

Conservation Resources: Agricultural Best Management Practices (BMPs)

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A stylized silhouette of a mountain range in a darker shade of teal, located in the bottom right corner of the slide.

Presentation Overview:

- ◆ NRCS / SWCD Introduction
 - ◆ How We Can Help You / Available Resources
 - ◆ Agricultural BMPs
 - ◆ Program Assistance Opportunities
 - ◆ Web Soil Survey Tutorial
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- A decorative graphic at the bottom right of the slide, consisting of a silhouette of a mountain range in a teal color, matching the background.



United States Department of Agriculture
Natural Resources Conservation Service

- ◆ Since 1935, NRCS (originally called the Soil Conservation Service) has provided leadership to help America's private land owners and managers conserve their soil, water, and other natural resources.
- ◆ NRCS employees provide technical assistance based on sound science and suited to a customer's specific needs
- ◆ We provide financial assistance for many conservation activities. Participation in our programs is voluntary.



Kendall County Soil & Water Conservation District

- ◆ A governmental body created by state law for the purpose of promoting the protection and conservation of the county's and state's soil, water and related natural resources.
 - "Independent unit of local government"
 - Formation was in part a response to the dust bowl of the 1930s.
- ◆ Kendall County SWCD formed on June 2, 1947.
- ◆ Co-located with NRCS at the USDA Service Center.
- ◆ Work items: technical assistance, cost-share programs (Conservation 2000 Program) education programs, community assistance, resource materials and related services.

Grassed Waterways

◆ How it works

- A natural drainage way is graded and shaped to form a smooth, bowl shaped channel and then planted to sod forming grasses.
- Runoff water that flows down the drainage way flows across the grass rather than tearing away soil and forming a larger gully

◆ How it helps

- Grass cover protects the drainage ways from gully erosion.
- Vegetation may act a filter absorbing some chemicals and nutrients in runoff water.
- Vegetation provides cover for small birds and animals.



Filter Strip / Riparian Buffer

◆ How it works

- Strips of grass, trees and/or shrubs slow water flow and cause contaminants like sediment, pesticides, and nutrients to collect in the vegetation.
- Collected nutrients are used by the vegetation, rather than entering water supplies. Filtered water then enters water bodies.

◆ How it helps

- Grass, trees and shrubs provide cover for small birds and animals.
- Ground cover reduces soil erosion.
- The vegetative strip moves row crop operations farther from a stream.
- Vegetation prevents contaminants from entering water bodies, protecting water quality.



Field Border

◆ How it works

- Strips of perennial vegetation are established at the outside edges of a field.
- The grass or legume in the strip protects field edges from soil erosion, and provides turning and travel lanes around the field.

◆ How it helps

- Vegetative cover reduces sheet and rill erosion by slowing water flow.
- Vegetation filters runoff to improve water quality.
- Vegetation provides cover and habitat for small birds and animals.



Water and Sediment Control Basin (WASCoB)

◆ How it works

- An embankment is built across a depressional area of concentrated water runoff to act similar to a terrace.
- It traps sediment and water running off farmland above the structure, preventing it from reaching farmland below.

◆ How it helps

- Basins improve water quality by trapping sediment on uplands and preventing it from reaching water bodies.
- Structures reduce gully erosion by controlling water flow within a drainage area.
- Grass cover may provide habitat for wildlife.



Terraces

◆ How it works

- Terraces break long slopes into shorter ones and usually follow the contour.
- As water makes its way down a hill, terraces serve as small dams to intercept water and guide it to an outlet.

◆ How it helps

- Both water quality and soil quality are improved.
- Terraces reduce gully erosion by controlling water flow within a drainage area.
- Terraces with grass can provide nesting habitat.



Windbreak

◆ How it works

- Multiple rows of coniferous trees or a combination of coniferous and deciduous trees are planted to protect a farmstead or feedlot from wind and snow.
- The established windbreak slows wind on the downwind side of the windbreak for a distance of 10 times the height of the trees.

◆ How it helps

- A windbreak reduces wind erosion, conserves energy, reduces heating bills and beautifies a farmstead
- Trees serve as a sound barrier and muffle road noise.
- Trees and shrubs provide food and cover for wildlife.



Nutrient Management

- ◆ How it works
 - After taking a soil test, setting realistic yield goals, and taking credit for contributions from previous years' crops and manure applications, crop nutrient needs are determined.
 - Nutrients are then applied at the proper time by the proper application method.
 - These steps reduce the potential for nutrients to go unused and wash or infiltrate into water supplies.
- ◆ How it helps
 - Sound nutrient management reduces input costs and protects water quality, by preventing over application of commercial fertilizers and animal manure.



Crop Residue Management

- ◆ How it works
 - Leaving last year's crop residue on the surface before and during planting operations provides cover for the soil at a critical time of the year.
 - The residue is left on the surface by reducing tillage operations and turning the soil less.
 - Pieces of crop residue shield soil particles from rain and wind until plants can produce a protective canopy.
- ◆ How it helps
 - Ground cover prevents soil erosion and protects water quality.
 - Residue improves soil tilth and adds organic matter to the soil as it decomposes.
 - Time, energy and labor savings are possible with fewer tillage trips.



Planned Grazing System

◆ How it works

- Pasture is divided into two or more pastures or paddocks with fencing.
- Livestock are moved from paddock to paddock on a pre-arranged schedule based on forage availability and livestock nutrition needs.

◆ How it helps

- Improves vegetative cover, reducing erosion and improving water quality.
- Increases harvest efficiency and helps ensure adequate forage throughout the grazing season
- Increases forage quality and production which helps increase feed efficiency and can improve profits.



Wetland Enhancement

- ◆ How it works
 - Most wetland enhancement work includes small structures built to add water or regulate water levels in an existing wetland.
 - Adjustable outlets allow the landowner to fluctuate the water level during different seasons.
 - Planting native wetland vegetation if plant populations need to be supplemented.
- ◆ How it helps
 - Wetlands filter nutrients, chemicals and sediment before water infiltrates into ground water supplies.
 - Wetlands provide habitat for waterfowl and many other species of wildlife.



Streambank Stabilization

- ◆ How it works
 - Using structures to stabilize and protect banks of streams against scour and erosion.
 - Structures include: stone toe protection, gabion baskets, bendway weirs, rock riffles, stream barbs, and vegetation plantings.
 - Bare soils on the slopes of the bank are seeded with site specific vegetation.
- ◆ How it helps
 - Streambanks covered with rocks, grass, trees or other cover reduce erosion



Well Sealing

- ◆ How it works
 - The sealing and permanent closure of a water well no longer in use.
 - Illinois State law requires water wells be sealed 30 days after it is abandoned and when the well is no longer used to supply water...etc (77 Ill Adm. Code, section 920.120, Abandoned Wells.)
- ◆ How it helps
 - Eliminate the physical hazard of an open hole to people, animals, and farm machinery
 - Prevent entry of contaminated surface water into well
 - Conserve yield and hydrostatic head of aquifers



NRCS Program Opportunities

Technical & Financial Assistance

- ◆ 2002 Farm Bill Programs
 - Conservation Reserve Program (CRP)
 - Conservation Reserve Enhancement Program (CREP)
 - Environmental Quality Incentive Program (EQIP)
 - Wildlife Habitat Incentive Program (WHIP)
 - Wetland Restoration Program (WRP)

SWCD Program Opportunities

Technical & Financial Assistance

- ◆ Conservation 2000 (C-2000)
 - Erosion & Sediment Control Practices (ESC)
 - Nutrient Management Plan Practice (NMP)
 - Water Well Decommissioning Practice (WDP)
 - Special Projects (SP)
 - Streambank Stabilization & Restoration Program (SSRP)
 - Sustainable Agriculture Grant Program
- ◆ Conservation Reserve Enhancement Program (CREP)

Helping People Help the Land!

If you would like a conservation needs assessment done on your farm NRCS and the Kendall County SWCD would like to offer our assistance.

With your permission we will review your farm, develop a personalized conservation plan and propose conservation assistance programs to *help with the cost of the installation.*

Call for an appointment 630-553-5457 ext. 3