Cost Share BMP Summary

1. Conservation Cover

   Definition- Establishing and maintaining pernament vegetative cover

   Purpose-

   • Reduce soil erosion and sedimentation.
   • Improve water quality.
   • Enhance wildlife habitat and pollinator habitat.
   • Improve air quality.
   • Improve soil quality.
   • Manage plant pests

2. Cover Crop

   Definition-Crops including grasses, legumes, and forbs for seasonal cover and other conservation purposes

   Purpose-

   • Reduce erosion from wind and water.
   • Increase soil organic matter content.
   • Capture and recycle or redistribute nutrients in the soil profile.
   • Promote biological nitrogen fixation and reduce energy use.
   • Increase biodiversity.
   • Suppress Weeds.
   • Manage soil moisture.
   • Minimize and reduce soil compaction

3. Critical Area Planting-

   Definition-Establishing permanent vegetation 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.

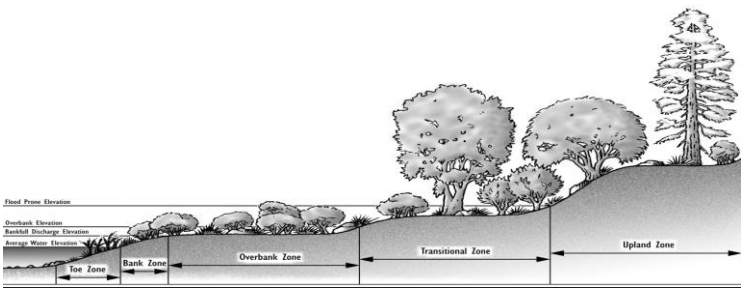
   Purpose-This practice supports one or more of the following purposes:

   • Stabilize stream and channel banks, pond and other shorelines – Resource concern (SOIL EROSION– Excessive bank erosion from streams shorelines or water conveyance channels).

   • Stabilize areas with existing or expected high rates of soil erosion by wind or water – Resource concern (SOIL EROSION – Concentrated flow erosion and/or SOIL EROSION - Sheet, rill, & wind erosion and/or SOIL QUALITY DEGRADATION – Concentration of salts or other chemicals).

   • Stabilize areas, such as sand dunes and riparian areas – Resource concern (SOIL EROSION – Concentrated flow erosion and/or SOIL EROSION- Sheet, rill, & wind erosion).

   Example:



4. Fence

   Definition-A constructed barrier to animals or people

   Purposes- This practice facilitates the accomplishment of conservation objectives by providing a means to control movement of animals and people, including vehicles.

5. Field Borders

   Definition- A strip of pernament vegetation established at the edge or around the perimeter of a field

   Purpose- This practice may be applied to accomplish one or more of the following:

   • Reduce erosion from wind and water – Resource Concern (SOIL EROSION - Sheet, rill, & wind erosion

   • Protect soil and water quality – Resource Concerns (SOIL QUALITY DEGRADATION – Compaction and WATER QUALITY DEGRADATION – Excess nutrients in surface and ground waters)

   • Provide wildlife food and cover and pollinator or other beneficial organism habitat – Resource Concern (INADEQUATE HABITAT FOR FISH AND WILDLIFE –Habitat degradation)

   • Increase carbon storage – Resource Concern (SOIL QUALITY DEGRADATION –Organic matter depletion)

   • Improve air quality – Resource Concern (AIR QUALITY IMPACTS - Emissions of Particulate Matter - PM - and PM Precursors).

6. Filter Strips

   Definition-A strip of herbaceous vegetation that removes contaminates from overland flow.

   Purpose-This practice supports one or more of the following purposes:

   • Reduce suspended solids and associated contaminants in runoff – Resource concerns (WATER QUALITY DEGRADATION – Excess nutrients in surface and ground waters, Pesticides transported to surface and ground waters, Excess pathogens and chemicals from manure, bio-solids or compost applications, and Excessive sediment in surface waters).

   • Reduce dissolved contaminant loadings in runoff – Resource concerns (WATER QUALITY DEGRADATION – Excess nutrients in surface and ground waters, Pesticides transported to surface and ground waters, and Excess pathogens and chemicals from manure, bio-solids or compost applications).

   • Reduce suspended solids and associated contaminants in irrigation tail water – Resource concern (WATER QUALITY DEGRADATION – Excess nutrients in surface and ground waters, Pesticides transported to surface and ground waters, Excess pathogens and chemicals from manure, bio-solids or compost applications, and Excessive sediment in surface waters).

7. Forage and Biomass Planting

   Definition- Establishing adapted and/or compatible species, varieties, or cultivars of herbaceous species suitable for pasture, hay, or biomass production.

   Purpose-

   • Improve or maintain livestock nutrition and/or health.

   • Provide or increase forage supply during periods of low forage production.

   • Reduce soil erosion.

   • Improve soil and water quality.

   • Produce feedstock for biofuel or energy production.

8. Grassed Waterways or Outlets

   Definition- A shaped or graded channel that is established with suitable vegetation to carry surface water at a non-erosive velocity to a stable outlet.

Purpose-

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

9. Heavy Use Area Protection

   Definition- Heavy Use Area Protection is used to stabilize a ground surface that is frequently and intensively used by people, animals, or vehicles.

   Purposes- Heavy Use Area Protection is used:

   - To provide a stable, non-eroding surface for areas frequently used by animals, people or vehicles
   - To protect or improve water quality.

10. Lined Waterways or Outlets

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

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

    - Provide for safe conveyance of runoff from conservation structures or other water concentrations without causing erosion or flooding
    - Stabilize existing and prevent future gully erosion
    - Protect and improve water quality

11. Mulching

    Definition- Applying plant residues or other suitable materials produced off site, to the land surface.

    Purposes- This practice supports one or more of the following purposes:

    - Conserve soil moisture – Resource concern (INSUFFICIENT WATER –Inefficient moisture management).
    - Reduce energy use associated with irrigation – Resource concern (INEFFICIENT ENERGY USE – Farming/ranching practices and field operations and INSUFFICIENT WATER –Inefficient moisture management).
    - Provide erosion control – Resource concern (SOIL EROSION– Excessive bank erosion from streams shorelines or water conveyance channels, and/or SOIL EROSION – Concentrated flow erosion, and/or SOIL EROSION - Sheet, rill, & wind erosion).
    - Facilitate the establishment of vegetative cover – Resource concern (DEGRADED PLANT CONDITION – Undesirable plant productivity and health).
    - Improve soil health – Resource concern (SOIL QUALITY DEGRADATION –Organic matter depletion).
    - Reduce airborne particulates – Resource concern (AIR QUALITY IMPACTS - Emissions of Particulate Matter - PM - and PM Precursors).

12. Nutrient Management Plan

    Definition-Managing the amount (rate), source, placement (method of application), and timing of plant nutrients and soil amendments.

    Purpose-

    - To budget, supply, and conserve nutrients for plant production.
    - To minimize agricultural nonpoint source pollution of surface and groundwater resources.
    - To properly utilize manure or organic by-products as a plant nutrient source.
    - To protect air quality by reducing odors, nitrogen emissions (ammonia, oxides of nitrogen), and the formation of atmospheric particulates.
    - To maintain or improve the physical, chemical, and biological condition of soil.

13. Pipeline

Definition-A pipeline and appurtenances installed to convey water for livestock or wildlife**.**

Purposes-This practice may be applied as part of a resource management system to achieve one or more of the following purposes:

- Convey water to points of use for livestock or wildlife.
- Reduce energy use.
- Develop renewable energy systems.

14. Prescribed Grazing

Definition-Managing the harvest of vegetation with grazing and/or browsing animals.

Purposes-This practice may be applied as part of a conservation management system to achieve one or more of the following:

- Improve or maintain desired species composition and vigor of plant communities.
- Improve or maintain quantity and quality of forage for grazing and browsing animals' health and productivity.
- Improve or maintain surface and/or subsurface water quality and quantity.
- Improve or maintain riparian and watershed function.
- Reduce accelerated soil erosion, and maintain or improve soil condition.
- Improve or maintain the quantity and quality of food and/or cover available for wildlife.
- Manage fine fuel loads to

15. Residue and Tillage Management, No Till/ Strip Till

Definition-Limiting soil disturbance to manage the amount, orientation and distribution of crop and plant residue on the soil surface year around.

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

- Reduce sheet, rill and wind erosion – Resource Concern (SOIL EROSION - Sheet, rill, & wind erosion).
- Reduce tillage-induced particulate emissions – Resource Concern (AIR QUALITY IMPACTS - Emissions of Particulate Matter - PM - and PM Precursors).
- Maintain or increase soil quality and organic matter content – Resource Concern (SOIL QUALITY DEGRADATION – Organic matter depletion).
- Reduce energy use – Resource Concern (INEFFICIENT ENERGY USE – Farming/ranching practices and field operations).
- Increase plant-available moisture – Resource Concern (INSUFFICIENT WATER – Inefficient moisture management).
- Provide food and escape cover for wildlife – Resource Concern (INADEQUATE HABITAT FOR FISH AND WILDLIFE – Habitat degradation).

16. Riparian Forest Buffer

Definition- An area predominantly trees and/or shrubs located adjacent to and up-gradient from watercourses or water bodies.

Purposes-

- Create shade to lower or maintain water temperatures to improve habitat for aquatic organisms.
- Create or improve riparian habitat and provide a source of detritus and large woody debris.

• Reduce excess amounts of sediment, organic material, nutrients and pesticides in surface runoff and reduce excess nutrients and other chemicals in shallow ground water flow.

• Reduce pesticide drift entering the water body.

• Restore riparian plant communities.

• Increase carbon storage in plant biomass and soils.

17. Spring Development

Definition- Collection of water from springs or seeps to provide for livestock and wildlife.

Purpose-Improve the quantity and/or quality of water for livestock and wildlife.

18. Tree Shrub Establishment

Definition-Establishing woody plants by planting seedlings or cuttings, direct seeding, or natural regeneration.

Purposes-Establish woody plants for:

• Forest products such as timber, pulpwood, etc.

• Wildlife habitat

• Long-term erosion control and improvement of water quality

• Treating waste

• Storing carbon in biomass

• Reduce energy use

• Develop renewable energy systems

• Improving or restoring natural diversity

• Enhancing aesthetics

19. Watering Facility

Definition-A permanent or portable device to provide an adequate amount and quality of drinking water for livestock and/or wildlife.

Purposes- To provide access to drinking water for livestock and/or wildlife in order to:

• Meet daily water requirements

• Improve animal distribution