



OFFICIAL USE ONLY	
NPDES Permit ID #	_____
Date Received	_____
NOI Complete Date	_____
Issue Date	_____
Effective Date	_____
Expiration Date	_____

**NOTICE OF INTENT FOR COVERAGE  
UNDER THE GENERAL (PAG-02) NPDES PERMIT  
OR  
APPLICATION FOR AN INDIVIDUAL NPDES  
PERMIT FOR STORMWATER DISCHARGES  
ASSOCIATED WITH CONSTRUCTION ACTIVITIES**

PLEASE READ THE PERMIT SUMMARY SHEET AND INSTRUCTIONS PROVIDED IN THIS PERMIT APPLICATION PACKAGE BEFORE COMPLETING THIS FORM. COMPLETE THE ATTACHED CHECKLIST AND APPROPRIATE WORKSHEETS.

PLEASE PRINT OR TYPE INFORMATION IN BLACK OR BLUE INK.

PERMIT TYPE	<input type="checkbox"/> GENERAL	<input checked="" type="checkbox"/> INDIVIDUAL
APPLICATION TYPE	<input type="checkbox"/> NEW	<input checked="" type="checkbox"/> RENEWAL
	<input checked="" type="checkbox"/> MAJOR AMENDMENT	<input type="checkbox"/> MINOR AMENDMENT
	<input type="checkbox"/> PHASED	
<b>SECTION A. APPLICANT INFORMATION</b>		
Corporations for profit, corporations not-for-profit, limited liability companies, partnerships or sole proprietorships, limited partnerships, professional associations and business or statutory trusts that were not created or formed under the laws of Pennsylvania desiring to do business in this Commonwealth must register with the Pennsylvania Department of State.		
Applicant/Organization Name	Phone	610-332-3300
New Demi Road, LLC	FAX	
Mailing Address	City	State
559 Main Street, Suite 300	Bethlehem	PA
	ZIP + 4	-180185862
Supplemental Mailing Address (if needed)		
Employer ID (EIN)	84-3872726	
Email Address	LPektor@ashleydevelopment.com	
Contact Name	Louis P. Pektor, III	Contact Title President
Contact Phone	610-332-3300	Contact Email Address LPektor@ashleydevelopment.com
Co-Applicant/Organization Name	Phone	
	FAX	
Mailing Address	City	State
		ZIP + 4
Supplemental Mailing Address (if needed)		
Employer ID (EIN)		
Email Address		
Contact Name	Contact Title	
Contact Phone	Contact Email Address	



1b. Historical Land Uses:  Agriculture 16 %  Forest/Woodland 84 %  Barren \_\_\_\_\_ %  
 Urban \_\_\_\_\_ %  Brownfield \_\_\_\_\_ %  Other \_\_\_\_\_ %

2. Potential Toxic or Hazardous Pollutants:  N/A

Pollutant	Concentration w/Units	Source	Sample Type	Date(s) / Number of Samples

3. Fill Material

Will the applicant need to import or export fill for the project site? Clean fill can not be placed in or on waters of the Commonwealth. If fill will be imported or exported, Form FP-001 (Document # 258-2182-773) must be used to certify origin of the fill material.

Check the appropriate box  
 Import fill – the applicant will, in most situations, be responsible to perform environmental due diligence and determine that all fill imported to the site meets the department’s definition of clean fill. The plan designer must include a note on the drawings to identify the operator(s) responsibility and provide the definition of Clean Fill and Environmental Due Diligence.

Export fill – the Applicant is responsible for performing environmental due diligence at the time this application was submitted to determine that any fill exported from the site will be certified as clean fill.

Balance all cuts and fills with the amount of rock and soil available on the site.

4. Estimated Timetable for Phased Projects (Complete for phased projects only)

Phase No. or Name	Proposed Type of Activity	Total Area	Disturbed Area	Start Date	End Date

5 Waters to Which Project Discharges (Check all that apply)

5.a.  Waters of the Commonwealth to which the project discharges or has the potential to discharge to (including EV wetlands) other than MS4s, CSOs, private storm sewers:

Name of Waters	Designated Use of Water	Existing Use of Water
<u>UNT to the Delaware River</u>	<u>CWF, MF</u>	<u>N/A</u>
<u>UNT to Del. River, EV wetland</u>	<u>EV</u>	<u>N/A</u>

<input type="checkbox"/> Combined Sewer Overflow System to which the project discharges:	<input type="checkbox"/> Municipal Separate Storm Sewer (MS4) to which the project discharges:	<input type="checkbox"/> Private Storm Sewer to which the project discharges:	<input checked="" type="checkbox"/> Non Surface Water: (including off-site discharges): See below *
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5b. Does the site discharge to waters classified as impaired according to Category 4 of PA Integrated Water Quality Monitoring and Assessment Report?  Yes  No  
 If yes, list source and cause of impairment: \_\_\_\_\_

5c. Does the site discharge to waters with a TMDL according to Category 5 of the PA Integrated Water Quality Monitoring & Assessment Report?  Yes  No  
 If yes, list source and cause of impairment TMDL addresses: \_\_\_\_\_

**\* DEMI ROAD STORM SEWER TO UNT TO DELAWARE RIVER OWNED AND MAINTAINED BY UPPER MOUNT BETHEL TOWNSHIP THROUGH INTER-MUNICIPAL AGREEMENT WITH PORTLAND BOROUGH.**

**SECTION D. EROSION & SEDIMENTATION (E&S) AND POST CONSTRUCTION  
STORMWATER MANAGEMENT (PCSM)**

**Note: For projects involving multiple points of discharge, please submit a complete, separate Section D for each additional point of discharge.**

1. E&S Plan - The E&S Plan must satisfy at least one of subparagraph A or B below.
- A.  E&S plan is designed using BMPs in the Pennsylvania Erosion & Sedimentation Pollution Control Manual (ESPC) (Technical Guidance #363-2134-008/March 2012)
- OR**
- B.  E&S plan is designed using an alternative BMP or design standard
- E&S BMPs utilized for this project include silt soxx, stabilized construction entrance, two sedimentation basins with anti-seep collars, baffles, skimmers, and dewatering facilities. Filter bag and stone & concrete block inlet protection, compost filter sock, concrete washout, pumped waver filter bag, tree protection fence, silt soxx diversion berms, and E&S control blanket.

2. PCSM Plan
- The PCSM Plan must satisfy either subparagraph A, or B or C below.
- A.  Act 167 Plan approved on or after January 2005 – The attached PCSM Plan, in its entirety, is consistent with all requirements pertaining to rate, volume, and water quality from an approved Act 167 Stormwater Management Plan.

Complete the following table for all applicable approved Act 167 Stormwater Management Plans. (use additional sheets if necessary)

ACT 167 Plan Name	Date Adopted	Consistency Letter Included <input type="checkbox"/>
<u>Martins-Jacoby Creek</u>	<u>4/9/07</u>	Consistency Letter Pending <input checked="" type="checkbox"/>

If the PCSM Plan is consistent with a DEP approved Act 167 plan from 2005 or later and the Act 167 plan is without variance consistent with the standard design criteria from the 25 Pa. Code Chapter 102.8(g)(2) and (3) then utilizing worksheets 1-5 and the *Summary table for Supporting Calculation and Measurement Data* are recommended, otherwise check the applicable box(es) in Section D.3

- OR**
- B.  The PCSM Plan meets the standard design criteria from the 25 Pa. Code Chapter 102.8(g)(2) and (3).
- OR**
- C.  Alternative Design Standard – The attached PCSM plan was developed using approaches other than those in 25 Pa. Code Chapter 102.8(g)(2) and (3). Demonstrate how this standard will be either more protective than what is required in 25 Pa. Code Chapter 102.8(g)(2) and (3). and will maintain and protect existing water quality and existing and designated uses as allowed in 102.8(g)(2)(iv) and 102.8(g)(3)(iii). Alternative design standard selected due to use of voluntary forested riparian buffer to mitigate volume impacts per prior discussions/agreement with PADEP (see PCSM narraive for description).

3. Summary Table for Supporting Calculation and Measurement Data

- Not Applicable in accordance with 102.8(g)(2)(iv)- provide supporting calculations and documentation in the Narrative. **If checked, proceed to Peak Rate Analysis** (provide supporting details to include a summary, calculations, and a statement and demonstration of attainment in the Narrative- Reference the *Instructions for a General (PAG-02) OR Individual NPDES Permit for stormwater discharges associated with construction activities* Section D)
- Not Applicable PCSM Plan satisfies an Act 167 Plan approved on or after January 2005, in its entirety- provide supporting calculations and documentation in the Narrative. **If checked proceed to Section D.4** (provide supporting details to include a summary, calculations and a statement and demonstration of attainment in the Narrative- Reference the *Instructions for a General (PAG-02) OR Individual NPDES Permit for stormwater discharges associated with construction activities* Section D)

Please reference the stormwater methodology used (Numbers generated in the table below should be consistent with Worksheets 3,4, and 5 and be accompanied by supporting calculations in the Narrative)

SCS \_\_\_\_\_

	Pre-construction		Post Construction		Net Change	
Design storm frequency <u>2-year/24-hour</u>						
Rainfall amount <u>3.31</u> inches						
Impervious area (acres)	1	0.60	2	15.72	3	15.12
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet (check appropriate box)	4	186,768	5	305,835	6	119,067
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet (check appropriate box)			7	228,651	8	-109,584
<b>Peak Rate Analysis:</b> Complete Boxes 9-20 (Numbers generated in table should be accompanied by supporting calculations in the narrative)						
<input type="checkbox"/> Exempt in accordance 102.8(g)(3)(ii), Complete Boxes 9-20						
<input checked="" type="checkbox"/> Not Applicable in accordance with 102.8(g)(3)(iii)						
{If any of the above is checked, provide supporting calculations and documentation in the Narrative}						
Stormwater peak discharge rate for the 2-year/24-hour storm (cubic feet per second (cfs))	9	5.47	10	1.47	11	-4.00
Stormwater peak discharge rate for 10-year/24-hour storm (cfs)	12	28.61	13	18.59	14	-10.02
Stormwater peak discharge rate for 50-year/24-hour storm (cfs)	15	79.74	16	77.38	17	-2.36
Stormwater peak discharge rate for the 100-year/24-hour storm	18	111.86	19	109.27	20	-2.59

- Box 1. Pre-construction impervious area:** The total acres of impervious area on the project site before construction activities begin, based on land use for five years preceding the planned project.
- Box 2. Post construction impervious area:** The total acres of impervious area on the project site after construction activities have been completed.
- Box 3. Net change of impervious area:** The change in the impervious area (acres) listed in Box 1 and Box 2. Zero or negative values are acceptable. (Box 2- Box 1)
- Box 4. Pre-construction stormwater runoff volume:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence before construction activities begin based on land use for five years preceding the project.
- Box 5. Post construction stormwater runoff volume:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished assuming that no non-structural/structural BMP(s) have been installed.
- Box 6. Net change in stormwater volume:** The change in stormwater runoff volumes listed in Box 4 and Box 5. (Box 5 - Box 4)
- Box 7. Post construction stormwater runoff volume reduction:** The amount of stormwater runoff volume reduction that would result from the planned non-structural/structural BMP(s) installation. (Total non-structural volume credit (from worksheet 3) + Total Structural volume (from worksheet 5) )

**Box 8. Net change in stormwater runoff volume with planned BMPs:** The change in stormwater runoff volume and volume reduction listed in Box 6 and Box 7. (Box 6 – Box 7)  
 Figures contained in the “*Summary table for supporting calculation and measurement data*” should be consistent with those on Worksheets 3, 4, and 5, when applicants have utilized the Stormwater Best Management Practices (BMP) Manual to meet design standards. Below is a depiction of which worksheet(s) corresponds (i.e. WKST 4) to each Box and where on the worksheet to find the information (i.e. 2-Year Volume Increase).

Numbers generated in the summary table should be consistent with Worksheets (WKST) 3, 4 and 5			
	Pre-construction	Post Construction	Net Change
Design storm frequency <u>2-year/24-hour storm</u> Rainfall amount <u>WKST 4 "2-Year Rainfall"</u> inches			
Impervious area (acres)	1 <u>WKST 4</u> Existing Condition: Impervious cover type	2 <u>WKST 4</u> Developed Condition: Impervious cover type	3 <u>Box 2 - Box 1</u>
Volume of stormwater runoff <input checked="" type="checkbox"/> acre-feet or <input type="checkbox"/> cubic feet (check appropriate box)	4 <u>WKST 4</u> Existing Condition: Total Runoff Volume	5 <u>WKST 4</u> Developed Condition: Total Runoff Volume	6 <u>WKST 4</u> 2-Year Volume Increase
Volume of stormwater runoff <input checked="" type="checkbox"/> acre-feet or <input type="checkbox"/> cubic feet (check appropriate box)		7 <u>WKST 3</u> Total non-structural volume credit + <u>WKST 5</u> Total structural volume	8 <u>WKST 5</u> Difference

- Box 9. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the 2-year/24-hour storm as determined by the land use for the past five years.
- Box 10. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the 2-year/24-hour storm after all planned stormwater BMPs are installed.
- Box 11. Net change stormwater discharge rate:** The change in stormwater runoff discharge rates listed in Box 9 and Box 10. (Box 10 – Box 9)
- Box 12. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the 10-year/24-hour storm as determined by the land use for the past five years.
- Box 13. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the 10-year/24-hour storm after all planned stormwater BMPs are installed.
- Box 14. Net change stormwater discharge rate:** The change in stormwater runoff discharge rates listed in Box 12 and Box 13. (Box 13 – Box 12)
- Box 15. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the 50-year/24-hour storm as determined by the land use for the past five years.
- Box 16. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the 50-year/24-hour storm after all planned stormwater BMPs are installed.
- Box 17. Net change stormwater discharge rate:** The change in stormwater runoff discharge rates listed in Box 15 and Box 16. (Box 16 – Box 15)
- Box 18. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the 100-year/24-hour storm as determined by the land use for the past five years.
- Box 19. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the 100-year/24-hour storm after all planned stormwater BMPs are installed.
- Box 20. Net change stormwater discharge rate:** The change in stormwater runoff discharge rates listed in Box 18 and Box 19. (Box 19 – Box 18)

4. Summary Description of Post Construction Stormwater BMPs (consistent with the design or applicable worksheets)  
 Key: RC = Rate Control VC = Volume Control WQ = Water Quality

In the lists below, check the BMPs identified in the PCSM Plan, and their function(s) using the above Key. More than one function may be checked for a BMP. A BMP may have more than one function (rate, volume, water quality), therefore, there may be more than one volume/acres listed. For example, a Rain garden/Bio-retention BMP may have a volume treated and acres treated for volume control and water quality, that differs from the volume treated and acres treated for rate control. If any BMP in the PCSM Plan is not listed below, it must be described in the space provided after "Other". Attach additional sheet(s) as needed

For Rate Control provide the volume of stormwater treated and acres treated for the 100-year/24-hour storm event  
 For Volume Control and Water Quality provide the volume of stormwater treated and acres treated for the 2-year/24-hour storm event

BMP	Function(s)	Volume of stormwater treated	Acres treated
<input type="checkbox"/> Wet ponds	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input type="checkbox"/> Constructed wetlands	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input type="checkbox"/> Retention basins	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input type="checkbox"/> Detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input type="checkbox"/> Underground detention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input checked="" type="checkbox"/> Dry Extended detention basin	<input type="checkbox"/> VC <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	474,325 cf (RC) 153,941 cf (WQ)	20.69
<input type="checkbox"/> Sediment fore bay	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input type="checkbox"/> Infiltration trench	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input type="checkbox"/> Infiltration Berm/Retentive Grading	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input type="checkbox"/> Subsurface Infiltration bed	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input type="checkbox"/> Infiltration basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input type="checkbox"/> Pervious pavement	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input type="checkbox"/> Dry well/Seepage pit	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input type="checkbox"/> Bio-infiltration areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input type="checkbox"/> Rain gardens/Bio-retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input type="checkbox"/> Vegetated swales	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input type="checkbox"/> Constructed filters	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input type="checkbox"/> Protect Sensitive & Special Value Features	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input type="checkbox"/> Protect/Convert/Establish Riparian buffers	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input checked="" type="checkbox"/> Restoration: Buffers/ Landscape/Floodplain	<input checked="" type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	16,453 cf	9.93
<input type="checkbox"/> Disconnection from storm sewers	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input type="checkbox"/> Rooftop disconnection	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input type="checkbox"/> Vegetated roofs	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input type="checkbox"/> Runoff capture/Reuse	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ		
<input type="checkbox"/> Oil/grit separators	<input type="checkbox"/> WQ		
<input checked="" type="checkbox"/> Water quality inserts/inlets	<input checked="" type="checkbox"/> WQ	96,126 cf	16.19
<input type="checkbox"/> Street sweeping	<input type="checkbox"/> WQ		
<input checked="" type="checkbox"/> Other <u>Level Spreaders</u>	<input type="checkbox"/> VC <input type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	n/a	28.35
<input checked="" type="checkbox"/> Other <u>voluntary forested riparian buffer</u>	<input checked="" type="checkbox"/> VC <input type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	207,936 cf	28.35
<input checked="" type="checkbox"/> Other <u>Protect Ex. Trees</u>		2,726 cf	1.50
<input checked="" type="checkbox"/> Other <u>Revegetate/Reforest</u>		1,536 cf	31 dec. & 135 ev. trees

5. Off Site Discharge Analysis

Does the project propose any off-site discharges to areas other than surface waters?  Yes  No

If yes, the applicant must have appropriate easement that provides the legal authority for this off-site discharge. In addition, applicant must provide a demonstration in both the E&S and PCSM plans that the discharge will not cause erosion, damage, or nuisance to off-site properties.

An unnamed tributary to the Delaware River is located partially within and along the project's westerly property boundary. In areas where the tributary is not located on the subject property, wetland areas connected directly to the tributary extend onto the subject property. A minimum 150' wide existing undisturbed wooded buffer (250'-300' for bog turtle) is being provided for this project for the entire length of the westerly property boundary. Discharges from the three dry extended detention basins onsite utilize three level spreaders to capture and discharge runoff for the project over a 760LF width to mimick existing pre-development runoff flow patterns. The project rate and volume discharges as a whole are controlled to less than pre-development levels for all storms up to and including the 2-year runoff event. In addition, the project utilizes a portion of the adjacent Ultra-Poly property to the East as a temporary haul road/construction access and possible future sanitary sewer easement. Ultra-Poly also has a current NPDES permit (#PAC480057). Runoff generated the proposed haul road extension drains primarily to existing storm sewer located along Demi Road in Portland Borough and is conveyed to the Ultra-Poly POI #1 (NPDES Permit #PAC480057) which is located along the same UNT that flows thru the subject property. Demi Road and the existing storm sewer contained therein is being maintained by Upper Mount Bethel Township from the structures located in Demi Road to their terminus at the UNT through a maintenance agreement with Portland Road. Regarding the future sanitary sewer easement, the associated runoff drains to another section of storm sewer in the Demi Road cul-de-sac which outlets into the same UNT previously mentioned. Once construction is complete for both the offsite temporary access road road and sanitary easement areas, the disturbed areas will be reseeded and restored as meadow. Therefore, there will be no future/post-development increase in stormwater rate of runoff or volume as a result of this project. The runoff that is generated from the subject site and discharged into this same UNT as the Ultra-Poly runoff considers the Ultra-Poly POI #1 as the POI #1 for this project. Runoff from the subject project will not result in any accelerated erosion or sediment pollution to the UNT or properties downstream of POI #1.

6. Potential Pollution Causing Materials

Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution during earth disturbance activities and include BMPs to avoid or minimize potential pollution and its impacts from the formation.

There are no naturally occurring geologic formations or soil conditions that have the potential to cause pollution during earth disturbance activities.

7. Riparian Buffers

A. Does the project discharge to a river, stream, creek, lake, pond or reservoir with a designated use of high quality or exceptional value? If so, is earth disturbance occurring within 150 feet of the river, stream, creek, lake, pond or reservoir?

Yes  No

If yes, go to B. If no, continue to Section 8.

B. Will you be protecting, converting, or establishing a 150 foot riparian buffer throughout the project area?

Protect  Yes  No  Convert  Yes  No  Establish  Yes  No

If No to all above, the application must contain a demonstration of riparian buffer or riparian forest buffer equivalency. (Continue to C)

**\*\* VOLUNTARY RIPARIAN FOREST BUFFER BEING UTILIZED WHICH WILL PREVENT THERMAL IMPACTS AND IS A NON-DISCHARGE ALTERNATIVE PER 102.14 (c) (1). \***

C. What BMPs will you be using that will be functionally equivalent to that of either a riparian buffer or a riparian forest buffer whatever is applicable to the project? Please attach an equivalency demonstration.

An equivalency demonstration must be completed, including worksheets 12-15 and a narrative that shows that the alternative BMPs implemented will be functionally equivalent to that of either a riparian buffer or a riparian forest buffer, whichever is applicable to the project according to 102.14(a)(1) and (2). \*

D. Will the project propose any earth disturbance within 100 feet of a surface water?  Yes  No

If yes, the applicant shall provide an offset riparian forest buffer at a ratio of one to one for the disturbed area.

**\* PROPOSED STORM OUTFALL LOCATED AT NW CORNER OF SITE WAS PREVIOUSLY APPROVED AS PART OF ORIGINAL NPDES PERMIT AND QUALIFIES AS AN ALLOWABLE ACTIVITY PER 102.14 (f) (2) (I.E., CONSTRUCTION OR PLACEMENT OF ROADS, STORM DRAINAGE, UTILITIES, ETC.).**



8. Thermal Impacts Analysis

Explain how thermal impacts associated with this project were avoided, minimized, or mitigated.

1. Storm Sewerage Geo-Thermal Transfer

Surface runoff from street impervious surfaces and unshaded vegetated areas, having elevated water temperatures, will be provided with some thermal mitigation via the underground storm sewerage conveyance system. The underground storm sewerage system will naturally maintain the cooler geothermal subsurface temperature of surrounding sub-soils. As water enters and travels through the storm sewerage system, natural geo-thermal heat transfer from the water through the walls of the storm sewerage piping to the cooler surround subsurface soils will occur. The storm sewer conveyance has significant length from the far corners of the site to the basin facilities which should provide significant geo-thermal mitigating factors.

2. PCSM BMP 5.6.3 (Revegetate And Reforest Disturbed Areas, Using Native Species)

Street and buffer trees are being provided throughout the proposed site while portions of the existing wooded areas will remain undisturbed and protected. Trees will help to mitigate temperature with partial shading of impervious surfaces and supplemental shading of vegetated surfaces. Shading generated by these new plantings will provide reduced ground temperatures where currently there is no shading, which will thus aid in reducing temperature of runoff crossing shaded area. Refer to plans for details.

3. PCSM BMP 6.6.3 - Dry Extended Detention Basin

The project proposes three (1 vegetated & two underground) dry extended detention basins. Basin 1-B includes an Ernst detention basin seed mix to promote the uptake of water/runoff as well as a small water quality orifice at the basin bottom (with larger orifice above the 2-year storm elevation) to manage or control the 2-year frequency storm volume increase over a 72-hour period. In order to mitigate the potential for warm water discharge and to provide water quality/pollutant removal, the runoff will naturally experience some thermal mitigation from the cooler geothermal subsurface temperature of surrounding sub-soils due to the small water quality orifice at the bottom of the basin. Additional thermal mitigation will occur through natural geo-thermal heat transfer from the water through the walls of the storm sewerage outlet piping to the cooler surrounding subsurface soils as its being discharged to the associated level spreaders.

4. PCSM BMP 6.8.1 - Level Spreader

Level spreaders are designed in conjunction with MRC BMP discharges and storm sewerage inlet & piping facilities and are located downslope of the proposed development. The level spreaders will convey runoff in a sheet flow condition similar to pre-development runoff flow conditions. Thermal mitigation will occur through natural geo-thermal heat transfer from the water through the walls of the perforated storm sewerage level spreader piping to the cooler surrounding subsurface soils prior to being discharged overland in a sheet flow condition similar pre-development conditions.

5. PCSM BMP Voluntary Riparian Forest Buffer

Upon being discharged from the dry extended detention basins and outletted via level spreaders, runoff will naturally experience thermal mitigation as it travels overland for a minimum 250'-300' across the wooded and shaded forest floor prior to infiltrating entirely into the cooler Hydrologic Soil Group A soils contained therein prior to ever reaching the downstream wetlands and UNT to the Delaware River.

9. Critical Stages

Identify the critical stages of implementation of the PCSM plan for which a licensed professional or designee shall be present on the project site.

1. Surface facilities that can be visually inspected, such as landscape restoration (BMP 6.7.2), water quality filters & hydrodynamic devices (snouts & water quality inlet filter inserts, BMP 6.6.4), and revegetate & reforest (BMP 5.6.3), will be visually inspected and certified upon completion.

2. PCSM BMP 6.8.1 level spreaders will be observed during the installation of the geo-textile, stone base, level lip (i.e., conc. slab over gabion basket), and perforated pipe stubs at the time of the sediment basin installation. The remainder of the perforated pipe and stone backfill material (i.e., river rock) will be inspected and certified upon completion.

3. PCSM BMP 6.6.3 Dry Extended Detention Basins, when used as a sediment basin (Basin 1-B) during construction, will be observed during the excavation, preparation, and stabilization of the sediment basin. Upon completion of site construction and removal of sediment from basin floor, the dry extended detention basin will be observed again during basin conversion. Underground Basins 1A & 1C will be observed during the excavation, installation, and backfill.

4. Voluntary Riparian Forest Buffer - Will be visually inspected during construction for invasive species and any invasive species will be removed and certified upon completion.

**SECTION E. ANTIDegradation Analysis Module**

**This Section is to be completed for Special Protection Waters Only  
(Projects that drain to HQ/EV Waters and EV Wetlands).**

**PART 1 NONDISCHARGE ALTERNATIVES EVALUATION**

E & S Plan	Official Use Only	PCSM Plan	Official Use Only
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<p>Check off the environmentally sound nondischarge Best Management Practices (BMPs) listed below to be used prior to, during, and after earth disturbance activities that have been incorporated into the E &amp; S Plan based on the site analysis. For BMPs not checked, provide an explanation of why they were not utilized, attach additional sheets if necessary. SEE ATTACHED</p>		<p>Check off the environmentally sound nondischarge Best Management Practices (BMPs) listed below to be used after construction that have been incorporated into the PCSM Plan based on the site analysis. For BMPs not checked, provide an explanation of why they were not utilized, attach additional sheets if necessary. SEE ATTACHED</p>	
<p><b>Nondischarge BMPs</b></p> <p><input type="checkbox"/> Alternative Siting</p> <p>    <input type="checkbox"/> Alternative location</p> <p>    <input type="checkbox"/> Alternative configuration</p> <p>    <input type="checkbox"/> Alternative location of discharge</p> <p><input type="checkbox"/> Limited Disturbed Area</p> <p><input type="checkbox"/> Limiting Extent &amp; Duration of Disturbance (Phasing, Sequencing)</p> <p><input checked="" type="checkbox"/> Riparian Buffers (150 ft min)</p> <p><input checked="" type="checkbox"/> Riparian Forest Buffer (150 ft min)</p> <p><input checked="" type="checkbox"/> Other* <u>level spreaders</u></p>		<p><b>Nondischarge BMPs</b></p> <p><input type="checkbox"/> Alternative Siting</p> <p>    <input type="checkbox"/> Alternative location</p> <p>    <input type="checkbox"/> Alternative configuration</p> <p>    <input type="checkbox"/> Alternative location of discharge</p> <p><input type="checkbox"/> Low Impact Development (LID / BSD)</p> <p><input checked="" type="checkbox"/> Riparian Buffers (150 ft min)</p> <p><input checked="" type="checkbox"/> Riparian Forest Buffer (150 ft min)</p> <p><input type="checkbox"/> Infiltration</p> <p><input type="checkbox"/> Water Reuse</p> <p><input checked="" type="checkbox"/> Other* <u>level spreaders</u></p>	
<p>*<input checked="" type="checkbox"/> Identify any and all best management practices, design standards and alternatives that collectively are substantially equivalent to a riparian buffer or riparian forest buffer in effectiveness, to minimize the potential for accelerated erosion and sedimentation and to protect, maintain, reclaim and restore water quality and for existing and designated uses of a perennial or intermittent river, stream or creek or lake, pond or reservoir of this Commonwealth to ensure compliance with 25 Pa. Code Chapter 93 (relating to water quality standards).</p>			
<p>Will the nondischarge alternative BMPs eliminate the change in rate, volume, or quality during construction? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, the antidegradation analysis is complete. If no, proceed to Part 2.</p>	<p>Will the nondischarge alternative BMPs eliminate the change in rate, volume, or quality after construction? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, the antidegradation analysis is complete. If no, proceed to Part 2.</p>		

**Part 2 Antidegradation Best Available Combination of Technologies (ABACT)**

If the net change in stormwater discharge during or after construction is not fully eliminated by nondischarge BMPs, the applicant must utilize ABACT BMPs to manage the change. The applicant must specify whether the discharge will occur during construction, post-construction or both, and identify the technologies that will be used to ensure that the discharge will be a non-degrading discharge.

E & S Plan	Official Use Only	PCSM Plan	Official Use Only
<p><input checked="" type="checkbox"/> <b>Treatment BMPs:</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Sediment basin with skimmer</li> <li><input checked="" type="checkbox"/> Sediment basin ratio of 4:1 or greater (flow length to basin width)</li> <li><input checked="" type="checkbox"/> Sediment basin with 4-7 day detention</li> <li><input type="checkbox"/> Flocculants</li> </ul> <p><input checked="" type="checkbox"/> <b>Land disposal:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Vegetated filters</li> <li><input checked="" type="checkbox"/> Riparian buffers &lt;150ft.</li> <li><input checked="" type="checkbox"/> Riparian Forest Buffer &lt;150ft.</li> </ul> <p><input checked="" type="checkbox"/> <b>Pollution prevention:</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> PPC Plans</li> <li><input checked="" type="checkbox"/> Immediate stabilization</li> <li><input type="checkbox"/> Street sweeping</li> <li><input checked="" type="checkbox"/> Channels, collectors and diversions lined with permanent vegetation, rock, geotextile or other non-erosive materials</li> </ul> <p><input type="checkbox"/> <b>Stormwater reuse technologies:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Sediment basin water for dust control</li> <li><input type="checkbox"/> Sediment basin water for irrigation</li> </ul> <p><input type="checkbox"/> <b>Other*</b> _____</p>		<p><input type="checkbox"/> <b>Treatment BMPs:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Infiltration Practices</li> <li><input type="checkbox"/> Wet ponds</li> <li><input type="checkbox"/> Created wetland treatment systems</li> <li><input type="checkbox"/> Vegetated swales</li> <li><input type="checkbox"/> Manufactured devices</li> <li><input type="checkbox"/> Bio-retention/infiltration</li> <li><input type="checkbox"/> Green Roofs</li> </ul> <p><input checked="" type="checkbox"/> <b>Land disposal:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Vegetated filters</li> <li><input checked="" type="checkbox"/> Riparian Buffers &lt;150ft.</li> <li><input checked="" type="checkbox"/> Riparian Forest Buffer &lt;150ft.</li> </ul> <p><input checked="" type="checkbox"/> <b>Pollution prevention:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Disconnection of roof drainage</li> <li><input type="checkbox"/> Bio-retention/bio-infiltration</li> <li><input type="checkbox"/> Street sweeping</li> <li><input type="checkbox"/> Nutrient, pesticide, herbicide or other chemical application plan alternatives</li> <li><input checked="" type="checkbox"/> PPC Plans</li> <li><input checked="" type="checkbox"/> Non-structural Practices</li> <li><input type="checkbox"/> Land Preservation</li> <li><input checked="" type="checkbox"/> Restoration BMPs</li> </ul> <p><input type="checkbox"/> <b>Stormwater reuse technologies:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Cisterns</li> <li><input type="checkbox"/> Rain barrels</li> <li><input type="checkbox"/> Dry hydrant with underground storage</li> <li><input type="checkbox"/> Spray/Drip Irrigation</li> </ul> <p><input checked="" type="checkbox"/> <b>Other* level spreaders</b> _____</p>	

\* Identify any and all best management practices, design standards and alternatives that collectively are substantially equivalent to a riparian buffer or riparian forest buffer in effectiveness, to minimize the potential for accelerated erosion and sedimentation and to protect, maintain, reclaim and restore water quality and for existing and designated uses of a perennial or intermittent river, stream or creek or lake, pond or reservoir of this Commonwealth to ensure compliance with 25 Pa. Code Chapter 93 (relating to water quality standards).

Are the ABACT BMPs selected sufficient to minimize E & S discharges to the extent that existing or designated surface water uses are protected?

Yes If yes, antidegradation analysis is complete.

No If no, and the project discharges to a HQ water, proceed to Part 3. If no and the project discharges to an EV Water, contact the local conservation district or Department regional office.

Are the ABACT BMPs selected sufficient to achieve no net change and assure that existing or designated surface water uses are protected?

Yes If yes, antidegradation analysis is complete.

No If no, and the project is located in a HQ water, proceed to Part 3. If no and the project discharges to an EV Water, contact the local conservation district or Department regional office.

**Part 3 Social or Economic Justification (SEJ) (for projects in high quality waters only)**

If the project discharges to HQ waters only, is there an important economic or social justification for the project?

Yes  No If yes, please contact the Department regional office for the county in which the project is located.

SECTION F. CONSULTANT FOR THIS PROJECT				
Plan Preparer's Name Michael A. Sodl, P.E.			eFACTS Consultant ID	
Title Senior Project Manager/Engineer		Consulting Firm Vertek Constr. Mgmt.,		Seal (if applicable) 
Mailing Address 7171 Airport Road, Suite 200				
City		State	ZIP+4	
Bath		PA	18014	
Email msodl@vertekcm.net			Phone	6108371856
			FAX	Ext 357
SECTION G. COMPLIANCE HISTORY REVIEW				
<p>Is/was the applicant(s) in violation of any Department regulation, order, schedule of compliance or permit or in violation of any Department regulated activities within the past five years?</p> <p><input type="checkbox"/> Yes      <input checked="" type="checkbox"/> No</p> <p>If yes, list each permit order, schedule of compliance or project that is/was in violation and provide compliance status of the activity (use additional sheets to provide information on all permits).</p> <p>Permit Program or Activity: _____ Permit Number (if applicable): _____</p> <p>Brief description of non-compliance: _____</p>				
Steps taken to achieve compliance			Date(s) compliance achieved	
<p>Current Compliance Status:    <input checked="" type="checkbox"/> In-Compliance      <input type="checkbox"/> In Non-Compliance</p>				
<p>If in non-compliance, please attach schedule for achieving compliance.</p>				



**SECTION I. CERTIFICATION**

Applicant Certification

I certify under penalty of law that this application and all related attachments were prepared by me or under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my own knowledge and on inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. The responsible official's signature also verifies that the activity is eligible to participate in the NPDES permit, and that BMP's, E&S Plan, PPC Plan, PCSM Plan, and other controls are being or will be, implemented to ensure that water quality standards and effluent limits are attained. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment or both for knowing violations pursuant to Section 309(c)(4) of the Clean Water Act and, 18 Pa. C.S. §§4903-4904.

I grant permission to the agencies responsible for the permitting of this work, or their duly authorized representative to enter the project site for inspection purposes. I will abide by the conditions of the permit if issued and will not begin work prior to permit issuance.

(For individuals no indication of title is necessary, choose the box below. All others proceed to the next paragraph)

Individual; proceed to signature portion.

I hereby certify that I am the signatory pursuant to 25 Pa. Code § 92a.22 and 40 CFR §122.22 and that I am the person who is responsible for decision-making regarding environmental compliance functions for New Demi Road, LLC, the manager of one or more manufacturing, production, or operating facilities of the applicant and am authorized to make management decisions which govern the operation of regulated facility including having explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure the applicant's long term environmental compliance with environmental laws and regulations; and I am responsible for ensuring that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements.

(choose one of the following; not applicable for individuals):

The responsible corporate officer  president  vice president  secretary  treasure of New Demi Road, LLC Corporation/Company  
Entity name

The  member or  manager of \_\_\_\_\_ LLC  
Entity name

The general partner of \_\_\_\_\_ partnership/LP/LLP  
Entity name

The principal executive officer or ranking elected official of \_\_\_\_\_ Municipality/State/Federal/other public agency  
Entity name

Power of Attorney/delegation of contractual authority (documentation supporting delegation of contracting authority must be provided) for \_\_\_\_\_  
Entity name

SIGNATURES

Applicant

Co-Applicant (if applicable)

By: New Demi Road, LLC  
Louis P. Pektor, III, President  
Print Name and Title of Person Signing

\_\_\_\_\_  
Print Name and Title of Person Signing

  
Signature of Applicant

\_\_\_\_\_  
Signature of Co-Applicant

10/27/2021  
Date Signed

\_\_\_\_\_  
Date Signed

Please note below the name, address and telephone number of the individual that should be contacted in the event additional information is required.

Name Michael A. Sodi, P.E.

Phone 610-837-1856

FAX \_\_\_\_\_