MMR ASSESSMENT FORM

Project Name: Heartwood Solar II
County: Hillsdale

MMR – Minimize, Mitigate & Repair Plan

Atwell and Heartwood Solar II met virtually with the Hillsdale County Drain Commissioner (HCDC) on March 3, 2026, to introduce the Heartwood Solar II Project (Project) and to discuss County stormwater requirements and drains. Following the call, it is Atwell's understanding that permanent stormwater runoff volume BMPs are not necessary for the array areas, similar to the requirements of the previously approved Heartwood Solar Project. For any areas with higher concentrations of pavement, gravel, or rooftops, standard stormwater BMPs (i.e. detention or retention basin) would be required. Additionally, HCDC confirmed that there are no county drains located within the Project Area. Therefore, drain crossing agreements or improvements are not anticipated. The final design by the EPC contractor should include stormwater features and SESC BMPs as described in this document, if required, and will be subject to further HCDC review, approval, and permitting. Atwell has prepared this project specific Minimize, Mitigate, and Repair Plan following discussions with HCDC and standard construction practices.

MINIMIZE

Summary of measures implemented to minimize / avoid stormwater impacts:

Potential Impact	Measure	Result
Runoff Quantity	Improve ground cover by Converting croplands to meadow with disconnected gravel drives	Reduction in runoff curve number (CN) from crop to meadow with gravel driveway results in a reduction of site runoff.
	Limit grading to maintain existing tributary areas	Avoid increasing acreage of runoff to other areas.
	Permanent vegetation	Meadow ground cover offers more resistance to flow than crops, increasing time of concentration and thus reducing peak intensity and flow.
Water Quality	Site Vegetation – consists of multiple stages: 1) Pre-seeding before construction (temporary) 2) Final seeding after construction (permanent)	Conversion of agricultural land regularly disturbed, exposed and chemically treated to a permanent meadow-type vegetation (no further disturbance or broad-spectrum chemical application) will reduce the potential for pollutant transport offsite.
Natural Areas	Avoid wetlands, minimize tree removal and provide buffers	Preserve existing natural areas to maintain current stormwater capture and treatment function. Buffers are typically greater than limits of farming.
Adjacent Parcels	Provide setbacks along Project limits.	Provided setbacks are generally much further from the property lines than current farming limits, offering more space for runoff capture and filtration.
Drain Capacity	Maintain or reduce flows to existing drains (see above)	There are no county drains located within the Project Area. No detrimental effect on existing drain capacity due to proposed Project.
Drain Crossing, Access	Use existing crossings where feasible	There are no county drains located within the Project Area. No additional culverts or fill within drain channel.
Drain Crossing, Utility	Minimize and combine number of underground utility crossings.	There are no county drains located within the Project Area. No underground utility crossings of drains proposed by the Project.
Drain Tile, Private	Locate tiles and avoid in site design	Limit potential for damage to existing drainage infrastructure.

MITIGATE

Activities to mitigate unavoidable stormwater impacts.

Impact	Measure	Result
Increased Runoff Quantity	Provide stormwater volume BMP (i.e. basin) where Project increases runoff. Typically, in areas with large impervious surfaces (substation, etc.) or where extensive wooded areas are removed.	Basins capture and detain excess runoff, releasing the outflow at a rate acceptable to the County. This mitigates risk associated with increased runoff and is a common solution for development sites where runoff increase is a concern.
Water Quality	Provide vegetated buffers around project perimeter.	Similar to array vegetation, the perimeter buffers provide additional pollutant capture and filtration.
Flow Concentration	Check Dams, Rock Filters, Level Spreaders	Dissipate concentrated flow to reduce velocity and minimize erosion potential.
Drain Capacity	Where Project increases rate of runoff, provide means to clear or clean drain/culvert to improve current capacity	There are no county drains located within the Project Area. Drain improvements are not anticipated.
Drain Crossing, Access	For new access drives, install culvert crossing in accordance with County / EGLE guidelines	There are no county drains located within the Project Area. Drain crossings are not anticipated.
Drain Crossing, Utility	Trenchless installation (i.e. bore or directional drill) to depth specified by County / EGLE.	There are no county drains located within the Project Area. Drain crossings are not anticipated.
Drain Tile, Private	Relocate tile where project design cannot accommodate current location.	Relocation or replacement of drain tile will maintain or improve the current drain function and not cause issues for the properties it serves.
Runoff to adjacent properties	Provide stormwater basin(s) to capture and detain site runoff prior to discharge offsite.	Satisfy County stormwater management requirement to provide runoff detention prior to discharge, in locations specified by County.
	Flowage easement (where possible)	Establish formal agreement(s) dedicating flow route(s) that cannot be impeded between Project and public drainage system (i.e. County Drain).

REPAIR

Plan to repair stormwater impacts during and after construction.

Impact	Measure	Result
Construction Stormwater Quality	Provide temporary Soil Erosion and Sediment Control (SESC) BMPs in accordance with the approved County SESC permit.	Common BMPs such as seed & mulch, silt fence, wattles, check dams, rock filters, sediment basins, and tracking mats are designed and installed to reduce SESC from construction sites to a level acceptable to County and State regulations.
Inadequate Vegetation, Construction	Reapplication of seed and mulch to reestablish vegetative cover as required per SESC permit.	Maintenance of vegetation during construction will help reduce runoff, erosion and sediment transport until final vegetation is established.
Inadequate Vegetation, Operations	Revegetate substandard areas in accordance with Project requirements.	Replenish ground cover to levels acceptable to meet Project, County and/or EGLE requirements.
Concentrated Flow Erosion	Check Dams, Rock Filters, Level Spreaders	Dissipate concentrated flow to reduce velocity and minimize erosion potential.
Drain Blockage	Clean and clear drain where Project activities result in debris or sediment in drains	There are no county drains located within the Project Area. Drain blockages are not anticipated.
Culvert Damage	Repair / replace existing culverts when damaged by Project activity	Stable, clear culverts will maximize flow capacity and help protect adjacent land from stormwater impacts.
Utility Installation “Frac-out”	Contractor to provide specific plan outlining steps to address frac-out of drilling fluids.	Ensures there is a process to minimize, monitor, and actions to be taken to correct the impacts of frac-out.
Damaged Drain Tile, Private	Repair or replace drain tile damaged during construction.	Prompt repair ensures that the current drain function will be reestablished and not cause issues for the properties it serves.