

**BEFORE THE OHIO POWER SITING BOARD**

<b>In the Matter of the Application of Ross County Solar, LLC for a Certificate of Environmental Compatibility and Public Need.</b>	) ) ) ) )	<b>Case No. 20-1380-EL-BGN</b>
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**DIRECT TESTIMONY OF MATT MARQUIS**

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**Q.1. Please state your name, title and business address.**

**A.1.** My name is Matt Marquis. I am a Project Engineer at Hull & Associates, LLC (“Hull”). My business address is 6397 Emerald Parkway, Suite 200, Dublin, OH 43016.

**Q.2. What are your duties as a Project Engineer?**

**A.2.** As a project engineer at Hull, I am responsible for managing projects related to storm water and hydrologic and hydraulic (“H&H”) studies. I am also a technical lead for many of the same projects I manage and others throughout the company. I am responsible for civil engineering design for dams, landfills, and land development projects. For dam projects, I am responsible for performing dam site inspections, performing H&H analysis to support rehabilitation and repair options to achieve regulatory compliance, developing Emergency Action Plans and Operation Maintenance and Inspection Manuals, and developing construction drawings and quantities. For storm water management projects and all other projects at Hull, I prepare H&H studies to support the engineering design, I prepare construction drawings with erosion and sediment control design, and I provide Ohio Environmental Protection Agency (“OEPA”) surface water construction permitting

assistance for both public and private clients through preparation of Storm Water Pollution Prevention Plans.

**Q.3. What is your educational and professional background?**

**A.3.** I am a registered Professional Engineer in the states of Ohio, Pennsylvania, and West Virginia, and a Certified Floodplain Manager with the state of Ohio. I received my master's degree in civil engineering in 2014 with a focus on geotechnical engineering from Norwich University in Northfield, VT, and my bachelor's degree in construction engineering technology in 2011 from the University of Toledo. I completed nearly 12 months over three calendar years of cooperative work-education as a full-time engineer at BBC&M Engineering, Inc., in Dublin, OH before being hired in 2011 as a staff engineer. Soon after being hired, BBC&M Engineering, Inc. was acquired by S&ME, Inc., and I continued working at S&ME, Inc. until September of 2017 when I joined Hull. I am currently a Project Engineer at Hull. Throughout my career I have served on multiple boards and committees for professional development. I spent three years as a member of the Central Ohio Section of the American Society of Civil Engineers' younger member group and was elected vice-president of the group in my third year. My career has focused on engineering projects related to water resources. My project experience includes a wide range of H&H analyses, surface water management, and erosion and sediment control design. I function as the H&H lead on many large and small engineering design projects and flood studies for public and private clients covering dams, landfills, ash ponds, site development and redevelopment, site remediation, oil and gas projects, and stream and wetland restoration projects. My technical hydrologic experience includes watershed analysis using simplified methods such as the rational method and TR-20 through more

complex statistical and regression analyses using stream and rainfall gage data, 1-dimensional and 2-dimensional stream channel and floodplain modeling, dam breach and breach inundation mapping studies, and steady-state flood studies in support of project work within mapped floodplains and floodways established by Flood Insurance Rate Maps. My technical surface water hydraulics experience includes pressure pipe flow, weir flow, culvert design, inlet and outlet protection, open channel armoring design, and steady-state and unsteady hydraulic modeling of streams and rivers. During my time at S&ME, Inc., I also worked closely with the Ohio Department of Natural Resources' Division of Engineering and Division of Water Resources Dam Safety under an owner-agent contract for nearly two years to assist the Divisions with the update and consistency reviews of all 54 state-owned Class I dam Emergency Action Plans, each of which included flood inundation mapping updates.

**Q.4 Have you testified previously before the Ohio Power Siting Board?**

**A.4.** Yes, I have testified as an expert before the Board in the Nestlewood Solar proceeding (Case No. 18-1546-EL-BGN), the Angelina Solar proceeding (Case No. 18-1579-EL-BGN), the Alamo Solar proceeding (Case No. 18-1578-EL-BGN), the Big Plain Solar proceeding (Case No. 19-1823-EL-BGN), and the Yellowbud Solar proceeding (Case No. 20-0972-EL-BGN), in part, to address the storm water condition recommended through stipulation in each of those proceedings.

**Q.5 On whose behalf are you offering testimony?**

**A.5.** I am testifying on behalf of the Applicant, Ross County Solar, LLC ("Applicant").

**Q.6. What is the purpose of your testimony?**

**A.6.** The purpose of my testimony is to address the impact of the Project on storm water flows during and after construction and the presence of karst a mile away from the Project Area.

**Q.7. Have you reviewed the Application in this proceeding?**

**A.7.** Yes, I have reviewed the Application, including the Geotechnical Report (Exhibit C), Vegetation Management Plan (Exhibit D), Hydrology Study (Exhibit R), and Ecological Assessment (Exhibit S).

**Q.8. In your opinion and based upon your experience, what will be the impact of the Project on storm water flows during construction?**

**A.8.** The Project should not require significant amounts of ground disturbance, and therefore I would not expect significant changes in storm water flows. Also, based on my experience in watershed models, doing hydrologic studies of watersheds that range in size from 1 acre to 60 square miles, and after reviewing the Application, the proposed changes to land use in this project would not result in an increase in runoff post-construction.

**Q.9. What permits will the Applicant be required to obtain related to storm water management during construction?**

**A.9.** In compliance with the Ohio Water Pollution Control Act, dischargers of storm water from construction activity are authorized by the OEPA to discharge storm water from the site to waters of the state in accordance with the General Permit Authorization for Storm Water Discharges Associated with Construction Activity Under the National Pollutant Discharge Elimination System (“NPDES”), Ohio EPA (“OEPA”) Permit No. OHC000005, effective April 23, 2018 (“General Permit”). Construction projects disturbing one or more acres of land, or that disturb less than one acre but are part of a larger plan of development,

need to apply for this coverage under the General Permit. To meet NPDES requirements, a qualified engineer will utilize the final Project layout to develop a Storm Water Pollution Prevention Plan (“SWPPP”). The SWPPP will identify potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges associated with construction activities. If applicable, the SWPPP will clearly identify all activities that will be authorized under Section 401 of the Clean Water Act and, through coverage under the General Permit, will meet the requirements of an antidegradation review. The SWPPP will also describe and ensure the implementation of best management practices that reduce pollutants in storm water discharges during construction.

**Q. 10. Will the measures Applicant will employ during construction adequately provide for management of any post-construction storm water flows?**

**A.10.** In my opinion, yes. The site is generally split along a drainage divide that drains the southern half of the Project Area toward Buckskin Creek and drains the northern half of the Project Area toward Paint Creek. While I do not anticipate any post-construction storm water flow issues given the nature of the Project, the NPDES General Permit and the SWPPP will help to ensure that post-construction storm water flows are appropriately managed, and to the extent that any post-construction control measures are required that they are designed and maintained in accordance with OEPA regulations. Similar to many of the other cases where I have provided testimony, the conversion of cultivated land to the low-growing vegetation described in the Vegetation Management Plan (Exhibit D) has a net positive result via reduction of storm water runoff volume and improved water quality from the Project Area and that serves to benefit both Paint Creek to the west and Buckskin Creek to the southeast.

**Q.11. In your review of the Application, did you identify the presence of karst in the Project Area?**

A. 11. No. The Project Area does not contain any known karst features or sinkholes. However, there is a probable karst area southwest of the Project Area (Application pg. 62; Exhibit S, Figure 7).

**Q. 12. In your opinion, will the presence of karst a mile away from the Project Area have any effect on the construction and operation of the Project?**

A.12. In my opinion, no. As I mentioned above, according to my review of the application, a probable karst area is located southwest of the Project Area (Exhibit S). Additionally, ODNr has identified 12 verified or suspected sinkholes within one mile of the Project Area (Application pg. 62), but there are no known sinkholes or known karst features within the Project Area (Exhibit C). It should be noted that the preliminary Geotechnical Report prepared for the Project Area noted that karst conditions were not encountered at any of the soil boring locations and publicly available data suggests that carbonate rocks are anticipated at depths greater than 50 feet (Exhibit C). The preliminary Geotechnical Report mentions that loading from structures on a solar project typically do not extend below 20 to 25 feet and if deeper foundations are required for substations or other equipment, then additional subsurface investigations will be necessary during final design on a location specific basis. (Exhibit C). So it is my opinion that the proximity of these features to the Project Area will not affect construction or operation of the Project.

**Q.13. Does this conclude your testimony?**

A.13. Yes, it does.

## **CERTIFICATE OF SERVICE**

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Summary: Testimony Direct Testimony of Matt Marquis electronically filed by Ms. Anna Sanyal on behalf of Ross County Solar, LLC