
# GENERAL GUIDELINES
FOR
# COMPETITIVE APPLICATIONS

## SECTION 319(h) FY2019
## NONPOINT SOURCE IMPLEMENTATION GRANT

Revised July 2018

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# INTRODUCTION

Under Section 319(h) of the Clean Water Act, the U.S. Environmental Protection Agency (USEPA) annually awards a Nonpoint Source Implementation Grant to the Georgia Environmental Protection Division (GAEPD) to fund eligible projects that support the goals of the Georgia Nonpoint Source Program (NPSP). Federal funding is dependent on annual allocations from Congress and adjustments by USEPA.

Because funds are limited, the GAEPD employs a competitive process to select the projects that best support the NPSP goals for funding. This document is designed to help applicants understand the selection process and complete the application materials.

## ELIGIBLE & INELIGIBLE APPLICANTS

Eligible applicants are limited to public entities in Georgia such as:

- City and county governments, and State agencies;
- Local, regional, or State authorities operating jurisdictional services and/or delivery programs;
- Regional Commissions;
- Resource Conservation and Development Councils;
- Local and regional school systems, and State colleges and universities;

Eligible applicants that partner with local non-profit watershed groups established prior to the submittal of the application will receive additional consideration for a grant award.

Local governments must have Qualified Local Government Status in compliance with the requirements of the Georgia Planning Act of 1989 and the Service Delivery Strategy Law of 1997 in order to be eligible to execute contracts with GAEPD, per State law**.**
**http://www.dca.ga.gov/LocalGovStatus/planning.asp**

## MAXIMUM FEDERAL REIMBURSEMENT & MINIMUM NON-FEDERAL MATCH

- Maximum federal amount is limited to $400,000 and to 60% of the total project cost.
- Applicants must commit to a minimum non-federal match of 40% of the total project cost.
- A match commitment of 50% or greater will receive priority consideration for funding.
- Formula to calculate Match Commitment: Federal Funds Requested x $^{2}/_{3}$ = Match

# MINIMUM REQUIREMENTS FOR FUNDING

Eligible projects will be scored competitively based on criteria established in compliance with GAEPD and USEPA rules and guidelines.

Project applications **must** meet **all three** of the following minimum requirements:

- Implement an existing watershed-based plan that adequately meets USEPA's Nine Elements of Watershed Planning or implement an alternative to a watershed-based plan in the form of a Summary of Nine Elements compiled from planning documents; and

- Locate the project in a watershed or drainage area equal in size to a single 10-digit Hydrologic Unit Code (HUC-10) or smaller; and

- Commit to a minimum 40% non-federal Match that can be accomplished through local funds, in-kind services, or other non-federal sources.

Note: There will be no FY2019 competitive funds awarded to either revise existing or develop new watershed-based plans.

## ALTERNATIVE TO WATERSHED-BASED PLANS

If an existing watershed-based plan doesn't exist, the applicant may create a new, separate document – a Summary of Nine Elements – that includes the name of the applicant's project in the title. The Summary will consist of headings that correlate with the USEPA Nine Elements of Watershed Planning (see check list in Appendix A) and content that appropriately addresses each of the elements. The content can be excerpted from Regional Water Plans or multiple planning documents, should focus on a HUC-10 watershed scale or smaller, and should support the applicant's project proposal. The following options are recognized as the basis for an acceptable alternative to watershed-based plans and the foundation for a Summary of Nine Elements:

- Georgia's eleven (11) Regional Water Plans – selecting excerpts that narrow the focus to a HUC-10 watershed, support the applicant's project proposal, and meet the USEPA's Nine Elements of Watershed Planning. Access *Georgia's State Water Plan* web site at https://waterplanning.georgia.gov

- Multiple planning documents (TMDLs, TMDL Implementation Plans, watershed protection plans, stormwater management plans, source water protection plans, watershed studies, data reports and other water resource management documents) – combining excerpts that support the applicant's project proposal and meet the USEPA's Nine Elements of Watershed Planning. Access TMDLs and TMDL implementation Plans online at http://epd.georgia.gov/total-maximum-daily-loadings

# SELECTION FACTORS

## KEY RANKING CRITERIA

- Specify the nonpoint sources of pollution to be addressed and propose the activities best suited to prevent, control and/or abate the identified nonpoint pollution sources.

- Demonstrate cost effectiveness.

- Support the milestones and/or implementation activities described in the 2014 revision of the *Georgia Nonpoint Source Management Program* as documented in Georgia's Statewide Nonpoint Source Management Plan.

- Include an appropriate component to evaluate the effectiveness of the project (e.g., water quality monitoring, beneficial use assessment, environmental indicators).

### If implementing Best Management Practices:

The project must include:

- Schedules of BMP operations and maintenance, or manuals describing Standard Operating Procedures, which cover the expected lifespan of the practice and in accordance with commonly accepted standards.
- Estimates of load reductions in nitrogen, phosphorus and sediment.

## ADDITIONAL SELECTION PRIORITIES

Proposals will be given priority consideration if they meet minimum and key ranking criteria and also:

- Target Georgia's Section 305(b)/303(d) List of Waters in order to:
    - Improve water quality in impaired (not supporting) waters ; or
    - Restore impaired (not supporting) waters so that they are meeting water quality standards and supporting their designated or beneficial uses; or
    - Protect water quality in Category 1 (supporting) waters by incorporating USEPA's *Healthy Watersheds Initiative.*

- Implement structural and/or nonstructural best management practices recommended in a watershed-based plan that will lead to measurable (i.e., quantitative) improvements in water quality.

- Support a watershed management approach utilizing cooperating partnerships and/or multi-governmental agencies, especially in conjunction with other nonpoint source management activities within the watershed as well as across jurisdictional boundaries.

- Target waterbodies impaired for violating water quality standards and/or for water quality issues related to Pathogens, Dissolved Oxygen, Sediment, and/or Nutrients (Phosphorus & Nitrogen).

- Propose implementing management practices identified within the appropriate Regional Water Plan.

- Address waters with finalized Total Maximum Daily Loads (TMDLs).

- Demonstrate that the project results in environmental benefits beyond addressing nonpoint source impairments. These benefits may include, but are not limited to: environmental justice, air quality, water or energy conservation, stream flow profile, habitat connectivity, and others.

- Commit to a match of 50% or higher.

- Locate the project area(s) in priority watershed(s) as determined by GAEPD and USEPA, and focus proposed activities on watershed-based implementation and/or restoration.

- Include administrative and/or managerial improvements that prevent and/or correct the adverse hydrologic impacts of increased impervious surfaces. In order to receive consideration for this priority ranking, applications must propose to develop and implement items such as local or regional development ordinances, stream buffer protections wider that State minimums, or other local mechanisms to ensure long-term success in minimizing the potential future impacts of hydrological modifications.

- Qualify as a WaterFirst Community or locate the project within the jurisdiction of a WaterFirst Community that has committed to participate as a partner in the project.

- Partner with local non-profit watershed groups that were established prior to the submittal of the application.

- Carry out specific activities that address and/or implement management measures, enforceable policies, and mechanisms identified in *Georgia's Coastal Nonpoint Source Management Program*.

- Implement recommended stormwater BMPs in nine Coastal Georgia urban clusters. (See map in Appendix G detailing the selected cities: Springfield, Rincon, Buckhead, Darien, St. Simons, Jessup, Folkston, St. Mary's and Kingsland.)

## Changes or Improvements since Managing Previous Section 319(h) Grants

- Applicants who have not successfully administered previous federal grant-funded projects may receive a reduction in points during project review. All applicants are encouraged to describe staff or operational changes that would improve their ability to manage a grant project more efficiently and effectively.

Successful administration includes, but is not limited to:

- Completing all project activities during the contract period;
- Meeting all required deadlines;
- Completing the project on time and on budget;
- Expending all grant funds requested on project activities; and
- Providing adequate documentation as requested by GAEPD.

## Proposals must also meet the following factors for competitive selection:

- Follow all instructions and guidelines described herein to avoid forfeiting review or consideration for recommendation for funding.

- Prepare application in a clear and concise manner where all goals and objectives are clearly stated, and where all activities can be clearly understood.

# ELIGIBLE AND INELIGIBLE PROJECTS

Eligible projects must address nonpoint sources of pollution to improve water quality through implementation of an existing watershed-based plan or Summary of Nine Elements.

Ineligible activities are not entitled to 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 Project Activities |
|---|
| • Implementation of National Pollutant Discharge Elimination System (NPDES) permit requirements (including Concentrated Animal Feeding Operations, Phase I & II Stormwater Permits, Wastewater Permits, etc.) or of elements included in a permit (i. e., mandated Watershed Assessments and/or Protection Plans). |
| • Lake dredging or aquatic macrophyte harvesting – Note: Exceptions may be made if ALL contributing sediment sources have been corrected. |
| • Surface paving (impervious) |
| • Fulfillment of consent orders and/or decrees |
| • Construction of wastewater infrastructure |
| • Water quantity/supply projects (such as reservoirs, wells, infrastructure, etc.) |
| • Installation of incinerators – Note: Composting is the preferred practice for 319(h) funding as a means of dead livestock disposal. |

## "ABOVE AND BEYOND" NPDES PERMIT REQUIREMENTS

Some activities recommended in a watershed-based plan may be considered eligible for funding or as match under a 319(h) grant if they represent efforts, approaches or applications "above and beyond" any elements associated with a NPDES permit. Congruently, grant-funded activities entered in any NPDES permit report MAY NOT be counted as compliance.

Applications must include a signed Letter of Assurance on official letterhead from the lead organization verifying that activities proposed for a 319(h) project represent practices are "above and beyond" NPDES permit requirements and will not be counted as compliance in any NPDES permit reports.

Watershed monitoring required under a NPDES permit will not qualify for 319(h) Grant funding.

| Examples of Activities "Above & Beyond" NPDES Permits |
|---|
| **Add to Specified Number of Activities or Tasks Quoted in the NPDES Permit.**<br>• The applicant would replace an additional 10 septic systems, and would never count the additional installations (10 and up) as compliance with any NPDES permit requirements. |
| **Propose Completely New Activities or Approaches Not Included in the NPDES Permit.**<br>• The applicant would never count the grant-funded installations or activities as compliance with any NPDES permit requirements. |

# APPLICATION INSTRUCTIONS

## PRE-APPLICATION MEETING WEBINAR

All applicants are required to attend a webinar with GAEPD Grants Unit Staff to discuss the current application process. Project partners, consultants, or other affiliated parties are welcome to attend, but the lead organization **must** be in attendance on-line.

Two webinars are being held. You may attend either session; identical information will be presented. •

- Pre-application Webinar 1: Thursday, September 6, 9:30am – 10:30am
- Dial-in number (515) 604-9811 • Access code 654429

- Pre-application Webinar 2: Wednesday, October 3, 9:30am – 10:30am
- Dial-in number (515) 604-9811 • Access code 654429

## DRAFT APPLICATION REVIEW

In addition, Grants Unit Staff are available to review and comment on DRAFT applications if the documents are received (email is acceptable) by **September 31, 2018.**

To inquire about proposals or to schedule a conference call, contact:
Joyce McClain
404-651-8525
joyce.mcclain@dnr.ga.gov

**MAIL OR HAND-DELIVER APPLICATIONS ON A CD TO:**
Section 319(h) FY2019 Grant Application
ATTN: Joyce McClain
Georgia Environmental Protection Division
Watershed Protection Branch
Nonpoint Source Program
2 Martin Luther King Jr. Drive
Suite 1462 East
Atlanta, GA 30334

# APPLICATION SECTIONS

## PROJECT DESCRIPTION

Describe what the project will specifically do and how those objectives will be accomplished. By capturing the details of activities and tasks from the time the project begins until completion, the applicant is able to visualize the implementation of the project. Additionally, the project description must specifically identify the nonpoint sources of pollution to be addressed and clearly articulate the activities designed to prevent, control and/or abate those sources.

### 1. Project Title:

Provide the name or title of the project. Check the type of project that applies. You may check more than one type.

### 2. Lead Organization and Primary Contact:

Provide the name, address, telephone number, and email of the lead organization and primary contact. It is acceptable to include a secondary point of contact (for instance, when an applicant would like to include contact information for a major project partner). However, primary contact information must be provided for the applying organization to facilitate invoicing, documentation, and reporting.

Provide the Project Start Date, Project End Date, Federal Amount Requested, Match Amount to be Contributed and Total Project Amount where indicated.

### 3. Project Goals

Treat this section as a "sound bite" that provides an accurate account of **what** the project will accomplish including reference to the WMP being implemented and impairment being addressed, **where** the project will be located and **how** the goals will be met in the grant period.

Provide a description of all activities and best management practices (BMPs) the grant and match funding will be used for, including but not limited to, a description of each BMP, the type of BMP(s), approximate size of each BMP, number/type of structures in each BMP, educational activities, etc. Provide sufficient detail so that the project evaluators will know exactly what is being constructed/implemented and how it will function. Explain how the BMPs in the proposed project will reduce nonpoint source pollution. Include a description of how they will benefit the associated impaired water and, if applicable, implement the TMDL or WBP, or how they will protect unimpaired waters.

## 4. Project Background (as applicable)

Explain in a clear and concise manner **why** the project is needed, the scope of the problem and/or current condition of the targeted waterbody. If a subheading does not pertain to the project, put NA ("Not Applicable") under the subheading in the application.

### Reasons for Water Quality Impairments or Concerns/Threats

Identify the stressors/sources that cause or contribute to the environmental condition that will be addressed. Explain how and to what degree implementing this project will address the root cause stressors/sources of the problem. Reference supporting documents or materials that demonstrate the need for the proposed project as attachments in Section 12 at the end of the application.

### Staff, Partners and Volunteers

Introduce the organizations, agencies, individuals, and local non-profit watershed groups that have impacted and/or are committed to the project. Summarize the history that led to their interest or influence in developing project goals.

### Supporting Multi-Phase Projects

If the proposed project is part of a continuing or multi-phase strategy, briefly describe those efforts and their results in this section. Be clear if previous phases of a proposed project were funded by Section 319(h) Grants. Describe past work performed within the watershed to address existing impairments (specify a certain time period) and how the proposed project will build upon that work.

### Other On-Going Projects

Include information about other on-going nonpoint source management activities in the watershed, whether they represent an effort by the applicant or another party. Describe how the proposed project will support and/or coordinate with other programs in order to leverage efforts across the watershed as well as across jurisdictional boundaries.

### Addressing Adverse Hydrologic Impacts of Impervious Surfaces

Include local administrative and/or managerial mechanisms that will prevent and/or correct the adverse hydrologic impacts of increased impervious surfaces in a watershed. Applications must propose to develop and/or implement items such as stream buffer requirements wider than state minimums; local or regional low-impact development or quality growth ordinances; natural resource conservation and/or open space plans; impervious surface limits; stormwater or other nonpoint source utilities; or other mechanisms that will ensure long-term success by minimizing the potential impacts of future hydrologic modifications.

### Environmental Benefits in Addition to Addressing Nonpoint Source Impairments

Describe any environmental benefits the proposed project may produce in addition to managing nonpoint sources of pollution. Examples include but are not limited to: environmental justice/equity; water or energy conservation; air quality protection; wildlife habitat recovery or connectivity; stream flow profile; endangered species welfare; climate change mitigation; carbon footprint reduction; protection of healthy streams; and others.

### Implementing Management Practices Identified in an Appropriate Regional Water Plan

If the proposed project intends to implement management practices identified in a Regional Water Plan (RWP) that includes the project watershed, specify the coded sections (WW, WQ, etc.) of the RWP that reference the practices. Outline how the Water Planning Council will make the materials and methods developed through the project available to communities in the region for water quality protection and improvement.

## 5. Project Activities

Summarize courses of action, detail tasks and tactics, and describe deliverables that will achieve the Project Goals. In addition, establish Measures of Success to assess outcomes and effectiveness of each task.

**Project Activity:**

Reference each Project Activity to the appropriate corresponding milestone(s) and/or implementation practice(s) in sections of **Georgia's Statewide Nonpoint Source Management Plan.** Cite the section, subheading and page number. Summarize the milestone, goal or practice that corresponds with the Project Activity.

| Best Management Practices must be properly operated and maintained in accordance with commonly accepted standards for the specific practice. |
|---|

**Tasks:** Describe in detail the specific tasks necessary to complete each activity using available resources, and provide quantifiable information where appropriate. Number Tasks in continuous sequence (1, 2, 3, 4, 5, 6, etc.) and correlate Tasks directly to the Project Budget and Schedule.

Load reduction percentages must be estimated, using USEPA Region 5 or Spreadsheet Tool for Estimating Pollutant Load (STEPL) models or other model approved by GAEPD.

**Deliverables:** Identify all items that will be delivered as a result of each task. Provide quantifiable information where appropriate. Examples of deliverables include, but are not limited to: operation & maintenance manual (O&M), standard

operating procedure (SOP), notice of intent (NOI), subcontract, permit, design specification, water quality monitoring data, map, report, pictures, educational materials (brochure, video, etc.), and signage.

**Measures of Success:** Describe what evaluation criteria will be applied to each task to assess the appropriateness and effectiveness in accomplishing the associated activity. Criteria should target both quantifiable and qualitative results.

Include Quarterly Progress Reports/Invoices and Final Close-Out Report/Invoice as two separate tasks in the last Project Activity, with deliverables and measures of success. Quarterly Reports and Invoices are required for the length of the project to ensure adherence to the Schedule and to proactively address any concerns in a timely manner.

## EXAMPLE PROJECT ACTIVITIES TEMPLATE

**Project Activity:** Reach out to representatives & convene 3 meetings of Watershed Partnership.
**GA's Statewide NPS Management Plan, 319 Grants, Key Stakeholders, Funding, page 92:** *Priority watershed management approach that promotes a high level of stakeholder involvement & uses the expertise & authority of multiple agencies.*

Task 1: Introduce project to appropriate watershed partners.
- *Deliverables:* Outreach letters/emails/phone calls; preliminary meeting schedules.
- *Measures of Success*: Contact 75% of ongoing & potential partners within watershed.

Task 2: Convene 3 meetings to assign implementation tasks to partners & review progress reports.
- *Deliverables:* Notices, agendas, presentations, minutes, hand-outs, sign-in sheets.
- *Measures of Success*: Meetings attended by 50% of watershed partners.

**Project Activity:** Install agricultural BMPs based on contracts with minimum of 10 producers.
**GA's Statewide NPS Management Plan**, **Agricultural Nonpoint Source Program, Long Term Goal 3, page 45:** *Facilitate activities to reduce NPS pollution by 2016.*

Task 3: Install BMP systems according to NRCS specifications on contracted properties.
- *Deliverables:* Maps; pre- & post-BMP installation pictures.
- *Measures of Success:* Signed Certificates of Completion/Payment Requests for BMP systems installed.

**Project Activity:** Install septic system BMPs on minimum of 5 properties in the watershed.
**GA's Statewide NPS Management Plan**, **Onsite Sewage Disposal System (OSDS), Long Term Goal 5, page 133:** *Working with Georgia DPH and Georgia Onsite Wastewater Association, assist CBHs and local governments in development of OSDS post-installation management strategies that would include funding mechanisms for OSDS maintenance, inspection, and repair.*

Task 4: With GADPH assistance, recruit & contract with minimum of 5 property owners in watershed.
- *Deliverables:* Notices; meeting agendas, presentations, sign-in sheets, hand-outs. Signed inspections by appropriate agency; signed NOIs & cost-share commitments with property owners.
- *Measures of Success:* Fully-executed contracts with minimum of 5 property owners.

Task 5: Pump out, repair or replace septic systems on contracted properties according to GADPH.
- *Deliverables:* Procurement of qualified contractors; BMP designs/specifications according to GADPH requirements; permitting, supervision & inspection of installations by GADPH; maps; pre- & post-BMP installation pictures, O&M/SOP Schedules/Manuals.
- *Measures of Success:* Completion of a minimum of 5 septic system BMPs.

**Project Activity:** Implement green infrastructure urban stormwater BMPs
**GA's Statewide NPS Management Plan: Urban Nonpoint Source Program - Stormwater, Short Term Goal 3.5, page 60:** *Encourage and/or incentivize green infrastructure retrofits to reduce NPS runoff from existing development in urban areas.*

Task 6: Recruit & contract with one local government, business/industry or institution in watershed
- *Deliverables:* Notices; meeting agendas, presentations, sign-in sheets, hand-outs. Signed inspections by LIA, ACoE, GAEPD; signed NOIs & cost-share commitments with property owner.
- *Measures of Success:* Fully-executed contract with one property owner.

Task 7: Install green infrastructure stormwater BMPs targeting one urban watershed.

- *Deliverables:* Procurement of qualified contractor; required BMP designs & specifications; permits & certificates; maps; pre- and post-implementation inspections & photographs.
- *Measures of Success:* Completed urban stormwater BMP consistent with green infrastructure specs & guidance and in accordance with *Georgia Stormwater Management Manual Vol. II*.

**Project Activity:** Estimate load reductions using Region V, STEPL or other acceptable models.
**GA's Statewide NPS Management Plan**, **Key Components, Statewide Milestones for Water Quality Improvement, NPS Pollutant Load Reduction, page 149:** *Annually review information from NPS staff and project stakeholders for NPS load reductions of sediment, nitrogen & phosphorus; and include information in NPS annual report and GRTS.*

Task 8: Develop load reduction model outputs on each BMP for sediment, phosphorus & nitrogen.

- *Deliverables:* Load reduction reports for agricultural, septic system & urban GI BMPs.
- *Measures of Success:* Model outputs show sediment, phosphorus & nitrogen load reductions.

**Project Activity:** Prepare & submit Quarterly & Close-Out Reports & Invoices.
**GA's Statewide NPS Management Plan, 319 Grants, Long Term Goal 13, page 99:** *Effectively manage Section 319(h) grant funds.*

Task 9: Quarterly Invoices & Status Reports

- *Deliverables:* Invoices & reports on 15th of January, April, July & October during grant period
- *Measures of Success:* Documentation of progress & expenditures according to Project Schedule.

Task 10: Final Invoice & Close-Out Report

- *Deliverables:* Final Invoice within 30 days of contract term, and Close-Out Report.
- *Measures of Success:* Final Invoice & Close-Out Report documenting completion and evaluation of project activities on schedule & within budget.

**ADD PROJECT ACTIVITIES AS APPROPRIATE**

## 6. Roles and Responsibilities of Participating Organizations

Describe the roles and responsibilities for all Participating and Invited Organizations, subcontractors and stakeholders, clearly delineating the duties and accountabilities assigned to each. In particular, identify whether they intend to serve as general stakeholders or in a more committed capacity. Spell out all time, services or resources that each intend to contribute as match (cash or in-kind) to the project and provide detailed descriptions of the different expectations of each.

Participating and Invited Organizations, subcontractors and stakeholders can fulfill a variety of functions. Assigned roles can include project coordinator, technical expert, member of steering / advisory committee, and/or general stakeholder who attends infrequent outreach or educational events to learn about and comment upon the project.

**REQUIRED LETTERS OF COMMITMENT**

Participating Organizations must provide a letter of commitment clearly stating their roles, contributions, and responsibilities. If a Participating Organization plans to provide match, either as cash or in-kind services, these letters must also describe the dollar amount (cash) or dollar value (in-kind) of the match to be supplied.

NOTE: Private companies to be paid as sub-contractors on the project will not be counted as Participating Organizations.

**WaterFirst Community**

Complete the WaterFirst section in the application by marking an X in the appropriate space for Lead Organization and/or Local Government partner (YES or NO), and supplying the certification date as requested.

Applicants must include all relevant information and utilize the Participating Organizations table provided in the application template.

## 7. Project Location

**Project Area Description and Map:** Describe the approximate size of the proposed project area, including stream miles, lake or wetlands acreage, as appropriate. Identify the major River Basin and the Regional Water Planning Council where the project is located. Insert or attach a map (embedded in the application or as a separate electronic file). Be sure the ENTIRE project area is depicted on one map, even if the project will take place in two or more sub-watersheds.

**Hydrologic Unit Code(s), Watershed Name(s), and Priority Watershed(s):** Indicate the HUC numbers within, impacted or addressed by the project area. Provide watershed

name(s) and put an X after "Priority" if HUC is located in a priority watershed. Repeat the format as needed.

**Hydrologic Unit Codes (HUCs)** are sizing units that delineate watershed boundaries. Additional information about watersheds (e.g. 8-digit HUC boundaries, rivers and streams in a 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 HUC map for Georgia may be ordered from the USGS Science Information Center (ESIC) at 1-888-275-8747 or at http://www.usgs.gov

## 8. Nonpoint Source Pollution Impairments or Healthy Waters

### a) Section 305(b)/303(d) List of Waters:

Fill in all columns in the chart with information targeted by project activities. Add rows as necessary.

Priorities for funding Section 319(h) grant proposals include addressing either impaired (Categories 4 & 5 - Not Supporting; Categories 2 & 3 - Assessment Pending) or healthy (Category 1 - Supporting) waterbodies on Georgia's 2014 Section 305(b)/303(d) List of Waters. Please find more information on the USEPA's *Healthy Watersheds Initiative* at www.epa.gov/healthywatersheds/

Include ONLY those listed segments within the project area that will be directly targeted by project activities. These segments should also be referenced in the Project Goals and Background. The 2014 Section 305(b)/303(d) List of Waters can be found online at: http://epd.georgia.gov/georgia-305b303d-list-documents

### b) Known Impairments not on the 305(b)/303(d) List of Waters:

Although considered a lesser priority, a project can target other nonpoint source impacts, pollutants (such as phosphorous, nitrogen and other nutrients) or water quality threats that are NOT on Georgia's 2014 Section 305(b)/303(d) List of Waters, but that have been thoroughly documented by the applicant.

Acceptable forms of documentation include local or regional watershed-based plans (not necessarily associated with TMDLs) that meet USEPA's Nine Elements of Watershed Planning, water quality data collected following QA/QC methods, environmental impact research or studies, habitat or ecological assessments, public health alerts, etc.

## 9. Post-BMP Water Quality Monitoring

Applicants can propose water quality monitoring after BMPs have been installed for the following purposes:

- Collecting and qualifying samples for 305(b)/303(d) List of Waters assessments. Data would show whether the stream is meeting State water quality standards for the criterion violated and can be restored to supporting its designated use (Sample Quality Assurance Plan).

- Tracking trends in water quality improvement or degradation during the life of a project (Targeted Monitoring Plan).

- Evaluating effectiveness for new technology BMPs only (Targeted Monitoring Plan). All three monitoring options above must be scheduled during the final 12 months of the project in order to give BMPs enough time to function before sampling.

- Sampling sites must be located downstream of BMP installations or clusters in order to demonstrate water quality improvement.

- The site monitored by GAEPD where data was collected for listing assessments must be included as one of the sites sampled for the project.

For monitoring expenses to be eligible for reimbursement or as in-kind match, the application **must** include a DRAFT Quality Assurance/Quality Control (QA/QC) Water Quality Monitoring Plan for GAEPD to review and approve.

The QA/QC Monitoring Plan must identify the pollutant(s) or water quality concern(s) to be monitored, such as bacteria, dissolved oxygen, sediment or nutrients. In addition, the monitoring design must describe the stream name, the time line and frequency schedule for sample collection, the number and locations of sites (upstream, downstream, and latitude/longitude coordinates in Decimal Degrees), and the number of samples to be collected. Collection and analysis quality assurance/quality control must specify procedures, materials and equipment. Training dates and names / affiliations of field personnel must also be included.

In situations where up-to-date water quality monitoring data is available, please provide all relevant data summaries as an attachment to the application.

## 10. Project Budget

Break out the following details in each Item Class Category in the Project Budget for both federal and local match cash/in-kind allocation (see Example Project Budget, page 21):

> Item A - Personnel: *Position on Lead Organization Payroll (not subcontractors), annual full-time equivalent (FTE) salary, percentage of FTE, resulting dollar amount and number of years assigned to project.*

Item B - Fringe Benefits: *Position on Lead Organization Payroll (not subcontractors), percentage of FTE, resulting dollar amount, fringe benefit rate applied, and number of years assigned to project.*

Item C - Travel: *Position, purpose, total mileage estimated for project and mileage rate.*

Item D - Equipment: *Description, purpose or use.*

Item E - Supplies: *Item or category of items (monitoring, administrative, printing, etc.), purpose or use.*

Item F - Contractual: *Sub-contractor name (only if currently under contract – must have been procured using procedure consistent with State Procurement Practices), services or products related to project.*

Item G - Other: *Volunteer hours, donated services for match.*

Item I - Indirect Charges: *Federally-approved indirect cost rate*

Indirect costs are those that have been incurred for common or joint purposes. Indirect costs include costs which are frequently referred to as overhead expenses (for example, rent and utilities). Typical examples of indirect costs may include general administration of the non-Federal entity, accounting and personnel services performed within the non-Federal entity, depreciation on buildings and equipment, the costs of operating and maintaining facilities. Indirect Costs are reimbursable with federal funds or can be applied to local match.

Indirect Cost Rates proposed by the applicant must be certified by either a Federal review or audit procedures. The certificate, along with supporting documentation, must be submitted with the application.

Any non-Federal entity that does not have a federally negotiated indirect cost rate may elect to charge a "de minimis" rate of 10% of modified total direct costs (MTDC).

## Confirm Sources and Values of Non-Federal Match

Identify the sources of non-federal match in the Item Class Categories of the Project Budget, making sure the sources correlate with in-kind or cash commitments from specific partners in Item 6. *Roles and Responsibilities of Participating Organizations* of the application.

Project Activities and Tasks must correspond directly to the break-out of budget expenditures in the Item Class Categories. For example, if a turbidity meter is listed in the Equipment or

Supplies item class categories, there must be a Project Task that requires the purchase of a turbidity meter – i.e. TSS monitoring.

Applicants must also supply a Narrative Justification to the Budget that relates to actual Project Activities/Tasks and justifies the expenses covered by federal dollars and match values in appropriate Item Class Categories.

**EXAMPLE PROJECT BUDGET ON NEXT PAGE**
Please double-check all Project Budget calculations!

| Item | Item Class Category | 319(h) Grant Funds (60% Maximum) | Non-Federal Matching Funds (40% Minimum) | Total |
|---|---|---|---|---|
| A | Personnel (Lead Organization Payroll only):<br>Position: One (1) Project Manager - 0.50 FTE ($35,000/year) x 3 years<br>Description of Duties: Communication and collaboration with project partners and project oversight | $52,500 | $0 | $52,500 |
| | Position: One (1) Technician - 0.20 FTE ($25,000/year) x 3 years<br>Description of Duties: Conduct water quality monitoring | $0 | $15,000 | $15,000 |
| | **Sub Total:** | **$52,500** | **$15,000** | **$67,500** |
| B | Fringe Benefits (Lead Organization Payroll only):<br>Position: One (1) Project Manager – 0.50 FTE at 30% x 3 years | $15,750 | $0 | $15,750 |
| | Position: One (1) Technician - 0.20 FTE at 30% x 3 years | $0 | $4,500 | $4,500 |
| | **Sub Total:** | **$15,750** | **$4,500** | **$20,250** |
| C | Travel:<br>Position: Project Manager<br>730 miles x $.575/mile<br>Purpose of Travel: Meetings, Field Days, Site Visits | $420 | $0 | $420 |
| | Position: Technician<br>1,217 miles x $.575/mile<br>Purpose of Travel: Water Quality Monitoring | $700 | $0 | $700 |
| | **Sub Total:** | **$1,120** | **$0** | **$1,120** |
| D | Equipment: Laboratory<br>Description: Fluorometer & accessories<br>Purpose/Use: Optical brightener testing | $0 | $6,600 | $6,600 |
| | **Sub Total:** | **$0** | **$6,600** | **$6,600** |
| E | Supplies: Education & Outreach<br>Description: Printing<br>Purpose/Use: Brochure, flyers, mailer inserts, signage | $2,500 | $0 | $2,500 |
| | Description: Office Supplies<br>Purpose/Use: Meetings, project oversight, accounting | $0 | $600 | $600 |
| | **Sub Total:** | **$2,500** | **$600** | **$3,100** |
| F | Contractual:<br>Contractor Name: TBD via competitive bid<br>Description of Services: Urban GI stormwater BMP: Stream bank stabilization; trails; green space (6400 square feet) | $62,500 | $62,500 | $125,000 |
| | Contractor Name: XYZ Engineering, Inc.<br>Description of Services: Septic system pump-out, repair, replacement (5 @ $4,000 each) | $12,000 | $8,000 | $20,000 |
| | Contractor Name: Agricultural Producers TBD<br>Description of Services: Install BMP contracts (10 @ $7,500 each) | $45,000 | $30,000 | $75,000 |
| | **Sub Total** | **$119,500** | **$100,500** | **$220,000** |
| G | Other:<br>Volunteer Hours: 10 hours x $20 per hour | $0 | $200 | $200 |
| | **Sub Total** | **$0** | **$200** | **$200** |
| H | **Total Direct Charges: (Sum of A-H)** | **$191,370** | **$127,400** | **$318,770** |
| I | Indirect Charges:<br>Indirect Charge Rate (45%) | $18,428 | $21,060 | $39,488 |
| J | **Total:**<br>(Sum of I and J) | **$209,798** | **$148,460** | **$358,258** |

**Narrative Justification for Item Class Categories (Federal, Match or Both):**

- **Personnel (A) Budget Narrative Justification:** Summarize responsibilities and duties of staff on lead organization payroll as related to Project Activities and Tasks for each position cited, regardless of funding source. Describe skills, experience and qualifications of each individual that show them to be capable of performing the associated Tasks.

- **Travel (C) Budget Narrative Justification:** Clearly link individual traveling to the purpose of travel associated with the project. Provide the current federal mileage rate. Correlate travel budget items with a specific project activity and task. NOTE: Out-of-state travel must be pre-approved by GAEPD and is based upon reason for travel and cost.

  For current information on Mileage Rates, please visit the following website:
  IRS - http://www.currentmileagerate.com/

- **Equipment Narrative Justification (D):** The term "Equipment" applies only to single items with a useful life of more than one (1) year and an acquisition cost equal to or greater than $5,000 per item. All equipment budget items and costs MUST be itemized separately, and associated with a specific activity and task. If available, provide product descriptions, specifications or actual quotes.

- **Supplies Narrative Justification (E):** Items estimated to cost under $5,000 and/or with less than one (1) year of useful/shelf life should be budgeted as Supplies. Explain how Supply items or categories support actual project activities and tasks. Combine items and expenses into categories (monitoring, administrative, printing, etc.) when each category totals less than $2,000. Break down categories of Supplies into individual items if collective total is more than $2,000 per category.

- **Contractual Narrative Justification (F):** Contractual budget items represent formal financial relationships between the lead organization and subcontractors. Insert a detailed budget breakdown for each Contractual item equal to or greater than $30,000. As appropriate, describe service or job specifications and contractor qualifications required to accomplish the related project activities and tasks. If available, attach a copy of job announcement/RFP or solicitation to the application.

- **Other Narrative Justification (G):** Other budget items and costs must be itemized separately. Items allocated to this Item Class Category include in-kind volunteer contributions to match. Specify expenses (either dollar amount or percentage of totals) allocated to the project that are eligible for federal reimbursement or match (rent, utilities, telecommunications, financial services, audits, etc.).

- **Indirect Charges Narrative Justification (I):** Federally-approved indirect costs associated with the project are eligible for reimbursement by GAEPD Section 319(h)

Grant federal funds. In addition, indirect costs associated with the project may be applied to match. Attach documentation supporting the federally-approved indirect cost rate for the lead organization to be able to receive federal reimbursement for those costs and to apply those costs as required match.

**LEGAL REQUIREMENTS & ALLOWABLE COSTS**

Section 319(h) Nonpoint Source Implementation Grant projects must conform to all applicable legal requirements & allowable costs in the OMB's *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* at Title 2 CFR Part 200 and Part 1500, effective December 26, 2014.

http://www.ecfr.gov/cgi-bin/text-idx?SID=cda0bdef668241883294f8587b2c1163&mc=true&tpl=/ecfrbrowse/Title02/2tab_02.tpl

## 11. Project Schedule

All project proposals must include a Project Schedule that details expected execution of tasks, state and federal reporting requirements, expenditure of funds and accumulation of match. Note that 319(h) projects cannot exceed three (3) years in duration and that the three years are divided into quarters that progress consecutively from Quarter #1 to Quarter #12. The Project Schedule includes the following items:

- ***Project Timeline in Quarters (Row 2):*** Based on the 3-year limit, the Schedule template assumes awarded projects will be contracted in October 2019 and completed by September 2022. For the purposes of the application, all applicants MUST base their timeline on an October 2019 start date. If a proposed project is expected to be completed prior to September 2022, the remaining columns should be left blank. Once grant funds are awarded, the Schedule can be adjusted based on actual start and end dates.

- ***Federal Drawdown (Rows 3 & 4):*** Applicants MUST estimate the amount of 319(h) Grant funds they will spend each quarter. The "Initial" column indicates that no grant funds can be expended prior to the contract execution date, and the "Final" column indicates that by the end of 12 quarters all grant funds are expected to be spent.
  Enter each dollar amount manually into Row 3. The template will automatically calculate the percentage of federal dollars remaining in Row 4 for you.

- ***Match Expenditures (Rows 6 & 7):*** Applicants must also estimate the rate at which they expect to accrue match dollars. The "Initial" column indicates that no match funds can be accrued prior to the contract execution date, and the "Final" column indicates that by the end of 12 quarters, 100 percent of the match commitment will be met.
  Enter each dollar amount manually into Row 6. The template will automatically calculate the percentage of match accrued in Row 7 for you.

- ***Milestones/Tasks (Rows 11-111):*** This section details the timeframe in which each task identified in Section 5 is expected to be completed.

    - ***Contract Execution:*** This section has already been completed in the Template, and should remain as is.

    - ***Tasks:*** Applicants should include all tasks and task numbers from Section 5. It may be appropriate to shorten the task description to fit within the allotted space in the template, but the intent of the task should remain clear. Applicants should "fill-in" the appropriate number of cells, creating a bar that depicts the expected length of each task in months (tasks that will require less than one month should be represented by the filling in of an entire month cell). Applicants are encouraged to color code their tasks by suitable categories. For instance, in the "Example Schedule", meetings are color-coded in purple and tasks that will result in products deliverable to GAEPD are color-coded in orange. A key should be provided.

    - ***Federal/State Quarterly Progress Reporting Requirements:*** 319(h) Grant award recipients will be required to submit Quarterly Reports and Invoices for the length of the project to ensure adherence to the Schedule and to proactively address any concerns in a timely manner. These reporting requirements have already been completed in the template (color coded in pink) and should remain as they are.

    - ***Contract Close-Out:*** This section has already been completed in the template, and should remain as is. The contract close-out date can be adjusted as necessary once grant funds are awarded.

## 12. Project Attachments

Reference all digital supporting documents as attachments with sequential numbers (1, 2, 3) or alphabetical letters (A, B, C) in this section. Assign appropriate designations (Attachment, Exhibit, Figure, Table, or Map), titles and/or descriptions. Label all files appropriately so that they can be easily associated with the documents they contain.

# APPENDIX A

## CHECK LIST OF USEPA'S NINE ELEMENTS OF WATERSHED PLANNING

**ELEMENT (A):** IDENTIFICATION OF POLLUTANT & IMPAIRMENT CAUSES & SOURCES

- The plan identifies the pollutant causes and sources that will need to be managed to achieve the load reductions identified in a TMDL, or elsewhere in the plan.

- The plan addresses the causes and sources of other water quality, environmental, natural resource or stakeholder issues and concerns that are not addressed by a TMDL; but, may be problematic and are documented with supporting claims, studies, water quality data or other evidence.

**ELEMENT (B):** POLLUTANT LOAD REDUCTION ESTIMATES EXPECTED FROM BEST MANAGEMENT PRACTICES (BMP)

- The plan documents load reductions needed to achieve a TMDL.

- The plan describes a reasonable approach to estimate pollutant load reductions and includes assumptions and limitations.

- The plan estimates expected potential load reductions from BMP for each pollutant cause or source, or groups of similar sources that need to be managed.

**ELEMENT (C):** NONPOINT SOURCE (NPS) BEST MANAGEMENT PRACTICES (BMP) & CRITICAL TARGET AREAS FOR BMP INSTALLATION

- The plan provides recommended locations where *potential* BMPs may be implemented.

- The plan identifies potential BMPs to be installed in "critical" NPS loading areas.

**ELEMENT (D):** FINANCIAL & TECHNICAL ASSISTANCE TO IMPLEMENT BMP, ASSOCIATED COSTS & SOURCES OF FUNDS

- The plan identifies sources and amounts of the funding that will be needed to implement the BMP.

- The plan identifies authorities and technical assistance that will be relied upon to implement the BMP.

**ELEMENT (E):** EDUCATION & OUTREACH TO ENCOURAGE PUBLIC PARTICIPATION IN PLAN IMPLEMENTATION

- The plan provides an information/education component that will enhance public understanding of the plan and encourage their early and sustained participation in project development and plan implementation.

**ELEMENT (F):** BMP IMPLEMENTATION SCHEDULE

- The plan provides a reasonably expeditious schedule for implementing Best Management Practices (BMP) in (C) above.

**ELEMENT (G):** INTERIM MILESTONES TO DETERMINE PROGRESS OF BMP IMPLEMENTATION

- The plan provides a list or description of interim milestones for determining progress of NPS management practices or whether BMP are being implemented.

**ELEMENT (H):** SET OF CRITERIA TO MONITOR AND ASSESS BMP

- The plan describes a set of criteria, including water quality monitoring as well as hydrological, environmental, economic and social impacts, to determine whether pollutant controls or management practices are achieving loading reductions over time.
- If substantial progress is not being made towards attaining water quality standards, the plan includes a provision that uses the established criteria to determine:
    - Whether improvements or adjustments need to be made to existing BMPs; or
    - Whether new BMPs need to be added to replace existing BMPs.

**ELEMENT (I):** COMPONENT TO DETERMINE PLAN IMPLEMENTATION EFFECTIVENESS

- The plan provides a component to evaluate the effectiveness of efforts to implementation the plan over time measured against the criteria established under item (H).
- The evaluation component can also be applied to determine
    - Whether the watershed-based plan needs to be revised; or
    - Whether the NPS TMDL needs to be revised, if a NPS TMDL has been established.

# APPENDIX B
## DETERMINING MEASURES OF SUCCESS

The Measures of Success are critical components of a competitive project proposal. They provide the criteria (what & how) to determine if the Tasks are being accomplished in order to achieve the Project Goals. The Measures of Success also demonstrate that an applicant has a clear understanding of the expected efforts and results involved with each Task.

When developing the Project Activities, applicants should (1) identify **what** criteria will demonstrate the successful outcome of each specific Task, and (2) determine **how** to track those criteria. These criteria should include both qualitative and/or quantitative measures as appropriate. For certain BMP implementation Tasks, the Measures of Success will be numeric, e.g. expected load reductions from primary and secondary pollutants. In addition, tracking those load reductions will involve modeling to get numeric values. For other projects, the Measures of Success will require more creativity and thought. For example, generally accepted for educational outreach Tasks would be improved understanding of nonpoint source pollution issues throughout the watershed. And, one way to track that change in behavior or knowledge might be to conduct an educational survey before and after information or instruction materials are disseminated or workshops are conducted.

| Project Activity | Examples of Measures of Success |
|---|---|
| BMP Implementation | • Number of landowners contacted<br>• Number of projects contracted (percentage of target)<br>• Percentage of watershed affected by project<br>• Number of completed BMPs in accordance with appropriate specifications<br>• Estimate of load reductions for nitrogen, phosphorus and sediment<br>• Estimate of water quality and other environmental benefits above and beyond load reductions (based on modeling and/or monitoring)<br>• Number of field days/workshops/etc. and number of participants |
| Monitoring | • Number of monitoring sites<br>• Percentage of watershed for which monitoring data will be collected |
| Education and Outreach | • Number and description of educational materials produced and distributed<br>• Percentage of watershed population affected by project<br>• Attendance at workshops/meetings/classes by target audience (to be demonstrated through sign-in sheets, agendas, etc.)<br>• Improvement in water quality knowledge (based on survey or test results)<br>• Number of Continuing Education credits earned<br>• Creation of/Participation in Adopt-A-Stream or other volunteer groups<br>• Number of field days/workshops/etc. and number of participants |
| Technical Assistance | • Number/Percentage of participating local governments and other relevant stakeholders<br>• Extent of assistance performed (i.e. number of ordinances developed/implemented; workshops held and attendance; plans completed; monitoring results; etc.) |
| BMP Demonstration for New Technology Only | • Number of installed BMPs<br>• Effectiveness of BMP(s) in reducing primary and secondary pollutants<br>• Number of field days/workshops and number of participants |
| Regulatory Programs | • Establishment of self-funding mechanism within an appropriate timeframe<br>• Number of inspections, reports, plan reviews, citations etc.<br>• Number of ordinances developed/implemented/supported |

# APPENDIX C
## MONITORING GUIDANCE FOR 319(h) PROJECTS

**Monitoring Purpose**

Monitoring funded by 319(h) Grants will be conducted for the following purposes:

- Provide data to update assessments on the Georgia 305(b)/303(d) List of Waters;
- Track water quality trends (post-BMP installation or during the life of the project to protect healthy waters); and / or
- Evaluate the BMP effectiveness for new technologies only.

**Monitoring Types**

There are two distinct types of monitoring associated with a 319(h) Grant-funded project:

- 305(b)/303(d) List Monitoring, and
- Targeted Monitoring.

**Monitoring Pollutant(s) or Water Quality Concern(s)**

- Biological (i.e. Bacteria)
- Chemical/Physical (i.e. DO, pH, Conductivity, Nitrogen, Phosphorus, etc.)
- Habitat (i.e. Macroinvertebrates, Fish IBI, Habitat Assessments)
- Sediment (i.e. Turbidity, TSS, Macroinvertebrates)

**Monitoring Plans**

Once the monitoring purpose and appropriate, corresponding monitoring type have been determined, a quality assurance/quality control (QA/QC) monitoring plan will be required that describes the protocol for selecting sampling sites, establishing collection techniques, and conducting water quality analysis:

> 319(h) grant applications that request funds for monitoring must identify the monitoring purpose and type, reference the preliminary content of a specific monitoring plan, and provide a DRAFT QA/QC Monitoring Plan. A FINAL plan will be required if the project is funded.

The appropriate QA/QC Monitoring Plan for 305(b)/303(d) List assessments will be a Sampling Quality Assurance Plan (SQAP) and a Targeted Monitoring Plan for tracking water quality trends. Both plans will detail the following:

**Watershed Description:**

- Stream segment name(s) and location(s), including impaired reaches.
- Pollutant(s) or water quality concerns to be monitored, drainage area delineation, general conditions, jurisdictions, and reasons for monitoring.

**Description & Map of Target Areas or Post-BMP Sites to be Sampled:**

- Site names and locations (upstream/downstream).
- Sampling sites must include the site monitored by GAEPD where data was collected that put the stream on the Section 305(b)/3903(d) List.
- GPS latitude/longitude coordinates in Decimal Degrees for all sites.

**Time Period and Frequency Schedule:**

- Monitoring time period (month/year through month/year) and frequency of sample collection (weekly or monthly or quarterly)

**Procedures:**

- Number of samples to be collected during the length of the time period.
- Description of methodology and materials used to collect and analyze samples.
- Names, affiliations and credentials of field and laboratory personnel.

**Quality Assurance:**

- Dates of monitoring training workshops, and names and affiliations of instructors.
- Chain of Custody / rules for sample storage, transport, analysis, and disposal.

**Data Retention:**

- Names, locations and duration of data storage.
- Procedures for reporting and sharing data.

## SAMPLING QUALITY ASSURANCE PLAN (SQAP) FOR 305(b)/303(d) LIST MONITORING

Water quality monitoring for listing assessments involves collecting data from impaired water bodies classified as "Not Supporting" or "Assessment Pending". Section 305(b)/303(d) List monitoring is subject to the Quality Control / Quality Assurance requirements described in GAEPD's *Guidance on Submitting Data for 305(b)/303(d) Listings* [1] with links to a guidance document on how to develop a SQAP (May 2007) as well as to the GAEPD *Water Protection Branch Quality Assurance Manual*, June 1999 (Revised 2005); the *Title 40, Code of Federal Regulation, Part 136*; and the *Georgia Rules for Commercial Environmental Laboratory Accreditation (O.C.G.A. 12-2-9). In addition, Guidelines for Using Third Party Biological Data for 305(b)/303(d) Purposes* describes conditions that need to be met in order for GAEPD to use water quality data collected by outside sources in 305(b)/303(d) listing decisions.

Samples must be collected, when feasible, at the same site(s) that previously placed the water body on the 305(b)/303(d) List. GAEPD will need to approve an alternate location if sampling at the original site is not feasible. Qualified data that fits criteria outlined in *Georgia's 2014 305(b)/303(d) Listing Assessment Methodology* [2] will be reviewed by GAEPD to determine if a stream meets water quality standards and may be moved to a "Supporting" status.

| Pollutant or Indicator | Summary of Water Quality Standards* | Required Number of Samples |
|---|---|---|
| Fecal Coliform | Two seasonal in-stream water quality standards for geometric means:<br>1,000 mpn per 100 ml (Nov-April)<br>200 mpn per 100 ml (May-Oct) | 16 samples per site: 4 samples collected within a 30-day period during each of 4 calendar quarters or seasons to calculate 4 geometric means.<br>**NOTE:** The 30-day sampling period must not overlap the months of April/May or October/November due to seasonal changes in water quality standards. |

| | | |
|---|---|---|
| Dissolved Oxygen | 5mg/l (daily average)<br>4 mg/l (minimum) | 20 measurements within a 12 month period<br>(1-2 measurements per month) |
| Temperature | 90º F (maximum) | 20 measurements within a 12 month period<br>(1-2 measurements per month) |
| pH | 6.0-8.5 std. Units | 20 measurements within a 12 month period<br>(1-2 measurements per month) |

**NOTE:** GA EPD will consider requests to monitor additional pollutants or indicators on a case-by-case basis.
*Specific water use classifications (Fishing, Recreation, Scenic River, etc.) have different water quality standards[2].
[1] http://epd.georgia.gov/guidance-submitting-data-305b303d-listings
[2] https://epd.georgia.gov/sites/epd.georgia.gov/files/related_files/site_page/303d_Listing_Methodology_Y2014.pdf

The U.S. Environmental Protection Agency (USEPA) requires a biennial report updating assessments for the Georgia 305(b)/303(d) List of Waters on April 1st of every even-numbered year (2018, 2020, 2022, etc.). To be included in upcoming reports, data must be submitted to the GAEPD no later than June 30th of each odd-numbered year (2017, 2019, 2021, etc.).

**Steps to 305(b)/303(d) List Monitoring of Water Bodies Classified as Not Supporting or Assessment Pending**

- Design and submit a site-specific Sampling Quality Assurance Plan (SQAP) that follows procedures described in the ***Guidance on Submitting Water Quality Data for Use by the Georgia EPD in 305(b)/303(d) Listing Assessments*** (May 2007).
- Schedule certified training by GAEPD's Monitoring Unit that will include instructions on proper site access, sample collection and handling, and in-situ testing and analysis (i.e. dissolved oxygen, pH, and temperature).
- Collect and deliver samples under the chain-of-custody authorized by a certified laboratory analyst or accredited laboratory as referenced in the GA EPD's ***Water Protection Branch Quality Assurance Manual*** (June 1999, Jan 2005 revision).
- Employ sample collection methods that conform to the guidelines in the ***Water Protection Branch Quality Assurance Manual*** (June 1999, Jan 2005 revision).
- Report testing results based on analytical procedures approved by the U.S. EPA as outlined in the ***Title 40, Code of Federal Regulations, Part 136***.
- Assure analytic tests are performed by a certified laboratory analyst or by personnel from an accredited laboratory.
- Report testing results (if collected) with each invoice [1] submitted; and, where appropriate, the data should be accompanied by load reduction information based on a load reduction model such as STEPL or Region 5.
- Complete a Final Monitoring Report [2] for GA EPD review that compiles all data, notes, and information gathered on the conditions of the watershed. The Final Monitoring Report should be submitted in hardcopy format with the Final Project Closeout Report.

[1] Invoices that include reimbursement for monitoring costs may not be paid until water quality data is received.
[2] A completed watershed-based plan (of any type) will serve as the Final Monitoring Report.

## TARGETED MONITORING

Targeted Monitoring aims at tracking particular trends in water quality improvement or degradation, and is intended to provide a broad picture of water quality conditions within a

watershed. Samples or in-stream measurements are collected following GAEPD Adopt-A-Stream Program or other quality assurance/quality control (QA/QC) techniques. Monitoring is performed at multiple sites in the watershed and must also include established GAEPD/USEPA sampling site(s). Resulting data can demonstrate water quality improvement after BMP installation, or track water quality trends in healthy waters.

Post-BMP monitoring must be scheduled during the final 12 months of the project in order to give BMPs enough time to function. Locate sampling sites downstream of BMP installations or clusters in order to evaluate whether BMPs are effective in improving water quality.

| Pollutant or Indicator | Recommended Water Quality Criteria* | Required Number of Samples |
|---|---|---|
| E. coli [1] | **Swimming Categories**<br>Designated: <235 cfu/100 mL<br>Moderate: <298 cfu/100 mL<br>Light: <410 cfu/100 mL<br>Infrequent: <576 cfu/100 mL | 1 sample per site every month<br>(12 samples per year) |
| Dissolved Oxygen[2] | 5mg/l (daily average)<br>4 mg/l (minimum) | 20 measurements within a 12-month period<br>(1-2 measurements per month) |
| Temperature[2] | 90º F (maximum) | 20 measurements within a 12-month period<br>(1-2 measurements per month) |
| pH[2] | 6.0-8.5 standard units | 20 measurements within a 12-month period<br>(1-2 measurements per month) |
| Phosphorus[3] | Normal background levels:<br>< 0.1 ppm | 1 sample per site every month<br>(12 samples per year) |
| Nitrogen[3] | Normal background levels:<br>< 1 ppm | 1 sample per site every month<br>(12 samples per year) |
| Conductivity[3] | Georgia streams supporting mixed fisheries range from 50 to 500 mS/cm | 1 measurement per site every month<br>(12 measurements per year)<br>Establish normal background levels<br>Follow up any deviations |
| Habitat Assessment[2] | All waters shall be free from substances that interfere with legitimate water uses or are harmful to humans, animals or aquatic life. | Quarterly assessments at each site<br>(4 measurements per year) |
| Turbidity[2] | All waters shall be free from turbidity that causes a substantial visual contrast in a water body. | 3 wet weather samples per season (May-October / November-April)<br>(6 wet weather samples per year) |
| Total Suspended Solids (TSS) [4] | Reduce post-development total suspended solids loadings by 80%, as measured on an average annual basis. | 3 wet weather samples per season (May-October / November-April)<br>(6 wet weather samples per year) |
| Settleable Solids (Imhoff Cone) [3] | Excessive solids block sunlight, clog fish gills, smother aquatic habitats, carry toxic substances, and erode stream banks. | 3 wet weather samples per season (May-October / November-April)<br>(6 wet weather samples per year) |

*Specific water use classifications (Fishing, Recreation, Scenic River, etc.) have different water quality standards[2].
[1] USEPA recommendations based on an acceptable risk level of 8 people out of 1000 getting sick
[2] GAEPD water quality standard: http://epd.georgia.gov/georgia-water-quality-standards
[3] GA Adopt-A-Stream data
[4] USEPA guidance adopted by GAEPD: http://www.georgiastormwater.com

If Targeted Monitoring data shows improvement in water quality, this can lead to further qualified monitoring for 305(b)/303(d) List purposes under an approved SQAP or by GAEPD.

The pollutants or water quality concerns that GAEPD considers priorities for 319(h) grant-funded monitoring are bacteria (fecal coliform, E. coli and Enterococci), dissolved oxygen, nutrients (phosphorus and nitrogen) and sediment. Monitoring for sediment consists of habitat assessments and measurements for turbidity, settleable solids and Total Suspended Solids.

**Steps to Targeted Monitoring**

- Determine pollutants or water quality concerns to be monitored and develop an approved **Targeted Monitoring Plan** that follows the methods and procedures described in the most current GA Adopt-A-Stream Program (AAS) ***Visual Stream Survey, Biological & Chemical Stream Monitoring*** and ***Bacterial Monitoring*** manuals*.
- Schedule certified training by GA EPD's Monitoring Unit and/or Adopt-A-Stream Program staff that will include instructions on proper site access, sample collection and handling, and testing and analysis.
- Collect samples at multiple sites within the watershed to track water quality improvement by sampling downstream of BMP installations, or water quality trends in healthy waters.
- Apply quality assurance/quality control protocols for the duration of the monitoring project such as using a blank, taking samples in duplicate, and equipment calibration.
- Report testing results with each invoice [1] submitted (if collected); and, where appropriate, the data should also be accompanied by load reduction information based on a load reduction model such as STEPL or Region 5.
- Complete a Final Monitoring Report [2] for GA EPD review that compiles all data, notes, and information gathered on the conditions of the watershed. The Final Monitoring Report should be submitted in hardcopy format with the Final Project Closeout Report.

* Access at https://adoptastream.georgia.gov/monitoring-resources

[1] Invoices that include reimbursement for monitoring costs may not be paid until water quality data is received.

[2] A completed watershed-based plan (of any type) will serve as the Final Monitoring Report.

# APPENDIX D
## MATCH FAQS SHEET

### WHAT IS LOCAL MATCH?

Local match is a financial commitment related to the federal dollar amount requested, and is required as part of a Section 319(h) Grant contract to implement the project. The applicant and project partners identify budget expenses that will be contributed as match in local dollars or in-kind services/resources when submitting the initial project application.

### HOW MUCH LOCAL MATCH IS REQUIRED?

A minimum 40% of the total project cost is the required local match for all Georgia Section 319(h) projects. Additional local match of 50% or above is encouraged; and may result in the project proposal receiving priority consideration for funding.

**Example Calculation for Determining Match Commitment:**
**Federal Funds Requested x $^{2}/_{3}$ = Required Minimum Non-Federal Matching Funds**

| | |
|---|---|
| *Federal Funds Requested:* | *$150,000 (60% Total Project Cost)* |
| *Minimum Local Match Required:* | *$100,000 (40% Total Project Cost)* |
| *Total Project Cost:* | *$250,000* |

### WHAT CAN BE USED AS LOCAL MATCH?

Local match must be from non-federal sources and may be in cash or in-kind services/resources applied to a specific project. Match items *MUST* be eligible for federal dollars. Any items that do not qualify for federal funds may not be counted as match.

**CASH MATCH:** Cash contributed specifically to cover the actual costs of the project.

**IN-KIND MATCH:** Contributions made directly in the form of services, resources or goods with dollar value specified to implement the project. These amounts must be:

1. Verifiable (see section below regarding tracking local match commitments);
2. Directly related to accomplishing project activities and tasks;
3. Not already counted as match for another project funded by federal grants;
4. Allowable as federal grant funds under the applicable cost principles. See Title 2 CFR Part 200 and Part 1500, effective December 26, 2014, available online at: http://www.ecfr.gov/cgi-bin/text-idx?SID=cda0bdef668241883294f8587b2c1163&mc=true&tpl=/ecfrbrowse/Title02/2tab_02.tpl

### PUBLIC LAND CONSERVATION AS LOCAL MATCH

(1) Restricted to water quality protection purposes; (2) Compliant with *Conditions on Land Acquisition for State of Georgia* (Appendix E) and *Uniform Appraisal Standards for Federal Land Acquisitions*; (3) Permanently protected by Deed Restriction or Conservation Easement; and (4) Sustaining required due diligence.

## EXAMPLE IN-KIND MATCH SERVICES

| | |
|---|---|
| ✓ Personnel/Staff Salaries | ✓ Structural Designs |
| ✓ Professional Fees | ✓ Outreach Products & Events |
| ✓ Labor | ✓ Media Buys & Production |
| ✓ Supplies & Materials | ✓ Surveys |
| ✓ Equipment (Leases or Purchases) | ✓ Publications |
| ✓ Office / Meeting Space Rent | ✓ Audits & Appraisals |
| ✓ Office Utilities | ✓ Indirect Charges |
| ✓ Volunteer Hours | ✓ Public Land Conservation |
| ✓ Fringe benefits are also eligible as match for personnel time donations from the grant lead organization and other project | |

## EXAMPLE LIMITATIONS

- ⌦ Local match contributions must be from non-federal sources. This means that contributions cannot include:
  - × Cash from any federal funding sources;
  - × Cash or in-kind goods/services/efforts that will be reimbursed with federal dollars;
  - × Cash or in-kind goods/services/efforts used as cost-share for another federal grant; and/or
  - × In-kind goods/services/effort provided by federal employees or a federal organization.
- ⌦ Expenditures that are either required or anticipated to be required under an NPDES permit or enforcement order cannot be used as local match.
- ⌦ Match cannot be contributed until the start date of the fully-executed grant contract and as outlined in the Project Schedule.
- ⌦ The same cash or in-kind services/goods cannot be applied to more than one project.

## How Do I Track Local Match Contributions?

Local cash or in-kind match must be fully documented and consistent with the Project Schedule outlined in the grant contract:

1. Local match contributions must be tracked on a quarterly basis along with invoicing for federal funds and progress reports;
2. Match contributions must be entered into the lead organization's accounting records and be auditable from those records (i.e. type, quantity, value of contribution, date of contribution, signature of contributor/partner organization);
3. When recording in-kind match, accounting records must show how the value placed on the match was derived (i.e. number of volunteer or personnel or meeting space hours and hourly rate for each, etc.);
4. Volunteer hours and services must be documented to the extent feasible.

## How Do I Calculate The Value Of In-Kind Match?

The in-kind match value must not exceed fair market cost or rental rates.

### Donated Services:

**Actual Salaries, Wages or Fees**
Actual salaries, wages or fees contributed for match only count if the individuals are performing the same work in support of the project for which they are employed or charge compensation. In this case, the value of fringe benefits and overhead costs associated with the donated time can also be applied to match. Otherwise, the value of donated time must be computed at the "volunteer" rate paid for the work performed. In other words, lawyers, engineers, planners must base donated time on "volunteer" rates if they are removing tires from a stream. However, if they donate their professional services to support the project, they can compute the match based on their normal fee structures.

**Volunteer Contributions**
Volunteer time/services donated to the project must be valued at rates consistent with standard wages, fees or compensation ordinarily paid for similar work/services in the same labor market. Rates for volunteer services can be found on the following websites:

- https://explorer.dol.state.ga.us/vosnet/Default.aspx
- www.bls.gov/bls/blswage.htm
- www.independentsector.org/volunteer_time

### Donated Supplies:

The contribution must be priced at the market value of the supplies at the time of donation.

### Donated Equipment or Space in a Building:

The contribution must be appraised at the fair market rental rate of the equipment or space.

## APPENDIX E
### REQUIRED DUE DILIGENCE
### FOR NON-POINT SOURCE & LAND CONSERVATION PROJECTS IN GEORGIA

The value of property that is permanently protected through a non-point source (NPS) project may be used as match in 319(h) grant applications if the following conditions are met and approved by the Georgia EPD.

**1. Connection to the Proposed NPS Project:**

In order for the proposed land conservation activity to be used as match, it must play an integral role in the protection of water quality through a larger NPS project. This role must be jusitified by the applicant in the application documents and approved by Georgia EPD. The use of land conservation as match may be denied if the proposed NPS project could be completed and sustained without permanent land protections.

**2. Permanent Protection:**

For projects in which the applicant will acquire a fee-title property interest, the following language must be incorporated into the property deed and recorded on the date of the project's real estate closing. The entity receiving the fee-title property interest must be eligible to accept 'Qualified Donations', as defined in O.C.G.A §48-7-29.12(a)(6). A copy of the so-amended deed must be recorded and delivered to the EPD.

*This property shall be and is perpetually restricted, as indicated herein, so as to maintain certain conservation values which may include waterways, wetlands, natural habitats, forests, wildlife, scenic and agricultural areas and other ecological values which qualify the property as scenic, natural or rural and that has not been subject to significant development and as a significant natural area that provides a "relatively natural habitat for fish, wildlife, plants, or similar ecosystems" as that phrase is used in Section 170(h)(4)(A)(ii) of the Internal Revenue Code. These restrictions are deemed to be covenants running in favor of or for the benefit of land and are being held for the use of the public. Therefore, pursuant to O.C.G.A. § 44-5-60 (c), these covenants shall run in perpetuity. The grantee shall seek to preserve any plants, animals, or plant communities of the property, including but not limited to species designated as protected by the Georgia Department of Natural Resources and the U.S. Fish and Wildlife Service.*

For projects in which the applicant will acquire a conservation easement on the property, EPD must review and approve the draft easement prior to its execution. A copy of the executed easement must then be delivered to EPD. The entity receiving the easement must be eligible to accept 'Qualified Donations', as defined by O.C.G.A §48-7-29.12(a)(6). The easement must also contain the language below.

*This conservation easement shall be perpetual and shall be a covenant running with the land. If circumstances arise under which an amendment to or modification of this Conservation Easement would be appropriate, Grantor and Grantee, or their successor or assigns, may*

*subject to the approval process discussed below, amend this Conservation Easement; provided that no amendment shall be made that will adversely affect the qualification of this Conservation Easement or the status of Grantee under any applicable laws, including Sections 170(h) and 501(c) (3) of the Internal Revenue Code and the Georgia Uniform Conservation Easement Act, O.C.G.A. § 44-10-1 et seq. Any such amendment shall be consistent with the purposes of this Conservation Easement, shall not affect its perpetual duration, and shall result in equal or greater protection of the Conservation Values on the Protected Property. Nothing herein shall require Grantee to agree to any amendment, and Grantee shall obtain approval of the Georgia Environmental Protection Division or its successor State of Georgia entity, for any amendments, which approval shall not be granted if, in the sole discretion of the State of Georgia, the proposed amendment affects the Conservation Values of the Property. In the event no successor State of Georgia entity exists, the contact agency will be the State Properties Commission or the State of Georgia entity then responsible for the accounting of state property.*

### 3. Appraised Value:

The values of permanently protected fee-title land or conservation easements being used to match 319(h) grant funds must be justified by appraisals that meet specific standards. The purpose of the appraisal is to develop an opinion of the market value of the fee-title or easement interest in the property being conveyed. Such interest is $0 in inverse condemnations. All appraisals are subject to review and approval by the State.

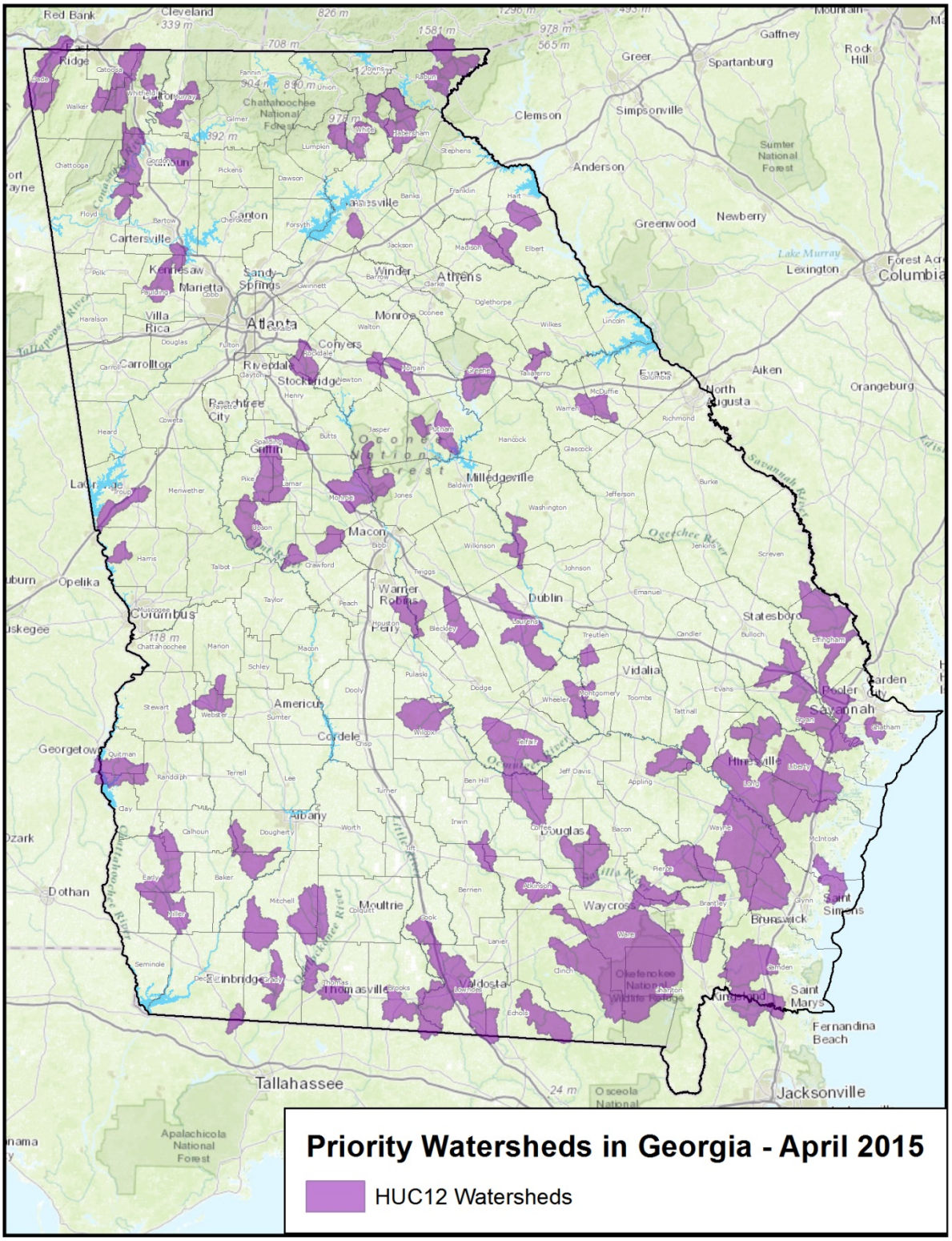
Acceptable appraisals may only be developed by Certified General appraisers according to the Georgia Real Estate Appraisers Board. All appraisals must conform to the Uniform Standards of Professional Appraisal Practice (USPAP) and the Appraisal Institute's Code of Professional Ethics and Standards of Professional Appraisal Practice. Appraisals must also meet the requirements of Section 170 of Title 26 of the United States Code and contain the following items.

- Purpose, Scope and function of the appraisal.
- Highest and Best use of the property.
- Physical description of the property being appraised and at least a 5-year sales history of the property.
- All relevant approaches to valuation consistent with common professional appraisal practices.
- A description of comparable sales with photos and location maps of each comparable.
- A statement of the value of the real property to be acquired, including data analysis. For conservation easements, a statement of the property value *before and after* the easement is in place is required.
- Effective valuation date, appraisal date, appraiser signature and certification within one year of review.

## 4. Other Due Diligence Materials:

- Property Survey. For land or conservation easements acquired as part of the proposed NPS project, a current survey plat and/or legal description signed by a registered Georgia land surveyor is required. The surveyor shall provide a recordable plat and/or legal description of the tract(s); and provide a signed "Certificate of Surveyor" that complies with O.C.G.A. §15-6-67 – 69 as amended, and O.C.G.A. §44-4-20 – 31.
- A Phase I Environmental Site Assessment. A Phase I Environmental Assessment in accordance with the American Society for Testing and Materials (ASTM) Standard E 1527-00 or ASTM Standard E 2247-02 shall be conducted on all land being permanently protected as part of the NPS project.
- Title Insurance. All land conservation projects being used a match require a copy of a valid title insurance policy in favor of the intended real property or easement holder. A copy of a title commitment letter from a registered title insurance company must be delivered to EPD prior to project closing.
- Land Management Plan. The applicant shall submit a land management plan to EPD for review and approval at least 30 days prior to acquiring the land or easement. The land management plan shall outline how the permanently protected land will be managed to protect water quality and lessen the impacts of nonpoint source pollution in perpetuity.

## APPENDIX F
### MAP & LIST OF PRIORITY HUC-12 WATERSHEDS



| HUC12 | Name | DNR_BASIN | County |
|---|---|---|---|
| 030701060301 | Fivemile Creek | Altamaha | Appling |
| 030701060203 | Lower Tenmile Creek | Altamaha | Appling |
| 030702010302 | Little Red Bluff Creek | Satilla | Atkinson |
| 030702010603 | Middle Hog Creek | Satilla | Bacon |
| 031300080304 | Lower Cooleewahee Creek | Flint | Baker |
| 031102020604 | Lower Willacoochee River | Suwannee | Berrien |
| 030701050102 | District Hollow Branch-Gum Swamp Creek | Ocmulgee | Bleckley |
| 030701050101 | Reedy Creek-Gum Swamp Creek | Ocmulgee | Bleckley |
| 030702011104 | Lower Buffalo Creek | Satilla | Brantley |
| 031102030703 | Lower Piscola Creek | Suwannee | Brooks |
| 030602040301 | Sterling Creek-Ogeechee River | Ogeechee | Bryan |
| 030602020508 | Little Creek-Black Creek | Ogeechee | Bryan |
| 030602030606 | Clyde Creek-Canoochee River | Ogeechee | Bryan |
| 030602020507 | Lower Mill Creek | Ogeechee | Bryan |
| 030602020505 | Caney Branch-Black Creek | Ogeechee | Bulloch |
| 030602020503 | Ash Branch-Lower Black Creek | Ogeechee | Bulloch |
| 031300100102 | Perry Creek-Spring Creek | Flint | Calhoun |
| 030702040904 | Little St. Marys River | Saint Mary's | Camden |
| 030702040905 | Catfish Creek-St. Marys River | Saint Mary's | Camden |
| 030702040902 | Cabbage Creek-St. Marys River | Saint Mary's | Camden |
| 030702011202 | Rose Creek-Satilla River | Satilla | Camden |
| 060200010702 | Lower East Chickamauga Creek | Tennessee | Catoosa |
| 060200010703 | Tiger Creek | Tennessee | Catoosa |
| 031102010105 | Okeefenokee Swamp | Suwannee | Charlton |
| 030602040201 | Hardin Canal-Little Ogeechee River | Ogeechee | Chatham |
| 030602040303 | Vernon River | Ogeechee | Chatham |
| 031102010103 | Suwannee Creek | Suwannee | Clinch |
| 031102010201 | Upper Tatum Creek | Suwannee | Clinch |
| 030702010401 | Broxton Creek | Satilla | Coffee |
| 030701040804 | Gregeory Creek-Ocmulgee River | Ocmulgee | Coffee |
| 030702010504 | Cat Creek-Seventeen Mile River | Satilla | Coffee |
| 030702010403 | Rose Creek | Satilla | Coffee |
| 031200020401 | Upper Little Ochlockonee Creek | Ochlockonee | Colquitt |
| 031200020402 | Middle Little Ochlockonee Creek | Ochlockonee | Colquitt |
| 031102040501 | Wells Mill Creek | Suwannee | Cook |
| 030701031503 | Little Echeconnee Creek | Ocmulgee | Crawford |
| 031300051206 | Lower Ulcohatchee Creek | Flint | Crawford |
| 060200011102 | Gulf Creek-Lookout Creek | Tennessee | Dade |
| 060200011103 | Crawfish Creek-Lookout Creek | Tennessee | Dade |
| 060200011104 | Sitton Gulch Creek-Lookout Creek | Tennessee | Dade |
| 060200011105 | Lookout Creek | Tennessee | Dade |
| 031200030205 | Lower Swamp Creek | Ochlockonee | Decatur |
| 031300090806 | West Chickasawhatchee Creek-Chickasawhatchee Creek | Flint | Dougherty |
| 031300100103 | Town of Crossroads-Spring Creek | Flint | Early |
| 031300100205 | Lower Dry Creek | Flint | Early |
| 031300100104 | Spring Branch-Spring Creek | Flint | Early |

| 031102010502 | Lower Toms Creek | Suwannee | Echols |
|---|---|---|---|
| 031102010501 | Upper Toms Creek | Suwannee | Echols |
| 030601090202 | Lower Runs Branch | Savannah | Effingham |
| 030601090203 | Ebenezer Creek | Savannah | Effingham |
| 030601090201 | Upper Runs Branch | Savannah | Effingham |
| 030601040304 | Deep Creek-Broad River | Savannah | Elbert |
| 031501041604 | Dykes Creek | Coosa | Floyd |
| 031501030602 | Woodward Creek | Coosa | Floyd |
| 030702030101 | Little Buffalo Creek | Satilla | Glynn |
| 030701060504 | Altamaha Sound-Frontal Atlantic Ocean | Satilla | Glynn |
| 030702030102 | Turtle River | Satilla | Glynn |
| 031501020604 | Marlow Branch-Salacoa Creek | Coosa | Gordon |
| 031501030203 | Snake Creek-Oostanaula River | Coosa | Gordon |
| 031501030201 | Camp Creek | Coosa | Gordon |
| 031501020605 | Lick Creek-Salacoa Creek | Coosa | Gordon |
| 031501030204 | Bow Creek-Oostanaula River | Coosa | Gordon |
| 031501030205 | Robbins Creek-Oostanaula River | Coosa | Gordon |
| 031200020704 | Little Tired Creek | Ochlockonee | Grady |
| 031200020703 | Middle Tired Creek | Ochlockonee | Grady |
| 031200020706 | Lower Tired Creek | Ochlockonee | Grady |
| 030701011102 | Upper Beaverdam Creek | Oconee | Greene |
| 030701011103 | Lower Beaverdam Creek | Oconee | Greene |
| 030701011101 | Town Creek-Richland Creek | Oconee | Greene |
| 030701011104 | Little Creek-Richland Creek | Oconee | Greene |
| 031300010105 | Amys Creek-Chattahoochee River | Chattahoochee | Habersham |
| 031300010202 | Upper Soquee River | Chattahoochee | Habersham |
| 031300010206 | Lower Soquee River | Chattahoochee | Habersham |
| 031300010204 | Middle Soquee River | Chattahoochee | Habersham |
| 031300010201 | Headwaters Soquee River | Chattahoochee | Habersham |
| 030701010104 | Upper Walnut Creek | Oconee | Hall |
| 031300021103 | Mountain Oak Creek | Chattahoochee | Harris |
| 030601030407 | Little Coldwater Creek | Savannah | Hart |
| 030601030406 | Upper Coldwater Creek | Savannah | Hart |
| 030701040107 | Thompson Mill Creek-Ocmulgee River | Ocmulgee | Houston |
| 030701031303 | Little Falling Creek | Ocmulgee | Jasper |
| 030701031307 | Berry Creek-Ocmulgee River | Ocmulgee | Jones |
| 030701031304 | Lower Falling Creek | Ocmulgee | Jones |
| 031300050901 | Honey Bee Creek-Potato Creek | Flint | Lamar |
| 031300050904 | Little Potato Creek | Flint | Lamar |
| 030701021103 | Horse Branch-Turkey Creek | Oconee | Laurens |
| 030701021304 | Upper Ochwalkee Creek | Oconee | Laurens |
| 030701021104 | Bluewater Creek-Turkey Creek | Oconee | Laurens |
| 030701021105 | Reedy Creek-Turkey Creek | Oconee | Laurens |
| 030602030505 | Middle Taylors Creek | Ogeechee | Liberty |
| 030602030507 | Strum Bay-Canoochee Creek | Ogeechee | Liberty |
| 030602040401 | Upper North Newport River | Ogeechee | Liberty |
| 030602030503 | Strickland Pond-Canoochee Creek | Ogeechee | Long |
| 030701060404 | Lower Doctors Creek | Altamaha | Long |

| 031102021003 | Alapahoochee River | Suwannee | Lowndes |
|---|---|---|---|
| 031102021002 | Lower Mud Swamp | Suwannee | Lowndes |
| 031102030404 | Valdosta-Withlacoochee River | Suwannee | Lowndes |
| 031102030802 | Tiger Creek-Withlacoochee River | Suwannee | Lowndes |
| 031102040504 | Franks Creek | Suwannee | Lowndes |
| 031102030804 | Redland Creek | Suwannee | Lowndes |
| 031102021001 | Upper Mud Swamp | Suwannee | Lowndes |
| 031300010505 | Tate Creek-Chestatee River | Chattahoochee | Lumpkin |
| 030601040302 | Scull Shoal Creek-Broad River | Savannah | Madison |
| 030601080103 | Whites Creek-Brier Creek | Savannah | McDuffie |
| 030602040601 | Upper South Newport River | Ogeechee | McIntosh |
| 031300100505 | Town of Boykin-Spring Creek | Flint | Miller |
| 031300100403 | Upper Aycocks Creek | Flint | Miller |
| 031300100303 | Long Branch-Spring Creek | Flint | Miller |
| 031300100501 | Town of Colquitt-Spring Creek | Flint | Miller |
| 031300100401 | Susian Ford Creek | Flint | Miller |
| 031200020403 | Lost Creek | Ochlockonee | Mitchell |
| 031300080506 | Bay Pole Branch-Big Slough | Flint | Mitchell |
| 031200020404 | Big Creek | Ochlockonee | Mitchell |
| 030701031305 | Deer Creek | Ocmulgee | Monroe |
| 030701031306 | Rum Creek | Ocmulgee | Monroe |
| 030701021301 | Cypress Creek | Oconee | Montgomery |
| 030701011406 | Middle Big Indian Creek | Oconee | Morgan |
| 030701011405 | Upper Big Indian Creek | Oconee | Morgan |
| 031501010402 | Mill Creek-Holly Creek | Coosa | Murray |
| 031501010403 | Goldmine Branch-Holly Creek | Coosa | Murray |
| 031501010406 | Bullpen Branch-Holly Creek | Coosa | Murray |
| 030701011401 | Nelson Creek-Little River | Oconee | Newton |
| 031501041103 | Lawrence Creek-Pumpkinvine Creek | Coosa | Paulding |
| 031501041102 | Lane Creek-Pumpkinvine Creek | Coosa | Paulding |
| 031501041105 | Westbrook Creek-Pumpkinvine Creek | Coosa | Paulding |
| 030702020501 | Sixty Foot Branch | Satilla | Pierce |
| 030702010705 | Caney Branch-Satilla River | Satilla | Pierce |
| 031300050903 | Gola Creek-Potato Creek | Flint | Pike |
| 031300050902 | Turnpike Creek | Flint | Pike |
| 030701011803 | Lower Rooty Creek | Oconee | Putnam |
| 030701011802 | Upper Rooty Creek | Oconee | Putnam |
| 030701011502 | Pearson Creek-Little River | Oconee | Putnam |
| 031300031313 | Drag Nasty Creek-Chattahoochee River | Chattahoochee | Quitman |
| 031300031507 | Lower Holanna Creek | Chattahoochee | Quitman |
| 031300031508 | Wilkey Creek-Pataula Creek | Chattahoochee | Quitman |
| 030601020207 | Upper Stekoa Creek | Savannah | Rabun |
| 030601020203 | West Fork Chattooga River | Savannah | Rabun |
| 030601020205 | Upper Warwoman Creek | Savannah | Rabun |
| 060102020102 | Middle Creek-Little Tennessee River | Tennessee | Rabun |
| 030601020208 | Lower Stekoa Creek | Savannah | Rabun |
| 030601020206 | Lower Warwoman Creek | Savannah | Rabun |
| 030701030106 | Honey Creek | Ocmulgee | Rockdale |

| | | | |
|---|---|---|---|
| 030701030107 | Camp Creek-South River | Ocmulgee | Rockdale |
| 030701031104 | Cabin Creek | Ocmulgee | Spalding |
| 031300031501 | Clear Creek-Pataula Creek | Chattahoochee | Stewart |
| 030601050105 | Lick Creek-Little River | Savannah | Taliaferro |
| 030701060302 | Watermelon Creek | Altamaha | Tattnall |
| 030701040703 | Lower Horse Creek | Ocmulgee | Telfair |
| 030701040701 | Upper Horse Creek | Ocmulgee | Telfair |
| 030701040702 | Middle Horse Creek | Ocmulgee | Telfair |
| 031101030102 | Oliver Creek | Ochlockonee | Thomas |
| 031200020602 | Pine Creek-Ochlockonee River | Ochlockonee | Thomas |
| 031300020906 | Lower Long Cane Creek | Chattahoochee | Troup |
| 031300020905 | Upper Long Cane Creek | Chattahoochee | Troup |
| 031300050906 | Tenmile Creek | Flint | Upson |
| 031300050907 | Jerry Reeves Creek-Potato Creek | Flint | Upson |
| 031300050908 | Bell Creek-Potato Creek | Flint | Upson |
| 060200010704 | Upper Little Chickamauga Creek | Tennessee | Walker |
| 030702010604 | Lower Hog Creek | Satilla | Ware |
| 030701020407 | Wheeler Creek-Buffalo Creek | Oconee | Washington |
| 030701060402 | Penholoway Creek | Altamaha | Wayne |
| 030701060405 | Penholoway Swamp-Altamaha River | Altamaha | Wayne |
| 030702020502 | Little Satilla River | Satilla | Wayne |
| 030701060501 | Alex Creek-Altamaha River | Altamaha | Wayne |
| 031300070203 | Lower Lanahassee Creek | Flint | Webster |
| 031300070201 | Clear Creek-Kinchafoonee Creek | Flint | Webster |
| 030701021403 | Lotts Creek-Oconee River | Oconee | Wheeler |
| 030701021401 | Larry Creek-Oconee River | Oconee | Wheeler |
| 031300010102 | Smith Creek-Chattahoochee River | Chattahoochee | White |
| 031300010504 | Lower Tesnatee Creek | Chattahoochee | White |
| 031300010502 | Upper Tesnatee Creek | Chattahoochee | White |
| 031501010307 | Bates Branch-Coahulla Creek | Coosa | Whitfield |
| 060200010701 | Upper East Chickamauga Creek | Tennessee | Whitfield |
| 030701040504 | Cedar Creek | Ocmulgee | Wilcox |
| 030701040505 | Folsom Creek | Ocmulgee | Wilcox |
| 030701020801 | Oochee Creek-Oconee River | Oconee | Wilkinson |

# APPENDIX G

## MAP OF URBAN CLUSTERS IN THE GEORGIA COASTAL NONPOINT SOURCE AREA