|  |  |
| --- | --- |
|  | **Application for Clean Water Act, Section 604(b)/205(j) Grant**  **FY 2013** |
|  |  |
|  | **North Carolina Department of Environment and Natural Resources**  **North Carolina Division of Water Quality** |

|  |  |
| --- | --- |
| **1a. Project Title** | **Little River Watershed Restoration Project** |

|  |  |
| --- | --- |
| **1b. Overview (In a nutshell, the COG with this project proposes to…)** | The Albemarle Commission (AC), Albemarle Resource Conservation and Development Council and other project partners propose to develop a restoration plan for the Little River watershed using EPA’s nine-step process. The restoration plan will help guide efforts to conserve and restore the watershed, and identify key activities for future grant applications. The Little River watershed (Figure 1) was once rich in biodiversity with key anadromous fish and shellfish areas, and swamp forests critical to support native fish and wildlife, mitigate flooding, and protect water quality. Stormwater runoff from agriculture, and residential and commercial development in the watershed has degraded water quality to the point where a 7.9 mile section of the Little River is listed as Impaired (2012, 303d list).  To help restore the Little River’s biodiversity, the partnership is considering a number of activities including construction of wetland filters on main drainage canals flowing into the Little River, restoration of natural hydrology in riparian buffers, conservation of riparian buffers, construction of fish habitat, improved public access, public outreach and environmental education, and monitoring and research.  A nine-step restoration plan will help guide the partnership’s efforts to restore the watershed’s water quality and biodiversity. The AC is requesting $25,527 of 205J grant funds for the project. |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **2a. Grantee Primary Contact or Project Manager 1** | | | | | | | |
| **Name** | Bert Banks | | | | | | |
| **Title** | Executive Director | | | | | | |
| **Organization** | Albemarle Commission | | | | | | |
| **E-mail** | ebanks@albemarlecommission.org | | | | | | |
| **Address** | 512 S Church Street | | | | | | |
| **City** | Hertford | **State** | | NC | **Zip** | | 27944 |
| **Telephone** | 252 426-5753 | | **Fax Number** | | | 252 426-8482 | |

**1** A Statement of Qualifications must be provided in Section 2d. below.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2b. Grantee Execution Address (where contract will be mailed for signature)** | | | | | | | | |
| **Name** | Bert Banks | | | | | | | |
| **Title** | Executive Director | | | | | | | |
| **Organization** | Albemarle Commission | | | | | | | |
| **E-mail** | ebanks@albemarlecommission.org | | | | | | | |
| **Address** | 512 S Church Street | | | | | | | |
| **City** | Hertford | | **State** | | NC | **Zip** | | 27944 |
| **Telephone** | 252 426-5753 | | | **Fax Number** | | | 252 426-8482 | |
| **Federal Tax ID Number** | | 560987088 | | | | | | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **2c. Grantee Payment Address (where invoice payments will be mailed)** | | | | | | | |
| **Name** | Bert Banks | | | | | | |
| **Title** | Executive Director | | | | | | |
| **Organization** | Albemarle Commission | | | | | | |
| **E-mail** | ebanks@albemarlecommission.org | | | | | | |
| **Address** | 512 S Church Street | | | | | | |
| **City** | Hertford | **State** | | NC | **Zip** | | 27944 |
| **Telephone** | 252 426-5753 | | **Fax Number** | | | 252 426-8482 | |

|  |
| --- |
| **2d. Required Statement of Qualifications (To confirm that anyone involved in the proposed project is qualified to do so. Include in the statement ongoing 205J grant-funded projects, and you may include past 205J projects.)** |
| The **Albemarle Commission** (AC) improves the ability of member governments to enhance the quality of the lives of citizens in the Albemarle Region through direct services and assistance in planning, program development and management, public-private partnerships, and leadership. The AC has been addressing regional needs since 1970, and has been instrumental in the development and/or enhancement of regional infrastructure, industrial recruitment business development, labor force development, travel and tourism, community reinvestment /rehabilitation, and health and human services. The AC provides services in   * Workforce Development * Senior Programs * Regional Planning   The AC serves Northeastern North Carolina's Counties and Municipalities: Camden, Chowan, Currituck, Dare, Gates  Hyde, Pasquotank, Perquimans, Tyrrell, Washington, Columbia, Creswell, Duck, Edenton, Elizabeth City, Gatesville,  Hertford, Kill Devil Hills, Kitty Hawk, Manteo, Nags Head, Plymouth, Roper, Southern Shores, and Winfall.  The Little River Watershed Restoration Project would be the first 205J grant-funded project for the AC.  www.albemarlecommission.org  The **Albemarle Resource Conservation and Development Council** (ARCD) will be the lead technical service provider on the project. For over 35 years, the ARCD has worked with partners on projects that balance conservation of natural resources with economic and community development. Examples of projects in the council’s 10-county area around the Albemarle and Pamlico Sounds include:   * Assisted Perquimans County with stabilizing and regenerating 800 feet of natural shoreline and constructing stormwater wetlands and nature trails at its multi-million dollar recreation center on the Perquimans River in Hertford * Assisted multiple counties, towns and schools with creating wetlands to filter stormwater runoff and to provide outdoor classrooms for environmental education * Assisted multiple counties with county-wide watershed management studies * Assisted many local governments and communities with water management projects.   See the attached qualifications document for land and water conservation projects in the council’s 10-county area.  The ARCD’s website [www.albemarlercd.org](http://www.albemarlercd.org) also has information on programs and current and past projects.  Pasquotank and Perquimans Soil and Water Conservation Districts will provide technical and logistical support for the project. |

|  |  |  |
| --- | --- | --- |
| **3. Grant Funds Requested** | | |
| 205J Grant Funds Requested | $25,527 |  |
| Any other Funds necessary to complete? | $0 | (Source and are these funds secured?) |
| Total Project Cost | $25,527 |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **4. General Goal of Project (Must meet at least one Clean Water Act, Section 604(b)/205(j) requirement for use of funds).** | | | |
| Check all that are applicable  **√** | Determine the nature, extent, and cause of water quality problem(s) | Identify most cost effective and locally acceptable facility and non-point source measures to meet and maintain water quality standards | Develop implementation plan to obtain state and local financial and regulatory commitments to implement measures identified |
| **√** | **√** | **√** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **5.** | **Project Start Date** | (Feb 1, 2014) | **Project End Date** | (Mar 31, 2015) |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **6. Project Coverage Area** | | | | | | |
| (Include all COG(s) involved)  Albemarle Commission  (Is there a specific watershed name that applies to the area?)  Little River Watershed | | | | | Results could be applicable statewide (Yes/No) | Site Specific only (Yes/No) |
| Yes | No |
| **River Basin(s)** | | Pasquotank | | | | |
| **Watershed Hydrologic Unit(s)** | | Little River HU-0301020514 | | | | |
| **303(d) listed water? (yes or no, define if yes)** | | Yes or No | | (Define what use it’s 303(d) listed for here/year listed)  (use 2012 IR and/or 2014 draft IR)  Yes. 2012 IR: Category 5 Impaired Aquatic Life Standard Violation Chlorophyll *a*, Little River From SR 1225 (1 mile downstream of of SR 1221) to Halls Creek 7.9 FW Miles. C;Sw | | |
| **303(d) List Assessment Unit Number(s)** | | 30-5-(1)b | | | | |
| **County(ies)** | | Perquimans and Pasquotank | | | | |
| **7. *Does this proposal address any need(s) identified by DWQ in a Basinwide Water Quality Plan or a Priority identified in the RFP? If addressing a basin planning need, please reference the need, plan date, and page number of the basin plan.*** Describe how this proposal is consistent with recommendations/findings/information gaps identified by the Basinwide Water Quality Plan and/or is useful to water quality planning efforts. If proposal addresses an RFP Priority, describe it in the appropriate box below. | | | | | | |
| *N.C. Division of Water Quality. 2002. Watershed Restoration Plan for the Pasquotank River Basin. N.C. Department of Environment and Natural Resources, Division of Water Quality, Raleigh, NC.*    *N.C. Division of Water Quality. 2007. Pasquotank River basinwide water quality plan. N.C. Department of Environment and Natural Resources, Division of Water Quality,Raleigh NC.* | P. 12  Section 3.3.1., Pages 54-55.  Chapter 12, Pages 143-146 | | In 2002, DWQ developed four broad restoration goals for the Pasquotank River Basin. Each goal reflected the DWQ’s watershed restoration strategy to focus restoration projects within local watersheds in order to address water quality impacts from nonpoint source pollution. The goals also reflected the DWQ’s focus on restoring wetland and riparian areas, enhancing water quality, increasing storage of floodwaters, and improving fish and wildlife habitat. The restoration goals for the Pasquotank River Basin are listed below.   * Restore ditched wetlands to improve the habitat, fishery and flood control functions of these wetlands; * Reduce sediment loading and other pollutants from surface runoff by increasing the soil retention, filtration, and nutrient uptake functions of wetland and riparian areas; * Contribute to the re-opening of closed (posted) shellfish waters within certain tidal creeks; * Restore and protect wildlife corridors and other key links to high-value habitat areas; and * Restore and protect natural breeding, nesting and feeding habitat to promote species richness and diversity.   In 2007, DWQ recommended that the upper 2.8 miles of the Little River be removed from the 2008 303(d) list of Impaired waters as a result of a benthic bioclassification. However, Little River [AU# 30-5-(1)b], from SR 1225 (one mile downstream of SR 1221) to Halls Creek was listed on the 2008 303(d) list for a water quality standards violation. Lower Little River [AU# 30-5-(2)] remained on the 2008 303(d) list of Impaired waters of Chlorophyll *a* for further assessment of DO and swamp drainage affects. DWQ noted that expanded residential and commercial development had significantly changed the Little River watershed. DWQ provided the following recommendations for the watershed:   * Develop stormwater management programs for new development and to retrofit existing development. * Establish riparian buffers, as needed throughout the basin, both in residential and agricultural land use areas. * Reestablish natural drainage and associated wetlands to reduce stormwater runoff, assist with flood control and improve water quality. * Support the development and implementation of best management practices (BMPs) to help reduce nonpoint source pollution. Monitoring of these BMPs should also be required to improve maintenance, design and functionality. BMPs applicable in residential areas need to be encouraged through public education campaigns. * Watershed education programs should be implemented and continued by local governments with the goal of reducing current stream damage and preventing further degradation.   About 8 miles of the Little River are listed as Impaired on the 2012 IR for Aquatic Life Standard Violation Chlorophyll *a*. A nine-step restoration plan will help identify problems and solutions for the watershed with public participation. | | | |
| (identify the RFP’s priority being addressed here) |  | | (Describe how your proposal completes a priority that was identified in the RFP)  The proposed project would directly address Priority 1 in the RFP by developing a nine-element watershed plan, which will help guide the partnership’s efforts to conserve and restore the watershed, and identify key activities for future grant applications. | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **8a. In general, this project will further examine the following potential pollution sources (check all that apply):**  **Copy and paste this check mark: √** | | | |
| **√** | Agriculture |  | Waste Disposal (includes onsite systems) |
|  | Construction | **√** | Hydrologic Modification |
| **√** | Silviculture |  | Marina and Recreational Boating |
| **√** | Urban Runoff/Stormwater |  | Groundwater Loading |
|  | Resource Extraction |  | Natural Sources |
| **√** | Habitat Modification (drainage/filling wetlands, streambank destabilization) |  | Other, specify: |
| **8b. In general, this project will involve the following specific pollutants (check all that apply):**  **Copy and paste this check mark: √** | | | |
| **√** | Nitrogen | **√** | pH |
| **√** | Phosphorus |  | Alterations |
| **√** | Sedimentation | **√** | Pathogens/Bacteria |
|  | Metals |  | Pesticides |
|  | Oil and Grease | **√** | Temperature |
| **√** | Oxygen-Demanding |  | Other, specify: |

|  |
| --- |
| **9. QAPP:** If this proposal will be carrying out water quality monitoring, a QAPP will need to be established or already in place. Your COG may already have a QAPP approved. Please provide detail here. For a QAPP template and instructions for developing a QAPP, visit:  <http://portal.ncdenr.org/web/wg/ps/nps/319program> or  <http://www.epa.gov/QUALITY/gs-docs/g5-final.pdg>  A QAPP is required prior to sampling.  A QAPP will be developed as a component of the nine-step watershed plan. |

|  |  |  |
| --- | --- | --- |
| **10a. BUDGET: FUNDING REQUESTED (GRANT FUND PORTION ONLY). Do not include the budget information for any additional funds besides 604(b)/205(j) here. Only identify other funds in #3 above.** | | |
| **Budget Categories** | **Amount of Grant Funds only** | **Explanation (justify each budget line item)** |
| **Personnel/Salary** | $2,000 | AC staff time to manage grant |
| **Fringe Benefits** | $500 | AC staff benefits |
| **Supplies** | $500 | Paper, printing, etc |
| **Equipment** |  |  |
| **Travel/Transportation** |  |  |
| **Contractual** | $20,227 | Technical assistance from Albemarle RC&D Council to develop nine-step restoration plan. |
| **Other-** |  |  |
| **Total Direct** | $23,227 |  |
| **Indirect (max. 10% of direct costs, per 40 CFR 35.268** | $2,300 | AC fixed operational costs. |
| **Totals** | $25,527 |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **10b. Budget Details (604(b)/205(j) grant funds only)** | | | | | | | |
|  | **Project Management** | **Inventory, Evaluate or Determine** | **Education, Training or Outreach** | **Monitoring** | **Technical Assistance** | **Other** | **Total** |
| **Personnel** | $2,000 |  |  |  |  |  |  |
| **Fringe Benefits** | $500 |  |  |  |  |  |  |
| **Supplies** | $500 |  |  |  |  |  |  |
| **Equipment** |  |  |  |  |  |  |  |
| **Travel** |  |  |  |  |  |  |  |
| **Contractual** |  |  |  |  | $20,227 |  |  |
| **Other** |  |  |  |  |  |  |  |
| **Operating** | $2,300 |  |  |  |  |  |  |
| **Total** | $5,300 |  |  |  | $20,227 |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **11. Project Plan Schedule** |  | | |
| **Time Period/Date** | **Task / Milestone (list specific action(s) that lead to output(s) or outcome(s) achieved during each quarter)** | **Deliverable (output(s) or outcome(s) achieved during each quarter)** | **Anticipated Amount3, 4** |
| **First Quarter**  **Ending Mar 31, 2014** | Conduct stakeholder meetings with landowners, local, state and government officials, community groups and project partners to develop restoration plan overview including 1) descriptive information about the watershed, 2) location, 3) size, 4) brief statement of impairment, 5) land use within watershed, and 6) background of activities in the watershed. Watershed function, stressors and indicators will also be identified.  Develop outline of information and education component that will be used to enhance public understanding of the project.  Develop outline of monitoring component. | Quarterly Invoice  Draft project overview including outline and strategy for information and education component and monitoring program. | 20% $5,227 |
| **Second Quarter**  **Apr-Jun 2014** | Work with stakeholders to:  Identify and design NPS management measures that will need to be implemented to achieve load reductions as well as to achieve other watershed goals  Estimate pollutant load reductions expected for the management measures. | Quarterly Invoice  Draft designs of NPS management measures and estimates of pollutant load reductions | 30%, $8,000 |
| **Third Quarter**  **Jul-Sep 2014** | Work with stakeholders to:  Estimate technical and financial assistance needed, associated cost or sources, and authorities that will be relied upon to implement the plan.  Schedule implementing the nonpoint source management measures identified in the plan that is reasonably expeditious. | Quarterly Invoice  Draft estimate of technical and financial assistance needed and schedule for implementing NPS measures. | 20% $5,000 |
| **Fourth Quarter**  **Oct-Dec 2014** | Work with stakeholders to:  Identify measurable milestones for determining whether nonpoint source management measures or other management control actions are being implemented.  Develop criteria that can be used to determine whether pollutant load reductions are being achieved over time and substantial progress is being made towards attaining water quality standards.  Finalize monitoring component to evaluate the effectiveness of the implementation efforts over time measured against the criteria established to measure achieved pollutant load reductions. | Quarterly Invoice  Draft measurable milestones and criteria for determining progress towards attaining water quality standards.  Final monitoring plan. | 20% $4747.30 |
| **Fifth Quarter**  **Jan-Mar 2015** | Work with stakeholders to finalize the restoration plan. | Quarterly invoice  Final Project Report | 10% $2,552.7 |
|  |  |  |  |

3 Please show percent of grant spent that quarter and anticipated dollar amount for reimbursement. Unused funds carry forward to next quarter. Invoices cannot exceed budgeted amount.

4 10% of grant will be held until receipt of Final Project Report.

|  |
| --- |
| **12. Project Need and Abstract, including background and goals of project.** |
| **Abstract**  The Albemarle Commission (AC), Albemarle Resource Conservation and Development Council (ARCD), Perquimans and Pasquotank Counties, Soil and Water Conservation Districts (SWCD), Elizabeth City State University (ECSU), Elizabeth City Bass Masters (ECBM), and local community groups are working together to restore the Little River watershed, which includes about eight miles of Impaired river (2012, 303d list). The watershed was once rich in biodiversity with key anadromous fish and shellfish areas, and swamp forests critical to support native fish and wildlife, mitigate flooding, and protect water quality (Figure 1). To help restore the Little River’s biodiversity, the partnership is developing a number of activities including construction of wetland filters on main drainage canals flowing into the Little River, restoration of natural hydrology in riparian buffers, conservation of riparian buffers, construction of fish habitat, improved public access, public outreach and environmental education, and monitoring and research.  **Need**  Agricultural operations and residential and commercial development have significantly impacted water quality and fisheries in the Little River watershed. Agricultural operations have opened drainage canals that directly carry sediments and nutrients to the river, and residential and commercial developments have increased pollution from stormwater runoff. Swamp forest buffers have been eliminated or severely degraded in many locations along the river. As a result, the upper and lower sections of the Little River have been included at different times on the 303(d) list of Impaired waters, beginning in 1998 with the upper section of the river from its source to Halls Creek (11.8 mi.) for low Dissolved Oxygen (DO).  In 2000, the lower Little River from Halls Creek to the Albemarle Sound (6,263.9 acres) was added to the 303(d) list of Impaired waters for low DO. In both upper and lower segments, swamp conditions combined with agricultural runoff were thought to be contributing to the low DO.  In 2008, the Little River from SR 1225 (one mile downstream of SR 1221) to Halls Creek was again placed on the 303(d) list for water quality standards violations. The Division of Water Quality (DWQ) recommended that the lower Little River remain on the 303(d) list of Impaired waters for further assessment of DO and swamp drainage affects.  In 2012, a section of the Little River from SR 1225 to Halls Creek (7.9 miles, Figure 1), was listed Impaired in the aquatic life category. Over the course of the five-year assessment period, nearly 11 percent of samples were above the water quality standard for Chlorophyll *a* indicating nutrient enrichment in this segment of the river. The lower Little River, from Halls Creek to the Albemarle Sound (6,263.9 acres), was not sampled during this assessment period.  The goals of the project are:   * Develop a dynamic public-private partnership of local governments, local, state and federal agencies, non-profit groups, community groups, universities and high schools working to conserve and restore the Little River. * Create active public participation in conservation and restoration activities. * Develop an effective water quality and fisheries monitoring program to measure project impacts. * Develop and demonstrate practical and cost-effective technologies for improving water quality and fisheries habitat. * Develop practical and useful communication tools for public outreach and education. * Create a practical framework for restoring similar watersheds in eastern North Carolina. * Improve recreational fishing in the Little River by improving water quality and by improving and creating fisheries habitat.   The development of a nine-step plan will help guide efforts to restore the Little River watershed. The plan’s implementation would address the causes of Impairment by working directly with farmers, homeowners and businesses in the watershed to reduce sediment and nutrient loading from agricultural operations and stormwater. An outreach and education program would increase public awareness of and participation in conservation and restoration activities. A water quality and fisheries monitoring program would help strengthen state and federal monitoring programs in the watershed. |

|  |
| --- |
| **13. Narrative, detailed description of the project. You may use an outline. (Note: if project entails developing a Watershed Restoration Plan, then complete section 15 instead of this section)** |
| See Section 15. |

|  |
| --- |
| **14. Stakeholder Involvement (Name and explain each stakeholder’s role in the project.)** |
| The AC will manage the 205J grant. The Albemarle RC&D Council will provide project technical support. Pasquotank and Perquimans District SWCD staff will assist with field surveys, habitat improvement, and public outreach. Pasquotank and Perquimans Counties will provide in-kind support through the SWCD offices and staff, and GIS staff. The tax offices in each county will work with the project to develop a system of tax relief for landowners who sign conservation easements along the river. Staff and students at ECSU will assist with developing and implementing programs for monitoring water quality and fisheries habitat, and processing data for public access. The ECBM will help with public education and awareness activities. |

|  |  |
| --- | --- |
| **15. Projects Developing a Watershed Restoration Plan should include** [**EPA’s 9 Key Elements for Watershed Restoration Plans.**](http://portal.ncdenr.org/web/wq/ps/nps/319program/applyfor319) **(This is not required, but is preferred for restoration projects and proposal is given priority.)** | |
| 1 | An **identification of the causes and sources** or groups of similar sources that will need to be controlled to achieve the load reductions estimated in the watershed.  An overview will include descriptive information about the watershed including location, size, brief statement of impairment, land use within watershed, and background of activities in the watershed. Water quality data will be compiled before, during, and after implementation of the watershed restoration plan in order to gain full understanding of the watershed system. This section will include:   * *Watershed Function*. Beneficial watershed characteristics, watershed function.   + The Little River watershed was once rich in biodiversity with key anadromous fish and shellfish areas, and swamp forests critical to support native fish and wildlife, mitigate flooding, and protect water quality (Figure 1). The river is used for recreational fishing, commercial crabbing and watersports. However, according to fisherman in the ECBM and local residents, fishing has declined over the past 10 years or so. * *Stressors* (causes of impairment). Physical, chemical and/or biological sources degrading the watershed function   + Agricultural operations and residential and commercial development have significantly impacted water quality and fisheries in the Little River watershed. Agricultural operations have opened drainage canals that directly carry sediments and nutrients to the river, and residential and commercial developments have increased pollution from stormwater runoff. Swamp forest buffers have been eliminated or severely degraded in many locations along the river. As a result, Stormwater runoff from agriculture, and residential and commercial development in the watershed has degraded water quality to the point where about eight miles of the Little River are listed as Impaired (2012, 303d list).   + The project will identify the sources of sediment and other stressors on the river.   + The project will identify how harvesting of riparian wetland forests along the river has impacted water quality and fisheries. * *Indicators*. The measures of impact associated with stressors. (ex. Water quality measurements, waterbody advisories)   + The upper and lower sections of the Little River have been included at different times on the 303(d) list of Impaired waters, beginning in 1998 with the upper section of the river from its source to Halls Creek (11.8 mi.) for low Dissolved Oxygen (DO). In 2012, a section of the Little River from SR 1225 to Halls Creek was listed Impaired in the aquatic life category. Over the course of the five-year assessment period, nearly 11 percent of samples were above the water quality standard for Chlorophyll *a* indicating nutrient enrichment in this segment of the river. The lower Little River, from Halls Creek to the Albemarle Sound was not sampled during this assessment period.  |  |  |  |  | | --- | --- | --- | --- | | * + ECSU staff and students will work with state agencies and local community groups to develop a water quality and fisheries monitoring program for the entire watershed. |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |
| 2 | A **description of the NPS management measures** that will need to be implemented to achieve load reductions as well as to achieve other watershed goals identified in the watershed based plan  This section will describe management measures scheduled for implementation that will result in pollutant load reductions necessary to achieve water quality standards. Measures will be designed to:   * protect water resources and downstream areas from pollution and flood risk * conserve, protect, and restore priority habitat areas * preserve and establish riparian swamp forest buffers   For example:   * Constructing stormwater wetlands on main agricultural ditches to help reduce sediment and nutrients entering the river. * Reconnecting riparian swamp forests to the river to reduce flood risk and create habitat. * Helping Perquimans and Pasquotank counties develop a tax structure to incentivize landowners to enroll swamp forests in conservation easements.   Management measures will be summarized in a table with the following headings:  *Possible Management Measures – Stressor - Targeted Load Reduction - Evaluation Measures* |
| 3 | An **estimate of the load reductions** expected for the management measures  Excess N and P from agricultural operations may be contributing to the Impaired listing for Chlorophyll *a*. Evaluation measures would include   * Reducing N and P (lbs/yr) * Increasing DO (mg/L) * Reducing TSS and Turbidity   Reducing sediment in the river will be one of the key objectives. The targeted load reduction would be tons of sediment per year. The evaluation measures may include TSS and Turbidity. Load reductions tools will be evaluated for calculating targets, for example:   * Spreadsheet Tool for the Estimation of Pollutant Load (STEPL) * Revised Universal Soil Loss Equation 2 (RUSLE2) |
| 4 | An **estimate of the amount of technical and financial assistance needed** associated costs and or sources and authorities that will be relied upon, to implement the plan  The Albemarle RC&D Council would provide project technical support. Pasquotank and Perquimans SWCD staff would assist with field surveys, habitat improvement, and public outreach. Pasquotank and Perquimans Counties would provide in-kind support through the SWCD offices and staff, and GIS staff. The tax offices in each county would work with the project to develop a system of tax relief for landowners who sign conservation easements along the river. Staff and students at ECSU would assist with developing and implementing programs for monitoring water quality and fisheries habitat, and processing data for public access. Elizabeth City Bass Masters would help with public education, habitat restoration and monitoring activities. Through the planning process, other local groups would be identified as project collaborators.  The project would also work with DMF, WRC, other state and federal agencies, and local fishing clubs to design habitat structures and artificial reefs for the upper, middle and lower sections of the Little River. The project would also identify and work with sub-watershed landowner groups to help solve local water management and water quality problems including conservation of swamp forests.  The restoration plan would identify potential sources of funding for project activities including   * Coastal Recreational Fishing License grant program * APNEP * Division of Water Resources * Clean Water Management Trust Fund * NC Division of Soil and Water Conservation * NRCS * US Fish and Wildlife Service * EPA * Other state and federal agencies * Grant-making non-profit organizations   Cost Categories would include:   * Staff Salaries * Technical Assistance * BMP Design and Construction * Public Awareness and Education * Monitoring and Evaluation * Office Supplies * Travel * Permitting |
| 5 | An **information/education component** that will be used to enhance public understanding of the project  Public education and outreach will be a major component throughout the watershed planning process. Key stakeholders will be identified and included in the development and implementation of the watershed plan. Local, state, and federal programs will also be included in the planning process to tie in financial and technical assistance. Examples of information and education activities include:   * Develop a project web site for public access to information and activities for conservation and restoration. Also access to monitoring data. * Develop informational brochures and materials for public meetings and educational events. * Conduct public meetings for landowners in Pasquotank and Perquimans Counties. * Implement BMPs in areas visible to the public * Conduct educational workshops for local high school students. * Install information kiosks and signage at river access sites, along the river and at BMPs to highlight project activities in watershed conservation and restoration. |
| 6 | A **schedule for implementing the NPS management measures** identified in this plan that is reasonably expeditious  The implementation schedule component of the watershed plan will turn the goals and objectives into specific tasks. The schedule will include a timeline of when tasks will be implemented and accomplished, and identify the agency/organization responsible for implementation. The timeline will cover the entire watershed recovery process, with short and long term goals. The parameters for the tasks will include:   * Duration * Geographic Scope * Critical Areas * Goal Statement * Objectives and Key Elements * Implementation * Costs * Schedule * Monitoring |
| 7 | A description of interim, **measurable milestones for determining whether NPS management measures** or other control actions are being implemented  Milestones will measure watershed improvement by setting:   * Short-term goals (1 – 2 years)   + For example, completing the watershed restoration plan and beginning implementation activities including public education and baseline monitoring. * Mid-term goals (2 – 5 years)   + For example, establishing six demonstration BMPs throughout the watershed, and a long-term monitoring program. * Long-term goals (5 – 10 years)   + For example, measuring reductions in N, P, and sediment, and improvements in water quality and fisheries stocks. Obtaining commitments from local governments and state and federal agencies to provide technical and financial assistance.   Measureable milestones will be organized by priority, and set out in the goals. Tasks set under each goal will include time estimates and responsible parties. |
| 8 | A set of **criteria that can be used to determine whether loading reductions are being achieved** overtime and substantial progress is being made towards attaining water quality standards  The restoration plan will provide a time estimate and criteria by which the pollutant controls will result in water quality standard attainment for Chlorophyll *a* ((*μ*g liter-1).  Criteria would include   * Reducing N and P (lbs/yr) * Increasing DO (mg/L) * Reducing TSS and Turbidity   The EPA’s recommended narrative for chlorophyll *a* in the Chesapeake Bay (2003) may be a good guide for the Little River watershed: *Concentrations of chlorophyll a in free-floating microscopic aquatic plants (algae) shall not exceed levels that result in ecologically undesirable consequences—such as reduced water clarity, low dissolved oxygen, food supply imbalances, proliferation of species deemed potentially harmful to aquatic life or humans or aesthetically objectionable conditions—or otherwise render tidal waters unsuitable for designated uses.* |
| 9 | A **monitoring component** to evaluate the effectiveness of the implementation efforts over time measured against the criteria established under item 8.  The project monitoring plan will address the following:   * Identify purpose of monitoring, including all valuable indicators * Consider data quality needed to meet the goals and objectives in the management plan * Define who and how the data will be used * Collect background information in the watershed that can be used to refine the goals and objectives if needed * Provide the identity and experience of the monitoring plan preparer * Description of the monitoring plan * Parameters to be monitored * Method of analysis * Monitoring frequency * Monitoring site locations (mapped in GIS)   ECSU staff and students will work with DWQ, NCDMF, WRC, other state and federal agencies, and local stakeholders to design and implement a water quality and fisheries monitoring program. A QAPP will be developed as a component of the project. |

\*\* Use additional pages as necessary

**If you have questions or need assistance filling out the application, please do not hesitate to contact: Hannah Headrick (919) 807-6434 /** [**Hannah.Headrick@ncdenr.gov**](mailto:Hannah.Headrick@ncdenr.gov) **with NC DENR, Division of Water Quality’s Planning Section.**

**FOLLOW UP NOTE TO EXPEDITE CONTRACTING:**

If your proposal is awarded a Section 604(b)/205(j) Grant, your COG’s office will be asked for the following items in order to establish a contract to carry out the project and to enable invoicing to DWQ for the costs of the project. It is recommended that you have the following items ready to be emailed, and this will expedite the contracting process which traditionally may take up to 3 months. No work can be paid for before the official contract is in place between the State and the COG. The items the State will need to set up the contract are:

1. Conflict of Interest Policy
2. Certification Regarding Debarment, Suspension, and Other Responsibility Matters Primary Covered Transactions
3. Certification Regarding Drug-Free Workplace Requirements
4. EPA Pre-award Compliance Review Report for All Applicants Requesting Federal Financial Assistance
5. EPA Lobbying and Litigation Certification for Grants and Cooperative Agreements
6. Statement of Tax Status

**Evaluation Criteria for Review of Submitted Proposals:**

Proposals will be reviewed and evaluated based on the following criteria:

1. Merit
   1. Projects that provide relevancy to the Basinwide Planning Program and are consistent with any findings, recommendations or gaps identified by a Basinwide Planning Document. Basinwide Plans are located online at <http://portal.ncdenr.org/web/wq/ps/bpu/basin>
   2. Projects that address current basin “Action Plans” or needs, as identified within a Basinwide Plan OR priorities identified in the RFP.
   3. Projects that address the most recent Integrated Report/303(d) listings (using 2012 and draft 2014 lists).
   4. For planning restoration projects, projects that apply steps of watershed planning consistent with EPA guidance in *Handbook for Developing Watershed Plans to Restore and Protect Our Waters* (<http://www.epa.gov/owow/NPS/watershed_handbook/pdf/handbook.pdf>).
   5. Projects that have measurable results proposed:
      * 1. Assessment and planning projects are well-defined and will be directly actionable in the next phase of the overall initiative.
        2. Assessment methods are sound and suited to proposed deliverables.
   6. Proposals that demonstrate preparedness and momentum by:
      * 1. Completeness and clarity of the proposal.
        2. Demonstration of readiness to begin work on the project.
        3. Continuation of (own or others) successful work or contributing to/partnering with ongoing projects by other funding sources (such as the Clean Water Management Trust Fund, Ecosystem Enhancement Program, Section 319, Ag Cost-Share, EQUIP, State Revolving Fund, etc.)
        4. Commitments (if any, such as from partners or co-funding) secured.
   7. Application is Accurate and Complete
      * 1. Application filled out completely and accurately.
        2. Information clear and concise.
        3. Purpose and outputs clearly stated, defined and relevant.
   8. Results that are transferable to restoration work in other areas of the state.
   9. Previously funded project by applicant or collaborator achieved measurable success.
2. Capabilities
   1. Applicant must be capable of carrying out proposed activities and provided a Statement of Qualifications with application.
   2. Broad stakeholder support is preferred.
3. Budget and Timeline
   1. Funding request must be appropriate to work proposed.
   2. Projects are to be completed by Sep 30, 2015.
   3. Percent of indirect costs must by less than or equal to 10.5%, per DENR policy.

**Reimbursement Requirements**

Timely Quarterly Reports on accomplishments and for reimbursement are required. Reports should include contract number, time period covered, contact name and contact information, reimbursement details, description of any problems encountered, quarterly accomplishments, and an invoice.

Figure 1.

