
MARATHON
COUNTY

MARATHON COUNTY

Conservation, Planning,
& Zoning Department

The Fenwood Creek Watershed Management Plan

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Introduction to the Fenwood Creek Watershed

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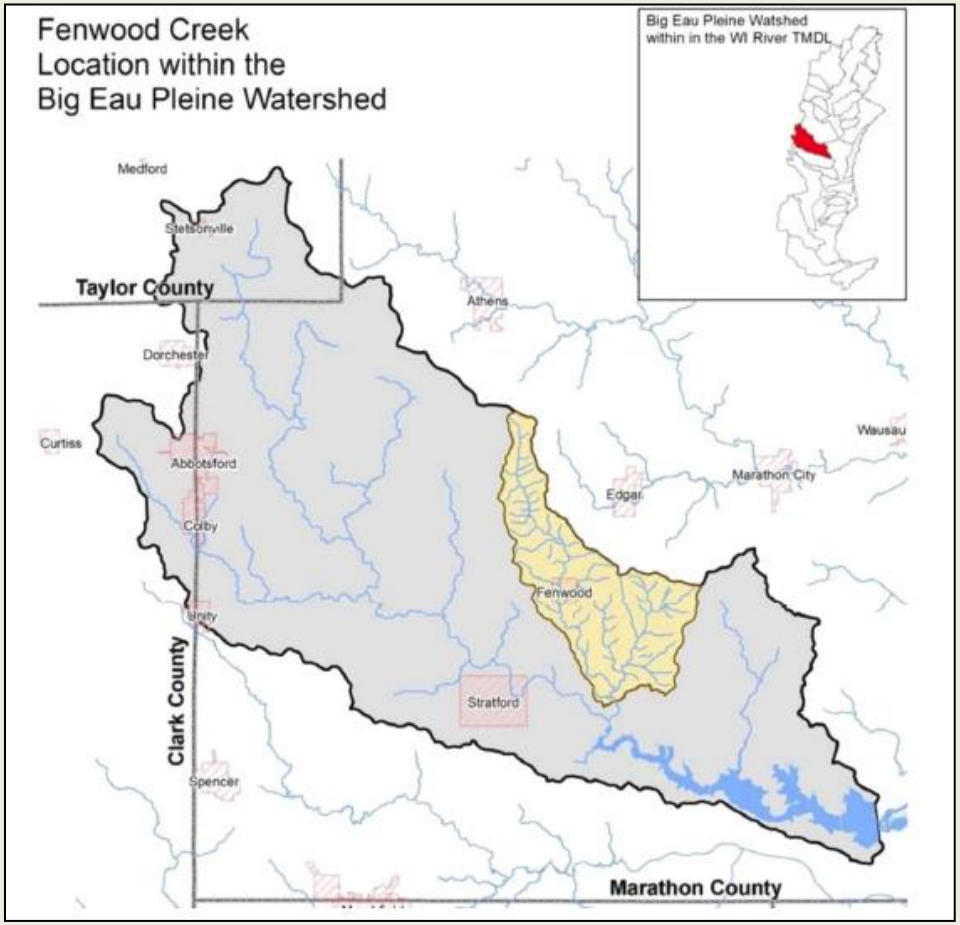
- The Fenwood Creek watershed drains 39 square miles of land into the Big Eau Pleine (BEP) reservoir.

- Low dissolved oxygen levels, high algae concentrations, and fish kills have occurred since its construction in 1937.

- EPA has designated the Big Eau Pleine River watershed as a 303D impaired water body due to the impacts from excessive phosphorus from soil sedimentation and nutrient runoff.



Introduction to the Fenwood Creek Watershed

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Gully erosion

Streambank erosion

Barnyard/manure storage runoff

Introduction to the Fenwood Creek Watershed

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65% of the Fenwood Creek Watershed is utilized as agriculture cropland.

Challenge: Grow the industry while minimizing environmental impacts caused by excessive soil sedimentation and nutrient loading.

A Call to Action: Defining a Community Partnership

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A significant fish kill within the Big Eau Pleine Reservoir in 2009 prompted Marathon County to form a task force to address the water quality issues and develop a strategic plan.

2009 fish kill on Big Eau Pleine Reservoir

The task force included the WI DNR, WI Dept. of Agriculture, Trade, and Consumer Protection (DATCP), dairy farmers, Clark County, Taylor County, Big Eau Pleine Citizens Organization (BEPCO), and Wisconsin Valley Improvement Company (WVIC).

TAYLOR COUNTY GOVERNMENT WEBSITE

WISCONSIN Clark County

MARATHON COUNTY

WISCONSIN DEPT. OF NATURAL RESOURCES

bepco Big Eau Pleine Citizens Organization

DEPARTMENT OF AGRICULTURE, TRADE & CONSUMER PROTECTION • WISCONSIN •

A Call to Action: Defining a Community Partnership

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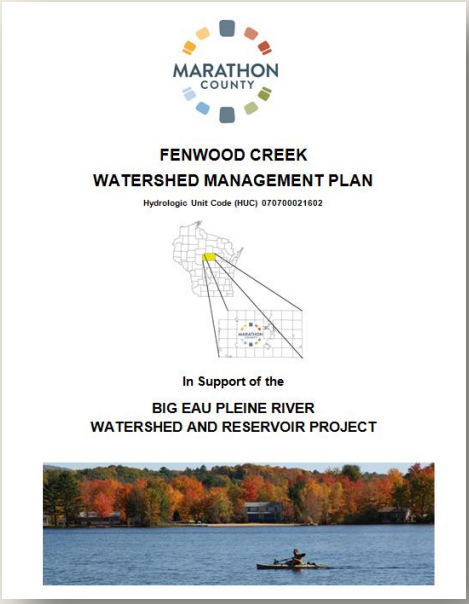
The task force's key finding was that the fish kill of 2009 was a symptom of a serious water quality problem caused by excessive soil sediments from cropping and manure management activities.

This led to the development of a strategic plan to address these issues within the watershed.

The purpose of the plan: Improve the health of the river system and stop fish kills while balancing the needs of community and economic interests.

Ephemeral erosion in the Fenwood Creek Watershed



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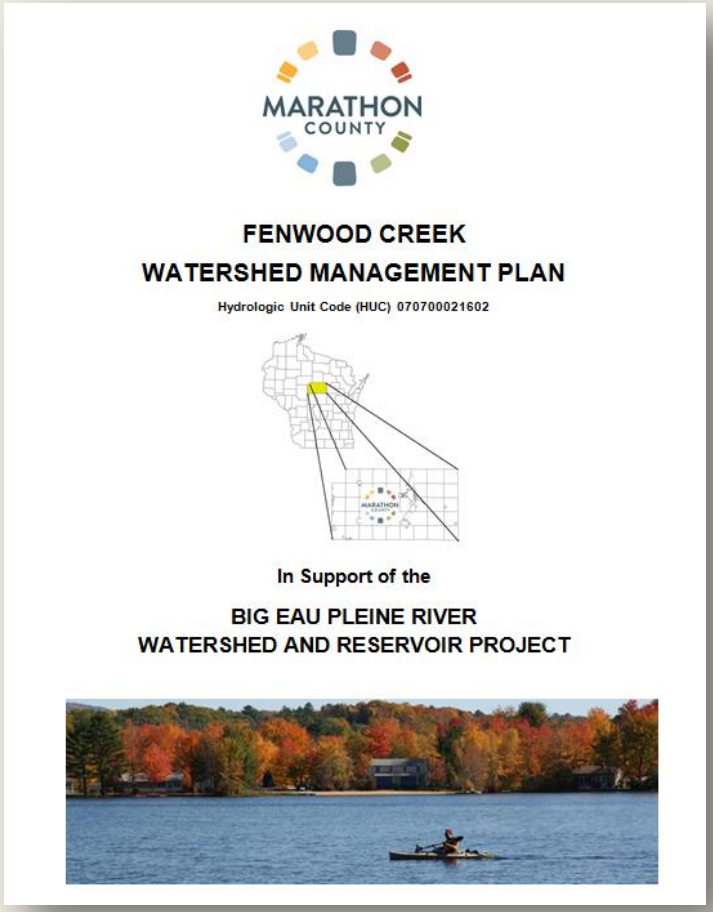

Goals for the Fenwood

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Technical assistance + outreach and education to landowners and farmers

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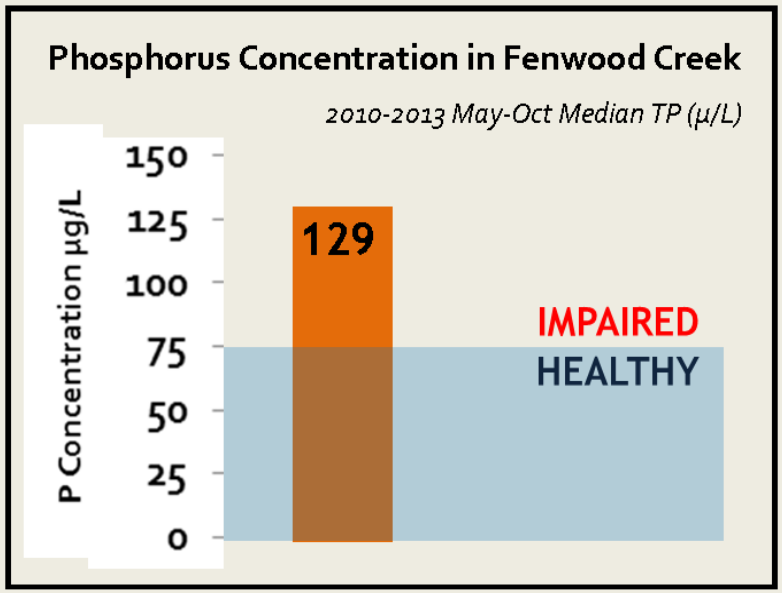
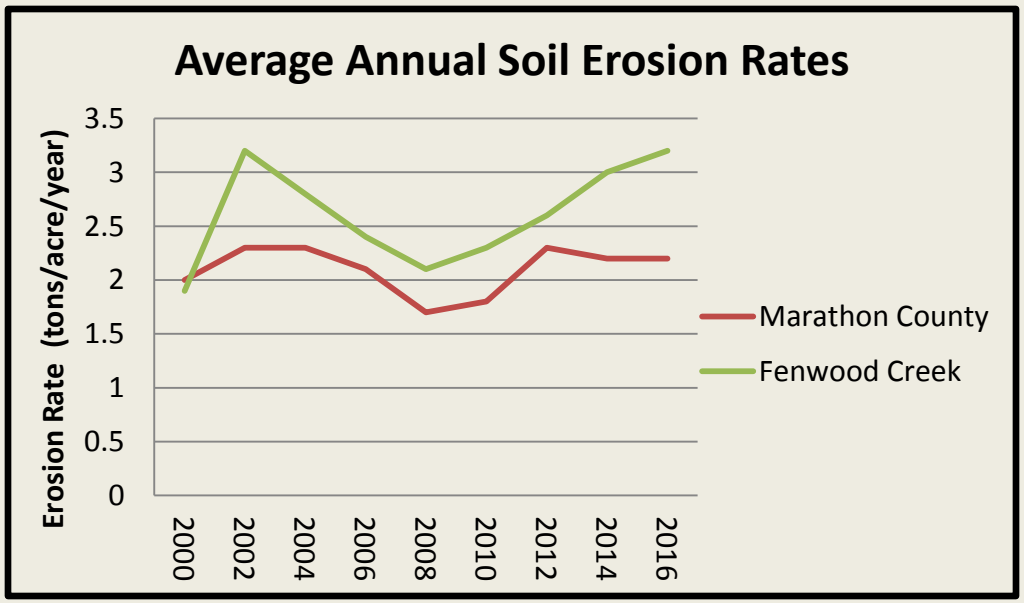
Reduction of total phosphorus loads from 4.8 to 2.6 lbs./acre

Reduction of average soil loss rate from 3.1 to 1.7 tons/acre/year





How will we reach our goals?

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1. Local Regulatory Policy Initiatives
2. Conservation Planning Strategies
3. Structural Management Practices
4. Non-structural Management Practices
5. Building community capacity

Available funding:

- Greenheck Grant, B.A. & Esther Greenheck Foundation
- Targeted Resource Management Grant, WI DNR
- Lake Protection Grant, WI DNR

Local Regulatory Policy Initiatives

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Local regulatory-based policy initiatives

a. Animal Waste Storage facilities and Nutrient Management Ordinance (AWO)

b. Livestock Facility Siting License Ordinance (LSO)

c. Private Sewage Systems Ordinance

Conservation Planning Strategies

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1. Identify and target the most serious farm field and farmstead contributors of erosion and runoff.

Ephemeral erosion


Flooded barnyard

2. Assess current performance of conservation practices installed in prior years.

Structural "Hard" Practices

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Structural best management practices located in the farmstead, cropland, and edge of field.

Watering system

Concrete lined manure storage facility

Cattle lane

Barnyard settling basin

Structural "Hard" Practices

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Structural Best Management Practice	
Stream crossing	Sediment basin
Trails and lanes	WASCOB (edge of field)
Waste storage facility engineering	Outlets
Waste transfer	Subsurface drains
Waste storage closure	Heavy use protection
Milk house/feed storage VTA's	Waste water treatment
Barnyard	Wetland
Roof runoff system	Grazing
Diversion	Fencing
Waterway	Riparian buffer

Structural "Hard" Practices

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Before

Manure storage abandonment *After*

Roof gutters for diversion

Earthen manure storage facility

Rock rip-rap treatment for shoreline erosion

Grazing and fencing

Non-Structural "Soft" Practices

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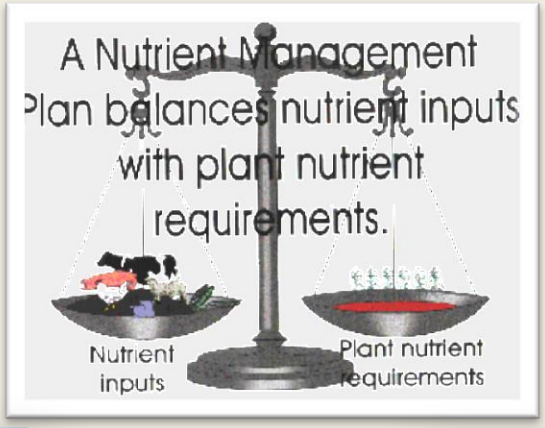
These practices focus on educational and technical assistance to address the runoff and erosion contributions of phosphorus across the watershed.

Reduced tillage



Nutrient Management Plans

Cover crops

Managed grazing

Non-Structural "Soft" Practices

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In field soil erosion practices

- Examples: diversions, rotational grazing, reduced till, no-till, cover crop, contour or strip cropping
- 1,809 acres (10 cost share contracts) have signed up for reduced tillage and/or no-till tillage.

Cover crop

No-till planter

Contour cropping

Non-Structural "Soft" Practices

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- Animal waste and nutrient management practices
  - Examples: discharge and runoff controls, nutrient management planning, technology adaptation, etc.

Manure spreader

Nutrient management planning can result in healthier soil and water

Building Community Capacity

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Marathon County actively leads efforts to build community capacity of both public and private partners to improve the water quality of the Fenwood Creek Watershed.

Accomplishments:

- Big Eau Pleine Socio-Economic Assessment, UWSP CLUE 2015
- 2016 Farmer/BEPCO social
- Farm field days and pasture walks
- Water's Edge event
- Water Action Volunteers training
- Water-themed community art show
- Newsletters and informational packets

Water's Edge 2017
Minnow Ponds Park, Edgar

Riehle pasture walk 2017

Building Community Capacity

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- Future activities
  - Explore and identify new partnerships
  - Create a Western Marathon County stakeholders group

Questions?

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Contact information:
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cpz@co.marathon.wi.us

Thank you!