

STORMWATER MANAGEMENT SUMMARY

for

Hamms Landfill Solar Farm, LLC

Proposed Solar Panel Field
23 Old Beaver Run Road
Block 14, Lot 33.01
Lafayette Township
Sussex County, New Jersey

Prepared by:

BOHLER //

NJ Certificate of Authorization No. 24GA28161700

30 Independence Blvd, Suite 200
Warren, New Jersey 07059
908-668-8300

Robert L. Streker, P.E.
New Jersey Professional Engineer License No. 45344

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STORMWATER MANAGEMENT SUMMARY

PROJECT: Preliminary & Final Site Plan for Hamms Landfill Solar Farm, LLC
Proposed Solar Panel Field

LOCATION: Block 14; Lot 33.01
23 Old Beaver Run Road
Lafayette Township
Sussex County, New Jersey

DATE: October 2021

Existing Site Conditions

The subject property is a previously disturbed lot and the site is currently being utilized for landfill activities and is listed as a Brownfield site by the USEPA with wooded wetland areas located at the perimeter of the landfill cap. The site is bounded by Old Beaver Run Road and residential properties to the south and an unnamed tributary to the Paulins Kill on the North. The adjacent property (Block 14, Lot 34) contains a Sussex County Municipal Utility Authority landfill. The site has topography sloping towards the north with a high point located along Old Beaver Run Road.

Proposed Site Conditions

The proposed conditions include the installation of solar panels, as shown on the *Preliminary & Final Site Plans for Hamms Landfill Solar Farm, LLC*, prepared by Bohler Engineering NJ, LLC dated October 1, 2021. The proposed solar panel area is an existing landfill which was originally in violation of the NJDEP landfill closure and maintenance requirements. The landfill cap consisted partly of wooded vegetation, and various scrub vegetation and overgrown grasses. This area was required to be cleared of vegetation as part of the landfill closure plan and is currently in the process of being cleared. The project proposes the creation of an earthen terrace on the northwesterly portion of the landfill cap to accommodate the limit of ground-mounted solar panels, for a total limit of disturbance of approximately 23.6 acres. The solar panels will be mounted on a concrete ballast system to avoid driving piles into the landfill cap.

In accordance with N.J. Statute 40:55D-38.1, “An ordinance requiring approval by the planning board of either subdivisions or site plans, or both, shall not include solar panels in any calculation of impervious surface or impervious cover.” The existing landfill cap acts as an impermeable barrier and for the purpose of calculating stormwater runoff will be considered impervious surface (non-motor vehicle). As a result, the project does not propose new impervious surfaces exceeding the 0.25-acre threshold to be considered a major development under the Stormwater Management Rules located at N.J.A.C. 7:8. However, as the proposed clearing and grading activities in the area of the ground-mounted solar panels exceed 1-acre of land disturbance, the paragraphs below address the New Jersey Department of Environmental Protection (N.J.D.E.P.) standards for storm water quantity (runoff rates), storm water quality, and groundwater recharge.

Since the project will not increase impervious coverage, there is no additional stormwater generated to mitigate in the form of peak runoff rate reductions. Therefore, no new stormwater management features are proposed as part of the solar panel installation. A minor alteration to ground cover will take place when the existing vegetation is cleared and replaced with a wildflower seed mixture beneath the ballast-mounted solar panels. The area will be permanently stabilized as specified on the plans, and any change in runoff condition should be de minimis.

Secondly, since the project will not increase impervious coverage, there is no anticipated post-construction increase in pollutant loading to the existing stormwater management facilities.

Lastly, since the project will not increase impervious coverage, there is no groundwater recharge deficit created by installation of the ground mounted solar panels.

Conclusion

The solar project described above and shown on the referenced plans requires clearing and grading activities in the ballast-mount area, however those activities are not intended to change the overall drainage patterns. The solar panels and ballast system themselves are not considered to be an additional impervious surface on the existing landfill cap, and as a result, no increases to stormwater peak runoff rates (quantity), pollutant loading (quality), or groundwater deficit (recharge) are expected. It is our opinion that this project will not adversely impact the existing stormwater management facilities on the subject property, or any surrounding properties.