USDA

United States Department of Agriculture

National Water Quality Initiative (NWQI)

ACWA Webinar
April 21, 2020

Area Wide Planning Branch

Natural Resources Conservation Service

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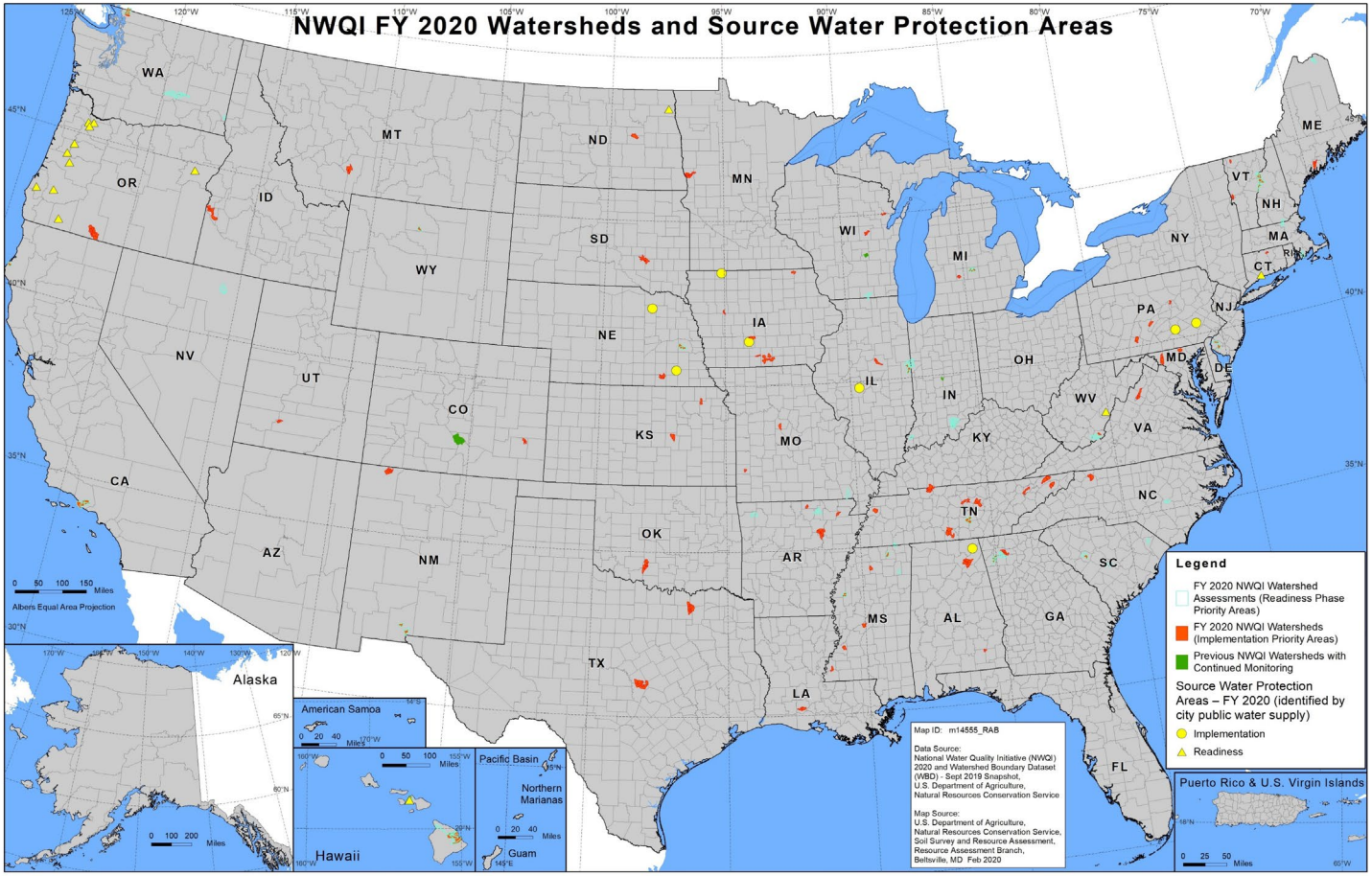
National Water Quality Initiative (NWQI)



Provides an opportunity for partners to work with NRCS on a shared vision for water quality priorities

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National Water Quality Initiative (NWQI)

- Initiated in 2012 in partnership with EPA
- Priority watersheds are selected in collaboration with state water quality agencies
    - NRCS State Conservationists (STCs) consult with partners to evaluate the status of NWQI watersheds, and propose to add or withdraw watersheds based on NWQI criteria and State priorities
- NWQI addresses Clean Water Act impaired surface waters, with a focus on nutrients and sediment, and pathogens related to agricultural land uses
- NWQI expanded to include source water protection in FY2019

Criteria for Selection

The watershed must be associated with a water body that:

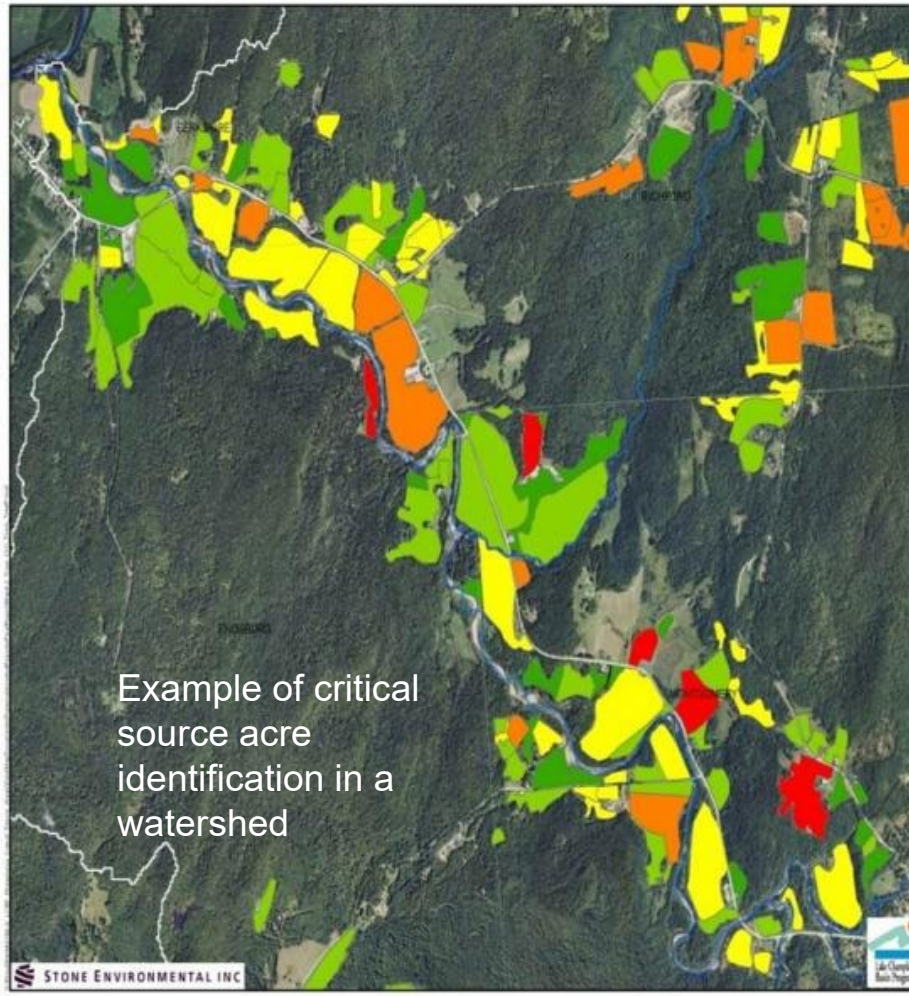
- Is impaired
- Has a TMDL
- Is threatened (water quality data documenting an impairment, but is not documented in the Integrated Report
- Is critical (upstream of an impaired segment that is determined to be a significant contributing source of a downstream impairment)

Additional NRCS considerations:

- Adequate technical capacity in the watershed
- Existing network of partnering agencies
- Producer interest/sufficient density of eligible producers

Emphasis on Planning

- In FY 2017, a pilot project was initiated to develop watershed assessments and outreach plans prior to implementation funding ("readiness phase")
  - Technical assistance funding provided to assist assessment development
  - Assessments identify and target critical source areas for treatment
  - Outreach strategies developed to engage producers
- The readiness phase was mainstreamed in FY 2018.



Example of critical source acre identification in a watershed

Tracking Progress

Long-term goal of NWQI is to achieve water quality improvements through accelerated conservation practice implementation at the small watershed scale

All NWQI watersheds will assess progress toward meeting watershed goals

- When possible, select watersheds where baseline water quality monitoring data already exist
- Track implementation on the identified critical source areas within the watershed
- Report on the specific metrics that were developed with partner input to demonstrate progress in meeting watershed goals
- Interim metrics are related to or surrogates for the water quality concerns (e.g., load reduction percentage, pounds of P prevented from leaving field, change in biotic integrity score, change in P index results weighted across the watershed, etc.)

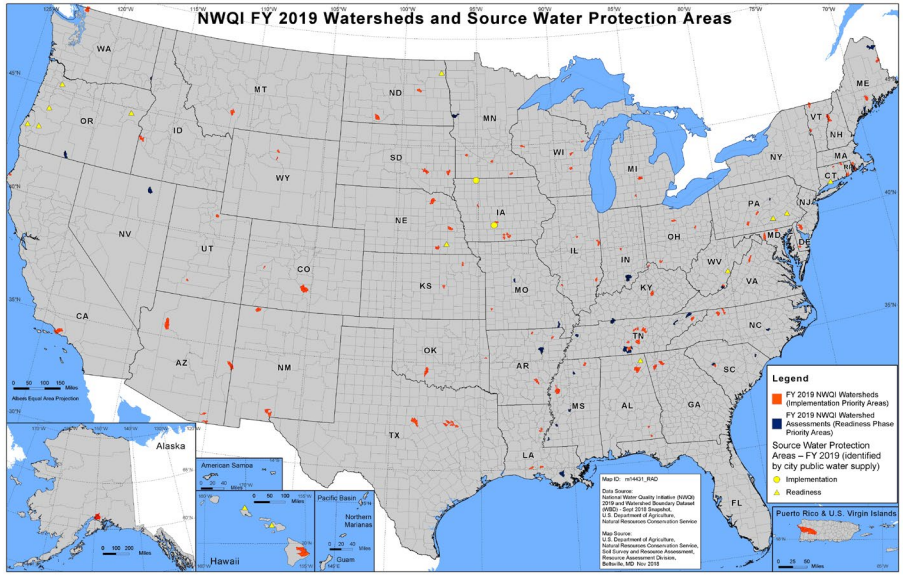
NWQI Watershed Selection – Two Phases

1. Planning (Readiness) Phase
   - New priority watersheds or source water protection areas that need assessments can request the readiness phase
   - Readiness watersheds are provided technical resources to assist with development of assessments and outreach strategies
2. Implementation Phase
   - Watershed assessment is complete, ready for financial assistance for practice implementation
   - The watershed assessment must provide all elements outlined in the NRCS assessment guidance
   - Multi-year budget and schedule of practice implementation required - “NRCS implementation plan”

Changes to NWQI in FY2020

In FY19 there were:

- 201 implementation watersheds
  - 156 of these lacked adequate assessment
- 62 readiness watersheds
- 16 SWPA pilot projects



New Requirements for FY20:

Significant changes were expected in watersheds for FY20 with the transition to new requirements:

- All NWQI watersheds must have a multi-year plan documenting projected activity and funding needs.
- All NWQI watershed must have watershed plans or assessments that inform the project implementation needs (including currently approved watersheds)

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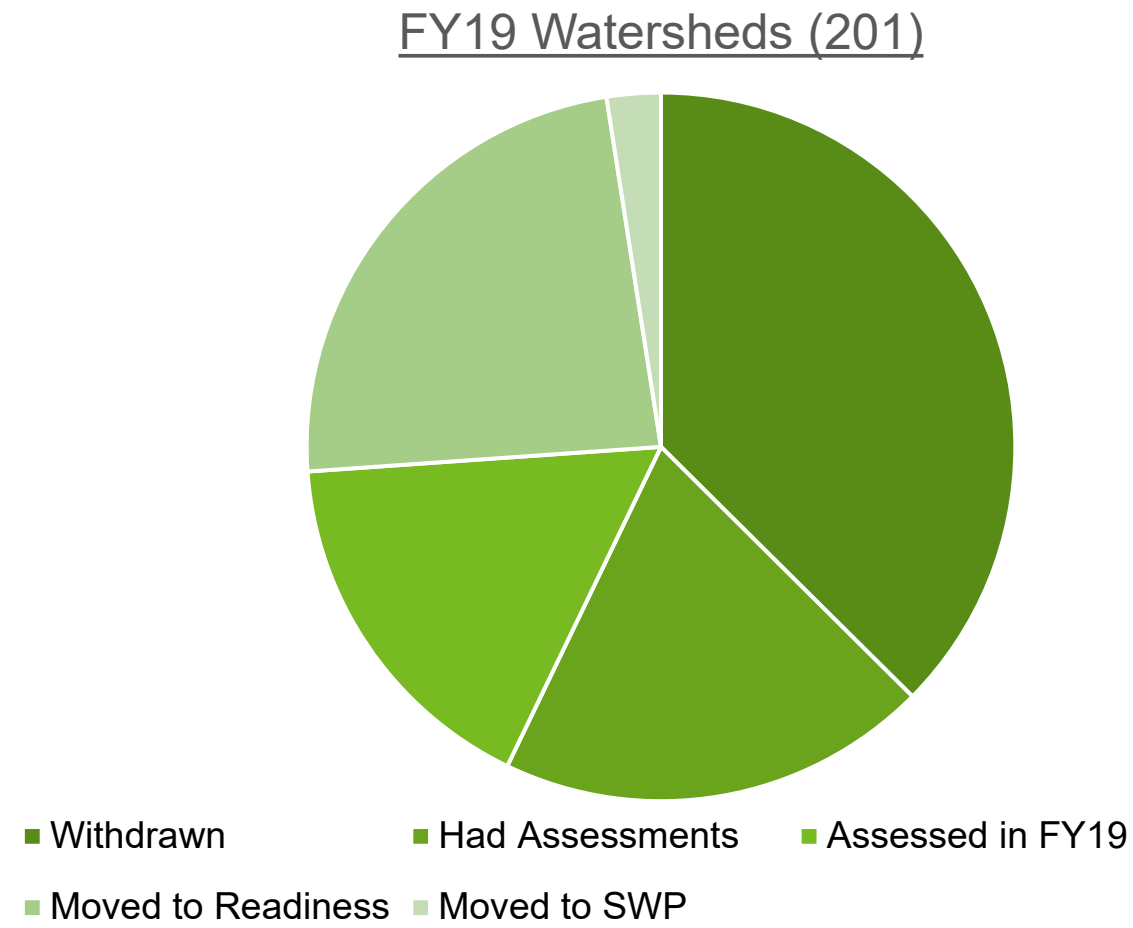
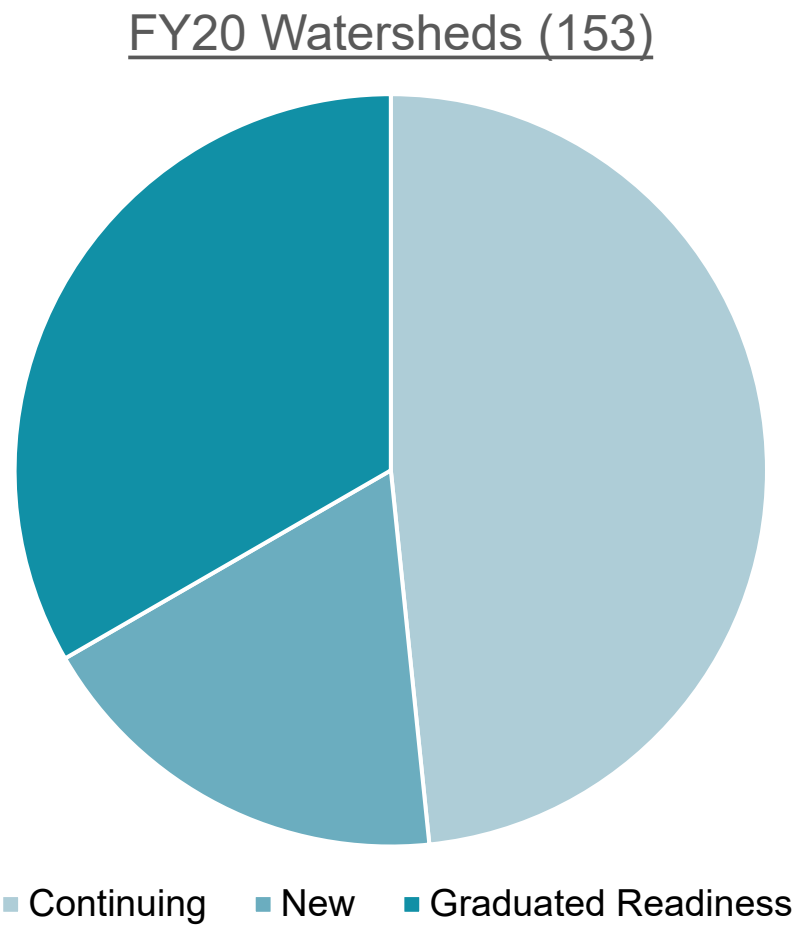
NWQI Watershed Changes in FY2020

Implementation Phase – "Regular" NWQI



NWQI Watershed Changes in FY2020

Implementation Phase – "Regular" NWQI



NWQI Watershed Changes in FY2020

Readiness Phase

97 total watersheds developing assessments in FY20 (21 states)

- 10 readiness phase watersheds carried over from FY19
- 48 watersheds were previously approved for NWQI prior to FY18 but did not have assessments – some have requested continuing FA in FY20 per the bulletin
- 39 watersheds requested are new to NWQI
- Several states have requested assistance with watershed assessments from an outside contractor through EPA

Source Water Protection Areas

6 new projects for FY20 – 38 HUC12s (OR, IL)

22 total projects – 8 in implementation

NWQI Changes for FY2021

NWQI bulletin posted on April 1 - Changes include:

- Readiness phase will now be referred to as the **planning phase**

- Participation is required for all states.
  - Minimum participation is 3 watersheds (HUC-12) addressing an impaired or threatened water body.
  - Source water protection is in addition to the minimum participation.
  - Planning phase watersheds count towards the minimum.

- Funding changes
  - The three smallest projects (by dollar value) will be the basis for each state's NWQI request to National Headquarters.
  - A minimum representing 3% of state's General EQIP will be provided for NWQI.

Watershed or SWPA Assessments

There must be an actionable watershed plan or assessment that meets *NWQI Assessment Guidance:*

- **Sufficient watershed assessment to guide the siting and implementation of conservation practices at the HUC-12 level for greatest water quality benefit**
- **Identification of critical source areas within the watershed for identified pollutants of concern**
- **Established watershed goals/objectives for water quality improvement, with specific metrics that can establish progress towards these goals**
- **Outreach strategies for implementation on vulnerable acres**
- **These assessments can be in any format and information can be provided in multiple documents for the watershed**

Multi-Year NWQI Implementation Plan

Required for NWQI watersheds

- **Developed by NRCS (with assistance from partners) – spreadsheet template**
- **Based on information from the watershed assessment/watershed plans**
- **Includes information on:**
  - Watershed characteristics
  - Proposed budget by year
  - Conservation systems that will be used and list of practices planned to be implemented each year
  - Metrics that will be used to measure progress
  - Identified critical source areas
  - Producer interest and partner involvement/assistance

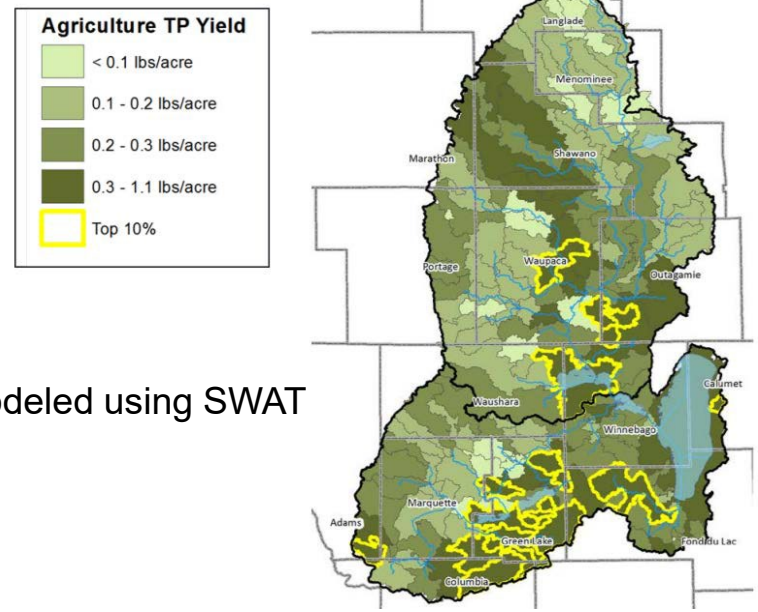
Accelerated Timeframe for FY2021 and Beyond

- NRCS states need to know their approved NWQI watersheds before they conduct their resource assessments to determine their financial and technical needs for the upcoming FY.
- The release date and the due date for NWQI watershed selection has been moved up this year – due date is July 3 for submissions for FY2021.
- We anticipate that the release date for the FY2022 NWQI bulletin will be significantly accelerated to allow more time for NRCS states to work with partners on watershed and source water protection area prioritization and submission.

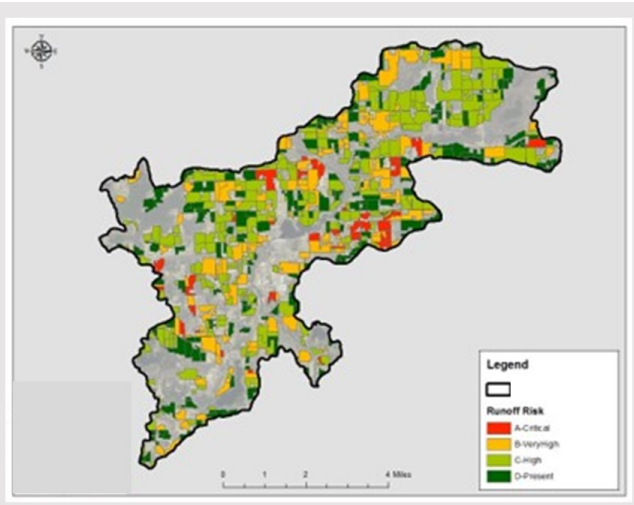
Opportunities for Collaborative Planning in NWQI

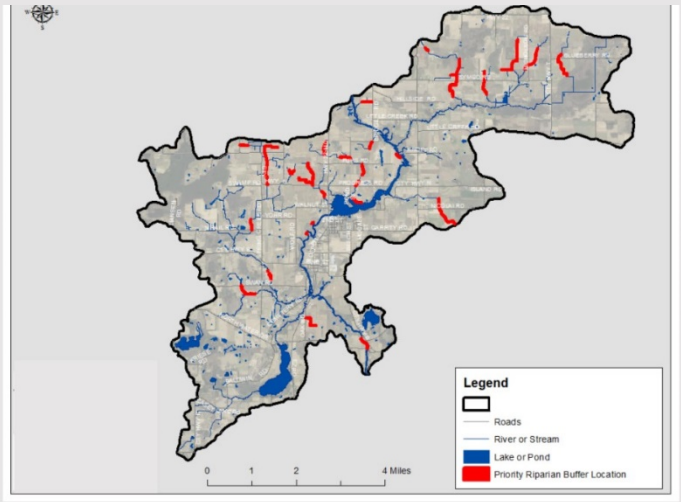
- NWQI assessment compatible with 319 9-element plan
- Similar planning process and elements in common
- Aspects that may need additional analysis or consideration for NWQI:
  - Scale of analysis
  - Critical source areas specific to agricultural land uses
  - Level of existing conservation implementation
  - Conservation practices and costs
  - NEPA evaluation
  - Outreach strategies

Elements of Watershed Assessment: Targeting Critical Source Areas for Treatment



Modeled using SWAT

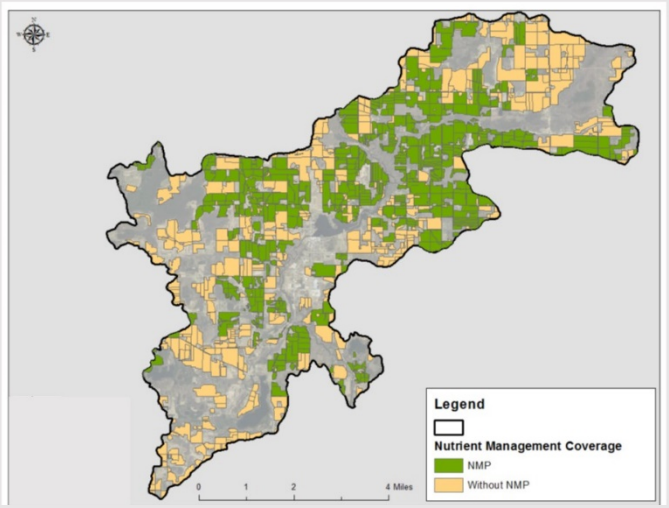




Elements of Watershed Assessment: Assessing Current Treatment Levels

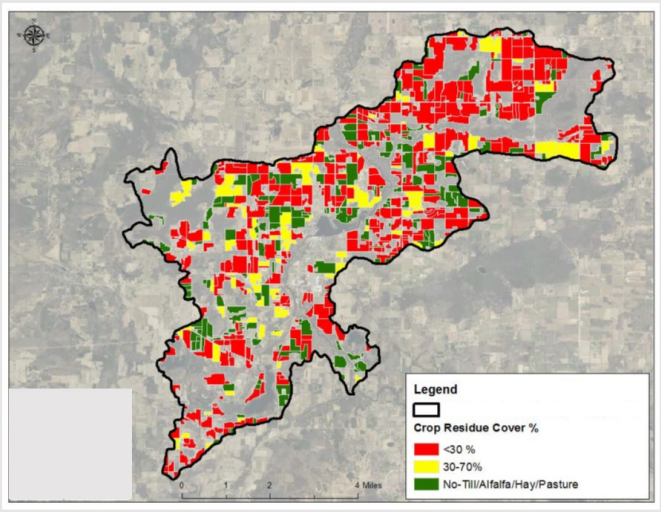
NRCS practices implemented in the watershed

Practice Group	Practice Code	Practice Name	Units	Quantity
Farmstead	313	Waste Storage Facility	no	1
	CAP102	Comprehensive Nutrient Management Plan	no	3
	561	Heavy Use Area Protection	sq ft	1111
	558	Roof Runoff Structure	no	1
	367	Roofs and Covers	no	1
	620	Underground Outlet	sq ft	250
Pasture	382	Fence	ft	4210
	512	Forage and Biomass Planting	ac	5.4
	516	Livestock Pipeline	ft	1087
	528	Prescribed Grazing	ac	47.4
Agronomic (Cropland)	340	Cover Crop	ac	123
	441	Irrigation System, Microirrigation	ac	0.1
	590	Nutrient Management	ac	650.7
	325	Seasonal High Tunnel System for Crops	sq ft	5040
	612	Tree/Shrub Establishment	ac	2.4
	620	Underground Outlet	ft	1850
	638	Water and Sediment Control Basin	no	6
Other Rural Land	658	Wetland Creation	ac	1



Practices implemented using other funding sources

Practice Name	Units	Quantity	Funding
Animal lot abandonment/relocation	each	1	TRM
Animal Walkway	each	1	LWRM
Barnyard Runoff Control	each	1	TRM
Critical Area Seeding	acre	1	NOD
Feed Lot Runoff Control	each	1	NOD
Filter strip	each	1	LWRM
Roof Runoff	each	1	LWRM
Underground Outlet	each	9	NOD, LWRM
Waste Storage	each	2	TRM
Waste Transfer	each	7	TRM
Water and Sediment Control Basin	each	10	NOD, LWRM



Elements of Watershed Assessment: Needed Practices and Costs

Best Management Practice	Unit	Quantity	Total Practice Cost per unit	Total Estimated Cost	NRCS Payment per unit	NRCS Total Cost
No-till/Reduced Tillage[1]	ac	5,300	18.50	294,150.0	15.12	240,408.00
Cover Crops[1]	ac	5,000	70.00	1,050,000.0	62.48	937,200.00
Grassed Waterway	ln ft	5,200	5.00	26,000.0	3.64	18,928.00
Filter Strip/Riparian Buffer	ac	83	4,000.00	332,000.0	511.20	42,429.60
Water and Sediment Control Basin *(System including underground outlet)*	each	20	7,000.00	140,000.0	varies*	NA
Critical Area Planting (*gully and concentrated flow stabilization*)	ac	20	200.00	4,000.0	140.45	2,809.00
Prescribed Grazing[2]	ac	500	30.00	45,000.0	21.75	32,625.00
Nutrient Management[3]	ac	4,300	10.00	172,000.0	25.97	335,013.00
Wetland Restoration/Creation	ac	15	15,000.00	225,000.0	varies*	NA
Low Disturbance Manure Injection	ac	900	58.00	52,200.0	NA	NA

Elements of Watershed Assessment: Implementation Schedule and Measuring Progress

10 Year Management Measures Plan Matrix							
Recommendations	*Indicators*	*Milestones*			*Timeline*	*Funding Sources*	*Implementation*
		0-3 years	*3-7 years*	*7-10 years*			
1) Management Objective: Reduce the amount of sediment and phosphorus loading from agricultural land.							
a) Application of conservation practices to cropland. These practices include[1]: • Increase acreage of conservation tillage (No till, Strip till, Mulch Till) in watershed area. Fields must meet 30% residue. • Implement use of cover crops. • Use of low disturbance manure injection on fields with cover crops & reduced tillage. • Prescribed grazing • Nutrient Management	7,800 acres cropland with conservation practices applied	2,400	4,000	1,400	0-10 years	EQIP, TRM, GLRI, CSP, AM, WQT, MDV, LWRM	NRCS, LWCD
b) Stabilization of gullies and concentrated flow paths (Critical Area Planting, Grassed/Lined Waterway, WASCOB, etc).	# of linear feet stabilized	14,000	20,780	10,000	0-10 years	EQIP, CREP, AM, WQT, MDV, LWRM	NRCS, LWCD
c) Critical area plantings to stabilize concentrated flow areas.	# acres of critical area plantings	6	10	4	0-10 years	GLRI, EQIP, MDV, LWRM	NRCS, LWCD

Estimate Load Reductions Using STEP-L

Management Measure Category	Total Units (size/length)	Total Cost($)	Estimated Load Reduction			
			TP (lbs/yr)	Percent	TSS (t/yr)	Percent
Vegetative Riparian Buffers	83 acres	332,000.00	1,491.0	12.8	194.0	9.7
Farmstead Practices (vegetated treatment area, waste storage including transfer, clean water diversions, fencing, waste treatment, roof runoff management, critical area plantings maintenance/repair of existing	20 Sites	3,640,000.00	771.0	6.6	NA	NA
Practices applied to Cropland (Conservation Tillage/Residue Management, Cover Crops, Nutrient Management, Low Disturbance Manure Injection, Prescribed Grazing)	7,800 acres	1,613,350.00	4,970.0	42.6	750.0	37.6
Gully/Concentrated Flow Stabilization (Grassed Waterways, Critical Area Planting, Lined Waterway, WASCOBs, etc)	44,781 ft/ 20 WASCOBs	170,000.00	132.0	1.1	252.0	12.6
Wetland Restoration/Creation	15 acres	225,000.00	170.0	1.5	44.0	2.2
Upland Habitat Restoration (Conservation cover and tree plantings)	30 acres	18,600.00	24.0	0.2	5.0	0.3
	Total	**5,998,950.00**	**7,558.0**	**64.8**	**1,240.0**	**62.2**

Elements of Watershed Assessment: Outreach Strategy

Information and Education Plan Implementation Matrix

Information and Education Action	Target Audience	Recommendations	Schedule	Outcomes	Cost	Implementation
Educate agricultural landowners and operators about the plan, its recommendation actions, and technical assistance and funding available.	Agricultural landowners/ operators	• Distribute educational materials on conservation practices and programs. • One on one contact with individual landowners to provide tools and resources. • Orchestrate group meetings with agricultural landowners in watershed to share knowledge and foster community connections for long term solutions. • Offer workshops to agricultural landowners to educate them on conservation practices that should be used to preserve the land and protect water resources. • Establish & tour local demonstration farms and other sites that have implemented conservation practices. Hold field days at demonstration sites to demonstrate new equipment and practices.	0-10 years	• Agricultural landowners are informed about conservation practices, cost share programs, and technical assistance available to them. • Increase in interest in utilizing and installing conservation practices. • Improved communication between agricultural landowners, willingness to share ideas, and learn from other agricultural landowners. • Agricultural landowners recognize the benefit of conservation farming practices and how it improves water quality. • Agricultural landowners see success of conservation practices as well as problems that can be expected.	$20,000	NRCS, CD, Extension

Goal of the outreach strategy is determine best approaches to engage producers, especially those whose operations may contain vulnerable areas