412)**

### **WR and NPS**

#### **1. DEFINITION**

A constructed waterway or outlet shaped or graded and established in vegetation (grass or crop), as needed, for the safe disposal of runoff from a field, diversion, terrace, or other structure.

#### **2. PURPOSE**

To provide for the disposal of excess surface water from terraces, diversions, or from natural concentrations without damage by erosion or flooding.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

The grassed waterway practice applies where added capacity or vegetative protection, or both, are required and designed for the shaping of natural waterways or side field outlets to control erosion resulting from concentrated runoff where such control can be achieved by grassed waterways alone or in combination with other practices.

**\*NPS: As part of a livestock waste system for a confined animal feeding operation.**

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Shaping (acre)
    - (1) Includes all earthwork necessary to construct the structure to meet specification.
    - (2) County average cost is to be figured by the acre.
  - ii. Shaping - berm (acre)
    - (1) Includes all earthwork necessary to construct the structure to meet specification.
    - (2) County average cost is to be figured by the acre.
  - iii. Shaping – bermless (acre)
    - (1) Includes all earthwork necessary to construct the structure to meet specification.

- (2) County average cost is to be figured by the acre.
- iv. Topsoiling (acre)
  - (1) Includes the added cost to remove and stockpile or haul in topsoil for the waterway.
  - (2) County average cost is to be figured by the acre.
- v. Turf Reinforcement Mat (square yard)
  - (1) Woven fabric of synthetic fibers placed to provide added soil erosion protection to areas being seeded.
  - (2) County average cost to be figured by the square yard.

b. Associated Practices

- i. Critical Area Planting (see Code No. 342)
- ii. Subsurface Drain (see Code No. 606)
- iii. Underground Outlet (see Code No. 620)

**5. POLICIES**

- a. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

**6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## GRASSED WATERWAY RESTORATION (Code 412r)

### WR ONLY

#### 1. ELIGIBILITY REQUIREMENTS

The existing grassed waterway must meet all the requirements listed below to be eligible to receive state cost-share assistance:

- a. The waterway must be 20 or more years old.
- b. Capacity is diminished such that runoff frequently flows along the outside edge(s) of waterway. Indicators of this condition include gully formation along the outside edges of the waterway, or a waterway bottom elevation that is approximately equal to or greater than the adjacent field elevation.
- c. Erosion of the waterway bottom or sides is such that gullying is occurring to the extent that vegetation cannot be effectively established.
- d. An adequate, stable outlet is available for the waterway.
- e. Reasonable efforts have been made to maintain the waterway.

#### 2. RESTORATION

Restoration may include any or all of the following:

- a. Reshaping the waterway cross section.
- b. Revegetating the waterway, including any berm and inter-terrace strip areas. (Critical Area Planting - see Code No. 342)
- c. Respreading topsoil over part or the entire waterway.
- d. Installing subsurface drains where necessary to stabilize the waterway and promote the establishment and maintenance of vegetation. (Subsurface Drain - see Code No. 606)
- e. Conversion of gradient terraces to underground tile outlet terraces is not eligible for Terrace Restoration assistance if a suitable or restorable grassed waterway outlet is available.

**3. COMPONENTS AND ASSOCIATED PRACTICES**

Refer to Grassed Waterway or Outlet – Code No. 412.

**4. POLICIES**

- a.** Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

**5. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## HEAVY USE AREA PROTECTION (Code 561)

### WR and NPS

#### 1. DEFINITION

The stabilization of livestock feeding areas and watering areas frequently and intensively used by animals, by surfacing with suitable materials, and/or installing needed structures.

#### 2. PURPOSE

This practice may be used as part of a livestock waste management system or livestock feeding or watering area to reduce soil erosion and improve water quality.

#### 3. CONDITIONS WHERE PRACTICE APPLIES

A livestock feeding area where a water quality concern exists, an area around a livestock watering facility, or a pond watering access point.

**\*NPS: When relocating a confined animal feeding operation and concrete bunk pads are present at the existing site.**

#### 4. COMPONENTS

a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)

- i. Concrete Bunk Pad (cubic yard)
  - (1) County average cost is to be figured by the cubic yard.
- ii. Gravel, Rock (cubic yard)
  - (1) County average cost is to be figured by the cubic yard.
- iii. Other Cementitious Materials (cubic yard)
- iv. Geotextile (square yard)
  - (1) Woven fabric of synthetic fibers placed under rock fill and surface material.
  - (2) County average cost is to be figured by the square yard.

## **5. POLICIES**

- a. A livestock feeding area is defined as an area where livestock are continuously feed using bale rings or other similar types of equipment and does not meet the definition of a confined feeding operation. Definition of a confined feeding operation can be found in Chapter 5, Livestock Waste System Definitions.
- b. Concrete bunk pad is only eligible when relocating a confined feeding operation. Only the amount of feet of concrete bunk pad at the existing confined animal feeding site is eligible for cost-share assistance at the new relocated confined animal feeding site.
- c. When there is a need to relocate a livestock feeding area to a more suitable location, the landowner is required to clean and properly dispose of the waste from the existing feeding area and plant vegetation at the site as recommended by the conservation district to maximize nutrient uptake.
- d. A grass buffer area of good quality and dense cover of grass with a minimum area of 3 times the area of the feeding area must be maintained down gradient from the livestock feeding area for the full width of the livestock feeding area.
- e. An operation and maintenance (O&M) plan shall be prepared by NRCS and followed by the landowner. The plan will address the following items:
  - i. Site is to be inspected annually and after significant storm events to identify any repair and maintenance needs.
  - ii. Plan will detail the level of repairs needed to maintain the effectiveness and useful life of the practice.
  - iii. The plan will address periodic removal and management of manure accumulation.

## **6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **HERBACEOUS WEED CONTROL (Code 315)**

### **WR ONLY**

#### **1. DEFINITION**

Utilizing environmentally sensitive prevention, avoidance, monitoring and suppression strategies, to manage invasive perennial sericea lespedeza that directly or indirectly causes damage or annoyance.

#### **2. PURPOSE**

This practice is applied as part of an action plan (Conservation Plan or Resource Management System) to minimize negative impacts of sericea lespedeza on soil resources, water resources, plant resources, or animal resources in a rangeland environment.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies in counties that have been declared a sericea lespedeza disaster area by the Kansas Secretary of Agriculture according to K.A.R. 4-8-43 for the control of sericea lespedeza on rangeland using chemical pest control methods.

#### **4. COMPONENTS**

- a. County average cost is to be figured by the acre. The incentive includes the following components are authorized for cost-share:  
(When applicable, include labor when calculating county average cost.)
  - i. Chemical spray mix (acre)
  - ii. Application cost (acre)
- b. Other sericea lespedeza management practices involving cultural and mechanical control may be considered by the DOC at the recommendation of the district.

#### **5. POLICIES**

- a. Only District Needs Allocation (DNA) funds may be used for this practice.
- b. A Forage Balance Estimate Worksheet form, provided by the DOC or a NRCS Prescribed Grazing Plan Code 528, shall be completed prior to submitting the CS-3.
- c. An exclusion cage shall be installed according to NRCS Standards and Specifications prior to submitting the CS-4 (not required in a cool season pasture).
- d. An exclusion cage must remain in the pasture for the 10-year duration of the contract.
- e. Incentive payments are eligible on this practice as required under the Conservation Plan, which may require multiple applications.

f. The conservation district shall provide a KSU Extension publication on grazing management to each landowner under contract. Following are extension publications to consider:

MF1118 – Stocking Rate and Grazing Management,  
<http://www.ksre.ksu.edu/bookstore/pubs/mf1118.pdf>;

C402 - Smooth Brome Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/C402.pdf>;

C729 – Tall Fescue Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/c729.pdf>.

Districts should consult with their county extension agent on publications that would be applicable for their county.

g. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a grazing workshop in the previous year.

## **IMPROVEMENT OF EXISTING WATER WELLS (Code 008)**

### **NPS ONLY**

#### **1. DEFINITION**

A reconditioning of an existing domestic (not irrigation) water well that is currently in use or landowner has intentions of future use, to prevent groundwater contamination in a priority NPS pollution protection area.

#### **2. PURPOSE**

To protect public and private water supplies by implementing pollution control practices to prevent and reduce pollution of surface and groundwater entering the aquifers.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

To be eligible for cost-share assistance, a system must be designated failing, and in non-compliance with K.A.R. 28-30-6. All reconstructed wells shall follow administrative regulations set forth by Kansas Department of Health and Environment in K.A.R. 28-30-6. These wells shall be inspected by Groundwater Management District or Local Health Department Official to determine if the existing well is in need of repair.

#### **4. COMPONENTS**

a. All improvement to existing wells shall be completed by a licensed water well contractor. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)

i. Sanitary Well Seal (each)

(1) Includes a manufactured seal installed at the top of the well casing which, when installed, creates an airtight and watertight seal to prevent contaminated or polluted water from gaining access to the groundwater supply.

(2) County average cost is to be figured per individual unit.

ii. Pitless Well Adaptor or Unit (each)

(1) Includes an assembly of parts installed below the frost line which will permit pumped groundwater to pass through the wall of the casing or extension thereof and prevent entrance of contaminants.

(2) County average cost is to be figured per individual unit.

iii. Casing

(1) Includes approved, durable, watertight well casing which shall be set from a minimum of three feet below the ground surface to at least one foot above the ground surface.

**Note: The casing shall be sealed between the casing, and the pilot hole with approved grouting material from the bottom of the casing to ground surface. The drive pipe shall be considered the pump drop pipe. For underground discharge completions, a "T" joint shall be used. The drive pipe shall be capped with a solid cap at the "T" joint when the casing method is used. An approved sanitary well seal and a well vent shall be installed on the top of the well casing in accordance with K.A.R. 28-30-6 (f) and (k).**

- (2) Includes labor and equipment use for installation purposes.
- (3) County average cost is to be figured with a combination of components using a per foot, per well diameter, per linear foot unit basis.

iv. Grout (bag)

- (1) Bentonite
- (2) Cement grout
- (3) Neat cement

Includes cement grout, neat cement grout, bentonite clay grout or other material approved by the Kansas Department of Health and Environment used to create a permanent impervious watertight bond between the casing and the undisturbed formation surrounding the casing or between two or more strings of casing.

- (4) County average cost is to be figured by the bag.

v. Concrete Structure (cubic yard)

- (1) Includes construction of cement slab, if recommended minimum pollution control practice, for reconstruction of existing water well.
- (2) County average cost is to be figured per finished cubic yard.

vi. Chlorine (gallon)

- (1) To shock treat the well.
- (2) County average cost is to be figured per gallon.

vii. Pit Extension (cubic yard)

- (1) Includes labor and excavation necessary to comply with K.A.R. 28-30-6 requirements.
- (2) County average cost is to be figured by the cubic yard.

## 5. **MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **IRRIGATION SYSTEM, TRICKLE (Code 441)**

### **WR and NPS**

#### **1. DEFINITION**

An irrigation system for distribution of water directly to the plant root by means of surface or subsurface applicators.

#### **2. PURPOSE**

To efficiently apply water and maintain soil moisture for trees and shrubs.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies where supplemental water is required to establish trees and shrubs in conjunction with or meeting criteria for DOC Windbreak/Shelterbelt Establishments, Windbreak/Shelterbelt Renovation, or Tree/Shrub Establishments.

#### **4. COMPONENTS**

a. County average cost is figured per tree/shrub. The following components are authorized for cost-sharing:

(When applicable, include labor when calculating county average cost.)

i. Pipe, emitters, and other associated components (tree/shrub)

b. Associated Practices

i. Tree/Shrub Establishment (see Code No. 612)

ii. Windbreak/Shelterbelt Establishment (see Code No. 380)

#### **5. POLICIES**

a. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

#### **6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **IRRIGATION WATER CONVEYANCE PIPELINE (Code 430DD)**

FOR CONVERSION OF FLOOD TO SPRINKLER IRRIGATION (HIGH PRESSURE  
UNDERGROUND PLASTIC PIPE)

**WR ONLY**

### **1. DEFINITION**

A pipeline and components installed in an irrigation system to accommodate the installation of a sprinkler irrigation system.

### **2. PURPOSE**

To convert flood irrigation systems to sprinkler irrigation systems. The conservation objective of this pipeline practice is to utilize low drift nozzles or low pressure, below canopy application systems which will yield a reduction in water usage while maintaining tolerable soil erosion levels.

### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. All pipelines shall be planned and located to serve as integral parts of an irrigation water distribution or conveyance system that has been designed to facilitate the conservation use and management of the soil and water resources on a farm or group of farms.
- b. Water supplies and rates of irrigation delivery for the area served by the pipeline shall be sufficient to make irrigation practical for the crops to be grown and the irrigation water application methods to be used. Areas served by the practice shall have appropriate water rights issued by the Kansas Department of Agriculture, Division of Water Resources.
- c. Plastic pipeline installed under this standard shall be placed only in suitable soils where the bedding and backfill requirements can be fully met.

### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing. (For each pipe component, a non-metered component is available and must be assigned.)  
(When applicable, include labor when calculating county average cost.)
  - i. Develop average costs for selected pipe sizes including all components associated with pipe. County average cost for pipe, including all components is to be figured per linear foot of pipe. The number below refers to grouped components.
    - (1) 12/- Complete with valves and risers, dogleg (z-pipe), excavation, testing, and backfill (pump stand and flow meter not included in the cost)

- ii. For each pipe component, a non-metered component is available and must be assigned.

## **5. POLICIES**

- a. Non-(flow) metered systems will incur a state cost-share limit of 50% or less up to a landowner limit of \$1,500 per system.
- b. Systems must have a total cost per acre-foot saved equal to or less than \$300 (based on Ranking Worksheet for Irrigation Cost-Share).
- c. Refer to Chapter 7 for additional policies.

## **6. LIMITATIONS**

- a. Cost-sharing is not authorized for:
  - i. Systems that maintain an end gun.
  - ii. Surface pipe and any components installed solely on ground surface. All pipe must be buried.
  - iii. Conversion of non-irrigated land, unless an equal amount of previously irrigated land is taken out of irrigated production.
  - iv. The above-ground sprinkler system and any component thereof.
  - v. Pipeline installed to sprinkler system that is not equipped with low drift nozzles or low pressure in low pressure spray nozzle system, nor will yield a reduction in water usage.

## **7. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **IRRIGATION WATER CONVEYANCE PIPELINE (Code 430EE)**

FOR SURGE VALVE INSTALLATION ON A FLOOD IRRIGATION SYSTEM OR CONVERSION OF FLOOD TO DRIP OR SPRINKLER IRRIGATION (LOW-PRESSURE, UNDERGROUND, PLASTIC PIPELINE)

### **WR ONLY**

#### **1. DEFINITION**

A pipeline and components installed in an irrigation system to accommodate the installation of a surge valve or conversion to a drip or sprinkler irrigation system.

#### **2. PURPOSE**

- a. The conservation objectives of this pipeline practice are to prevent erosion or loss of water quality or damage to the land, to make possible the proper management of irrigation water, and to reduce water conveyance losses.
- b. To provide the underground pipeline for a surge valve being installed on a flood irrigation system.
- c. To convert flood irrigation systems to drip or sprinkler irrigation systems. The conservation objective of this pipeline practice is to utilize drip or low drift nozzles, or low pressure, in or above canopy application systems which will yield a reduction in water usage while maintaining tolerable soil erosion levels.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. All pipelines shall be planned and located to serve as integral parts of an irrigation water distribution or conveyance system that has been designed to facilitate the conservation use and management of the soil and water resources on a farm or group of farms.
- b. Water supplies and rates of irrigation delivery for the area served by the pipeline shall be sufficient to make irrigation practical for the crops to be grown and the irrigation water application methods to be used. Areas served by the practice shall have appropriate water rights issued by the Kansas Department of Agriculture, Division of Water Resources.
- c. Plastic pipelines installed under this standard shall be placed only in suitable soils where the bedding and backfill requirements can be fully met.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. County average cost for pipe, including all components is to be figured per linear foot of pipe. The following components are authorized for cost-sharing.  
(When applicable, include labor when calculating county average cost.)

- i. Develop average costs for selected pipe sizes including all components associated with pipe. The number below refers to grouped components.
  - (1) 12/ - Complete with valves and risers, dogleg (z-pipe), excavation, testing, and backfill (pump stand and flow meter not included in the cost)
- ii. For each pipe component, a non-metered component is available and must be assigned.

## 5. **POLICIES**

- a. Non-(flow) metered systems will incur a state cost-share limit of 50% or less up to a landowner limit of \$1,500 per system.
- b. Refer to Chapter 7 for additional policies.

## 6. **LIMITATIONS**

- a. Cost-sharing is not authorized for:
  - i. Systems that maintain an end gun.
  - ii. Surface pipe and any components installed solely on ground surface. All pipe must be buried.
  - iii. Installation of any pipe or components other than the pipe leading from the main or return line to the location in which the surge valve is to be installed.
  - iv. The surge valve.
  - v. Conversion of dryland to irrigated land, unless an equal amount of previously irrigated land is taken out of irrigated production.
  - vi. The above-ground sprinkler system and any component thereof.
  - vii. Pipeline installed to sprinkler system which is not equipped with low drift nozzles or low pressure spray nozzle system, nor will yield a reduction in water usage.

## 7. **MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **IRRIGATION WATER MANAGEMENT (Code 449)**

### **WR ONLY**

#### **1. DEFINITION**

Determining and controlling the rate, amount, and timing of irrigation water application in a planned and efficient manner. Evapotranspiration (ET) data entered into a computer spreadsheet program used to monitor water balance and schedule irrigation events.

#### **2. PURPOSE**

To provide irrigation water management (IWM) awareness and education to irrigators to encourage adoption of irrigation scheduling technologies. To effectively use available irrigation water supply in managing and controlling the moisture environment of crops and to promote less consumptive use. This is accomplished by avoiding unnecessary over-pumping and controlling undesirable water loss. Also, to minimize soil erosion and loss of plant nutrients, and to protect water quality.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. This practice is applicable to all lands that are suitable for irrigation and that have a water supply of suitable quality and quantity.
- b. An adapted conservation irrigation system must be available either as a portable system or a system that has been established on the land to be irrigated.
- c. The irrigator shall have the training and ability to gather, enter and process data required to implement irrigation events on a daily basis using an irrigation scheduling computer program based on (ET) data.
- d. The irrigator shall have the necessary computer knowledge, capability and computer technology necessary to apply and manage irrigation water in such a manner to meet the goals outlined under "Purpose".

#### **4. COMPONENTS**

- a. County average cost (incentive) is to be figured by the acre for 1<sup>st</sup> and 2<sup>nd</sup> Year.

#### **5. POLICIES**

This practice will be used as reimbursement for satisfactory completion of an ET based scheduling program achieving the following criteria:

- a. Be trained in the use of and implement a Division of Conservation, Kansas Department of Agriculture approved ET based irrigation scheduling program such as KanSched for the three (3) year life of the contract AND

- b. Apply irrigation water according to the approved ET based scheduling program not to exceed the net water requirements of the crop by more than 10% the first year of the contract and not more than 5% the second and third year of the contract (water requirements for flushing due to salinity or for maintenance of SDI systems will be included in the water budget but will not be used for the calculation of crop needs – NRCS will determine the adjustment necessary) (Exceptions may be granted by the DOC regarding the net irrigation requirement) AND
- c. Provide the conservation district (where incentive application was made) with the required documentation from the ET based scheduling program at the end of each growing season (the annual cost-share payment will not be provided until the required documentation is received by the conservation district and the NRCS has verified that the criteria in item b. above has been met) AND
- d. Allow posting of a sign (if required by the DOC) provided by the Division of Conservation, Kansas Department of Agriculture and installed by the conservation district in a highly visible and high traffic area at the project site as determined by the conservation district. Sign must remain at the site for the life of the contract.
- e. Applicants shall not be eligible for the Irrigation Water Management (IWM) incentive if the applicant applies the program to a pivot system(s) with an end gun.
- f. A working and accurate flow meter is required on all systems where the IWM incentive is applied. Meter readings are required before and after each irrigation event when multiple systems use the same well. Flow meters shall be read a minimum of once per week to ensure operability. Systems with hour meters and appropriate regulators may be used for flow rate determination when a certified rate test is completed and documentation is provided to the conservation district.

**Note: It is the applicant's responsibility to ensure the meter is calibrated and operating properly at the beginning of the irrigation season and is accurate and fully functional. Recorded data at the beginning and end of the crop season will be used as determination of compliance with criteria stated in the practice code.**

- g. All systems where IWM is applied shall meet minimum Irrigation Farm Efficiency of 85% (Refer to table KS6-1 from the Kansas Irrigation Guide. This information is also provided in Chapter 7 of this manual).
- h. An assessment of the irrigation water source based on the determination of crop needs shall be completed using Form KS-ENG 394 “Irrigation Water Management Crop and Water Requirement” and ensure the water source is sufficient to meet the planned crop needs. The Net Irrigation Requirement (NIR) used will be 40%.
- i. The National Engineering Handbook, Part 652 “Irrigation Guide” shall be used as a basis for irrigation water management practice application. System evaluations should likewise be governed by the principles set forth in the guide.
- j. Each applicant shall complete a Conservation Plan of Operations and an Irrigation Development Plan with NRCS.

- k. A soil moisture profile test must be completed according to NRCS accepted methods before the crop season and results used in the water budget developed in the scheduling program.
- l. Prior to project approval, the allowable pump rate, land authorized for irrigation, and a valid water right (in good standing) must be verified to the conservation district by the applicant.
- m. Applicants may be allowed to change the site where IWM is applied within the contract period providing the conservation district approves the change. Changing crops in the same crop season may be allowed for only cogent reasons and as approved by the conservation district.
- n. An accurate rainfall gauge must be maintained at the site where IWM is applied.
- o. Irrigation systems eligible are pivot, sub-surface drip and flood.

## **6. COST-SHARE ASSISTANCE**

- a. Irrigation Water Management Incentive:
  - i. Upon completion of the above listed IWM requirements, program participants are eligible for an incentive payment of:
    - (1) \$10.00 per acre.
    - (2) Maximum incentive payment allowed is \$1,250 per applicant per year for the first two years of the contract provided all the program requirements are met as determined by the conservation district and NRCS.
    - (3) Contract shall be for three years with payments made at a maximum of \$1,250 for the first two years and none the third year.
- b. Applicants are eligible for a maximum of one (1) IWM incentive contract.
- c. Applicants must attend a required IWM ET based scheduling program-training event prior to the beginning of the irrigation season. The conservation district may require proof of attendance.
- d. Priority criteria for application approval:
  - i. Project site is in the Rattlesnake sub-basin or an IGUCA
  - ii. Project bid (see Irrigation Water Management Bid Sheet in Chapter 7)
  - iii. Estimated water savings
  - iv. Current or previous users may be eligible at the conservation districts discretion and will be ranked lower in the prioritization process.

- e. Applicants for IWM must sign the DOC form entitled “DOC Durable Power of Attorney for Participation in the Kansas Water Resources Cost-Share Program” if applicants is an operator and not the landowner.
- f. Applicants must complete the required ET based scheduling training no later than two weeks prior to the beginning of the crop season (as determined by the conservation district). The DOC will announce training events to conservation districts who will inform applicants. It will be the applicant’s responsibility to attend the required training even if a training event is not conveniently scheduled in the applicant’s area of residence.
- g. Applicants determined to be in non-compliance with Code 449 may be required to repay all or part of the state incentive payment received.
- h. Conservation district shall enter Code 449 Irrigation Water Management on their CS-2 at \$10.00 under county average cost and 100% under the cost-share rate.

## **LAND SMOOTHING (Code 446)**

### **NPS ONLY**

#### **1. DEFINITION**

Removing irregularities on the land surface by use of special equipment.

#### **2. PURPOSE**

Leveling small areas that are used to buffer pollution potential from small feedlots.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies on areas where depressions, mounds, old terraces, turn rows, and other surface irregularities interfere with the application of needed water quality management practices. Land smoothing is used for leveling small buffer areas that are used to limit pollution potential from small feedlots.

It is limited to areas having adequate soil depth or where topsoil can be salvaged and replaced.

#### **4. COMPONENTS**

a. The following components are authorized for cost-share:  
(When applicable, include labor when calculating county average cost.)

i. Earthwork (cubic yard)

(1) Include all earthwork required to meet specifications to include plowing and diskng.

(2) County average cost is to be figured by the cubic yard.

#### **5. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **LINED WATERWAY OR OUTLET (Code 468)**

### **WR and NPS**

#### **1. DEFINITION**

A waterway or outlet having an erosion-resistant lining of concrete, stone, synthetic turf reinforcement fabrics, or other permanent material.

#### **2. PURPOSE**

Provide for safe conveyance of runoff from conservation structures or other water concentrations without causing erosion or flooding and protect and improve water quality.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

Concentrated runoff, steep grades, wetness, prolonged base flow, seepage, or piping is such that a lining is needed to control erosion. Limited space is available for design width, which requires higher velocities and lining. Soils are highly erosive or other soil or climatic conditions preclude using vegetation only.

**NPS Only:** Practice is part of an overall livestock waste management system.

#### **4. COMPONENTS**

- a. The following components are authorized for cost-share:  
(When applicable, include labor when calculating county average cost.)
  - i. Concrete (cubic yard)
    - (1) Includes concrete and any necessary reinforcing to meet specification.
    - (2) County Average cost is to be figured by the cubic yard of concrete.
  - ii. Earthwork (cubic yard)
    - (1) Includes all earthwork involved in the structure.
    - (2) County average cost is to be figured by the cubic yard of earth moved.
  - iii. Rip Rap (ton)
    - (1) County average cost is to be figured by the ton.

- iv. Geotextile (square yard)
  - (1) Woven fabric of synthetic fibers placed under rock fill and surface material.
  - (2) County average cost to be figured by the square yard.
- v. Turf Reinforcement Mat (square yard)
  - (1) Woven fabric of synthetic fibers placed to provide added soil erosion protection to areas being seeded.
  - (2) County average cost to be figured by the square yard.

**5. POLICIES**

- a. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

**6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **LIVESTOCK WASTE SYSTEM (Code 312)**

### **NPS ONLY**

#### **1. DEFINITION**

A planned system to manage liquid and solid wastes from a confined animal feeding operation (CAFO), including runoff from concentrated waste areas, with ultimate disposal in a manner which does not degrade air, soil or water resources.

#### **2. PURPOSE**

To manage livestock waste in a manner which prevents or minimizes degradation of air, soil and water resources and protects public health and safety. Such systems are planned to preclude discharge of pollutants to surface or groundwater and, to the fullest practicable extent, utilize waste products through soil and plants.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies where:

- a. Wastes are generated by agricultural production or processing;
- b. Wastes from municipal and industrial treatment plants are utilized in agricultural production;
- c. Soil, water, air, plant, and animal resources are managed properly in waste utilization.
- d. All Livestock Waste System structural practices are cost-shared under their own practice code.

#### **4. COMPONENTS**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Engineering design assistance. The CS-2 should contain one component for engineering design assistance as follows:
    - (1) Engineering – 100% with a county average cost of \$10,000
- b. Livestock Waste System Co-Pay. This component is used for enhancement of a federal Environmental Quality Incentive Program (EQIP) Confined Livestock Animal Waste contract. There is up to a 20% enhancement eligibility under this component. Contract payment will be figured at the EQIP contract total cost for DOC eligible practices. The combination of the EQIP payment and the DOC contract payment cannot exceed 90%. Only DOC eligible Livestock Waste System practices are eligible for the enhancement. Districts that offer this incentive are encouraged to use this incentive to enhance participation in the EQIP cost-share program.

## **MONITORING WELL (Code 353)**

### **NPS ONLY**

#### **1. DEFINITION**

A well constructed to monitor groundwater quality as required by the KDHE permit for a confined animal feeding operation.

#### **2. PURPOSE**

A monitoring well installed as part of a groundwater monitoring system to be used along with a Groundwater Monitoring Plan to provide for characterization of the groundwater quality at a confined animal feeding operation.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies to a confined animal feeding operation where the distance to groundwater and the soils are such that the quality of the groundwater under the facility needs to be monitored for possible contamination.

#### **4. COMPONENTS**

a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)

i. Casing (linear foot)

(1) Includes casing, impervious grout, gravel pack, screening, etc. needed to complete the practice to specification.

(2) County average cost is to be figured by the linear foot of casing.

ii. Concrete (cubic yard)

(1) Includes concrete and any necessary reinforcing to meet specification.

(2) County average cost is to be figured by the cubic yard.

iii. Well Head Protector (each)

(1) County average cost is to be figured by the each.

## **5. POLICIES**

- a. The design and placement of monitoring wells must be approved in writing by KDHE prior to well installation.
- b. A Groundwater Monitoring Plan must be approved by KDHE and followed by the landowner.
- c. Installation of the well must be by a firm licensed in Kansas under K.A.R. 28-18a-18(d) to install groundwater monitoring wells.
- d. A confined feeding operation must meet the DOC eligibility requirements for cost-share assistance for a livestock waste system to be eligible for this practice.

## **6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **MULCHING (Code 484)**

### **WR, NPS and RW**

#### **1. DEFINITION**

Applying weed/moisture barrier fabric to the soil surface.

#### **2. PURPOSE**

To conserve soil moisture, provide erosion control, and suppress weed growth for establishing trees and shrubs.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies where weed control and moisture conservation is necessary to establish trees and shrubs in conjunction with or meeting criteria for DOC Windbreak/Shelterbelt Establishments, Tree/Shrub Establishments, or Riparian Forest Buffer.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Fabric weed/moisture barrier (linear foot)
    - (1) Fabric widths eligible for cost-sharing are determined by the conservation district.
    - (2) Included in the cost of fabric are all components necessary to complete installation of the practice according to specification.
    - (3) While fabric may be purchased by the square or the roll, the county average cost is figured by linear foot of fabric.

- b. Associated Practices

- i. Tree/Shrub Establishment (see Code No. 612)
- ii. Windbreak/Shelterbelt Establishment (see Code No. 380)
- iii. Riparian Forest Buffer (see Code No. 391)

**5. POLICIES**

- a. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

**6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **NUTRIENT MANAGEMENT (Code 590)**

### **NPS ONLY**

#### **1. DEFINITION**

Managing the amount, form, placement, and timing of application of plant nutrients.

#### **2. PURPOSE**

To supply adequate plant nutrients for optimum forage and crop yields, lawn maintenance and garden production; minimize entry of nutrients to surface and ground water; and to maintain or improve chemical, physical, and biological condition of the soil. The assistance provided is targeted toward educating producers to change management practices that will improve water quality and impact favorably on future landowner environmental stewardship.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies where plant nutrients (commercial fertilizer and animal waste) are applied. This practice shall be compatible with applicable water quality standards, and shall consider the combined effects of the nutrient source, nutrient transport and resource management systems.

#### **4. COMPONENTS AND POLICIES**

This practice will be used as reimbursement for satisfactory completion of a Nutrient Management System consisting of:

- a. Soil test (per test)
  - i. Organic Matter
  - ii. Profile Nitrogen
  - iii. Routine Fertility (Ph, P, K)
- b. Establishment of a realistic yield goal
- c. Compliance with KSU or certified laboratory fertilizer recommendations is required (Applications cannot exceed 10% over recommendations to maintain cost-share eligibility.) KSU Cooperative Extension Bulletin MF-734 (Revised), dated October 2004 outlines procedures for soil sample collection and submittal can be found at the following KSU Extension website.  
<http://www.ksre.ksu.edu/bookstore/pubs/MF734.pdf>

d. Manure sample analysis (per test)

i. Test for N, P, K

(1) Follow recommended and/or required application rates, timing and placement as established in the Nutrient or Waste Utilization Management Plan.

ii. Collection method:

Samples and analysis should be obtained as close as possible to application. Dry manure can be collected in a zip-lock freezer bag (approx. 2 lbs.) Liquid manure should be collected in a clean non-glass container (1 pint). Do not use soaps or disinfectants to clean containers. Take representative samples from the stack at several locations and mix. Pack the samples in ice or freeze and deliver to the lab as soon as possible. Provide the lab with species, size, facility type and type of waste. Check with the laboratory for specific instructions/ requirements

**The following practices and incentives may be offered only in pilot counties to address high priority TMDL impairments for fecal coliform bacteria, eutrophication, nutrients or dissolved oxygen. Prior approval from the DOC is required.**

e. Nutrient Incorporation:

i. This practice will be used as reimbursement for properly incorporating, commercial fertilizer or animal waste using appropriate banding, knifing or tillage equipment consisting of:

(1) Rental of specialized commercial fertilizer application equipment that directly bands the product into the soil.

(2) Reimbursement for using tillage equipment to incorporate broadcast products.

## **5. COST-SHARE ASSISTANCE**

a. Soil Testing and Manure Analysis:

i. Upon completion of the above listed soil and manure testing requirements, program participants are eligible for up to 100% reimbursement of soil test and manure analysis costs.

ii. Program participants may include landowners, operators, and others that are interested in utilizing soil testing as a management tool.

**Note: Local County Extension Offices may coordinate applications on behalf of the district. Districts will want to submit a separate contract for each quarter with the County Extension Office listed as the applicant. County Extension Offices request payment for soil tests completed each quarter. To provide additional assurance that**

**soil tests contribute to water quality improvement and the cost-share recipient follows DOC and Conservation District guidelines and KSU application recommendations, an additional soil testing landowner agreement is recommended. An example is located at the end of the Chapter 3.**

When a conservation district contracts with a County Extension Office for nutrient testing, a ledger containing the information in the Nutrient Management Ledger found at the end of Chapter 4 is required. Extension personnel shall complete the ledger as applications are received and provide completed ledgers to the conservation district at the end of the contract for filing at the district office. This ledger will assist the County Extension Office in fulfilling the state requirements for documentation of soil tests.

b. Nutrient Incorporation:

- i. Cost-share incentive payments for the above listed practices are eligible with the following restrictions:
  - (1) Anhydrous ammonia applicator rental costs are excluded from eligibility.
  - (2) Cost-share will be available at a maximum of 70% of the county average cost of the per acre equipment rental cost.
  - (3) Incentive payments up to \$5.00 per acre in lieu of cost-share is eligible. Soil testing is required on cropland receiving fertilizer and animal waste prior to application.

**Note: Test results must be received by the applicant and a Nutrient Management Landowner Agreement signed by the landowner before eligibility for this practice can be determined.**

## **ON-SITE WASTEWATER SYSTEM, Code 110**

### **NPS ONLY**

#### **1. DEFINITION**

A system composed of a septic tank/treatment field, a wastewater lagoon, or an alternative treatment system to treat wastewater from a single family residence, church, school, business or government office on the site at which it is generated. A domestic wastewater system installed in conformance with state regulations and county sanitary/environmental codes to prevent surface and groundwater contamination by disease-causing organisms, organic matter and chemicals.

#### **2. PURPOSE**

To dispose of domestic wastewater on-site in a manner that provides adequate treatment and prevents entry of untreated sewage into surface or ground waters.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

A failing on-site wastewater system may be indicated by ponding of untreated wastewater on the ground surface above lateral fields, a leaking or overflowing wastewater pond, and direct discharge of effluent from a septic tank to the surface or a ditch, or other conditions that indicate inadequate treatment of domestic wastewater. An initial site assessment by the county sanitarian will confirm the failure and need for replacement or alteration of the system. The sanitarian will provide technical data and design standards to bring the system up to code requirements. When partial system repair is determined by the sanitarian to be sufficient, he/she must certify to the conservation districts the existing components proposed to continue in use are usable and have an estimated life of at least 10 years. A file containing supporting documentation is maintained in the health department and should be copied and kept at the conservation district office along with application information in the landowners file.

- a. The failing system must meet one of the following location criteria to be eligible for state cost-share:
  - i. Located 500 feet or less from a perennial or intermittent stream.
  - ii. Located within a shallow aquifer area where depth to water is generally 50 feet or less (e.g. Equus Beds Aquifer, Big Bend Prairie Aquifer, Sand Springs Aquifer, alluvial aquifers).
  - iii. Located within a wellhead protection area of a public water supply (i.e. 2 mile radius of a public water supply well or other approved source water protection zone).

- iv. Located at a home site where a domestic water well is the primary source of drinking water supply for human consumption and one or more of the following criteria is met:
  - (1) Current failing system is a rat hole, cesspool or seepage pit.
  - (2) Current failing system is within 100 ft. of the domestic well.
  - (3) Current failing system is up gradient of the domestic well and is within 400 ft. of the domestic well.
  - (4) The domestic water well has tested positive for fecal coliform bacteria or has elevated nitrate levels (over 10 ppm) and the failing system is determined by the local sanitarian to be a possible source of the contamination.

**Note: The Onsite Wastewater System Eligibility Form found in Chapter 6 is to be used to determine eligibility for cost-share and a copy must be kept in the landowner file.**

#### **4. COMPONENTS**

Districts can cost-share by the following two methods:

- a. Complete System (each) – Includes all components needed to install a new complete system. Following are the eligible types of complete systems:
  - i. Drip Dosing
  - ii. Ezflow
  - iii. Infiltration Chambers
  - iv. Quick4 Standard Chamber
  - v. Lagoon
    - (1) M-35 lagoon
    - (2) M-40 lagoon
    - (3) M-45 lagoon
    - (4) M-50 lagoon
    - (5) M-55 lagoon
    - (6) M-60 lagoon

(7) Twin cell lagoon

- vi. Conventional Absorption Field
- vii. Mound
- viii. Rock, Plant Filter
- ix. Sand Filter
- x. County average cost is to be figured by each complete system.

b. By individual components. The following components are authorized for cost-sharing: (When applicable, include labor when calculating county average cost.)

- i. Earthwork (cubic yard)
  - (1) To complete necessary modifications to existing systems for structural changes. This would include trenching to add additional feet of lateral field, replace the existing lateral field, or excavation of a hole for septic tank installation or replacement. Also includes excavation for the purpose of enlarging or installing a wastewater lagoon.
  - (2) County average cost is to be figured by the cubic yard of earth moved or by lagoon size, M-35, M-40, M-45, M-50, M-55, M-60 and Twin Cell. When using the lagoon size, the county average cost will be figured by the each.
- ii. Pipe (linear foot)
  - (1) Includes delivery line from exterior of residence to the wastewater pond or lateral field and perforated lateral field line.
  - (2) County average cost is to be figured on a linear foot basis.
  - (3) Minimum of SDR Schedule 40 pipe shall be used for house to tank and tank to lateral conduits.(solid pipe applications - not perforated). If there is already an existing SDR-35 pipe or cast iron pipe in place in good working order and meets county code, the Schedule 40 requirement does not apply (orangeburg pipe or clay tile must be replaced). Schedule 40 pipe is recommended for lagoon conduits but SDR-35 pipe is acceptable if it meets the local county code.

iii. Tank (each)

- (1) Aeration tank
- (2) Concrete tank – 500 gallon
- (3) Concrete tank – 750 gallon
- (4) Concrete tank – 1000 gallon
- (5) Concrete tank – 1250 gallon
- (6) Concrete tank – 1500 gallon
- (7) Plastic tank – 500 gallon
- (8) Plastic tank – 750 gallon
- (9) Plastic tank – 1000 gallon
- (10) Plastic tank – 1250 gallon
- (11) Plastic tank – 1500 gallon
- (12) Includes inadequately sized tanks, leaking tanks, non-functional tanks, and systems with no tanks. If the required inspection reveals any of these conditions, a replacement tank is eligible.
- (13) County average cost is to be figured per single unit cost.

**Note: DOC will not pay to pump tanks.**

iv. Lift Station with Pump (each)

- (1) Includes pumping device and installation only.
- (2) Only applicable when a modified conventional on-site wastewater system is the least cost system for a given site.
- (3) County average costs shall be computed on a per unit basis.

v. Conventional Absorption Field (linear foot)

- (1) Conventional absorption field – 18”
- (2) Conventional absorption field – 24”
- (3) Conventional absorption field – 36”

- (4) Excavation: Includes trench construction, site preparation.
- (5) Gravel/Sand/Rock: Includes purchase of material, hauling and delivery costs.
- (6) Pipe: Includes necessary pipe and components required within the approved absorption field design.
- (7) Distribution box.
- (8) Straw or filter fabric: Includes cost of material needed to provide for separation of rock or gravel from soil fill.
- (9) County average cost, a sum of excavation, rock, pipe, and labor is to be figured by the linear foot for absorption field.

vi. Infiltration Chambers (linear foot)

- (1) Infiltration chamber – 18” – 24”
- (2) Infiltration chamber – 36”
- (3) Includes chamber units, distribution box, end caps and fittings.
- (4) Excavation: Includes trench construction, site preparation.
- (5) County average cost, a sum of excavation, infiltration chambers and labor, is to be figured on a linear foot basis.

vii. Quick4 Standard Chamber (linear foot)

- (1) Includes chamber units, distribution box, end caps and fittings.
- (2) Excavation: Includes trench construction, site preparation.
- (3) County average cost, a sum of excavation, infiltration chambers and labor, is to be figured on a linear foot basis.

viii. Ezflow system (linear foot)

- (1) County average cost is to be figured on a linear foot basis.

ix. Risers (each)

- (1) Includes installation of risers to surface grade or to 12” below surface grade if required by county code.
- (2) County average costs shall be computed on a per unit basis.

x. Labor (hour)

- (1) Eligible as required to install or modify on-site wastewater systems can be included with linear foot costs of many other components of this practice.
- (2) County average cost is to be figured by the hour.

xi. Seeding (acre)

- (1) Seeding – cool season
- (2) Seeding – warm season
- (3) Includes seedbed preparation, seed, seeding costs, fertilizer and mulching as required to complete the installation or modification.
- (4) County average cost is to be figured by the acre.

xii. Fencing (linear foot)

- (1) Fencing – 2x4 wire
- (2) Fencing – chain link
- (3) Applicable on lagoon only.
- (4) Shall meet minimum specifications according to KDHE Environmental Health Handbook. May also include galvanized wire livestock combination panels a minimum of four feet high with openings of 8 square inches maximum.
- (5) Includes wire, posts, bracing, etc. to restrict access to a wastewater lagoon.
- (6) County average cost is to be figured on a linear foot basis.

xiii. Wastewater Lagoon Anti-Seep Lining (square foot)

- (1) Anti-Seep Lining – Bentonite
- (2) Anti-Seep Lining – Salt
- (3) Includes use of bentonite, as recommended, to prevent seepage from storage/treatment structure.
- (4) County average cost is to be figured by the square foot.

xiv. Tank Lid with Riser (each)

(1) County average costs shall be computed on a per unit basis

xv. Backflow Protection Device (each)

(1) County average costs shall be computed on a per unit basis

xvi. Topsoiling (cubic yard)

(1) Applicable to absorption fields and mound system.

(2) County average cost is to be figured by the cubic yard.

xvii. Effluent Filter (each)

(1) County average costs shall be computed on a per unit basis

xviii. Subsurface drain – 4" (linear foot)

(1) County average cost is to be figured on a linear foot basis.

## 5. **POLICIES**

a. State cost-share assistance shall be available only in counties where a sanitary/environmental code has been adopted or is actively being developed.

b. An on-site wastewater system shall be designed, inspected, and certified as complete by a local official according to local and state design and permitting standards before any state financial assistance payment is made.

c. Minimum design and construction standards for infiltration and alternative systems are outlined in KDHE Bulletin 4-2, Minimum Standards For Design and Construction of On-site Wastewater Systems, dated March 1997. Minimum design and construction recommendations for wastewater lagoons are outlined in KSU Cooperative Extension Service Publication, Wastewater Pond Design and Construction, MF-1044 dated November 1997, and the Environmental Health Handbook available from K-State Research and Extension. These minimum standards shall be followed for state cost-shared projects unless superseded by local codes requiring more stringent standards of design and construction.

d. On-site wastewater system applicants are not eligible for cost-share assistance when the local health official has reported the applicant to the county attorney for enforcement action under local ordinances.

e. Maintenance guidelines for wastewater ponds outlined in KSU Cooperative Extension Service Publication, MF-2290, Wastewater Pond Operation, Maintenance, Repair will be followed for all state cost-shared on-site waste lagoon systems.

- f. Cost-share for on-site wastewater systems is not available for homeowners with new home construction that requires a new on-site wastewater system. New homes requiring new on-site waste systems on new home sites are not eligible. Only existing home sites with failing systems determined to be failing by a county official are eligible. A landowner may be eligible when a new home is built alongside a currently inhabited old home and can be served by the existing failing system provided the system was determined as failing by a county official prior to new home construction. An abandoned home site or home is not considered an old home. An abandoned home site or home is defined as either a site where a home once existed or a site that has a home that is not being currently inhabited. Local city ordinances that require home site connection to a collective sewage system excludes a homeowner from cost-share eligibility.
- g. Effective July 1, 1998 tax on labor for installation of an on-site wastewater system is no longer required.
- h. Districts shall establish and apply applicant prioritization based on water quality benefit criteria for all state cost-shared on-site wastewater systems. A ranking worksheet shall be completed for each system receiving cost-share and shall be included in the landowner file at the conservation district office. Copies of completed worksheets shall be provided to the DOC upon request. An Example Ranking Worksheet can be found in Chapter 6.
- i. On-Site Wastewater System cost-share assistance provided to landowners for system upgrade shall not exceed 70% of the computed cost, and shall be calculated from the least-cost alternative pollution control practice (PCP) when multiple PCP's exist. Churches may be considered private dwellings and cost-shared at the 70% rate at the discretion of the district. All public schools and government entities can be cost-shared at the public rate not to exceed 70%.
- j. Alternative systems are eligible if approved by KDHE and the local health agency. If multiple PCP options exist the cost-share calculations will be figured on the least cost option.
- k. All renovations and or abandonment of septic systems require pumping of the tank and examination of structural integrity **prior** to the upgrade on any NPS cost-shared system.
- l. If the mapped soil type for a proposed system has a severe limitation to septic tank absorption field, it is recommended that an on-site profile should be completed to determine feasibility of the site for soil absorption system or lagoon.
- m. On-site waste lagoons must have the required fence installed before the system is certified as complete and application for payment is made.
- n. Each district shall provide education/training on the proper maintenance of on-site wastewater systems to all cost-share recipients.

- o. Cost-share may be provided to connect to a collective sewage system if local city ordinances allow the connection and the connection is not being required by the city. Local city ordinances that require home site connection to a collective sewage system excludes a homeowner from cost-share eligibility.
- p. The project shall be completed by **June 1** of the state fiscal year the contract was approved.

## **6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## PIPELINE (Code 516)

### WR\* and NPS

#### 1. DEFINITION

Pipeline installed for conveying water from a source of supply to points of use for livestock.

#### 2. PURPOSE

The primary purpose of all water supply practices is to provide water for livestock to facilitate proper use of vegetation on rangeland or pasture and/or reduce livestock impacts on streams or riparian areas with the stated or implied intent of improving water quality. All alternative grazing management practices must be exhausted before additional water supply is implemented.

#### 3. CONDITIONS WHERE PRACTICE APPLIES

- a. There is a need for initial or additional watering places to permit the desired level of grassland management by improving distribution of grazing over all parts of the range.
- b. To reduce livestock waste in streams.
- c. Relocation of a confined animal feeding operation.
- d. Existing ponds are eligible for a pipeline if the ponds meet NRCS criteria found in form KS-ENG-4a.

**\*WR: In addition to the above, this also applies when there is a need for a replacement of an existing watering place.**

#### 4. COMPONENTS AND ASSOCIATED PRACTICES

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Pipe and other components associated with pipe installation. The conservation district shall determine the method of computing average costs. Either of the following methods or a combination of both may be used.
    - ii. Hydrant (each)

- iii. Develop average costs for selected pipe sizes including all components associated with pipe. County average cost for pipe, including all components is to be figured per linear foot of pipe. The numbers below refer to grouped components.
  - (1) 9/ - Complete with intake, valves, operating rod, valve box and lid, anti-seep collars, testing, and manually tamped backfill.
  - (2) 10/ - Complete with intake, valves, valve box and lid, filler pipe assembly, excavation, testing, and manually tamped backfill.
  - (3) 11/ - Complete with valves and hydrants, excavation, testing, and backfill.
- iv. Develop individual average costs for selected pipe sizes and each associated component. County average cost for pipe and individual components is to be figured on a per unit basis.

b. Associated Practices

- i. Pond (see Code No. 378)
- ii. Spring Development (see Code No. 574)
- iii. Watering Facility (see Code No. 614)
- iv. Water Well (see Code No. 642)

## 5. **POLICIES**

- a. Grazing planning requirements are:
  - i. This practice must facilitate proper grazing use by improving distribution of grazing and/or reduce impacts of livestock on streams or riparian areas.
  - ii. The water quality in each stock watering facility within a pasture should be nearly equal to encourage livestock distribution.
- b. A Forage Balance Estimate Worksheet form, provided by the DOC or a NRCS Prescribed Grazing Plan Code 528, shall be completed prior to submitting the CS-3. (Not required for livestock waste systems.)
- c. An exclusion cage is required to be installed to NRCS Standards and Specifications in a warm season pasture (not required in a cool season pasture) prior to submitting the CS-4.
- d. The exclusion cage must remain in the pasture for the 10 year duration of the contract maintenance agreement.
- e. Grazing lands served by this pipeline shall be maintained in permanent vegetation for a minimum of 10 years.

- f. All livestock water supply practices must be constructed or installed to serve pastures 40 acres or larger. Practices may be installed in pastures less than 40 acres when livestock are excluded from a stream (except livestock waste systems).
- g. The livestock area must be fenced at time of practice completion.
- h. Water for distribution needs can be from wells, springs, flowing streams, ponds, or rural water districts. If connecting to rural water district line, cost-share will be provided from meter on landowner's property to tank.
- i. The conservation district shall provide a KSU Extension publication on grazing management to each landowner under contract. Following are extension publications to consider:

MF1118 – Stocking Rate and Grazing Management,  
<http://www.ksre.ksu.edu/bookstore/pubs/mf1118.pdf>;

C402 - Smooth Brome Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/C402.pdf>;

C729 – Tall Fescue Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/c729.pdf>.

Districts should consult with their county extension agent on publications that would be applicable for their county.

- j. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a grazing workshop in the previous year.

**Note: The DOC may grant exceptions to established restrictions of a water supply development when limited water sources are available. The purpose of this exception is to allow for domestic and non-grazing livestock use.**

**The DOC may also grant exceptions to the 40 acre pasture minimum on a case-by-case basis if significant water quality gains will be achieved.**

## **6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **POND (Code 378)**

### **WR\* and NPS**

#### **1. DEFINITION**

A water impoundment made by constructing a dam, embankment, or by excavating a pit or dugout.

#### **2. PURPOSE**

The primary purpose of all water supply practices is to provide water for livestock to facilitate proper use of vegetation on rangeland or pasture and/or reduce livestock impacts on streams or riparian areas with the stated or implied intent of improving water quality. All alternative grazing management practices must be exhausted before additional water supply is implemented.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. There is a need for initial or additional watering places to permit the desired level of grassland management by improving distribution of grazing over all parts of the range.
- b. To reduce livestock waste in streams.
- c. Relocation of a confined animal feeding operation.

**\*WR: In addition to the above, this also applies when there is a need for a replacement of an existing watering place.**

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Earthwork (fill or excavation - cubic yard)
    - (1) Earthwork – cubic yard
    - (2) Earthwork – dry pit pond
    - (3) Earthwork – wet pit pond
  - (4) Includes all earthwork involved in the structure whether it be fill or excavation.
  - (5) County average cost is to be figured by the cubic yard of earth moved.

- ii. Pipe for use in earth dams and other components associated with pipe installation.
  - (1) Develop average costs for selected pipe sizes including all components associated with pipe. County average cost for pipe, including all components is to be figured per linear foot of pipe. The numbers below refer to grouped components.
    - (a) 4/ - Complete with trash rack, canopy inlet, plastic PVC barrel, anti-seep collars, pipe support, and manually tamped backfill of the barrel.
    - (b) 5/ - Complete with trash rack, canopy inlet, CMP barrel, connecting bands, anti-seep collars, pipe support, and manually tamped backfill of the barrel.
    - (c) 6/ - Complete with trash rack, riser (base and 4' barrel), CMP barrel, connecting bands, anti-seep collars, pipe support, and manually tamped backfill of both the riser and barrel.
- iii. Concrete (cubic yard)
  - (1) Includes concrete and any necessary reinforcing to meet specification.
  - (2) County average cost is to be figured by the cubic yard of concrete.

b. Associated Practices

- i. Critical Area Planting (see Code No. 342)
- ii. Fencing (see Code No. 382)
- iii. Pipeline (see Code No. 515)
- iv. Pond Sealing or Lining (see Code No. 521A, 521B, 521C, 521D)
- v. Watering Facility (see Code No. 614)

## 5. **POLICIES**

- a. Grazing planning requirements are:
  - i. This practice must facilitate proper grazing use by improving distribution of grazing and/or reduce impacts of livestock on streams or riparian areas.
  - ii. The water quality in each stock watering facility within a pasture should be nearly equal to encourage livestock distribution.
- b. DOC encourages the use of a fence around the pond and dam to exclude livestock on earth embankment type ponds. Livestock water can be supplied by a tank or trough and pipeline through the dam. Fencing is not required but recommended where applicable.

- c. A Forage Balance Estimate Worksheet form, provided by the DOC or a NRCS Prescribed Grazing Plan Code 528, shall be completed prior to submitting the CS-3. (Not required for livestock waste systems.)
- d. An exclusion cage is required to be installed to NRCS Standards and Specifications in a warm season pasture (not required in a cool season pasture) prior to submitting the CS-4.
- e. The exclusion cage must remain in the pasture for the 10 year duration of the contract maintenance agreement.
- f. Grazing lands served by this pond shall be maintained in permanent vegetation for a minimum of 10 years.
- g. All livestock water supply practices must be constructed or installed to serve pastures 40 acres or larger. Practices may be installed in pastures less than 40 acres when livestock are excluded from a stream.
- h. The livestock area must be fenced at time of practice completion.
- i. The conservation district shall provide a KSU Extension publication on grazing management to each landowner under contract. Following are extension publications to consider:

MF1118 – Stocking Rate and Grazing Management,  
<http://www.ksre.ksu.edu/bookstore/pubs/mf1118.pdf>;

C402 - Smooth Brome Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/C402.pdf>;

C729 – Tall Fescue Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/c729.pdf>.

Districts should consult with their county extension agent on publications that would be applicable for their county.

- j. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a grazing workshop in the previous year.

**Note: The DOC may grant exceptions to established restrictions of a water supply development when limited water sources are available. The purpose of this exception is to allow for domestic and non-grazing livestock use. The DOC may also grant exceptions to the 40 acre pasture minimum on a case-by-case basis if significant water quality gains will be achieved.**

## **6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **POND RESTORATION (Code 378r)**

### **WR ONLY**

#### **1. ELIGIBILITY REQUIREMENTS**

The existing pond must meet all the requirements listed below to be eligible to receive state cost-share assistance:

- a. The condition of dam is satisfactory other than the condition of the principal spillway pipe.
  - i. The dam has been properly maintained.
  - ii. The embankment slopes are stable and have not been subjected to significant erosion.
  - iii. The emergency spillway is stable and has not been subjected to severe wave erosion.
  - iv. The vegetative cover on the dam is satisfactory and does not pose any hazards to the dam (this relates mainly to trees).
  - v. No other conditions exist which pose a hazard to the dam.
- b. The principal spillway pipe has served its anticipated service life. Most pipes that will be replaced are corrugated metal. NRCS generally assumes about a 25 year life for the quality of pipe typically installed in farm ponds. Some have rusted out in as little as 15 years due to corrosive soil conditions while some others are now 40 years old. A service life of 20 to 25 years is suggested.
- c. The pond is still capable of serving a conservation use (stockwater, water for fire control, erosion control, etc.).
- d. The replacement pipe and installation will meet NRCS standards and specifications and will be of a type and quality of material that is anticipated to provide a 25 year service life.
- e. Exception: Ponds not meeting criteria a. could be eligible if the owner agreed to bring the dam up to existing NRCS standards and specifications. No cost-share funds would be eligible for this additional work and no cost-share funds would be paid for the pipe replacement if the additional work was not completed concurrently.

#### **2. RESTORATION**

Restoration should include the following:

- a. Removal and disposal of the old pipe and any associated de-watering and pumping;

- b. Installation of the new pipe, inlet section, trash rack, anti-seep collars and pipe support as shown in the plans;
- c. Hand-compacted back fill around the pipe and appurtenances;
- d. Machine-placed back fill back to the original line and grade of the dam; and
- e. Seeding all disturbed areas.

### **3. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:
  - i. Earthwork (fill or excavation per cubic yard)
    - (1) Includes all earthwork involved in the structure, whether it be fill or excavation.
    - (2) County average cost is to be figured per cubic yard of earth moved.
  - ii. Pipe and other components associated with pipe installation.
    - (1) Develop average costs for selected pipe sizes including all components associated with pipe. County average cost for pipe, including all components is to be figured per linear foot of pipe.
  - iii. Concrete (cubic yard)
    - (1) Includes concrete and any necessary reinforcing to meet specification.
    - (2) County average cost is to be figured by the cubic yard of concrete.
- b. Associated Practice: Critical Area Planting (see Code No. 342)

### **4. POLICIES**

- a. A Forage Balance Estimate Worksheet form, provided by the DOC or a NRCS Prescribed Grazing Plan Code 528, shall be completed prior to submitting the CS-3.
- b. An exclusion cage shall be installed to NRCS Standards and Specifications prior to submitting the CS-4.
- c. Grazing lands served by this pond shall be maintained in permanent vegetation for a minimum of 10 years.
- d. All livestock water supply practices must be constructed or installed to serve pastures 40 acres or larger. Practices may be installed in pastures less than 40 acres when livestock are excluded from a stream.

- e. Pond pipe replacement is authorized for ponds that do not serve livestock, when there is a significant erosion and sediment control issue. (Forage Balance Estimate Worksheet not required.)
- f. The conservation district shall provide a KSU Extension publication on grazing management to each landowner under contract. Following are extension publications to consider:

MF1118 – Stocking Rate and Grazing Management,  
<http://www.ksre.ksu.edu/bookstore/pubs/mf1118.pdf>;

C402 - Smooth Brome Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/C402.pdf>;

C729 – Tall Fescue Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/c729.pdf>.

Districts should consult with their county extension agent on publications that would be applicable for their county.

- g. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a grazing workshop in the previous year.

## **5. LIMITATIONS**

- a. Cost-sharing is not authorized for:
  - i. Ponds that are completely silted up.
  - ii. Ponds that are used or are planned for use in a residential or commercial development.

## **6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

**POND SEALING OR LINING (FLEXIBLE MEMBRANE, SOIL  
DISPERSANT, BENTONITE, NATURAL CLAY) (Code  
521A, 521B, 521C, 521D)**

**WR and NPS**

**1. DEFINITION**

Installing a fixed lining of impervious material or treating the soil in a pond mechanically or chemically to impede or prevent excessive water loss.

**2. PURPOSE**

To reduce seepage losses in ponds, waste storage ponds, waste lagoons or on-site waste lagoons to an acceptable level.

**3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies where water loss from a pond through leakage will be of such proportion as to prevent the pond from fulfilling its planned purpose. Or, where leakage will damage land and crops or cause waste of water or environmental problems. Applies to new construction only.

**4. COMPONENTS**

a. The following components are authorized for cost share:

i. Flexible Membrane (square foot)

(1) Earthwork – cubic yard

ii. Soda Ash (ton)

(1) Earthwork – cubic yard

iii. Bentonite (ton)

(1) Earthwork – cubic yard

iv. Natural Clay (cubic yard)

(1) Earthwork – cubic yard

**5. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## PRECISION LAND FORMING (Code 462)

### NPS ONLY

#### 1. DEFINITION

Reshaping the surface of land to planned grades.

#### 2. PURPOSE

To improve surface drainage, provide more effective use of rainfall, facilitate installation of more workable drainage systems, and improve water quality. Only used in livestock waste systems such as the installation of earthen mounds.

#### 3. CONDITIONS WHERE PRACTICE APPLIES

On land that is suitable for the purpose required and where precision land forming is practical. Soils shall be of sufficient depth and of suitable textures so that, after precision land forming is completed, an adequate root zone remains to permit the planned use of the land and application of proper conservation measures, soil amendments, and fertilizer.

All precision land forming shall ONLY be planned as an integral part of an overall livestock waste management system.

#### 4. COMPONENTS

a. County average cost is to be figured by the cubic yard of earth moved. The following components are authorized for cost sharing:  
(When applicable, include labor when calculating county average cost.)

i. Earthwork (cubic yard)

#### 5. MAINTENANCE

The practice shall be maintained for ten (10) years.

## **PRESCRIBED GRAZING (Code 528)**

### **WR and NPS**

#### **1. DEFINITION**

Managing the controlled harvest of vegetation with grazing animals.

#### **2. PURPOSE**

To improve or maintain the health and vigor of plant communities; improve or maintain water quality and quantity; reduce accelerated soil erosion, and maintain or improve soil condition.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies to all lands where grazing animals are managed.

#### **4. COMPONENTS**

The following components are authorized for cost-sharing:

- a. Incentive payment #1 – Prescribed Grazing implemented with 30 to 73 percent rest during growing season. Practice will be implemented a minimum of three years. Onetime payment will be made upon initial implementation of the practice. Maximum per acre incentive is the annual payment amount in the existing EQIP contract.
- b. Incentive payment #2 – Prescribed Grazing implemented with greater than or equal to 74 percent rest during growing season. Practice will be implemented a minimum of three years. Onetime payment will be made upon initial implementation of the practice. Maximum per acre incentive is the annual payment amount in the existing EQIP contract.

#### **5. POLICIES**

- a. The grazing land must meet the NRCS eligibility for the EQIP Prescribed Grazing Management Incentive.
- b. A NRCS Prescribed Grazing Plan must be developed for management units where grazing will occur according to state standards and specifications.
- c. A NRCS Grazing Management Plan must be developed for livestock that identifies periods of grazing, rest, and other treatment activities for each management unit.
- d. A NRCS Contingency Plan developed that details potential problems,(i.e., severe drought and flooding) and serves as a guide for adjusting the grazing prescription to ensure management without resource degradation.
- e. A NRCS Monitoring Plan developed with appropriate records to assess whether the grazing strategy is meeting objectives.

## **PUMPING PLANT FOR WATER SUPPLY (Code 533)**

### **WR and NPS**

#### **1. DEFINITION**

A pumping facility installed to transfer water as part of a water supply for livestock.

#### **2. PURPOSE**

To provide a power source for a dependable alternative water source for livestock that has typically watered from a natural stream or for existing or newly developed water well that provides grazing distribution.

The primary purpose of this water supply practice is to provide water for livestock with the stated or implied intent of improving water quality.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. This practice applies when a landowner is excluding livestock from a riparian area and needs to develop an alternative water source for the livestock.
- b. Relocation of a confined animal feeding operation when excluding livestock from a riparian area.
- c. This practice applies when a landowner is installing a new water well or using an existing water well that provides grazing distribution or replacement of a properly located but damaged/nonfunctional watering system.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Pumpjack (each)
  - ii. Solar Panels (each)
    - (1) Includes wiring associated with the solar panel installation. County average cost is to be figured based on the cost of the complete power unit. (Panel and miscellaneous all together.)
  - iii. Solar Pumps (each)
    - (1) Includes wiring associated with the solar pump installation. County average cost is to be figured based on the cost of the complete power unit. (Pump and miscellaneous all together.)

- iv. Solar System (each) Solar System #1 thru Solar System #4
  - (1) Includes wiring associated with the solar panel and pump installation. County average cost is to be figured based on the cost of the complete power unit. (Pump, panel and miscellaneous all together.)
- v. Submersible Pump (each)
  - (1) County average cost is to be figured based on the cost of the complete unit. (Pump, pipe, wiring from pressure switch to pump, pressure switch, pressure tank, and miscellaneous fittings all together.)
- vi. Windmill New (each)
  - (1) County average cost is to be figured based on the cost of the complete power unit.
- vii. Windmill Rebuild (each) *from farm sale etc. and moved to new well*
  - (1) County average cost is to be figured based on the cost of the complete power unit.

b. Associated Practices

- i. Fencing (see Code No. 382)
- ii. Pipeline (see Code No. 516)
- iii. Watering Facility (see Code No. 614)
- iv. Water Well (see Code No. 642)

## 5. **POLICIES**

- a. For livestock water, this practice must reduce impacts of livestock on streams or riparian areas or enhance grazing distribution in the pasture.
- b. A Forage Balance Estimate Worksheet form, provided by the DOC or a NRCS Prescribed Grazing Plan Code 528, shall be completed prior to submitting the CS-3. (Not required for livestock waste systems.)
- c. An exclusion cage shall be installed to NRCS Standards and Specifications in a warm season pasture (not required in a cool season pasture) prior to submitting the CS-4.
- d. An exclusion cage must remain in the pasture for the 10 year duration of the contract maintenance agreement.
- e. Grazing lands served by this pumping plant shall be maintained in permanent vegetation for a minimum of 10 years.

- f. All livestock water supply practices must be constructed or installed to serve pastures 40 acres or larger. Practice may be installed in pastures less than 40 acres when livestock are excluded from a stream (except livestock waste systems).
- g. The livestock area must be fenced at time of practice completion.
- h. Water for distribution needs can be from wells, springs, flowing streams, ponds, or rural water districts.
- i. Exclusion is not required to be year round but a fence should be in place to manage livestock access to the stream.
- j. Solar panels shall be fenced to eliminate livestock abuse.
- k. Electrical wiring for submersible pumps is only eligible in the well casing.
- l. The conservation district shall provide a KSU Extension publication on grazing management to each landowner under contract. Following are extension publications to consider:

MF1118 – Stocking Rate and Grazing Management,  
<http://www.ksre.ksu.edu/bookstore/pubs/mf1118.pdf>;

C402 - Smooth Brome Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/C402.pdf>;

C729 – Tall Fescue Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/c729.pdf>.

Districts should consult with their county extension agent on publications that would be applicable for their county.

- m. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a grazing workshop in the previous year.

**Note: The DOC may grant exceptions to established restrictions of a water supply development when limited water sources are available. The purpose of this exception is to allow for domestic and non-grazing livestock use.**

## **6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## RANGE PLANTING (Code 550)

### WR AND NPS

#### 1. DEFINITION

Establishment of adapted perennial vegetation such as grasses, forbs, and legumes.

#### 2. PURPOSE

To reduce soil and water loss.

#### 3. CONDITIONS WHERE PRACTICE APPLIES

- a. On land where the planned use is rangeland, or native or naturalized pasture.
- b. Land to be seeded must have soil and climate that can support a satisfactory cover of adapted range forage plants.

#### 4. COMPONENTS

- a. The conservation district may select components to develop a county average cost as a complete practice using components Complete Practice – Seed Mix #1 thru Seed Mix #10, or for individual components. Seed mix refers to either single species or multiple grass species.
  - i. County average cost for a complete practice is to be figured by the acre.
  - ii. County average cost for individual components is to be figured by the unit of measure as indicated below in parenthesis.
  - iii. One time reseeding of a failed cover crop as determined by NRCS.
- b. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Seedbed Preparation – Tillage/Clean Tilled (by acre)
  - ii. Seedbed Preparation - Standing Cover (by acre)
  - iii. Seedbed Preparation – Chemical/No-Till (by acre)
  - iv. Fertilizer - Lime (by ton)
  - v. Fertilizer - Nitrogen (by pound)
  - vi. Fertilizer - Phosphorus (by pound)

- vii. Fertilizer - Potash (by pound)
- viii. Cover Crop (by acre)
- ix. Cover Crop Reseeding (acre) one time only
- x. Nurse Crop (by acre)
- xi. Seed Mix/Sprig (by acre)
  - (1) Seed Mix #1 thru Seed Mix #10
- xii. Seeding Cost (by acre)
- xiii. Sprigging Cost (by acre)

## **5. POLICIES**

- a. Cost-sharing is not authorized for:
  - i. Cover crops which are harvested for resale or consumption.
  - ii. Pure stands of legumes or interseeding of legumes.
- b. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

## **6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## RANGE PLANTING RESEEDING (Code 550r)

### WR AND NPS

#### 1. DEFINITION

Establishment of adapted perennial vegetation such as grasses, forbs, and legumes.

#### 2. PURPOSE

To reduce soil and water loss, and to improve water quality.

#### 3. CONDITIONS WHERE PRACTICE APPLIES

A one-time reseeding of a failed grass stand when the failure is due to conditions beyond the control of the landowner on previously state cost-shared seeding

#### 4. COMPONENTS

- a. The conservation district may select components to develop a county average cost as a complete practice using components Complete Practice – Seed Mix #1 thru Seed Mix #10, or for individual components. Seed mix refers to either single species or multiple grass species.
  - i. County average cost for a complete practice is to be figured by the acre.
  - ii. County average cost for individual components is to be figured by the unit of measure as indicated below in parenthesis.
- b. The following components are authorized for cost-sharing:  
(when applicable, include the labor when calculating county average cost.)
  - i. Seedbed Preparation – Tillage/Clean Tilled (acre)
  - ii. Seedbed Preparation - Standing Cover (acre)
  - iii. Seedbed Preparation – Chemical/No-Till (acre)
  - iv. Fertilizer - Lime (ton)
  - v. Fertilizer - Nitrogen (pound)
  - vi. Fertilizer - Phosphorus (pound)
  - vii. Fertilizer - Potash (pound)
  - viii. Cover Crop (acre)

- ix. Nurse Crop (acre)
- x. Seed Mix/Sprig (acre)
  - (1) Seed Mix #1 thru Seed Mix #10
- xi. Seeding Cost (acre)
- xii. Sprigging Cost (acre)

## **5. POLICIES**

- a. A one-time reseeding of a failed grass stand is eligible when the failure is due to conditions beyond the control of the landowner.
- b. A maximum of 50% cost-share rate is eligible for reseeding.
- c. All eligible components for this practice are eligible for reseeding.
- d. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

## **6. LIMITATIONS**

- a. Cost-sharing is not authorized for:
  - i. Cover crops which are harvested for resale or consumption.
  - ii. Pure stands of legumes or interseeding of legumes.

## **7. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **RESIDUE MANAGEMENT NO TILL/STRIP TILL/DIRECT SEED (Code 329A)**

### **WR and NPS**

#### **1. DEFINITION**

Managing the amount, orientation, and distribution of crop and other plant residue on the soil surface year-round, while limiting soil-disturbing activities to only those necessary to place nutrient, condition residue, and plant crops.

#### **2. PURPOSE**

To reduce sheet and rill erosion; reduce wind erosion; improve soil organic matter content; reduce carbon dioxide losses from the soil; increase plant-available moisture; and reduce sediment export from fields therefore improving water quality.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies to all cropland and other land where crops are planted.

This practice includes planting methods commonly referred to as no-till, strip till, direct seed, zero till, slot till, or zone till. Approved implements are: No-till and strip-till planters, certain drills and air seeders, strip-type fertilizer and manure injectors and applicators, in-row chisels, and similar implements that only disturb strips and slots.

#### **4. COMPONENTS**

The following components are authorized for cost-sharing:

a. **Incentive Payment – One Year and/or Incentive Payment – Two Year**

An additional one or two year incentive payment for a current or new EQIP contract for No-till/Strip Till/Direct Seed. All requirements of the EQIP contract must be followed. A onetime payment for period of adoption. Payment will be made upon initial implementation of the practice. Maximum per year incentive payment is the annual payment amount in the existing EQIP contract.

## **5. POLICIES**

- a. Residue shall not be burned.
- b. All residues shall be uniformly distributed over the entire field.
- c. No full-width tillage shall be performed regardless of the depth of the tillage operation.
- d. The annual Soil Tillage Intensity Rating (STIR) value for all soil-disturbing activities shall be no greater than 10 for no-till seeding, 15 for strip-till seeding, and 30 for direct seed.
- e. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

## **RIPARIAN FOREST BUFFER (Code 391)**

### **WR, NPS, and RW**

#### **1. DEFINITION**

An area of trees and shrubs located adjacent to streams, lakes, ponds and wetlands.

#### **2. PURPOSE**

To improve streambank stability; reduce excessive amounts of sediment, organic material, nutrients, and pesticides in surface runoff; and improve wildlife habitat.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

Along perennial or intermittent streams, lakes, ponds, and wetlands.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Planting (per tree/shrub)
    - (1) Tree - Bareroot (per tree)
    - (2) Tree – Containerized (per tree)
    - (3) Tree – Other (per tree)
    - (4) Shrub (per shrub)
  - (5) Tree components include planting site preparation, trees, shrub, and planting costs.
  - (6) County average cost for tree components are to be figured per tree/shrub.
- b. Nut planting (acre)
  - i. Nut #1 thru Nut #3 (pound)
  - ii. Tree Shelters (per tree) – Plastic mesh is not eligible.
    - (1) County average cost should include the cost of the tree shelter, stake, if needed, and installation.

c. Associated Practices

- i. Fencing (See Code No. 382)
- ii. Mulching (See Code No. 484)

**5. POLICIES**

- a. Livestock shall be controlled or excluded if necessary to achieve and maintain the intended purpose.
- b. Cost-sharing is not authorized for planting of trees for resale.

**6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **ROOF RUNOFF STRUCTURE (Code 558)**

### **NPS ONLY**

#### **1. DEFINITION**

Structures that collect, control, and transport precipitation from roofs.

#### **2. PURPOSE**

Part of a livestock waste management system to improve water quality and protect structures.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

Roof runoff structures are a component of a livestock waste management system and roof runoff needs to be diverted away from structures or contaminated areas.

#### **4. COMPONENTS**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Gutter (linear foot)
    - (1) County average cost is to be figured by the linear foot.
  - ii. Downspout (linear foot)
    - (1) County average cost is to be figured by the linear foot.
  - iii. Concrete (cubic yard)
    - (1) County average cost is to be figured by the cubic yard.

#### **5. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **SEDIMENT BASIN (Code 350)**

### **WR, NPS, and RW**

#### **1. DEFINITION**

A basin constructed to collect and store debris or sediment.

#### **2. PURPOSE**

To abate pollution by providing basins for deposition and storage of sediment and agricultural wastes as part of a livestock waste management system.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies to livestock waste management systems.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

a. The following components are authorized for cost-share:  
(When applicable, include labor when calculating county average cost.)

- i. Earthwork (cubic yard)
  - (1) Includes all earthwork involved in the structure.
  - (2) County average cost is to be figured by the cubic yard of earth moved.

b. Associated Practices

- i. Critical Area Planting (see Code No. 342)
- ii. Underground Outlet (see Code No. 620)

#### **5. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **SPRING DEVELOPMENT (Code 574)**

### **WR and NPS**

#### **1. DEFINITION**

Improving springs and seeps by excavating, cleaning and providing collection and storage facilities.

#### **2. PURPOSE**

The primary purpose of all water supply practices is to provide water for livestock to facilitate proper use of vegetation on rangeland or pasture and/or reduce livestock impacts on streams or riparian areas with the stated or implied intent of improving water quality. All alternative grazing management practices must be exhausted before additional water supply is implemented.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. There is a need for initial or additional watering places to permit the desired level of grassland management by improving distribution of grazing over all parts of the range.
- b. To reduce livestock waste in streams.
- c. Relocation of a confined animal feeding operation.
- d. Developments shall be confined to springs or seepage areas that can furnish dependable supply of suitable water during the planned period or periods of use.

**\*WR: In addition to the above, this also applies when there is a need for a replacement of an existing watering place.**

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Collection and Delivery (including installation per development)
    - (1) Includes collection pipe, gravel, equipment, labor, spring box, etc. to develop the spring. County average cost is to be figured per development.
  - ii. Collection and Delivery – Other (including installation per development)
    - (1) Includes collection pipe, gravel, equipment, labor, spring box, etc. to develop the spring. County average cost is to be figured per development.
- b. Associated Practices

- i. Pipeline (see Code No. 516)
- ii. Watering Facility (see Code No. 614)

## 5. **POLICIES**

- a. Grazing planning requirements are:
  - i. This practice must facilitate proper grazing use by improving distribution of grazing and/or reduce impacts of livestock on streams or riparian areas.
  - ii. The water quality in each stock watering facility within a pasture should be nearly equal to encourage livestock distribution.
- b. A Forage Balance Estimate Worksheet form, provided by the DOC or a NRCS Prescribed Grazing Plan Code 528, shall be completed prior to submitting the CS-3. (Not required for livestock waste systems.)
- c. An exclusion cage is required to be installed to NRCS Standards and Specifications in a warm season pasture (not required in a cool season pasture) prior to submitting the CS-4.
- d. The exclusion cage must remain in the pasture for the 10 year duration of the contract maintenance agreement.
- e. Grazing lands served by this spring development shall be maintained in permanent vegetation for a minimum of 10 years.
- f. All livestock water supply practices must be constructed or installed to serve pastures 40 acres or larger. Practices may be installed in pastures less than 40 acres when livestock are excluded from a stream (except livestock waste systems).
- g. The livestock area must be fenced at time of practice completion.
- h. The conservation district shall provide a KSU Extension publication on grazing management to each landowner under contract. Following are extension publications to consider:

MF1118 – Stocking Rate and Grazing Management,  
<http://www.ksre.ksu.edu/bookstore/pubs/mf1118.pdf>;

C402 - Smooth Brome Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/C402.pdf>;

C729 – Tall Fescue Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/c729.pdf>.

Districts should consult with their county extension agent on publications that would be applicable for their county.

- i. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a grazing workshop in the previous year.

**Note: The DOC may grant exceptions to established restrictions of a water supply development when limited water sources are available. The purpose of this exception is to allow for domestic and non-grazing livestock use.**

**The DOC may also grant exceptions to the 40 acre pasture minimum on a case-by-case basis if significant water quality gains will be achieved.**

**6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## STREAM CROSSING (Code 578)

### NPS ONLY

#### 1. DEFINITION

A constructed travel way through a streambed comprised of rock and geotextile.

#### 2. PURPOSE

Provide a means of moving cattle across a creek or stream with minimal disruption to the bed and banks from erosion and sedimentation.

#### 2. CONDITIONS WHERE PRACTICE APPLIES

- a. In conjunction with an access road that is constructed to facilitate access to a relocated livestock holding or feeding area.
- b. In situations where animals must cross a stream to access a livestock feeding or holding area and the practice is installed as part of a management system to enhance or protect riparian areas from degradation.

\* See Chapter 8 for project types and practice eligibility.

#### 4. COMPONENTS AND ASSOCIATED PRACTICES

- a. The following components are authorized for cost-share:  
(When applicable, include labor when calculating county average cost.)
  - i. Earthwork (cubic yard)
    - (1) Includes earthwork involved in the excavation of a site in preparation for installation of the structure.
    - (2) County average cost to be figured by the cubic yard of earth moved.
  - ii. Gravel or rock (cubic yard)
    - (1) Rock delivery
    - (2) Rock placed
    - (3) County average cost to be figured by cubic yard.

- iii. Geotextile (square yard)
  - (1) Woven fabric of synthetic fibers placed under rock fill and surface material.
  - (2) County average cost to be figure by the square yard.
- iv. Concrete (cubic yard)
  - (1) Includes concrete and any necessary reinforcing to meet specification.
  - (2) County average cost to be figured by cubic yard.

b. Associated Practices

- i. Critical Area Planting (see Code No. 342)
- ii. Other practices associated with a livestock waste system (when applicable).

**Note: All applicable rules and regulations of the Kansas Department of Agriculture, Division of Water Resources (Stream Obstruction Program, K.S.A. 82a-301 et. seq.), and the U.S. Army Corps of Engineer (Regulatory Program, Section 404 of Clean Water Act) must be followed and necessary permits obtained.**

## **5. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## STREAMBANK PROTECTION (Code 580)

### NPS\* and RW

#### 1. DEFINITION

Treatment(s) used to stabilize and protect streambanks.

#### 2. PURPOSE

To stabilize the eroding streambanks, reduce damage from sediment and runoff to downstream areas, and improve wildlife habitat.

#### 3. CONDITIONS WHERE PRACTICE APPLIES

On highly erodible or critically eroding streambanks. These areas usually cannot be stabilized by ordinary conservation treatment and management, and if left untreated can cause severe erosion or sediment damage.

**\* Only eligible for Watershed Restoration and Protection (WRAPS) projects or NPS priority projects. Contact DOC for instructions on use of NPS funds for this practice.**

#### 4. COMPONENTS

a. A bid process for determining the county average cost for each project will be used. Following is the DOC process:

- i. DOC staff will meet with the landowner, conservation district and NRCS staff once a design for the project is completed to go over the bid process.
- ii. The landowner will review and sign a Streambank Protection Project Bid Procedure form. Contact the DOC for the specific bid procedure form for each approved project.
- iii. Contractors will submit bids to landowners using the Streambank Protection Project Bid form. Contact the DOC for the specific bid form for each approved project.
- iv. The landowner will submit all bids to the DOC for review.
- v. DOC will determine which bid will be accepted. The bid selected will become the county average cost for the contract.

b. Co-Pay EQIP. This component is used for enhancement of a federal Environmental Quality Incentive Program (EQIP) Streambank Protection contract.

- i. Contract payment will be figured at the EQIP contract total cost.
- ii. The combination of the EQIP payment and the DOC contract payment cannot exceed 100% of the landowner actual cost.
- iii. Co-Pay is eligible in priority project areas approved by the DOC.

## **5. POLICIES**

All streambank stabilization projects must include a 66 ft. (minimum width) Filter Strip or Riparian Forest Buffer and must meet the NRCS Standards and Specifications for these practices. An exception (see Chapter 2, Requesting an Exception) may be granted by the DOC with prior approval. This area may be enrolled in the Continuous Conservation Reserve Program through USDA, NRCS – FSA.

## **6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## STREAMBANK PROTECTION REPAIR (Code 580R)

### NPS and RW

#### 1. DEFINITION

Repair a previously stabilized streambank project.

#### 2. PURPOSE

To repair a previously stabilized streambank project where repairs of shaping and/or additional rock is required for the project due to high flow events.

#### 3. CONDITIONS WHERE PRACTICE APPLIES

On a previously stabilized streambank project where repairs of shaping and/or additional rock is required for the project due to high flow events. If left unrepaired, the project will not function properly causing severe erosion or sediment damage.

**\* Only eligible for Watershed Restoration and Protection (WRAPS) projects or NPS priority projects. Contact DOC for instructions on use of NPS funds for this practice.**

#### 4. COMPONENTS

A bid process for determining the county average cost for each project will be used. Contact DOC for details of the bid process. The bid may include the following:

- a. Earthwork (cubic yard)
- b. Rock (ton)
  - i. The rock cost should include the cost of the rock, delivery of the rock, and placement of the rock.

#### 5. POLICIES

A determination must be made by the design engineering firm that originally designed the project that repairs of shaping and/or additional rock is required for the project for it to function properly.

#### 6. MAINTENANCE

The practice shall be maintained for ten (10) years.

## **STREAMBANK RIPARIAN BUFFER INCENTIVE PAYMENT (Code 004)**

### **NPS and RW**

#### **1. DEFINITION**

A one-time payment to a landowner who provides land and access for the installation of a 66-foot wide riparian forest buffer in association with a streambank protection project.

#### **2. PURPOSE**

To establish a riparian forest buffer in association with an eligible streambank protection project.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

Where practice Code 580 Streambank Protection is required to stabilize highly erodible or critically eroding streambanks. If practice code 004, Streambank Riparian Buffer Incentive Payment, is selected by the landowner in combination with practice code 580, Streambank Protection, a riparian forest buffer shall be part of the design of the streambank protection project and is an important component of the overall success of the project.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

The following component is authorized for cost-share:

a. Streambank Riparian Buffer Incentive Payment (Each)

i. The one-time payment to allow the installation of a riparian forest buffer will be computed by using the following calculations:

(1) The acres eligible for the incentive payment will be determined upon completion of the streambank protection project. The acres will be calculated by multiplying the total length of the project by 66-feet and divide by 43,560. (project length (in feet)) x (66 feet) / 43,560 square feet = (# acres)

(2) The Farm Service Agency (FSA) soil rental rate (SRR) for the soil type associated with the riparian forest buffer is used to determine the per acre payment.

(3) Payment will be calculated by multiplying the acres in the 66-foot wide riparian forest buffer by the FSA soil rental rate by 10 years. (#acres) x (SRR) x 10 (years) = Incentive Payment

Example: 1 (# of acres) x \$100 (SRR) x 10 (years) - \$1,000.00

(4) The practice incentive payment will be made to the landowner once the acres are certified, the permanent markers are installed, and the riparian forest buffer is certified as complete by the Kansas Forest Service.

## 5. **POLICIES**

- a. Project Eligibility: Streambank Projects funded by the DOC are eligible for the incentive payment.
- b. The landowner will be responsible for the total cost of the planting stock and installation of the buffer, unless other sources such as RCPP/EQIP are providing funding.
- c. Kansas Forest Service (KFS) and/or Kansas Forest Service contract personnel will be installing and maintaining the riparian forest buffer. The KFS is responsible for developing the tree planting and maintenance plans.
- d. The landowner agrees to permit access to the Kansas Forest Service and/or Kansas Forest Service contract personnel or DOC personnel for the installation, maintenance, and monitoring of the 66-foot wide riparian forest buffer for 10 years.
- e. The field side boundary of the 66-foot riparian forest buffer will be marked with permanent six and one half foot steel t-posts with a white PVC pipe sleeve every one hundred feet for the total length of the project. This boundary will be installed by Kansas Forest Service and/or Kansas Forest Service contract personnel and must remain in place for 10 years.
- f. It is the landowner's responsibility to ensure that the riparian forest buffer or the buffer field side boundary markers are not disturbed or destroyed for 10 years. The landowner maintains the responsibility for the control of noxious weeds after the 3-year tree establishment period. The landowner must maintain 70% planting survival rate during the contract period (replanting expenses are the responsibility of the landowner years 4 through 10, unless the cause was due to weather-related events or other acts beyond the landowner's control (e.g. drought or flooding) – cases will need to be evaluated individually).
- g. Livestock must be excluded from accessing or grazing the buffer area during the contract period.

## **STREAMBANK SIGNING INCENTIVE PAYMENT (Code 001)**

### **NPS and RW**

#### **1. DEFINITION**

An incentive payment to landowners that sign-up for practice Code 580 Streambank Protection, Code 322 Channel Bank Vegetation, and Code 484 Mulching.

#### **2. PURPOSE**

To provide an incentive for landowners to sign-up for practice Code 580 Streambank Protection, Code 322 Channel Bank Vegetation, and Code 484 Mulching.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

Where practice Code 580 Streambank Protection is required to stabilize highly erodible or critically eroding streambanks.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

The following components are authorized for cost-share:

- a. SSIP-Streambank Protection-Bid (Each)
  - i. County average cost is to be figured on the bid amount for the project.
- b. SSIP-Channel Bank Vegetation-Bare Root (Each)
  - i. County average cost is to be figured using the current NRCS EQIP state average cost by the each.
- c. SSIP-Channel Bank Vegetation-Live Stake (Each)
  - i. County average cost is to be figured using the current NRCS EQIP state average cost by the each.
- d. SSIP-Channel Bank Vegetation-Grass Seeding (Acre)
  - i. County average cost is to be figured using the current NRCS EQIP state average cost by the acre.
- e. SSIP-Mulching (Ton)
  - i. County average cost is to be figured using the current NRCS EQIP state average cost by the ton.

#### **5. POLICIES**

The cost-share rate is 10% of the county average cost for each eligible component.

## **STRUCTURE FOR WATER CONTROL (Code 587)**

### **WR and NPS**

#### **1. DEFINITION**

A structure in a water management system that conveys water, controls the direction or rate of flow, or maintains a desired water surface elevation for livestock waste management projects only.

#### **2. PURPOSE**

The practice may be applied as a management component of a water management system to control the stage, discharge, distribution, delivery, or direction of water flow.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

A permanent structure is needed as an integral part of a wetland or confined livestock waste management system to convey water from one elevation to a lower elevation within, to, or from a water conveyance system such as a ditch, channel, canal, or pipeline designed to operate under open channel conditions.

#### **4. COMPONENTS**

a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)

- i. Concrete (cubic yard)
  - (1) Includes concrete and any necessary reinforcing to meet specification.
  - (2) County average cost is to be figured by the cubic yard of concrete.
- ii. Earthwork (cubic yard)
  - (1) Includes all earthwork involved in the structure.
  - (2) County average cost is to be figured by the cubic yard of earth moved.
- iii. Pre-constructed PVC (each)
  - (1) Includes structure and installation.
  - (2) County average cost is to be figured by the each.

- iv. Pre-constructed metal structure (each)
  - (1) Includes structure and installation.
  - (2) County average cost is to be figured by the each.

**5. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **SUBSURFACE DRAIN (Code 606)**

### **WR and NPS\***

#### **1. DEFINITION**

A conduit, such as tile, pipe, or tubing, installed beneath the ground surface which collects and/or conveys drainage water.

#### **2. PURPOSE**

To improve the soil environment for vegetative growth by regulating the water table and groundwater, alleviating seepage problems; and to remove surface runoff.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

When included in the design of a Grassed Waterway (Code No. 412), to be constructed in areas having prolonged flows, a high water table, or seepage problems.

**\*NPS: As part of a livestock waste system for a confined animal feeding operation.**

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Pipe and other components associated with pipe installation. The conservation district shall determine the methods of computing county average costs. Either of the following methods or a combination of both may be used.
    - (1) Develop average costs for selected pipe sizes including all components associated with pipe. County average cost for pipe, including all components is to be figured per linear foot of pipe.
    - (2) Develop individual average costs for selected pipe sizes and each associated component. County average cost for pipe and individual components is to be figured on a per unit basis.
  - ii. Sand/Gravel (cubic yard)
- b. Associated Practices
  - i. Grassed Waterway or Outlet (see Code No. 412)
  - ii. Livestock Waste System practices

**5. POLICIES**

- a. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

**6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **TERRACE (Code 600)**

### **WR and NPS\***

#### **1. DEFINITION**

An earth embankment or a combination ridge and channel constructed across the slope on cropland only, except when used in conjunction with a confined animal feeding operation.

#### **2. PURPOSE**

To reduce slope length, reduce erosion, reduce sediment content in runoff water, improve water quality, intercept and conduct surface runoff at a non-erosive velocity to a stable outlet, retain runoff for moisture conservation, or prevent gully development.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies where:

- a. Water erosion is a problem.
- b. There is a need to conserve water.
- c. The soils and topography are such that terraces can be constructed and farmed with reasonable effort.
- d. A suitable outlet can be provided.
- e. Runoff and sediment can damage land or improvements downstream or impair water quality.

**\*NPS: As part of a livestock waste system for a confined animal feeding operation.**

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing for each terrace type: flat channel, gradient, grass back, level, parallel, and tile (underground outlet terraces). (When applicable, include labor when calculating county average cost.)
  - i. Earthwork (construction of ridge by linear foot; grass back sloped terraces by linear foot or cubic yard)
    - (1) Includes all earthwork involved in the structure.
    - (2) County average cost for quantity of complete terraces is to be figured by the linear foot of ridge. County average cost for grass back sloped terraces may be figured by linear foot or cubic yard.

b. Associated Practices

- i. Critical Area Planting (see Code No. 342)
- ii. Grade Stabilization Structure (see Code No. 410)
- iii. Underground Outlet (see Code No. 620)

**5. POLICIES**

- a. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

**6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **TERRACE RESTORATION (Code 600r)**

### **WR ONLY**

#### **1. DEFINITION**

Restoring a terrace. A terrace is an earth embankment or a combination ridge and channel constructed across the slope on cropland only.

#### **2. PURPOSE**

Restoring a terrace to reduce slope length, reduce erosion, reduce sediment content in runoff water, improve water quality, intercept and conduct surface runoff at a non-erosive velocity to a stable outlet, retain runoff for moisture conservation, or prevent gully development.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

The existing terrace system must meet all the requirements listed below to be eligible to receive state cost-share assistance:

- a. The terrace system must be 20 or more years old and on cropland only.
- b. The system must have less than 50 percent of the terrace capacity remaining, based upon cross sectional area.
- c. Adequate, stable outlets must be available for each terrace.
- d. Reasonable efforts must have been made to maintain the terrace system.
- e. A terrace system is defined as a single complete terrace or a group of terraces treating a field or portion of a field.
- f. The existing cross sectional area for gradient terraces has the capacity to carry less than 50 percent of the design discharge without overtopping or a minimum of 0.5 foot of height.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing for each terrace restoration type: flat channel, gradient, grass back, level, parallel, and tile (underground outlet terraces).

(When applicable, include labor when calculating county average cost.)

- i. Earthwork (construction of ridge by linear foot; grass back sloped terraces by linear foot or cubic yard)

- (1) Includes all earthwork involved in the structure.

(2) County average cost for quantity of complete terraces is to be figured by the linear foot of ridge. County average cost for grass back sloped terraces may be figured by linear foot or cubic yard.

b. Associated Practice: Underground Outlet (see Code No. 620)

## 5. **POLICIES**

a. Restoration may include any or all of the following:

- i. Restoration of the terrace height.
- ii. Reconstruction of terrace cross section within the following guidelines:
  - (1) Broadbase cross section on land slopes of eight percent or less.
  - (2) Grass gack sloped cross section on land slopes of six percent or greater.
  - (3) Narrow base cross section on any land slope.
  - (4) Exceptions to these guidelines will be allowed when the soil depth will not permit reconstruction of the terrace types indicated above.

b. Terraces that are under-spaced, over-spaced, or so poorly aligned that the terrace system cannot be farmed with modern equipment should be eliminated and be replaced with a new terrace system. In this situation, the terraces should be funded under practice Code 600 Terrace. The elimination of existing terraces is not eligible for cost-share assistance.

c. Documentation of terrace eligibility should be maintained in the landowner cost-share file.

d. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

## 6. **LIMITATIONS**

- a. Conversion of gradient terraces to underground tile outlet terraces is not eligible for Terrace Restoration assistance if a suitable or restorable grassed waterway outlet is available.
- b. General maintenance of a terrace system is not eligible such as repair of washed out portions or other small structural failures.

## 7. **MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **TREE/SHRUB ESTABLISHMENT (Code 612)**

### **WR ONLY**

#### **1. DEFINITION**

To set tree seedlings or cuttings in the soil.

#### **2. PURPOSE**

To reinforce a stand of trees and to conserve soil and moisture.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. Tree/shrub replacement in field windbreaks.
- b. Where erosion control is needed.
- c. Interplanting in woodland.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Tree/Shrub (per tree/shrub)
    - (1) Tree - Bareroot (per tree)
    - (2) Tree – Containerized (per tree)
    - (3) Tree – Other (per tree)
    - (4) Shrub (per shrub)
  - (5) Tree components include planting site preparation, trees, shrub, and planting costs.
  - (6) County average cost for tree components are to be figured per tree/shrub.
- ii. Tree Shelters (per tree) – Plastic mesh is not eligible.
  - (1) County average cost should include the cost of the tree shelter, stake, if needed, and installation.

- b. Associated Practices
  - i. Fencing (see Code No. 382)
  - ii. Mulching (see Code No. 484)

**5. POLICIES**

- a. Cost-sharing is not authorized for planting of trees for resale.
- b. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

**6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **UNDERGROUND OUTLET (Code 620)**

### **WR, NPS\*, AND RW\*\***

#### **1. DEFINITION**

A conduit installed beneath the surface of the ground to collect surface water and convey to a suitable outlet.

#### **2. PURPOSE**

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

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. Excess surface water needs to be disposed of.
- b. A buried outlet is needed for diversions, terraces, or similar practices.
- c. An underground outlet can be installed that will safely dispose of excess water.
- d. Surface outlets are impractical because of stability problems, climatic conditions, land use, or equipment traffic.

**\*NPS:** As part of a livestock waste system for a confined animal feeding operation, diversion, or a water and sediment control basin.

**\*\*RW:** See Chapter 7 for project types and practice eligibility.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing.  
(When applicable, include labor when calculating county average cost.)
  - i. Pipe and other components associated with pipe installation. The conservation district shall determine the methods of computing county average costs. Either of the following methods or a combination of both may be used.
    - (1) Develop average costs for selected pipe sizes including all components associated with pipe. County average cost for pipe, including all components is to be figured per linear foot of pipe. The number below refers to grouped components.
      - (a) 2/ - Complete with riser and tee or canopy, main conduit, manually tamped backfill under the ridge, and CMP outlet with rodent guard or bubble-up riser.

(2) Develop individual average costs for selected pipe sizes and each associated component. County average cost for pipe and individual components is to be figured on a per unit basis.

b. Associated Practices

- i. Diversion (see Code No. 362)
- ii. Grassed Waterway or Outlet (see Code No. 412)
- iii. Terrace (see Code No. 600)
- iv. Water and Sediment Control Basin (see Code No. 638)

**5. POLICIES**

- a. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

**6. LIMITATIONS**

- a. Cost-sharing is not authorized for:
  - i. Trickle tubes.
  - ii. Principal spillways from dams.
  - iii. Sub-surface drains.

**7. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## UNDERGROUND OUTLET RESTORATION (Code 620r)

### WR ONLY

#### 1. DEFINITION

Restoring an underground outlet. An underground outlet is a conduit installed beneath the surface of the ground to collect surface water and convey to a suitable outlet.

#### 2. PURPOSE

To replace pipe (tile) and associated components in need of restoration.

#### 3. CONDITIONS WHERE PRACTICE APPLIES

- a. The existing tile outlet terrace system must meet all the requirements listed below to be eligible to receive state cost-share assistance:
- b. The terrace system must be 20 or more years old.
- c. The terrace system must meet NRCS standards and specifications.
- d. Reasonable efforts must have been made to maintain the underground outlet pipe, risers and associated components.
- e. The underground outlet pipe has served its anticipated service life. (Verification by NRCS that pipe failure has occurred due to pipe exceeding its useful life)
- f. An adequate stable outlet is available for the tile outlet system.
- g. Exception: Tile terrace systems not meeting criteria b. could be eligible if the owner agreed to bring the terrace system up to existing NRCS standards and specifications. No cost-share funds would be eligible for this additional work and no cost-share would be paid for the underground outlet pipe replacement if the additional work was not completed concurrently.

#### **4. POLICIES**

Restoration may include any or all of the following:

- a. Removal and disposal of the old underground outlet pipe and risers.
- b. Installation of the new underground outlet pipe, risers and associated components.
- c. Hand-compacted backfill around the pipe where required.
- d. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

#### **5. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **UNPERMITTED AND PERMITTED ABOVE GROUND FUEL STORAGE TANK (Code 700)**

### **NPS ONLY**

Prepared by the Kansas Department of Health and Environment - Nonpoint Source Section of the Bureau of Water.

#### **1. DEFINITION**

A device for storing fuel above ground in a manner which minimizes environmental and safety hazards associated with this activity.

#### **2. PURPOSE**

To describe minimum recommended pollution control practices for all fuel storage tanks not subject to or subject to the requirements of the Kansas State Storage Tank Act (K.S.A. 65-34, 105)

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. Above ground fuel storage facilities of less than 10,000 gallons for commercial or private use are present, and in conjunction with irrigation engines and farmstead fuel centers.
- b. The facility must meet one of the following location criteria to be eligible for state cost-share:
  - i. Located 500 feet or less from a perennial or intermittent stream.
  - ii. Located within a shallow aquifer area where depth to water is generally 50 feet or less (e.g. Equus Beds Aquifer, Big Bend Prairie Aquifer, Sand Springs Aquifer, alluvial aquifers).
  - iii. Located within a wellhead protection area of a public water supply (i.e. 2 mile radius of a public water supply well or other approved source water protection zone).
  - iv. Located in a Sensitive Groundwater Area as found on the Kansas Corporation Commission Sensitive Groundwater Area map. The map can be found at the following website: <http://kcc.ks.gov/maps/groundwater.htm>
  - v. Located at a home site where a domestic water well is the primary source of drinking water supply for human consumption and one or more of the following criteria are met:
    - (1) Facility is within 100 ft. of the domestic well.

- (2) Facility is up gradient of the domestic well and is within 400 ft. of the domestic well.

#### **4. COMPONENTS**

- a. The following components are authorized for cost-sharing:  
(Contact the DOC for component unit of measure.)
  - i. Secondary containment (location)
    - (1) In a manner that allows fire officials to safely access the tank unit.
    - (2) In a geologically stable area.
    - (3) At least 100 feet away from a surface water source.
    - (4) At least 10 feet from the adjacent landowners property line.
  - ii. Use only for secondary containment of spilled or leaking fuels from storage tank.  
(No disposal of any other waste fluid.)
  - iii. Recommended Design Standard
    - (1) Single walled tank or tank on frame is located inside a concrete or steel “dike” that is liquid tight and contains at the minimum 10% more volume than the tank or tanks in the barrier. For example, if the tank is 300 gallons, the containment capacity should be 330 gallons.
    - (2) Double Walled Tank: Tank is wrapped with a tank; minimum space between layers. This can be filled with inert material or left open for leak detection.
  - iv. Concrete dike containment system requirements are:
    - (1) Poured at one time (monolith pour)
    - (2) Sufficient foundation to support the weight of the tank.
    - (3) Poured slab of concrete at least 6" thick.
    - (4) A design to allow fluid to drain to a low point, where drain hole and plug can be installed.
    - (5) Sidewalls must be high enough to provide for the necessary containment volume.

- (6) Sidewalls for containment structures shall be 6" poured concrete or 8" concrete blocks with rebar and poured concrete inside the blocks.
- (7) All seams and joints in the concrete must be sealed with a compound that is impervious to the material in the tank.
- (8) Placed on two side-by-side concrete walls high enough to facilitate gravity flow.

v. Steel containment: "tank in an open tank or box"

- (1) A prefab steel "dike system" is endorsed to be the best dike for NPS application (KSU Extension).
- (2) Steel thickness for dike should be as thick or thicker than the tank. Minimum dike thicknesses' are:
  - (a) 300 gallons would need 12 gauge
  - (b) 550 gallons would need 10 gauge
  - (c) 1,000 to 2,000 gallons would need 7 gauge
- (3) Reduce corrosion potential and fume accumulations by assuring rainfall or product does not remain in tank by using a roof and drain/plug.
- (4) Steel dike should have a six inch space between the ground and steel.
  - (a) Channel iron or I beam skids would allow for clearance for lifting as deemed necessary.
  - (b) Placed on crushed rock or other material which does not allow moisture to evaporate (not on concrete or ground encouraging condensation).
- (5) Bonding sealant requirements
  - (a) If not galvanized, must be sealed with epoxy, polyurethane or other sealant.
- (6) The formula for required secondary containment where 7.48 gallons=1 cubic foot is:
  - (a) Tank volume times 1.10 equals tank volume with containment in gallons. Minimum containment volume (cubic feet).

- (b) Capacity of the tank in gallons divided by 7.48 equals tank volume.

**Example:** 1,100 gallons (tank plus containment of 10%) of tank by 7.48 equals 147 cubic feet of containment needed.

- (c) Then figure the length times width times height of containment which will accommodate the specific site to design containment structure (volume is in cubic feet).

- (d) **Examples:**

\* Tank Capacity: 560 gallons. Dike Capacity 616 gallons Dimension 94" x 72" x 21".

\*\* Tank Capacity: 1,000 gallons. Dike Capacity 1,100 gallons Dimension 108" x 40" x 30".

\*\*\* The containment volume must be at least as large as the minimum containment volume.

vi. Pre-fabricated double walled tanks

- (1) UL-142 secondary tank within a primary tank
- (2) Test well, drain plug and venting mechanisms for both tanks.
- (3) No need for dike system, however, it would provide for additional protection.

vii. Frame supported fuel storage tank

- (1) Form concrete insert or attach frame legs to ensure stability.
- (2) Affix frame to dike system (open box) in a way that no structural integrity is lost. (i.e. spot welding, etc.)
- (3) Saddle tank would require a concrete pillar configuration.

viii. Other components or hardware for installation

ix. Visual enhancement for safety factors

- (1) Bright colored flag
  - (a) Makes the tank easier to see to prevent backing accidents.
  - (b) Tall enough to see clearly from all angles.
  - (c) Other components or hardware for installation.

- (2) Brightly marked barriers
  - (a) Pier structure
  - (b) Parking posts
- (3) Painted tanks and barriers
  - (a) Bright colored
  - (b) Non-toxic, non CFC paint

x. Cover

- (1) Roof material
  - (a) Galvanized steel
  - (b) Tarp (some tanks or steel dikes come with this feature)
- (2) Support material
  - (a) Metal frame
  - (b) Wood frame
  - (c) Chainlink fence poles
  - (d) Other components or hardware for installation

xi. Sign

- (1) Contact information in case of a leak or a significant spill.
  - (a) Emergency spill response coordinator/Fire Department
  - (b) KDHE District Office
  - (c) KDHE registration number
  - (d) Owner/operator
- (2) Metal or wood with painted lettering
  - (a) Location to be seen from road
  - (b) Other components or hardware for installation

## **5. POLICIES**

- a. Install all containment structures according to manufacturer's recommendations and guidelines.
- b. Conservation district or designated qualified representative shall witness installation to certify practice implementation.
- c. Facilities that store more than 1,320 gallons in aboveground containers must complete an Oil Spill Prevention, Control, and Countermeasure (SPCC) plan required by the U.S. Environmental Protection Agency. For more information on the SPCC plan go to [www.epa.gov/emergencies/spcc](http://www.epa.gov/emergencies/spcc).

## **6. MONITORING**

- a. Measuring level gauge or stick.
- b. Check for leaks or signs of tank or containment failure on every field visit. Check concrete or steel for evaporation spots.
- c. Record usage from time of fill to time of fill.

## **7. KDHE REGISTRATION (FREE)**

- a. Enhances registrants potential to have access to the Storage Tank Release Trust Fund.
- b. Proof of minimum pollution control for land transactions etc.
- c. Conservation district shall maintain records of tanks registered.
- d. Contact local KDHE District Office for applications (see 8-5-45) or contact Mr. Brad Roberts (785)296-6242 or write to: Kansas Department of Health and Environment, Bureau of Environmental Remediation, Storage Tank Section, Forbes Field, Building 740, Topeka, Kansas 66620-0001.

## **8. MAINTENANCE**

The practice shall be maintained for a minimum of 10 years or the manufacturer's life expectancy of the structure, whichever is greater.

## **9. INFORMATION SOURCES**

- a. Kansas Department of Health and Environment Storage Tank Section of the Bureau of Environmental Remediation
- b. Kansas Above Ground Fuel Storage Tank Regulations
- c. American Petroleum Institute - Recommended Practices for Installation of Above Ground Storage Systems for Motor Vehicle Fueling. PEI/RP200-92

- d. K-State Extension (Agricultural Engineering)
- e. Farm Journal - December 1993
- f. Robert Grisso - University of Nebraska, Extension (402)472-6714 and De Lynn Hay - (402)472-1625
- g. Midwest Plan Service - Designing Facilities for Pesticide and Fertilizer Containment. First Edition, 1991. Iowa State University, Ames, Iowa (515)294-4337
- h. Fabricator: McDonald Tank - Great Bend, Kansas (316)793-3555

## UNPERMITTED DUMP SITE REMEDIATION (Code 120)

### NPS ONLY

#### 1. DEFINITION

A planned reclamation of an illegal dump site to remove litter and debris, to allow shaping and revegetation of impacted areas.

#### 2. PURPOSE

Unpermitted dump site remediation involves removal of debris before runoff or wind moves these materials to surface or groundwater.

#### 3. CONDITIONS WHERE PRACTICE APPLIES

Illegal dumping has occurred in a priority protection area as designated in the conservation district's approved NPS Pollution Management Plan.

#### 4. COMPONENTS AND ASSOCIATED PRACTICES

a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)

i. Dump Fees (ton)

(1) Includes costs associated with landfill dumping fees.

(2) County average cost is to be figured by the ton.

ii. Tire Fees (each)

(1) County average cost is to be figured by the each.

iii. Site Reclamation (hour)

(1) Site Reclamation – Backhoe

(2) Site Reclamation – Bulldozer

(3) Site Reclamation – Trackhoe

(4) Includes costs incurred from gathering/collecting, loading of waste and debris.

(5) Includes excavation necessary to shape site for permanent vegetation planting.

(6) County average cost is to be figured per machine type, by the hour.

iv. Transportation (hour)

(1) Includes costs associated with moving waste and debris from site to landfill.

(2) County average cost is to be figured by the hour.

b. Associated Practices

i. Critical Area Planting (see Code No. 342)

ii. Fencing (see Code No. 382)

**5. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **VEGETATED TREATMENT AREA (Code 635)**

### **NPS ONLY**

#### **1. DEFINITION**

A treatment component of an agricultural waste management system consisting of a strip or area of herbaceous vegetation.

#### **2. PURPOSE**

The purpose of this practice is to improve water quality by reducing loading of nutrients, organics, pathogens, and other contaminants associated with animal manure and other wastes and wastewater by treating runoff from livestock holding areas with infiltration or treating wastewater with overland flow.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies:

- a. Where a treatment strip is a component of a planned agricultural waste management system with less than 500 animal units.
- b. Where a treatment strip can be constructed, operated, and maintained without polluting air or water resources.
- c. To the treatment of contaminated runoff from such areas as feedlots, barnyards, and other livestock holding areas.
- d. To the treatment of dilute wastewater such as milkhouse effluent and silage leachate.
- e. Where the waste treatment strip must have a stable outlet.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-share:  
(When applicable, include labor when calculating county average cost.)
  - i. Earthwork (cubic yard)
    - (1) Includes all earthwork necessary to construct the structure to meet specification.
    - (2) County average cost is to be figured by the cubic yard.

- ii. Gated Irrigation Pipe (linear foot)
  - (1) 6" Gated Irrigation Pipe
  - (2) 8" Gated Irrigation Pipe
  - (3) 10" Gated Irrigation Pipe
  - (4) Other components associated with pipe installation.
  - (5) County average cost is to be figured by the linear foot.

- iii. Concrete (cubic yard)

- (1) Includes concrete and any necessary reinforcing to meet specification.
  - (2) County average cost is to be figured per cubic yard of concrete.

- b. Associated Practice: Critical Area Planting (see Code No. 342)

## 5. **POLICIES**

See Chapter 5, "Livestock Waste Management Provisions."

## 6. **MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **WASTE STORAGE FACILITY (Code 313)**

### **NPS ONLY**

#### **1. DEFINITION**

A waste impoundment made by constructing an embankment and/or excavating a pit or dugout, or fabricating a structure.

#### **2. PURPOSE**

To temporarily store wastes such as manure, wastewater, and contaminated runoff as a storage function component of an agricultural waste management system.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. This practice applies where:
  - i. The storage facility is a component of a planned agricultural waste management system.
  - ii. Temporary storage is needed for organic wastes generated by agricultural production or processing.
  - iii. The storage facility can be constructed, operated, and maintained without polluting water resources.
  - iv. Site conditions are suitable for construction of the facility.
- b. This practice applies to:
  - i. Facilities utilizing embankments with an effective height of 35 feet or less where damage resulting from failure would be limited to farm buildings, agricultural land, or township and county roads.
  - ii. Fabricated structure facilities, which include tanks, stacking facilities, and pond appurtenances.
  - iii. An in-field temporary poultry litter storage facility.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Earthwork (fill or excavation - cubic yard)
    - (1) Includes all earthwork involved in the structure whether it be fill or excavation.

- (2) County average cost is to be figured by the cubic yard of earth moved.
- ii. Pipe and other components associated with pipe installation (unit)
  - (1) Develop individual average costs for selected pipe sizes and each associated component. County average cost for pipe and individual components is to be figured on a per unit basis.
- iii. Concrete (cubic yard)
  - (1) Concrete – installation of pipe fence posts.
  - (2) Concrete - Formed - includes concrete pads for poultry litter/bird composting and storage.
  - (3) County average cost is to be figured by the cubic yard of concrete.
- iv. Reinforcing steel (pound)
  - (1) County average cost is to be figured by the pound.
- v. Timber picket fence (square foot)
  - (1) County average cost is to be figured by the square foot.
- vi. Lumber (linear foot)
  - (1) County average cost is to be figured by the linear foot.
- vii. Other Cementitious Materials (cubic yard)
  - (1) County average cost is to be figured by the cubic yard.

- b. Associated Practices
- i. Pond Sealing or Lining – Flexible Membrane, Soda Ash, Bentonite Sealant or Natural Clay (see Code No. 521A, 521B, 521C, 521D)
- ii. Critical Area Planting (see Code No. 342)

## **5. POLICIES**

See Chapter 5, “Livestock Waste Management Provisions.”

## **6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **WASTE TRANSFER (Code 634)**

### **NPS ONLY**

#### **1. DEFINITION**

A waste conveyance system using structures or conduits.

#### **2. PURPOSE**

To transfer animal waste (bedding material, spilled feed, process and wash water, and other residues associated with animal production may be included) through a hopper or reception pit and a conduit to a waste storage/treatment facility or loading area.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

The waste transfer component is part of a livestock waste management system. Where waste is generated by livestock production and a conveyance system is necessary to transfer waste from the source to a storage/treatment facility and/or a loading area.

#### **4. COMPONENTS**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Concrete (cubic yard)
    - (1) Includes concrete and any necessary reinforcing to meet specification.
    - (2) County average cost is to be figured by the cubic yard of concrete.
  - ii. Earthwork (cubic yard)
    - (1) Includes all earthwork involved in the structure.
    - (2) County average cost is to be figured by the cubic yard of earth moved.
- b. Pumps or any equipment used for waste transfer is not eligible for cost-share assistance.

#### **5. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **WASTE TREATMENT LAGOON (Code 359)**

### **NPS ONLY**

#### **1. DEFINITION**

An impoundment made by excavation or earth fill for biological treatment of animal or other agricultural waste.

#### **2. PURPOSE**

To biologically treat organic waste, reduce pollution, and protect the environment.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies where:

- a. An overall waste management system has been planned,
- b. Waste generated by agricultural production or processing needs treatment,
- c. Lagoon can be located near the source of waste and a minimum of 1,320 feet from a neighboring residence or public area,
- d. Soils are suitable for retaining the waste or can be sealed,
- e. Water supply is adequate to fill the lagoon about half full before operation and to maintain the design depth when the lagoon becomes fully operational.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-share:  
(When applicable, include labor when calculating county average cost.)
  - i. Earthwork (fill or excavation - by cubic yard)
    - (1) Includes all earthwork involved in the structure whether it be fill or excavation.
    - (2) County average cost is to be figured by the cubic yard of earth moved.
  - ii. Pipe and other components associated with pipe installation. The conservation district shall determine the method of computing average costs. Either of the following methods or a combination of both may be used.
    - (1) Develop average costs for selected pipe sizes including all components associated with pipe. County average cost for pipe, including all components is to be figured per linear foot of pipe.

- (2) Develop individual average costs for selected pipe sizes and each associated component. County average cost for pipe and individual components is to be figured on a per unit basis.
  - iii. Concrete (cubic yard)
    - (1) Includes concrete and any necessary reinforcing to meet specifications.
    - (2) County average cost is to be figured by the cubic yard of concrete.

b. Associated Practices

- i. Critical Area Planting (see Code No. 342)
- ii. Fencing (see Code No. 382)
- iii. Pond Sealing or Lining – Flexible Membrane, Soda Ash, Bentonite Sealant or Natural Clay (see Code No. 521A, 521B, 521C, 521D)

**5. POLICIES**

See Chapter 5, “Livestock Waste Management Provisions.”

**6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **WATER AND SEDIMENT CONTROL BASIN (Code 638)**

### **WR, NPS\* and RW**

#### **1. DEFINITION**

A short earth embankment or a combination ridge and channel generally constructed across the slope and minor watercourses to form a silt or sediment basin.

#### **2. PURPOSE**

To trap and collect sediment, reduce on-site erosion, reduce the content of sediment in water, reduce peak rate of flow at downslope locations, reduce flooding, reduce gully erosion, re-form land surface, and improve the potential of areas for farming.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. The topography precludes installing and farming terraces with reasonable effort.
- b. Runoff and sediment from high areas can damage downstream land or improvements.
- c. Water erosion is a problem.
- d. Site conditions are suitable for installation.
- e. Adequate outlets can be provided.
- f. Basins are installed in conjunction with the establishment of a workable terrace system to stabilize outlets and/or odd areas or where land treatment practices reduce soil loss to tolerable limits for the soil involved.

**\*NPS: When addressing a head cut coming out of a riparian area into a field under the Sediment Control project type.**

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Earthwork (by cubic yard)
    - (1) Includes all earthwork involved in the structure.
    - (2) County average cost is to be figured by the cubic yard of earth moved.

- ii. Pipe for use in earth dams and other components associated with pipe installation.
  - (1) Develop average costs for selected pipe sizes including all components associated with pipe. County average cost for pipe, including all components is to be figured per linear foot of pipe.
- b. Associated Practices
  - i. Critical Area Planting (see Code No. 342)
  - ii. Underground Outlet (see Code No. 620)

## **5. POLICIES**

- a. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

## **6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **WATER WELL (Code 642)**

### **WR\* and NPS**

#### **1. DEFINITION**

A well constructed or improved to provide water for livestock.

#### **2. PURPOSE**

The primary purpose of all water supply practices is to provide water for livestock to facilitate proper use of vegetation on rangeland or pasture and/or reduce livestock impacts on streams or riparian areas with the stated or implied intent of improving water quality. All alternative grazing management practices must be exhausted before additional water supply is implemented.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. This practice applies to drilled, driven, and dug vertical or horizontal wells constructed to supply water from an underground source.
- b. There is a need for initial or additional watering places to permit the desired level of grassland management by improving distribution of grazing over all parts of the range.
- c. To reduce livestock waste in streams.
- d. Relocation of a confined animal feeding operation.

**\*WR: In addition to the above, this also applies when there is a need for a replacement of an existing watering place.**

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Casing (by linear foot)
    - (1) Casing – 5”
    - (2) Casing – 6”
    - (3) Casing – Other
  - (4) Includes drilling, casing, gravel pack, screening, etc. needed to complete the practice to specification.
  - (5) County average cost is to be figured by the linear foot of casing.

- i. Equipment Mobilization Cost (by each)
  - (1) Includes cost incurred in moving necessary equipment to the project construction site.
- b. Associated Practices
  - i. Pipeline (see Code No. 516)
  - ii. Watering Facility (see Code No. 614)

## 5. **POLICIES**

- a. Grazing planning requirements are:
  - i. This practice must facilitate proper grazing use by improving distribution of grazing and/or reduce impacts of livestock on streams or riparian areas.
  - ii. The water quality in each stock watering facility within a pasture should be nearly equal to encourage livestock distribution.
- b. A Forage Balance Estimate Worksheet form, provided by the DOC or a NRCS Prescribed Grazing Plan Code 528, shall be completed prior to submitting the CS-3. (Not required for livestock waste systems.)
- c. An exclusion cage is required to be installed to NRCS Standards and Specifications in a warm season pasture (not required in a cool season pasture) prior to submitting the CS-4.
- d. The exclusion cage must remain in the pasture for the 10 year duration of the contract maintenance agreement.
- e. Grazing lands served by this practice shall be maintained in permanent vegetation for a minimum of 10 years.
- f. All livestock water supply practices must be constructed or installed to serve pastures 40 acres or larger. Practice may be installed in pastures less than 40 acres when livestock are excluded from a stream (except livestock waste systems).
- g. The livestock area must be fenced at time of practice completion.

h. The conservation district shall provide a KSU Extension publication on grazing management to each landowner under contract. Following are extension publications to consider:

MF1118 – Stocking Rate and Grazing Management,  
<http://www.ksre.ksu.edu/bookstore/pubs/mf1118.pdf>;

C402 - Smooth Brome Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/C402.pdf>;

C729 – Tall Fescue Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/c729.pdf>.

Districts should consult with their county extension agent on publications that would be applicable for their county.

i. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a grazing workshop in the previous year.

**Note: The DOC may grant exceptions to established restrictions of a water supply development when limited water sources are available. The purpose of this exception is to allow for domestic and non-grazing livestock use.**

**The DOC may also grant exceptions to the 40 acre pasture minimum on a case-by-case basis if significant water quality gains will be achieved.**

## **6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **WATERING FACILITY (Code 614)**

### **WR and NPS**

#### **1. DEFINITION**

A trough, tank, or waterer with needed devices installed to provide drinking water for livestock.

#### **2. PURPOSE**

The primary purpose of all water supply practices is to provide water for livestock to facilitate proper use of vegetation on rangeland or pasture and/or reduce livestock impacts on streams or riparian areas with the stated or implied intent of improving water quality. All alternative grazing management practices must be exhausted before an additional water supply is implemented.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. There is a need for initial or additional watering places to permit the desired level of grassland management by improving distribution of grazing over all parts of the range.
- b. To reduce livestock waste in streams.
- c. Relocation of a confined animal feeding operation.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Trough, Tank or Waterer (per tank or by gallon of capacity)
    - (1) Automatic Waterer (each)
      - (a) Automatic Waterer # 1
      - (b) Automatic Waterer #2
    - (2) Concrete (each/gallon)

- (3) Energy Free (each)
  - (a) Energy Free - 1 Hole
  - (b) Energy Free - 2 Hole
  - (c) Energy Free - 4 Hole
  - (d) Energy Free - 6 Hole
- (4) Fiberglass (each/gallon)
- (5) Steel Rimmed (each/gallon)
- (6) Tank (each/gallon)
  - (a) Tank # 1 thru Tank #5
- (7) Tire Tank (each/gallon)
- (8) Wildlife Ramp (each)
- (9) Wildlife Ramp #1 (each)
- (10) Wildlife Ramp #2 (each)
- (11) Wildlife Ramp #3 (each)
- (12) Wildlife Ramp #4 (each)

- ii. Includes permanent installation of trough, waterer or tank constructed of concrete, fiberglass, steel rim or tire tanks. Also concrete pad, riser, rock/gravel and miscellaneous pipe and fittings.
- iii. County average cost is to be figured either per tank or by gallon of capacity.
- iv. Cost-share is not authorized for electrical components.

b. Associated Practices

- i. Pipeline (see Code No. 516)
- ii. Pond (see Code No. 378)
- iii. Spring Development (see Code No. 574)
- iv. Water Well (see Code No. 642)

## 5. **POLICIES**

- a. Replacement of trough, tank or waterer is not eligible.
- b. Grazing planning requirements are:
  - i. This practice must facilitate proper grazing use by improving distribution of grazing and/or reduce impacts of livestock on streams or riparian areas.
  - ii. The water quality in each stock watering facility within a pasture should be nearly equal to encourage livestock distribution
- c. A Forage Balance Estimate Worksheet form, provided by the DOC or a NRCS Prescribed Grazing Plan Code 528, shall be completed prior to submitting the CS-3. (Not required for livestock waste systems.)
- d. An exclusion cage is required to be installed to NRCS Standards and Specifications in a warm season pasture (not required in a cool season pasture) prior to submitting the CS-4.
- e. The exclusion cage must remain in the pasture for the 10 year duration of the contract maintenance agreement.
- f. Grazing lands served by this trough or tank shall be maintained in permanent vegetation for a minimum of 10 years.
- g. All livestock water supply practices must be constructed or installed to serve pastures 40 acres or larger. Practices may be installed in pastures less than 40 acres when livestock are excluded from a stream (except livestock waste systems).
- h. The livestock area must be fenced at time of practice completion.
- i. Water for distribution needs can be from wells, springs, flowing streams, ponds, or rural water districts.
- j. The conservation district shall provide a KSU Extension publication on grazing management to each landowner under contract. Following are extension publications to consider:

MF1118 – Stocking Rate and Grazing Management,  
<http://www.ksre.ksu.edu/bookstore/pubs/mf1118.pdf>;

C402 - Smooth Brome Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/C402.pdf>;

C729 – Tall Fescue Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/c729.pdf>.

Districts should consult with their county extension agent on publications that would be applicable for their county.

- k. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a grazing workshop in the previous year.

**Note: The DOC may grant exceptions to established restrictions of a water supply development when limited water sources are available. The purpose of this exception is to allow for domestic and non-grazing livestock use.**

**The DOC may also grant exceptions to the 40 acre pasture minimum on a case-by-case basis if significant water quality gains will be achieved.**

**6. MAINTENANCE**

The practice shall be maintained for ten (10) years

## **WATERING FACILITY REPLACEMENT (Code 614r)**

### **WR and NPS**

#### **1. DEFINITION**

A replacement trough, tank, or waterer with needed devices installed to provide drinking water for livestock.

#### **2. PURPOSE**

The primary purpose of all water supply practices is to provide water for livestock to facilitate proper use of vegetation on rangeland or pasture and/or reduce livestock impacts on streams or riparian areas with the stated or implied intent of improving water quality. All alternative grazing management practices must be exhausted before an additional water supply is implemented.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. There is a need for the replacement of a failed trough, tank, or waterer to permit the desired level of grassland management by improving distribution of grazing over all parts of the range.
- b. To reduce livestock waste in streams.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Trough, Tank or Waterer (per tank or by gallon of capacity)
    - (1) Automatic Waterer (each)
      - (a) Automatic Waterer # 1
      - (b) Automatic Waterer #2
    - (2) Concrete (each/gallon)

- (3) Energy Free (each)
  - (a) Energy Free - 1 Hole
  - (b) Energy Free - 2 Hole
  - (c) Energy Free - 4 Hole
  - (d) Energy Free - 6 Hole
- (4) Fiberglass (each/gallon)
- (5) Steel Rimmed (each/gallon)
- (6) Tank (each/gallon)
  - (a) Tank # 1 thru Tank #5
- (7) Tire Tank (each/gallon)
- (8) Wildlife Ramp (each)
- (9) Wildlife Ramp #1 (each)
- (10) Wildlife Ramp #2 (each)
- (11) Wildlife Ramp #3 (each)
- (12) Wildlife Ramp #4 (each)

- ii. Includes permanent installation of trough, waterer or tank constructed of concrete, fiberglass, steel rim or tire tanks. Also concrete pad, riser, rock/gravel and miscellaneous pipe and fittings.
- iii. County average cost is to be figured either per tank or by gallon of capacity.
- iv. Cost-share is not authorized for electrical components.

b. Associated Practices

- i. Pipeline (see Code No. 516)
- ii. Pond (see Code No. 378)
- iii. Spring Development (see Code No. 574)
- iv. Water Well (see Code No. 642)

## 5. **POLICIES**

- a. Replacement of a permanent trough, tank or waterer that has failed and no longer holds water is eligible.
- b. Grazing planning requirements are:
  - i. This practice must facilitate proper grazing use by improving distribution of grazing and/or reduce impacts of livestock on streams or riparian areas.
  - ii. The water quality in each stock watering facility within a pasture should be nearly equal to encourage livestock distribution
- c. A Forage Balance Estimate Worksheet form, provided by the DOC or a NRCS Prescribed Grazing Plan Code 528, shall be completed prior to submitting the CS-3. (Not required for livestock waste systems.)
- d. An exclusion cage is required to be installed to NRCS Standards and Specifications in a warm season pasture (not required in a cool season pasture) prior to submitting the CS-4.
- e. The exclusion cage must remain in the pasture for the 10 year duration of the contract maintenance agreement.
- f. Grazing lands served by this trough or tank shall be maintained in permanent vegetation for a minimum of 10 years.
- g. All livestock water supply practices must be constructed or installed to serve pastures 40 acres or larger. Practices may be installed in pastures less than 40 acres when livestock are excluded from a stream (except livestock waste systems).
- h. The livestock area must be fenced at time of practice completion.
- i. Water for distribution needs can be from wells, springs, flowing streams, ponds, or rural water districts.
- j. The conservation district shall provide a KSU Extension publication on grazing management to each landowner under contract. Following are extension publications to consider:

MF1118 – Stocking Rate and Grazing Management,  
<http://www.ksre.ksu.edu/bookstore/pubs/mf1118.pdf>;

C402 - Smooth Brome Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/C402.pdf>;

C729 – Tall Fescue Production and Utilization,  
<http://www.ksre.ksu.edu/bookstore/pubs/c729.pdf>.

Districts should consult with their county extension agent on publications that would be applicable for their county.

- k. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a grazing workshop in the previous year.

**Note: The DOC may grant exceptions to established restrictions of a water supply development when limited water sources are available. The purpose of this exception is to allow for domestic and non-grazing livestock use.**

**The DOC may also grant exceptions to the 40 acre pasture minimum on a case-by-case basis if significant water quality gains will be achieved.**

**6. MAINTENANCE**

The practice shall be maintained for ten (10) years

## **WELL DECOMMISSIONING (Code 351)**

### **NPS ONLY**

#### **1. DEFINITION**

The sealing and permanent closure of a water well no longer in use.

#### **2. PURPOSE**

Prevent entry of contaminated surface water into well and migration of contaminants into the unsaturated zone or saturated zone.

Prevent the commingling of chemically or physically different ground waters between separate water bearing zones.

Restore, as far as feasible, hydrogeologic conditions that existed before the well was constructed.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies to any drilled, dug, driven, bored, or otherwise constructed vertical water well determined to have no further beneficial use.

#### **4. POLICIES**

- a. A landowner is eligible to receive a maximum cost-share assistance of \$1,000 per well and may plug multiple wells.
- b. Personnel eligible to plug abandoned wells are either licensed well drillers or the well owner, except on irrigation wells a licensed well driller must plug the well.
- c. To cost-share on multiple wells for one landowner, select additional project types when developing the county CS-2 (i.e. AWP, AWP #1, AWP#2).
- d. The project shall be completed by June 1 of the state fiscal year the contract was approved.

#### **5. COMPONENTS**

- a. The conservation district shall determine the method of computing average costs either by the complete practice (well depth and diameter of well), or by individual components. The following components are eligible for cost-sharing: (When applicable, include labor when calculating county average cost.)
  - i. Site Preparation (each)
  - ii. Pump, Pipeline Removal (each)

- iii. Excavation, Shaping (cubic yard)
- iv. Subsoil Fill (cubic yard)
- v. Grout (bag)
  - (1) Grout – Bentonite
    - (only chip bentonite is authorized unless documentation of a KDHE exemption is provided to the DOC with the cost-share application)
  - (2) Grout – Cement
  - (3) Grout - Neat cement
- vi. Aggregate Fill (cubic yard)
  - (1) Sand
  - (2) Gravel (less than one inch diameter)
  - (3) County average cost is to be figured by the cubic yard.
- vii. Chlorine (gallon)
  - (1) To shock treat the well.
  - (2) County average cost is to be figured per gallon.
- viii. Labor (hour)
  - (1) County average cost is to be figured by the hour.
- ix. Complete Practice (each)
  - (1) Complete Practice – Capping
  - (2) County average cost is to be figured by the each.
- x. Complete Practice (linear foot)
  - (1) Complete Practice – Casing 10" – 24"
  - (2) Complete Practice – Casing 30" – 36"
  - (3) Complete Practice – Casing 38" – 48"
  - (4) Complete Practice – Casing < 10"

- (5) Complete Practice – Casing > 48”
- (6) Complete Practice – Handdug 36” – 48”
- (7) Complete Practice – Handdug 49” – 72”
- (8) Complete Practice – Handdug < 36”
- (9) Complete Practice – Handdug > 72”

## **6. LIMITATIONS**

- a. The maximum cost-share for abandoned water well plugging is \$1,000 per well.
- b. Gas and oil wells are not eligible for cost-share.
- c. A county can elect to conduct or participate in up to two (2) abandoned water well plugging demonstrations per year. The landowner is eligible for 100% cost-share of the landowner actual cost to plug the demonstration well.
- d. Plugging certification. The Kansas Department of Health and Environment (KDHE) Form WWC-5P shall be completed for each well. One copy shall be kept in the landowner file, and appropriate copies of the WWC-5P as indicated will be forwarded to KDHE. The conservation district or the landowner shall request the WWC-5P forms from KDHE.
- e. Plugging procedures and computation of plugging materials are outlined in KSU Cooperative Extension Service Publication MF-935, dated January 1998 and shall be followed when plugging all state cost-shared wells. KSU Extension publication MF-935 can be found at <http://www.ksre.ksu.edu/bookstore/pubs/MF935.pdf>

## **7. MAINTENANCE**

This practice is permanent however a landowner agreement must be signed by the well owner.

- a. **PLUGGING of CISTERNS:** The plugging of cisterns is eligible for cost-share providing the cistern is determined by the conservation district to be a water quality threat. All procedures and recommendations for plugging cisterns shall be followed in KSU Cooperative Extension Service Publication MF-2246, dated July, 1998. Extension Publication MF-2246 can be found at <http://www.ksre.ksu.edu/bookstore/pubs/MF2246.pdf>. The components eligible for well decommissioning shall be used. The cistern must intercept groundwater or have potential to threaten nearby water supplies. County average costs for plugging hand dug wells may be used. A KDHE well plugging certification must be completed and kept in the landowner file if the cistern intercepts groundwater.

b. **CAPPING WELLS:** Inactive drilled water wells (hand dug not eligible) which are not presently operating but are maintained in such a way they can be returned to operation with a minimum of service. Eligible wells must follow the requirements of K.A.R. 28-30-7 (f). The landowner must send a completed Form WWC6 to KDHE requesting a well be placed on inactive status. An approval letter is sent to the landowner by KDHE, which places the well on inactive status at which time the well may be capped. Form WWC5 must be completed and sent to KDHE if any reconstruction of the well is required. Conservation districts shall contact the DOC for capping instructions and limitations. The components for abandoned well plugging shall be used.

\*\* Artesian wells shall be plugged using procedures for wells with confined aquifers.

## **WETLAND CREATION (Code 658)**

### **WR, NPS and RW**

#### **1. DEFINITION**

A wetland that has been created on a site location which historically was not a wetland or is a wetland but the site will be converted to a wetland with a different hydrology, vegetation type, or function than naturally occurred on the site.

#### **2. PURPOSE**

To create wetlands that has wetland hydrology, hydrophytic plant communities, hydric soil conditions, and wetland functions and/or values.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies to sites where no natural wetland occurred or where a wetland exists, or existed, and the wetland characteristics (hydrology, vegetation, and functions) will be different from what historically occurred.

This practice is applicable only if modifying drainage and/or artificial flooding of duration and frequency to create and maintain wetland conditions during an average annual precipitation event can approximate hydrologic conditions. The wetland class/subclass will be specified.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Earthwork (fill or excavation by cubic yard)
    - (1) Includes all earthwork involved in the structure, whether it be fill or excavation.
    - (2) County average cost is to be figured by the cubic yard of earth moved.
  - ii. Pipe and other components associated with pipe installation (per linear foot)
    - (1) Develop average costs for selected pipe sizes including all components associated with pipe. County average cost for pipe, including all components is to be figured per linear foot of pipe. The numbers below refer to grouped components.
      - (a) 2/ - Complete with riser and tee or canopy, main conduit, manually tamped backfill under the ridge, and CMP outlet with rodent guard or bubble-up riser.

(b) 7/ - Complete with inline water control structure, inlet and outlet pipe, manually tamped backfill of structure and pipe, bar guard, rodent guard, and back flap.

iii. Other Components Associated with Pipe (per unit installed)

- (1) Other components required to complete installation of the practice according to specification shall be listed individually from the pipe component. Average costs for each shall be established.
- (2) County average cost is figured per unit installed.

iv. Drop Log Structure (each)

- (1) Includes structure and all components necessary for installation.
- (2) County average cost is figured per structure.

v. Hydrophytic Vegetation (each)

- (1) County average cost is to be figured based on each plant.

b. Associated Practice: Critical Area Planting (see Code No. 342)

**5. LIMITATIONS**

- a. The landowner shall obtain necessary local, state, and federal permits that apply before wetland construction, including water rights if required.
- b. The design will comply with local, state, and federal permit requirements.
- c. Documentation of the soil, hydrology, and vegetative characteristics of the site and its contributing watershed shall be made before construction

**6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## **WETLAND ENHANCEMENT (Code 659)**

### **WR, NPS and RW**

#### **1. DEFINITION**

The modification or rehabilitation of an existing or degraded wetland, where specific functions and/or values are modified for the purpose of meeting specific project objectives.

#### **2. PURPOSE**

To modify the hydrologic condition, hydrophytic plant communities, and/or other biological habitat components of a wetland for the purpose of favoring specific wetland functions or values.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

This practice applies on any degraded or existing wetland where the objective is to specifically enhance a selected wetland function(s) and/or value(s).

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Earthwork (fill or excavation by cubic yard)
    - (1) Includes all earthwork involved in the structure, whether it be fill or excavation.
    - (2) County average cost is to be figured by the cubic yard of earth moved.
  - ii. Pipe and other components associated with pipe installation (per linear foot)
    - (1) Develop average costs for selected pipe sizes including all components associated with pipe. County average cost for pipe, including all components is to be figured per linear foot of pipe. The numbers below refer to grouped components.
      - (a) 2/ - Complete with riser and tee or canopy, main conduit, manually tamped backfill under the ridge, and CMP outlet with rodent guard or bubble-up riser.
      - (b) 7/ - Complete with inline water control structure, inlet and outlet pipe, manually tamped backfill of structure and pipe, bar guard, rodent guard, and back flap.

- iii. Other Components Associated with Pipe (per unit installed)
  - (1) Other components required to complete installation of the practice according to specification shall be listed individually from the pipe component. Average costs for each shall be established.
  - (2) County average cost is figured per unit installed.
- iv. Drop Log Structure (each)
  - (1) Includes structure and all components necessary for installation.
  - (2) County average cost is figured per structure.
- v. Hydrophytic Vegetation (each)
  - (1) County average cost is to be figured based on each plant.

- b. Associated Practice: Critical Area Planting (see Code No. 342)

## 5. LIMITATIONS

- a. The landowner shall obtain necessary local, state, and federal permits that apply before wetland construction, including water rights if required.
- b. The design will comply with local, state, and federal permit requirements.
- c. Documentation of the soil, hydrology, and vegetative characteristics of the site and its contributing watershed shall be made before construction

## 6. MAINTENANCE

The practice shall be maintained for ten (10) years.

## **WETLAND RESTORATION (Code 657)**

### **WR, NPS, and RW**

#### **1. DEFINITION**

A rehabilitation of a drained or degraded wetland where the soils, hydrology, vegetative community, and biological habitat are returned to the natural condition to the extent practicable.

#### **2. PURPOSE**

To restore hydric soil conditions, hydrologic conditions, hydrophytic plant communities and wetland functions that occurred on the disturbed wetland site prior to modification to the extent practicable.

#### **3. CONDITIONS WHERE PRACTICE APPLIES**

- a. This practice applies only to sites with hydric soil which were natural wetlands that have been previously degraded hydrologically and/or vegetatively.
- b. This practice is applicable only if natural hydrologic conditions can be approximated by modifying drainage and/or artificial flooding of a duration and frequency similar to natural conditions.

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Earthwork (fill or excavation by cubic yard)
    - (1) Includes all earthwork involved in the structure, whether it be fill or excavation.
    - (2) County average cost is to be figured by the cubic yard of earth moved.
  - ii. Pipe and other components associated with pipe installation (per linear foot)
    - (1) Develop average costs for selected pipe sizes including all components associated with pipe. County average cost for pipe, including all components is to be figured per linear foot of pipe. The numbers below refer to grouped components.
      - (a) 2/ - Complete with riser and tee or canopy, main conduit, manually tamped backfill under the ridge, and CMP outlet with rodent guard or bubble-up riser.

(b) 7/ - Complete with inline water control structure, inlet and outlet pipe, manually tamped backfill of structure and pipe, bar guard, rodent guard, and back flap.

iii. Other Components Associated with Pipe (per unit installed)

- (1) Other components required to complete installation of the practice according to specification shall be listed individually from the pipe component. Average costs for each shall be established.
- (2) County average cost is figured per unit installed.

iv. Drop Log Structure (each)

- (1) Includes structure and all components necessary for installation.
- (2) County average cost is figured per structure.

v. Hydrophytic Vegetation (each)

- (1) County average cost is to be figured based on each plant.

b. Associated Practice: Critical Area Planting (see Code No. 342)

**5. LIMITATIONS**

- a. The landowner shall obtain necessary local, state, and federal permits that apply before wetland construction, including water rights if required.
- b. The design will comply with local, state, and federal permit requirements.
- c. Documentation of the soil, hydrology, and vegetative characteristics of the site and its contributing watershed shall be made before construction.

**6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## WINDBREAK/SHELTERBELT ESTABLISHMENT (Code 380)

### WR\* and NPS

#### 1. DEFINITION

- a. A shelter to diffuse and deflect winds away from livestock or structures consisting of:
  - i. A strip or belt of trees or shrubs established next to a confined feeding area or farmstead.
  - ii. An outdoor living barn that is a specialized windbreak, typically composed of trees and shrubs strategically located in open areas to provide winter livestock shelter; or
  - iii. An earthen berm constructed of sufficient height and length to provide winter livestock shelter; or
  - iv. A constructed windbreak composed of building materials such as wood and corrugated metal normally constructed in an “L” configuration to provide winter livestock shelter.
- b. **\*WR: In addition to the above, in or around open cropland needing protection against wind damage to soils or crops and where deposition of snow for moisture conservation can best be accomplished. This applies only to planted windbreaks.**

#### 2. PURPOSE

To protect soil resources, control snow deposition, moisture conservation, protect crops and provide shelter for livestock.

#### 3. CONDITIONS WHERE PRACTICE APPLIES

- a. Land next to feedlots where wind damage is likely and rows of trees and/or shrubs, or other eligible structures can provide the needed protection. Practice only applies to:
  - i. Livestock facility or feeding area relocation.
  - ii. Riparian area livestock exclusion or significant reduction of use of the riparian area.
  - iii. Existing livestock facility or feeding area.
- b. Land next to a farmstead, field, or any area that addresses a resource concern. (**\*WR Only**)

#### **4. COMPONENTS AND ASSOCIATED PRACTICES**

- a. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Tree/Shrub (per tree/shrub)
    - (1) Tree - Bareroot (per tree)
    - (2) Tree – Containerized (per tree)
    - (3) Tree – Other (per tree)
    - (4) Shrub (per shrub)
  - (5) Tree components include planting site preparation, trees, shrub, and planting costs.
  - (6) County average cost for tree components are to be figured per tree/shrub.
- ii. Tree Shelters (per tree) – Plastic mesh is not eligible.
  - (1) County average cost should include the cost of the tree shelter, stake, if needed, and installation.
- iii. Earthwork (fill or excavation – cubic yard) (not applicable for ESC project types)
  - (1) County average cost is to be figured by the cubic yard of earth moved.
- iv. Corrugated Metal (linear foot) (not applicable for ESC project types)
  - (1) County average cost is to be figured by the linear foot.
- v. Posts (wood or metal – each) (not applicable for ESC project types)
  - (1) County average cost is to be figured by the each.
- vi. Stringers (wood or metal – linear foot) (not applicable for ESC project types)
  - (1) County average cost is to be figured by the linear foot.
- vii. Concrete (post anchoring only – cubic yard, bag or ready mix) (not applicable for ESC project types)
  - (1) County average cost is to be figured by the cubic yard or bag.

b. Associated Practices

- i. Fencing (see Code No. 382)
- ii. Irrigation system, Trickle (see Code No. 441)
- iii. Mulching (see Code No. 484)

**5. POLICIES**

- a. Cost-share is not authorized for planting trees for resale.
- b. Design specifications for living barns, earthen berms and constructed windbreaks can be found in Chapter 5.
- c. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

**6. MAINTENANCE**

The practice shall be maintained for ten (10) years.

## WINDBREAK/SHELTERBELT RENOVATION (Code 650)

### WR and NPS

#### 1. DEFINITION

Replacing selected trees and shrubs or rows, or adding rows to the windbreak or shelterbelt.

#### 2. PURPOSE

Restoring or enhancing the function of existing windbreaks or shelterbelts used for livestock, farmsteads, or erosion control.

#### 3. CONDITIONS WHERE PRACTICE APPLIES

In any windbreak or shelterbelt that is no longer functioning properly, where wind damage is likely and/or additional rows of trees and/or shrubs can provide the needed protection. Practice only applies for:

- a. Livestock facility.
- b. Riparian area livestock exclusion or significant reduction of use of the riparian area.
- c. Field windbreak.
- d. Farmstead windbreak. **(WR Only)**

#### 4. COMPONENTS AND ASSOCIATED PRACTICES

- a. County average cost for tree components are to be figured per tree/shrub. The following components are authorized for cost-sharing:  
(When applicable, include labor when calculating county average cost.)
  - i. Tree/Shrub (per tree/shrub)
    - (1) Tree - Bareroot (per tree)
    - (2) Tree – Containerized (per tree)
    - (3) Tree – Other (per tree)
    - (4) Shrub (per shrub)
  - (5) Tree components include planting site preparation, trees, shrub, and planting costs.

- ii. Tree Shelters (per tree) – Plastic mesh is not eligible.
  - (1) County average cost should include the cost of the tree shelter, stake, if needed, and installation.
- b. Associated Practices
  - i. Fencing (See Code No. 382)
  - ii. Irrigation System, Trickle (See Code No. 441)
  - iii. Mulching (See Code No. 484)

**5. POLICIES**

- a. Cost-sharing is not authorized for planting trees for resale.
- b. Conservation districts may give extra points on the ranking worksheet for applicants that have attended a conservation district approved No-till or Cover Crop workshop in the previous year.

**6. MAINTENANCE**

The practice shall be maintained for ten (10) years.