

<b>Watershed Management Plan Component Checklist for CWA Section 319 Grant Funding<sup>(1)</sup></b>	
<b>Watershed Management Plan Title:</b>	
<b>Waterbody ID, Hydrologic Unit Code, Watershed Boundary Data Set, or Hydrologic Response Unit:</b>	
<b>River Basin:</b>	
<b>County(ies):</b>	
<b>Title of TMDL:</b>	
a) A TMDL for This Watershed is ("X" as applicable): <input type="checkbox"/> Approved <input type="checkbox"/> In Draft b) No TMDL Has Been Developed to Date: <input type="checkbox"/> c) The Watershed Plan Addresses a Non-Impaired or Threatened Waterbody: <input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Comments:</b>	

<sup>(1)</sup>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 watershed plan and this completed checklist must be on file with the ADEM Nonpoint Source Unit. 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/ADEM. Note that preparation or submittal of a watershed management plan, or this checklist, does not obligate the ADEM or EPA to partially or fully fund any part of a watershed management plan.

<b>Component (A) Identification of Pollutant Causes and Sources</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Chapter, Section, Table, List, etc.</b>	<b>Page No.(s)</b>
I. The plan identifies the pollutant <i>causes</i> and <i>sources</i> <u>or</u> groups of similar sources that will need to be managed to achieve the load reductions identified in a TMDL, or elsewhere in this plan. (If “No” or “N/A” provide comments below.) <u>Comments:</u>					
II. The plan addresses <i>other</i> watershed/natural resource/stakeholder issues and concerns that <i>may be</i> problematic, but are <i>not</i> addressed by a TMDL. (If “No” or “N/A” provide comments below.) <u>Comments:</u>					

<b>Component (B) Pollutant Load Reduction Estimates</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Chapter, Section, Table, List, etc.</b>	<b>Page No.(s)</b>
I. The plan provides estimates of load reductions needed to achieve a TMDL. (If “No” or “N/A” provide comments below.) <u>Comments:</u>					
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.) <u>Comments:</u>					
III. The plan provides locations where <i>potential</i> BMPs may be implemented. (If “No” or “N/A” provide comments below.) <u>Comments:</u>					
IV. A reasonable approach is used to <i>estimate</i> pollutant load reductions (assumptions and limitations should be stated). (If “No” or “N/A” provide comments below.) <u>Comments:</u>					

<b>Component (C) Best Management Practices</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Chapter, Section, Table, List, etc.</b>	<b>Page No.(s)</b>
I. The plan identifies <i>potential</i> BMPs to be installed in “critical” areas. <u>Comments:</u> (If “No” or “N/A” provide comments below.)					

<b>Component (D) Financial and Technical Assistance</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Chapter, Section, Table, List, etc.</b>	<b>Page No.(s)</b>
I: The plan provides estimates of the financial and technical assistance that will be needed to implement the plan. (If “No” or “N/A” provide comments below.) <u>Comments:</u>					
II: The plan identifies sources and authorities that will be relied upon to implement the plan. (If “No” or “N/A” provide comments below.) <u>Comments:</u>					

<b>Component (E) Education and Outreach</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Chapter, Section, Table, List, etc.</b>	<b>Page No.(s)</b>
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. (If “No” or “N/A” provide comments below.) <u>Comments:</u>					

<b>Component (F) Plan Implementation Schedule</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Chapter, Section, Table, List, etc.</b>	<b>Page No.(s)</b>
I. The plan provides a reasonably expeditious schedule for implementing management measures. (Should base implementation timetable on BMPs in "C" above.) <u>Comments:</u> (If "No" or "N/A" provide comments below.)					

<b>Component (G) Interim Milestones</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Chapter, Section, Table, List, etc.</b>	<b>Page No.(s)</b>
I. The plan provides a list or description of interim milestones for determining whether NPS management measures are being implemented. (If "No" or "N/A" provide comments below.) <u>Comments:</u>					

<b>Component (H) Monitoring and Assessment</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Chapter, Section, Table, List, etc.</b>	<b>Page No.(s)</b>
I. A set of criteria that can be used to determine whether loading reductions are being achieved over time and substantial progress is being made towards attaining water quality standards, and if not, the criteria for determining whether the watershed plan needs to be revised - or if a NPS TMDL has been established - whether the NPS TMDL needs to be revised. (If "No" or "N/A" provide comments below.) <u>Comments:</u>					

<b>Component (I) Plan Implementation Effectiveness</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Chapter, Section, Table, List, etc.</b>	<b>Page No.(s)</b>
I. A monitoring component to evaluate the effectiveness of the implementation efforts over time measured against the criteria established under item (H). (If "No" or "N/A" provide comments below.) <u>Comments:</u>					

**Watershed Management Plan Component Checklist for CWA Section 319 Grant  
Funding Acknowledgment**

I/we, the undersigned, believe that the watershed plan takes reasonable steps to address “a-i” watershed plan 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 plan. Certain components of the watershed plan (and this checklist) may need to be updated over time as data and information improves.

**It is understood that this checklist will be used for ADEM Nonpoint Source Unit informational gathering purposes only.** The signatory(ies) below are under no obligation to partially or fully fund or implement a watershed plan, or any part thereof, unless funded by an EPA/ADEM approved Section 319 grant in accordance with an approved Section 319 workplan.

This checklist is submitted for CWA Section 319/ADEM Nonpoint Source Unit grant guideline information gathering purposes by:

\_\_\_\_\_  
Signature/Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature/Title

\_\_\_\_\_  
Date

- Attachment -  
**Watershed Management Plan Component Checklist  
 Helpful Notes and Examples**

**Component (A): Identification of Pollutant Causes and Sources**

- I. Causes may include low dissolved oxygen, organic enrichment, nutrients, ammonia, pathogens, siltation, pH, metals, habitat alteration, turbidity, pesticides, priority organics, etc.

Sources or "groups of similar sources" may include agriculture (pasture grazing; animal feeding operations; crop production, irrigation, etc.), urban/construction (stormwater runoff; industrial/municipal discharges, impervious surfaces, etc.), silviculture (forest planting/harvesting), land disposal (illegal dump; littering, septic tanks/septage disposal, etc.), resource extraction (surface mining); flow regulation/modification; etc.

- II. "Other" watershed issues and concerns may include public health issues, aesthetic/recreational/beneficial uses, erosion/sedimentation, water supply/drinking water protection, threatened and endangered species, etc. In addition, "Other" may refer to threats or "potential" impairments documented in watershed assessment surveys, studies, plans and reports (e.g., SWCD watershed assessments and ranking).

**Component (B): Pollutant Load Reduction Estimates**

- I. TMDL load reduction estimates should be derived from an approved TMDL. TMDL parameters may include organic enrichment/dissolved oxygen (OE/DO), pathogens, nutrients (Total Nitrogen (TN) / Total phosphorus (TP), siltation, pH, metals, etc., and should be expressed as pounds/yr, tons/yr, percent, etc. Load reduction data may be descriptive or in tabular/list format.

Example: Low Dissolved Oxygen/Organic Loading for (Name) Creek. The steady state TMDL spreadsheet water quality model (SWQM) developed by ADEM estimated that total organic loading for non-forested, nonpoint sources was 6.1 lbs./day. This will require a theoretical total organic loading reduction of 61.6% to bring (Name) Creek into compliance with the Fish and Wildlife water quality standard for dissolved oxygen (D.O.) of 5 mg/L. Since there are no point sources in the watershed, TMDL reductions will be sought from existing nonpoint sources.

Existing NPS Load	Reduced Load Non-Forest	Reduced Load Non-Forest	% Reduction	% Reduction Non-Forest
lbs./day	lbs./day	lbs./day	NPS	NPS
11.2	6.1	4.3	45.5%	61.6%

- II. Load reduction *Estimates* of each pollutant load reduction *to be targeted* by the plan should be included. For Section 319 funding purposes, pre-implementation BMP estimates of nitrogen, phosphorus, and sediment load reductions must be provided, if applicable. Estimates should be expressed as *number, pounds, tons, acres, miles, etc.*

Estimates are *predicted* load reductions expected from pre-implementation BMPs for a particular *cause* (e.g., siltation, nutrients) and/or *source* (e.g., agriculture, pasture grazing)

*Example:*

Pollutant:	Unit	Pre-BMP	Post-BMP	% Reduction Estimate
Sediment	tons/acre	12.69	6.8	47
Organic N	pounds/acre	14.8	11.46	23
Nitrate (NO <sub>3</sub> )	pounds/acre	2.22	1.75	47
Organic P	pounds/acre	2.44	1.30	11
Soluble P	pounds/acre	0.19	0.08	57

III. Refers to *anticipated* locations, if known (pre-BMP implementation). *Potential* sites should be identified using a narrative description; photos, land use/topographic map, etc. Lat/Long and GPS coordinates should also be included, if BMP sites are obvious and definite.

*Example:*

TMDL Causes: Siltation, Nutrients

TMDL Sources: Agriculture, Pasture Grazing

BMP Location: Approx. (X) Miles (*direction*) of (*Town*), AL. *Tributary to (Name) Creek.*

Pasture is approx. (X) mile (*direction*) of the County Road (#) bridge crossing.

IV. Load reduction *estimates* may be determined using models (e.g., EPA Region 5, StepL, SWAT, IPSI, RUSLE, etc), technical/research references, or WQ monitoring and assessment data. Model assumptions and limitations should be stated.

Note: Pollutant load reductions for most on-the-ground management measures can usually be estimated using desktop models or water quality monitoring data for BMPs such as stream bank restoration, cover crops, buffers, nutrient management, seeding and mulching, etc. Estimates of load reduction associated with education and outreach (public involvement; behavior/attitudes changes), technical assistance, land-use ordinances, habitat/biological responses, etc., may not be easily discernable.

Note: Pre- and post-BMP implementation nitrogen, phosphorus, and sediment load reduction estimates, *as applicable to the project*, are *required* for Section 319 grant funding.

**Component (C): Best Management Practices**

Note: The plan should provide a management practice description; numbers, types, etc.

*Example:*

Problem: Approx. 75 head of beef cattle with unrestricted access to the (*name of impaired waterbody*), grazing on 30 acres of unimproved pasture land.

Solution: Install NRCS Conservation Practice Standard 914. Livestock Fencing: 6,680 feet.

Note: Not all best management measures will be “on-the-ground” type practices. Some “best” management activities may involve the establishment of committees, hiring coordinators, planning, monitoring/assessments, developing local ordinances, regulation/enforcement, providing technical assistance, establishing citizen volunteers, conducting outreach/training, etc. Load reductions estimates as a result of these types of measures may be difficult to quantify. It is acknowledged that BMPs are *estimates* and *may* need to be modified over time as new information is derived, land use’s change, and as the watershed plan is implemented.

**Component (D): Financial and Technical Assistance**

I. *Example 1:*

Technical Assistance: Fencing installed to control cattle with unrestricted access to the creek.

Financial Assistance: Livestock Fencing @ 6,680 ft. @ \$1/ft = \$6,680

Section 319: \$2,672 (40% of total cost)

EQIP: \$2,004 (30% of total cost)

Landowners: \$2,004 (30% of total cost)

*Example 2:*

NRCS Conservation Practice Standard No.	BMP Description	No.	Unit of Measure	Avg. Cost	Lead Entity	Federal \$	Nonfederal \$	Other \$	Total Cost
914	Livestock Fencing	6,680	feet	\$1 / ft	"Name" County SWCD	\$2,672 (Sec. 319)	\$2,004 (Landowner)	\$2,004 (EQIP)	\$6,680

- II. Watershed plan stakeholders should be identified, and roles and responsibilities defined. A source refers to a federal, state, or local agency; or landowners/landusers, citizen volunteers, foundations/grants/loans/donations, etc., that will provide watershed plan implementation services/funding.

Authorities refer to laws, rules, regulations, grant/loan programs, etc., that may be necessary to implement the watershed plan, for example: Federal Water Pollution Control Act, as amended; Alabama Water Pollution Control Act, as amended; Public Health Dept. Rules; CWA Section 319, USDA-Environmental Quality Incentives Program; USDA Conservation Reserve Program; Surface Mining Control and Reclamation Act; other Federal/State Natural Resource/Land Management Programs; local ordinances; etc.

Example: Cooperator Roles and Responsibilities:

The “X” Resource Conservation and Development Council (RC&D): The RC&D program is a partnership between local people and the agencies of the US Dept. of Agriculture (USDA). The mission of the RC&D is “...to encourage and improve the capability of state and local nonprofit organizations in rural areas to plan, develop, and carry out programs for resource conservation and development.” Under authority of Public Law 97-98, the RC&D Council helps local stakeholders to plan, conserve, and utilize natural resources to solve locally identified problems. The RC&D Coordinator, provided by the Natural Resources Conservation Service (NRCS), will help find resources, money, skills, and materials to assist in implementing the watershed plan. Specifically, the RC&D implement erosion and sediment control practices, provide project guidance and follow-up to ensure projects stay on track and budget, provide semi-annual reports for the duration of the project, and coordinate field days.

#### **Component (E): Education and Outreach**

Education and Outreach may be “*watershed-scale*” in scope and include, “Partnership” meetings and conferences; school/civic club/service organization presentations; news articles/feature stories; displays, fairs/festivals; tours/field days; agency/citizen cooperation in selection, design, and implementation of management measures, conservation practice “sign-ups” etc.

Efforts may also be more “*site specific focused*” or “*small-scale*” such as targeting a single TMDL cause or source site (e.g. Farmer Smith’s cows have unrestricted access to the creek and are the only cause and source of pollutants in the watershed. One-on-One meetings and conservation practice sign-ups may be the only educational tools needed to effectively protect water quality).



**Component (F): Plan Implementation Schedule**

An implementation schedule refers to tasks that ensure that the watershed plan’s goals and objectives will be achieved in an expeditious manner.

*Example A:*

Milestone 1: The name County SWCD will hire a Watershed Project Coordinator by date.

Milestone 2: 16,680 of Livestock Fencing (NRCS Conservation Practice Standard 914) will be installed by the name County SWCD by date.

*Example B:* Management measures in “F” and “Interim” milestones in “G” below may be combined into a “Milestone Table” or List, as presented below:

No.	Activities and Interim Practices to Assure that Project Implementation is Timely and Reasonable	Milestone Schedule	Responsible Entity
1.	Milestone: Conduct an area-wide watershed project outreach campaign to inform citizens about the project, its benefits, to encourage enthusiasm and input, and to build and sustain project support for the duration of the project period	Begin: 03/15/05 End: 03/15/08	SWCD
1a.	<u>Interim Measure:</u> Develop a stakeholder “contact list” to provide quarterly communication via telephone, e-mail, website, personal contact, meetings, etc.	Begin: 04/15/05 End: 03/15/08	ADEM
1b.	<u>Interim Measure:</u> Document all correspondence with stakeholders, citizen info. request, and records of meetings for the duration of the project period	Begin: 03/15/05 End: 03/15/08	RC&D
1c.	<u>Interim Measure.</u> Coordinate the development and distribution of newsletter articles, brochures, etc, with the Watershed Project Steering Committee	Begin: 03/15/05 End: 03/15/08	ACES
2.	Etc.		
2a.	Etc.		

**Component (G): Interim Milestones**

*Interim* refer to step-wise or intervening measures that ensure the implementation schedule (“F” above) will be achieved in an expeditious manner, and may include: RFPs/contracts executed; hiring a coordinator, to coordinate specific types/number/dates management practices are to be installed, to identify specific BMP sites/site preparation; various stakeholder coordination/information delivery approaches; monitoring/assessments; outreach/training materials to be produced/distributed; etc.

*Examples:*

*Interim Milestone 1:* The SWCD will issue an RFP to hire a Watershed Project Coordinator by date.

*Interim Milestone 2:* The name County SWCD will execute a contract to install Fencing by date.

*Interim Milestone 3:* The SWCD will conduct *semi-annual* site visits to ensure BMPs are properly maintained.

**Note:** Interim Measure(s) may be combined in a tabular format as per *Example “B”* under Component “F” above.

### **Component (H): Monitoring and Assessment**

Note: The following items are examples of a watershed monitoring and assessment component. One or more - or none - may apply to any particular watershed plan.

- a) Water quality samples and stream assessments to assess load reductions will be collected post-BMP implementation (monthly, quarterly, semiannually, etc.) by (agency/cooperator name).
- b) Water quality samples and stream assessments for the watershed/impaired waterbody name will be collected post-BMP implementation on or before date by (agency/cooperator name).
- c) Post-BMP implementation data may be compared with any previously collected water quality data and watershed information to determine if pollutant load reductions have been achieved. If no water quality improvements are noted, the watershed plan may be revised, and/or the types, numbers, locations, etc, of BMPs modified by stakeholders.
- d) Post-BMP implementation data may be compared with any previously collected water quality data and watershed information to determine the scope of pollutant loadings. If non-impaired waters are threatened, the watershed plan may be revised, and/or the types, numbers, locations, etc, of BMPs modified by stakeholders to protect against further degradation.
- e) Post-BMP water quality monitoring data may be compared with NPS TMDL targets to determine if NPS pollutant load reductions have been achieved. If no load reductions have been achieved, the TMDL may be revised by ADEM, as needed.
- f) Information collected from ADEM 5-year rotational river basin assessments, as well as trend, reservoir, or other water quality monitoring programs - may be used to assess basin-wide and targeted watershed pollutant loading. This data may be used to determine if load reductions are being achieved over time as a result of BMPs installed. If water quality standards are not being met during the 5-year period for a targeted 303(d) listed impaired water, stakeholders may re-evaluate management practice targeting and effectiveness and/or whether the TMDL should be revised.
- g) The development of load reduction success indicators (to include meeting water quality standards) will be a collaborative effort among watershed stakeholders. Evaluation criteria developed by stakeholders may be reviewed (semiannually/annually) as BMPs are installed.
- h) Establishment and implementation of monitoring activities will be coordinated with watershed project partners pre- and post-BMP implementation. Load reduction success may be based on an evaluation of available data and information collected over time. If load reduction criteria are not progressing as expected, stakeholders may revise and re-distribute the watershed plan within (X) months of the evaluation.
- i) If monitoring indicates load reduction expectations are not being achieved incrementally for the resources available/expended, watershed stakeholders may investigate the effectiveness of selected BMP practices, and may revise the watershed plan.

Note: All plans/proposals that include an environmental monitoring component and submitted for 319 grant funding, must have an EPA/ADEM approved Quality Assurance Plan before 319 funding can be expended.

### **Component (I): Plan Implementation Effectiveness**

Effectiveness monitoring “over time” may include on-site visits (citizens/resource agency/professional BMP installation or site assessments), documentation of BMP types/numbers/sites; cooperative stakeholder reviews of watershed plan/TMDLs; installation of new/innovative/improved BMPs not proposed in the original plan; water quality monitoring scheme presented in “H” above, etc.