

AUG 23 2011

9 Element Watershed Based Plan Component Checklist for CWA Grant Funding⁽¹⁾
<p>Watershed Management Plan Title: “Sasco Brook Watershed-Based Plan: Recommendations for Protecting and Improving Water Quality in the Sasco Brook Watershed” (February 2011)</p>
<p>Waterbody ID, Hydrologic Unit Code, Watershed Boundary Data Set, or Hydrologic Response Unit: Waterbody Segment ID: CT7109-01_00 and CT109-00_02</p>
<p>River Basin: Subregional Basin Name and Code: Sasco Brook 7109 Regional Basin: Southwest Eastern Major Basin: Southwest Coast</p>
<p>County(ies): Fairfield County</p>
<p>Title of TMDL: a) A TMDL for This Watershed is (“X” as applicable): (X) Approved () In Draft b) No TMDL Has Been Developed to Date: ()</p>
<p>Comments: The Sasco Brook Watershed-Based Plan (the Plan) was prepared by the Sasco Brook Pollution Abatement Committee (SBPAC), a voluntary alliance (chaired by the Town of Westport Conservation Director) of representatives of governmental agencies and private organizations with authorities, responsibilities, and interests concerning water quality in the watershed. Participants include representatives of the conservation departments of the towns of Westport and Fairfield, Connecticut Department of Environmental Protection, Connecticut Bureau of Aquaculture, Westport-Weston Health District, USDA Natural Resources Conservation Service, Earthplace-The Nature Discovery Center, and the Fairfield County Hunt Club. The Plan contains recommendations to protect and improve water quality in the watershed and was prepared in the period 2009-2011. Recommendations of the Plan are non-binding and stress voluntary initiatives to reduce bacterial contamination from animal waste and septic systems that is sometimes carried by stormwater runoff into the brook, its tributaries, and ultimately into Long Island Sound. The watershed covers a little over 10 square miles in southwestern Connecticut. A significant part of the watershed is in the Town of Westport; most of the watershed is in the town of Fairfield; and a relatively small part of the watershed is in the Town of Easton.</p> <p>Included in the Plan is a review of the significant accomplishments for protecting and improving water quality in the watershed since the SBPAC was formed in 1991, along with some of the significant lessons learned by the SBPAC through its experience. The Plan sets forth a “Watershed Vision” of ten broad goals based on the concept of perpetual stewardship whereby all citizens, governmental officials, agencies, and organizations with an interest or authority pertaining to the watershed will think of themselves as having responsibilities to care for the brook and its watershed. The Plan also proposes an implementation strategy focused on cooperative, voluntary actions on the part of all watershed stakeholders to reduce nonpoint source pollution.</p>

In addition, the Plan includes a five-year implementation program consisting of specific actions for advancing the Watershed Vision, including: analytical measures to continue to develop understanding of the sources of pollution in the watershed; structural measures to influence the movement of stormwater; outreach and education measures to maintain and increase public interest and support for advancing the Watershed Vision; planning and regulatory measures focused on informed land-use planning and effective application of existing land-use regulations, and ongoing pursuit of available funds to implement best management practices for water quality management. A priority implementation measure is a microbial source tracking analysis, heretofore not conducted in any other watershed-based planning effort in Connecticut, to more precisely assess the most significant bacterial contamination sources affecting the brook.

The Plan was prepared as a guidance document with an emphasis on continued public outreach and education initiatives that will be pursued through already existing programs, including the programs of the SBPAC and the agencies and organizations represented on the committee. A principal goal of the Watershed Vision is to encourage voluntary, personal stewardship actions that will reduce the risk of pollution without creating an additional, undue burden on municipal budgets.

⁽¹⁾In order to be eligible for CWA Section 319 incremental* grant (watershed protection) funding - or to submit a Section 319 grant proposal - a copy of the EPA approved 9 element watershed based plan and this completed checklist must be on file with the Connecticut Department of Environmental Protection's Bureau of Water Protection and Land Reuse. Components and formatting of this checklist may change in response to federal grant funding, grant guideline revisions, or other program initiatives or purposes as deemed appropriate by EPA/CT-DEP. Note that preparation or submittal of an EPA 9 Element watershed based plan, or this checklist, does not obligate the EPA or CT DEP to partially or fully fund any part of a watershed based plan or recommended implementation project.

* Incremental grant background: Congress enacted Section 319 of the Clean Water Act in 1987, establishing a national program to control nonpoint sources of water pollution. During the last several years EPA has been working with the States to strengthen its support for watershed-based environmental protection by encouraging local stakeholders to work together to develop and implement watershed-based plans appropriate for the particular conditions found within their communities. In particular, EPA and the States have focused attention on waterbodies listed by States as impaired under Section 303(d) of the Clean Water Act. Toward this end States must use \$100 million (\$1 million for Connecticut) of Section 319 funds (referred to as "incremental funds") to develop watershed-based plans that address nonpoint source impairments in watersheds that contain Section 303(d)-listed waters and implement recommendations incorporated in these plans.

Component (A) Identification of Pollutant Causes and Sources	Yes	No	Chapter, Section, Table, List, etc.	Page No.(s)
I. The plan identifies the pollutant <i>causes</i> and <i>sources</i> or groups of similar sources that will need to be managed to achieve the load reductions identified in this watershed based plan or a TMDL, including page number where load reductions are found in this plan.)	X			

<p><u>Comments:</u></p> <p>Causes and sources of pollution in the watershed are summarized in the "Introduction and Summary" section; Chapter Two (Water Quality Issues and Planning Considerations); and Chapter Three (Sasco Brook Pollutant Loading Review). Included in Chapter Three is an estimate of pollution load risks from wildlife, domestic animal, and septic system fecal contaminant sources. This estimate was prepared utilizing a method developed by the SBPAC for the purpose of the Plan.</p>			<p>Introduction and Summary</p> <p>Chapter Two: Water Quality Issues and Planning Considerations</p> <p>Chapter Three: Sasco Brook Pollutant Loading Review</p>	<p>See Non-point Source Pollution" section on p. viii; "Total Maximum Daily Load" section on p. x</p> <p>See Question 1 (What are the sources and types of water pollution to be concerned about in the Sasco Brook Watershed?) on p. 2-2.</p> <p>See section "Estimating Pollution Load Risks from Fecal Contaminant Sources" on pp. 3-7... through 3-12; see tables 3-1 through 3-4.</p>
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Component (B) Pollutant Load Reduction Estimates	Yes	No	Chapter, Section, Table, List, etc.	Page No.(s)
<p>I. The plan provides estimates of load reductions needed to delist water bodies identified in the watershed based plan. <u>This is a requirement of the Watershed Based Plan.</u></p> <p><u>Comments:</u></p> <p>Utilizing the findings of the Pollutant Loading Review described in Chapter Three of the Plan, the SBPAC has established pollutant load reduction goals to meet the dry and wet flow reduction goals of the</p>	X		Chapter Six: A Strategy for Achieving the	pp. 6-4 through 6-9

<p>Sasco Brook TMDL. The Plan's load reduction goals are presented in Chapter Six.</p>			<p>Watershed Vision</p> <p>Table 6-1: Potential Bacterial Reduction Assessment</p> <p>Table 6-2: Reduction Calculations</p>	<p>p. 6-8</p> <p>p. 6-9</p>
<p>II. The plan provides <i>estimates</i> of potential load reductions for each pollutant cause or source, or groups of similar sources that need to be managed. (If "No" or "N/A" provide comments below.)</p> <p><u>Comments:</u></p> <p>Utilizing the findings of the Pollutant Loading Review described in Chapter Three (Sasco Brook Pollutant Loading Review), the SBPAC's pollutant load reduction goals (see Sec. I above) are presented in Chapter Six of the Plan with regard to each bacterial source category, including human, canine, equine, terrestrial wildlife, and waterfowl sources.</p>	<p>X</p>		<p>Chapter Six: A Strategy for Achieving the Watershed Vision</p> <p>Table 6-1: Potential Bacterial Reduction Assessment</p> <p>Table 6-2: Reduction Calculations</p>	<p>pp. 6-4 through 6-9</p> <p>p. 6-8</p> <p>p. 6-9</p>
<p>III. A model (as outlined in Attachment B.IV.) is used to <i>estimate</i> pollutant load reductions (assumptions and limitations should be stated).</p> <p><u>Comments:</u></p> <p>For the purpose of the Plan, the SBPAC developed a method for assessing potential pollution sources and the relative contribution of each source. The method assesses human-based bacterial load potential, domestic animal bacterial load potential, and wildlife bacterial load potential. The method, along with the assumptions used to develop the method and its limitations, is presented in Chapter Three (Sasco Brook Pollutant Loading Review). The results of the Plan's</p>	<p>X</p>		<p>Chapter Three: Sasco Brook Pollutant Loading Review</p> <p>Table 3-1: Estimate of Potential</p>	<p>pp. 3-1 through 3-17</p> <p>p. 3-14</p>

Pollutant Loading review are then utilized to develop the Plan's pollutant load reduction goals that are presented in Chapter Six (A Strategy for Achieving the Watershed Vision).

Bacterial Loading Septic System Assessment

Table 3-2: Estimate of Potential Bacterial Loading Domestic Animal Assessment

p. 3-15

Table 3-3: Estimate of Potential Bacterial Loading Wildlife Assessment

p. 3-16

Table 3-4: Potential Bacterial Loading Relative Assessment

p. 3-17

Chapter Six: A Strategy for Achieving the Watershed Vision

pp. 6-4 through 6-9

Table 6-1: Potential Bacterial Reduction Assessment

p. 6-8

Table 6-2: Reduction Calculations

p. 6-9

Component (C) Best Management Practices	Yes	No	Chapter, Section, Table, List, etc.	Page No.(s)
<p>I. The plan provides locations where <i>potential</i> BMPs may be implemented.</p> <p><u>Comments</u></p> <p>Locations for implementing Best Management Practices for water quality management are described in Chapter Seven (Five-Year Program for Advancing the Watershed Vision) and shown on Map 7-1.</p>	X		<p>Chapter Seven: Five-Year Program for Advancing the Watershed Vision</p> <p>Map 7-1: Area-Specific Initiatives for Protecting and Improving Water Quality</p>	<p>pp. 7-1 through 7-12</p> <p>Following p. 7-12</p>
<p>II. The plan identifies <i>potential</i> BMPs to be installed in "critical" areas.</p> <p><u>Comments:</u> This is a requirement of the Watershed Based Plan</p> <p>Critical areas for installation of Best Management Practices and other Plan implementation actions are identified in Chapter Seven (Five-Year Program for Advancing the Watershed Vision) and are represented by the geographic areas identified as the locations for implementation actions identified as "major milestones for implementation of the Watershed-Based Plan." These locations include the area for implementation of the Fairfield County Hunt Club Pollution Reduction Project described in Chapter Seven and Appendix E, and the sampling location for the Fecal Bacteria Reduction Project described in Chapter Seven and Append D.</p>	X		<p>Chapter Seven: Five-Year Program for Advancing the Watershed Vision</p> <p>Map 7-1: Area-Specific Initiatives for Protecting and Improving Water Quality</p> <p>Appendix D: Proposed E. Coli Ribotyping Project (Fecal Bacteria Reduction Project)</p> <p>Appendix E: Proposed Fairfield County Hunt Club Pollution Reduction Project</p>	<p>pp. 7-1 through 7-12</p> <p>Following p. 7-12</p>

Component (D) Financial and Technical Assistance	Yes	No	Chapter, Section, Table, List, etc.	Page No.(s)
<p>I: The plan provides estimates of the financial and technical assistance that will be needed to implement the plan. <u>This is a requirement of the Watershed Based Plan.</u> <u>Comments:</u> This section will include BOTH estimates and potential funding sources for project implementation costs AND annual maintenance costs of the project.</p> <p>Estimates and sources of financial and technical assistance needed to implement the Plan are included in Chapter Six (A Strategy for Achieving the Watershed Vision) and Chapter Seven (Five-Year Program for Advancing the Watershed Vision).</p> <p>In Chapter Seven, which outlines the recommended five-year program for advancing the Watershed Vision, estimated costs are assigned to certain of the Plan's analytical and structural implementation actions and the first recommended public outreach and education project. In addition, the Plan identifies responsibilities for implementing each of the implementation actions described in Chapter Seven.</p>	X		<p>Chapter Six: A Strategy for Achieving the Watershed Vision—Sec. 4: Identify and Pursue Implementation Funds and Sec. 5: Identify and Pursue Technical Assistance for Plan Implementation</p> <p>Chapter Seven: Five-Year Program for Advancing the Watershed Vision</p>	<p>pp. 6-12 through 6-17</p> <p>pp. 7-1 through 7-12</p>
<p>II: The plan identifies sources and authorities that will be relied upon to implement the plan. <u>Comments:</u></p> <p>The “institutional framework” for watershed-based planning consists of a number of agencies and private organizations as well as many laws, regulations, plans, and programs that affect water quality in the watershed. In addition, private landowners and business owners in the watershed have significant rights and interests that are part of the institutional framework that will be relied upon to implement the Plan. The institutional framework is summarized in Chapter One (Background Information for the Watershed-Based Plan).</p> <p>Sources and authorities for Plan implementation are also described throughout Chapter Six (A Strategy for Achieving the Watershed Vision) and Chapter Seven (Five-Year Program for Advancing the Watershed Vision). Described in Sec. I above, potential source of</p>	X		<p>Chapter One: Background Information for the Watershed-Based Plan. See the section on the “Institutional Framework for Watershed-Based Planning”</p> <p>Chapter Six: A Strategy for Achieving the</p>	<p>pp. 1-8 through 1-20</p> <p>pp. 6-1 through 6-18</p>

<p>Plan implementation funds are identified in Chapter Six along with sources of technical assistance. Responsibilities for implementing each of the recommended Plan implementation actions are included in Chapter Seven</p>			<p>Watershed Vision</p> <p>Chapter Seven: Five-Year Program for Advancing the Watershed Vision</p>	<p>pp. 7-1 through 7-12</p>
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<p>Component (E) Education and Outreach</p>	<p>Yes</p>	<p>No</p>	<p>Chapter, Section, Table, List, etc.</p>	<p>Page No.(s)</p>
<p>I. The plan provides an information/education component that will enhance public understanding of the plan and encourage their early and continued participation in project development. Note: This education and outreach component must link the information to model demonstration or pilot projects that stakeholders can implement post WBP development.</p> <p><u>Comments:</u></p> <p>The Plan emphasizes continued public outreach and education initiatives that will be pursued through already existing programs, including the programs of the SBPAC and the agencies and organizations represented on the SBPAC. The Watershed Vision presented in Chapter Five (A Watershed Vision for Protecting and Improving Water Quality) calls for new and effective outreach programs to inform and educate the public concerning watershed values and opportunities for personal stewardship initiatives.</p> <p>A supporting element of the recommended strategy for achieving the Watershed Vision calls for the continued sharing of information concerning water resources and other relevant conditions in the watershed. (See Chapter Six: A Strategy for Achieving the Watershed Vision.)</p>	<p>X</p>		<p>Chapter Five: A Watershed Vision for Protecting and Improving Water Quality; see Goal 3</p> <p>Chapter Six: A Strategy for Achieving the Watershed Vision: See Sec. 7: "Continue to Advance the Development, Maintenance, and Sharing of Information Concerning the Sasco Brook Watershed"</p>	<p>p. 5-4</p> <p>p. 6-18</p>

Specific public outreach and education measures and initiatives intended to maintain and increase public interest, support, and participation for advancement of the Watershed Vision are set forth in Chapter Seven (Five-Year Program for Advancing the Watershed Vision).			Chapter Seven: Five-Year Program for Advancing the Watershed Vision: See the section concerning "Public outreach and Education Measures and Initiatives"	pp. 7-9 through 7-10.
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Component (F) Plan Implementation Schedule	Yes	No	Chapter, Section, Table, List, etc.	Page No.(s)
<p>I. The plan provides a schedule for implementing management measures. (Applicant should base implementation timetable on BMPs in "Component C" above.)</p> <p><u>Comments:</u></p> <p>A proposed schedule for implementing the Plan's recommended implementation actions, including analytical measures and initiatives, structural measures and initiatives, public outreach and education measures and initiatives, and planning and regulatory measures and initiatives, is presented on Table 7-1 in Chapter Seven (Five-Year Program for Advancing the Watershed Vision). Aspects of the implementation schedule are contingent on funding availability.</p>	X		<p>Chapter Seven: Five-Year Program for Advancing the Watershed Vision</p> <p>Table 7-1: Five-Year Implementation Schedule</p>	Following p. 7-12
Component (G) Interim Milestones	Yes	No	Chapter, Section, Table, List, etc.	Page No.(s)
<p>I. The plan provides a list or description of interim milestones for determining whether NPS management measures are being implemented.</p> <p><u>Comments:</u></p> <p>The Plan's recommended implementation actions described in Chapter Seven (Five-Year Program for Advancing the Watershed Vision) include actions identified as major milestones for implementation of the Watershed-Based Plan. (Major milestone actions are highlighted on the Five-Year Implementation Schedule presented as Table 7-1.) Several of these milestone actions, including the microbial source tracking analyses, water quality data assessments, and Fairfield County Hunt Club pollution reduction project, are also intended to serve as indicators of the success of the Plan's best management practices for reducing bacterial pollution.</p>	X		<p>Chapter Seven: Five-Year Program for Advancing the Watershed Vision</p> <p>Table 7-1: Five-Year Implementation Schedule</p>	<p>pp. 7-1 through 7-12</p> <p>Following p. 7-12</p>

Component (H) Monitoring and Assessment	Yes	No	Chapter, Section, Table, List, etc.	Page No.(s)
<p>I. A set of criteria that can be used to determine whether loading reductions are being achieved over time and progress is being made towards attaining water quality standards.</p> <p><u>Comments:</u></p> <p>The Plan's pollutant load reduction goals established in Chapter Six (A Strategy for Achieving the Watershed Vision) are essentially the criteria by which to determine the success of the Plan's initiatives to protect and improve water quality in the watershed. Progress toward achieving these goals will be measured and reviewed through the ongoing monitoring initiatives noted in (D)(1) below.</p>	X		Chapter Six: A Strategy for Achieving the Watershed Vision: See Sec. 3: "Apply Pollutant Load reduction Goals to Pollutant Sources"	pp. 6-4 through 6-7

Component (I) Plan Implementation Effectiveness	Yes	No	Chapter, Section, Table, List, etc.	Page No.(s)
<p>I. A monitoring component to evaluate the effectiveness of the implementation efforts over time measured against the criteria established under item (H).</p> <p><u>Comments:</u> The WBP must note that revisions will be made to improve the effectiveness of implementation efforts if monitoring shows no improvement post BMP efforts.</p> <p>The Plan emphasizes continued monitoring of water quality and the conditions affecting water quality in the watershed, including monitoring using the historically established in-stream sampling locations. The Watershed Vision presented in Chapter Five (A Watershed Vision for Protecting and Improving Water Quality) calls for effective monitoring of watershed conditions, including monitoring to identify: a) the presence of bacterial contamination and other contaminants; b) relevant trends concerning water quality; and c) the effectiveness of applied best management practices and other measures for reducing and avoiding NPS pollution and otherwise implementing the Plan.</p>	X		Chapter Five: A Watershed Vision for Protecting and Improving Water Quality; see Goal 8	pp. 5-7 and 5-8

<p>A priority element of the recommended strategy for achieving the Watershed Vision recognizes current and future water quality monitoring as an essential activity to confirm or adjust the significance of each pollution source identified during the watershed-based planning process. The strategy also calls for continued volunteer support for implementing the Watershed Vision, including volunteer support for water quality monitoring. (See Chapter Six: A Strategy for Achieving the Watershed Vision.)</p> <p>Specific monitoring initiatives are set forth in Chapter Seven (Five-Year Program for Advancing the Watershed Vision), including a five-year seasonal and event-based water quality sampling and testing program utilizing the 12 historically established in-stream sampling locations in the watershed and three identified storm drains in the vicinity of the Route1/Post Road corridor. Other recommended implementation actions identified in Chapter Seven also have a monitoring component. Water quality monitoring sites are shown on Map 7-1.</p> <p>The Plan also makes clear that Plan amendments will be considered pending new information, including information developed through the ongoing monitoring initiatives.</p>			<p>Chapter Six: A Strategy for Achieving the Watershed Vision:</p> <p>See Sec. 4(a) concerning identification of water quality management measures;</p> <p>See also Sec.2 concerning maintaining and expanding the involvement of volunteers</p> <p>Chapter Seven: Five-Year Program for Advancing the Watershed Vision:</p> <p>See the section concerning "Fecal Contamination Assessment"</p> <p>See the section concerning "Watershed-Based Plan Review and Amendments"</p> <p>Map 7-1: Area-Specific Initiatives for Protecting and Improving Water Quality</p>	<p>pp. 6-7 and 6-10</p> <p>p. 6-12</p> <p>pp. 7-2 and 7-3</p> <p>p. 7-11</p> <p>Following p. 7-12</p>
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**Watershed Management Plan Component Checklist
for CWA Grant Funding*
Acknowledgment**

I/we, the undersigned, believe that the watershed plan addresses Elements "a-i" of the EPA approved watershed based plan model elements - particularly those elements pertaining to broadly estimating pollutant load reductions that may result from implementation of best management practices - as presented in the, "Nonpoint Source Program and Grants Guidelines for States and Territories. Federal Register. October 23, 2003. (Volume 68, Number 205. pp. 60658-60660).
<http://www.epa.gov/fedrgstr/EPA-WATER/2003/October/Day-23/w26755.htm>

I/we acknowledge that information provided by this checklist is based on a dynamic watershed based plan. Certain components of the 9 element watershed based plan (and this checklist) may need to be updated as data and information improves.

The signatory(ies) below are under no obligation to partially or fully fund or implement a watershed based plan, or any part thereof, unless funded by an EPA/CT-DEP approved Section 319 grant in accordance with an approved Section 319 workplan.

This checklist is submitted for CWA Section 319/CT-DEP Nonpoint Source Program grant program purposes by:

<u>Alvin M. Mozan</u> Signature/Title	<u>Conservation Director</u> Town of Westport, CT	<u>August 17, 2011</u> Date
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Signature/Title	Date

*This CWA Grant Funding Source includes, but is not limited to, CWA Section 319 grant funding.