

# Stillwater River Watershed Draft Loading Analysis Plan

December 2, 2020



1

## Process Overview

- 5 Steps of Stakeholder Involvement
  - Study Plan/Quality Assurance Project Plan (QAPP)
  - Biological and Water Quality Report (aka TSD)
  - Loading Analysis Plan (LAP)
  - Preliminary Modeling Results (PMR)
- Draft TMDL – 60 day public comment period, hearing can be requested

30 day comment  
period

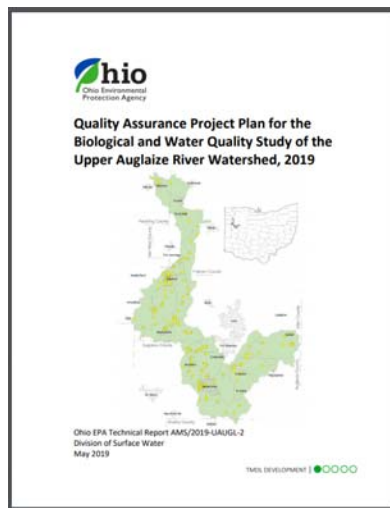


2

## Step 1 – QAPP/Study Plan



- Kicks off the project
- Helps drive the sampling
- Provides an opportunity for local input

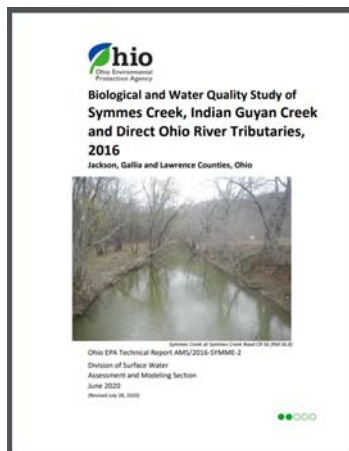


3

## Step 2 - Biological & Water Quality Reports



- Technical support documents providing the foundation for water quality standards, permitting and TMDLs.
- All data collected during the survey
- Detailed explanations on findings

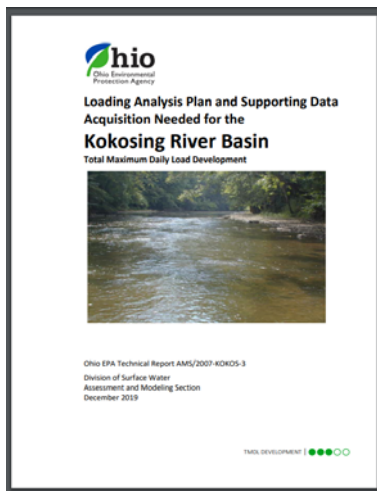


4

## Step 3 – Loading Analysis Plans



- Linkage between sampling and TMDLs
- Proposes actions to be taken for impaired sites
  - TMDL, follow-up sampling, referral to another agency, no action, etc.



5

## LAP – Continued

- No modeling is completed at this stage
- Additional opportunity for public comment
- May be last step in process if no TMDLs are recommended
- “Round Two” LAP – for projects where TMDLs have already been developed
  - Same basic format, but more detailed than first round LAP
  - Side-by-side comparison of two surveys



6

## Step 4 – Preliminary Modeling Results



- If TMDL is proposed, the PMR will be developed
- Currently building this step
  - Based on previous TMDL documents
  - Load allocations, wasteload allocations, margin of safety and future growth, permit limits necessary to achieve water quality targets and preliminary implementation plan
- Allows for the public to provide input on how the modeling was done prior to the draft TMDL



7

## Step 5 – Draft TMDL



- Currently building this document
- Allows for public input on the draft TMDL
  - Changes can be made prior to submittal to USEPA
- Builds upon the previous steps in the process
- Specific requirements in statute




8



**Loading Analysis Plan and Supporting Data  
Acquisition Needed for the  
Stillwater River Basin**

**Total Maximum Daily Load Development**




Ludlow Falls in the Stillwater River Watershed on March 13, 2013.

Ohio EPA Technical Report AMS/2013-STILR-3  
Division of Surface Water  
Assessment and Modeling Section  
Draft November 2020

TMDL DEVELOPMENT | ●●●○○


## Overview: Stillwater LAP



9

## Introduction

- Provides background of watershed surveys
- Originally assessed in 1999
- 141 sites evaluated; 77 sites meeting ALU expectations (55% in attainment)
- TMDL developed and approved in 2004
  - TP TMDL
    - Updated in 2009
    - Recalculates P loads for more accurate representation of watershed
  - Habitat Analysis



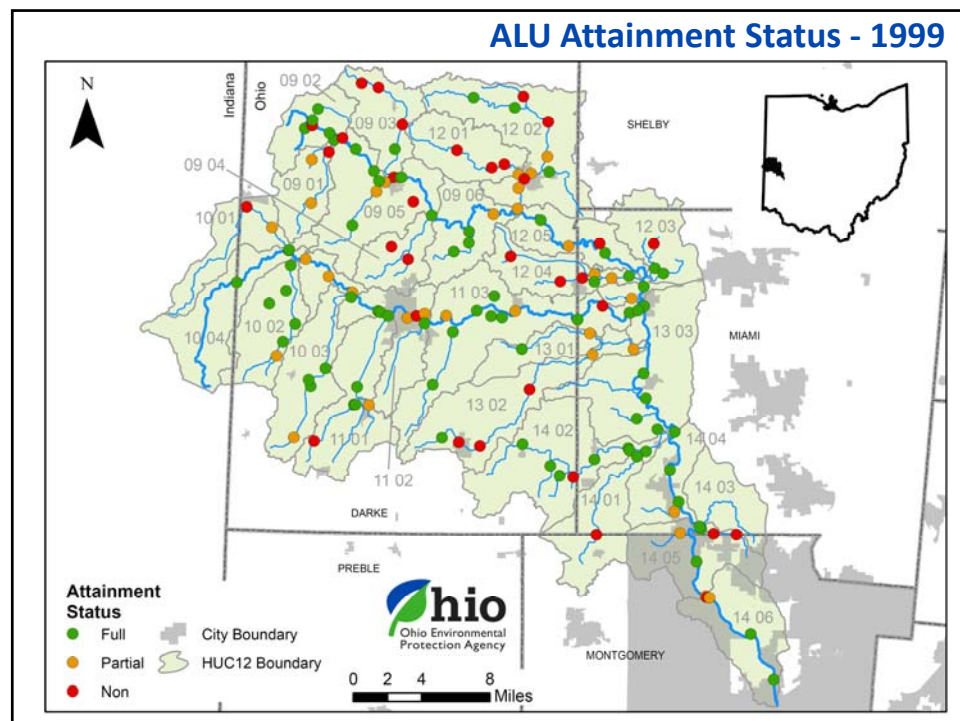
10

## Introduction

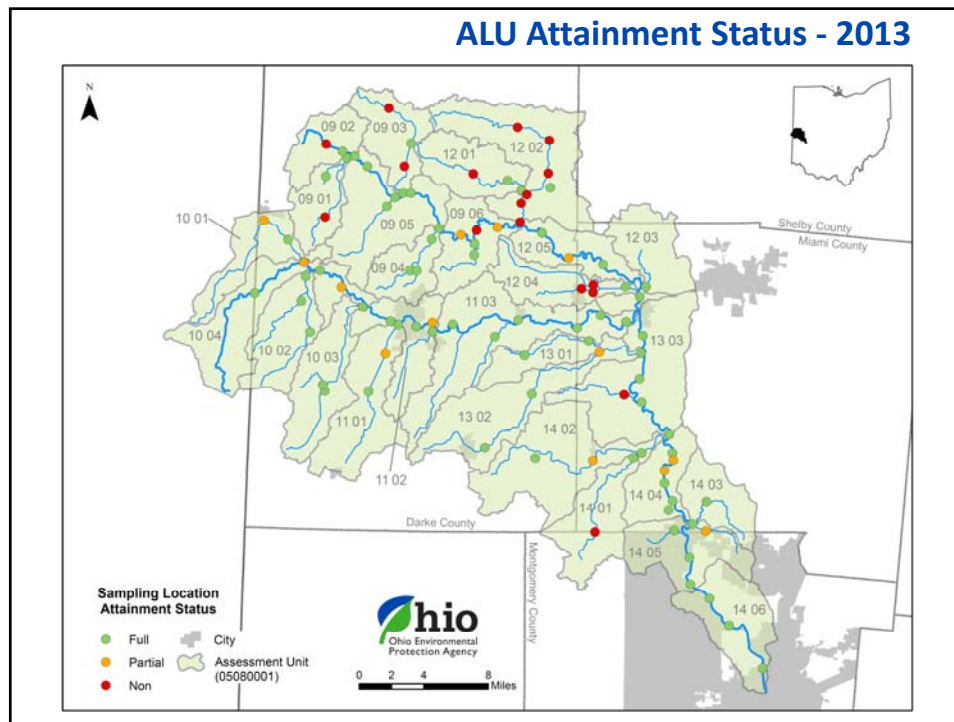
- Most recent assessment in 2013
- 96 sites evaluated; 67 sites meeting ALU expectations (70% in attainment)
- Reduction in sites due to reduction in sampling of small headwater sites ( $\sim < 3.0 \text{ mi}^2$ )
  - Done to document appropriate use designation in original survey



11



12



13

## Proposed Actions

- What is considered when deciding how to address impairments
- What strategy has been chosen for each site
- Justification for the strategy that was selected
- Watershed updates



14

## Watershed Updates

- 2013 survey mirrored impairments from 1999, but significant improvements have been noted
  - Nutrients
  - Habitat
- Given existing TMDL for nutrients and noted progress, new TMDLs will not be calculated
- Continued and further implementation to address nutrients encouraged



15

## Watershed Updates

- Numerous upgrades and changes to NPDES permitted facilities and unsewered communities
  - Further supports resampling at affected locations
  - Not all upgrades completed as a result of 2009 TMDL
- Table 2 summarizes NPDES TP limits and next steps for facilities
  - Greenville, Versailles, Bradford, Arcanum – recommend reassessment due to improvements
  - No action at this time for other facilities



16



## Proposed Strategy

- Found in Table 3
- Side-by-side comparison of 1999 and 2013 surveys
- Includes:
  - Impaired sites from most recent survey
  - Impaired sites from 1999 that were not reassessed in 2013
- Lists previous actions from 2004 and 2009 TMDLs
- Lists proposed actions moving forward



17

**Table 3 – Summary of ALU impairments from 1999 and 2013, including Ohio EPA's prior efforts to address impairments and the strategy to address continued impairments.**

Station	Location	HUC-12 (05080001)	River Mile	Attain. Status (1999)	Causes (1999)	Actions (1999)	Attain. Status (2013)	Causes (2013)	Actions (2013)	Method (2013)
H06P09	Stillwater River at West Milton at St Rt 571	90 02	17.45 <sup>b</sup>	None	NA	NA	<b>PARTIAL</b>	Direct habitat alterations	Other	Follow-up
203744	South Fork Stillwater River at Young Rd	09 01	5.5 <sup>a</sup>	<b>PARTIAL</b>	Hydromodification	2004 Habitat Analysis	<b>NON</b>	Nutrient/Eutrophication biological indicators	2009 TP TMDL	Update Implementation
					Enrichment	2009 TP TMDL		Organic enrichment	2009 TP TMDL	
H06W24	South Fork Stillwater River @ Coletown-Lightsville Rd	09 01	1.26 <sup>a</sup>	<b>NON</b>	Hydromodification	2004 Habitat Analysis	None	NA	Other	Follow-up
203707	Stillwater River SW of Lightsville, upstream of Young Rd, upstream trib	09 02	65.0 <sup>a</sup>	<b>NON</b>	Organic Enrichment	2009 TP TMDL	<b>NON</b>	Nutrient/Eutrophication biological indicators	2009 TP TMDL	Update Implementation
								Organic Enrichment	2009 TP TMDL	
H07K46	N. Fk. Stillwater R. NW of Rossburg @Riegel-Bell Rd	09 03	8.78 <sup>a</sup>	<b>NON</b>	Organic enrichment	2009 TP TMDL	None	NA	Other	Follow-up



18

## Proposed Actions – Justifying the Method

- Narrative following Table 3
  - Detailed justification for method proposed
- 7/29 sites not meeting expectations due to natural causes
  - No TMDL required
- Remaining 22 sites impaired due to direct habitat alterations, nutrient/eutrophication biological indicators, organic enrichment, ammonia
  - Follow-up
  - Update implementation



19

## Follow-up

- Spills to Dismal and Swamp Creeks
  - Follow up sampling to evaluate other potential causes
- West Milton low head dam removal completed in 2014
- Village of Bradford CSO elimination
- Mill Creek – deicers from Dayton Airport
  - Airport completed project to mitigate these



20

## Follow-up

- Mud and Harris Creeks
  - Direct habitat alterations due to channelization
- Analysis completed for Harris Creek site in 2004
- Mud Creek site was not monitored in 1999
  - Habitat is not seen as a pollutant
  - Encourage strategies such as 9-Element Non-point Source Implementation Strategies (9-Element NPS-IS) to improve habitat



21

## Update Implementation

- Detailed in 2004 and 2009 TMDLs
  - Animal waste management
  - Drainage and channelization management
  - On-site sewerage management
  - Urban issues
  - Point source controls
- Working on standalone document for implementation to publish after LAP is final



22

## Proposed Targets

- No new TMDLs are being proposed
- Typically ALU targets are in this section
- Targets for existing TMDLs can be found in the previous TMDL reports



23

## Recreation Use

- Impaired sites listed in Table 5
- Project specific TMDL will not be created for these sites
- Sites will be included in the Multi-watershed Bacteria TMDL Project
  - Currently in the LAP stage as well
  - PMR is in-development



24

## Appendices

- **Appendix A**
  - Side-by-side comparison of ALL sites assessed in both 1999 and 2013
  - No proposed actions, purely looking at comparing the two surveys
- **Appendix B and Appendix C**
  - ALU attainment tables for 2013 and 1999, respectively.
  - More detailed
    - Includes scores
    - Causes/sources



25

## **\*\*Reminder\*\***

Stillwater River Watershed Draft Loading Analysis Plan  
is currently available for review and comment.

[epa.ohio.gov/dsw/wq#185305282-loading-analysis-plan](http://epa.ohio.gov/dsw/wq#185305282-loading-analysis-plan)

- All comments must be submitted to the Agency **no later than 5:00 p.m. on December 7, 2020** (this Monday!)
  - Submit comments to [EPATMDL@epa.ohio.gov](mailto:EPATMDL@epa.ohio.gov)



26

## Stay Involved

For future public notices on all TMDL related reports, subscribe to updates for TMDL projects at:

[https://ohioepa.custhelp.com/app/utils/login\\_form/redirect/account%252Fprofile](https://ohioepa.custhelp.com/app/utils/login_form/redirect/account%252Fprofile).



27

## Questions? Comments?

Please feel free to shoot me an email!

Kate Hamilton, TMDL Coordinator

[Kathryn.Hamilton@epa.ohio.gov](mailto:Kathryn.Hamilton@epa.ohio.gov)



28

## Links

Stillwater River Draft Loading Analysis Plan

<https://epa.ohio.gov/dsw/wq#185305282-loading-analysis-plan>

Study Plans, Biological and Water Quality Reports, and TMDLs for the Stillwater River

<https://epa.ohio.gov/dsw/tmdl/GreatMiamiRiver#116712983-stillwater-river>

Multi-Watershed Bacteria TMDL Project

<https://epa.ohio.gov/dsw/tmdl/Multi-Watershed>

