2019/2020 Local Technical Assistance and Community Planning Programs

Application Number: 2

Project Title: BACOG Stormwater Plan

Applicant: Barrington Area Council of Governments

CALL FOR PROJECTS

CMAP

Project Description:

Regional Stormwater Plan with Groundwater Recharge Focus

A great deal of environmental work has been completed by BACOG including groundwater studies, mapping, programs and education. The area's watershed partnerships have developed watershed plans and related programs that cover most of the BACOG area. To date there has been limited integration of these components, although surface water and groundwater are a single resource.

The project would provide a detailed look at stormwater flow throughout the BACOG area, incorporate groundwater considerations and opportunities, and include projected precipitation/climate trend data. Desired outcomes are: 1) a new regional approach to managing stormwater and improving water quality; 2) focused utilization of groundwater recharge capabilities to replenish the regional aquifer and reduce flooding; and 3) enhanced collaboration among governments for better overall, regional environmental management.

The project would first map a high level of detail of stormwater flows within each community (incorporating any existing mapping) and show flows into and out of each community and the region as a whole under existing climate conditions. Then stormwater flows would be modeled under a second climate scenario to show projected precipitation conditions and resultant stormwater flows.

The two scenarios (existing and projected conditions) would be analyzed to determine the capacity of existing gray and green infrastructure in each community to address and control existing and increased stormwater flows, flooding and water quality. Problem areas under current infrastructure conditions would be identified through the detailed mapping, engineering and village/township input, and site investigation. An estimate of problems and the extent of areas affected would be estimated under projected conditions.

Opportunities for better stormwater management would then be identified. The detailed flow mapping would be integrated with the BACOG groundwater recharge area map and other groundwater and natural area information and would identify areas suitable (e.g., large enough, close enough, with appropriate soils) to accept additional stormwater. The analysis would generate new possibilities to divert, retain, detain and/or redirect stormwater to sensitive groundwater recharge areas to replenish the aquifers and reduce flooding. The project would identify projects and practices to resolve problems and improve water quality. It might address creation of downstream capacity through mitigation or credits between governments. It might also note areas suitable for developing raingardens and bioswales on private property, to educate and engage property owners to assist in their own local flood mediation, resulting in less demand on stormwater facilities.

Ultimately the project would conclude with recommendations for shared regional management of stormwater and groundwater projects, activities, responsibilities, and innovation. Activities that could occur across jurisdictional boundaries would be identified, within the limitations of state and federal laws and stormwater ordinances.

Each government would implement agreed recommended projects within their own community, possibly through new intergovernmental agreements and possible cost sharing arrangements among members.

Funding and/or resource assistance is needed for consultant(s) to perform the mapping, analysis, modeling and recommendations components of the project. Recommendations would be jointly developed by BACOG government members and the consultants. If needed, the project can be broken up by components (mapping, modeling, analysis & recommendations) for funding requests.

Project Location: The BACOG area is located about 40 miles northwest of Chicago in parts of 4 counties. The area encompasses approximately 80 square miles in 4 sub-watersheds of the Upper Fox Watershed and 1 sub-watershed of the Des Plaines Watershed. See map on our website at www.bacog.org