

| |
|---|
| 3. <input checked="" type="checkbox"/> Plan drawings have been developed for the project and will be available on-site. |
| 4. <input checked="" type="checkbox"/> Plan drawings have been developed for the project and are attached to the NOI/application. |
| 5. <input checked="" type="checkbox"/> Recycling and proper disposal of materials associated with PCSM BMPs are addressed as part of long-term operation and maintenance of the PCSM BMPs. |
| 6. Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities are completed and PCSM BMPs are operational and the applicant's plan to avoid or minimize potential pollution and its impacts. Based on the site's due diligence, a portion of this site's soils are considered contaminated. Specific construction plans and systems are being implemented to avoid or minimize the potential for these soils to cause pollution during or after earth disturbance activities are completed and the PCSM BMPs are operational. Please refer to the environmental plan, sheet 2, and the associated soil management plan for procedures to manage contaminated or potentially contaminated materials during this construction phase. |
| 7. Identify whether the potential exists for thermal impacts to surface waters from post-construction stormwater. If such potential exists, identify BMPs that will be implemented to avoid, minimize, or mitigate potential thermal impacts. N/A - no discharges are proposed in the Phase 1, E&S phase. This will be addressed in Phase 2. |
| 8. <input checked="" type="checkbox"/> The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan. |
| 9. <input checked="" type="checkbox"/> A pre-development site characterization has been performed. |

Total Credits (CF):

STORMWATER ANALYSIS – PEAK RATE

Surface Water Name: UNT to Pennypack Creek **Discharge Point(s):** N/A - This will be addressed in Phase 2

1. The design standard is based on rate requirements in an Act 167 Plan approved by DEP within the past five years.
2. The design standard is based on managing the net change for 2-, 10-, 50-, and 100-year/24-hour storms.
3. An alternative design standard is being used.
4. A printout of DEP's PCSM Spreadsheet – Rate Worksheet is attached.
5. Alternative rate calculations are attached.

6. Identify precipitation amounts. Source of precipitation data: PWD Requirements

| | | | |
|------------------------|------|------------------------|------|
| 2-Year/24-Hour Storm: | 3.32 | 10-Year/24-Hour Storm | 4.95 |
| 50-Year/24-Hour Storm: | 7.00 | 100-Year/24-Hour Storm | 8.04 |

7. Report peak discharge rates, pre- and post-construction (without BMPs), based on a time of concentration analysis.

| Design Storm | Pre-Construction Peak Rate (cfs) | Post-Construction Peak Rate (cfs) | Difference (cfs) |
|------------------|----------------------------------|-----------------------------------|------------------|
| 2-Year/24-Hour | 171.27 | 150.04 | -21.23 |
| 10-Year/24-Hour | 311.70 | 298.93 | -12.77 |
| 50-Year/24-Hour | 495.99 | 475.14 | -20.85 |
| 100-Year/24-Hour | 590.47 | 570.31 | -20.16 |

8. Identify all BMPs used to mitigate peak rate differences and provide the requested information.

| BMP ID | Inflow to BMP (cfs) | | | | Outflow from BMP (cfs) | | | |
|--------|---------------------|-------|-------|--------|------------------------|-------|-------|--------|
| | 2-Yr | 10-Yr | 50-Yr | 100-Yr | 2-Yr | 10-Yr | 50-Yr | 100-Yr |
| N/A | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

9. Report peak rates for pre-construction and post-construction with BMPs and identify the differences.

| Design Storm | Pre-Construction Peak Rate (cfs) | Post-Construction Peak Rate (with BMPs) (cfs) | Difference (cfs) |
|------------------|----------------------------------|---|------------------|
| 2-Year/24-Hour | 171.27 | 150.04 | -21.23 |
| 10-Year/24-Hour | 311.70 | 298.93 | -12.77 |
| 50-Year/24-Hour | 495.99 | 475.14 | -20.85 |
| 100-Year/24-Hour | 590.47 | 570.31 | -20.16 |

STORMWATER ANALYSIS – WATER QUALITY

A printout of DEP's PCSM Spreadsheet – Quality Worksheet is attached for all surface waters receiving discharges.

LONG-TERM O&M

Describe the long-term operation and maintenance (O&M) requirements for each selected PCSM BMP.

| BMP ID | O&M Requirements |
|--------|--|
| | N/A - This will be addressed in Phase 2. |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

PCSM PLAN DEVELOPER

I am trained and experienced in PCSM methods.

I am a licensed professional.

Name: Cornelius Brown, P.E.
 Company: Bohler Engineering
 Address: 1515 Market Street, Suite 920
 City, State, ZIP: Philadelphia, PA 19102
 License Type: Professional Engineer

Title: Principal
 Phone No.: 267-402-3400
 Email: cbrown@bohlereng.com
 License No.: PE075317
 Exp. Date: _____

Cornelius Brown

March 30, 2020

PCSM Plan Developer Signature

Date

