

FINAL Template with Descriptions for Ohio's Nonpoint Source Pollution Implementation Strategies (NPS-IS) (Ohio's Nine-Element Plans)

Overall this document should be written in concise yet detailed manner using paragraphs, not pages, to convey information. When possible, it is preferred that information be incorporated into this document by reference with a brief explanation, rather than writing all details in this document. In Ohio, the NPS-IS is meant to closely align with *Ohio's Nonpoint Source Management Plan Update (FY2014 to FY2018)*. When creating a NPS-IS in Ohio, this *NPS Update* should be utilized and referenced. It is recommended that this NPS-IS be written for a single HUC-12. If the authoring organization prefers to address more than one HUC-12 (i.e., all the HUC-12s in the HUC-10), then all the HUC-12 NPS-IS documents may be combined into one HUC-10 document. If there is not an impairment/Critical Area in one (or more) of the HUC-12s, then that HUC-12 should still be included in the combined HUC-10 document with a notation that the HU is in attainment. In the descriptions below, the number of recommended paragraphs is a suggestion. Your watershed(s)/Critical Area(s) may be very complex and require more explanation or it may be nearly restored and have very little to explain. The recommend length is based on an average watershed with a few issues that need addressed. Make certain that each section is adequately addressed either in this document or by referencing another document that adequately addresses the issue. Any section that references a condition/issue that does not exist in your watershed(s), should still be included in the document with a notation that the condition/issue "does not apply" or is "not applicable."

Table of Contents

Acknowledgements

[NOTES: This section should include recognition for those person(s) and/or organizations(s) that assisted in the development of the NPS-IS.]

Chapter 1: Introduction

[NOTES: This Chapter is to give the reader a rough bearing of where your watershed is located in Ohio, who was involved in creating the document and the reasons for creating it.]

1.1 Report Background

[Description: This section should be 5 paragraphs or less explaining why this NPS-IS was created. Include as many images, maps, tables, etc. as needed to illustrate the area to be addressed.]

1.2 Watershed Profile & History

[Description: This section should be a 15 paragraph or less summary description of the watershed(s)/HUC-12 (i.e., name of watershed, county/cities, flows from where to where, basic geographic location/info) that will be included in this NPS-IS and brief history of the area. Include as many images, maps, tables, etc. as needed to illustrate the area to be addressed.]

1.3 Public Participation and Involvement

[Description: This section should be a 10 paragraph or less summary of who was involved in the development of this document, including information on of any public meetings or reviews that were held to assist in the development of this NPS-IS. Include as many images, maps, tables, etc. as needed.]

Chapter 2: HUC-12 Watershed Characterization and Assessment Summary

[NOTES: This Chapter is intended to be an overview and scoping of the full geographic extent of the HUC-12 addresses in this document. Chapter 2 should be a brief non-technical description/overview of the overall watershed/HUC-12 conditions as context for the rest of the document. It is expected that for most watershed(s) /HUC-12s this information has already been captured in other document(s) (i.e. TSD, TMDL, WAP) and can be summarized here with details incorporated by referencing the other document. As new data becomes available this Chapter should be updated. This Chapter should be written for a single HUC-12. If the authoring organization prefers to address more than one HUC-12 (i.e., all the HUC-12s in the HUC-10) then all the HUC-12 NPS-IS documents may be combined into one document.]

2.1 Summary of HUC-12 Watershed Characterization

2.1.1 Physical and Natural Features

[Description: This sub-section should be a 15 paragraph or less summary description of the features of the watershed(s)/HUC-12 included in this NPS-IS (i.e. Rivers and Watersheds, Ecoregions, Geology, Soils, Wetlands, Fisheries and Wildlife, Rare, Threatened, and Endangered Species, Invasive Nuisance Species). Include as many images, maps, tables, etc. as needed to illustrate the physical & natural features related to NPS water quality.]

[Possible Data Sources: Ohio EPA Technical Support Documents (TSDs), Ohio EPA Total Maximum Daily Load Reports (TMDLs), Ohio EPA Integrated Report, other reliable data and information]

2.1.2 Land Use and Protection

[Description: This sub-section should be a 10 paragraph or less summary description of the features of the watershed(s) /HUC-12 included in this NPS-IS (i.e., land use classifications (i.e. developed, forested, agricultural), public and protected lands, commercial/industrial use). Include as many images, maps, tables, etc. as needed to illustrate the land use conditions related to NPS water quality.]

[Possible Data Sources: Ohio EPA Technical Support Documents (TSDs), Ohio EPA Total Maximum Daily Load Reports (TMDLs), Ohio EPA Integrated Report, other reliable data and information]

2.2 Summary of HUC-12 Biological Trends

[Description: This section should be a 10 paragraph or less summary of Ohio's biological water quality indicators (i.e. fish (IBI, MIwb), macroinvertebrates (ICI), habitat (QHEI)) for the watershed(s) /HUC-12 included in this NPS-IS. This section should be a simple summary of the trends and overall conditions for a HUC-12; not specific site-by-site conditions. Detailed site-by-site conditions will be captured in the Chapter 4. Include as many images, maps, tables, etc. as needed to illustrate NPS water quality.]

[Possible Data Sources: Ohio EPA Technical Support Documents (TSDs), Ohio EPA Total Maximum Daily Load Reports (TMDLs), Ohio EPA Integrated Report, other reliable data and information]

2.3 Summary of HUC-12 Pollution Causes and Associated Sources

[Description: This section should be a 10 paragraph or less summary of the identified causes and associated sources of the NPS impairments (i.e. habitat alteration, hydromodification, silt/sedimentation, nutrient enrichment) for the watershed(s) /HUC-12 included in this NPS-IS. This section should be a brief summary of why the watershed(s)/HUC-12 is in partial or non-attainment and how that ties to each identified cause/source. This should not a specific site-by-site explanation. Those details will be captured in the Chapter 4. Not all causes and associated sources need to be included; only those related to the NPS issues or related to the projects that are recommended in this NPS-IS. Include as many images, maps, tables, etc. as needed to illustrate NPS water quality.]

[Possible Data Sources: Ohio EPA Technical Support Documents (TSDs), Ohio EPA Total Maximum Daily Load Reports (TMDLs), Ohio EPA Integrated Report, other reliable data and information]

2.4 Additional Information for Determining Critical Areas and Developing Implementation Strategies

[Description: The sub-sections in this section should be no more than 4 paragraphs describing each study, survey, initiative, etc. that explains relevant information gathered and used to inform the critical areas, needs and projects of the watershed(s) /HUC-12 included in this NPS-IS. Include as many images, maps, tables, etc. as needed to explain the conditions related to NPS water quality.]

[Possible Data Sources: University studies, public agency datasets, local inventories & surveys, other reliable data and information]

2.5.1 EXAMPLE: Non-profit group assessment data

2.5.2 EXAMPLE: University study of habitat

Chapter 3: Critical Area Conditions & Restoration Strategies

[NOTES: This Chapter should be a more detailed explanation of the Critical Area than found in the HUC-12 summary conditions in Chapter 2. Each sub-section should be written for a single Critical Area and each section MUST include a map of the Critical Area. It is recommended that all identified Critical Areas in the HUC-12 be included in this Chapter, however, at least one Critical Area must be identified and explained in order for an implementation project from that Critical Area to be eligible for funding.]

3.1 Overview of Critical Areas

[Description: This sub-section should provide an overview of the Critical Areas, general observations (i.e. more ag issues than urban, lots of habitat alterations) and a map of those critical areas (if feasible) for the watershed(s)/HUC-12 that is included in this NPS-IS. In order to reference this information in the Project & Implementation Overview Strategy Table (section 4.1) you are encouraged to develop a numbering or tracking system for your Critical Areas. Include as many images, maps, tables, etc. as needed to explain the conditions related to NPS water quality. It is possible that a critical area for one impairment may have the same boundary or overlap another critical area for a different impairment. All impairments for a critical area should be included in the section that addresses that critical area.]

3.2 Name/Number of Critical Area: Conditions, Goals & Objectives

3.2.1 Detailed Characterization

[Description: This sub-section should be 10 paragraphs or less succinctly describing the detailed features of one Critical Area included in this NPS-IS. This sub-section should be more detailed than section 2.1 and be specific to this Critical Area. Include as many images, maps, tables, etc. as needed.]

[Possible Data Sources: Ohio EPA Technical Support Documents (TSDs), Ohio EPA Total Maximum Daily Load Reports (TMDLs), Ohio EPA Integrated Report, other reliable data and information]

3.2.2 Detailed Biological Conditions

[Description: This sub-section should be 8 paragraphs or less succinctly describing the detailed biological conditions of one Critical Area included in this NPS-IS and state, numerically, how far the Critical Area is from attaining the aquatic life use target (i.e., fish (IBI, MIwb), macroinvertebrates (ICI), habitat (QHEI)). This sub-section should be more detailed than section 2.2 and be specific to this Critical Area. Include as many images, maps, tables, etc. as needed to illustrate NPS water quality.]

[Possible Data Sources: Ohio EPA Technical Support Documents (TSDs), Ohio EPA Total Maximum Daily Load Reports (TMDLs), Ohio EPA Integrated Report, other reliable data and information]

3.2.3 Detailed Causes and Associated Sources

[Description: This sub-section should be 10 paragraphs or less succinctly describing in detail the Causes and associated Sources for one Critical Area included in this NPS-IS. This sub-section should be more detailed than section 2.3 and be specific to this Critical Area. Include as many maps, tables, etc. as needed.]

[Possible Data Sources: Ohio EPA Technical Support Documents (TSDs), Ohio EPA Total Maximum Daily Load Reports (TMDLs), Ohio EPA Integrated Report, other reliable data and information]

3.2.4 Outline Goals and Objectives for the Critical Area

[Description: This sub-section should be 15 paragraphs or less succinctly describing the Goals and Objectives needed to address the nonpoint source pollution impairments for one Critical Area included in this NPS-IS. Goals must outline what the overarching need is (i.e. reduce sediment loading by 20%) in order to address a measured parameter/cause (i.e. sedimentation). The Objectives must explain what technical solutions needs to be implemented (i.e. increase bank stabilization) and how much (i.e. install 1500') to reduce or eliminate the associated source. (i.e. sedimentation). The Goals and/or Objectives must include a quantifiable output of what is needed to address the NPS impairment (i.e., sedimentation load reduction of 20%, installation of 1500' of streambank stabilization, achieve 7% of stream corridor length placed into conservation easement). This might be most easily illustrated using a table. In order to reference this information in the Project & Implementation Overview Strategy Table (section 4.1) you are encouraged to develop a numbering system for your Goals, Objectives and related Projects. Include as many images, maps, tables, etc. as needed.]

[Possible Data Sources: Ohio EPA Technical Support Documents (TSDs), Ohio EPA Total Maximum Daily Load Reports (TMDLs), Ohio EPA Integrated Report, other reliable data and information]

3.3 REPEAT section 3.2 for each Critical Area (as needed)

3.3.1 Detailed Characterization

3.3.2 Detailed Biological Conditions

3.3.3 Detailed Causes and Associated Sources

3.3.4 Outline Goals and Objectives for Critical Area)

Chapter 4: Projects and Implementation Strategy

[NOTES: This Chapter is where the Critical Areas, Goals, Objectives, projects and actions all come together to outline what needs to be done, where, by whom, in what order, and using what strategies outlined in Ohio's Nonpoint Source Management Plan (Update) to restore the NPS pollution issues of the watershed(s) included in the NPS-IS. The information in sections 4.1 and 4.2 are the dynamic portion of this document. As projects get implemented and new projects are developed the Overview Table and Project Summary Sheets should be updated.]

4.1 Projects and Implementation Strategy Overview Table(s) (Overview Table)

[see table below]

4.2 Project Summary Sheet(s)

[see sheet below]

Section 4.2 Project Summary Sheet(s)

[Description: In addition to creating the rest of this NPS-IS, a Project Summary Sheet MUST be created for each project that is being proposed for NPS funding from US EPA and/or Ohio EPA. Most of the essential elements of a Nine Element Plan are included on these Project Summary Sheets. If a Project Summary Sheet has not been created for a project, then a Nine-Element Plan is not complete for that project; and thus, it is not eligible for some US EPA/Ohio EPA funding opportunities.]

[Possible Data Sources: Public meetings, organizational priorities, previous Watershed Action Plans, other reliable data and information]

Nine Element Criteria	Information needed	Explanation
n/a	Title	Provide a title for the project. Preferably 75 characters or less.
criteria d	Project Lead Organization & Partners	Provide the primary organization responsible for the project and any significant partnering organizations.
criteria c	HUC-12 and Critical Area	Provide the HUC 12 code and name, as well as the identifying name/number of the Critical Area where your project is located.
criteria c	Location of Project	Provide your project's physical address or as much as possible. If there isn't an actual address, please use a mapping program (i.e. Google Maps) to get the closest address or provide the latitude/longitude of your project's location.
n/a	Which strategy is being addressed by this project?	Provide the NPS reduction, restoration or protection strategy from Ohio's Nonpoint Source Management Plan (Update) that will be addressed by this project.
criteria f	Time Frame	Provide the expected date and/or term for implementation of this project (i.e. Short-Term (Priority) (1-3 yr); Medium Term (3-7 yrs); Long Term (7+ yrs); Ongoing (annual events)). Any Short-Term project should have a completed Project Summary Sheet
criteria g	Short Description	Provide a concise synopsis. Include pertinent details like a location description, issues addressed, and/or restoration activities. Preferably 250 characters or less.
criteria g	Project Narrative	Provide a more detailed synopsis explaining the project to partners, funders and the public. Include information like <u>who</u> is involved, <u>what</u> are the detailed goals and methods, <u>where</u> is will be done and <u>how</u> it will result in progress toward restoration of the impairment. Use numeric or measureable values when possible (i.e. 1500' of bank stabilization, 20% reduction of phosphorus loading). Similar to US EPA outputs. Preferably 2,500 characters or less.
criteria d	Estimated Total cost	Provide a total of all expected expenses necessary to conduct your project. If possible, provide a breakdown by Personnel/Fringe, Travel, Equipment/Supplies, and Sub-contractual. List any sources of cash or in-kind match and the amount, if they have been identified and/or committed. Also, where applicable, include an estimated cost per unit for BMPs.
criteria d	Possible Funding Source	Provide a list of possible funding sources for your project.
criteria a	Identified Causes and Sources	Provide a list of the identified Cause(s) and associated Source(s) that your project will address. The causes/source should be those listed for the critical area you are working in.
criteria b & h	Part 1: How much improvement is needed to remove the NPS impairment for the whole Critical Area?	This should be based on Water Quality Standards such as those in the Goals and Objectives of Chapter 3 subsection 3.2.4. (i.e., biological targets: IBI scores need to be improved by 5 points to meet WQS; load reductions: phosphorus loading needs to be reduced by 6%)
	Part 2: How much of the needed improvement for the whole Critical Area is estimated to be accomplished by this project?	Provide the amount of measured improvement expected for each of the biological and/or chemical impairments. Similar to US EPA outcomes.
	Part 3: Load Reduced?	Estimate of reduction in pollutants (e.g., Tons sediment/yr., #P/yr., #N/yr.)

<i>criteria i</i>	How will the effectiveness of this project in addressing the NPS impairment be measured?	<i>Provide an explanation of how you or your partners intend to measure the improvement. (i.e. Ohio EPA 319 staff will conduct biological criteria sampling, ABC University will measure changes in flow)</i>
<i>criteria e</i>	Information and Education	<i>Provide a brief description of how information about this project will be shared. Be measurable when possible (i.e. hold 2 workshops)</i>

Reference Information for author consideration when preparing a NPS-IS

(Expected to be in a Guidance Document that has not been created yet)

Where are US EPA's Nine Elements found in Ohio's NPS-IS?

Criteria	US EPA Definition	Location in the Ohio NPS-IS Template
a	Identify the causes and sources of pollution that need to be controlled	3.2.3, 3.3.3 ... etc. 4.2
b	Determine load reductions needed	3.2.4, 3.2.4 ... etc. 4.2
c	Describe management measures to achieve improvements in targeted critical areas	3.2.4, 3.2.4 ... etc. 4.2
d	Identify technical and financial assistance and authorities needed to implement the plan	4.1, 4.2
e	Develop an information/ education component	4.2
f	Develop implementation schedule	4.1, 4.2
g	Describe the interim, measureable milestones	4.2
h	Identify indicators to measure progress	4.2
i	Develop monitoring component.	4.2

Acronyms

IBI – Index of Biotic Integrity

ICI – Invertebrate Community Index

MIwb – Modified Index of Well Being

QHEI – Qualitative Habitat Evaluation Index

TSD – Technical Support Document

TMDL – Total Maximum Daily Load

WAP – Watershed Action Plan

WBP – Watershed Based Plan

WC – Watershed Characterization

WQS – Water Quality Standards

WRAS – Watershed Restoration Action Strategy

Critical Areas Defined

In Ohio, Critical Areas are defined as:

- An impaired HUC 12 or an area where Ohio EPA monitoring shows a nonpoint source related cause of impairment; especially those areas with identified high magnitude causes such as habitat alteration, hydromodification, silt/sediment, or nutrient enrichment; **OR**
- An area identified as having healthy waters that need protected from degradation by nonpoint source pollutants such as nutrients and sediment; especially those areas seriously threatened by the rapid conversion of countryside to developments.

Ranking of Projects *(used in Chapter 4)*

PRIORITY: The PRIORITY designation indicates the importance of immediate action and should be used for the most important short term projects. Immediate action may be needed due to issues such as:

- Highly threatened by development pressures or loss of full attainment status;
- Would achieve a high reduction in the loading percentage of nitrogen, phosphorus and/or fecal coliform/e. coli; and
- A publicly owned or accessible area in most need of protection.

Time Frame for Implementation *(used in Chapter 4)*

- Short term:** These projects should be/are expected to be implemented in Year 1-3
Medium term: These projects should be/are expected to be implemented in Years 3-7
Long term: These projects should be/are expected to be implemented in Year 7 and beyond

Definitions

- Goals:** A measured parameter such as sediment or nutrients (i.e. Reduce Sedimentation Rates)
- Objectives:** What can be done to restore the impaired measured parameter (i.e. Increase bank stabilization)
- Sources of Impairment:**
- 1) The most prominent origins of the "agents" deemed responsible for the observed aquatic life use impairment.
*(Ohio EPA Integrated Report 2014 Glossary, Ohio EPA website:
<http://wwwapp.epa.ohio.gov/gis/mappointal/IR2014Glossary.html>)*
 - 2) The activities, facilities or conditions that generate the pollutants including: municipal sewage treatment plants, factories, storm sewers, modifications of hydrology, agricultural runoff, etc.)
*(2002 National Assessment Database: Assessing Water Quality Q&A, US EPA web site:
http://www.epa.gov/waters/305b/assessing_quality.html)*
- Cause(s) of Impairment:**
- 1) The most prominent "agents" deemed responsible for the observed aquatic life use impairment and should be the initial focus of restoration activities or TMDL development within the watershed.
*(Ohio EPA Integrated Report 2014 Glossary, Ohio EPA website:
<http://wwwapp.epa.ohio.gov/gis/mappointal/IR2014Glossary.html>)*
 - 2) What is keeping the waters from meeting the criteria adopted to protect the designated uses including: chemical contaminants (i.e. PCBs, metals, etc), physical conditions (i.e. temperature, excess siltation, alterations of habitat, etc.), and biological contaminants (i.e. bacteria, noxious aquatic weeds).
*(2002 National Assessment Database: Assessing Water Quality Q&A, US EPA web site:
http://www.epa.gov/waters/305b/assessing_quality.html)*

Explanation of Ohio's Nonpoint Source Management Plan Update (FY2014-FY2018) Strategies

[NOTES: ALL NPS projects that are eligible for funding under Ohio EPA's §319 NPS program must be based upon the strategies outlined in the Ohio Nonpoint Source Management Plan Update (FY2014-FY2018). These strategies explain the types of projects that Ohio EPA can fund to restore the NPS impairments that are resulting in a Critical Area's inability to attain Ohio's WQS. This document should be used as a reference when writing a NPS-IS.]

- **Urban Sediment and Nutrient Reduction Strategies**

These strategies address the causes and associated sources related to Urban Sediment and Nutrient impairments (i.e. storm water runoff, LID).

- **Altered Stream and Habitat Restoration Strategies**

These strategies address the causes and associated sources related to Altered Stream and Habitat impairments (i.e. stream restoration, riparian habitat, flow restoration).

- **Agricultural Nonpoint Source Reduction Strategies**

These strategies address the causes and associated sources related to Agricultural Nonpoint Source impairments (i.e. upland mgmt., livestock mgmt., drainage mgmt.).

- **High Quality Waters Protection Strategies**

These strategies address the protection of High Quality Waters (i.e. restore and protect high quality in-stream habitat, manage invasive species).