COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES EROSION AND SEDIMENT CONTROL (E&S) MODULE 1

Applicant: **Core5 Industrial Partners**

Project Site Name: **Core5 at Route 100**

Surface Water Name(s): **Cherith Brook via existing swale**

Surface Water Use(s): **HQ-CWF, MF**

E&S PLAN INFORMATION

1. Describe the existing topographic features of the project site and the immediate surrounding area.

The site is characterized by one existing two-story house, one existing one-story masonry orchard building/garage, associated driveways, parking areas, lighting, utilities, building foundations, gravel, an on-site pond, a former agricultural field/orchard, and forested areas. Existing stream channels are not expected to be impacted with the implementation of PCSM BMP measures that are proposed, existing drainage patterns will remain intact, existing vegetation will be maintained to the maximum extent practicable, and new vegetated areas are proposed. Drainage patterns for the existing site travels north from Kernsville Road directly to the wetland area.

2. Complete the following table for soils present at the project site.

Map Unit Symbol	Map Unit Name	Acres	HSG	% of Disturbed Area	Depth (ft)	Hydric
BkB	**Berks-Weikert complex 3 to 8 percent slopes**	**3.6**	**B**	**24.3**	**2.50**	☐
BkC	**Berks-Weikert complex 8 to 15 percent slopes**	**5.9**	**B**	**39.9**	**2.50**	☐
BkD	**Berks-Weikert complex 15 to 25 percent slopes**	**3.2**	**B**	**21.6**	**3.08**	☐
BkF	**Berks-Weikert complex 25 to 60 percent slopes**	**2.1**	**B**	**14.2**	**3.08**	☐

Discuss any soil limitations and how the E&S Plan was designed to address those limitations.

Refer to Sheet 4, EC-1, of E&S Plan for soil limitations and resolutions. Limitations to these soils are that they are characteristic of having the following: cutbanks cave, corrosion of uncoated steel and concrete, droughty, easily erodible, hydric/hydric inclusions, low strength or landslide prone, slow percolation, piping, poor source of topsoil, and potential for frost action.

Resolutions:

- **Excavation will be properly supported by sheeting and shoring to prevent caves.**
- **No unprotected steel is expected to be in direct contact with soils.**
- **No wetlands are present in the development area within the limit of disturbance.**
- **Provide positive drainage across the site.**
- **Erosion control matting and immediate stabilization will be used on all steep slopes to limit erosion.**
- **Existing topsoil, which has proven to be suitable will be reused on the site. Lime and fertilizer will be added to the topsoil seeded areas to offset any low pH or low fertility, respectively. Additionally, topsoil may be either sifted on-site or brought in as required to replace poor topsoil. Topsoil specifications are included on the plan.**

If Hydric soils are present, is a wetland determination attached to this module? ☒ Yes ☐ No ☐ N/A

If soils are known to be contaminated, 1) identify the pollutants exceeding Act 2 standards in the space provided below, 2) identify the extent of soil contamination on an E&S Plan Drawing that is attached to this module, and 3) describe the methods that will be used to avoid or minimize disturbance of the contaminated soils in the space provided below.

No known contaminants above Act 2 standards are expected on-site. Any contaminated soils on-site will be removed from the site in accordance with the Phase 1 and Phase 2 Environmental Site Assessments.

3. Describe the characteristics of the earth disturbance activity, including the past, present and proposed land uses and the proposed alteration to the project site.

   The site has been used various agricultural uses since at least 1955. The existing pond on-site was constructed in the mid-1960s and used as an irrigation pond. The future land use is planned to serve the industrial sector with a warehouse, parking lot, stormwater management, and utilities. The proposed improvements include constructing a new ±100,569 S.F. warehouse, associated parking, stormwater management facilities, utility connections/stubs, etc. The plan proposes to minimize increases in impervious area from pre- to post-development to the maximum extent practicable.

4. Describe the volume and rate of runoff from the project site and its upstream watershed area.

   The Erosion and Sedimentation Control (E&S) Plan has been developed to minimize any increase in stormwater runoff. The project proposes to utilize compost filter socks, compost sock sediment traps, compost filter sock diversions, and a sediment basin during construction to convey and manage the stormwater runoff. Due to the above-mentioned measures being taken, there is no anticipated increase in stormwater runoff volume and rate during construction. No negative change to runoff quality is expected from the proposed construction improvements.

   The drainage area to Discharge Point (DP) 001 is characterized by moderate to steep slopes and a drainage area of about 14.67 acres. About 89% of this is on-site and about 11% is off-site runoff. The design for this DP utilizes compost filter sock, inlet protection, a sediment basin, sediment trap, temporary seeding, and mulching to minimize stormwater runoff from the project site.

5. Check boxes to indicate all BMPs that will be installed or implemented, identify plan numbers for the BMPs, and describe any deviations from the E&S Manual.

E&S BMPs	Plan No(s). Identified	Plan No(s). for O&M	Deviation(s) from E&S Manual
☐ Rock Construction Entrance			
☒ Rock Construction Entrance with Wash Rack	**EC-1, EC-2**	**DN-2**	
☐ Rumble Pad			
☐ Wheel Wash			
☐ Temporary and Permanent Access Roads			
☐ Waterbar			
☐ Broad-based Dip			
☐ Open-top Culvert			
☐ Water Deflector			
☐ Roadside Ditch			
☐ Ditch Relief Culvert			
☐ Turnout			
☐ Compost Sock Sediment Trap			
☐ Temporary Stream Crossing			
☐ Temporary Wetland Crossing			
☐ Turbidity Barrier (Silt Curtain)			
☐ Dewatering Work Areas			
☒ Pumped Water Filter Bag	**N/A**	**DN-2**	
☐ Sump Pit			
☒ Waste Management	**DN-1**	**N/A**	
☒ Concrete Washout	**EC-2**	**DN-4**	
☒ Compost Filter Sock	**EC-2**	**DN-2**	
☐ Compost Filter Berm			
☐ Weighted Sediment Filter Tube			
☒ Rock Filter Outlet	**N/A**	**DN-4**	
☐ Silt Fence (Filter Fabric Fence)			
☐ Reinforced Silt Fence			
☐ Super Silt Fence (Super Filter Fabric Fence)			

E&S BMPs	Plan No(s). Identified	Plan No(s). for O&M	Deviation(s) from E&S Manual
☐ Sediment Filter Log (Fiber Log)			
☐ Wood Chip Filter Berm			
☐ Straw Bale Barrier			
☒ Rock Filter	**EC-2**	**DN-4**	
☐ Vegetative Filter Strip			
☐ Inlet Filter Bag			
☐ Stone Inlet Protection			
☒ Runoff Conveyance (Channel)	**EC-1, EC-2**	**DN-3**	
☐ Bench			
☐ Top-of-Slope Berm			
☐ Temporary Slope Pipe			
☒ Sediment Basin	**EC-1, EC-2,**	**DN-3**	
☐ Sediment Trap			
☒ Riprap Apron	**EC-1, EC-2**	**DN-3**	
☐ Flow Transition Mat			
☐ Stilling Basin (Plunge Pool)			
☐ Stilling Well			
☐ Energy Dissipater			
☐ Drop Structure			
☐ Earthen Level Spreader			
☒ Structural Level Spreader	**EC-1-EC-2**	**DN-3**	
☐ Surface Roughening			
☒ Vegetative Stabilization	**EC-1**	**DN-1/DN-2**	
☒ Erosion Control Blanket	**EC-2**	**DN-3**	
☐ Soil Binders			
☐ Sodding			
☐ Cellular Confinement Systems			
☐ Alternative:			
☐ Alternative:			

Table 1 – For PAG-01 applicants, complete the requested information for each selected E&S BMP, where applicable.

Site Access BMPs									
BMP Name	**No.**	**Length (ft)**	**Width (ft)**	**% Slope**	**Spacing (ft)**	**Length of Upslope Drainage (ft)**	**Culvert Diameter (in)**	**Soil Type in Ditch**	**E&S Manual Figure/Detail No.**
Rock Construction Entrance (RCE)									
RCE with Wash Rack									
Temporary and Permanent Access Roads – Crowned Roadway									
Temporary and Permanent Access Roads – Insloped Roadway									
Waterbar									
Broad-based Dip									
Open-top Culvert									
Water Deflector									
Roadside Ditch									
Ditch Relief Culvert									

Sediment Barriers / Filters								
BMP Name	**DA (ac)**	**Diameter (in)**	**Storage Capacity (cf)**	**Trap Height (in)**	**% Slope**	**Slope Length Above Barrier (ft)**	**Barrier Height (in)**	**E&S Manual Figure/Detail No.**
Compost Sock Sediment Trap								
Compost Filter Sock								
Compost Filter Berm								
Silt Fence (Filter Fabric Fence)								
Super Silt Fence								
Sediment Filter Log								
Weighted Sediment Filter Tube								
Straw Bale Barrier								
Wood Chip Filter Berm								
Toe-of-Slope Berm								

Table 1 – For PAG-01 applicants, complete the requested information for each selected E&S BMP, where applicable.

Runoff Conveyance BMPs													
BMP Name	**Temporary**	**Design Storm**	**DA (ac)**	**Multiplier**	**Qr (cfs)**	**Q (cfs)**	**Manning's n**	**Va (fps)**	**V (fps)**	**D (ft)**	**d (ft)**	**Flow Depth Ratio**	**E&S Manual Figure/Detail No.**
Vegetated Channel	☐												
Sodded Channel	☐												
Riprap Channel	☐												

Energy Reduction BMPs								
BMP Name	**Downstream Distance to Drainage Course (ft)**	**Downstream % Slope**	**DA (ac)**	**Discharge (cfs)**	**Manhole Depth (ft)**	**Inflow Pipe Diameter (in)**	**Outlet Pipe Diameter (in)**	**E&S Manual Figure/Detail No.**
Level Spreader								
Drop Structure								

Stilling Basins / Wells								
BMP Name	**Pipe Diameter (in)**	**Discharge (cfs)**	**Well Diameter (in)**	**Depth of Well Below Invert (ft)**	**Basin Depth (ft)**	**Median Riprap Size (in)**	**Distance from Discharge Pipe to Basin Center (ft)**	**E&S Manual Figure/Detail No.**
Stilling Basin								
Stilling Well								

Other BMPs												
BMP Name	**DA (ac)**	**Pipe Diameter (in)**	**Berm Height (in)**	**Length (ft)**	**% Slope**	**Vertical Spacing (ft)**	**Channel Depth (ft)**	**Riprap Size**	**Riprap Thickness (in)**	**Initial Width (ft)**	**Terminal Width (ft)**	**E&S Manual Figure/Detail No.**
Temporary Slope Pipe												
Bench												
Rock Filter												
Riprap Apron												

For selected BMPs not identified in Table 1, report the name of the BMP and the Figure or Detail No. from the E&S Manual that will be used for design and implementation (PAG-01 only).

BMP Name	E&S Manual Figure/Detail No.	BMP Name	E&S Manual Figure/Detail No.

6. ☒ All applicable Standard E&S Worksheets from Appendix B of the E&S Manual have been completed and are attached.

7. ☐ Other worksheets or calculations equivalent to Appendix B of the E&S Manual have been completed and are attached.

8. Identify the E&S Plan Drawing number(s) that describes the sequence of BMP installation and removal in relation to the scheduling of earth disturbance activities, prior to, during and after earth disturbance activities that ensure the proper functioning of all BMPs.

   Sheet DN-3

9. ☐ Supporting E&S calculations have been completed and are available upon request (PAG-01 only).

10. ☒ Supporting E&S calculations are attached to the NOI/application.

11. ☐ Plan drawings consist of standard Figures/Construction Details in E&S Manual (PAG-01 only).

12. ☒ Plan drawings have been developed for the project and are attached to the NOI/application.

13. ☒ BMPs will be inspected on a weekly basis and after measurable storm events (i.e., at least 0.25 inch).

14. Identify the following information relating to temporary stabilization measures on an E&S Plan Drawing and identify the Drawing No. below: 1) vegetative species, 2) % pure live seed, 3) seed application rate, 4) fertilizer type, 5) fertilizer application rate, 6) mulch type, 7) mulching rate, and 8) liming rate.

    E&S Plan Drawing No(s).: **Sheet DN-1**

15. Identify the following information relating to permanent stabilization measures on an E&S Plan Drawing and identify the Drawing No. below: 1) vegetative species, 2) % pure live seed, 3) seed application rate, 4) fertilizer type, 5) fertilizer application rate, 6) mulch type, 7) mulching rate, 8) liming rate, 9) anchor material, 10) anchoring method, 11) rate of anchor material application, 12) topsoil placement depth, and 13) seeding season dates.

    E&S Plan Drawing No(s).: **Sheet DN-1**

16. Describe the procedures that will be taken to ensure that recycling or disposal of materials associated with or from the project site will be conducted properly.

    Refer to Sheet 6, DN-1, for recycling and disposal notes. Typical construction wastes are anticipated (i.e. concrete, asphalt, rebar, lumber, piping, building materials, etc.). The contractor shall dispose of waste materials obtained from construction activities in a legal manner, and shall recycle as much of the waste material as possible, in accordance with the applicable sections of the contract specifications. All building materials and wastes must be removed from the site and recycled or disposed of in accordance with the Department's solid waste management regulations at 25 PA. Code 260.1 et seq., 271.1, and 287.1 et seq. no building materials, wastes, or unused building materials shall be burned, buried, dumped, or discharged at the site.

17. Identify the presence of any naturally occurring geologic formations or soil conditions that may have the potential to cause pollution during earth disturbance activities. If such formations or conditions exist, identify BMPs that will be implemented to avoid or minimize potential pollution.

    While minerals may be present at this location, geologic formations present are not expected to be exposed or expected to impact the receiving streams' water quality. The soil conditions present on-site are not considered acid producing soil, to further justify no expected impact to the water quality of the receiving streams.

18. Identify whether the potential exists for thermal impacts to surface waters from the earth disturbance activity. If such potential exists, identify BMPs that will be implemented to avoid, minimize, or mitigate potential thermal impacts.

    Potential thermal impacts associated with the proposed site improvements have been minimized to the maximum extent practicable. Seed and stabilization shall be applied immediately after final grading of disturbed areas and on temporary grades where no further earthwork is expected within 4 days. The site has been designed to be compact and utilize and/or expose the least amount of impervious/bare earth that is practical, while constructing a

safe and functional site.

Thermal impacts associated with the proposed site improvements have been minimized by the capture of heated stormwater. During the construction phase the stormwater will be captured within the proposed sediment trap and sediment basin. The sediment trap/basin will continually dewater as stormwater runoff enters it via the outlet structure, thus not adversely affecting the temperature of the stormwater runoff.

Due to the considerations above, thermal impacts are not anticipated in association with this project.After construction, the site will be completely stabilized and permanent BMPs will be in place to treat stormwater runoff, limiting thermal impacts to surface waters.

19. ☒ The E&S Plan has been planned, designed, and will be implemented to be consistent with the PCSM Plan.

20. If applicable, identify existing and proposed riparian forest buffers on E&S and PCSM Plan Drawings and identify the Drawing No(s) below (select N/A if not applicable).

E&S Plan Drawing No(s): **EC-1 - EC-2** ☐ N/A

PCSM Plan Drawing No(s):

E&S PLAN DEVELOPER

☒ I am trained and experienced in E&S control methods. ☒ I am a licensed professional.

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E&S Plan Developer Signature **1/18/2023** **Date**