



# North Dakota Geological Survey

Edward C. Murphy - State Geologist

Department of Mineral Resources

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North Dakota Industrial Commission

www.state.nd.us/ndgs

September 10, 2018

Geralyn Schmaltz  
N.D. Public Service Commission  
600 East Boulevard Avenue, Dept. 408  
Bismarck, ND 58505-0480



Re: PSC Case No. PU-18-219 Notice of Filing – Harmony Solar Project, Cass Co.

The North Dakota Geological Survey appreciates the notification and opportunity to review and provide comment on this proposed energy development project. The notice of filing for the project, dated September 5, 2018, was reviewed by our office on September 10, 2018. Regarding the proposed project at the location described in the notice, we would offer the following general comments related to the shallow subsurface geology present at the proposed project site.

The areas outlined for the project are located in the western portion of the former Glacial Lake Agassiz Plain. As such, shallow drilling records, which are sparse in this area, indicate that the site is likely underlain by over 50-ft of soft and expansive glacial lake silts and clays of the Sherack and Brenna Formations. The expansive clays of the Brenna Formation in particular are problematic throughout the Red River Valley and can make for difficult construction conditions for surface engineered works. These glacial lake sediments mantle subglacial till of the Red Lake Falls Formation and other similar glacial sediments down to shale bedrock at depths of approximately 250 to 300-ft below land surface.

Site-specific geotechnical engineering and materials testing in a manner consistent with the current standard-of-care for similar construction projects in the Red River Valley would be recommended given the scope and extent of this project.

Please feel free to contact us at (701) 328-8000 or via email at [fjanderson@nd.gov](mailto:fjanderson@nd.gov) at any time if there are any additional questions or comments.

Sincerely,

North Dakota Geological Survey:

  
Fred J. Anderson  
Geologist

10 PU-18-219 Filed: 9/10/2018 Pages: 1  
Comments

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North Dakota Geological Survey  
Fred Anderson, Geologist