

Request for Research Concepts:

Fostering community engagement and enhancing community-municipal partnerships to address linkages between stormwater and trash, litter and/or illicit discharges in NC Stormwater Group (SWG) member municipalities

*Issued by the North Carolina Water Resources Research Institute (WRRI)
on behalf of the NC Stormwater Group (SWG)*

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I. Background

The Stormwater Group (SWG) was formed in 1998 as a subgroup of the Urban Water Consortium and is administered by the NC Water Resources Research Institute (NC WRRI). Membership comprises nine municipal stormwater programs¹ in North Carolina, most of which are NPDES Phase 1 communities. Through membership dues, the SWG sponsors research and technology transfer on urban stormwater and management issues that are identified as priorities by the SWG.

The priorities and needs of the SWG have evolved since its inception. Initial focus was on foundational research to better understand stormwater, its impacts and methods for control. The SWG has since shifted focus to a more applied research approach that can help the members more effectively manage their programs, address the many nuances and challenges of stormwater management, respond to local, state and federal requirements, and ultimately support projects that enable timely measurable impact to the local stormwater programs and the communities and waterways they serve.

Learn more about the SWG at <https://wrri.ncsu.edu/partnerships/swg/>.

II. Problem Statement and Context for RFP

The municipal stormwater programs that comprise the SWG routinely implement projects to reduce the impact of stormwater runoff on the water quality of receiving streams. These programs also provide education, outreach and engagement, both about projects being implemented and about surface water quality issues more generally, to a variety of demographics in their respective municipalities. Additionally, the programs interface with the public in other ways not typically considered community engagement, but that provide significant opportunities to address gaps in communication and relationship-building related to municipal stormwater activities (such as when field crews access easements, make infrastructure repairs, address flooding concerns or conduct other activities that require a physical public presence). The SWG recognizes that a single approach

¹ Cities of Burlington, Charlotte, Durham, Fayetteville, Greensboro, High Point, Raleigh, Wilmington, Winston-Salem

to communication, education and engagement in order to achieve stormwater program goals may not be equally effective across all demographics.

The SWG also sees a need to better understand the interests of their constituents and to build relationships across all demographics in order to effectively serve their communities, respond to community needs and meet local, state and federal stormwater goals and permit requirements. The SWG is particularly concerned about underserved communities, marginalized communities, communities of color, low- or fixed-income communities and/or communities that may experience other socio-economic disadvantages (e.g. elderly communities or areas of lower municipal investments).

The SWG recognizes there are opportunities to enhance relationships and build partnerships. Trash and litter have been selected by the SWG for special attention in the context of this RFP as they perceive that this topic may be of interest among residents and is a suitable platform for engaging the communities of SWG's concern. Additionally, trash and litter are surrogates for surface water contamination, they are more visible and tangible than conventional pollutants, they are directly attributable to individual behaviors and they are often prevalent in urban watersheds and receiving streams. Effectively addressing trash and litter issues can yield highly visible results and provide opportunities for close community engagement. While focusing on trash and litter, the SWG also seeks guidance and recommendations for effectively engaging the public in addressing less tangible pollutants such as fecal coliform, sediment, and nutrients.

The SWG member municipalities also face challenges implementing local Illicit Discharge Detection and Elimination (IDDE) programs when efforts to curtail certain activities (for example, illegal discharges from mobile detail car washes or other newly-emerging, less-regulated businesses) may be perceived as targeting those who may already be marginalized or otherwise socio-economically challenged. Requiring such businesses to implement pollution prevention best management practices is often perceived by such businesses as though they are being unfairly targeted with overly burdensome requirements. For this reason, outreach and engagement related to illicit discharges is an important area of focus in some communities and may represent a more significant opportunity than trash and litter for engagement and partnership development to address mutual needs.

III. Focus Area

The SWG seeks concepts for models and implementation of approaches that help member municipalities effectively engage communities and build partnerships around issues associated with stormwater and trash, litter, and/or illicit discharges.

Projects proposed in response to this RFP should engage underserved communities, marginalized communities, communities of color, and/or low- or fixed-income communities. Proposals should include meaningful public engagement, public participation, and/or collaboration with members of the communities where research is to take place.

Successful concepts ideally will include community-directed research that:

- engages target communities in defining needs and desired outcomes;
- is transferrable/customizable across different communities, watersheds and target audiences within the same municipality or across municipal stormwater programs;

- builds a foundation for the continuation of an initiative beyond the duration of the project itself; and
- includes broad engagement of municipal staff and/or officials beyond those who may traditionally be tasked with education and outreach-related duties.

While successful concepts may include campaigns, marketing materials and educational materials, they should go beyond simply evaluating and overhauling existing approaches and materials that SWG members may have. Likewise, final packaged curricula or materials may be a component of the deliverables but should not be considered a successful outcome in and of themselves.

Concepts should include metrics for evaluation of success and meaningful outcomes such as, but not limited to:

- improvement of stormwater quality through better watershed protection and decreased trash, litter and/or illicit discharges;
- new initiatives begun that meet mutual goals of watershed protection and community members' goals;
- systematic engagement of communities; and
- established partnerships and relationships among community members, municipalities and researchers.

IV. Disciplines and Scope:

Proposed research must take place in the service area(s) of at least one SWG member municipality, though engagement of multiple member municipalities is strongly encouraged and preferred.

Projects may address research questions and methods in the fields of social science, education, communications, natural science, engineering, economics or policy, or a combination of these disciplines as applied to the focus area described above.

Information and technology transfer and dissemination of research results are critical for successful projects. Successful applicants will be asked to address this in a full proposal and in project deliverables.

Projects not eligible for funding include those focused on monitoring-only activities and projects on health effects involving humansubjects. Research that addresses the link between environmental and human health as related to the focus area below is acceptable (which may require IRB approval from the applicant's campus).

V. About the Research Concept Process

The SWG issues this request for research concepts with the goal of increasing the dialogue between the SWG members and researchers early in the process of project conception and development. This dialogue will enable a deeper exploration of potential research approaches to the SWG's priority issues and ultimately the co-creation of a full project proposal that is tailored to address specific mutual needs and interests of the SWG and the researcher. This is in contrast to a model where researchers more fully define their research project in direct response to RFP priority areas and then present their pre-determined approach to funders for consideration with only minor modifications to objectives, scope and budget at the end of the proposal development process.

As such, applicants shall submit a 2-page narrative that describes their areas of interest and research concepts (hereafter referred to as “concept”) to address the focus area identified in this RFP. This narrative may include methods or reference to methods as appropriate, but detailed methodology should not be the focus of the submission. If a researcher is selected for developing a full proposal, a more detailed research methodology will be required at that time and is likely to be co-developed with SWG input. See Sections IX and X of this document for additional format, content and submission guidelines.

Submissions will be evaluated by SWG members based on alignment with the SWG’s needs as related to the focus area of this RFP, the likelihood of impact in member municipalities and the experience of the researcher in conducting successful projects that engage communities.

If the concept presented in the submission is determined by majority vote of the SWG to align with member needs, the researcher(s) will then be invited to a SWG meeting for an oral presentation and discussion session with SWG members (guidance will be provided to the researcher(s) upon invitation). This allows the researcher(s) to further explain their ideas, explore alternatives and allows members to ask questions and help guide the research approach such that the outcomes are more applicable to member needs. More than one applicant may be selected to participate in this phase of the process. If no submissions align with SWG needs, this solicitation may be re-issued. The SWG is under no obligation to fund any submissions.

After this meeting, the SWG will evaluate the concept(s) and the researcher(s), as well as their confidence in the ability of the researcher(s) to effectively collaborate with the SWG and any determined end users (including but not limited to community members, local decision makers and state government).

If the SWG decides, by majority vote, to move forward with the development of a full proposal, the selected researcher(s) will then be invited to co-develop the full proposal with input from the full SWG or assigned subcommittee, as appropriate. Pending satisfactory development of a full proposal that is mutually agreeable to the applicant(s) and the SWG or assigned subcommittee, the final proposal(s) will be submitted to the full SWG for review. Final funding approval requires a majority vote of the SWG and applicable university sponsored programs approval.

The SWG meets quarterly and the anticipated steps and timeline are as follows:

- February 2019: Submissions accepted by WRRI and distributed to SWG for initial reviews.
- April 2019 — Quarter 1 Meeting: SWG discusses submissions and reviews, then makes decisions about which researchers to invite to discuss concepts in person.
- May 2019 — Pre-Quarter 2: WRRI notifies applicants who are invited to present and provides guidance on preparation for in-person discussion.
- June 2019 — Quarter 2 Meeting: Presentation and Discussion session. SWG decides which researchers to move forward with to co-create a project proposal.
- July — September 2019 - Pre-Quarter 3: SWG/subcommittee works with the Principal Investigator(s) (PI) to collaboratively develop a full project proposal.
- October 2019 — Quarter 3 Meeting: The PI attends SWG meeting (as needed) to finalize discussions with full SWG and final vote is taken to approve funding.
- November 2019 — January 2020: Anticipated start dates for projects.

Discussions with researchers and refinement of proposals may extend to Quarter 4 as needed based on complexity of project development, mutual needs and interests of the SWG and researchers, and number of projects the SWG decides to support.

VI. Project Funding and Duration

Because the initial phase of this process is to create a proposal concept that can be tailored through dialogue, both the final project duration and funding limit may be subject to change. Applicants are encouraged to be flexible in developing project budgets. This should not be a significant focus of the proposed concepts, but guidance is provided here to help applicants keep concept scopes within the limits of SWG funding capacity.

Generally, projects may be 1-3 years in duration with a total project budget of \$80,000. Indirect rates are under negotiation and could range from 0-10%.

Matching funds and in-kind services are not required, but are encouraged.

At the SWG's discretion, based on quantity, quality and scope of submissions, as well as available funds, projects may be funded at greater or lesser amounts.

VII. Applicant Eligibility

Eligible to apply to this funding opportunity are: research and/or extension faculty of any accredited college or university (public or private) in North Carolina; private consultants with an office in North Carolina; and non-profits with an office in North Carolina. Undergraduate, graduate and post-doctoral support may be included in proposals, but students and post-docs are not eligible to apply as a PI.

The SWG encourages applicants to collaborate with industry, local community groups, federal, state, or local agencies and/or with researchers from different academic institutions and disciplines. The SWG also encourages submissions from PIs in early-career status.

An individual may be listed as an investigator on a maximum of two submissions and serve as lead PI on only one. That is, if you are involved in two concept submissions, you may be a co-investigator on both, or a co-investigator on one and lead PI on the other.

VIII. Applicant Diversity

Recognizing that some students, faculty and professionals of color have been underserved and under-targeted with research opportunities, and that some students, faculty and professionals of color are underrepresented in the sciences, we strongly encourage submissions by and/or collaborative partnerships with one or more of the following:

- African American, Hispanic and Native American faculty, students and professionals
- Historically Black Colleges and Universities (HBCUs)
- Minority Serving Institutions (MSIs)

IX. Format, Submission and Due Date

Submissions are due by **4:00 p.m., February 10, 2019**. In fairness to all applicants, late submissions and those not adhering to the following formatting guidelines will not be accepted.

Compile all sections into a single PDF entitled "PILastNameFirstName_SWG2019" and attach to an

email to nicole_wilkinson@ncsu.edu. Please indicate "SWG research concept submission" or similar in the subject line of your email.

You will receive an email confirmation of receipt within four business days of submission. If, after four days, you have not received confirmation, call (919) 513-1216.

Proposals must adhere to the following format:

- 3/4-inch margins all around
- Times New Roman 11-point font
- Strict page limits as listed below
- Page numbers, starting with the cover page as Page 1

X. Submission Contents

Submissions should contain the elements below.

1. Cover Page (limited to 1 page)
2. Project Concept (limited to 2 pages)
3. Statement of PI Interest and Qualifications (limited to 1 page)
4. References (as needed – ideally should not exceed 2 pages)
5. Curricula Vitae (CV) for each PI and Co-Investigator (Co-I) (limited to 2 pages per CV)

1. Cover Pages must include the following elements:

- Concept title
- Proposed start/end date (anticipated funding to begin between November 2019 and January 2020, though slightly later start dates may be accepted)
- Budget request (total amount only, no breakdown required)
- Name, academic rank or title, affiliation, mailing address, phone number and email address for the PI
- Name, title, affiliation and email address for each Co-I

2. Project Concepts are described as follows:

Submissions do not have to address all ideas described below, but the approach of the work and the benefits and impacts should be clearly and coherently explained.

You may propose more than one concept, idea or research approach in a single submission, keeping in mind that the goal of this submission is to share ideas and increase dialogue for the exploration of research ideas. However, if addressing multiple concepts, sufficient explanation must be included for each to ensure that the reviewers have enough information to evaluate your ideas. Also, applicants should take care to ensure that the narrative is cohesive rather than an assembly of unrelated ideas. Regardless of the number of concepts or ideas addressed, the 2-page limit for this section still applies.

This narrative should state what you would like to accomplish through a proposed project or research approach (i.e. goals, objectives, hypotheses to test or research questions to answer), as well as how it will be done (i.e. the technical approach, brief timeline, major milestones and, if applicable, the leverage of existing resources or partnerships). Note that a lengthy detailed

explanation of research methodology is not needed nor expected for this phase, but will be explored later if a researcher is selected for development of a full proposal.

Describe how your proposed concept addresses the focus area of this RFP and its significance to urban stormwater issues in North Carolina as related to the focus area. Describe what success would look like for this project. Include what metrics of success that you would consider. State anticipated outcomes, impacts and deliverables. Specify the target audiences for these outcomes, impacts and deliverables.

Describe any novelty in your work. Explain what new perspectives or accomplishments your proposed approach could bring to the state, SWG members' stormwater programs or the communities they serve.

Explain whether the outcomes of your concept will apply across geographic areas of the SWG membership. Even if a project concept uses discreet locations as case studies, results or lessons learned should be transferrable to other member communities, or at the state level which could then contribute to the member communities through statewide outcomes.

3. Statement of PI Interest and Qualifications are described as follows:

In addition to the CVs required for the PI and Co-Is, proposals should also include a detailed statement of what uniquely qualifies the researcher(s) to conduct this work and why they are interested in applying to this funding opportunity. Example information could include:

- History of partnerships with communities, municipalities or state agencies on relevant work
- Highlights of academic research in this field
- Interest in or concern about the issues this funding opportunity seeks to address
- Track record of measurable outcomes
- Unique skills and experiences that may not typically be included in a CV
- Descriptions of previously developed outreach programs or materials
- References to other relevant projects or efforts

This statement should relate back to the information provided in the Project Concept section and the focus area it addresses (i.e. if your concept includes significant community engagement, your statement of interest and qualifications should describe your experience in this realm such that the SWG can evaluate your capacity to effectively and meaningfully work with communities).

4. References (as needed – ideally should not exceed two pages)

Provide full citations for all references cited in the body of the concept (and only those references), in standard bibliographical format, in alphabetical order by the first author's last name.

5. Curricula Vitae

Provide a CV for the PI and each formal Co-I or significant partner/collaborator named in the proposal. The CVs for faculty and researchers should follow standard NSF format, (see the section on "biographical sketches" at

http://www.nsf.gov/pubs/policydocs/pappguide/nsf11001/gpg_index.jsp). CVs for other named

personnel (technical staff, collaborators in government or non-profits, etc.) may deviate from this format if appropriate to emphasize skills and experience over publications (though the limit of two pages per person still applies).

XI. Informational Webinars

Interested applicants are invited to join an optional, free webinar to learn more about this funding opportunity. The webinar will briefly recap the intent of this request for research concepts and provide open time for participants to ask questions directly or anonymously regarding concept development, submission or other relevant items.

For planning and tracking purposes, RSVPs for webinars are requested. Webinars are scheduled for:

**December 6, 2018, 1:00-2:00 p.m.
January 9, 2019, 10:00-11:00 a.m.**

To register and ensure you receive a link for participation, please go to go.ncsu.edu/swg_rfp.

FOR QUESTIONS, PLEASE CONTACT:

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