

# ACWA 319/NPS Workgroup Webinar: NWQI NRCS FY20 Bulletin

6.17.19

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# Outline of the call

- EPA: Introduction, overview of FY16 NWQI reporting water quality results
- NRCS: Overview of program changes as reflected in the FY20 NWQI Bulletin
  - Overview of changes and discussion of NRCS April interim NWQI assessment
  - Actions needed for FY20
  - Watershed Selection Consideration
- NRCS: Elements of watershed assessment requirements
- Q&A for NRCS



# Water Quality Improvements from FY16 NWQI Reporting

- 27% of NWQI monitoring watersheds have detected an improvement in water quality in at least one of their monitored pollutants (based on FY16 data)
  - 81% of water quality improvements in these watersheds can be attributed to or associated with agricultural conservation practices
- States reported that nine stream reaches or waterbody impairments were removed (or proposed for removal) from states' 303(d) lists because they are now meeting one or more water quality standards



United States Department of Agriculture

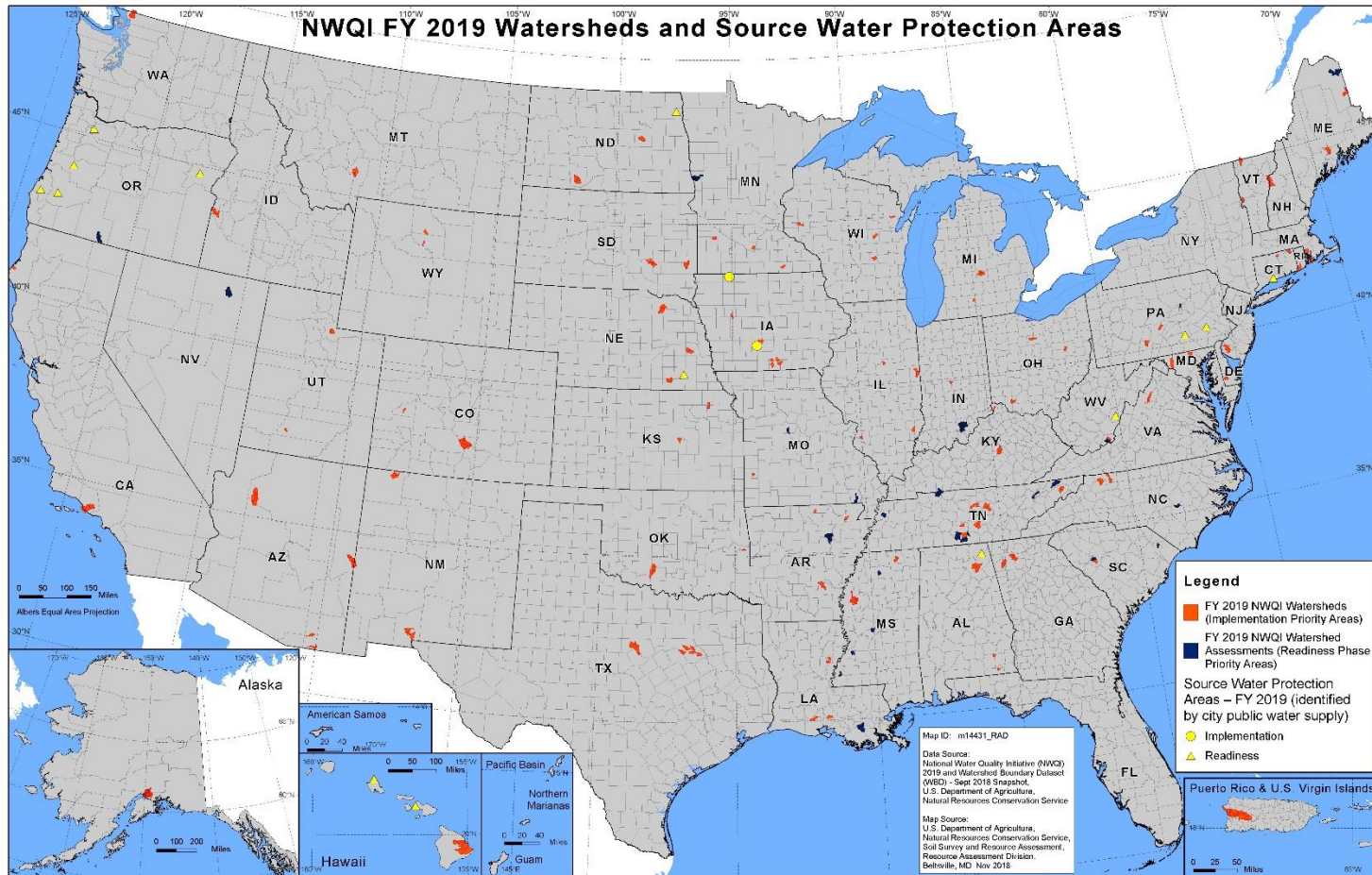
# NATIONAL WATER QUALITY INITIATIVE (NWQI)

ACWA Webinar  
June 17, 2019

***Area Wide Planning Branch***

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Partnering with EPA, state water quality agencies and drinking water utilities for water quality improvement

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# National Water Quality Initiative (NWQI)

- Priority watersheds are selected in collaboration with state water quality agencies, facilitated by EPA
- NWQI addresses surface waters impaired under the Clean Water Act, and protects/restores drinking water sources (both surface and ground water)
- Focus pollutants – nutrients, sediments, pathogens
- Long-term goal of NWQI is to achieve water quality improvements through accelerated conservation practice implementation



# Overview of NWQI Changes for FY19-FY23

- Each watershed must have a watershed plan or assessment that meets NRCS guidance - done at a scale to inform practice implementation needs. NRCS is responsible for this assessment, and may use partners to assist.
- Currently approved watersheds without assessments may:
  - Work to develop an assessment if there are still treatment needs, or
  - Request to withdraw if they meet withdrawal criteria
- NRCS will develop a multi-year NWQI implementation plan for the watershed documenting the schedule of activity and funding needs in order to receive financial assistance for implementation
- The source water protection component started in FY19 will be continued in FY20 (ASDWA webinar June 25 12-130pm ET)



# Preparing for Changes



- Phased approach to begin the transition in FY19 - all new watersheds requesting the implementation phase had to have a watershed assessment and an implementation plan.
- FY19 bulletin encouraged NRCS State Conservationists (STCs) to use FY19 as a preparatory year to work with partners to develop or complete assessments meeting guidance for currently approved watersheds that did not have an assessment.
- In March 2019, NRCS put out a bulletin to STCs reminding them of these upcoming changes, and requesting they work with partners to determine the path of currently approved watersheds that lacked assessments.
  - At least 25 states had currently approved watersheds that they may be considering to withdraw in FY20
  - For those NWQI watersheds that states plan to continue, only about 20% have assessments that meet guidance. Some states planned to use the readiness phase in FY20 to develop the needed assessments





# NRCS Actions Needed for FY20



## FOR CURRENTLY APPROVED WATERSHEDS IN IMPLEMENTATION PHASE:

- Can continue in NWQI implementation phase ONLY IF an assessment meeting NRCS guidance and an implementation plan is complete
- If the assessment is missing, NRCS state offices may request the readiness phase in FY20 to complete an assessment and implementation plan
- NRCS leadership is considering whether watersheds will continue to receive financial assistance for one year as they work to complete the assessments



# NRCS Actions Needed for FY20



## FOR CURRENTLY APPROVED WATERSHEDS IN IMPLEMENTATION PHASE:

- NRCS state office requests to withdraw the watershed, in concurrence with state water quality agency
- Must meet the criteria for withdrawal:
  - Evidence that treatment goals have been met, or will be met through other resources
  - Evidence of low producer participation
- Any NWQI watersheds proposed for withdrawal that will continue monitoring by the state water quality agency will be placed in “NWQI Monitoring Watershed” category but will not receive financial assistance through NWQI



# NRCS Actions Needed for FY20



## FOR CURRENTLY APPROVED WATERSHEDS IN READINESS PHASE:

- Can proceed to the implementation phase ONLY IF an assessment meeting guidance has been completed
- Readiness watersheds ready for implementation – NRCS state offices provide a map of critical source areas and an NWQI implementation plan to NHQ
- Readiness watersheds needing additional time should notify NHQ



# NRCS Actions Needed for FY20



## REQUESTS FOR NEW PRIORITY WATERSHEDS OR SWPAs:

- Must meet eligibility criteria
- Must have an assessment that meets NRCS guidance
- Must complete a multi-year NWQI implementation plan and provide a map of critical source areas
- If no assessment, or it doesn't meet guidance, can be submitted as a request for readiness phase by completing readiness proposal



# Watershed Selection Considerations

In addition to eligibility criteria for surface water quality (impaired, TMDL, threatened, critical), NRCS State Offices will consider the following for selection:

- Is there adequate technical capacity in the watershed, from NRCS or partners, to conduct sufficient outreach and technical assistance to meet project goals?
- Does a network of partnering agencies already exist that can carry out identified activities needed to meet goals?
- Is there sufficient density of producers and producer interest to meet project goals?
- Can partners conduct instream monitoring to track the change in water quality attributed to NWQI practices? Can partners assist in developing and measuring other metrics that can be used to assess progress?





# Watershed or SWPA Assessments

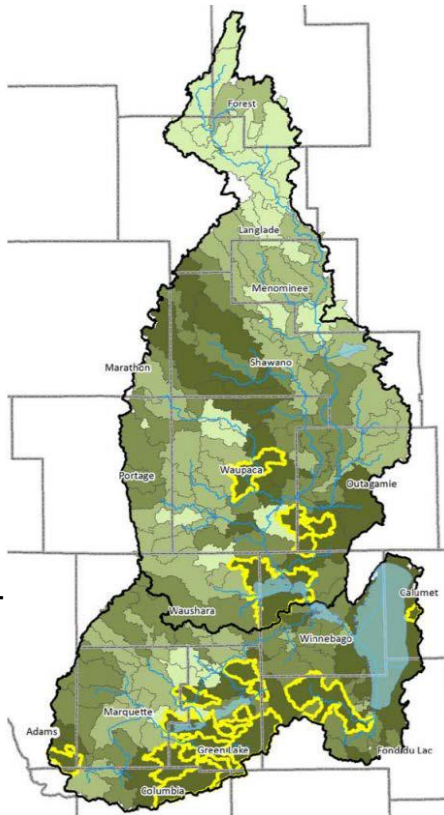
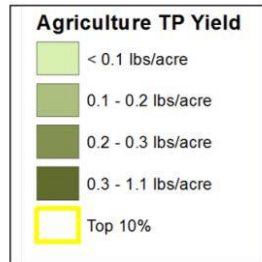


NRCS state offices must provide an actionable watershed plan or assessment that meets *NWQI Assessment Guidance*:

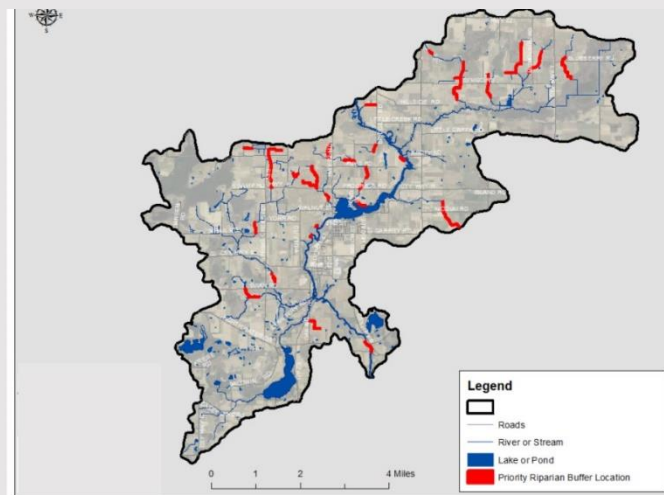
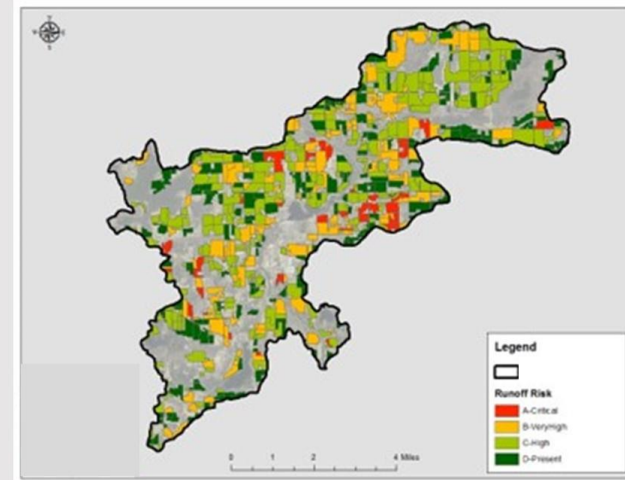
- Sufficient watershed assessment to guide the siting and implementation of conservation practices at the HUC-12 level for greatest water quality benefit
- Identification of critical source areas within the watershed for identified pollutants of concern
- Established watershed goals/objectives for water 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



# Elements of Watershed Assessment: Targeting Critical Source Areas for Treatment



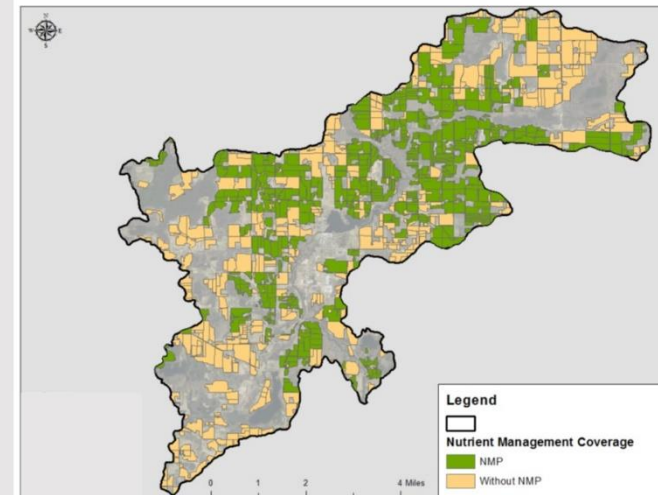
Modeled using SWAT



# Elements of Watershed Assessment: Assessing Current Treatment Levels

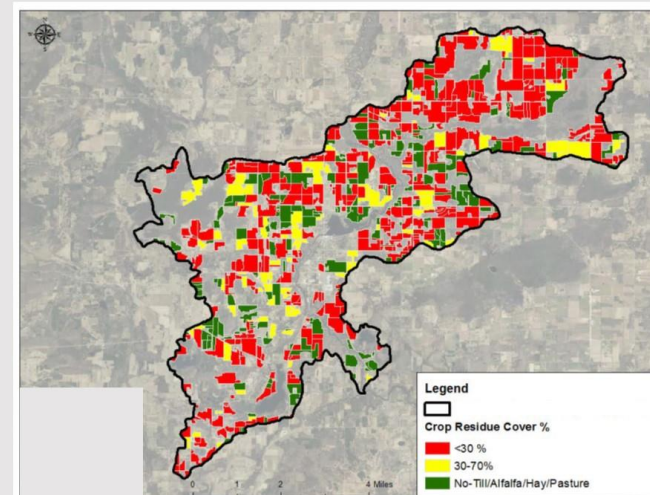
## NRCS practices implemented in the watershed

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
Other Rural Land	638	Water and Sediment Control Basin	no	6
	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 <sup>1</sup>	ac	5,300	18.50	294,150.0	15.12	240,408.00
Cover Crops <sup>1</sup>	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 <i>(System including underground outlet)</i>	each	20	7,000.00	140,000.0	varies*	NA
Critical Area Planting <i>(gully and concentrated flow stabilization)</i>	ac	20	200.00	4,000.0	140.45	2,809.00
Prescribed Grazing <sup>2</sup>	ac	500	30.00	45,000.0	21.75	32,625.00
Nutrient Management <sup>3</sup>	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

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# Elements of Watershed Assessment: Implementation Schedule and Measuring Progress

10 Year Management Measures Plan Matrix						
Recommendations	Indicators	Milestones			Timeline	Funding Sources
		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 <sup>1</sup> :  <ul style="list-style-type: none"> <li>• Increase acreage of conservation tillage (No till, Strip till, Mulch Till) in watershed area. Fields must meet 30% residue.</li> <li>• Implement use of cover crops.</li> <li>• Use of low disturbance manure injection on fields with cover crops &amp; reduced tillage.</li> <li>• Prescribed grazing</li> <li>• Nutrient Management</li> </ul>	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
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
c) Critical area plantings to stabilize concentrated flow areas.	# acres of critical area plantings	6	10	4	0-10 years	GLRI, EQIP, MDV, LWRM

56

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

<b>REQUIRED: Maximize practice implementation on critical source areas within the watershed. The % of critical source areas with conservation by the end of the project should be a value (e.g. 50%) determined through the assessment/planning process.</b>	% of critical source areas with conservation
(Example) 35% increase in the amount of acres with conservation that have received full treatment (avoid, control and trap) by the end of the project for identified water quality concerns.	% of treated acres that moved to full treatment status over the course of the project
(Example) Achieve a documented % in N and P loads through water quality modeling at pour point in sub-watershed by 2023.	lb/yr measured from baseline

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# 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	<ul style="list-style-type: none"> <li>• Distribute educational materials on conservation practices and programs.</li> <li>• One on one contact with individual landowners to provide tools and resources.</li> <li>• Orchestrate group meetings with agricultural landowners in watershed to share knowledge and foster community connections for long term solutions.</li> <li>• Offer workshops to agricultural landowners to educate them on conservation practices that should be used to preserve the land and protect water resources.</li> <li>• Establish &amp; tour local demonstration farms and other sites that have implemented conservation practices. Hold field days at demonstration sites to demonstrate new equipment and practices.</li> </ul>	0-10 years	<ul style="list-style-type: none"> <li>• Agricultural landowners are informed about conservation practices, cost share programs, and technical assistance available to them.</li> <li>• Increase in interest in utilizing and installing conservation practices.</li> <li>• Improved communication between agricultural landowners, willingness to share ideas, and learn from other agricultural landowners.</li> <li>• Agricultural landowners recognize the benefit of conservation farming practices and how it improves water quality.</li> <li>• Agricultural landowners see success of conservation practices as well as problems that can be expected.</li> </ul>	\$20,000	NRCS, CD, Extension

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



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# Multi-Year NWQI Implementation Plan

## Required for NWQI watersheds beginning in FY2020

- **Developed by NRCS – 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

