

Appendix E

United States Environmental Protection Agency's Supplemental Guidance

Watersheds In and Near Metropolitan Areas - Preventing, Reducing, and/or Eliminating Impacts Associated with Urban Runoff

Background

Urban Runoff is storm water runoff from urban and suburban areas. As areas are developed, land uses change and more impervious surfaces are created. These changes to the land affect the volume of runoff and the pollutant levels in runoff. The increased volume of storm water runoff and the increased pollutant loads profoundly affect the hydrology of water bodies and water quality. The watershed approach is the most effective way to address these problems. There are two main Clean Water Act Programs (Nonpoint Source [NPS] and National Pollutant Discharge Elimination System [NPDES]) that must work together in order for local communities and watershed groups to develop and implement watershed management plans that will protect and/or restore water quality. The NPS Program has funding and technical resources and the NPDES program establishes requirements that, integrated together, can be very effective catalysts for action.

Section 319 funds can be used, within certain limitations as discussed further below, to assist in the management of urban runoff. The purpose of this supplemental guidance is to promote the effective integration of Section 319 NPS and Section 402 NPDES programs in urban and suburban areas on a watershed basis. Additionally, this guidance will help States determine if particular proposed urban runoff projects/activities are eligible for Clean Water Act Section 319 funding, and identify opportunities for coordination between the NPS and NPDES programs. Note this guidance is for the purpose of assessing the eligibility of projects/activities for funding, and this guidance is not set forth for the purpose of evaluating compliance with storm water discharge permits or other enforceable requirements. Over time it is expected that permits, Total Maximum Daily Loads (TMDLs), MS4 storm water management plans, and Storm Water Pollution Prevention Plans (SWPPPs) will describe more specifically/explicitly what practices are required, which should facilitate determinations regarding what projects/activities are 319-eligible. Additionally, it is expected that as progress is made in integrating the NPS and NPDES programs, future permits will be developed which will do even more to support the watershed approach.

Watershed Management Projects/Activities

Watershed Planning

Subject to certain restrictions, Section 319 funds can be used for watershed planning projects. For areas where development is occurring or is expected to occur, States should support watershed organizations in carrying out watershed planning and implementation projects which explicitly take into account the effects of land use and development practices on water resources. For example, as part of a watershed planning and protection initiative in a developing area, a watershed group should include estimates of runoff quantities, pollutant loads, and the watershed effects of alternative various growth and development scenarios. The watershed plan should also include, as appropriate, recommendations for zoning, buffers, and urban runoff management

measures. Note that Section 319 funds cannot be used for projects or activities that are required under a Section 402 or 404 permit, as discussed further below. Thus while Section 319 funds can be used for watershed planning work, these funds cannot be used to develop (or implement) MS4 storm water management plans.

Watershed Permits Which Incorporate Watershed Plans

There may be cases where NPDES permits incorporate by reference parts or all of a watershed plan. This can be extremely valuable in terms of helping to ensure consistency and to foster the full implementation of the watershed plan. However, this can present additional complications in terms of Section 319 funding eligibility determinations. For example a watershed plan might recommend restoration/stabilization of certain portions of a stream channel. Is this restoration work now ineligible for funding because the watershed plan is cross-referenced to the permit?

The approach that is recommended is as follows:

- Identify what components of the watershed plan implement aspects of the six minimum control measures, or are otherwise enforceable requirements under a NPDES permit (see further discussion below on making such determinations).
- Identify what components of the watershed plan are intended to be implemented to the extent feasible or as circumstances allow, but which are not considered to be *enforceable* requirements under the permit. For example, a stream bank stabilization project included in the watershed plan may not be considered to be an enforceable requirement under the watershed permit.
- Record the above in the permit, the watershed plan, or the watershed plan approval letter.

Projects/activities that are outlined in the watershed plan but are not considered to be enforceable requirements under the permit are potentially eligible for Section 319 funding.

Urban Runoff Implementation Projects/Activities

States can utilize Section 319 funds (subject to certain eligibility requirements) for implementation of management practices to restore/protect water resources. Following are guidelines for such projects/activities:

*The Management Practice Must Address **Nonpoint Source** Runoff*

Section 319 funds can be used for source control best management practices (BMPs) or runoff control best management practices, but not for point source controls. As a rule of thumb, BMPs which reduce the amount of runoff generated or which intercept and infiltrate, hold, or treat storm water before it enters the municipal storm sewer system or surface water system are potentially eligible for Section 319 funding. Note a key factor is *has the storm water entered the municipal system or surface water system*. If, for example, a BMP/treatment device is located at the edge of a parking lot such that it intercepts and treats runoff from the parking lot before that water goes to the municipal system, that BMP/treatment device would potentially be eligible, even if the runoff flowed through a grate or catch basin. The BMP would be intercepting runoff from the parking lot before that water goes into the municipal sewer system. On the other hand, an end-of-pipe device to treat storm water from the municipal storm sewer system before it is

discharged to a water body would generally be considered a point source control and would not be eligible for Section 319 funding.

*The Management Practice Should Address a **Nonpoint Source** Impairment*

Incremental Section 319 funds must be used for projects/activities which will measurably address documented water quality impairment(s). For the purposes of this supplemental guidance, *documented water quality impairments(s)* means water quality standards violations documented by a 303(d) listing, by local monitoring data, or through a build-out analysis. The build-out analysis should be able to justify the need to do headwater protection within MS4 jurisdictions. *Measurably address documented nonpoint source water quality impairments* includes modeled results to show load/volume reductions, and is not limited to measured in-stream improvements. The project does not necessarily need to fully resolve impairment(s), but it should be part of the solution to the impairment, and the contribution to addressing the documented impairment(s) needs to be quantified. Prevention activities can be focused on areas less than 1 acre if the areas are located in an impaired watershed.

The Management Practice Must Not Be Required Pursuant to a Federal or State Discharge Permit

Section 319 funds cannot be used by any entity for projects or activities that are required under a Federal or State NPDES permit. Under the NPDES program, storm water permit coverage is required for storm water discharges from large, medium, and regulated small Municipal Separate Storm Sewer Systems (MS4s). There are six “minimum control measures” identified for MS4 systems:

- Public Education and Outreach
- Public Participation/Involvement
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post-Construction Runoff Control
- Pollution Prevention/Good Housekeeping

Projects or activities carried out to comply with these minimum control measures are not eligible for Section 319 funding. However, there may be some types of activities that could be eligible, and in meeting the six minimum measures there are opportunities to promote the watershed approach. Following are brief discussions regarding the six minimum control measures:

[Public Education and Outreach](#) – Basic education and outreach activities directed to homes and businesses in the MS4 area are generally not eligible for Section 319 funding. However, specialized education/outreach initiatives may be eligible. For example, signage to showcase and explain an urban runoff project demonstrating a new or innovative technology may be eligible for 319 support. Also, activities such as a workshop on Low Impact Development covering an entire watershed or region (vs. a regulated MS4 area) may be eligible.

Municipalities have opportunities to advance the watershed approach as part of their education and outreach work. For example, when distributing educational materials and performing outreach to inform citizens about the impacts of polluted storm water runoff

discharges can have on water quality, a municipality can use this as opportunity to promote the watershed approach and the local watershed groups/organizations working in the area. A municipality can also support local volunteer monitoring efforts as part of its public education and outreach.

[Public Participation/Involvement](#) - This minimum control measure is focused on providing opportunities for citizens to participate in program development and implementation, including effectively publicizing public hearings and/or encouraging citizen representatives on a storm water management panel. While such activities are likely not 319-eligible, for municipalities this is another opportunity to promote involvement with local watershed management planning and implementation efforts.

[Illicit Discharge Detection and Elimination](#) - Pursuant to this minimum control measure MS4 permittees need to develop and implement a program to detect and eliminate illicit discharges to the storm sewer system. This includes activities like developing and enforcing a local ordinance, and a surveillance/detection program. Such activities are not 319-eligible. To complement the MS4 illicit discharge detection and elimination program, municipalities can coordinate with local watershed groups so adequate downstream water quality monitoring occurs. Being able to document the success and/or impact of activities is extremely important to both the local watershed group as well as the permittee.

[Construction Site Runoff Control](#) - This minimum control measure calls for municipalities to develop, implement, and enforce an erosion and sediment control program for construction activities that disturb 1 or more acres of land. Activities such as conducting inspections and compliance/enforcement proceedings would not be 319-eligible. An example of an activity that could be 319-eligible and which would promote the watershed approach would be a MS4 community working with local watershed group to promote consistency of practices and approaches by builders for activities outside the community's jurisdiction.

[Post-Construction Runoff Control](#) - MS4 permittees are responsible for developing, implementing, and enforcing a program to address discharges of storm water runoff from new development areas after construction is completed and the site is in use. This may include measures such as establishing requirements in an ordinance for detention or infiltration of certain flow amounts. Controls could also include preventive actions such as protecting sensitive areas (e.g., wetlands, forested areas). An example of an activity that could be 319-eligible and which would put into practice the watershed approach would be working with local groups to demonstrate and communicate on the feasibility and benefits of sustainable land use and development practices in the watershed, such as Smart Growth and Low Impact Development. A watershed plan could include specific recommendations regarding post-construction runoff controls as part of build-out analysis.

[Pollution Prevention/Good Housekeeping](#) - Under the MS4 permit communities need to develop and implement activities designed to prevent or reduce pollutant runoff from municipal operations. The program must include municipal staff training on pollution prevention measures and techniques (e.g., regular street sweeping, reduction in the use of pesticides or street salt, frequent catch-basin cleaning). An example of an activity that could be 319-eligible and which would promote the watershed approach would be a community working with local watershed groups to convert turf areas in parks,

particularly parks adjacent to water resources, to native prairie plants (the prairie plants will absorb more storm water and trap more pollutants, as compared to turf grass, and will help reduce the presence of gulls or geese which contribute to bacteria loadings to water resources).

There are likely to be situations where a project or activity is somehow related to a minimum control measure, but it is not clear if that activity is *required* or not. For example, if a community wishes to develop a program to have pet stores and shelters distribute information and materials to improve pick-up of pet wastes, would that be an eligible cost? It is recommended that States examine such projects/activities which are proposed for funding as follows:

1. Is there language in the applicable NPDES permit that specifically requires the project/ activity?
2. Does the MS4 storm water management plan (or a SWPPP) specifically identify the project/ activity as a measure that will be carried out to comply with the permit?
3. Is the project/activity clearly required to meet one of the six minimum measures?
4. Is the project/activity required to achieve load reductions specified in a TMDL?

If the answer to all these questions is no, and if the project/activity addresses the pollutants of concern identified in the Watershed Management Plan, the project/activity is potentially eligible for Section 319 funding.

Types of control measures and BMPs that have been or are being implemented within Phase I or Phase II jurisdictions with Section 319 funds (because they have been documented to be outside what is required under the applicable MS4 permit) include:

- Riparian management, streambank rehabilitation, and in-stream measures to eliminate/reduce channel instability.
- Wetland creation, restoration and/or enhancement for water quality purposes.
- Source area management/pollution prevention, such as critical area seeding of non-construction areas.
- New technologies and approaches, such as green roofs.
- Information and education related to new approaches and technology.
- Conveyance system inlet BMPs, such as sand filters.
- Alternative road and parking pavements.
- Converting/adjusting water quantity structures/devices to incorporate water quality benefits.
- BMPs such as rain gardens and rain barrels in residential and governmental projects.

Permits and local storm water plans/programs vary considerably; the applicable permit(s) should be reviewed before any of these activities are undertaken with Section 319 funds.

State programs (NPS/NPDES) can develop documents to more specifically define what is required under applicable permits, and what would generally be considered to be outside the scope of what is required, and can submit such documents to U.S. EPA for concurrence, if it is believed such documentation would be helpful.

To ensure projects/activities proposed for funding are not required pursuant to a permit, applicants for Section 319 grants for storm water-related projects/activities in MS4 areas,

applicants must include as part of their application materials a statement documenting that the work proposed for funding is not required under a storm water discharge permit (or other environmental permits).

Monitoring/Evaluation

Monitoring needed to help develop watershed plans is generally eligible for funding, including source identification monitoring (e.g., bacterial source tracking project to determine whether E. coli in an urban watershed is from human or origins). Any monitoring required pursuant to a regulation or permit would not be eligible for funding. Monitoring done by a community should be coordinated with watershed management plan development and implementation, and where possible should be done in such a manner that the data can be used for multiple purposes and to establish baselines against which progress can be evaluated.

At the community or subwatershed level, monitoring includes identifying and tracking what management measures and practices have been implemented. Management measures should be tracked in a database that identifies the type of measure, location, date of installation, and ownership. This database then serves as the foundation for local monitoring and maintenance of management measures that must occur to ensure the practices remain in place and function as designed.

At the project scale, urban runoff implementation projects should include provisions for measuring or evaluating the effects of the practices or control measures put in place. This may include monitoring of the performance of a specific management measure, and quantifying the loading reductions achieved. This data would should be coordinated and correlated with the tracking and monitoring of management measures done at the community or subwatershed level. In-stream monitoring can be conducted by the State or by a watershed organization to assess the effects of watershed plan implementation in terms of attainment of designated uses.

State Initiatives/Activities to Address Urban Runoff Issues

In addition to the above, States may use Section 319 funds for State-wide NPS program activities which foster or promote improved management of urban runoff. Among the types of activities States may directly or indirectly (i.e., via sub-grants or contacts) carry out with Section 319 funds are the following:

- (1) Education and outreach to local officials, engineers, planners, developers, real estate professionals, financial institutions, and/or the public on innovative or "green" approaches to reducing urban runoff, e.g., Smart Growth, Low Impact Development, Conservation Development/Design.
- (2) Work to develop improved/model local codes and ordinances which result in improved management of urban runoff. This includes work on codes and ordinances related to sustainable land use and development practices. Many local codes and ordinances have provisions which discourage (or even prohibit) certain sustainable design features and/or BMPs. Example of code requirements which may need to be updated include criteria for street widths, setbacks, and densities, requirements which may inhibit use of native landscaping and rain gardens.

Note, however, the State cannot use Section 319 funds to directly or indirectly carry out an activity that is required of a permittee. For example, the State cannot develop an Illicit Discharge Control Ordinance for a MS4 community.

- (3) Plan and support research, demonstration projects, and quantification efforts related to the performance and/or effects on water resources of new or innovative urban runoff management practices. Signage or publications designed to highlight the design and performance of demonstration projects would in most cases be considered beyond the scope of the education and outreach called for under the six minimum control measures, and would thus be potentially eligible for Section 319 funding.
- (4) Assist in making planning tools and data available to local units of government, developers, and other stakeholders. This may include making available water quality data and/or GIS layers (e.g., land use coverages), or it may include furthering the use of models and other analytical tools.