NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

NINE ELEMENT (9E) WATERSHED PLAN

DEC Reviewer Guidance

October 2019

DIVISION OF WATER
BUREAU OF WATER RESOURCE MANAGEMENT

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Reviewer Guidance Summary

This guidance is intended to help New York State Department of Environmental (DEC), Division of Water staff to complete the Nine Key Element Watershed Plan Assessment Form (Appendix A) to ensure watershed plans are consistent with the nine key elements established by the United States Environmental Protection Agency (US EPA) (https://www.dec.ny.gov/docs/water_pdf/9elements.pdf). A copy of this guidance form will be provided to watershed plan preparers.

Qualifications of the plan preparer

Watershed plan preparers should attach resumes and complete the qualifications form (Appendix B) to describe their experience with the models or other relevant experience used in the development of the watershed plan to demonstrate that the plan was thoughtfully developed.

Evaluation of watershed plan's consistency with nine elements

Overview of the 9 elements

A) Identify and quantify sources of pollution in watershed
B) Identify water quality target or goal and pollutant reductions needed to achieve goal
C) Identify the best management practices (BMPs) that will help to achieve reductions needed to meet water quality goal/target
D) Describe the financial and technical assistance needed to implement BMPs identified in Element C
E) Describe the outreach to stakeholders and how their input was incorporated and the role of stakeholders to implement the plan
F) Estimate a schedule to implement BMPs identified in plan
G) Describe the milestones and estimated time frames for the implementation of BMPs
H) Identify the criteria that will be used to assess water quality improvement as the plan is implemented
I) Describe the monitoring plan that will collect water quality data need to measure water quality improvement (criteria identified in Element H)

Element A. Identify and quantify sources of pollution in watershed

Element A provides the basis for developing effective management strategies to meet water quality goals and includes the identification of the target pollutant. This element helps to develop the other eight elements. The plan should describe the watershed, including: soils, hydrology, land use, demographics and recreations; the water quality within the watershed, including: water quality monitoring, biological surveys, priority waterbody listings (303d), existing watershed plans, sources of the impairments and the causes. This information should be used to identify and quantify the sources of pollution.

Any sampling that was used to produce the plan must adhere to a Quality Assurance Project Plan (QAPP)and utilize a New York State Department of Health (DOH) Environmental Laboratory Approval Program (ELAP) certified laboratory for analytical chemistry processing (https://www.wadsworth.org/regulatory/elap). Any sampling conducted using state funding must

have a DEC-approved QAPP. QAPP templates and example QAPPs are available on DEC's website: https://www.dec.ny.gov/chemical/103264.html. This data will serve as the baseline to evaluate implementation of practices to improve water quality.

This part of the plan needs to indicate the pollutants addressed by the plan (e.g., phosphorus, sediment, etc.); quantify the pollutants sources; and include an inventory of point and nonpoint sources. This element should adequately link the sources of pollution and the extent to which they cause water quality problems with maps, modeling, monitoring and field assessments. Data gathered from other sources may be used as the basis to identify sources and loads, as long as the documentation is adequate and properly referenced.

Modeling Note: Various modeling approaches can be used to conduct the loading analysis. There is no one model that fits all watersheds and/or pollutants of concern and a review of various models available can be found in Chapter 8 of the EPA Handbook (https://www.epa.gov/sites/production/files/2015-11/documents/2008_04_18_nps_watershed_handbook_ch08.pdf). Several key factors should be evaluated about the model used:

- complexity of the system (e.g., watershed size, coastal influence)
- pollutant fate and transport (i.e., model takes into account p cycle; or is a runoff model),
- time scale of the analysis in relation to the pollutant of concern (i.e., pathogens—daily; dissolved oxygen—hourly, phosphorous—daily, monthly, annual),
- what source loads types are considered by model (i.e., how does model perform with different land uses; assumptions of source load contributions from land uses),
- model inputs (i.e., models require data on daily or monthly or annual time scale; current land use maps, soils data resolution),
- model output is sufficient to show water quality goals can be achieved, and
- user experience with model (based on description of model required in this section).

This section should include an explanation of the model used, a discussion of model limitations and model inputs including assumptions. DEC has developed a modeling matrix template that can be used to list analytical metrics, data sources, quality control documentation, and data verification, validation, quality assessments and final use determination. The modeling matrix template is available on DEC's website: https://www.dec.ny.gov/chemical/103264.html.

Watershed analysis, at a minimum, should evaluate and quantify the following point and nonpoint sources of pollution if present in the watershed:

- Land use
    - Developed, low intensity
    - Developed, medium intensity
    - Developed, high intensity
    - Forest
    - Pasture/Hay
    - Cultivated crops
- Septic system loads
    - Number within watershed
    - Number within a specified distance of the waterbody (e.g., 250 ft)

    - Number of seasonal homes with septic systems within a specified distance of waterbody (e.g., 250 ft)
- Point sources
    - Wastewater treatment plants
    - Concentrated Animal Feeding Operations (CAFOs)
    - Other permitted facilities that discharge pollutant of concern

Element B. Identify water quality target or goal and pollutant reductions needed to achieve goal

This section should use the information collected in Element A to determine the point and nonpoint source load reductions needed to achieve the water quality target or goal. This information will then be used to determine the most appropriate actions (e.g., best management practices) needed (Element C) to achieve the reductions. The plan must describe how the selected best management practices (BMPs) will reduce the pollutant, the rationale for the selecting the BMPs, and provide an estimate of the expected load reductions from the BMPs. Accepted BMPs efficiencies for agricultural and urban practices are available on the DEC website: (http://www.dec.ny.gov/chemical/96777.html). It is important that the expected load reductions from BMPs be clearly identified to ensure appropriate selection of BMPs (Element C) to achieve water quality goals.

Element C. Identify the best management practices (BMPs) that will help to achieve reductions needed to meet water quality goal/target

The plan must describe how the BMPs will be implemented throughout the watershed. For example, the plans should estimate how many acres of riparian buffers, cover crops, fencing, rain gardens, bioretention ponds, or pervious pavement will be installed to achieve the load reductions in Element B. This section should also describe BMPs that will be used to address other watershed goals identified in the plan.

Pollutant loads may vary among land use types; load reductions will be dependent on the use of sufficient water quality data and appropriate modeling for determining BMP type and location. If the plan targets appropriate measures at the most significant sources of pollution, it is expected that pollution loads will be reduced and water quality will improve.

The methods used to quantify load reductions should be logical and understandable—methods don't have to be overly detailed or sophisticated, but should be reasonable. This portion of the analysis does not have to be based on the same model used for Element A and B; for example Element A and B could be based on a complex model, while Element C may be based on a simple spreadsheet model that determines the relative reduction in a pollutant for a given management practice (for example, STEPL, WTM, Simple Method https://www.dec.ny.gov/chemical/96777.html, USEPA 2008).

Element D. Describe the financial and technical assistance needed to implement BMPs identified in Element C

Detailed characterization and understanding of the baseline watershed condition (addressed in Elements A-C) will provide the basis for determining the appropriate technical and financial needs to support the implementation actions. Plans must identify potential funding sources and

how they will be secured; leveraging of funding and collaboration concerning technical and financial assistance are a plus and should be included in the plan.

Estimates for implementation of the entire plan should include: implementation of practices, long-term operation and maintenance of the practices, information and educational activities, monitoring, and evaluation activities.

Element E. Describe the outreach to stakeholders and how their input was incorporated and the role of stakeholders to implement the plan

Information gained from Elements A-C should be used to strengthen stakeholders (including the public) support. The plan must identify the main audiences and how the plan intends to engage the audiences to adopt/support the watershed plan, long term operation and maintenance of practices, promote involvement and relay information to stakeholders, encourage/support voluntary implementation by targeted land-owners, and identification of barriers and possible solutions to overcome barriers.

Element F. Estimate a schedule to implement BMPs identified in plan

The plan must include a schedule for implementing the management measures outlined in the watershed plan and should reflect the milestones that are indicated in Element G and include how the milestones align with the technical and financial assistance identified in Element D. Because much of the implementation of watershed plans are contingent on availability and award of funding, implementation schedules may include broad timeframes--short-term (3 yrs), mid-term (3-5 yrs) and long-term (5-10 yrs). More detailed information should be presented for short-term activities; mid- and long-term activities may be described in less detail. It is expected that schedules will need to be revised to updated or amended as implementation is completed. The schedule should include a timeline for watershed plan review and updates.

Recommendation: For experienced watershed groups, implementation schedules could be estimated based on past experience.

Element G. Describe the milestones and estimated time frames for the implementation of BMPs

This element is closely tied to Element F. The plan must describe the interim, measurable milestones that will be used to track progress implementing the BMPs in the watershed plan. The interim milestones should ensure that the BMPs are implemented on schedule and in the most critical areas of the watershed to address water quality concerns. The level of detail depends on how well the plan characterized the watershed and targeted appropriate BMPs.

Element H. Identify the criteria that will be used to assess water quality improvement as the plan is implemented

The plan must clearly state the criteria that will be used to determine if the load reductions are being achieved over time, if progress is being made toward improving water quality, and if/when the plan should be revised. The criteria used in this element should be the same or equivalent to the criteria used to determine loadings for elements A & B; for example direct measurements to of monitoring data (nutrients, bacteria) or indirect (beach closures). The criteria must be measurable and quantifiable and appropriately measure progress towards the reduction goals. In addition, this section should include a review process to assess progress and explain how the

plan will be adaptively managed. The plan must include a mechanism to track and report measureable progress on the implementation of BMPs.

Element I. Describe the monitoring plan that will collect water quality data need to measure water quality improvement (criteria identified in Element H)

This section is closely linked to elements A (pollution sources), F (implementation schedule), G (milestones) and H (criteria to evaluate load reductions). This element must include at a minimum, baseline (before) and post-project (after) monitoring. The monitoring program should be designed to determine if loading reductions are being achieved over time and if progress in meeting water quality goals are being made. A monitoring program may include: a reference to DEC RIBs monitoring (plan must describe how and when they will inform and follow-up with DEC); water quality trend analysis; upstream/downstream comparisons; paired watershed designs; and tracking beach or shellfishing closures. The monitoring data collected should support the criteria described in Element H and be used to assess BMP effectiveness in reducing loads to the waterbody. This section should reference the sampling QAPP and ELAP certified laboratory used to process the samples.

Additional Documentation & Resources

A sampling and modeling QAPP, if referenced, must be attached or a link to an electronic copy must be included in the document. Also, the QAPP documentation must indicate if the plan was approved by DEC or other state or federal agency.

If the watershed plan was developed using information from other reports (Total Maximum Daily Load (TMDL), technical report, planning report) or reference other plans as the basis for any of the elements in Section 2, the preparers must include a copy or a link to an electronic copy of the reports. Also, the reference must indicate if the TMDL was finalized and approved by EPA.

DEC recommends that a geodatabase is created and maintained for all geospatial data and an electronic database to store data used in the development of the watershed plan. Data should consist of model input, output, monitoring, maps, and other relevant information to watershed plan development.

DEC recommends maintaining databases because this information can be used by plan developers to update and revise the analysis, track trends and ensure consistency of the data. In addition, data is more easily transferable to interested parties and stakeholders.

Recommended 9E Plan Outline

The following outline is recommended for 9E plans and how sections within the outline align with the nine elements. Following this format will produce a comprehensive and understandable planning document and will expedite the review process. Not all of the items listed in Section V, Water quality condition, part a (Historical conditions/previous studies) of the outline may be applicable; please include the sub-section only if relevant to the watershed.

Recommended Nine Element (9E) Watershed Plan Outline

I. Executive summary
II. Purpose/Background
III. Public participation and public input process (Element E)

a. Agencies and organizations
b. Description of how stakeholders were engaged and will be engaged

IV. Watershed description (information needed for Element A)
a. Study area
b. Soils
c. Hydrology
d. Land use
e. Demographics
f. Recreation

V. Water quality condition (information needed for Element A)
a. Historical conditions/previous studies, ***if relevant***, include:
i. Biological surveys
ii. Waterbody Inventory/Priority Waterbodies List (WI/PWL) datasheet descriptions
iii. Total Maximum Daily Loads (TMDLs)
iv. Watershed plans
v. Long Term Control Plans (LTCP)
vi. Consent orders
vii. Sewer service areas & septic systems
b. Present conditions

VI. Designated and desired uses (Element A)
a. Designated uses in the watershed & status (i.e., met, impaired or threatened)
b. Desired uses in watershed

VII. Water quality goals and objectives (Element A, B)
a. Sources of impairments and threats to designated uses
b. Causes of impairments and threats
c. Pollutants addressed by plan
d. Pollutant source assessment (quantify pollutant source loads in watershed)
e. Water quality goal or target
f. Expected load reductions needed to meet water quality goal or target

VIII. Priority areas within watershed (Element C)
a. How priority/critical areas were determined

IX. Proposed BMPs (Element B, C)
a. Best management practice (BMPs) recommendations
b. Rationale for the selection of recommended BMPs
c. Description and performance (reduction of pollutant) of recommended BMPs

X. Implementation Plan (Element D, F)
a. Action plan for short-term objectives
b. Action plan for intermediate objectives
c. Action plan for long-term objectives
d. Technical and financial assistance
i. Sources of technical assistance
ii. Estimate of financial assistance needed
iii. Potential funding sources for action plan items
e. Evaluation of plan and plan updates (Element F)
f. Evaluation of the implementation actions (Element G, H, I)
i. Mechanism to track implementation actions

ii. Qualitative evaluation criteria
iii. Quantitative evaluation criteria
iv. Monitoring plan

XI. References, Maps and Data Sources (needed to support Element A, B, C, H, I)

Outline Checklist

Section #	Document section	9E addressed in section	Check
I	Executive Summary	N/A	
II	Purpose/Background	N/A	
III	Public participation & public input process	Element E	
IV	Watershed description	**needed for Element A	
V	Water quality condition	**needed for Element A	
VI	Designated and desired uses	Element A	
VII	Water quality goals and objectives	Element A, B	
VIII	Priority areas within watershed	Element C	
IX	Proposed BMPs	Element B, C	
X	Implementation plan	Element D, F	
Xe	Evaluation of plan and plan updates	Element F	
Xf	Evaluation of implementation actions	Element G, H, I	
XI	References, Maps and Data sources	**needed for Element A, B, C, H, I	

Appendix A. Nine Key Element Watershed Plan Assessment Form

New York State Department of Environmental Conservation (DEC), Division of Water (DOW) is responsible for reviewing and approving watershed plans to ensure the plans meet the Nine Key Elements established by the USEPA. This form is to be completed by DEC staff to ensure each of the Nine Key Elements are addressed in plans that are designated as State Approved Plans.

Watershed plan title: _____

Watershed(s) identifiers HUC IDs and WI/PWL Name and Numbers

Target Waterbody Name and WI/PWL Name and Number

Pollutant(s) addressed by plan: _____

Prepared by: _____

Submitted by: _____

DEC Reviewer 1: _____

DEC Reviewer 2: _____

☐ Addresses watershed with an existing TMDL? If yes, provide date of TMDL and reference:

☐ Update to previously approved plan? If yes, provide date of plan and reference:

☐ New plan

Additional Comments:

☐ Watershed plan is **approved** as a NY State Approved Nine Key Element Watershed Plan

Reviewer Signatures: _____ Date Approved: _____

☐ **Not approved.** Comment letter sent. Date: _____

Directions to the Reviewer

For each item on the form, indicate if the item is present. Where possible, indicate the page number or section in the plan where the item is found. Each of the nine key elements must be satisfactorily addressed for the plan to receive approval. The reviewer is directed to the Handbook for Developing Watershed Plans to Restore and Protect our Waters (USEPA Office of Water Nonpoint Source Control Branch, 2008; EPA 841-B-08-002) to assist in determining if each element is adequately addressed. Additional comments or concerns can also be included in the comments sections.

Section 1. Qualifications of the plan preparer(s)

Refer to Watershed Plan Preparer's Summary of Qualifications form (Appendix B in Watershed Plan Reviewer Guidance). The completed watershed plan must have resumes (1-2 pages) attached for each preparer listed below:

Preparers and Role

Role	Name	Resumé	
		Included?	Sufficient?
Modeling		☐	☐
Best Management Practices		☐	☐
Outreach		☐	☐
Monitoring		☐	☐
Partnerships		☐	☐
QAPPs		☐	☐

Required Documentation

The table below lists the **required** documentation that must be included in an Addendum to the Nine Element Plan.

Additional Information and Documentation	Yes	No	Comments
If the watershed plan was funded through a state or federal grant program, was the grant award number provided in the plan?	☐	☐	grant #, date
Does the plan include a copy or link to a data *monitoring* quality assurance project plan (QAPP)?	☐	☐	control #
Was the QAPP approved by NYS DEC or other state or federal agency?	☐	☐	date, reviewer initials
Does the plan include a copy or link to an electronic copy of a *modeling* QAPP?	☐	☐	control #

Additional Information and Documentation	Yes	No	Comments
Were the primary and secondary data used in development of this Nine Element Plan analyzed at an ELAP[1] certified laboratory?	☐	☐	Lab name and ELAP ID
Was a Data Usability Assessment Report (DUAR) completed to determine data quality if needed?	☐	☐	control #
Was the QAPP approved by NYS DEC or other state or federal agency?	☐	☐	date, reviewer initials
If the plan referenced other reports or plans as the basis for any of the elements in Section 2, did the plan preparers provide links to electronic copies?	☐	☐	

[1] NYS Department of Health (NYSDOH) Environmental Laboratory Accreditation Program

Section 2. Nine Elements Checklist

Element A. Causes/Sources of Pollution Identified

USEPA Handbook for Developing Watershed Plans to Restore and Protect Our Waters, 2008, Chapters 5-8

	Reviewer 1		Reviewer 2			
Identification of the causes and sources or groups of similar sources that will need to be controlled to achieve the load reductions estimated in the watershed plan.	**Yes**	**No**	**Yes**	**No**	**Page or section number**	**Notes**
Pollutant(s) to be addressed by watershed plan are clearly stated?	☐	☐	☐	☐		
Are sources of pollution identified, mapped and described?	☐	☐	☐	☐		
Are pollutant causes identified or described?	☐	☐	☐	☐		
Are loads from identified sources quantified and summarized?[2]	☐	☐	☐	☐		
Are the land uses modeled representative of current land uses in the watershed?[1]						
Are there any point sources identified in the watershed?	☐	☐	☐	☐		
Were point sources listed as separate entities with appropriate identification and loading estimates provided?	☐	☐	☐	☐		
Does plan state water quality goal or target?	☐	☐	☐	☐		
Provide water quality target and goal(s):						
Are there any sub-watershed areas? If so, are the sources broken down to the sub-watershed level?	☐	☐	☐	☐		
Are data sources indicated? Are estimates and assumptions reasonable?	☐	☐	☐	☐		

[1] For example, if vineyards are a substantial land use, was a land cover type for vineyards accounted for and accurately represented in the model?

Other comments:

[2] See suggested watershed loading summary on the following page

This section includes a summary of critical information required in the Nine Element Plan regarding major land use breakdowns, loading rates by major land cover type for all calibrated chemistry parameters and yield. This summary should be provided by the preparer in a table (see Table below).

Land Use/Loading Sector	**Area (acres)**	**Percent of Watershed (%)**	**Average Annual Load (pounds per year)**	**Percent of Annual Load (%)**	**Average Yield (pounds per acre)**
Forested (Combined Forest Types)					
Wetlands					
Urban					
Residential					
Streambank erosion					
Agricultural					
Pasture and hay					
Cultivated row crop Cash/other crops					
Other					
Direct (Atmospheric Deposition)					
Groundwater	N/A	N/A			
Point Sources	N/A	N/A			
Septics (must be separated out of basin loading estimates)[1]	N/A	N/A			
Total		**100%**		**100%**	

[1] Counts of septics, seasonal usage, distances from waterbodies, assumptions of failure rates and loading per capita must be specified in the Nine Element Plan.

Other comments:

Element B. Expected Load Reductions for Solutions Identified

USEPA Handbook for Developing Watershed Plans to Restore and Protect Our Waters, 2008, Chapters 8-9

	Reviewer 1		Reviewer 2			
Estimate of the load reductions expected for the management measures described under Element C.	**Yes**	**No**	**Yes**	**No**	**Page or section number**	**Notes**
Are expected load reductions within the accepted range to ensure water quality standards and/or other goals will be achieved (see guidance)?	☐	☐	☐	☐		
Are expected load reductions linked to a pollution cause/source identified in Element A?	☐	☐	☐	☐		
Is the complexity of modeling used appropriate for the watershed characteristics, the scale and complexity of the impairment, and the extent of water quality data identified in Element A?	☐	☐	☐	☐		
Does the plan explain why the BMPs were selected?	☐	☐	☐	☐		
Will the BMPs described in the plan effectively achieve load reductions?	☐	☐	☐	☐		
Are estimates, assumptions, and other data used in the analysis reasonable?	☐	☐	☐	☐		

Other comments:

Element C. Nonpoint Source Management Measures Identified

USEPA Handbook for Developing Watershed Plans to Restore and Protect Our Waters, 2008, Chapters 10-11

	Reviewer 1		Reviewer 2			
A description of the NPS management measures that will be implemented to achieve the load reductions estimated in Element B and identification of the critical areas for implementation.	**Yes**	**No**	**Yes**	**No**	**Page or section number**	**Notes**
Does the plan list and describe BMPs that will address the causes/sources of pollution identified in Element A?	☐	☐	☐	☐		
Have critical and priority areas been identified? Is the methodology for identifying critical and priority areas explained?	☐	☐	☐	☐		
Is the rationale given for the selection of BMPs?	☐	☐	☐	☐		
Will the BMPs described in the plan effectively achieve load reductions?	☐	☐	☐	☐		
Are BMPs applicable to the pollutant causes and sources?	☐	☐	☐	☐		
In selecting and siting the BMPs at the sub-watershed level, are the estimates, assumptions and other data used in this analysis technically sound? Were design manuals or source of BMPs referenced?	☐	☐	☐	☐		

Other comments:

Element D. Technical and Financial Assistance

USEPA Handbook for Developing Watershed Plans to Restore and Protect Our Waters, 2008, Chapter 12

	Reviewer 1		Reviewer 2			
An estimate of the amounts of technical and/or financial assistance needed, associated costs, and/or the sources and parties that will be relied upon to implement this plan.	**Yes**	**No**	**Yes**	**No**	**Page or section number**	**Notes**
Estimate of Technical Assistance Needed						
Are potential sources of technical assistance included?	☐	☐	☐	☐		
Does the watershed plan describe the anticipated involvement of assisting agencies, watershed groups or volunteers?	☐	☐	☐	☐		
Are additional technical assistance needs identified?	☐	☐	☐	☐		
Estimate of Financial Assistance Needed						
Is a detailed cost estimate included?	☐	☐	☐	☐		
Does the cost estimate include a reasonable estimate of all planning and implementation costs?	☐	☐	☐	☐		
Are potential funding sources included?	☐	☐	☐	☐		

Other comments:

Element E. Education/Outreach

USEPA Handbook for Developing Watershed Plans to Restore and Protect Our Waters, 2008, Chapter 3-4

	Reviewer 1		Reviewer 2			
An information/education component that will be used to enhance public understanding of the project and encourage their early and continued participation.	**Yes**	**No**	**Yes**	**No**	**Page or section number**	**Notes**
Does the watershed plan identify relevant stakeholders?	☐	☐	☐	☐		
Does the watershed plan include methods to inform and engage stakeholders and landowners in continued participation and implementation?	☐	☐	☐	☐		
Were stakeholders involved in development of the plan?	☐	☐	☐	☐		
Does the plan provide describe the stakeholders?	☐	☐	☐	☐		
Do the stakeholders referenced in the plan seem appropriate for the objectives of the watershed plan?	☐	☐	☐	☐		
Does the watershed plan identify potential partners who may be involved in implementation?	☐	☐	☐	☐		
Do the education components emphasize the need to achieve water quality standards?	☐	☐	☐	☐		
Does the education components prepare stakeholders for continued proper operation and maintenance of the BMPs after the project is completed?	☐	☐	☐	☐		

Other comments:

Element F. Implementation Schedule

USEPA Handbook for Developing Watershed Plans to Restore and Protect Our Waters, 2008, Chapter 12

	Reviewer 1		Reviewer 2			
A schedule for implementing nonpoint source management measures identified in this plan that is reasonably expeditious.	**Yes**	**No**	**Yes**	**No**	**Page or section number**	**Notes**
Does the schedule/timeline present projected dates for the development and implementation of the actions needed to meet the goals of the watershed plan?	☐	☐	☐	☐		
Is the schedule appropriate based on the complexity of the impact and the size of the watershed?	☐	☐	☐	☐		
Does plan schedule include when plan will be reviewed and updated?	☐	☐	☐	☐		

Other comments:

Element G. Milestones Identified

USEPA Handbook for Developing Watershed Plans to Restore and Protect Our Waters, 2008, Chapter 13

	Reviewer 1		Reviewer 2			
A description of interim, measurable milestones for determining whether nonpoint source management measures or other control actions are being implemented.	**Yes**	**No**	**Yes**	**No**	**Page or section number**	**Notes**
Are the identified milestones measurable and attainable?	☐	☐	☐	☐		
Does the watershed plan identify incremental milestones with anticipated completion dates?	☐	☐	☐	☐		
Does the watershed plan include progress evaluations and possible “course corrections” as needed?	☐	☐	☐	☐		
Are the milestones appropriately linked with the proposed schedule in Element F?	☐	☐	☐	☐		

Other comments:

Element H. Criteria to Evaluate Load Reductions

USEPA Handbook for Developing Watershed Plans to Restore and Protect Our Waters, 2008, Chapter 12-13

	Reviewer 1		Reviewer 2			
A set of criteria that will be used to determine whether loading reductions are being achieved over time and substantial progress is being made towards attaining water quality standards.	**Yes**	**No**	**Yes**	**No**	**Page or section number**	**Notes**
Are criteria measurable and quantifiable?	☐	☐	☐	☐		
Do the proposed criteria effectively measure progress towards the load reduction goal?	☐	☐	☐	☐		
Are the types of data to be collected identified?	☐	☐	☐	☐		
Does the watershed plan include a review process to determine if anticipated reductions are being met?	☐	☐	☐	☐		
Is there a commitment to adaptive management in the watershed plan?	☐	☐	☐	☐		
Does plan include mechanism to track and report progress on BMP implementation to estimate progress toward achieving reduction targets; and to assist with updates to plan?						

Other comments:

Element I. Monitoring

USEPA Handbook for Developing Watershed Plans to Restore and Protect Our Waters, 2008, Chapter 12-13

	Reviewer 1		Reviewer 2			
A monitoring component to evaluate the effectiveness of the implementation efforts over time, measured against the criteria established under Element H.	**Yes**	**No**	**Yes**	**No**	**Page or section number**	**Notes**
Explanation of how monitoring fits into Plan						
Does the plan describe how monitoring will effectively measure the evaluation criteria identified in Element H?	☐	☐	☐	☐		
Does the watershed plan include a routine reporting element in which monitoring results are presented?	☐	☐	☐	☐		
Monitoring Methods						
Are the parameters appropriate?	☐	☐	☐	☐		
Is the number of sites adequate?	☐	☐	☐	☐		
Is the frequency of sampling adequate?	☐	☐	☐	☐		
Is the monitoring tied to a quality assurance plan?	☐	☐	☐	☐		

Other comments:

Appendix B: Summary of Qualifications

Watershed plan preparers should attach resumes and complete the qualifications form to describe their experience with the models used in the development of the watershed plan and other experience relevant to the development of the watershed plan to demonstrate that the plan was thoughtfully developed.

Watershed plan title: _____

Prepared by: _____

Submitted by: _____

Date plan submitted: _____

Email contact: _____

Phone: _____

Complete where applicable.

Role	Name
Modeling	
Best Management Practices	
Outreach	
Monitoring	
Partnerships	
QAPP preparation	

Documentation and References

Please include the following documents/references, if relevant, when your watershed plan is submitted to DEC for refer:

- Copy or link to water quality monitoring data QAPP
    - Indicate if QAPP was approved by DEC or other state or federal agency
- Copy or link to modeling QAPP
    - Indicate if QAPP was approved by DEC or other state or federal agency
- Copy or link to other reports or plans that were used to satisfy any of the nine elements

In addition, DEC recommends that a geodatabase be created to document and maintain the geospatial data and an electronic database to store data used in the development of the watershed plan. Data should consist of model input, output, monitoring, maps, and other relevant information to watershed plan development. Cataloging watershed plan information will help plan developers to update and revise analyzes, track trends and share data.