ALLIANCE FOR CLEAN ENERGY NEW YORK, INC.

119 Washington Avenue, Suite 103
Albany, NY 12210
518.432.1405
info@aceny.org | www.aceny.org

December 18, 2022

New York State Department of Environmental Conservation
Stormwater_info@dec.ny.gov

Re: "Comments on the 2022 Draft Design Manual"

Mr. Emanuel Olff:

On behalf of Alliance for Clean Energy New York (ACE NY) and the renewable energy industry, we submit these comments in response to the Department of Environmental Conservation's request for comments on the Draft May 2022 "Stormwater Management Design Manual" (Manual) originally prepared by the Center for Watershed Management and updated by the Department. Comments according to the Department's webpage[1] are to be submitted by December 18, 2022 at the email address noted above.

The mission of the Alliance for Clean Energy New York (ACE NY) is to promote the use of clean, renewable electricity technologies and energy efficiency in New York State, in order to increase energy diversity and security, boost economic development, improve public health, and reduce air pollution. ACE NY members are a mix of private companies and non-profit organizations interested in promoting clean energy and creating opportunities for growth in New York's clean energy economy.

We welcome the opportunity to provide comments on behalf of our members on the proposed Manual based on our past experiences with Stormwater Pollution Prevention Plans (SWPPPs) reviews for renewable energy projects including solar farms. The ACE NY comments are supplemented by the attached LaBella Engineering and Fisher recommendations and comments.

The Climate Leadership and Community Protection Act (Climate Act) effectively mandates that the Department consider climate change in developing all of its policies and guidance. The expeditious permitting of renewable energy projects is essential to reach our Climate Act goals. The permit review process includes having an approvable SWPPP and obtaining authorization to commence construction activities under the SPDES general permit for Stormwater Discharges from Construction Activity [GP-0-20-001].

The SWPPP, like wetland delineations, interconnection costs, stream locations, forested areas, endangered and threatened species habitat, flood zones, slopes, and local zoning

[1] https://www.dec.ny.gov/chemical/29072.html

permissible uses and design standards, all effect the potential suitability of a site for a certain sized solar farm. The successful outcome of this pre-project environmental and land use planning process to site, for example, a potential solar farm is dependent on the reliability and availability of the information and most importantly, a predictable and replicable review process.

The Manual must provide the SWPPP preparer and the reviewer, alike, with additional tools, practices, and methodology that is currently accepted in other states, such as Minnesota, to minimize unnecessary back and forth comments and responses between SWPPP preparer and reviewer. SWPPP reviews are now undertaken across the State by DEC staff, or MS4 communities who in turn may retain a private consultant. Regional offices are providing conflicting guidance because the existing Manual is lacking in substance. The DEC and MS4 SWPPP review process essentially requires one qualified professional to review another qualified professional's SWPPP product. That review process should result in consistent SWPPP review outcomes throughout the state; unfortunately, it does not.

The proposed SWPPP Manual contains no specific guidance or models for solar farm SWPPP post-construction requirements. The Manual does not even reference or incorporate the April 6, 2018 Division of Water guidance memorandum titled "Solar Panel Construction Stormwater Permitting/SWPPP." The Manual does include fifteen references or citations to the work of Minnesota agencies and thereby recognizes that state's forward thinking in solar farm SWPPP development and implementation.

Unfortunately, the proposed DEC SWPPP Manual does not include a reference to, or incorporation of the Minnesota Stormwater Manual chapter titled "Stormwater management for solar projects and determining compliance with the NPDES construction stormwater permit."[2]

The Minnesota Manual describes the necessary calculations, assumptions and guidance, and example calculations. They even include a solar panel calculator. They note the unique characteristics of a solar farm that requires specific attention in their manual:

> "Solar projects must follow the permanent stormwater management rules and regulations of the permit. However, because solar farms—particularly the panels— have unique characteristics, not like building a building or road, the MPCA allows for the use of the "disconnected impervious credit method," which often results in a reduction in treatment volume required. The design of the permanent stormwater management system must first try to utilize volume reduction practices such as infiltration. If it is determined that volume reduction cannot be accomplished due to prohibitions found in the permit, other types of permanent stormwater management such as wet sedimentation basins or

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2 https://stormwater.pca.state.mn.us/index.php?title=Stormwater_management_for_solar_projects_and_determining_compliance_with_the_NPDES_construction_stormwater_permit

> filtration systems (e.g., sand filters) must be constructed. This will be explained in greater detail in the Volume Credit to Solar Projects section below."

In addition to the incorporation of the Minnesota Manual, we advocate that the Department rely upon existing studies to guide the revisions to the Manual including the attached American Society of Civil Engineers (ASCE) paper titled "Hydrologic Response of Solar Farms" by Lauren M. Cook and Richard H. McCuen. Cook and McCuen demonstrate that:

> [t]he addition of solar panels over a grassy field does not have much of an effect on the volume of runoff, the peak discharge, nor the time to peak. With each analysis, the runoff volume increased slightly but not enough to require storm-water management facility ties. However, when the land-cover type was changed under the panels, the hydrologic response changed significantly.[3]

ACE NY believes the most expediate and prudent way to bring about more consistent solar farm SWPPP reviews is to make sure the Department's final Manual incorporates by reference the Minnesota Stormwater Manual Chapter, relies upon actual study data and conclusions from Cook and McCuen, and the National Renewable Energy Laboratory, and considers the comments of industry consultants, LaBella Associates, and Fisher Associates, who have been tasked with applying the existing Manual guidance to field conditions to create SWPPPs.

Thank you for the opportunity to provide our comments and please do not hesitate to reach out if you have any questions.

Sincerely,

Anne Reynolds

Anne Reynolds
Executive Director, Alliance for Clean Energy New York

[3] The National Renewable Energy Laboratory, a national laboratory of the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, is also undertaking a major research study to establish run off coefficients based on actual solar farm panel design and vegetation because, to date, states have used non-solar specific stormwater management guidance and calculations that have imposed unnecessary costs and delays on solar farm developers. They have a research site in New York for this study.