

SUMMARY INFORMATION

Federal Awarding Agency Name: U.S. Department of Agriculture - Natural Resources Conservation Service (NRCS)

Funding Opportunity Title: Enhanced or Accelerated implementation of the Key Conservation Objectives.

Announcement Type: Modification to the Initial Announcement

Funding Opportunity Number: USDA-NRCS-AL-MULTI-19-GEN0010289

Catalog of Federal Domestic Assistance (CFDA) Number:

CFDA 10.069 - Conservation Reserve Program (CRP): Food Security Act of 1985, as amended, Section 1231, 16 U.S.C 3831-3835a.

CFDA 10.902 - Soil and Water Conservation (CTA): Soil Conservation and Domestic Allotment Act, Public Law 74-76, N/A Stat. N/A, 16 U.S.C 590 a-f.

CFDA 10.912 - Environmental Quality Incentives Program (EQIP): This program is authorized by Chapter 4 of Subtitle D of Title XII of the Food Security Act of 1985 (16 USC 3839aa et seq.), effective February 7, 2014., Executive Order Executive Order, Title XII, Part Subtitle D, Public Law 99- 198, 16 U.S.C 3830.

CFDA 10.924- Conservation Stewardship Program (CStP) - Food Security Act of 1985, Public Law 106-224, NA Stat. NA, 16 U.S.C 3839-21 et seq.

CFDA 10.931- Agriculture Conservation Easement Program - (ACEP) 16 USC 3865 et seq. ALE/WRE): Food Security Act of 1985, Title XII, Part Subtitle D, Section 1237, Public Law 99- 198. 16 USC 3865 et seq.)

CFDA 10.072 - Wetland Reserve Program (WRP): 16 U.S.C. 3837-3837f

Funding Opportunity Announcement Summary:

The purpose of this announcement is to advertise opportunities to parties who are interested in partnering with NRCS to provide technical services to address the key conservation objectives and focus areas described below. NRCS will accept applications under this notice for single or multi-year applications submitted by eligible entities based in or with substantial operations in Alabama.

Technical assistance services are defined as: technical expertise, information, training, education, and tools necessary for a producer to be able to successfully implement, operate, and maintain the conservation of natural resources on land active in agricultural, forestry, or related uses. The term includes:

- Technical services provided directly to farmers, ranchers, and other eligible entities, such as conservation planning, technical consultation, and assistance with design and implementation of conservation practices; and

- Technical infrastructure, including activities, processes, tools, and agency functions needed to support delivery of technical services, such as technical standards, resource inventories, training, data, technology, monitoring, and effects analyses. Information regarding technical assistance can be found at: <http://www.nrcs.usda.gov/programs/cta/>
- Technical assistance does not include research.

Key Dates:

Applications must be received by NRCS by 12:00 p.m. CST, Friday, July 19, 2019. The agency expects to make selections by July 29, 2019.

Federal Funding Floor and Ceiling Amounts:

The funding floor for this announcement \$20,000, and the funding ceiling is \$1,488,400. The funding floor means the minimum agreement funding amount for the Federal share per agreement awarded. The ceiling is the maximum agreement funding amount for the Federal share per agreement awarded.

A. PROGRAM DESCRIPTION

The authorizing statutes and regulations for this opportunity are

Food, Conservation, and Energy Act of 2008, Public Law 110-246; Food Security Act of 1985, Title XII, Part Subtitle D, Section 1237, Public Law 99-198, 16 U.S.C 3831-3835a. Soil Conservation and Domestic Allotment Act, Public Law 74-76,

N/A Stat. N/A, 16 U.S.C 590 a-f. Food, Conservation, and Energy Act of 2008, Section 2602, Public Law 110-246; Farm Security and Rural Investment Act of 2002, Section 2502, Public Law 107-171; Federal Agriculture Improvement and Reform Act of 1996, Section 387, Public Law 104-127, 110 Stat. 888, 16

U.S.C 3836a. Subtitle I of Title XII of the Food Security Act of 1985 as amended by the Agriculture Improvement Act of 2018 (Public Law 115-334).

CFDA 10.069 - Conservation Reserve Program (CRP): Food Security Act of 1985, as amended, Section 1231, 16 U.S.C 3831-3835a.

CFDA 10.902 - Soil and Water Conservation (CTA): Soil Conservation and Domestic Allotment Act, Public Law 74-76, N/A Stat. N/A, 16 U.S.C 590 a-f.

CFDA 10.912 - Environmental Quality Incentives Program (EQIP): This program is authorized by Chapter 4 of Subtitle D of Title XII of the Food Security Act of 1985

(16 USC 3839aa-- 3839aa-8), effective February 7, 2014., Executive Order Executive Order, Title XII, Part Subtitle D, Public Law 99- 198, 16 U.S.C 3830.

CFDA 10.924- Conservation Stewardship Program (CStP) - Food Security Act of 1985, Public Law 106-224, NA Stat. NA, 16 U.S.C 3838h.

CFDA 10.931- Agriculture Conservation Easement Program - (ACEP-

ALE/WRE): Food Security Act of 1985, Title XII, Part Subtitle D, Section 1237, Public Law 99-198.

CFDA 10.072 - Wetland Reserve Program (WRP): 16 U.S.C. 3837-3837f

Oil Pollution Act of 1990 (33 U.S.C. §§ 2701, et seq.).

Conservation partners are invited to apply for NRCS assistance with projects focused on the following key conservation objectives:

- 1) Conduct water quality monitoring in Fowl River and the Weeks Bay Watershed. See attached Statement of Work.
- 2) Provide technical assistance for groundwater assessment and detailed action plan for the Pisgah source water area. See attached Statement of Work.
- 3) Provide technical assistance for a statewide groundwater risk assessment for nutrients and pesticides:
 - a. Develop Groundwater/Aquifer Vulnerability Mapping Approach for statewide risk assessment determinations utilizing DRASTIC method developed by EPA or an alternative assessment equivalent to DRASTIC method.
 - b. Develop individual GIS mapping layers and descriptive reports for each parameter utilized in the final Aquifer Vulnerability map (e.g. depth to water map layer and descriptive report, net recharge, aquifer media, soil media, topography, impact of vadose zone, hydraulic conductivity).
 - c. Develop a refined statewide vulnerability mapping product for specific constituents involved in groundwater contamination process {i.e. pesticides, nitrate concentrations, wastewater storage ponds and lagoons}.
 - d. Develop modifications for the assessment methods as necessary to accurately represent the statewide conditions as well as including additional parameters such as land use/land cover and weights as necessary to generate a comprehensive vulnerability assessment product {e.g. Modifications to the depth to water parameter will be necessary to account for the wastewater structure depths and provide accurate risk assessment quantification}.
 - e. Provide GIS mapping layers and report for final Aquifer Vulnerability mapping.

- 4) Provide technical assistance for watershed assessment of the 10-digit Hydrological Unit 0603000108, Short-Scarham Creek Watershed. See attached Statement of Work for Watershed Assessments and Source Water Assessment
- 5) Technical investigations to identify cultural resources through reconnaissance field surveys, and/or phased field investigations, and/or the evaluation of cultural resources through the application of the National Register of Historic Places {NRHP} eligibility criteria for historic properties, found at 36 CFR Part 63. Provide management summaries and/or reports or letter reports detailing cultural resources investigations to the Alabama NRCS for review and acceptance by NRCS Archaeologists, Cultural Resources Specialists {CRS} or the NRCS Cultural Resources Coordinator {CRC}.
- 6) Provide technical assistance to landowners to complete prescribed burning on longleaf/shortleaf stands.
- 7) Provide training and site-specific engineering design for Natural Channel and Floodplain Restoration and Applied Fluvial Geomorphology.
- 8) Utilize Outreach efforts to increase participation in NRCS programs and services by socially disadvantaged, limited resource, women, veterans and beginning farmers and ranchers in Alabama through the following methods listed below:
 - Conducting Conferences, Joint USDA Outreach meetings, Annie's Project, Women in Ag Conference, Farmers Cooperatives Workshops utilizing planning, and promotional techniques
 - Host multi-county Conservation Events, Regional Summit, Conservation Demonstration Tours Rural Farmers Market in targeted counties utilizing news articles and other media outlets to promote the events
 - Establishment, maintenance and distribution of local produce from community gardens for targeted audiences {including veterans, women, seniors, youth while increasing awareness of the benefits within the younger population.
 - Engage youth and community stakeholders in the implementation of a walking trail and wetland park within a defined geographic area
 - Establishment of urban gardens and walking trails to facilitate rehabilitation of our veteran's population to promote healthier lifestyles while promoting urban gardening

B. FEDERAL AWARD INFORMATION

1. Estimated Funding

The total amount of Federal funding the agency expects to award through this announcement is \$1,488,400.

2. Start Dates and Performance Periods

Projects may be between one and five years in duration. Applicants should plan their projects based on a project start date of September 15, 2019.

3. Type of Federal Award

The agency plans to award either a:

- Contribution Agreement with 50 percent contribution from each party (unless a Statement of Financial Burden requesting waiver of 50 percent contribution, not to exceed 75 percent Federal share, is requested and approved by the Alabama NRCS State Conservationist), or
- Cooperative Agreements* without contribution of funds but where significant NRCS involvement is desired and/or needed.

* In the event that cooperative awards are made, there will be substantial involvement on the part of the NRCS. This would include NRCS collaboration or participation, or close NRCS oversight and control. This may involve:

- a. Authority to suspend work if specifications or work statements are not met;
- b. Review and approval of one stage of work before another may begin;
- c. Review and approval of substantive provisions of proposed sub-grants or contracts beyond existing Federal policy;
- d. NRCS and recipient collaboration or joint participation;
- e. Project monitoring to permit specified kinds of direction or redirection of the work because of interrelationships with and impacts on other projects;
- f. Highly prescriptive NRCS requirements that limit recipient discretion;
- g. Review and approval of key personnel; or
- h. Direct NRCS operational involvement or participation during the activity.

4. Number of Awards

The agency expects to make ten award(s).

5. Procurement Contracts

The agency does not expect to award procurement contracts associated with this announcement.

6. Eligibility of Renewal or Supplemental Project Applications

Applications for renewal or supplementation of existing projects are eligible to compete with applications for new Federal awards. An application for renewal

means a proposal submitted to continue an existing agreement that meets the objectives and requirements of this NFO. An application for supplementation of an existing project means a proposal to add components to an existing agreement so that it would meet the objectives and requirements in this NFO.

C. ELIGIBILITY INFORMATION

1. Eligible Applicants

Applicants and applications must meet eligibility criteria by the application deadline to be considered for award. Eligible applicant type is determined by the implementing program statute.

Applicants must be federally recognized as an Indian Tribe, State or local unit of government, Community Based Organizations, College and/or University, non-governmental organization, non-profit organization, or an organization or entity with an established history of working cooperatively with producers on agricultural land, as determined by NRCS, to address local conservation priorities. All applicant categories must be capable of providing support in the State of Alabama.

2. Cost Sharing or Matching

Match requirements of at least 25% are required to earn 15 points. However, proposals will be evaluated in part on the relative contribution of non-Federal resources to the project. Non-Federal funds may be derived from any combination of cash, non-cash and in-kind sources. Proposals claiming matching funds must ensure funds are secured at time of application. Proposals must include written verification of commitments of matching support (including both cash and in-kind contributions) from third parties. Additional information about matching funds can be found at 2 CFR 200.

3. Other (if applicable)

Applicant entities identified in the SAM.gov Exclusions database as ineligible, prohibited/restricted or excluded from receiving Federal contracts, certain subcontracts, and certain Federal assistance and benefits will not be considered for Federal funding, as applicable to the funding being requested under this Federal program (2 CFR 200.205(d)).

D. APPLICATION AND SUBMISSION INFORMATION

1. Address to Request Application Package

All standard forms necessary for this announcement are included in the [Grants.gov](https://www.grants.gov) application package. Applicants may request paper copies of materials by contacting Stephen Musser at 334-887-4503 or by written request

mailed to USDA-NRCS, Stephen Musser, 3381 Skyway Drive, Auburn, AL 36830-6443

2. Content and Form of Application Submission

To be considered for funding under this opportunity, an application must contain:

- a. **Application Form:** (Standard Form 424 Application for Federal Assistance) Applicants must use this document as the cover sheet for each proposal. See Instructions for Completing SF 424 located in the Related Documents tab of this announcement on Grants.gov.
- b. **Standard Form (SF) 424A, Budget Information - Non-Construction Programs.** Fill in all spaces as appropriate. Section B, Item 6, Column 1 should reflect the agency funds, and Column 2 should reflect the applicant's matching funds. This form is the summary budget for the project and should include the full project totals on pages one and two. See Instructions for Completing SF 424A located in the Related Documents tab of this announcement on Grants.gov.
- c. **Budget Narrative** - In a separate narrative titled "Budget Narrative", explain and justify all requested budget items/costs. Detail how the totals on the SF-424A were determined and demonstrate a clear connection between costs and the proposed project activities. For personnel salary costs, include the base-line salary figures and the estimates of time (as percentages) to be directly charged to the project. Describe any item that under the applicable Federal cost principles requires the agency's approval and estimate its cost. See Instructions for Completing Budget Narrative located in the Related Documents tab of this announcement on Grants.gov.
 - i. As required in Title 2 of the Code of Federal Regulations Part 200, Subpart F Audit Requirements, all U.S. states, local governments, federally-recognized Indian tribal governments, and non-profit organizations expending \$750,000 USD or more in Federal award funds in a fiscal year must submit a Single Audit report for that year through the Federal Audit Clearinghouse's Internet Data Entry System. Therefore, any U.S. states, local governments, federally-recognized Indian tribal governments, and non-profit organizations applying under this opportunity must include one of the following statements in its budget narrative:

"My organization was required to submit a Single Audit report last year. The reporting period covered was from (insert date) to (insert date). This report, filed under EIN # (insert EIN), is available on the Federal Audit Clearinghouse Single Audit Database website (<https://harvester.census.gov/facweb/>) or will be by (insert date). "

OR

“My organization was not required to submit a Single Audit report last year.”

- ii. Proposals must include written verification of commitments of matching support (including both cash and in-kind contributions) from non-Federal third parties. For third-party contributions, a separate letter of support is required for each contribution, signed by the authorized organizational representative of the contributing organization and the applicant organization, which must include: (1) the name, address, and telephone number of the contributor, (2) the name of the applicant organization, (3) the title of the project for which the contribution is made, (4) the dollar amount of the contribution, and (5) a statement that the contributor will pay the contribution during the grant period. The agency may conduct reference checks to ensure that organizations identified are supportive and involved with the project.

d. **Standard Form (SF) 424B, Assurances - Non-Construction Programs.**

Applicants, by signing and submitting an application, assure and certify that they are in compliance with the following Federal regulations:

- 2 CFR Part 417, Government wide Debarment and Suspension (Non-procurement)
- 4 CFR Part 418, New Restrictions on Lobbying
- 2 CFR Part 421, Government wide Requirements for Drug Free Workplace (Financial Assistance)

- e. **Certification and Disclosure of Lobbying Activities** - Under Title 31 of the United States Code, Section 1352, an applicant or recipient must not use any federally appropriated funds (both annually appropriated and continuing appropriations) or matching funds under a grant or cooperative agreement award to pay any person for lobbying in connection with the award. Lobbying is defined as influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress connection with the award. Submission of an application also represents the applicant's certification of the statements in 2 CFR Part 418, Appendix A-Certification Regarding Lobbying. If you/your organization have/has made or agrees to make any payment using non-appropriated funds for lobbying in connection with this proposal AND the Federal share exceeds \$100,000, you must also complete and submit the SF LLL, Disclosure of Lobbying Activities located at 2 CFR 418, Appendix B. See 2 CFR, Subpart 418.110 for more information on when additional submission of this form is required.

- f. **AD-3031**, Assurance Regarding Felony Conviction and Tax Delinquent Status for Corporate Applicants. Although the text of this document states it is applicable only to corporate entities, USDA policy requires that all entity types complete it.

g. **Proposal**

Each page must be on numbered 8½” x 11” paper with one-inch margins. The text of the proposal must be single spaced and typed in New Times Roman, no smaller than 12-point font and must not exceed 6 pages.

Proposals that fail to comply with the required content and format will not be considered for funding. **Material exceeding stated page limits and/or formatting structure will not be considered.** Incomplete and/or noncompliant proposals will not be considered.

- i. **Project Summary:** [Two (2)-page maximum] Applicants must submit a description including the information below:
- a. Project title;
 - b. Primary emphasis area that application pertains to as described in Section A of this announcement;
 - c. Project director/contact name, and contact information (including address, email, and telephone number);
 - d. Names and affiliations of application collaborators;
 - e. Project objectives (purpose and goals);
 - f. Project geographic area/location (where application activities will take place);
 - g. Project proposed activities; and
 - h. Project deliverables and benefits.
- i. **Project Description:** [Four (4)-page *maximum*] The description must include the following information:
- i. Proposal background: Describe the issue or problem. Include the geographic area and those who will be affected and benefit from this project proposal.
 - j. Project objectives and methods: Be specific using qualitative and quantitative measures, if possible, to describe the project’s purpose and goals.
 - k. Project action plan and timeline: Provide a table listing project actions, timeframes, and associated milestones through project completion. Anticipated start date after August 1, 2019 but subject change. Proposals should have flexible start dates with timelines shown relative to the execution of an agreement.
 - l. Project Management: Give a detailed description of how the project will be organized and managed. Include a list of key project personnel, their relevant experience, and their anticipated

contributions to the project. Identify who will participate in monitoring and evaluating the project.

- m. Project deliverables/products: Provide a list of **specific** deliverables and products that will allow NRCS to monitor progress and make payment. In addition to proposal- specific deliverables, selected applicants will be required to provide the following:
 - 1) Semi-annual or annual progress reports;
 - 2) Supplemental narratives or brief updates that indicate progress that explain and support payment requests; and
 - 3) A final progress report.
- n. References, bibliographies, and citations, if included, do not count towards the 4-page maximum.

h. **Post Award Documentation** – not applicable

3. **Unique entity identifier and System for Award Management (SAM)**

Each applicant (unless the applicant is an individual excepted from those requirements under 2 CFR §25.110(b) or (c), or has an exception approved by the Federal awarding agency under 2 CFR §25.110(d)) is required to: (i) Be registered in SAM before submitting its application; (ii) provide a valid unique entity identifier (Data Universal Numbering System (DUNS) number) in its application; and (iii) continue to maintain an active SAM registration with current information at all times during which it has an active Federal award or an application or plan under consideration by a Federal awarding agency. The agency may not make a Federal award to an applicant until the applicant has complied with all applicable unique entity identifier and SAM requirements and, if an applicant has not fully complied with the requirements by the time the agency is ready to make an award, it may determine that the applicant is not qualified to receive a Federal award and use that determination as a basis for making a Federal award to another applicant.

Entities must obtain a DUNS and register in SAM prior to registering with Grants.gov. A description of each is below. Entities are strongly encouraged to apply early for their DUNS number and SAM registration.

Data Universal Numbering System (DUNS) Number: A Dun and Bradstreet DUNS number is a unique, nine-digit sequence recognized as the universal standard for identifying and keeping track of over 70 million businesses worldwide. Applicants must obtain a DUNS number. Information on how to obtain a DUNS number can be found at <http://fedgov.dnb.com/webform> or by calling 1-866-705-5711.

System for Award Management (SAM) Registration: SAM is the official Federal system that consolidated the capabilities of Central Contractor Registry, Federal Agency Registration, Online Representations and Certifications Application, and Excluded Parties List System. To register,

go to: <https://www.sam.gov/portal/public/SAM>. The Federal Service Desk is available for registration assistance, and can be contacted via the Help tab at the website listed above.

4. Submission Dates and Times

Applications sent via express mail, overnight courier service, or the United States Postal Service must be sent to the following address: USDA-NRCS, Stephen Musser, 3381 Skyway Drive, Auburn, AL 36830-6443. If you choose to submit your application electronically, visit www.grants.gov/apply and follow the instructions. Applicants may submit their application electronically via grants.gov or email:

steve.musser@usda.gov with a copy to stacey.riggins@usda.gov. All applications, regardless of how they are submitted, must be received by NRCS 12:00 p.m. CST, Friday, July 19, 2019.

Note: NRCS is not responsible for any technical malfunctions or Web site problems related to Grants.gov or emailed submissions. Applicants should begin the Grants.gov process or send their email in advance of the submission deadline to avoid problems.

5. Intergovernmental Review (if applicable)

This funding opportunity is not subject to Executive Order 12372, “Intergovernmental Review of Federal Programs.”

6. Funding Restrictions

Funds may not be used to pay any of the following costs unless otherwise permitted by law, or approved in writing by the Authorized Departmental Officer in advance of incurring such costs

- Costs above the amount of funds authorized for the project;
- Costs incurred prior to the effective date of the grant;
- Costs which lie outside the scope of the approved project and amendments thereto;
- Entertainment costs, regardless of their apparent relationship to project objectives;
- Compensation for injuries to persons, or damage to property arising out of project activities;
- Consulting services performed by a Federal employee during official duty hours when such consulting services result in the payment of additional compensation to the employee; and
- Renovation or refurbishment of research or related spaces, the purchase or installation of fixed equipment in such spaces, and the planning, repair, rehabilitation, acquisition, or construction of buildings or facilities.

This list is not exhaustive. Questions regarding the allowances of particular items of cost should be directed to the administrative contact person listed in this announcement.

Indirect costs limitations:

- a. A non-profit organization or institution of higher education awarded a cooperative agreement will be limited to a 10% indirect cost rate in accordance with the Agency's annual appropriations act. The 10% indirect cost rate applies to both federal and non-federal funds. Other types of entities are not subject to this statutory limitation.
- b. To be eligible to recover any indirect cost under a Federal award, recipients must either 1) have a current negotiated indirect cost rate agreement (NICRA) with a Federal agency that has not expired; or 2) qualify for use of the de minimis rate authorized by 2 CFR 200.414(f). In order to qualify for the de minimis rate, the recipient must have never had a NICRA. A State, local, or tribal governmental department or agency unit that receives more than \$35 million in direct Federal funding is not eligible for the de minimis rate.
- c. Applicants not subject to the statutory limitation stated above, which have a current NICRA must calculate indirect costs using the rate and base specified in their NICRA. A recipient may voluntarily reduce or waive recovery of indirect costs at its sole discretion and must not be encouraged or coerced in any way to do so by the agency. If voluntarily reduced or waived, the recipient may choose to apply any unrecovered indirect costs as part of their cost share or match. Unrecovered indirect cost means the difference between the amount charged to the Federal award and the amount which could have been charged to the Federal award under the recipient's approved negotiated indirect cost rate (2 CFR 200.306(c)). A copy of the applicant's current NICRA must be provided with the application. Indirect costs may not be recovered under an expired NICRA. However, if an applicant with a current NICRA is subject to the statutory limitation, indirect costs must be calculated as follows. First, multiply the NICRA rate by the base stated in the NICRA to arrive at Amount A. Next, multiply the statutory limit of 10% by the total of all direct costs to arrive at Amount B. The lower of Amount A and B is the amount of indirect cost to include on the budget.
- d. Entities that are eligible for the de minimis rate who already have a de minimis rate agreement must use the rate and base specified in the agreement, which is modified total direct costs (MTDC) as defined by 2 CFR 200.68 and also excluding the amount of each subcontract exceeding \$25,000. Note that MTDC excludes certain costs from the base to which the rate is applied. A copy of the applicant's de minimis rate agreement must be provided with the application. If a recipient is eligible to use the de minimis rate, but does not have a de minimis rate agreement, use an indirect cost rate of no more than

10% of MTDC when preparing the budget. If selected for award, a de minimis rate agreement will be executed along with the award.

- e. Profit is not an eligible project cost. Therefore, any funds awarded to for-profit entities must be used for reimbursement of award related direct and indirect costs only.

E. APPLICATION REVIEW INFORMATION

1. Merit/Technical Criteria

1. (10 points) The extent to which the project supports one or more of the identified conservation objectives:

Projects that promote/enhance/foster implementation of the following state resource priorities:

- Water Quantity
- Water Quality
- Plant Health
- Soil Health
- Wildlife
- Energy

2. (0 to 25 points) The extent which the proposal places emphasis to achieve any of the following:

- a. Conduct water quality monitoring in Fowl River and the Weeks Bay Watershed. See attached Statement of Work.
- b. Provide technical assistance for groundwater assessment and detailed action plan for the Pisgah source water area. See attached Statement of Work.
- c. Provide technical assistance for a statewide groundwater risk assessment for nutrients and pesticides:
- d. Develop Groundwater/Aquifer Vulnerability Mapping Approach for statewide risk assessment determinations utilizing DRASTIC method developed by EPA or an alternative assessment equivalent to DRASTIC method.
- e. Develop individual GIS mapping layers and descriptive reports for each parameter utilized in the final Aquifer Vulnerability map (e.g. depth to water map layer and descriptive report, net recharge, aquifer media, soil media, topography, impact of vadose zone, hydraulic conductivity).
- f. Develop a refined statewide vulnerability mapping product for specific constituents involved in groundwater contamination process (i.e. pesticides, nitrate concentrations, wastewater storage ponds and lagoons).
- g. Develop modifications for the assessment methods as necessary to accurately represent the statewide conditions as well as including

additional parameters such as land use/land cover and weights as necessary to generate a comprehensive vulnerability assessment product (e.g. Modifications to the depth to water parameter will be necessary to account for the wastewater structure depths and provide accurate risk assessment quantification).

- h. Provide GIS mapping layers and report for final Aquifer Vulnerability mapping.
- i. Provide technical assistance for watershed assessment of the 10-digit Hydrological Unit 0603000108, Short-Scarham Creek Watershed. See attached Statement of Work.
- j. Technical investigations to identify cultural resources through reconnaissance field surveys, and/or phased field investigations, and/or the evaluation of cultural resources through the application of the National Register of Historic Places (NRHP) eligibility criteria for historic properties, found at 36 CFR Part 63. Provide management summaries and/or reports or letter reports detailing cultural resources investigations to the Alabama NRCS for review and acceptance by NRCS Archaeologists, Cultural Resources Specialists (CRS) or the NRCS Cultural Resources Coordinator (CRC).
- k. Provide technical assistance to landowners to complete prescribed burning on longleaf/shortleaf stands.
- l. Provide training and site-specific engineering design for Natural channel and Floodplain Restoration and Applied Fluvial Geomorphology.
- m. Utilize Outreach efforts to increase participation in NRCS programs and services by socially disadvantaged, limited resource, women, veterans and beginning farmers and ranchers in Alabama through the following methods listed below:
 - Conducting Conferences, Joint USDA Outreach meetings, Annie's Project, Women in Ag Conference, Farmers Cooperatives Workshops utilizing planning, and promotional techniques
 - Host multi-county Conservation Events, Regional Summit, Conservation Demonstration Tours Rural Farmers Market in targeted counties utilizing news articles and other media outlets to promote the events
 - Establishment, maintenance and distribution of local produce from community gardens for targeted audiences (including veterans, women, seniors, youth while increasing awareness of the benefits within the younger population)
 - Engage youth and community stakeholders in the implementation of a walking trail and wetland park within a defined geographic area
 - Establishment of urban gardens and walking trails to facilitate rehabilitation of our veteran's population to

promote healthier lifestyles while promoting urban gardening

3. (15 points) Partner match contribution.
4. (10 points) Evidence in the proposal that the design and implementation of project is based on sound methodology and demonstrated technology.
5. (5 points) Measurability of project outcomes.
6. (5 points) Potential for successful completion and benefit to NRCS mission.
7. {10 points} Project staff has technical expertise needed.
8. {10 points} Budget is adequately explained and justified.
9. {10 points} Project benefits to Historically Underserved Producers, Veteran Farmers or Ranchers or community-based organizations comprised of or representing these entities.
10. (-15 points) The extent to which the project is dependent upon NRCS field staff inputs (engineering assistance, etc.) for its completion.

2. Risk Criteria

The agency will check SAM to ensure the applicant is not suspended or debarred, which would preclude receiving an award. In addition, prior to making a Federal award with a total Federal share greater than the simplified acquisition threshold (\$250,000), the agency must review and consider any information about the applicant that is in the designated integrity and performance system accessible through SAM (the Federal Awardee Performance Integrity Information System, FAPIIS) (see 41 U.S.C. 2313 and 2 CFR 200.205(a)).

To further comply with the requirements at 2 CFR 200.205, the agency has established the following risk review process and related standards that an applicant must meet to be considered for award:

- a. Financial Stability. The applicant certifies that it maintains adequate financial resources or cash flow to meet its financial obligations on a routine basis and successfully complete any agreement it may be awarded.
- b. Quality of Management Systems and Ability to meet Management Standards prescribed in 2 CFR Part 200. The applicant certifies it has a financial management system adequate to segregate and track federal funds. It further certifies it has adequate systems in place for proper agreement administration; compliance with the standards outlined in 2 CFR Part 200 Section D for procurement, property, and records management; and required financial and performance reporting.
- c. History of Performance. If the applicant has previously obtained Federal financial assistance award, it certifies that it has never failed to materially comply with the Federal award terms and conditions and further that it has never had an award terminated on that basis.

Submission of a proposal constitutes certification that an applicant meets these standards.

3. Review and Selection Process

Proposals will be screened for completeness and compliance with the provisions of this notice. Incomplete, noncompliant, and/or proposals not meeting the formatting criteria will be eliminated from competition, and notification of elimination will be sent to the applicant. The agency intends to make a selection and award without conducting any discussions or allowing applicants to correct deficiencies or omissions in their applications. Consequently, they must ensure their applications are complete and accurate. However, while the agency intends to make a selection and award without discussions, it reserves the right to conduct discussions for the purpose of allowing applicants to revise their applications to correct deficiencies or omissions identified by the NRCS. If this is done, the agency will conduct discussions with all applicants and identify deficiencies and omissions and give applicants and opportunity to submit a revised application by a common cut-off date.

Merit/technical reviews will be conducted by a technical review board nominated by the approving official. Risk reviews will be conducted by the Grants and Agreements Service Branch. The approving official will make the final award decisions. The approving official for this opportunity is the State Conservationist.

4. Awards Over the Simplified Acquisition Threshold (if applicable)

Notice to applicants:

- a. Prior to making a Federal award with a total Federal share greater than the simplified acquisition threshold (\$250,000), the agency must review and consider any information about the applicant that is in the designated integrity and performance system accessible through SAM (the Federal Awardee Performance Integrity Information System, FAPIIS) (see 41 U.S.C. 2313 and 2 CFR 200.205(a));
- b. An applicant may review information in FAPIIS accessible through SAM and comment on any information about it that a Federal awarding agency previously entered;
- c. The agency will consider any comments by the applicant, in addition to the other information in the designated integrity and performance system, in making a judgment about the applicant's integrity, business ethics, and record of performance under Federal awards when completing the review of risk posed by applicants as described in 2 CFR 200.205, Federal awarding agency review of risk posed by applicants.

5. Anticipated Announcement and Federal Award Dates

The agency anticipates announcing or notifying successful and unsuccessful applicants by July 29, 2019 and expects to have Federal awards in place by September 15, 2019.

F. FEDERAL AWARD ADMINISTRATION INFORMATION

1. Federal Award Notices

The agency will provide notice that an application has been selected before it actually makes the Federal award. As such, the selection notification is not an authorization to begin performance. Any pre-award costs incurred by the awardee will not be reimbursed. The Notice of Grant and Agreement Award (form NRCS-ADS-093) signed by the authorized agency representative is the only authorizing document, and will be provided electronically to the entity's authorized representative for signature.

Both successful and unsuccessful applicants will be notified of the award decision via letter.

2. Administrative and National Policy Requirements

All project funds will be used in accordance with 2 CFR 200 and NRCS' General Terms and Conditions; a copy of the General Terms and Conditions may be obtained by contacting the Federal Awarding Agency Contacts listed in this announcement.

3. Reporting

Reporting will follow NRCS' General Terms and Conditions, but will generally include electronic submission of semiannual progress reports, quarterly financial status reports, and final reports.

If the Federal share of any agreement awarded under this opportunity notice may include more than \$500,000 over the period of performance, recipients must also comply with the post award reporting requirements reflected in Appendix XII of 2 CFR Part 200 —Award Term and Condition for Recipient Integrity and Performance Matters.

G. FEDERAL AWARDING AGENCY CONTACT(S)

For questions regarding this opportunity, please contact one of the following individuals:

Administrative Contact

Name: Michele Devaney

Grants Management Specialist

USDA-NRCS

Mailing Address: 125 S. State St., Room 4010, Salt Lake City, UT 84138

Phone Number: (801) 524-4587

Email: michele.devaney@usda.gov

Program Contact

Name: Steve Musser

ASTC-Programs

USDA-NRCS

Mailing Address: 3381 Skyway Drive, Auburn, AL 36830-6443

Phone Number: 334-887-4503

Email: steve.musser@usda.gov

H. OTHER INFORMATION

1. Questions regarding this announcement must be directed to the contacts identified above.

2. **Freedom of Information Act (FOIA)**

Proposals to NRCS are considered to be confidential information. Proposals are not shared with individuals or entities seeking public disclosure through the Freedom of Information Act (FOIA) without the consent of the applicant. More specifically, Executive Order 12600 and USDA FOIA regulation 7 CFR Part 1, Subpart A requires the NRCS to provide notice to applicants that a third party has requested copies of their business information, and requires NRCS to consult with applicants regarding the releasing their records.

3. **Government Obligation**

The Federal Government is not obligated to make any Federal award as a result of the announcement. Only authorized federal officials can bind the Federal Government to the expenditure of funds.

U.S. Department of Agriculture Non-Discrimination Statement

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at <https://www.ascr.usda.gov/filing-program-discrimination-complaint-usda-customer> and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call

(866) 632-9992. Submit your completed form or letter to USDA by:

(1) mail: U.S. Department of Agriculture

Office of the Assistant Secretary for Civil Rights

1400 Independence Avenue, SW

Washington, D.C. 20250-9410;

(2) fax: (202) 690-7442; or

(3) email: program.intake@usda.gov.

USDA is an equal opportunity provider, employer, and lender.

Appendix

Statement of Work

Water Quality Monitoring for Fowl River Watershed and Weeks Bay Watershed

The Fowl River and Weeks Bay Nutrient Reduction projects would restore water quality through implementation of improved land management practices. Monitoring data is needed to assess the performance of the project in meeting its restoration objectives.

The proposed monitoring for this project, outlined below, includes four monitoring parameters. For each parameter, information is provided on the monitoring methods, timing and frequency, sample size and sites. In addition, performance criteria for each parameter are identified (if applicable). These parameters will be monitored at appropriate reference and/or control sites to demonstrate how the project is trending toward the performance criteria.

Parameter: Discharge (m^3/s or cfs)

- a. Method: Per MAM Manual 1.0 (DWH NRDA Trustees 2017).
http://www.gulfspillrestoration.noaa.gov/sites/default/files/2018_01_TC_MAM_Procedures_Guidelines_Manual_12-2017_508_c.pdf
- b. Timing and frequency: Ten measurements per year would be taken at one or more sets of one upstream and two downstream stations that bracket portions of the watershed where conservation practices are being implemented.
- c. Sample size: The total number of sites is not yet determined and will be dependent on the amount and location of conservation practices in the watershed. It is anticipated that a total of 10 samples would be collected per year at each station. Samples would be taken at baseflow conditions when possible. Sites: Will be determined when land management practices are identified.
- d. Sites: N/A
- e. Performance criteria: N/A

Parameter: Total Suspended Solids (TSS) (mg/L or ppm) and Turbidity

- a. Method: In-stream. Fixed station parameter reading using a data sonde, under baseflow conditions when possible, using standard monitoring protocols would occur at appropriately located upstream and downstream stations that bracket portions of watersheds with conservation practices.
- b. Timing and frequency: Conduct pre-execution monitoring, then ten samples per year would be collected at one or more sets of one upstream and two downstream stations that bracket portions of the watershed where conservation practices are being implemented.
- c. Sample size: The total number of sites is not yet determined and will be dependent on the number and location of conservation practices in the watershed. It is anticipated that a total of 10 samples would be collected per year at each station. Samples would be taken at baseflow conditions when possible.
- d. Sites: Conservation practice implementation will be dependent on the participation of landowners in the target watersheds described above. Locations will be selected when landowners sign participation agreements with the NRCS. The geographic scope of the in-stream monitoring design will depend on the location of lands enrolled in the conservation program. Where a large number of acres are co-located in a small watershed (e.g., HUC 12), the design will likely include one upstream station (could be optional depending on upstream conditions) and one or more downstream stations depending on the location of the cluster of conservation practices.
- e. Performance criteria: Change in the quantity of in-stream sediment over time.

Parameter: Total Phosphorous (TP) (mg/L)

- a. Method: In-stream. Sample collection consistent with Alabama standard monitoring protocols would occur at appropriately located upstream and downstream stations that bracket portions of the area with conservation practices.
- b. Timing and frequency: Conduct pre-execution monitoring, then ten samples per year would be collected at one or more sets of one upstream and two downstream stations that bracket implementation areas.
- c. Sample size: The total number of sites is not yet determined and will be dependent on the number and location of conservation practices in the watershed. It is anticipated that a total of 10 samples would be collected per year at each station. Samples would be taken at baseflow conditions when possible.
- d. Sites: Conservation practice implementation will be dependent on the participation of landowners in the target watersheds described above. Locations will be selected when landowners sign participation agreements with the NRCS. The geographic scope of the in-stream monitoring design will depend on the location of lands enrolled in the conservation program. Where a large number of acres are co-located in a small watershed (e.g., HUC 12), the design will likely include one upstream station (could be optional depending on upstream conditions) and one or more downstream stations depending on the location of the cluster of conservation practices.
- e. Performance criteria: Change in the quantity of in-stream phosphorous over time.

Parameter: Total Nitrogen (TN) (mg/L)

- a. Method: Sample collection using standard monitoring protocols will occur at appropriately located upstream and downstream stations that bracket portions of areas where conservation activities are being implemented.
- b. Timing and frequency: Conduct pre-execution monitoring, then ten samples per year will be collected at one or more sets of one upstream and two downstream stations that bracket portions of the watershed where conservation activities are being implemented.
- c. Sample size: The total number of sites is not yet determined and will be dependent on the amount and location of conservation practices in the watershed. It is anticipated that a total of 10 samples would be collected per year at each station. Samples would be taken at baseflow conditions when possible.
- d. Sites: Conservation practice implementation will be dependent on the participation of landowners in the target watersheds described above. Locations will be selected when landowners sign participation agreements with the NRCS. The geographic scope of the in-stream monitoring design will depend on the location of lands enrolled in the conservation program. Where a large number of acres are co-located in a small watershed (e.g., HUC 12), the design will likely include one upstream station (could be optional depending on upstream conditions) and one or more downstream stations depending on the location of the cluster of conservation practices.
- e. Performance criteria: Change in the quantity of in-stream nitrogen over time.

The schedule for project monitoring is shown in Table 2, separated by monitoring activity. Pre- execution monitoring will occur before project execution. Execution monitoring occurs when project has been fully executed as planned. Performance monitoring will occur in the year following initial project execution.

Table 2: Monitoring Schedule

Monitoring Parameter	Pre-Execution Monitoring	As-Built (Year 0)	Post-Execution Monitoring (Years 1-4)
Discharge	X		X
TSS	X	X	X
TP	X	X	X
TN	X	X	X

The analysis methods would be applied to all monitoring parameters as follows:

Water Quality Data

Standard analytical techniques would be used to document water quality improvements between upstream and downstream stations that bracket areas with conservation systems, following guidance in Alabama’s Quality Assurance Project Plan (QAPP). The QAPP is developed in accordance with ADEM SOP #8302, “Preparation, Review, Approval, Distribution, and Archival of Quality Assurance Program/Project Plans (QAPPs) and EPA Requirements for Quality Assurance Project Plans” (EPA QA/R- 5, 2001).

DATA MANAGEMENT

Data Description

All data collected will follow the data standards as per the MAM Manual 1.0 ([DWH NRDA Trustees 2017](#)). To the extent practicable, all environmental and biological data generated during monitoring activities will be documented using standardized field datasheets. If standardized datasheets are unavailable or not readily amendable to record project-specific data, then Project-specific datasheets will be drafted prior to conducting any project monitoring activities. Original hardcopy datasheets and notebooks and photographs will be provided to the Implementing Trustee. Relevant project data that are handwritten on hardcopy datasheets or notebooks will be transcribed (entered) into standard digital format. All field datasheets and notebook entries will be scanned to PDF files.

All data will have properly documented FGDC/ISO metadata, a data dictionary (defines codes and fields used in the dataset), and/or a Readme file as appropriate (e.g., how data was collected, QA/QC procedures, other information about data such as meaning, relationships to other data, origin, usage, and format – can reference different documents). Electronic data files will be named with the date on which the file was created and will include a ReadMe file that describes when the file was created and by whom, and any explanatory notes on the file contents. If a data file is revised, a new copy should be made and the original preserved.

Data Review and Clearance

All data will undergo proper QA/QC protocols, be reviewed and verified following the process outlined in Section 3 of the MAM Manual Version 1.0. Data will be made publicly available, in accordance with the Federal Open Data Policy (Section 10.6.6 of SOP; DWH NRDA Trustees 2016b), through the DIVER Explorer Interface within a year of when the data collection occurred.

Data Storage and Accessibility

Once all data have been verified by quality assurance/quality control procedures, they will be submitted to the DIVER Restoration Portal. Trustees will provide DWH NRDA MAM data and information to the Restoration Portal as soon as possible and no more than one year from when data are collected.

Data Sharing

Data will be made publicly available, in accordance with the Federal Open Data Policy (Section 10.6.6 of SOP; DWH NRDA Trustees 2016b), through the DIVER Explorer Interface within a year of when the data collection occurred. Some data collected may be protected from public disclosure under federal and state law (e.g., personally identifiable information under the Privacy Act or observer information collected under Magnuson–Stevens Fishery Conservation and Management Act (MSFCMA), etc.) and therefore will not be publicly distributed.

REFERENCES

- DWH NRDA Trustees. 2016b. Trustee Council Standard Operating Procedures for Implementation of the Natural Resource Restoration for the *Deepwater Horizon* Oil Spill. Originally approved May 4, 2016; revised November 15, 2016.
- DWH NRDA Trustees. 2017. Monitoring and Adaptive Management Procedures and Guidelines Manual Version 1.0. Appendix to the Trustee Council Standard Operating Procedures for Implementation of the Natural Resource Restoration for the DWH Oil Spill. December.
- Environmental Protection Agency (EPA). 2001. EPA Requirements for Quality Assurance Project Plans QA/R-5. EPA/240/B-01/003.

NRCS Guidance for Water Quality Assessment for NWQI – Source Water Protection

Source Water is any surface water (streams, rivers, and lakes) or ground water (aquifers) that serves or has the potential to serve as sources of drinking water. Source water provides water for public drinking water supplies and private water wells. For Source Water Protection (SWP) projects to be approved for the National Water Quality Initiative (NWQI), **there must be an existing SWP plan or source water assessment already developed by the state or utility.** It should delineate the area or areas of protection using surface or ground-water modeling or other analytical methods to determine the approximate area of the watershed(s) or aquifer contributing untreated water to the drinking water system and the area where potential contamination of this water supply could occur. For the NWQI “readiness phase,” the product to be completed is an area-wide conservation assessment (as defined in the NPPH Part 600.50 B. (2)) conducted for the protection area as delineated in the Source Water Assessment and/or Source Water Protection Plan (SWPP).

The general elements to include in a water quality assessment for protection areas are outlined below. Some of this information may be available in the SWPP or other plans and documents (such as state Non-Point Source Management Plans, Clean Water Act Section 305(B) Water Quality or Assessment Reports, state Hazard Mitigation plans, or watershed-based plans)- those can be referenced. Gaps in data or analysis provided in complementary documents should be identified and included in this assessment. A thorough inventory should inform the analyses for surface or ground water quality assessment for the delineated area(s).

Engaging the state drinking water and/or source water protection program as well as the water utilities in the area will create useful partnerships and provide expertise and resources to projects to assist with water quality assessment.

- I. Overview of the Source Water Protection Area and At-Risk Public Water System(s).
 - a. Describe the drinking water system(s) at risk from impaired source water quality:
 - i. Describe how source water quality relates to challenges with treatment and finished drinking water quality.
 - ii. Information to include may be: general characteristics (surface or ground system; size of public water system, etc.), source water facilities and locations, treatment technologies, management capacity/structure, service capacity (MGD/day), challenges (e.g. fluctuations in ambient water quality, drinking water Maximum Contaminant Level violations, treatment challenges and/or complexity), plans developed
 - b. Characterize the population that would benefit from source water protection, including those served by public water supply systems. Include populations served by non-public water supply systems and private domestic-use wells if conservation treatment may have impacts.
 - c. Identification of contaminants or conditions (e.g. high turbidity) of concern that pose a risk to drinking water that would benefit from source water protection measures for either surface or ground water.
 - c. An assessment of NRCS’ ability to help partners reach the source water protection goals and objectives that partners establish through the planning process.

II. Characterization of the Area(s) of Influence for SWP

An overview of the protection area or area of influence (determined through partner collaboration) and identification of NRCS resource concerns. This characterization should be information that is useful for the surface or ground-water quality assessment and not just a laundry list of collected information. There are a number of resources available to assist in this characterization including the American Water Works Association/ANSI G300 standard for source water protection where key elements of assessment and characterization are clearly described.

- a. Location of surface or ground water protection area/area of influence. Explain the methodology employed to delineate the protection area boundaries, or areas of influence, that relate to agricultural land use impacts.
- b. Landscape setting and characteristics of the MLRA/ecoregion in which the surface or ground water protection area is located.
- c. Geology. Provide context for landscape and hydrogeological conditions expanded upon in Section III.
- d. Geomorphology and soils/soil interpretations.
- e. Climate. Provide context for land cover/uses with respect to hydrologic conditions, like ground-water recharge.
- f. Topography and drainage system. Provide basis for surface water/ground water interaction discussion in Section III.
- g. Land cover/land and water uses. Especially relevant are uses that may alter natural watershed hydrology and the delivery (i.e. timing and quantity) of water to surface and ground water bodies, and uses that may impact water quality and supply, such as wastewater lagoons, ground water injection, surface runoff, and significant water withdrawals.
- h. Socioeconomic conditions.
- i. Other relevant information to characterize the protection area.

III. Hydrology and Water Quality Characterization

Fully describe the hydrology and water quality conditions. The discussion should include surface transport for pollutants of concern, including the spatial and temporal characteristics of transport, primary aquifers and aquitards, recharge areas and mechanisms, and groundwater flow.

- a. Available data and resources.
 - i. U.S. Geological Survey (USGS) local and regional Water-Supply Papers, Water-Resource Investigations, Bulletins, Professional Papers, Hydrologic Atlases, and other reports.
 - ii. Reports of the State Geological Survey, Department of Environmental Quality, Department of Water Resources, or similar state agencies or university Water Resources Institutes.
 - iii. Surface and Groundwater monitoring data, both water level and quality, from USGS, state, public water systems, or other sources. Access water quality data at the [Water Quality Portal](http://www.waterqualitydata.us). (www.waterqualitydata.us)
 - iv. Source water quality data from the intake area available from the public water system(s) or possibly NGOs or others. (see <https://pubs.usgs.gov/circ/1346/> for a USGS overview of water quality of public water supplies across the US).
 - v. Data sources on potential sources of contamination/pollutants: Water system source water assessments, city or local planning departments, state water agency databases (e.g. State Emergency Planning and Community Right-to-know Act Tier II data), federal programs and databases (Drinking Water Mapping Application to

Protect Source Water—DWMAPS, Toxic Release Inventory, TSCA Inventory, EPA Envirofacts)

- b. Hydrogeology of the source water protection area including:
 - i. Major and minor aquifers providing domestic and public water supplies
 - ii. Ground water (aquifer) depths, potentiometric levels, and flow directions
 - iii. Surface and Ground water withdrawals
 - iv. Characterization of aquifer water chemistry
- c. Recharge and discharge areas; surface water-ground water interconnections
- d. Runoff and streamflow hydrology
 - i. Runoff and streamflow generation processes
 - ii. Precipitation-runoff budget
 - iii. Spatial and temporal distribution of runoff
 - iv. Surface water drainage networks – GIS-derived flow network
- e. Comprehensive description of potential contaminants of concern and sources including:
 - i. Agricultural sources of concern
 - 1. Crop growing operations
 - 2. Animal feeding operations
 - ii. Other potential sources (which may confound agricultural conservation solutions)
 - 1. Urban and industrial wastewater lagoons
 - 2. Septic systems
 - 3. Active and non-active landfills
 - 4. Mining (active/abandoned), petroleum operations, and underground injection
 - iii. Contaminant physical and chemical properties that influence modes of transport to the surface and ground water systems
- f. Description of ambient water quality conditions and problems/threats in relation to pollutant issue of concern, including:
 - i. Water quality data (physical, chemical and biological indicators) to show water quality impacts from pollution or pollutants of concern.

IV. Resource Analysis/Source Assessment

Documentation and comparisons between existing and potential conditions (related to water quality or other resource conditions that impact water quality – soil quality, riparian zone stability/bank condition, wildlife habitat, etc.). A preliminary analysis of what could be accomplished, if conservation treatments were applied. The types of conservation practices and extent needed to assist in meeting the SWP goals and objectives. The potential tools that can be used to analyze the resource problems identified, and results.

- a. Identify/locate source cause(s) of the surface or ground water contamination problem.
- b. Preliminary analysis to address the concerns, including hydrologic modeling, GIS analysis and other tools. Identify areas with the greatest need for treatment (critical areas).
 - i. Identify areas where surface water is impacted or is at risk using available tools
 - 1. Nutrient mass balance
 - 2. Sediment delivery budget
 - 3. Load reduction spreadsheets
 - 4. Watershed based modeling of potential sources and treatment effects
 - 5. GIS modeling, GIS vulnerability analysis
 - ii. Identify aquifers/areas where ground water quality is impacted, is at risk, or not at risk.
 - 1. Current “hot spots”
 - 2. Expected contaminant transport, direction, and rates
 - 3. Current water withdrawal locations
 - 4. Level of current and future risk to the aquifer and water users

5. Potential for aquifer recovery and protection
- c. Analysis of treatment and opportunities
 - i. Level of treatment in the watershed
 1. Current
 2. Potential
 - ii. An analysis of producers available in the watershed to participate in the initiative and their likely willingness to participate.
 - iii. An assessment of how critical area treatment is balanced with participation to achieve the most effective prioritization of implementation.
 - iv. A set of preferred conservation systems, locations, extent, responsible parties, costs, and time lines should be described based on the above analyses.

V. Summary and Recommendations

- a. Description of water quality impairments/concerns and treatments needed to prevent current or future risk of impairments within the protection area.
- b. Description of the SWP goals and objectives and practice efficiencies.
- c. Establish interim metrics to track progress. Both implementation (practices implemented on vulnerable acres) and effectiveness metrics (estimates of the water quality impacts of implementation should be selected).
- d. Description/evaluation of planned practice scenarios/alternatives that meet the protection area objectives, including estimation of treatment costs. **What are the best suites of practices to use, and how much is needed to accomplish the treatment objectives?**
- e. Documentation of NEPA concerns – refer to the CPA-52 example on the NWQI Sharepoint for area wide planning.

Appendix

Statement of Work for Watershed Assessments and Source Water Assessment

The general elements to be included in a watershed assessment are outlined below. Some of this information may be available in other plans and documents; those may be referenced. Data collection should inform the analyses for water quality assessment, especially transport mechanisms and critical areas.

I. Background and purpose of the assessment

Clearly identify the primary water quality resource concerns of the watershed, what the water quality objectives will be and to what extent the problem can be addressed through NRCS technical and financial assistance.

- a. General overview and location of the watershed assessment area
- b. Specific water quality degradation resource concerns and impairments
- c. Constituents of concern
- d. Opportunities and objectives for meeting water quality goals
- e. An assessment of NRCS's ability to help partners reach the watershed goals

II. Watershed characterization

An overview of the watershed and identification of resource concerns. *This overview should be information that is useful for the water quality assessment and not just a laundry list of collected information.*

- a. Location of watershed within the drainage network.
- b. Landscape characteristics of the MLRA or ecoregion in which the watershed resides. Provide an overview of landscape conditions within which the watershed resides.
- c. Climate. Provide overview that gives context for land cover/uses and a basis for the hydrologic conditions described in section III.
- d. Topography.
- e. Geology, geomorphology, and soils and soil interpretations.
- f. Drainage network (USGS National Hydrographic Dataset link, GIS-derived flow network, National Wetland Inventory, tour and any visual assessments of the watershed).
- g. Land cover and land use.
- h. Socioeconomic conditions.
- i. Other relevant information to characterize the watershed.

III. Hydrologic and water quality characterization

Fully describe the hydrology (including irrigation) and the water quality conditions within the watershed. The analysis should demonstrate the transport mechanisms for pollutants of concern, and the spatial and temporal characteristics of transport.

- a. Available data and resources.
 - i. Discuss available resources of information compiled by others.
 - ii. Gaging stations in or near the watershed.
 - iii. Surface and groundwater water quality sampling sites.
 - iv. Biological monitoring.
 - v. NRCS and partner sampling. During the 1-year assessment period, could ad hoc water quality monitoring be undertaken?
- b. Runoff and streamflow hydrology, and irrigation. Using streamflow, irrigation and climate data and other watershed information, synthesize hydrological conditions of the watershed.
 - i. Methods used in analysis.
 - ii. Runoff and streamflow generation processes. What generates runoff? Irrigation conveyances and systems.
 - iii. Precipitation-runoff budget. How much precipitation and irrigation returns as stream runoff? How much goes to deep groundwater? Evapotranspiration?
 - iv. Spatial distribution of runoff. Do certain areas of the watershed generate more runoff, due to soils, geology, topography, or land uses?
 - v. Temporal distribution of streamflow—monthly, runoff events, baseflows.
- c. Water quality conditions in the watershed.
 - i. What are the general concentrations and loads of major constituents and how do they vary with season, weather, land use, etc.?
 - ii. Sediment (if a watershed resource concern).
 - iii. Nutrients—N and P (if a watershed resource concern).
 - iv. Pathogens (if watershed resource concerns).
 - v. Other (pesticides, petroleum products, selenium, etc.).

IV. Resource Analysis and Source Assessment

Documentation and comparisons between existing and potential conditions. A preliminary analysis of what could be accomplished. The types of conservation practices and extent needed to assist in meeting the water quality objectives. The potential tools that can be used to analyze the resource problems identified, and results.

- a. The causes of the resource problem are identified.
- b. What are potential tools to use related to the type of resource problems?
- c. Preliminary analysis to address the problem with available tools. Hydrologic modeling, GIS analyses, or both used to identify acres with greatest need for treatment (critical acres) based on pollutants of concern and the numbers of acres of conservation to achieve goals. Depending upon the complexity of the watershed, several methods could be used:
 - i. Simple spreadsheet mass balance models for nutrients.
 1. Nutrient inputs based upon areas (acres) for given land cover and use.
 2. Nutrient outputs.
 3. Possible conservation measures. Use the mass balance spreadsheet to put acres of new conservation in and see results in water quality load reductions.
 - ii. Simple spreadsheet sediment delivery budget.
 1. Identifies the sediment sources in the watershed.

- 2. Estimate quantity, sediment delivery ratio, to estimate total sediment.
- iii. Load reduction spreadsheets for best management practices.
- iv. Watershed-based modeling of potential sources and treatment effects.
- v. Grid-based GIS modeling.
- vi. GIS vulnerability analysis – simple GIS analyses using GIS coverages of land use, management, physical attributes, etc., to assist in the identification of critical areas within the watershed.
- vii. Other analyses, including watershed and stream surveys, to identify areas needing treatment.
- d. Analysis of treatment and opportunities
 - i. Current level of treatment in the watershed.
 - ii. An analysis of producers available in the watershed to participate in the initiative and their likely willingness to participate.
 - iii. An assessment of how critical area treatment is balanced with participation to achieve the most effective prioritization of implementation.
 - iv. A set of preferred practices, locations, responsible parties, costs, and time lines should be described based on the above analyses.

V. Summary and Recommendations

- a. Description of water quality impairments.
- b. Description of the goals (usually reduction goals) and practice efficiencies.
- c. Establish interim metrics to track progress. Both implementation (practices implemented on high priority acres) and effectiveness metrics (estimates of the water quality impacts of implementation – e.g., load reductions, edge-of-field reductions, improvement in biological indicators or physical indicators, monitoring trends) should be selected.
- d. Description and evaluation of planned practice scenarios and alternatives that meet the water quality objectives, including estimation of treatment costs. What are the best suites of practices (in-field, edge-of-field, and off-field) to use, and how much is needed to accomplish the treatment objectives?
- e. Documentation of NEPA concerns – refer to the CPA-52 example on the following pages.

