

GENERAL GUIDELINES

SECTION 319(h) FY2011 GRANT NONPOINT SOURCE IMPLEMENTATION GRANT

REVISED MAY 2010

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INTRODUCTION

Under Section 319(h) of the Clean Water Act, the U.S. Environmental Protection Agency (USEPA) awards a **NonPoint Source Implementation Grant** to the Georgia Environmental Protection Division (GAEPD) to fund eligible projects that support the implementation of the **Georgia NonPoint Source Management Program**. These projects must prevent, control and/or abate nonpoint sources of pollution and address water quality impairments. Section 319(h) Grant funds are limited. Therefore, the GAEPD uses a competitive process to ensure the most appropriate projects are selected for funding.

Throughout these guidelines, **Helpful 319(h) Hint!** boxes have been placed in boxes to assist you with your application. If you have any questions about a section, please contact a 319(h) Grant Unit staff member listed on page 3.

In FY2011, the State is scheduled to receive approximately \$4.4 million to fund nonpoint source management projects, which is allocated into the following categories:

BASE: \$2.2 million for nonpoint source management projects throughout the State.

INCREMENTAL: \$2.2 million to develop, revise, and/or implement TMDL Implementation, Watershed Improvement Plans, and other Watershed Management Plans.

An additional \$435,000 in FY10 funding has also been made available to GAEPD for the revision of existing TMDL Implementation Plans to meet USEPA's Nine Key Elements of Watershed Planning. This is a ONE-TIME grant amendment, and there are restrictions attached to this funding. More information can be found in Appendix A (page 26).

Eligible Applicants include public governmental agencies in Georgia such as: cities, counties, local authorities operating local government delivery programs, regional development centers, local school systems, State colleges and universities, and State agencies.

State law currently prohibits *non-governmental organizations* (such as private firms and nonprofit organizations) from receiving Section 319(h) Grant funds directly; however, these organizations are encouraged to develop partnerships with eligible applicants to develop projects.

Maximum *Federal* reimbursement for a NonPoint Source Implementation Grant project is 60 percent of the total project cost. Therefore, each project must provide *non-Federal* matching funds or in-kind services for a minimum 40 percent of the total project cost.

Sample Calculation:					
	Federal Funds Requested X (2/3) = Non-Federal Matching Funds				
	OR				
	319 Federal Fund Requested: \$150,000 (60% of Total Project)				
	Non-Federal Matching Funds: \$100,000 (40% of Total Project)				
	Total Project Funds: \$250,000 (100% of Total Project)				

The maximum amount of individual Federal awards is \$1 million. Indirect rates (sometimes referred to as overhead or administration costs) must be documented either by Federal review or via audit procedures. Documented indirect rates are limited to 25% of the Federal award. GAEPD encourages applicants to donate all or the remainder of their indirect costs as part of the required 40% local match.

ELIGIBLE PROJECTS

Section 319(h) Grant project proposals should specifically identify the nonpoint sources of pollution being addressed and the activities proposed to prevent, control and/or abate these sources. Examples of eligible activities are included in the table below. Please note that this list is not exhaustive. If you have any questions regarding the eligibility of a project activity please contact a 319(h) Grant Unit staff member listed on page 3.

Activity	Example			
Regulatory or Non-Regulatory Programs for Enforcement	Erosion and Sedimentation Inspection/ Inspector			
Technical Assistance	Ordinance ReviewDesign/Review/Rewrite BMP Criteria			
Education / Outreach / Training	 Stormwater BMP Workshops Agricultural BMP Field Days, Production/Distribution of Water Quality Materials 			
Watershed / TMDL Implementation Planning	 Preparation/Revision of a USEPA 9-Key Element Watershed Management / TMDL Implementation Plan 			
TMDL / Watershed Management Plan Implementation	 Implementation of Recommended BMPs from a TMDL Implementation and/or other Watershed Management Plan 			
Watershed Restoration Projects	 Restoration of a hydrologically modified stream(s) to more "natural" conditions 			
Stormwater Projects	 Installation of stormwater control BMPs Creation of stormwater management program Establishment of a stormwater utility 			
Stream/Lake Protection	Establishment/Maintenance of Buffers			
Agricultural Management Practices Implementation	 Livestock Fence-Outs Alternate Water Sources Heavy Use Areas Other NRCS approved agricultural BMPs 			
Water Quality Monitoring	Assessment of Current Water QualityAssessment of Project Effectiveness			

Helpful 319(h) Hint!

What is a TMDL?

A TMDL (Total Maximum Daily Load) is a calculation of the maximum amount of a pollutant that a river, stream, or lake can receive and still meet water quality standards. For a list of the State of Georgia's Impaired Waters, please visit http://www.gaepd.org/Documents/305b.html. For more information on TMDLs, see the USEPA website: http://www.epa.gov/owow/tmdl/

INELIGIBLE PROJECTS

Certain projects are not eligible for 319(h) funding due to various Federal and State laws, rules and policies, and cannot be supported by either federal or local matching funds. Examples of ineligible projects include, but are not limited to:

- National Pollutant Discharge Elimination System (NPDES) Permit Requirements (this includes Concentrated Animal Feeding Operations, Phase I & II Stormwater Permits, Wastewater Permits, etc.)
- Implementing Elements of a Permit (this includes Watershed Assessments and/or Protection Plans mandated by an NPDES)
- Dam Construction and Removal
- Lake Dredging (exceptions may be made if sediment sources are corrected)
- Surface Paving
- Fulfillment of Consent Orders and Decrees
- Installation of Wastewater Infrastructure (including sewer connections)
- Installation of Incinerators (Composting is the preferred practice for Section 319(h) Grant funding as a means of dead livestock disposal. Please see Appendix D.)

Helpful 319(h) Hint!

319(h) Grants Unit staff (page 3) are available to provide technical assistance in developing a potential project. Do not hesitate to contact a staff member with project specific questions!

FUNDING PRIORITIES

Eligible project applications are reviewed according to the policies of GAEPD and USEPA as well as the Georgia Fair and Open Grants Act (FOGA), which are reflected in the funding priorities of the grant. These priorities are incorporated into the competitive scoring process used by the NonPoint Source Program to allocate 319(h) funds. Below are listed some of the criteria that may strengthen a project application. For FY2011, proposals will receive higher priority by encompassing one or more of the following:

- Projects resulting in measurable (i.e., quantitative) improvements in water quality.
- Projects implementing actions to alleviate the "criterion violated identified in the Section 303(d)/305(b) List of Waters, which are not fully supporting designated or beneficial uses due to nonpoint sources of pollution or documented as being threatened or impaired from NPS pollution. Emphasis will be placed on projects addressing waters listed for biota, habitat and/or sediment.

- Projects implementing the nonpoint source components of TMDLs that have been finalized as of November 30, 2010 under Section 303(d) of the Clean Water Act.
- Projects developing, revising and/or implementing TMDL Implementation Plan, Watershed Improvement Plans and/or Watershed Management Plans to prevent, control and/or abate nonpoint sources of pollution. Emphasis will be placed on projects implementing Extended Revision TMDL Implementation Plans or plans developed with Section 319(h) funds.
- Projects including realistic goals and measures of success, quantitative improvements in water quality and project effectiveness.
- Projects implementing structural best management practices (BMPs) to prevent, control and/or abate nonpoint sources of pollution.
- Projects supporting a watershed management approach utilizing cooperating partnerships and/or involving multi-governmental agencies. Emphasis will be placed on projects conducted in conjunction with other NPS management activities in the watershed.
- Projects including structural and/or managerial improvements that prevent and/or correct adverse hydrological impacts of increased impervious surface in a watershed. To receive this priority ranking, grantees must develop and implement or have in place: 1) development ordinances; 2) stream buffer protections wider than state minimums; or 3) other local mechanisms to ensure long-term success in minimizing the potential future impacts of hydrologic modification.
- Projects utilizing a "watershed-based approach", which is defined as focusing on a 10-digit HUC areas or smaller watersheds.
- Projects located in priority watersheds, as determined by GAEPD and USEPA, that are implementing watershed-based implementation, restoration and/or planning.
- Projects addressing and/or implementing management measures, enforceable policies and mechanisms that will result in *Georgia's Coastal Nonpoint Source Management Program* being fully approvable under Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA).

Additional information about Section 319(h) Nonpoint Source Implementation Grants may be accessed through the USEPA web page at: http://www.epa.gov/owow/nps/.



APPLICATION INSTRUCTIONS

A successful project proposal is thoughtfully planned, well prepared and concisely packaged. All activities and project information should be consistent throughout the project proposal. Please follow the instructions and fill out all sections completely. If you feel a section of the project proposal does not pertain to your project, then use a "not applicable" (N/A) response. **Do not leave any sections blank.** Incomplete project proposals will not be considered for funding. Before submission, please verify all sections of the application have been filled out and all sections of this guidance have been addressed. Please number pages and include the project name on each page. The cover page should be the only item before the proposal. Please include appendices or attachments at the end. If you do not understand a section or if you have any questions, call or email the 319(h) Grant Unit staff listed on page 3 for assistance.

Helpful 319(h) Hint!

DEADLINE: Submitted proposals must be postmarked by *November 30, 2010.* Any proposal postmarked (or received, if not mailed) after this date will not be considered for funding.

Applicants will be notified in *May 2011* if their Section 319(h) FY2011 Grant proposals have been recommended for funding. Contingent upon review and approval by the USEPA, and funding by Congress, contracts should be executed by *September 2011*.

The **lead organization must meet (or conference call)** with the GAEPD NonPoint Source Program staff to discuss the project **before** a proposal is submitted. Project partners, non-governmental organizations, consultants, or other affiliated groups or parties are welcome and encouraged to attend, but the lead organization must be present. 319(h) Grant Staff are available to review completed draft applications if they are received (email is acceptable) by **October 31, 2010**.

Please include two (2) printed copies and one (1) electronic copy on a CD in Microsoft Word format, and including all attachments. Please do not bind or staple projects together. Applicants MUST use the required application format (MS Word) available for download here:

http://www.gaepd.org/Documents/epdforms_wpb.html#nps

FAXES WILL NOT BE ACCEPTED.

Organizations should send Section 319(h) FY2011 Grant proposals to:

Section 319(h) FY2011 Grant Application ATTN Julie Montaigne Watershed Protection Branch NonPoint Source Program 4220 International Parkway, Suite 101 Atlanta, GA 30354

Section 319(h) FY2011 Grant Proposal Project Cover Page

Pr	oject litle:
Le	ead Organization:
Le	ead Contact:
Da	ate met with GAEPD NonPoint Source Program Staff:
1.	Is this project developing a new TMDL Implementation Plan / Watershed Improvement Plan, Watershed Restoration Action Strategy, or other Watershed Management Plan? YES NO
2.	Is this project revising an existing TMDL Implementation Plan? (Please see Appendix A) YES NO
3.	Is this project implementing a TMDL Implementation Plan / Watershed Improvement Plan, Watershed Restoration Action Strategy, or other Watershed Management Plan? YES NO
4.	For watershed projects, what is the project area size?
	1 HUC-10 or Smaller 2 HUC-10's 1 HUC-8 Larger than a HUC-8
5.	Please indicate which ONE category best fits the primary objectives and activities of the project, use Table 3, page 34 to determine:
	BMP Demonstration
	Restoration/Protection/Prevention
	Education/Information
	Lechnical Assistance
	Regulatory/Enforcement Activities
	Planning Activities
	Water Quality/Assessment/Monitoring
5.	If applicant is a local government, does the lead organization have Qualified Local Government Status in compliance with the requirements of the Georgia Planning Act of 1989 and Service Delivery Strategy Law of 1997? YES NO
6.	Is the project applicant a WaterFirst community and will the project be taking place within the WaterFirst community? YES NO
7.	Should the enclosed application not be approved for Section 319(h) grant funds, would you be interested in applying for a GEFA low-cost loan under the nonpoint source provisions to implement this project? YES NO

Project Description

The project description outlines the specific project objectives and related activities that will take place to achieve them. It is a detailed description of what will occur from the time the project begins until completion. The project description enables the reader to visualize the implementation of the project and should also establish the credibility and competence of the lead organization. Additionally, the project description must specifically identify the nonpoint sources of pollution being addressed and the activities proposed to prevent, control and/or abate these sources.

1. Project Title:

The project title uniquely identifies and describes the project. Limit the length of the title to two lines. The project title should identify the type of project (e.g., watershed restoration, TMDL implementation) and the name of the watershed, if applicable.

2. Lead Organization and Primary Contact:

The lead organization will be responsible for managing the proposed project. The primary contact will be the individual responsible for all correspondence and communications between the lead organization and the Georgia Environmental Protection Division. Please include the name, address, telephone number, fax number and e-mail of the lead organization and primary contact.

Helpful 319(h) Hint!

It is acceptable to have more than one primary point of contact (for instance when there are two major project partners). For projects where the primary contact is <u>NOT</u> a part of the lead organization, please include a lead organization contact. Understand that this person should be able to serve as a point of contact for invoicing, documentation, and other needs for the lead organization if the project is funded.

3. Project Background:

The project background section provides the justification for funding a particular project and should include relevant background information. State existing problems, and be clear and concise. Additionally, if the proposed project is part of a continuing or multi-phase project or implementing an existing watershed management plan, please provide all relevant background information. Also, specify the waterbody(s) to be addressed by this project and the listing status as appropriate. Please include information about other on-going nonpoint source management activities in the watershed and how this project will support and/or coordinate with other programs in order to leverage efforts across the watershed. Examples may include stormwater management programs, NPS education and outreach programs, watershed plan implementation projects, other Section 319(h) projects, and other NPS activities.

If the project will include address hydrologic impacts of increased impervious surface in a watershed, include information on what local mechanisms are in place or will be developed to ensure long-term success in minimizing the potential impacts of future hydrologic modifications. Mechanisms may include any stream buffer protections wider than state minimums; natural resource conservation and/or open space plans; low-impact development or quality growth ordinances; impervious surface limits; stormwater or other nonpoint source utilities; or other mechanisms in place to address impacts of nonpoint source pollution.

4. Project Objectives:

The project objectives should directly address the water quality problems identified in the project background, be quantifiable and focus on implementation of management measures to achieve and/or maintain State water quality standards. The information provided should be both factual and directly related to the project proposal. Project objectives should be well organized in narrative or bulleted form. The project objectives should specifically identify:

- 1) The nonpoint sources of pollution being addressed.
- 2) The desired outcome of each project activity.
- 3) The desired outcome of the project as a whole.

5. Specific Project Activities:

The specific project activities should describe in detail the actions that will be taken in order to achieve the project objectives in correlation to the budget items provided in Section 16. They should be clearly delineated in bullet form and explain how each will be accomplished with the available resources.

Helpful 319(h) Hint!

Remember to list both primary and secondary project activities. For instance, if your project involves implementing a stream restoration, applicable secondary activities would include pre- and post-implementation monitoring and educational outreach efforts as appropriate.

• NOTE: The Nonpoint Source Management Program has revised its policy regarding the eligibility of purchasing land (or accepting a property donation) as a 319(h) project activity for the FY2011 funding cycle. Conservation land purchases/donations for water quality protection purposes MAY be considered an eligible activity. If you wish to include a conservation property purchase/donation in your project activities (as either a federal or nonfederal match expenditure), you must provide ample justification in your grant application. If your project is selected for funding, a written decision will be provided to you regarding the inclusion of the land purchase/donation. Projects that submit their application at least two weeks before the deadline may be eligible to receive this decision earlier. In the event the conservation land purchase/donation is allowed, it will be subject to the *Conditions on Land Acquisition for State of Georgia* (Appendix F) as well as the *Uniform Appraisal Standards for Federal Land Acquisitions* (available upon request). Additional guidance will be provided as appropriate based on Georgia Land Conservation Program policy.

6. Roles and Responsibilities of Participating Organizations:

A description of the roles and responsibilities for all participating organizations allows for a clear delineation of duties and will help maintain a sense of accountability for project partners. Identify and include all Federal, State, regional and local organizations and major cooperating partners actively involved in the design and implementation of the proposed project. One organization must be identified as the lead organization responsible for managing the proposed project.

Each project participant should be identified by group name and should be described using the chart provided in the application. Major partners include those with significant contributions to the budget and/or milestones/objectives and/or an integral part of the project. The roles and

responsibilities of each organization involved in the proposed project must be identified, regardless of their funding source.

7. Specific Outputs:

The Specific Outputs section should list and describe all quantifiable outputs (e.g., number and type of educational materials developed and distributed, number and types of BMPs implemented, number and purpose of training workshops, reports, and load reductions, etc) of the project. Use bullets as directed in workplan format provided. Please be realistic and do not promise what the project cannot deliver.

Best Management Practices: Please note all management practices implemented with Section 319(h) Federal or non-Federal matching funds must be properly operated and maintained for at least 5-10 years. This section does not apply to projects developing and/or revising TMDL Implementation Plans and other Watershed Management Plans. For projects implementing structural and non-structural Best Management Practices, the following information should be included:

a. **Description:** Include the NRCS name and practice number of all BMPs to be implemented (see page 35).

Helpful 319(h) Hint!

Any agricultural operation that receives financial assistance pursuant to this grant must have, and work towards implementing, a Nutrient Management Plan, as resources become available. Nutrient Management Plans should be included as an output of these projects.

Comprehensive Nutrient Management Plans must, as per USEPA requirements:

- 1) Provide and maintain buffers or equivalent practices.
- 2) Divert clean water.
- 3) Prevent direct contact of confined animals with waters of the United States.
- 4) Address animal mortality.
- 5) Address chemical disposal.
- 6) Address proper operation and maintenance.
- 7) Address record keeping and testing.
- 8) Maintain proper storage capacity.
- 9) Address rates and timing of land application of manure and wastewater.
- b. Load Reductions: If BMP implementation seeks to reduce nutrients and/or sediment loads, one output of the project must be estimates of load reductions achieved. Please indicate if

Helpful 319(h) Hint!

Information regarding the STEPL and Region V Load Reduction models can be found online at http://it.tetratech-ffx.com/stepl/.

the Load Reduction figures will be based on monitoring or modeling. If modeling will be used, indicate the name or type of model to be used. Load reductions are to be submitted with requests for BMP reimbursement, unless based on monitoring data. Invoices may not be paid until the submittal of required load reductions.

- c. Wetlands: Indicate number of acres to be restored or protected.
- d. **Streambank Stabilization**: Indicate linear feet to be restored or protected. All streambank stabilization activities should meet the Streambank and Shoreline Stabilization Guidance located on EPD's website: http://www.gaepd.org/Documents/techquide wpb.html#es. Grant

funds are eligible for Level One and Two practices only. Level Three practices are discouraged and are not eligible for grant funding. Some use of riprap or armoring may be necessary, but should be used in conjunction with an integrated system and vegetation establishment. Check with 319(h) project staff if you have concerns about the eligibility of a proposed practice.

Monitoring: New for FY2011, water quality monitoring is required for installation of structural BMPs. This data will help in determining the effectiveness of the project. For monitoring to be eligible under this project, the following documentation must be provided prior to initiating monitoring activities:

- A detailed USEPA Quality Assurance Program Plan (QAPP) procedure is required for project proposals that include monitoring.
- Some monitoring elements may be eligible for coverage under a GAEPD Sampling Quality Assurance Plan (SQAP) or Targeted / BMP Monitoring Plan in lieu of a QAPP. Completing either plan will cover any monitoring under GAEPD's already approved QAPP.
 - By completing a SQAP, data may be eligible for use in the evaluation of a waterbody's status on the 305(b)/303(d) List of Waters, though submission of data for this purpose may not be required.
 - All SQAPs or other monitoring plans must be submitted to GAEPD for review prior to beginning water quality sampling. <u>Invoices may not be paid for monitoring</u> activities conducted without an approved plan.

Please contact Chris Faulkner (page 3) with specific questions or concerns regarding SQAP completion, methods and other components of the SQAP. The GAEPD document, *Guidance On Submitting Water Quality Data For Use By The Georgia Environmental Protection Division In 305(b)/303(d) Listing Assessments (SQAP)*, should be used when completing a SQAP.

Guidance on monitoring activities using 319(h) grant funds may be found in Appendix B.

Helpful 319(h) Hint!

Monitoring conducted for "delisting" purposes of consideration for the 305(b)/303(d) List of Impaired Waters MUST have an approved SQAP before monitoring activities may begin.

Monitoring conducted to locate pollution sources and/or assess the effectiveness of BMPs <u>MUST</u> have an approved Targeted / BMP Monitoring Plan before monitoring activities may begin.

Include the following information for expected monitoring activities:

a. Monitoring Goal:

- Pollution source assessment
- BMP effectiveness
- □ 305(b)/303(d) List of Waters assessment

b. Monitoring Type:

- Biological (i.e. bacteria)
- □ Chemical/Physical (i.e. DO, pH, conductivity, etc.)

Helpful 319(h) Hint!

Monitoring costs may be included in the requested Federal amount AND/OR as in-kind match.

- Habitat (i.e. macroinvertebrates, fish IBI, habitat assessments)
- Sediment (i.e. turbitity, TSS, macroinvertebrates, fish IBI)

List all parameters to be monitored for (Table 1, page 22)

c. Expected Monitoring Design: Briefly describe the expected monitoring design. Include information such as expected number of samples, monitoring locations relative to BMPs (upstream and/or downstream), timeline and stream names.

Products: Products are all tangible materials produced by the project. Upon completion of project products/outputs, the lead organization <u>must</u> submit two hardcopies and one electronic copy of each appropriate product to GAEPD and USEPA for review and approval <u>prior</u> to distribution to ensure consistency with Federal and State regulations and guidelines. The actual submission of project products must be included as a specific output. Examples include, but are not limited to, items such as:

- Maps
- Reports
- Manuals
- Monitoring data and reports

- Brochures
- Videos
- Educational signage
- Other project documents

It is preferred that any materials produced are made available online via the lead (or a partnering) organization's website. USEPA may provide an online platform for documents or other webpage assistance as needed.

Semi-Annual Reports: The lead organization is responsible for submitting semi-annual progress reports to the GAEPD for inclusion in the USEPA Grants Reporting Tracking System (GRTS) by March 15th and September 15th of each year.

Final Close - Out Report: Upon completion of the proposed project, the lead organization is responsible for submitting two (2) paper copies and one (1) electronic copy of a *Final Project Close-Out Report* to the GAEPD and the USEPA for review and approval.

8. Measures of Success:

The Measures of Success section of the project proposal should include an appropriate evaluation component to determine the effectiveness of the project. Measures of success are often the best means to learn from a project's experience and help guide the activities of future projects. Including measures of success in the project proposal indicates the applicant understands both the requirements and expected outcomes of the project.

Measures of success include both quantifiable and qualitative goals to be achieved through the project activities. This section should develop a measurable goal for each applicable project activity and describe the evaluation criteria that will be used to quantify that goal. Applicants must include a brief discussion of the environmental benefits of the project, specific to water quality, aquatic habitat, and/or prevention, reduction, and/or elimination of nonpoint source pollution. Measures of Success may be quantified using the following mechanisms:

- Water quality monitoring
- Load reduction modeling (such as STEPL, RUSLE, Region 5, others)

- Educational outreach efforts
- Number of local governments implementing a new program (such as a stormwater utility)
- Number of participants in grant programs
- Other measures as appropriate

Helpful 319(h) Hint!

Projects implementing BMPs must include a minimum number of BMPs to be implemented (i.e. number of agricultural BMPs, linear feet of fencing, linear feet of streambank stabilization, acres of wetlands protected, etc.) as measures of success. These projects must also provide an annual estimate of load reductions achieved by the project for nitrogen, phosphorous, and/or sediment as related measures of success. Load reduction estimates must be provided prior to reimbursement for BMP implementation.

If a project includes an educational outreach component, it must provide a method of quantifying the success of those efforts (i.e. pre/post survey).

For additional information on measures of success and specific examples, see Appendix B: Measures and Indicators of Progress and Success, in the Nonpoint Source Program and Grants Guidance for Fiscal Year 1997 and Future Years. (page 32)

9. Milestones:

All project proposals must include a schedule of milestones, the significant events or tasks that occur throughout the implementation of the proposed project. Include starting and completion dates for each entry.

Helpful 319(h) Hint!

Projects <u>MUST NOT</u> exceed three (3) years in duration.

Milestones should also include all outputs listed in Section 7 of the project proposal. The schedule of milestones will be used to track the progress of the approved projects. Milestones should include the execution of contracts/interagency agreements, submission of a SQAP/QAPP, specific outputs, submission of semi-annual reports and load reductions for GRTS updates and final project close-out reports, etc. The schedule of milestones must be prepared using the example format as shown:

Example: Project Schedule of Milestones

MILESTONES	STARTING DATES	COMPLETION DATES			
Execute contract/interagency agreement with the Georgia Environmental Protection Division.	08/2010	08/2010			
Submit SQAP/QAPP to the GAEPD and the USEPA for review and approval.	09/2010	11/2010			
Conduct water quality monitoring.	05/2010	06/2013			
Install Nonpoint Source Best Management Practices.	11/2010	12/2012			
Submit semi-annual report for GRTS update every March 15 th and September 15 st	02/2011	08/2012			
Submit final project closeout report to the GAEPD and the USEPA for review and approval.	01/2013	02/2013			

Milestones must be listed in chronological order according to the proposed starting date. Organizations should not plan on initiating projects before *December 1, 2011*.

Helpful 319(h) Hint!

Project activities eligible for Federal reimbursement or non-Federal matching funds or in-kind services <u>CANNOT</u> begin until after the grant has been awarded, all terms and conditions of the grant have been satisfied, <u>AND</u> the contract/interagency agreement between the GAEPD and the lead organization has been executed. The USEPA adds special terms and conditions to the Section 319(h) Grants, which may be applicable to the proposed projects.

10. Project Location:

- a) Project Area(s) and Map: The approximate size and location of the project area(s) to be addressed must be identified on a map. The project area(s) should be of an appropriate size to ensure the measures implemented will have a significant impact on restoring or protecting designated beneficial uses within the watersheds.
- b) Project area size (acres):

c)	This project will add Stream Miles Lake Acreage Wetland Acreage	ress the following:
d)	Land-Uses within the Agricultural Commercial Forestry Urban/Residential Mining/Extraction Forests/Natural Areas Water/Wetlands	e project area (percentages):

e) Hydrologic Unit Code(s) (HUCs) and Watershed Name(s): Please list the watershed name(s) and smallest watershed HUC (8, 10 or 12) that applies to the project area.

Helpful 319(h) Hint!

HUCs are watershed units that range in size from two (2) digits (largest) to twelve (12) digits (smallest) that define watershed boundaries.

Additional information about watersheds (e.g., 8-digit hydrological unit codes, rivers and streams in the watershed, land characteristics, river corridor and wetlands restoration efforts, index of watershed indicators, etc.) may be accessed through the USEPA webpage: http://cfpub.epa.gov/surf/locate/index.cfm

The USGS 10-digit hydrological cataloging unit map for Georgia may be ordered from the USGS Earth Science Information Center (ESIC) at (1-888-275-8747) or: http://www.usgs.gov/.

f) County or Counties: List the counties within the watershed or project area.

11. Pollutants to be Addressed: Please see Table 1, on page 22.

12. Impaired Waters:

a) Section 303(d) and Section 305(b) lists of waters:

Please list all waterbodies in the watershed or project area listed as impaired on Georgia's 305(b)/303(d) list, including the length of each segment. For each waterbody, fill in the appropriate response. Do not leave any sections blank.

Example: List of Impaired Waters to be Addressed

Waterbody (Miles/Acreage)	Location (County)	Criterion Violated	Category of impairment? (4a, 4b, 4c,5)	Has a plan been developed to implement a TMDL for this segment?	Will this project address the listed pollutant?
Etowah River (12 miles)	Bartow County	Dissolved Oxygen	4a	YES	YES
Dry Branch (5 miles)	Burke County	Bio- Habitat	5	NO	YES
Beaver Creek (4 miles)	Macon County	Fecal Coliform	4a	NO	YES
Goat Rock Lake (573 acres)	Harris County	FCG	5	NO	NO

The *Final Georgia 2008 305(b)/303(d) List Documents* are available at the GAEPD website, http://www.gaepd.org/Documents/305b.html.

b) Other Known Impairments (only if applicable):

This section applies only if stream has known/documented impairments but is NOT included on Georgia's 305(b)/303(d) List of Waters for that impairment. List the segment impaired, cause(s) of impairment, and the source of documentation. Please attach relevant information such as pictures, local watershed management plans, water quality data, etc.

13. Planning Activities:

If your project proposes to develop or revise a TMDL Implementation Plan/Watershed Improvement Plan or other Watershed Management Plan, the plan must fulfill USEPA criteria. (See Appendix D: USEPA GUIDELINES FOR WATERSHED PLANNING).

a)	Is the project proposal developing a new TMDL Implementation Improvement Plan, or other Watershed Management Plan?	n Plan,	Watershed
		Yes	No
b)	Is the project proposal revising an existing TMDL Implementation Appendix A)	Plan?	(Please see
	,	Yes_	No

c)	Is the project proposal implementing a TMDL Implementation Plan, Watershed
	Improvement Plan, or other Watershed Management Plan? (If checking yes, please
	identify document and attach relevant sections.)
	Yes, (Year Completed) No
	d) Was this plan developed using 319(h) Grant funds? Yes No

Helpful 319(h) Hint!

In order to be considered implementing a TMDL Implementation Plan or other watershed management plan, the project activities must be consistent with the plan's recommended action strategies AND address a source(s) of impairment specifically identified by the plan.

Relevant plan sections include: Pollution sources, water quality data, recommended management measures (BMPs), maps, and pictures of sources of pollution to be addressed.

14. Major Nonpoint Source Pollution Categories

List all Major Nonpoint Source Pollution Categories and Subcategories that pertain to the project proposal. Only use categories in Table 2 (page 23) for a selection list.

15. Nonpoint Source Pollution Activities:

List all Nonpoint Source Pollution Activities being addressed by the project proposal. Use Table 3 (page 24) for a selection list.

16. Project Budget:

The project budget must delineate proposed Federal and non-Federal matching expenditures by **object class categories** (A-G) as shown on page 31. The project proposal must provide sufficient detail to justify all project costs both Federal and non-Federal matching.

Helpful 319(h) Hint!

All proposed **budget items** must be justified in the project proposal, and must correspond *directly* to activities in the project proposal. For example, if a turbidity meter is listed as an equipment budget item, sufficient details about specific project activities are required to justify the purchase of a turbidity meter.

The total Federal portion of the project cost may not exceed \$1 million.

Object Class Categories:

- **Personnel:** Personnel budget items must include position titles, salary rates, full time equivalent (FTE) (i.e., if staff puts 100% of their time into the project, then they are 1.0 FTE), work years, and specific project activities.
- **Fringe benefits:** Fringe benefits budget items must include the position title, FTE, percentage of fringe benefit charges, work years and specific project activities.

- Travel: Travel budget items should identify the personnel traveling by position title, the specific project activities to be conducted, and the type and purpose of travel. Out of state travel will not be approved. Travel reimbursement rate may not exceed the current federal mileage rate.
- **Equipment:** All equipment budget items and costs must be itemized separately. For equipment costs over \$5,000, please include brief descriptions, specifications, or actual quotes. Equipment only applies to items with a useful life of more than one (1) year. Any single equipment item purchased at a cost OVER \$5,000 must be tracked until its value depreciates below \$5,000.
- **Supplies:** If supply budget items and costs are less then \$2,000, they may be collectively described as monitoring supplies, administrative supplies, printing supplies, etc. If supply budget items and costs are more then \$2,000, they must be itemized separately.
- **Contractual:** Contractual budget items must identify the types of subcontractors and specific project activities. For large sub-contracts (≥\$30,000), a detailed budget breakdown must be attached using the same object class categories. Any construction activities in this project should be included in this budget class.
- **Construction:** GAEPD Section 319(h) Grant funds do not apply to this category. Any approved BMP construction activities in this project should be included in **Contractual**.
- Other: Other budget items and costs must be itemized separately. (Examples: postage, printing, interagency agreements, BMP contracts, and etc.)
- Indirect charges: If indirect charges are appropriate for the lead organization, the Federally approved indirect rate percentage and costs may be included, up to 25 percent. It is recommended that any amount of federally approved indirect rate not covered by the reimbursable 25% be contributed towards the project match requirement. If project is selected for funding, the lead organization will be required to provide GAEPD with a copy of the Federal approved indirect rate agreement. Indirect charges may also be contributed in their entirety as local match.

Helpful 319(h) Hint!

When **procuring equipment and services**, **etc.** under a grant, the lead organization must follow the procurement policies and procedures as delineated in 40 CFR Part 31.36. Copies are available upon request, or at:

http://www.gpoaccess.gov/cfr/retrieve.html

However, in many cases local procurement procedures will be acceptable.

Allowable costs will be determined in accordance with the cost principles in "OMB Circular A-87." Copies are available upon request or at:

www.whitehouse.gov/omb/circulars

Example: Project Budget

Item	Object Class Category	319(h) Grant Funds (60% Maximum)	Non Federal Matching Funds (40% Minimum)	Total
Α	Personnel:			
	One (1) Coordinator – 1 FTE (\$35,000/Year) for 3 years (Project management)	105,000	0	105,000
	One (1) Technician – 0.5 FTE (\$18,000/Year) for 3 years (Water Quality Monitoring)	0	27,000	27,000
В	Fringe Benefits:			
	One (1) Coordinator – 1 FTE – 35% (Public Education and Involvement) for 3 years	0	36,750	36,750
	One (1) Technician – 0.5 FTE – 35% (Water Quality Monitoring)	0	9,450	9,450
С	Travel:			
	One (1) Program Manager for Conferences, workshops, etc (Project management)	1,500	0	1,500
	One (1) Technician for field monitoring (Water Quality Monitoring)	1,200	0	1,200
D	Equipment:			
	Two (2) Portable Turbidity Meters (Water Quality Monitoring)	1,150	0	1,150
Е	Supplies:			
	Monitoring Supplies (Water Quality Monitoring)	600	0	600
F	Contractual:			
	Stormwater BMP Implementation from TMDL (Match provided by lead agency)	94,550	62,800	157,350
G	Construction: Does not apply to GAEPD Section 319(h)-Grants	N/A	N/A	N/A
Н	Other:			
	BMP Implementation – 6 sites @ ~\$40,000 per site (Match provided by landowners)	96,000	64,000	160,000
I	Total Direct Charges: (Sum of A-H)	300,000	200,000	500,000
J	Indirect Charges:			
	Indirect Rate – 25% maximum	0	0	0
К	Total: (Sum of J and K)	300,000	200,000	500,000

The project budget must be prepared in this required format and using these object class categories.

PLEASE: Double-check all budget calculations!

PROJECT SUMMARY (ABSTRACT)

A separate **Project Summary** must be submitted with all Section 319(h) FY2011 Grant proposals. The project summary must specifically identify the nonpoint sources of pollution being addressed and the activities proposed to prevent, control and/or abate these nonpoint sources of pollution. The summary should be brief, *no longer than two pages*, and should include all key points necessary to communicate the objectives of the project proposal. It may be helpful to prepare the project summary after the project proposal has been developed. All of the following items must be included:

- 1. Project Title: The project title uniquely identifies and describes the project. Limit the length of the title to two lines. The project title should identify the type of project and the name of the watershed, if applicable.
- **2. Lead Organization and Primary Contact:** Please include the name, address, telephone number, fax number, and e-mail of the lead organization and primary contact.
- **3. Funding:** Funding must be listed as Federal funds requested, non-Federal matching funds contributed, and total project funds.
- **4. Project Start Date and Completion Date:** List starting and completion dates (month/year). Also include the length of the project in years and months.
- **5. Project Location:** For watershed projects, list the watershed name and 8-digit hydrological unit code (10- or 12-digit HUC should also be included if applicable). For statewide and regional projects, delineate the areas being addressed.
- **6. Project Background:** Specifically identify the nonpoint source(s) of pollution being addressed by this project and give a brief explanation on the activities in the project area that contribute to each nonpoint source(s) of pollution.
- **7. Objectives:** List the major objectives of the project. What the project should accomplish in regards to preventing, controlling, and/or abating the nonpoint source(s) of pollution.
- **8. Activities:** Specifically identify and describe the activities that will prevent, control, and/or abate the nonpoint source(s) of pollution.
- **9. Outputs:** BMPs, TMDL Implementation Plan, water quality monitoring data, workshops, field days, manuals, and all other project documents.
- **10. Measures of Success:** Anticipated project success (e.g., estimates of pollutant load reductions, linear feet or acres of wetlands protected or restored).

TABLE 1

Nonpoint Source Pollutants

Algal Growth/Chlorophyll

Alteration

Flow

Habitat—other than flow

Ammonia

Chlorine

Cyanide

Dioxins/Furans

Dissolved Oxygen (Low)

Ethylene Glycol

Exotic Species

Herbicides

Atrazine Alachlor

Other

Inorganics (Other)

Metals

Aluminum Arsenic

Cadmium

Copper

Chromium Iron

Lead

Mercury

Selenium

Zinc Other

Methyl Tertiary-Butyl Ether

Nitrate

Nitrogen

Total Kjeldahl Nitrogen

Oil and Grease

Organics

Pathogens

Fecal coliform

Enterocci coliform

E. coli Other

PCBs

Pesticides

DDT

Chlordane

Dieldrin Dianzinon

Other

рΗ

Phosphorus

Plants (Noxious Aquatic)

Propylene Glycol

Radiation

Salinity/TDS/Chlorides

Sedimentation/Siltation

(habitat and/or morphological)

Sulfates

Suspended Solids

Taste and Odor

Temperature

Toxics (Total)

Trash, Debris, Floatables

Tributyltin

Turbidity

TABLE 2

Major Nonpoint Source Pollution Categories and Subcategories

Agriculture

Non-irrigated Crop Production Irrigated Crop Production Specialty Crop Production Grazing-Related Sources Pasture Grazing Range Grazing Animal Feeding Operations (NPS) Aquaculture

Silviculture

Harvesting/Residue Management Reforestation Forest Management Road Construction/Maintenance

Construction

Highways/Roads/Bridges Land Development or Redevelopment

Urban Runoff/Stormwater

Municipal
Commercial
Residential
Illicit Connects/Illegal Hook-ups
Dry Weather Flow
Highway/Road/Bridge Runoff
Post-Development Erosion and
Sedimentation
Salt Storage Sites

Resource Extraction

Surface Mining
Subsurface Mining
Open Pit Mining
Placer Mining
Dredge Mining
Petroleum Activities
Mill Tailings
Mine Tailings
Abandoned Mine Drainage
Sand/Gravel Mining

Land Disposal/Storage/Treatment

Wastewater
Landfills
Inappropriate Waste Disposal
Industrial Land Management
On-site/Decentralized Wastewater
Treatment
Hazardous Waste
Septage Disposal

Waste Storage/Storage Tank Leaks (above ground) Leaking Underground Storage Tanks

Hydromodification

Channelization
Channel Erosion/Incision
Dredging
Dam Construction
Upstream Impoundment
Flow Regulations/Modification
Other Habitat Modification
Removal of Riparian Vegetation
Streambank Modification/Destabilization
Drainage/Filling of Wetlands
Groundwater Withdrawal

Marinas and Recreational Boating

Pumpouts
Sanitary On-Vessel Discharges
Other On-Vessel Discharges
Boat Construction
Boat Maintenance
Shoreline Erosion
Fueling
Dredging

Turf Management

Golf Courses Yard Maintenance Other Turf Management

Historical Pollutants

Contaminated Sediments Clean Sediments Other Historical Pollutants

Other NPS Pollution

Erosion from Derelict Land Atmospheric Deposition Spills Natural Sources Recreation/Tourism Activities (non-boat) Groundwater Loadings Wildlife

Source Unknown

TABLE 3

Nonpoint Source Pollution Activities

BMP Demonstration Projects

BMP Design/Implementation Activities in HUC-8 and larger
BMP Performance/Assessment

Restoration/Protection/Prevention

BMP Design/Implementation Activities in HUC-10 and smaller Animal Manure/Litter Management **Projects** Livestock Control Projects Vegetation Management/Revegetation Stream Bank Stabilization Grade Stabilization Sediment Control Stormwater Discharge Design/Control **Erosion Control Projects** Acquisition of Wetland Resources Wetland Restoration/Protection Acquisition of Riparian Resources Riparian Projects Fisheries Projects

Education/Information Activities

Restoration/Protection/Prevention

Statewide Education/Information Programs Local (Specific target) Education/Information Programs

Technical Assistance

Other

Activities

Technical Assistance to State/Local Government Nonpoint Source Program Overall Coordination/Management Nonpoint Source Project Staffing Technology Transfer to State/Local Government Other Technical Assistance Activity

Regulatory / Enforcement Activities

Certification Activities
Program Development Activities
Inspection Activities

Ordinance Development Enforcement Activities

Planning Activities

Nutrient Management Planning
Watershed Modeling Planning
Stormwater Management
Planning
Watershed Planning
Geographic Information
Systems
Develop/Revise Basin Plans
TMDLs
Nonstructural Planning (for new development)
Livestock Grazing System
Planning
Other Planning Activities

Water Quality Assessment/Monitoring

Instream Flow Assessments Assessments for Compliance with Water Quality Standards Wetland Assessment/Monitoring Riparian Assessment/Monitoring TMDL Assessments Water Quality Trend Assessment Water Quality Problem Identification Other Water Quality Assessment/Monitoring BMP Effectiveness Monitoring **Biological Monitoring** Watershed Assessments 319(h) National Monitoring

Other Activities

Project

Groundwater (all groundwater activities)
Antidegradation Activities and Analyses
Soil Analyses

Table 4

BEST MANAGEMENT PRACTICES

0310 0312 0313 0314 0317 0320 0322 0324 0326 0327 0328 0329 0330 0331 0335 0340 0342 0344 0348 0349 0350 0352	Bedding Waste Management System Waste Storage Structure Brush Management Compost Facility Irrigation Canal/Lateral Channel Vegetation Chiseling and Subsoiling Clearing and Snagging Conservation Cover Conservation Cropping Sequence Conservation Tillage Contour Farming Contour Orchard/Other Fruit Controlled Drainage Prescribed Burning Cover/Green Manure Crop Critical Area Planting Crop Residue Use Dam-Diversion Dam-Multiple Purpose Sediment Basin Deferred Grazing	0430 0436 0441 0442 0443 0447 0451 0452 0453 0454 0455 0466 0462 0464 0466 0468 0472 0482 0484 0490 0500 0510	Irrigation Pipeline Irrigation Storage Reservoir Irrigation Trickle Irrigation Sprinkler Irrigation Surface and Below Irrigation Tailwater Recover Irrigation Water Management Land Fire Control Land Shaft and Adit Closing Land Landslide Treatment Land Subsidence Treatment Land Toxic Discharge Control Land Highwall Treatment Land Clearing Precision Land Forming Irrigation Land Leveling Land Smoothing Lined Waterway or Outlet Livestock Exclusion Mole Drain Mulching Woodland Site Preparation Obstruction Removal Pasture and Hayland	0572 0574 0575 0580 0582 0584 0585 0586 0587 0599 0595 0600 0606 0607 0608 0609 0610 0612 0614 0620 0630 0633 0636	Spoil Spreading Spring Development Stock Trails/Walkways Stream/Shoreline Protect Open Channel Stream Channel Stability Stripcropping-Contour Stripcropping-Field Structure for Water Control Stripcropping-Wind Nutrient Management Pest Management Terrace Subsurface Drain Surface Drain Field Ditch Surface Drain Maintenance Surface Roughening Toxic Salt Reduction Tree Planting Trough or Tank Underground Outlet Vertical Drain Waste Utilization Water Harvest Catchment
0354	Delayed Seedbed Preparation		Management	0638	Water/Sediment Control Basin
0356	Dike	0512	Pasture/Hayland Planting	0640	Waterspreading
0359	Waste Treatment Lagoon	0516	Pipeline	0641	Water Table Control
0362	Diversion	0521	Pond Sealing or Lining	0642	Well
0378	Pond	0528	Proper Grazing Use	0644	Wildlife Wetland Management
0380	Farm and Feedlock Windbreak		Proper Woodland Grazing	0645	Wildlife Upland Area
0382	Fencing	0532	Pumped Well Drain	0040	Management
0386	Field Border	0533	Pumping Plant-Water Control	0648	Wildlife Watering
0388	Irrigation Field Ditch	0543	Land Reconstruction	0650	Windbreak Renovation
0392	Field Windbreak	0544	Abandoned Mine	0652	Woodland Direct Seeding
0393	Filter Strip	0544	Land Reconstruction Current	0654	Woodland Improved Harvest
0394	Firebreak	0540	Mine Grazing Land Machanical	0657	Wetland Restoration Woodland Pruning
0395 0397	Fish Stream Improvement Commercial Fishponds	0548	Grazing Land Mechanical Treatment	0660 0666	Woodland Improvement
0398	Fish Raceway or Tank	0550	Range Seeding	0901	Urban Catch Basin
0399	Fishpond Management	0552	Irrigation Pit/Reservoir	0902	Urban Catch Basin – Oil
0400	Floodwater Diversion	0554	Regulate Water-Drain System	0903	Urban Catch Basin – Sand
0402	Dam-Floodwater Retarding	0555	Rock Barrier	0904	Urban Concrete Grid
0404	Floodway	0556	Planned Grazing Systems	0905	Urban Extension Detention
0408	Forest and Erosion Control	0557	Row Arrangement	0000	Pond
0409	Forest Land Management	0558	Roof Runoff Management	0906	Urban Filtration Basin
0410	Grade Stabilization Structure	0560	Access Road	0907	Urban Grassed Swale
0411	Grasses/Legumes Rotation	0561	Heavy Use Area Protection	0908	Urban Infiltration Basin
0412	Grassed Waterway	0562	Recreation Area Improvement	0908	Urban Infiltration Trench
0422	Hedgerow Planting	0566	Recreation Land Grading	0910	Urban Porous Pavement
0423	Hillside Ditch	0568	Recreation Trail/Walkway	0911	Urban Stormwater Wetland
0425	Waste Storage Pond	0570	Runoff Management System	0912	Urban Vegetated Filter
0428	Irrigation Ditch/Canal	0571	Soil Salinity Management	0913	Urban Wet Pond

APPENDIX A GUIDANCE FOR TMDL IMPLEMENTATION PLAN REVISION APPLICATIONS

As part of a **ONE-TIME** grant amendment, GAEPD is scheduled to receive an additional \$435,000 in the FY10 319(h) Grant. **These funds are solely for revising existing TMDL Implementation Plans to meet USEPA's Nine Key Elements for Watershed Planning.** These applications will be reviewed separately from the 319(h) FY11 Grant applications, but may still be considered eligible for FY11 incremental funding.

In order to be considered eligible for this one-time funding opportunity, these projects must be revising an <u>existing TMDL</u> Implementation Plan only. Development of <u>new TMDL</u> Implementation Plans, Watershed Implementation Plans and Watershed Management Plans are still eligible for consideration to receive FY11 319(h) Grant incremental funds.

TMDL Implementation Plan revision projects <u>may not</u> exceed two years in length, and extensions will not granted in the event projects are not completed on time. Federal funding for these projects will be capped at \$43,000. Additional funding will not be granted.

In addition to the stipulations mentioned above, projects meeting the following criteria will receive priority for funding:

(1) Project size of HUC 12 watershed or smaller

Helpful 319(h) Hint!

Current TMDL Implementation Plans apply to HUC 10 watersheds. Please note that focusing on a single HUC 12 watershed within the larger context of the plan will count as a TMDL Implementation Plan revision. It is acceptable to submit multiple applications for HUC 12 watersheds within the same HUC 10 watershed.

(2) Location in one of the following HUC 8 watersheds:

- 03130001 Upper Chattahoochee
- 03150104 Etowah (Coosa)
- 03150108 Tallapoosa
- 03130003 Lower/Middle Chattahoochee
- 03060106 Middle Savannah
- 03060107 Brier (Savannah)
- 03060203 Canoochee (Ogeechee)
- 03070107 Ohoopee (Altamaha)
- 03070106 Altamaha
- 03070202 Little Satilla

- 03070201 Satilla
- 03070101 Upper Oconee
- 03120002 Upper Ochlockonee
- 03110203 Withlacoochee (Suwannee)
- 03070104 Lower Ocmulgee
- 03070105 Little Ocmulgee
- 03130006 Middle Flint
- 03130007 Kinchafoonee Muckalee (Flint)
- 06020002 Hiawassee (Tennessee)
- 06020003 Ocoee (Tennessee)

Applicants interested in revising existing TMDL Implementation Plans should complete the FY11 Grant Application. As a reminder, 319(h)-funded Nine Key Element Watershed Plans receive the highest priority for consideration of implementation funding.

Appendix B GUIDELINES FOR 319(h)-GRANT FUNDED MONITORING DRAFT

This document serves as guidance for conducting monitoring activities as part of a 319(h)-Grant funded project. This guidance does not replace earlier guidance on monitoring issued by GAEPD, unless otherwise stated. Do not hesitate to contact GAEPD's 319(h)-Grants Unit with any questions you may have regarding monitoring or other associated activities.

Introduction

This monitoring will be conducted to assist in updating the State 305(b)/303(d) list of waters and/or assessing the efficiency of Best Management Practices (BMPs) at reducing pollutant loads as well as determining the most likely sources of impairment within a watershed.

By updating water quality data GAEPD can make scientific based decisions for determining appropriate measures to improve water quality within the State. This data will also help in determining the best long-term management practices for removing certain pollutants from non-point source runoff and in making better decisions on where and which BMPs are most needed.

Targeted/BMP monitoring is intended to provide a better picture of the water quality conditions located within a watershed and/or assess the efficacy of BMPs. By conducting targeted monitoring, potential sources and/or areas of concern will be more easily identified. Also, resources can be better used in areas of the watershed that show the greatest need for attention. This can help open the door for projects that target areas of the watershed to receive funding to implement BMPs that are recommended to address water quality violations.

Types of Monitoring

There are two distinct types of monitoring that may occur as part of a 319(h) – Grant funded project, 305(b)/303(d) Monitoring and Targeted/BMP Monitoring.

305(b)/303(d) Monitoring involves collecting data following the protocols contained within GAEPD Monitoring Unit's Quality Assurance Project Plan (QAPP). This data will be used to assess and determine if a stream meets water quality standard and may be delisted. Before this type of data collection may begin, projects must complete and have on file an approved Sampling Quality Assurance Plan (SQAP). GAEPD's "Guidance On Submitting Water Quality Data For Use By The Georgia Environmental Protection Division in 305(b)/303(d) Listing Assessments" serves as guidance for completing the SQAP.

Targeted/BMP Monitoring involves more samples within the watershed and is used to either 1) determine the most likely source of impairment or 2) better assess the effectiveness of BMPs achieving their expected load reductions. This type of monitoring will tend to follow the GA Adopt-A-Stream (AAS) QAPP and associated methods and procedures. Before this type of monitoring may begin the project must complete and have on file an approved Targeted/BMP Monitoring Plan. The section of this document entitled Targeted/BMP Monitoring serves as the guidance on completing the associated monitoring plan.

305(b) / 303(d) Monitoring

Preparation of a Sampling and Quality Assurance Plan (SQAP)

Before monitoring can begin a Sampling and Quality Assurance Plan or SQAP must be completed and submitted to EPD for review. This requirement only applies if one does not already exist from those persons or organizations that intend to collect for regulatory purposes. The SQAP document shall outline the monitoring sites, parameters to be measured, intended sample collectors, lab to be used for analysis, and the parties responsible for data submission to EPD. The document entitled "Guidance On Submitting Water Quality Data For Use By The Georgia Environmental Protection Division in 305(b)/303(d) Listing Assessments" should be used as a guide for completing the SQAP. EPD is available to provide assistance in completing this task.

The following language **MUST** be included in the SQAP under Part Three "Quality Assurance Plan":

"All sample collection, field parameters, and lab analysis will be conducted in accordance with EPD's Quality Assurance Manual, 40 CFR Part 136 and U.S.EPA guidelines. These guidelines and references have been set forth in the Quality Assurance Project Plan (QAPP) and Quality Monitoring Plan (QMP) developed and maintained by EPD and has been previously been approved by USEPA. Copies of the QAPP and QMP are available from the EPD and will be kept on site to be used as reference and provide future guidance on water quality monitoring procedures. Any additional agencies, organizations, or subcontractors that participate in the aforementioned water quality monitoring activities shall also adhere to EPD's "Guidance On Submitting Water Quality Data for Use By the Georgia Environmental Protection Division in 305(b)/303(d) Listing Assessments."

The above statements serve to hold those conducting monitoring to the same quality assurance standards as EPD and will be taken very seriously. If at any point EPD determines the above statement was not followed and the resulting validity of the data produced suspect, then data may not be accepted for listing assessment purposes. <u>It is also required that the Contractor obtain a copy of EPD's own QAPP and QMP and keep it on-file for the duration of the project.</u> EPD will provide electronic copies of the QAPP and QMP if needed.

Sample Collection and Analysis

The Contractor may use local volunteers or staff to collect samples. Involving local citizens and volunteers will help to foster more local participation in watershed protection activities.

All personnel responsible for sample collection, whether staff, volunteers, or others, <u>must</u> undergo training through EPD. These training sessions will be conducted by the EPD's Monitoring Unit and will include proper site selection, sample collection, sample handling, and other topics. This will be completed before monitoring begins, unless there is already a previously approved SQAP in place or those responsible for sampling collection and/or field analysis have previous experience or training in the methods to be used.

Further information on developing a SQAP may be found in "Guidance On Submitting Water Quality Data for Use By the Georgia Environmental Protection Division in 305(b)/303(d) Listing Assessments", which will be provided along with this document.

Site Selection

Monitoring will occur at the same site(s) previously used to place the water body on the list of impaired waters. Additional sampling sites may be selected but at least one must be at the same location the impairment was identified. The site(s) will be provided by EPD and must be referenced in the SQAP. If a sample site does not already exist, then EPD will assist in site selection.

Before monitoring begins, visually determine if the site is accessible and conditions will not prohibit collecting samples safely (i.e. over grown conditions, public access, or other conditions). If the site is found to be unsuitable for sampling, EPD should be contacted to discuss the conditions of the site and determine where another acceptable sampling location may be located.

Data Submission

Data must be submitted no later than May 30th of odd numbered years to be considered for the next upcoming assessment for 305(b)/303(d) listing purposes. Georgia is under a statutory requirement to provide the U.S. Environmental Protection Agency with a completed assessment and listing report biennially on April 1st of every even numbered year. Having data in-hand by May 30th from the previous calendar year allows the EPD sufficient time to review the data and make listing assessment determinations prior to issuing public notice for comment and submittal to the U.S. Environmental Protection Agency for approval on April 1st. EPD's guidance document on sampling collection and submission will provide more detail on the proper data submission.

Data should also be submitted with any Semi-Annual Reports as well as Final Closeout Reports.

Targeted / BMP Monitoring

Introduction

This guidance will assist in establishing a targeted monitoring plan and provide tips for how to most effectively apply the monitoring to have the greatest impact. The data collected will not only help in the future implementation of watershed plans and application of BMPs, but may also be used to better aid EPD in determining where to conduct future monitoring. This monitoring ought to be looked at as another tool in improving Georgia's water quality. Sampling plans should include, at a minimum, the following sections and information:

- Watershed description
- Parameters to be monitored
- Quality Assurance / Quality Control
- Monitoring schedule
- Training
- Monitoring locations

Watershed Description

Briefly describe things such as violations of water quality, land use, watershed size, and other information. Also, include unique information such as, if there are a large number of agricultural operations (include type) or urban / suburban development. This section should be no more than about half-a-page.

Parameters to be Monitored

List all parameters that will be measured under this sampling plan. Include the methodologies to be used as well as equipment used to collect and analyze the samples. This section may be better addressed once training has been received.

Also, include any BMPs that will be monitored in this section, inclusive of which parameters that will be monitored. Be sure to list the locations of each BMP (latitude / longitude). This should also include where monitoring will occur for pre-installation assessments.

Quality Assurance / Quality Control

Describe the procedures to be used that will address quality assurance for the duration of the monitoring project. This may include things such as taking samples in duplicate, calibration, or other techniques. Also, within this section, include the following language:

"All sample collection, field parameters, and lab analysis will be conducted in accordance with GAEPD Adopt-A-Stream's (AAS) Quality Assurance Manual, 40 CFR Part 136 and U.S.EPA guidelines. These guidelines and references have been set forth in the Quality Assurance Project Plan (QAPP) and Quality Monitoring Plan (QMP) developed and maintained by AAS and has been previously been approved by USEPA. Copies of the QAPP and QMP are available from AAS and will be kept on site to be used as reference and provide future guidance on water quality monitoring procedures. Any additional agencies, organizations, or subcontractors that participate in the aforementioned water quality monitoring activities shall also adhere to AAS procedures and this guidance."

Monitoring Schedule

Briefly list the dates to be monitored as well as locations. This schedule will serve mostly as a guide, but should be followed as closely as possible.

If wet weather samples are to be taken, list the ideal month those samples will be collected.

Training

AAS and/or GAEPD's Monitoring Unit will conduct training on proper sample collection, handling, and analytics. Previously trained individuals may be exempt from this requirement; on the condition proof of training is submitted to EPD. This section should include the following information:

- Who conducted the training
- Who received the training (this includes anyone responsible for sample collection)
- When the training was completed
- What training was received (i.e. chemical, bacterial, macroinvertebrates, etc.)

Monitoring Locations

The section below gives a very general description of how sample locations should be chosen. Additional assistance will be given by GAEPD's 319(h)-Grants Unit during the development of the sampling plan.

The following information should be included in this section:

- Latitude / longitude of sample location
- Major road crossing / locations

- Brief description of each site (3 4 sentences)
- A map showing all sample location

Establishing Sample Locations

The key to creating an effective targeted monitoring plan is to establish sample locations that can give a "big" picture of the watershed conditions. The overall goal should be to establish at least 3 but up to 6 targeted sample locations in addition to the already established GA-EPD / USEPA sample location.

Sample locations should be selected with the following considerations:

- At least 1 sample up-stream of the original sample location
- At least 1 sample down-stream of the original sample location
- Locate any major tributaries and establish a sample site up-stream from the confluence
- Identify segments along the main stem of the stream that may contain more likely sources of contamination
- Sites where BMPs will be and/or are installed (if applicable)

Also, consider accessibility and safety when locating each site. Field reconnaissance should be done prior to sampling. Always know from where the samples will be taken and how easily those responsible for sampling can access the site. Try to have the sample site near road crossings, which will make sampling easier, as well as simplify potential access issues such as private property since much of the sampling can occur from the right-ofways. Always try to verify land ownership prior to going out into the field

Before committing to these locations try going from site to see the time commitment necessary to collect and process all the samples. This will also allow verification of directions for getting to each site.

Reporting

Data should be submitted (if collected) with each invoice. Invoices that include reimbursement for monitoring costs may not be paid until water quality data is received. Where appropriate, the data should also be accompanied by load reduction information based on a load reduction model such as STEPL or Region 5.

Once the data collection is complete a final report must be submitted to EPD for review. This report should compile all data, notes, and information gathered which will help begin answering questions about the conditions of the watershed. The final monitoring report* should contain the following elements:

- Introduction
 - Include brief watershed description
- Violations
- Previous data (i.e. old EPD or other data)
- Any previous implementation of BMPs
 - This includes any installed since the last year's data
- Results
- Conclusion / Next steps
 - Most likely sources of impairment
 - Recommendations for additional efforts to address impairments
- Appendix

- Copies of datasheets
- Field notes / observations

Tables, maps, and photos ought to be used where appropriate. The final report should be submitted in hardcopy format along with the final project closeout report.

*If a watershed plan (of any type) is being completed as part of the project, this information should be included in that plan. The completed watershed plan will serve as the final monitoring report.

Appendix C

MEASURES AND INDICATORS OF PROGRESS AND SUCCESS

To measure the progress and success of their nonpoint source programs, States will generally need to use at least three sets of measures. These include measures to indicate progress towards (1) the State's overall water quality vision of achieving and maintaining beneficial uses of water, (2) the long-term goals set by the State in its program (e.g., installing appropriate technology at all animal waste facilities that need to be upgraded, or implementing particular watershed projects) and (3) the shorter-term goals and objectives set by the State (e.g., successfully implementing a particular technology).

The following list illustrates measures and indicators, which States may choose from or add that will help the States measure the progress and success of their programs. States may identify and use other measures and indicators that are most relevant to their nonpoint source problems, programs, and projects. However, States must at least use the three measures of progress that are identified in Section 319(h)(11), (i.e., implementation milestones, available information on reductions in nonpoint source pollutant loadings, and available information on improvements in water quality).

Further, well-designed State programs will usually include several appropriate measures and indicators from each of the categories set forth below for each of their projects or program activities. For overall program status and trends, States will generally include measure 1.a. below as part of their Section 305(b) reports.

EPA and its State, Federal and other public and private partners have adopted core indicators to report nationally to measure attainment of five specific objectives. These five objectives are preserving and enhancing public health; preserving and enhancing ecosystem health; supporting uses designated by States and Tribes in their water quality standards; conserving or improving ambient conditions; and reducing or preventing pollutants loadings and other stresses. For nonpoint source pollution control, these five objectives are characterized by the measures and indicators presented below.

The categories below are approaches, which have been successfully used as water-quality and implementation measures and indicators, as well as measures of enhanced public education, awareness, and action. They are presented as examples, not requirements, and should be used as starting points for discussion.

1. Water Quality Improvement from Nonpoint Source Controls

- a. Number (or percentage) of river/stream miles, lake acres, and estuarine and coastal square miles that fully support all designated beneficial uses.
- b. Number (or percentage) of river/stream miles, lake acres, and estuarine and coastal square miles that come into compliance with one or more designated uses (e.g., a river segment that is neither fishable nor swimmable becomes fishable), or with one or more numeric water quality criteria (e.g., achieves a criterion for phosphorus while continuing to exceed a criterion for nitrogen).
- c. Demonstrable improvements in relevant surface and ground water quality parameters.

- d. Demonstrable improvements in biological or physical parameters (e.g., increase in diverse fish or macroinvertebrate populations, or improved riparian areas or other measures of habitat).
- e. Opening of previously closed shellfish beds.
- f. Lifting of fish consumption advisories.
- g. Prevention of new impairments (e.g., number of river miles removed from the "threatened" lists, or number of miles of high-quality waters protected).

2. Nonpoint Source Pollutant Load Reduction

- a. Reductions in pollutant loadings (e.g., by pounds or percentage) from nonpoint sources in impaired/threatened watersheds.
- b. Statewide reduction in pollutant loadings from nonpoint sources.
- c. In the case of nonpoint source pollution that may result from activities conducted in the future, prevention or minimization of new loadings, and/or offset of new loadings by reductions from existing sources.
- d. Reductions in frequencies, or prevention of increases, of peak flows in developing or developed areas.

3. Implementation of Nonpoint Source Controls

- a. Number of measures implemented in watersheds of impaired/threatened waters (e.g., number of on-the-ground practices implemented that reflect, for example, the "best practicable" approach to solve the identified problem).
- b. Percentages of "needed" measures implemented in watersheds of impaired/threatened waters (e.g., where watershed analysis has shown the need to implement measures at 20 sites, annual progress in implementing a watershed project can be shown by the number of BMPs installed).
- c. Combination of 2.b. and 3.b.
- d. Number of approved or certified plans written to address erosion and sediment control, storm water, nutrient management, or pest management.
- e. Percent of watershed covered by plans described in 3.d.
- f. Percent of facilities covered by plans described in 3.d.
- g. Statistically based survey of implementation rates (e.g., results of State-approved BMP use and effectiveness surveys).
- h. Percent of priority ground water addressed by nonpoint source controls.

4. Public Education, Awareness, and Action

- a. Participation rates in education programs specifically directed to solving particular nonpoint source pollution problems.
- b. Statistically based survey of public awareness, knowledge, and action to measure changes in attitudes and action over time.
- c. Participation rates in various nonpoint source activities, such as citizen monitoring and watershed resource restoration activities.
- d. Participation rates in various public awareness and education efforts.

Appendix D

USEPA GUIDELINES FOR WATERSHED PLANNING

If your project proposes to develop or revise a **TMDL Implementation Plan** or **Watershed Management Plan**, USEPA Guidelines require all plans to include the following elements:

- 1. An identification of the sources or groups of similar sources contributing to nonpoint source pollution to be controlled to implement load allocations or achieve water quality standards. Sources should be identified at the subcategory level (See Table 3) with estimates of the extent to which they are present in the watershed (e.g., X numbers of cattle feedlots needing upgrading, Y acres of row crops needing improved sediment control, or Z linear miles of eroded streambank needing remediation);
- 2. An estimate of the load reductions expected for the management measures described under paragraph (c) below;
- A description of the NPS management measures that will need to be implemented to achieve the load reductions established in the TMDL or to achieve water quality standards;
- 4. An estimate of the sources of funding needed, and/or authorities that will be relied upon, to implement the plan;
- 5. An information/education component that will be used to enhance public understanding of and participation in implementing the plan;
- 6. A schedule for implementing the management measures that is reasonably expeditious;
- 7. A description of interim, measurable milestones (e.g., amount of load reductions, improvement in biological or habitat parameters) for determining whether management measures or other control actions are being implemented;
- 8. A set of criteria that can be used to determined whether substantial progress is being made towards attaining water quality standards and, if not, the criteria for determining whether the plan needs to be revised; and;
- 9. A monitoring component to evaluate the effectiveness of the implementation efforts, measured against the criteria established under item (h).

Further guidance on developing a watershed management plan can be found using USEPA's *Handbook for Developing Watershed Plans to Restore and Protect Our Waters*, available at: http://www.epa.gov/nps/watershed-handbook/

Appendix E



Environmental Protection Division, Watershed Protection Branch 4220 International Parkway, Suite 101, Atlanta, Georgia 30354 Linda MacGregor, P.E., Branch Chief 404/675-6232

FAX: 404/675-6247

Reply To:
NonPoint Source Program
404/675-6240
FAX: 404/675-6245

October 17, 2007

MEMORANDUM

TO:

Section 319(h) Grant Project Administrators of Agricultural BMP Projects

in Georgia

THROUGH:

Linda MacGregor, Chief, Watershed Protection Branch

Lawrence W. Hedges, NonPoint Source Program Manager

FROM:

Michelle J. H. Vincent, Section 319(h) Grants Unit Manager

SUBJECT:

Chicken Mortality Management Practices

Consistent with GAEPD's mission to "take the lead in ensuring clean air, water and land," the Section 319(h) Grant Unit believes in order to effectively implement our program it is essential to consider all potential environmental impacts of our projects and agricultural practices.

The water quality threat posed by the disposal of dead livestock has been a justification for the installation of both composters and incinerators partially funded through Section 319(h) Nonpoint Source Implementation Grant funding. Both practices are commonly funded through agricultural best management practice projects and are supported by the USDA Natural Resource Conservation Service. However, research clearly details the negative air quality impacts of incinerators. Composting emits fewer pollutants and produces a usable by-product. Please see the attached research paper for more detailed information. Based upon these facts and the comparable installation costs of both practices, composting is the preferred best management practice as a means of chicken mortality, management for the Section 319(h) Program in Georgia.

Due to the negative air quality impacts of incinerators resulting from the emission of particulates, Georgia's Section 319(h) Grants Program will no longer fund the installation of incinerators within those counties in the State designated as non-attainment areas for air quality standards by the USEPA. Throughout the rest of the State, composting is the preferred practice for Section 319(h) Grant funding as a means of dead livestock disposal.

MJHV:dlw

Attachment

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cc: Jack Capp, Industrial Source Monitoring Program, Air Protection Branch, GAEPD Brent Dykes, Acting Executive Director, GA Soil and Water Conservation Commission James Tillman, State Conservationist, Natural Resources Conservation Service Billy Caudell, Agriculture Manager, GA Department of Agriculture

Poultry Mortality Management: Composting v. Incineration

Prepared by: Dana Wright and Michelle Vincent, GAEPD Watershed Protection Branch Published August 1, 2007

Georgia currently has five approved methods for managing poultry mortality. These include: on-site burial, landfill use, composting, incineration, and rendering. Composting and incineration are commonly funded through agricultural grant assistance programs, including the Section 319(h) Nonpoint Source Implementation Grant Program and the USDA's Environmental Quality Incentives Program. This paper briefly examines these two practices.

The Georgia Department of Agriculture and the Georgia Environmental Protection Division both require poultry growers to have permits for all mortality management activities. EPD permits are required for incinerators to help control the gaseous and particulate matter emissions, which occur during the burning process and for the burial and/or disposal of the ashes.1 The result of these incineration activities are a significantly increased opportunity for heavy metal toxins like lead and mercury, arsenic compounds, and nutrient pollutants to be emitted.² Research shows multi-chamber incinerators allow for a greater breakdown of carcasses and a greater reduction of toxic air emissions.3 Therefore, the state requires all incinerators be dual or multiple chamber devices equipped with an auxiliary burner in the primary chamber with a secondary burner to control smoke and odors. Smokeless incinerators are also available, which produce fewer emissions, but are more expensive.⁴ Despite the gaseous and particulate emissions, incineration is recognized as a biologically safe method of mortality management.⁵

Composting is the second most implemented practice next to on-site burial. As opposed to incineration, composting is the natural breakdown of livestock using organic materials resulting in a fraction of the gaseous pollutant emissions. This practice requires a storage facility with a roof and impervious floor. During this highly laborious process chicken litter is used to separate layers of carcasses while moisture, temperature, and oxygen levels must be constantly evaluated and maintained.6 The composter must be located 100 feet from surface water. drainage ditches, and wetlands. The entire composting process takes about 14 to 30 days. Composting is a fairly odorless procedure producing an organic material available for use as a soil additive shown to produce a 50-60 percent increase in vegetable crop yields.8 Composting requires the poultry producer have either a site appropriate for compost application or a source to purchase or remove the compost. Some companies manufacture rotary composting systems, which use air infusion and other aeration techniques. These technologies decrease labor intensity, shorten the composting process and lower the risk of contamination.9 When properly installed and maintained, composting facilities are one of the most environmentally safe mortality management practices.

¹ Ritz, Casey W., "Mortality Management Options for Georgia Poultry Growers." http://pubs.caes.uga.edu/caespubs/pubcd/B1244.htm, Cooperative Extension Service, University of Georgia College of Agricultural and Environmental Sciences, March 2004.

Ritz ("Management of Mortality").

"Rules for Air Quality Control," Chapter 391-3-1, Georgia Environmental Protection Division, Air Protection Branch, August 2006.

⁴ Carey, John B. and Thornberry, Fred D. "Dead Poultry Disposal," Texas Agricultural Extension Service, Texas A&M University.

⁵ Ritz ("Mortality Management Options").

⁶ Ritz ("Management of Mortality").

Ritz (Mortality Management Options").

8 Whelan, Ann Marie, "Fish/Poultry compost benefits environment, helps boost crop yields," Greenhouse Gas Mitigation Program, Soil and Nutrient Management Sector, http://www.soilcc.ca/gamp/ga_news/nr_060328.html. March 28, 2006.

9 Ritz, Casey W. and Worley, John W., "Poultry Mortality Composting Management Guide," Cooperative Extension Service,

University of Georgia College of Agricultural and Environmental Sciences, April 2005.

Appendix F

Conditions on Land Acquisition for State of Georgia

- 1. The grantee shall comply with the State of Georgia's land acquisition procedures as specified in Georgia Statutes and Code. Failure to adhere to State laws and regulations may be grounds for either grant termination or partial annulment.
- 2. The grantee shall not make an offer to purchase, execute a contract to purchase real property, or acquire an easement until the following documents are submitted to GAEPD and USEPA for review and approval is granted:
 - a. Documentation that the land will not be transferred by inverse condemnation.
 - b. Documentation that the ultimate deed holder has proper authority to acquire land and will assume all responsibility for managing the land in perpetuity in accordance with the conditions of this grant.
 - c. At least one (1) land appraisal prepared by a qualified professional. Appraisal preparation, documentation and reporting must be made in conformance with the standards and practices of the Uniform Appraisal Standards for Federal Land Acquisitions (UASFLA), as codified in 49 CFR 24.103, and the Uniform Standards of Professional Appraisal Practices (USPAP Standards 1 and 2) published by the Interagency Land Acquisition Conference.
 - d. A Phase I Environmental Assessment Report prepared by a qualified professional.
 - e. Documentation that all property purchased with Section 319(h) Grant funds is purchased with the proportion of Federal and match funds delineated in the project budget.
 - f. A copy of the proposed deed reflecting: 1) the actual Federal interest percentage in the property; and 2) the following encumbrance language intended to protect the interest of the United States:

Federal Lien: "Federal grant funds have been used to purchase this property. The United States interest in the property is 60%, or the percentage equal to actual share of the Federal participation in the original purchase price. This Federal interest must be reimbursed to the United States Treasury in the event the land is sold or transferred to a third party for purposes inconsistent with the grant from the United States of America or converted for purposes other than water quality protection."

- 3. Documentation must be submitted that the land provides for water quality protection and conservation. The appropriate State agencies must provide comments on the proposed site(s), if any construction, demolition, road building, or other disturbance of the real property is proposed. These comments must be provided and approved prior to any construction, demolition, road building, or other disturbance of the real property.
- 4. The grantee shall submit a copy of the land management plan to GAEPD and USEPA for review and approval 30 days prior to the purchase of the land. The land management plan shall ensure the land is placed in permanent conservation to protect water quality and lessen the impacts of nonpoint source pollution and the land is managed for that purpose in perpetuity.