



Maryland
Department of
the Environment

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor
Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

August 28, 2019

MD Solar 1, LLC
800 Brickell Avenue, Suite 1100
Miami, Florida 33131
Attn: Mr. Jason Thomas

Re: AI No. 162822
Nontidal Wetlands and Waterways Application No. 18-NT-0323/201861760

Dear Mr. Thomas:

The Maryland Department of Environment (“MDE”) received the above-referenced Joint Federal/State Application for the Alteration of Any Floodplain, Waterway, Tidal or Nontidal Wetland in Maryland (the “Application”) on October 18, 2018. After reviewing the application, and conducting several meetings with you and your representatives, MDE has determined that your project does not meet the statutory and regulatory criteria for issuance of a Wetlands and Waterways Permit.

This letter is to inform you that MDE has made the decision to deny your Application because the proposed project is not in compliance with Maryland’s Nontidal Wetlands Protection Act. Please be advised that under COMAR 26.23.02.03 you may not reapply for authorization for this project until six months from the date of denial unless there is a substantive change in the application. At that time, you will be required to submit a new application and application fee. Please see the attached Summary of the Basis for Decision for further explanation of MDE’s decision to deny your Application.

Please be advised that this is a final agency determination; there is no further opportunity for administrative review. Any person with standing, who is either the applicant or who participated in the public participation process through the submission of written or oral comments, may petition for judicial review in the Circuit Court in the county where the proposed project would occur. The petition for judicial review must be filed within 30 days after the date of this letter. Please see the attached Fact Sheet for additional information about the judicial review process.

Should you have any questions, please do not hesitate to contact Denise Keehner, Manager, Wetlands & Waterways Program, by telephone at (410) 537-3638 or by email at denise.keehner@maryland.gov. Please refer to the above-referenced AI number in all correspondence.

Sincerely,

A handwritten signature in blue ink that reads "Ben Grumbles".

Ben Grumbles
Secretary

Attachments: (1) Fact Sheet of the Judicial Review Process
(2) Summary of the Basis for Decision

cc: Maryland Public Service Commission
Frederick S. Kelly, DNR-PPRP

FACT SHEET
JUDICIAL REVIEW PROCESS

Effective January 1, 2010, permit decisions can be challenged through a request for direct judicial review in the Circuit Court for the county where the applicant's proposed project would occur. Applicants and persons having standing (see below) may seek judicial review. Judicial review will be based on the administrative record for the permit decision compiled by MDE and limited to issues raised in the public comment process (unless no public comment process was provided, in which case the review will be limited to issues that are germane to the permit decision).

Who Has Standing?

Anyone who meets the threshold standing requirements under federal law and is either the applicant or someone who participated in the public comment process by submitting written or oral comments (where an opportunity for public comment was provided), as provided in Environment Article §5-204, Annotated Code of Maryland. The three traditional criteria for establishing standing under federal law are injury, causation, and redressability, although how each criterion is applied is highly fact-specific and varies from case to case. Further, an association has standing under federal law to bring suit on behalf of its members when its members would otherwise have standing to sue in their own right, the interests at stake are germane to the association's purposes, and neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit.

What is the Procedure for Seeking Judicial Review?

Petitions for judicial review of a final determination or permit decision subject to judicial review must be filed in accordance with Environment Article §1-605, Annotated Code of Maryland, no later than 30 days following publication by MDE of a notice of final determination or final permit decision, and must be filed in the Circuit Court for the county where the applicant's proposed project would occur. Petitions for judicial review must conform to the applicable Maryland Rules of Civil Procedure.

SUMMARY OF THE BASIS FOR DECISION

MD Solar 1, LLC
Applicant

201861760/18-NT-0323
Application Number

Jeff Thompson/William Seiger
MDE Reviewer

August 28, 2019
Date of Decision

The Environment Article, Annotated Code of Maryland and the Code of Maryland Regulations establish criteria for the Maryland Department of the Environment (Department or MDE) to consider when evaluating projects that propose to change the course, current or cross section of a nontidal stream or other body of water or to impact a nontidal wetland. Under § 5-907 of the Environmental Article: (a) The Department may not issue a nontidal wetland permit for a regulated activity unless the Department finds that the applicant has demonstrated that the regulated activity:

- (1) (i) Is water dependent and requires access to the nontidal wetland as a central element of its basic function; or
- (ii) Is not water dependent and has no practicable alternative;
- (2) Will minimize alteration or impairment of the nontidal wetland, including existing topography, vegetation, fish and wildlife resources, and hydrological conditions;
- (3) Will not cause or contribute to a degradation of groundwaters or surface waters; and
- (4) Is consistent with any comprehensive management plan that may be developed in accordance with § 5-908 of this subtitle.

In addition, § 5-907(b) of the Environmental Article requires that the applicant demonstrate to the satisfaction of the Department that practicable alternatives have been analyzed and that the regulated activity has no practicable alternative. In evaluating whether the proposed regulated activity has a practicable alternative, the Department shall consider: (1) Whether the basic project purpose cannot be reasonably accomplished utilizing one or more other sites in the same general area that would avoid or result in less adverse impact on nontidal wetlands; (2) Whether a reduction in the size, scope, configuration, or density of the project as proposed and all alternative designs that would result in less adverse impact on the nontidal wetland would not accomplish the basic purpose of the project; (3) In cases where the applicant has rejected alternatives to the project as proposed due to constraints such as inadequate zoning, infrastructure, or parcel size, whether the applicant has made reasonable attempts to remove or accommodate these constraints; and (4) The economic value of the proposed regulated activity in meeting a demonstrated public need in the area and the ecological and economic value associated with the nontidal wetland.

The Department may not authorize any regulated activity that, in the determination of the Department, causes or contributes to a degradation of groundwaters or surface waters. In conducting its anti-degradation review, the Department must determine whether an activity will cause any individual or cumulative effects that degrade: aquatic ecosystem diversity, productivity, and stability; plankton, fish, shellfish, and wildlife; recreational and economic values; and public welfare; or cause any individual or cumulative effect that violates any applicable State water quality standard, the Environment Article of the Annotated Code of Maryland, or the Clean Water Act, or otherwise degrades surface and ground water quality. COMAR 26.23.02.06A. To satisfy these requirements with respect to impacts to Tier II waters, the Department requires an applicant to conduct an anti-degradation review consistent with COMAR 26.08.02.04-1, including where applicable a social and economic justification

In the case of the proposed construction of MD Solar 1, LLC's Shugart Valley Place Solar project (Shugart Valley Solar project), the question for the Department to address is whether or not the proposed project impacts, including impacts to a high quality (Tier II) water which lacks assimilative capacity, are acceptable and justifiable under the Statute and regulations.

MD Solar 1, LLC ("MD Solar 1") acknowledges that the Shugart Valley Solar project adversely impacts Wards Run 1 and 2, Tier II (high quality) streams. As is explained further below, MDE has found that the applicant has failed to adequately demonstrate that: (1) there are no alternative, less impactful practicable sites in the general area; and, (2) there is sufficient socio-economic justification for the adverse water quality impacts to Wards Run 1 and 2 from the Shugart Valley Solar project. The applicant has not demonstrated that the project meets a demonstrated public need nor that the economic value of the proposed regulated activity outweighs the ecological and economic value associated with natural resources impacted by this project. Accordingly, MDE is denying a permit for this project to impact regulated wetlands and waterways.

PUBLIC NOTICE

Adjoining property owners, local government officials and other interested persons must be notified of proposed impacts to nontidal wetlands and waterways. In addition, an opportunity to comment and request a public informational hearing must be provided via a local newspaper. In the case of MD Solar 1, MDE scheduled a public informational hearing and included the hearing information in the public notice. The public notice was published in the Maryland Independent on January 30, 2019. The notice also appeared in MDE's web site on February 5, 2019. In addition, a copy of the public notice was mailed to adjoining property owners, interested persons list and local elected officials.

The public informational hearing was held on February 27, 2019 at the Charles County Government Commissioners Room, located at 200 Baltimore Street, LaPlata, MD 20646. The hearing was called to order at 7 pm by the Hearing Officer, Amanda Sigillito, Chief of the Nontidal Wetlands Division at the Department of the Environment. The applicant presented the proposed project and its associated impacts on regulated resources. The presentation was followed by comments and questions from those in attendance. The hearing adjourned at 10:30 pm. The public comment period was extended pending additional information to be provided by the applicant and the scheduling of a second public hearing which was conducted on May 13, 2019, 6:00 PM to 8:30 PM at the same location to address those unable to speak at the initial hearing. Comments pertaining to the Department's Wetlands and Waterways authority have been received. The comment period remained open until August 23, 2019 with comments being addressed in the appropriate sections herein.

PROJECT PURPOSE AND NEED

In order for the Department to authorize impacts to nontidal wetlands, waterways, and their regulated buffers, proposed activities must be determined to be necessary and impacts unavoidable to meet the basic project purpose. Proposed activities also should not cause or contribute to a degradation of water quality in groundwater or surface water.

In the Application, the project purpose is to construct a 32.5 MW fixed-tilt alternating current (AC) solar thin film photovoltaic (PV) project. The energy produced is targeted for Georgetown University, and according to the Georgetown University website will provide nearly half of campus electricity needs and help the university fulfill its sustainability mission. The Project would consist of the clearing of two hundred forty-nine (249) acres of a 540 acre forested parcel in an area designated by MDNR as a Targeted Ecological Area (TEA). Targeted Ecological Areas (TEAs) are lands and watersheds of high ecological value that have been identified as conservation priorities by the Maryland Department of Natural Resources (DNR) for natural resource protection. Site preparation work which includes cutting, clearing, and grading, would be performed internal to the property. Impacted wetland and waterway resources include: 15,670 square feet of nontidal wetland buffer, 62 linear feet (1560 sq. ft.) of stream, and conversion of 4,550 square feet of palustrine forested wetland to emergent wetland. The proposed project site is located at 4850 Shugart Valley Place, west of LaPlata, Charles County, Maryland.

PUBLIC COMMENTS

In general the comments received during the hearings and public comment periods can be grouped into several categories and are provided below with MDEs brief response.

Several commenters provided support for the project and cited green energy and the renewable energy benefits received from a solar energy generation project.

MDE Response: While it is true that Maryland is committed to increasing the amount of energy generated by renewable resources, each solar project must be evaluated individually as to its benefit vs any impacts to regulated resources and its impact on water quality.

Many comments regarding the environmental impact from tree loss particularly in a Tier II watershed were received. Commenters also were concerned about the loss of wildlife and potential water quality issues.

MDE Response: This issue is addressed in detail in the Water Quality and Anti-degradation Review section below.

Several comments regarding the lack of an alternative site analysis were received. Commenters questioned why sites nearer to Georgetown and/or sites that were already timbered and cleared were not considered.

MDE Response: This issue is addressed in detail in the Alternatives Analysis section below.

Several comments were received regarding the project's effect on ground that the Piscataway Conoy Tribe considers to be historically significant.

MDE Response: No historical or archeological resources were identified during the initial screening of the project site by the Department. The Department consulted with the Maryland Historical Trust and the Maryland State Highway Administration about possible impacts to Native American cultural resources. The Department considered the Piscataway Conoy Tribal Council's comments as a "social" factor in its final decision.

ALTERNATIVES ANALYSIS

For projects that are not water-dependent, the applicant must conduct an alternatives analysis to demonstrate that the project has no practicable alternative. The factors to be considered are whether the project purpose can be accomplished using one or more alternative sites in the general area; a reduction in the size, scope, configuration or density would result in less impact; the applicant made a good faith effort to accommodate the site constraints that caused the alternative sites to be rejected; and that the regulated activity is necessary for the project to meet a demonstrated public need.

The applicant included in the permit application an alternatives analysis which indicates that 2-4 alternative sites were considered but that lack of availability, failure to meet project purpose, location outside of the general/market area, greater wetlands impact and engineering/design constraints resulted in these alternative sites being rejected or not considered. The applicant further explains that "other sites in the vicinity would either cause greater impacts to wetlands, were not available for purchase or lease, or would not be near enough to existing power lines to be of feasible use to the project purpose. Close proximity to existing infrastructure is needed to adequately transmit renewable energy into the power grid. That, and size of available land for the solar arrays are the primary consideration in rejecting the alternative sites."

The applicant did not identify in the application the locations of the 2-4 other sites considered, nor did the applicant provide supporting analyses or documentation for the conclusions the applicant reached with regard to the availability of practicable alternatives.

Comments received during the public hearings and comment period included several comments specifically addressing the issue of the adequacy of the alternative site analysis conducted by the applicant. These commenters indicate that the alternative site analysis is inadequate because it lacks details as to what sites were considered and the specific reasons and basis for rejection. Moreover, one commenter referenced County records which indicate that there are more than 2,700 acres of extractive or barren land in the County which should have been considered as possible alternative sites. Due to the lack of detail in the applicants' alternatives analysis, neither MDE nor the public can determine whether any of the 2,700 acres of extractive or barren land in the County was even considered. Several commenters specifically requested that the applicant further investigate alternative site options.

The applicant did not supplement the record with regard to alternative site analyses during the comment period despite the fact that this issue was clearly raised by numerous public commenters at the Hearing and in written comments to the record. Without adequate documentation in the record of the applicants' analyses demonstrating that alternative sites which pose less environmental impacts are not practicable, the Department is not able to independently review and verify the legitimacy of the applicant's conclusions. Moreover, this lack of information also hampers the ability of the public to properly consider and comment on aspects of the applicant's conclusions. Accordingly, MDE is unable to make a determination as to whether there are practicable alternative sites which would meet the project purpose and need and which would pose less impact to regulated resources (as well as to water quality and ecological resources). MDE may not issue a nontidal wetland permit for a regulated activity unless the Department finds that the applicant has demonstrated that the regulated activity: (i) Is water dependent and requires access to the nontidal wetland as a central element of its basic function; or (ii) Is not water dependent and has no practicable alternative.

WATER QUALITY AND ANTIDegradation REVIEW

Watershed forest cover is directly linked to in-stream biodiversity and health. In Maryland, some of the healthiest streams are associated with the most undisturbed forested watersheds. Cumulative land use cover change leads to a measurable decline in stream biodiversity. Land-cover analysis links the healthiest streams in the state with the areas of lowest impervious cover, greatest percentage of riparian buffer of 100 feet or greater per stream mile, and highest amount of watershed tree canopy cover. For species such as brook-trout, forest land cover was determined by DNR to be the most important factor when determining occurrence.

Forests represent the most naturally protective land use, helping to manage stream temperature, mitigate hydrologic alterations, manage stormwater flow, maintain water quality, provide habitat for a diverse range of invertebrate and vertebrate species in terms of root wads, leaf pack, wood debris, etc., as well serve as an important food source. Maintaining robust riparian buffers and buffers around other natural features such as wetlands are the single-most important factor to maintaining stream water quality to offset upstream or near-stream land use changes. This protects most steep slopes, erodible soils, recharge areas, and infiltration pathways. As impervious surfaces and agricultural land use shifts occur, overall watershed forest cover plays less of a role in determining water quality. As those other land uses increase (especially impervious surfaces) water quality declines are inevitable. Therefore it is vital to avoid net forest cover loss.

In non-urban settings, forest cover is the critical defining factor to mitigate hydrologic alterations that lead to stream health declines. Even with the best stormwater management available, there are still alterations to flow and other stream hydrologic response patterns that negatively impact biological stream health.

The Shugart Valley Solar project area lies within portions of the properties identified on Tax Map 41 grid 11 as parcel 24 and on Tax Map 42 as parcel 188. The proposed project area is within the Wards Run watershed and drains north and west via overland flow (i.e., runoff) to tributaries of Wards Run. Wards Run 1 and Wards Run 2 Tier II stream segments are designated as high quality waters, which flow into Nanjemoy Creek and ultimately discharge into the Lower Potomac River.

Maryland's promulgated antidegradation policy states that:

“Certain waters of this State possess an existing quality that is better than the water quality standards established for them. The quality of these waters shall be maintained unless: (1) The Department determines that a change in quality is justifiable as a result of necessary economic or social development; and (2) The change will not diminish uses made of, or presently existing, in these waters.”

For most projects, compliance with County-issued stormwater management approvals, which include enhanced best management practices, ensures that the project will not degrade water quality. In this case, the applicant has determined, and MDE agrees, that the Shugart Valley Solar project will have some effect on Wards Run. Accordingly, because this project affects Tier II waters including a Tier II water that lacks assimilative capacity (Wards Run 1), the Department requires an adequate socio-economic justification (SEJ) for any degradation in water quality.

The social and economic justification (SEJ) that is provided by the applicant to MDE must discuss the avoidance/minimization/mitigation decision-making process, identify the offset value of chosen practices, provide documentation to support such practices (i.e. conservation easements, etc.), and explain why the applicant cannot fully avoid and/or mitigate impacts. The SEJ provided by the applicant must also make the case that the change in water quality is “justifiable as a result of necessary economic or social development”.

The applicant provided to MDE a report titled “A Social & Economic Assessment of the Shugart Valley Solar Project” (the Report) dated July 31, 2019. This Report was also provided to the Power Plant Research Program of the Maryland Department of Natural Resources to comply with condition 13 (Tier II Stream Protection) in the certificate of public convenience and necessity granted by the Maryland Public Service Commission in Case No. 9464. MDE first identified the need for forest mitigation for this project at a meeting with MD Solar 1's attorneys and consultants on May 22, 2018. MDE subsequently indicated the need for an SEJ as a result of water quality monitoring conducted in

the spring of 2019. MDE has continued to be available to MD Solar 1's consultants and provided additional guidance on SEJ requirements, such as checklists and examples.

As is explained further below, MDE finds that the Report is lacking detail and the supporting documentation necessary to demonstrate that the Project has adequately avoided, minimized, and mitigated impacts. In addition the Report does not provide sufficient detail in the justification for the adverse water quality impacts to the Tier II stream segments Wards Run 1 and Wards Run 2. Many of the deficiencies detailed below have been discussed with the applicant and its consultants in the past.

Avoidance: The Report lacks a sufficient alternative site analysis. Specific deficiencies include:

1. The Report fails to demonstrate that there are no other economically feasible sites available that meet project needs and established criteria which avoid impacts to waters in a Tier II watershed. MD Solar 1 was instructed that the alternatives analysis process should consider project implementation outside of the Tier II watershed of Wards Run 1 and Wards Run 2. This is a different assessment than the Alternatives Analysis described above, wherein the applicant is required to explain why the applicant chose the Shugart Valley Place site and why the applicant believes that there are no practicable alternative sites to the site that was chosen with regard to impacts to wetlands and waterways associated with the construction of the project. The requirement to demonstrate that there are no other economically feasible sites available that meet project needs and established criteria which avoid impacts to waters in a Tier II watershed was indicated in feedback provided by MDE to The Sage Policy Group (Zachary Fritz) on their draft SEJ outline dated May 16, 2019.
2. The generalized examples provided in the Alternatives Analysis section of the Report which summarily discount entire regions of the State are insufficient.

Minimization: The Report indicates that construction, erosion and sediment control, and stormwater management plans are currently under review, and the forest conservation plan is still considered preliminary. The Report lacks documentation to support claims regarding BMPs, controls, and other practices implemented by the applicant to minimize water quality impacts to Wards Run 1 and Wards Run 2. Specific deficiencies include:

1. The applicant has not provided a Tier II checklist which documents any enhanced BMPs, controls, etc. referenced in the Report.
2. The applicant has not provided conservation easements to document protection of all riparian buffers and other on-site forest preservation indicated in the Report.
3. The Report fails to provide adequate detail and documentation regarding the "carefully considered alternative layouts, site designs and engineering measures" mentioned on page 27.

Mitigation: The Report lacks detail and documentation to demonstrate that the applicant developed a mitigation plan to offset in-kind 1:1 water quality impacts in the Wards Run 1 and Wards Run 2 watershed due to net forest loss associated with the Project, and to identify additional alternative mitigation opportunities. Specific deficiencies include:

1. The Report contains no information regarding 1:1 in-kind forest mitigation for net forest loss in Wards Run 1 and Wards Run 2 due to the Project.
2. No information is offered detailing how the applicant has addressed mitigation through alternative mitigation opportunities. The Report does not address the feasibility of the Charles County mitigation/retrofit/restoration projects previously under serious consideration, nor does it mention any other projects that were additionally evaluated. The Report fails to detail the process developed to identify other suitable offset opportunities, potential offset value of each opportunity, locations, cost of implementation, etc.
3. The Report does not include a mitigation plan

MDE'S DETERMINATION ON WHETHER DEGRADATION OF WARDS RUN 1 AND WARDS RUN 2 WOULD BE JUSTIFIABLE

As indicated above, the applicant has failed to document in detail and to demonstrate that a serious effort was made to avoid, minimize, mitigate in-kind at a 1:1 ratio for net forest loss, or otherwise offset, through alternative means, water quality impacts. This is a necessary pre-requisite to the consideration of whether any change in quality is

justifiable as a result of necessary economic or social development. MDE does not consider the economic or social development benefits of this project as presented in the Report to justify any change in water quality. First, after construction is completed the applicant estimates a total number of local jobs (both part time and full time) associated with ongoing maintenance to be four. Second, local annual income taxes associated with ongoing maintenance are estimated at \$6,000.00. Third, the proposed project site is considered historically significant by the Piscataway Conoy Native American tribe. Fourth, local wildlife and conservation groups such as the Chesapeake Bay Foundation, Audubon Maryland-DC, Chapman Forest Foundation, Clean Water Action, Mattawoman Watershed Society, Nanjemoy-Potomac Environmental Coalition, Potomac Riverkeeper Network, Preservation Maryland, Southern Maryland Audubon Society, and the Southern Maryland Group - Sierra Club, as well as many commenters from the local community, consider this forested area to be of great value to local human and animal life; they report that it is a destination for birders, naturalists, scientists, and specialists in environmental research. In short, MDE does not consider this project to be "necessary" for economic or social development in this area; thus, water quality degradation is not justified.