

Tippecanoe County SWCD

11/04

Rural Conservation Committee

*“To develop the most effective method to get
conservation “on the ground” on agriculture land”*

Long Range Planning
2005 - 2010

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Riparian Buffer

Statement of Intent

By 2010, 80% of Riparian Buffer “remaining need” will be planned.

Background

Careful stewardship of stream corridors is essential to meeting the goals for restoring water quality in Tippecanoe County streams. Riparian buffers play a critical role in the landscape, protecting water quality by filtering and removing nutrients and sediment from runoff; protecting living resources by supplying food, habitat and temperature-moderating shade; protecting the bank integrity from erosion impacts; and moderating flood damages.

Geographic Area

- Wabash River
- Wildcat Creek
- Indian Creek
- Wea (first order tributaries)
- Buck Creek
- “Horseshoe bends” in creeks
- Drainage Ditches

Audience

- Smaller Discussion Groups
- Tenants/Farm Operators/Farm Managers
- Tippecanoe Co. Drainage Board
- Little Wea Conservancy District

Key Individuals to Help Meet Goal

- Tippecanoe Co. Purdue Cooperative Extension Service (CES)
- Greater Wabash River Resource Conservation & Development Council (RC&D)
- Tippecanoe Co. Drainage Board
- Local Government (cities)
- Wabash River Parkway Commission
- Wabash River Heritage Corridor Commission
- Farm Bureau
- NICHES
- Local Non-governmental Organizations (Pheasants Forever, Ducks Unlimited, Quail Unlimited)
- Area Plan Commission/Board of Zoning Appeals
- Larger Corporations
- Hunter/Fisherman
- Builders (sent to Urban Committee)

Needs

- Firm commitment of landowners
- Opportunity to Leverage (with Drainage Board/others)
- Youth Education
 - FFA Students
 - Field Day/tours/Demonstrations
- Fish Fry (to get people together)
- Presentations to Groups (drainage boards, APC, etc.)
- Utilize Media
- Find People successful with conservation practices
 - Demonstrate economic values to conservation)

Effective Application of Conservation Practices

Statement of Intent

By 2010, there will be 50% increase in conservation tillage on erosive soils.

Background

On croplands with highly erodible soils, steep slopes, or adjacent to riparian areas, crop residues can provide the necessary soil protection to effectively reduce wind and water erosion. These areas quite often require the application of several other BMP (e.g. grassed waterways, buffer strips, terraces, etc.) in conjunction with conservation tillage to control erosion.

Geographic Area

- Based on tillage transect – highly erodible/high tillage areas

Audience

- Seed Producers
- Implement Dealers
- Landowners/Farm Operators of tracts in geographic area identified
- Farm Managers
- Lenders

Key Individuals to reach success

- Implement Manufacturers
- Successful Farmers (show successes)
- Tippecanoe Co. Purdue Cooperative Extension Service Ag Educator
- Farm writers/magazine
- Special Interest Groups – Pheasants Forever, Quail Unlimited, etc.
- SWCD Marketing Committee
- Co-op Managers
- Crop Profit Sales Centers

Needs

- “Harvest” Clinic
- Workshops – Lo-till
- Demonstrate equipment modifications
- Money for promotion
- Incentives
 - Mandatory workshop attendance (if receiving incentives)
 - Multi-year commitment
- Small Group tours - educational
- Education component (change habits/tradition)
- Personal contact with landowners

Lack of/Quality of Wildlife Habitat

Statement of Intent

By 2010, wildlife habitat will be established on 80% of the targeted sensitive areas.

Background

A wildlife habitat is an area that offers feeding, roosting, breeding, nesting, and refuge areas for a variety of bird and mammal species. Tippecanoe County's wildlife are precious resources. Surveys consistently show that residents value wildlife as part of their quality of life. In addition, wildlife is valued throughout Indiana for the contribution it makes to tourism, recreation, hunting, and fishing. As a result, there is an increasing appreciation of the role that wildlife contributes to quality of life

Geographic Area (targeted sensitive areas)

- Riparian Zones
- Wetlands
- Hadley Lake (under development pressure)
- Southern Tippecanoe Co.
 - IDNR target area for pheasant habitat starting July 1
- Woodland area
- Wea Creek
- Drainage Ditches

Audience

- Developers
- Landowners w/wooded/wetlands

Key Individuals

- Pheasants Forever
- Wild Turkey Federation
- Audubon Society (and other wildlife interest groups)
- Area Plan Commission
- Tippecanoe Co. Drainage Board

Needs

- Education
 - Politicians
- Identify Cost Share
- Local Incentives (tax breaks/drainage board incentive)
- Money
- Awards/Thank you letters
- Public awareness of importance of wildlife habitat

Livestock in Streams

Statement of Intent

By 2010, livestock in the Flint Creek Watershed will not have free access to the stream.

Background

Cattle, horses, and other livestock can damage streambanks and channels and degrade water quality if they are allowed continuous access to streams. Livestock can trample and destroy vegetation, damage the banks, and deposit animal wastes that cause bacteria and nutrient contamination of the water, and degrade the stream channel. Typical impacts include wide shallow channels with less cover, less shade, increased nitrates, increased turbidity, compacted soils and poor ground cover and understory.

Geographic Area

- Flint Creek Watershed
 - Wea Creek (2nd priority)

Audience

- Landowners/Farm operators within the watershed

Key Individuals

- Tippecanoe County SWCD Water Quality Educator
- Cattleman Association
- 4-H Horse & Pony Association

Needs

- Education about keeping animals out of stream
- Personal contact with clients
- WQ Data - IDEM 303D list, other collected data
- Public awareness of importance of riparian buffers
- Demonstration site for best management practices (BMPs)

Nutrient Management – Manure/Fertilizers

Statement of Intent

By 2010, 80% of producers with farms containing soils with high leach potential will follow a nutrient management plan.

Background

Soil particles, water within the soil, soil microorganisms, and the soil atmosphere form a complex system in which numerous chemical, physical and biological reactions occur. The fate of nutrients and crop responses to them are influenced by each of the above components in a very complex fashion. Nitrogen, phosphorus and potassium are macronutrients extremely important to farming. Micronutrients such as zinc, copper, molybdenum, manganese, iron and boron also play important roles in the soil-plant system. Among these nutrients, nitrogen and phosphorus represent the greatest cost to farmers and can cause water quality problems if not properly applied.

Waste from livestock can also pollute our water. When it rains, water runs over fields and pastures and can carry harmful bacteria from livestock waste to streams and provides unwanted fertilizer in streams.

Geographic Area

- Areas where soils test high for phosphorus
- Areas high in livestock numbers
- Areas with high leach potential

Audience

- Landowners/Farm Operators
- Fertilizer Dealers
- Environmental Activists

Key Individuals

- Fertilizer Applicators
- CCA
- Farm Managers/Farm Operators
- Livestock Associations
- CES

Needs

- Cost-share incentive land application (hauling)
- Monitoring soils testing, Tri-state fertilizer recommendations, record keeping
- Education – other state regulations, manual
- Tools for testing tile outlets
- WQ data posting in newspaper (similar to health dept inspections)
- Workshop for fertilizer dealers/applicators/etc.

Smart Growth – Farmland Preservation

Statement of Intent

By 2006, Develop and implement a strategy for Farmland And Natural Area Preservation

Background

Farmland, one of America's greatest treasures, is being converted to non agricultural uses in many areas of Tippecanoe County. According to USDA Agriculture Statistics, between 1997 and 2002, Tippecanoe County lost 25,272 acres of farmland to urban development. This represents a 10% loss in farmland in 5 years.

Prime farmland has the soil quality, growing season, and moisture supply needed for the soil to economically produce sustained high yields of food, fiber, forage and oilseed crops when properly managed. Conversion of farmland can increase the pressure to produce on marginal lands. This can lead to soil erosion, drainage of wetlands and increased water pollution from runoff.

When farmland is paved over, permeable surfaces, which provide for water infiltration and ground-water recharge, disappear. Controlling runoff in open fields helps to prevent the pollution of streams and waterways by sediment, bacteria, nutrients and metals. Paved areas, such as parking lots, have been shown to generate 16 times more runoff than open lands. This can also result in increased flooding.

The loss of large tracts of farmland to urban development is detrimental to wildlife, which needs large blocks or contiguous areas of land for healthy migration and habitat.

Tippecanoe County Soil and Water Conservation District knows that development will continue but believe an informed citizenry can make better decisions about land use changes.

Geographic Area

- High quality farmland with high development (see American Farmland Trust Map)

Audience

- Area Plan Commission
- Tippecanoe County Commissioners
- Owners/Sellers of Farmland
- General Public

Key Individuals

- Tippecanoe County Purdue Cooperative Extension Service County Agent
- Bob McCormick – Planning w/Power
- Vision 20/20
- Mike Brooks – Economic Development Corp.
- Farm Bureau

Needs

- Education Programs – why prime farmland is important
- Rethink current ordinances
- Identify marginal cropland
- Brownfield Development
- County Master Plan information
- Public awareness of importance of working lands

RURAL CONSERVATION PRIORITY ACTIONS (LONG RANGE)

RIPARIAN BUFFERS

By 2010, 80% of Riparian Buffer “remaining need” will be planned.

- Delineate/identify “remaining need” using Geographical Information System
- Meet with County Surveyor/Drainage Board/APC to explain benefits of conservation buffers. Discuss opportunity to leverage cost-share funds or to obtain county incentives for landowners.
- Establish cost-benefit “tool” of keeping riparian zone
- Develop plans on 20% of the needed buffers per year.
 - Meet with individual landowners face to face to sell
 - Work closely with Wabash Corridor groups and City, County and State Park Decision Makers
 - Provide education on benefits of riparian zone.
- FFA education tour
- Public awareness of importance of riparian buffers

EFFECTIVE APPLICATION OF CONSERVATION PRACTICES

By 2010, there will be 50% increase in conservation tillage on erosive soils.

- Conduct Conservation Tillage Workshops/Demonstrations
 - Harvest Clinic
 - Equipment Modifications
 - Lo-till
- Provide lo-till cost-share incentives if landowner attends workshop
- Conduct small group tours
- Personal contact with landowners
- Education program (change habits/tradition)

LACK OF/QUALITY OF WILDLIFE HABITAT

By 2010, wildlife habitat will be established on 80% of the targeted sensitive areas.

- Identify suitable wildlife habitat eligible lands
 - Look at longer corridor zones & target those landowners
 - Find out local endangered or threatened species.
- Develop plans on 20% of the lands identified per year.
- Re-assess or follow-up on established habitat (i.e. vegetative establishment).
- Seek Volunteer group (i.e. Purdue students) to monitor/assess wildlife diversity.
- Public awareness of importance of wildlife habitat.

LIVESTOCK IN STREAMS

By 2010, livestock in the Flint Creek Watershed will not have free access to the stream.

(note: Wea Creek will be second priority watershed after Flint Creek goals are being met)

- Identify Landowners who have livestock with direct access to stream.
- Develop conservation plans to eliminate 20% of the livestock from the stream each year.
- Establish demonstration site w/best management practices installed.

NUTRIENT MANAGEMENT – MANURE/FERTILIZER

By 2010, 80% of producers with high leach potential soils will follow a nutrient management plan.

- Identify areas where there are high numbers of livestock, high leach potential and high phosphorus levels
- Provide tools for testing tile outlets in high leach, high livestock areas
- Water Monitoring of Streams
 - Post stream water quality testing results (i.e. county-wide trend data in general terms, not numbers) in newspaper/on our website.
 - Obtain existing water quality data
- Utilize GPS/GIS for mapping legal/private (voluntary) tile.
 - Obtain existing GIS tile maps from MITS
- Sponsor workshop for fertilizer dealers/applicators/etc.

SMART GROWTH – FARMLAND PRESERVATION

By 2006, the SWCD will develop and implement a strategy for farmland and natural area preservation

- Take leadership in forming a steering committee to encourage the county to update the comprehensive land use plan.
- SWCD representation on the steering committee – specifically to represent working lands, natural and sensitive areas.
- Educate community of the importance of land use planning.
- Educate community of the importance of protecting working land, natural, and sensitive areas.
- Identify sensitive areas to be “protected” and encourage county to establish ordinance to “protect”.
- Sponsor or support “smart growth”/low impact development demonstrations/workshops for urban developing areas.