

# Post-Development Stormwater Management at Solar Projects: Virginia Department of Environmental Quality Memorandum



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The Director of the Virginia Department of Environmental Quality (“VDEQ”) issued a March 29th memorandum entitled:

*Post-development Stormwater Management at Solar Projects (“Memorandum”)*

The *Memorandum* was transmitted from VDEQ Director Michael S. Rolband, PE, PWD, PWS Emeritus to:

- Stormwater Management Development/Design Community
- Local Virginia Stormwater Management Program Administrators

The site design of a solar project can impact whether such project will improve or negatively affect water quality.

Existing federal and state stormwater requirements have generally not been developed taking into consideration solar energy facilities.

The VDEQ *Memorandum* addresses solar projects subject to the Virginia Stormwater Management Program. Solar projects had not previously been required to account for the imperviousness of the solar panels when applying Virginia’s post-development stormwater management technical criteria. VDEQ is stated to have only required that solar panel support posts and beams be considered impervious areas.

VDEQ states that such an approach:

. . . has the potential to underestimate the post-development runoff volume or runoff rate from solar panel arrays, which in turn has the potential to negatively impact downstream waterways or properties.

The *Memorandum* also cites the United States Environmental Protection Agency’s Chesapeake Bay Program which is stated to consider solar panels to be impervious for purposes of performing water quality modeling/calculations for the Chesapeake Bay Total Maximum Daily Load.

As a result, VDEQ has determined the following policy will go into effect immediately for solar projects subject to Virginia Stormwater Management Program requirements:

1. Water Quantity. Solar panels are to be considered unconnected impervious areas when performing post-development water quantity calculations using the hydrologic methods specified in the Virginia Stormwater Management Program Regulation, 9V AC25-870-72. Current information regarding the application of unconnected impervious areas can be found in Chapter

9 (Hydrologic Soil-Cover Complexes), Part 630 (Hydrology) of the Natural Resource Conservation Service's National Engineering Handbook.

2. **Water Quality.** Solar panels are to be considered impervious areas when performing post-development water quality calculations using the Virginia Runoff Reduction Method (VRRM). To account for the disconnection of the solar panels from the overall drainage system, the area of the solar panels may be entered into the applicable "Simple Disconnection" stormwater best management practices section of the VRRM compliance spreadsheet (i.e., 2a - Simple Disconnection to A/B Soils or 2b - Simple Disconnection to CID Soils).
3. **Alternative Methods.** This policy does not prohibit any alternative method. If alternative proposals are made, such proposals will be reviewed and accepted or denied based on their technical adequacy and compliance with the appropriate laws and regulations.

A copy of the *Memorandum* can be downloaded [here](#).