

DATE: September 21, 2026

SUBJECT: Notification of Elevated Review
Quaker Valley School
Permit Application No. PAD020098
Sewickley Borough, Allegheny County

TO: Elizabeth Farley, P.E. Eric Gustafson
Program Manager Regional Director
Waterways and Wetlands Program SWRO

THROUGH: Louis Turka
Section Chief, Chapter 102
Waterways and Wetlands Program

FROM: Sean Naylor
Application Manager
SWRO

Permit Application Timeline

Application Received Date:	8/27/25
Technical Deficiency (TD) Letter Sent:	12/24/25
TD Letter Response Received:	6/19/26

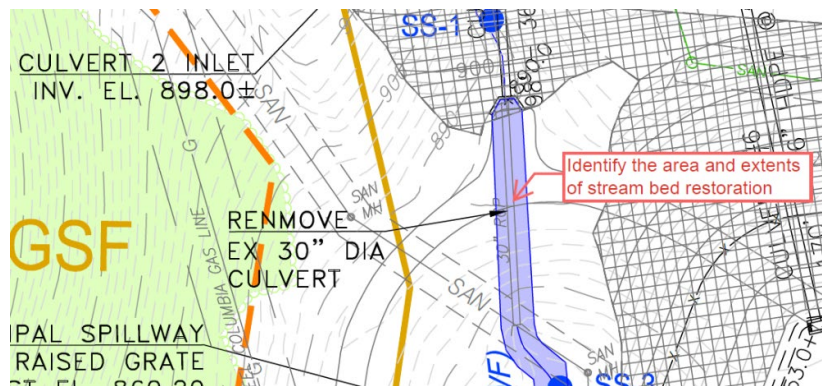
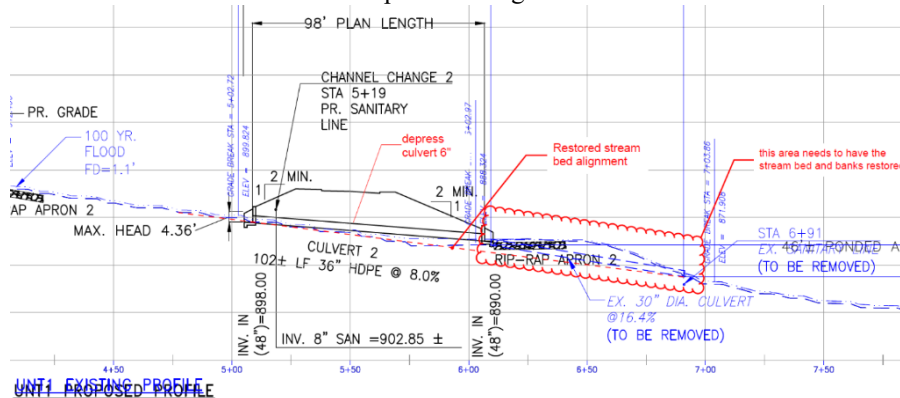
Applicant: Quaker Valley School District

After reviewing the response to our Technical Deficiency Letter, the referenced application for Individual NPDES Permit still contains significant technical deficiencies. The following is a list of the deficiencies that remain:

Technical Deficiencies

Previous DEP General Comments

9. §102.4(b)(5)(ix), §102.8(f)(9): Review of the existing and proposed profiles for the removal of the 30-inch diameter culvert and the placement of the proposed Culvert #2, has revealed thought and consideration to the restoration of the stream bed and proper alignment of the culvert #2 and associated riprap apron has not taken place. Please revise and provide appropriate details and construction sequence steps related to each, the culvert placement and the stream bed restoration. Identify the area and extents of the stream bed restoration on the E&S and PCSM plan drawings. Please revise.



Applicant response: The stream profile for UNT1 has been updated to depict the area and extent of the proposed stream restoration. The construction sequence has also been revised to appropriately describe the steps for culvert removal and stream restoration. In addition, the stream restoration detail has been added to the drawings. (See new design drawings in E & S Module 1 and NPDES Module 2).

TDL2: The stream restoration information referenced within the response above could not be located within the materials provided. Please provide.

11. §102.4(b)(5)(ix), §102.8(f)(9): Please label and dimension all proposed riprap aprons and embankment spillways on both E&S and PCSM drawings. Please include lining information, including riprap sizing, if applicable.

Applicant response: Riprap aprons and spillways have been labeled and dimensioned on both the E&S and PCSM drawings. The lining and riprap sizing have also been added to the detail plans. (See new design drawings in E & S Module 1 and NPDES Module 2).

TDL2: Basin SWMF-2 emergency spillway is not labeled/identified and dimensioned. Nor has the liner type been identified on the E&S Plan view sheets. Please revise.

Previous DEP E&S Comments

36. §102.4(b)(5)(viii): The drainage area mapping provided for the proposed culverts (Culverts Post Development Conditions – Figure C8) is too cluttered and virtually unreadable. Please revise.

Applicant response: The drainage maps have been revised in accordance with discussions from the DEP/QVSD Department/District meeting held on 1/20/2026. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

TDL2: Revised drainage area maps for the proposed culverts could not be located within the application materials. Please provide.

59. §102.4(b)(5)(ix): Provide grading standard notes on the E&S drawings.

Applicant response: The grading standard notes have been added to the E&S drawings. (See new design drawings and calculations in E & S Module 1).

TDL2: The Grading Standard Notes provided in the 2012 Pennsylvania E&S manual (pgs 325 & 326 could not located on the drawings. Please provide.

60. §102.4(b)(5)(viii): The drainage area maps are incredibly difficult to read and differentiation between BMP areas, and verification of the routing analysis provided is not possible. Less information is better. Every proposed improvement is not necessary to depict. Light poles, catch basins, roadways, roadway markings, buildings, utilities, grass & tree hatching, and callouts clutter the mapping. Consider providing only the information necessary to describe the stormwater conditions and their relationship to the routing analysis provided. Consider providing summary tables on the DA maps for each sub-drainage area that provide the corresponding routing hydrograph names, surface type acreages, and times of concentrations used within the analysis. The BMP facilities associated with each drainage area should also be identified within the mapping.

Applicant response: The drawings have been revised in accordance with discussions from the Department/District meeting held on 1/20/2026. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

TDL2: The proposed post construction SCMs are not identified on sheet HYD2.2. Please provide labels correlating the notation used in the routing analysis and NOI application materials for each SCM. Please revise

Previous DEP PCSM Comments

68. §102.8(f)(8): The SWM Volume Storage curve number calculations provided throughout the stormwater report use weighted CN values to derive runoff volumes. Please note that per the 2006 Pa SWM Manual, a weighted CN is generally unacceptable for volume analysis due to the large error associated with averaging of initial abstractions for storms less than or equal to the 2-year/24-hour storm event. Curve numbers for impervious and non-compacted pervious areas must be separate from the analysis. Please revise.

Applicant response: The stormwater management volume calculations have been revised using the standard PCSM spreadsheet and in accordance with the guidance in the 2006 Pennsylvania Stormwater BMP Manual. Weighted Curve Numbers (CNs) have been removed from the SWM volume storage analyses. Separate CN values are now used for impervious areas and non-compacted pervious areas in

order to appropriately account for differing initial abstractions and runoff responses, particularly for smaller storm events ($\leq$ 2-year/24-hour storm). All affected SWM volume calculations, supporting tables, and associated design documentation have been updated accordingly in the revised stormwater module.

TDL2: Weighted CN values are still being used for the PCSM volume routing analysis, specifically for the 1.2-inch storm event. Weighted CNs should not be used to establish this volume.

Summary for Subcatchment DA 111: DA 111

Runoff = 2.21 cfs @ 11.96 hrs, Volume= 0.103 af, Depth= 1.13"
Routed to Pond DS-43.1 : Diversion Structure

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-YR Rainfall=1.96"

Area (ac)	CN	Description
0.330	74	>75% Grass cover, Good, HSG C
* 0.770	98	Impervious
1.100	91	Weighted Average
0.330		30.00% Pervious Area
0.770		70.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

74. §102.8(f)(8), §102.8(f)(9): Consider the use of check-dams along the permanent channels to aid in control of the runoff and obtaining water quality volume.

Applicant response: Check dams have been added to the permanent channels. Please refer to the C400 series of plans for locations and details of the proposed check dams.

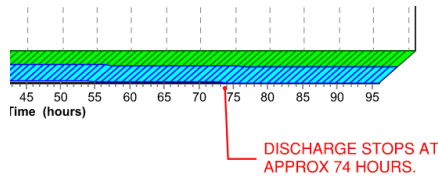
TDL2: Comment resolved. Consider including a reference to and spacing on channel profile on sheet C424. As this sheet gives no indication check dams are proposed along these channels.

Previous DEP MRC Comments §102.8(f)(15)

96. The drawdown time is being exceeded by the proposed MRC design. The maximum drawdown time to the MRC BMP surface should not exceed 72 hours for each 2-100-year/24-hour design storm. Please revise.

Applicant response: The post-construction stormwater management plan has been modified to include two (2) stormwater detention facilities (SWMF-1 and SWMF-2), eight (8) manage release concept (MRC) cells, and multiple bio-retention areas. The design includes a bypass structure at each MRC cell that diverts the 1.2"/24-hour storm into the MRC cell and bypasses higher flows to the two (2) proposed detention facilities (SWMF-1 and SWMF-2). The MRC cell includes an upstream water quality device, a R-Tank system for detention of the 1.2"/24-hour storm event, and an outlet structure. In addition, the detention facilities have been designed such that post-development 2-year discharge to Point of Interest 1 (POI-1) is less than the 1-year pre-development rate in accordance with the PADEP MRC guidance. The drawdown time comment has been addressed via the modified design.

TDL2: Drawdown calculations could not be located within the application materials. A spot check of the MRC 1 design indicates a drawdown time of 48 hours on the MRC 1 spreadsheet, 12 hours on the PCSM spreadsheet and the MRC 1 routing analysis hydrograph provided indicates discharge terminating at approximately 74 hours. Because incremental elevation is not provided, it is impossible to determine when the Internal Water Storage elevation is reached. Please revise each spreadsheet to more accurately represent the drawdown time and provide stage-discharge tables for each MRC design. Please provide or explain why this information is not needed.



Previous ACCD Comments:

108. §102.6(a)(1), §102.4(b)(5)(i): Provide a properly completed and accurate E&S Module 1. Address the following items:

- a. Page 1, #1 – the response provided does not discuss existing topographic features of the site/surrounding area.
- b. Page 2, #4 – The response provided discusses pre vs. post runoff conditions, but does not discuss during-construction runoff conditions. Describe volume/rate of runoff for the during construction conditions, and identify how runoff will be managed.
- c. Page 5, #18 – there are geologic conditions/soil formations present on the site. A response of NA is not sufficient. Revise to discuss how these conditions will be handled to avoid or minimize potential pollution.
- d. Page 6 – Provide the updated expiration date for the PE license for the E&S plan developer.

Applicant response: The E&S Module 1 items a–d have been revised to include the requested information. (See new design drawings and calculations in E & S Module 1).

TDL2: Item b – The response has been revised but did not address the concern regarding during-construction runoff from the site.

113. §102.4(b)(5)(iii): Show all proposed E&S controls on the phased drawings. Some have identifiers pointing to items that are not shown on the drawings. (Example – riprap aprons labeled on sheet ESC103C)

Applicant response: The plan sheets have been revised in accordance with discussions from the Department/ACCD meeting held on 1/20/2026. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

TDL2: Comment was not addressed. 105 JPA drawings are helpful for review, but it's unrealistic for an inspector to reference both while on an E&S inspection. Provide labels that match the ARIT for 105 impacts on the E&S drawings. For temporary impacts show the labeling on the appropriate stage drawings for the impact.

125. §102.4(b)(5)(ix): In stage 1, RCEs #1, 2, and 3 are provided as access off of Camp Meeting Rd. The details provided in the E&S plans call for wash racks. Wash racks are not shown on the drawings, and there is inadequate means for water removal in these areas. Revise the plans to show all required features of RCEs with a wash rack, including a collector channel to convey water to each associated CFS trap, location of concrete or welded steel pipe in the entrance, drain space, water supply, etc.

Applicant response: The existing RCE #1 rumble pad is to remain and alternate BMP's are proposed. RCE #2 and RCE #3 do not include wash racks. The plans and RCE details have been revised accordingly. (See new design drawings and calculations in E & S Module 1).

TDL2: Vacuuming is acceptable in combination with a typical RCE. Address the following related to changes in construction access:

- a. The drawings represent the RCE at a size that would be smaller than the 50' length/20' width. Revise the footprints of the RCEs on the drawings to reflect the actual size of the entrances. (The length itself would be more than double what is currently shown on the plan.)
- b. Call out daily vacuuming on the plan drawings.

128. §102.4(b)(5)(ix): No E&S controls are provided for protection of wetlands along the haul road/access road that runs from UNT #2 to Basin #1. Provide suitable protection for all sensitive features.

Applicant response: Fence protection measures have been added and shown around wetlands W1, W2 and W3 areas. (See new design drawings in E & S Module 1).

TDL2: CFS has not been provided by Wetland W3. Additionally, wetlands are no longer labeled on the Existing Conditions plan (sheet C100) or Stage 1 overview plan (sheet ESC101).

129. §102.4(b)(5)(ix): Provide identifiers/numbering and station numbers for all haul roads, temporary roads, and permanent roads. Identify which detail in the E&S plan is to be followed for haul/temporary roads.

Applicant response: Identifier numbering and stationing have been added to all new permanent roads on the plans. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

TDL2: Station numbers for proposed roads are buried under other layers; revise so they can be seen. Also, the original comment requested station numbers for haul roads and temporary roads as well. It is important for the inspector to be able to reference their location during inspections/while writing reports, particularly on larger sites. Provide station numbers as a means for identifying locations on all roads.

130. §102.4(b)(5)(ix): Per Chapter 3 of the E&S Manual, broad based dips should not be utilized on roads with slopes exceeding 10%. Explain how they will function appropriately on roads in the plans where this design criteria is exceeded.

Applicant response: Broad-based dips are not proposed for the project. A proposed 5' wide berm will be constructed to support the proposed curb and guide rail located on the northern side (upper gradient) of the proposed upper drive roadway. The proposed storm drainage system along the roadway will have E & S inlet protection to filter the sediment laden runoff. (See new design drawings and calculations in E & S Module 1).

TDL2: The 5 ft wide berm discussed in the response is not shown or labeled on the drawings, calculations are not provided, and no berm detail has been provided. Furthermore, the response provided does not address runoff generated on temporary roads or haul roads.

- a. Review Chapter 3 of the E&S manual and provide a sufficient means for conveying and managing sediment laden water from active haul roads during construction.
- b. For the proposed berm for the permanent roadway provide channel calculations, show the grading for this one the drawings, show the drainage area to the berm, provide a liner if necessary, and update the drawings, sequence, maintenance instructions, and application materials as needed.

131. §102.4(b)(5)(ix): Broad based dips should direct flow to either a basin/trap or a well vegetated area with sufficient coverage to resist erosion. This is not being met in the current design, as broad-based dips are discharging to freshly graded slopes and in areas that will not be able to make it to the proposed sediment basins. Revise the plans to provide a suitable outlet and adequate sediment removal for runoff from broad based dips where needed.

Applicant response: We are not proposing broad-based dips for the project. A proposed 5' wide berm will be constructed to support the proposed curb and guide rail located on the northern side (upper gradient) of the proposed upper drive roadway. The proposed storm drainage system along the roadway will have E & S inlet protection to filter the sediment laden runoff. (See new design drawings and calculations in E & S Module 1).

TDL2: The drawings still do not identify which detail for which roadway should be followed. Label on the plans somehow so the contractor knows which detail is used for what road.

132. §102.4(b)(5)(ix): Detail #3-4 is provided for a crowned roadway; identify on the plans where crowned roadways are proposed. Ensure appropriate cross drains, roadside ditches, etc. are shown and that calculations are provided for any additional channels/ditches.

Applicant response: Roadway stationing and cross-sections have been added to the plans to identify the locations of crowned and superelevated roadway sections. All temporary haul roads are crowned. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

TDL2: The drawings still do not identify which detail for which roadway should be followed. Label on the plans somehow so the contractor knows which detail is used for what road.

138. §102.4(b)(5)(vi): Module 1 indicates that there is an existing "rumble pad" to be utilized on the site. Identify the location on the plans, provide a detail for the rumble pads, identify the size, length, etc. of the existing rumble pad, and ensure that it is meeting ABACT requirements. Additionally, provide evaluation on the current status of the rumble pads to determine if they can be used as-is, or if modifications or maintenance will need to be conducted prior to use.

Applicant response: The existing rumble pad is in good condition and is located at the north gate off Camp Meeting Road. It is 21.5 feet wide and 6 feet long and discharges to a 17-foot-long riprap apron. We are keeping the rumble pad in place and alternate BMP's are proposed.

TDL2: The response to comment #125 indicated that an existing rumble pad would be used at entrance #1 and the response to comment #138 shows measurements of the existing feature in question. Address the following:

- a. The rumble pad is still not identified on the existing conditions plan, nor has it been labeled as a rumble pad in any stage, details have not been provided for rumble pads, and rumble pads are not identified in the maintenance of E&S controls.
- b. The rumble pad and photos referenced in the response to comment #138 are not showing a rumble pad. The device shown is a portion of a wash rack. Additionally, the length of travel is certainly not sufficient enough to provide 4 full tire rotations as required by the guidance for construction entrances.

140. §102.4(b)(5)(vii): The sequence provided does not match the features shown on the drawings for each stage. For example – new sidewalk is shown on the drawings in earlier phases, but isn't mentioned as being installed until the final stage. Revisit the sequence and drawings to make sure they are consistent with anticipated project progress in each stage.

Applicant response: The sequence of construction items for the project has been revised according to construction information shown on each Stage E&S Plan. (See new design drawings and calculations in E & S Module 1).

TDL2: If drainage area has not reached 70% uniform stabilization, CFS should not be removed. Revise the sequence to add that disclaimer. (See Stage 2.13 as an example.)

144. §102.4(b)(5)(vii): Identify in the sequence that the initial PCSM recording will need to be completed and provided to ACCD prior to scheduling the pre-construction meeting.

Applicant response: A note regarding PCSM recording has been added to the construction sequence on the E & S Plans and the PCSM Plans. (See new design drawings and calculations in E & S Module 1 and NPDES Module 2).

TDL2: Where is this note regarding the initial recording?

154. §102.4(b)(5)(ix): Phase 1: Provide E&S controls for utility work associated with relocation of the gas and sanitary lines. Several areas are not in an area that would flow to an already proposed section of CFS.

Applicant response: The submitted design will not require the relocation of the existing sanitary line. The gas company is relocating the gas line into the south bound lane of Camp Meeting Road and will abandon the gas line which crosses through the project site, however, they are leaving the abandoned line in place. During the construction of the lower driveway and installation of Culvert #3 the portion of the gas line along UNT-2 will be removed by the QVSD contractor. Pump bypass is proposed for this work in and along UNT-2. (See new design drawings and calculations in E & S Module 1).

TDL2: Have changes made to this plan been submitted to DEP for JPA re-review? Please discuss.

158. §102.4(b)(5)(ix): Provide a detail or diagram in the E&S set showing how erosion control for utilities/trenching activity should appear. (e.g. spoils on the upslope side of the trench, perimeter controls, etc.

Applicant response: E&S details have been added to the E & S Plan Detail sheet showing how erosion control to be provided for utility and trenching activities. (See new design drawings and calculations in E & S Module 1).

TDL2: If stockpiling topsoil for utility work, some perimeter control should be installed.

161. §102.4(b)(5)(ix): Phase 2: CFS #19 is shown almost IN the watercourse near Beaver Street. Please revise. Sufficient buffer space should be provided between perimeter controls and environmental resources.

Applicant response: The proposed future work from SWMF-2 to Beaver Street, located in Leetsdale Borough, is not part of this project or application, and all future work has been removed from the plans. (See new design drawings and calculations in E & S Module 1).

TDL2: Please see Common Plan of Development FAQ to determine if this future work should be included in the same permit.

167. §102.4(b)(5)(vii), §102.4(b)(5)(ix): The JPA plans indicate removal of existing utilities along the site; this is not reflected in the E&S plans or sequence. Revise to show all proposed earth disturbance in the E&S plans. Provide additional perimeter controls where needed.

Applicant response: The submitted design will not require the relocation of the existing sanitary line. The gas company is relocating the gas line into the south bound lane of Camp Meeting Road and will abandon the gas line which crosses through the project site, however, they are leaving the abandoned line in place. During the construction of the lower driveway and installation of Culvert #3 the portion of the gas line along UNT-2 will be removed by the QVSD contractor. Pump bypass is proposed for the work in and along UNT-2. (See new design drawings in E & S Module 1).

TDL2: Have changes made to this plan been submitted to DEP for JPA re-review? Please discuss.

171.§102.4(b)(5)(vii): Stage 5 states “build to final grade.” Build what to final grade? Be more specific.

Applicant response: We have added more stages to the design and now have eleven. Stage 11 or Final Stage shows all the work to be performed within this stage. The final stage construction sequence has been updated to include the specific areas that will be graded for the final grade. (See new design drawings in E & S Module 1).

TDL2: Rock filter #1 is still shown in Stage 2. Has this comment truly been resolved?

187.§102.4(b)(5)(vii): Provide specific instructions for conversion of the sediment basins in the E&S sequence.

Applicant response: The construction sequence has been revised to include instructions for converting the sediment basin SB-1 into a stormwater management facility SWMF-2. (See new design drawings and calculations in E & S Module 1).

TDL2: Why is the sediment basin a different shape than the stormwater basin? Is reshaping the basin at the end of the project ideal?

195.§102.4(b)(5)(ix): Identify the location for a cleanout stake in each sediment basin on the E&S plans.

Applicant response: The clean-out stake location for the proposed sediment basin SB-1 has been identified on the plans. (See new design drawings and calculations in E & S Module 1).

TDL2: Where is this clean out stake identified?

200.§102.4(b)(5)(ix): Provide skimmer detail #7-1 for each sediment basin.

Applicant response: A skimmer is no longer being proposed. A temporary perforation riser is proposed for sediment basin SB-1. (See new design drawings and calculations in E & S Module 1).

TDL2: The original comment stated, “Provide skimmer detail #7-1 for each sediment basin.” The response provided indicated that the outlet structure was revised from a skimmer to a temporary riser. Please note that the comment did not request to revise the outlet structure type and that to adhere to ABACT standards, the outlet structure requires a skimmer. Refer to the note on the bottom of worksheet #15.

- a. Revert the outlet structure back to skimmer for basin SB-1. Be sure to carry through all revisions (calculations, worksheets, details, drawings, labels, etc).**
- b. Additionally, please address the original comment #200, as requested.**

202.§102.4(b)(5)(ix): The details provided for skimmer components reference the standard detail numbers from the E&S manual, but the numbers have been removed from the details in the plans. Revise to include detail numbers for cross referencing, as other details reference these details.

Applicant response: A skimmer is no longer being proposed for sediment basin SB-1. (See new design drawings and calculations in E & S Module 1).

TDL2: The original comment stated, “The details provided for skimmer components reference the standard detail numbers from the E&S manual, but the numbers have been removed from the details in the plans. Revise to include detail numbers for cross referencing, as other details reference these details.” The response provided indicated that the outlet structure was revised from a skimmer to a temporary riser. Please note that the comment did not request to revise the outlet structure type

and that to adhere to ABACT standards, the outlet structure requires a skimmer. Revert the outlet structure back to skimmer for basin SB-1.

- a. Be sure to carry through all revisions (calculations, worksheets, details, drawings, labels, etc).**
- b. Additionally, please address the original comment #202, as requested.**

223. §102.4(b)(5)(ix), §102.4(b)(5)(iii), §102.6(a)(1): Antidegradation Module 3 items to address:

- a. The E&S page identifies a compost filter berm to be utilized; this is not represented in the details, drawings, etc. for the project. Explain why this is checked.
- b. Protect/Utilize Natural Flow Pathways on-site has been checked in the PCSM section. Explain how the current design is doing this considering the amount of Ch 105 impacts that are proposed. This is also not identified in Module 2. Long-term protection also has not been included in the plans with a conservation easement or equivalent.
- c. Street sweeping is checked in the PCSM section, but this is not identified in Module 2. Explain.
- d. All the bioretention facilities are identified as “infiltration” in Module 2, but there is no design infiltration rate. Module 3 also includes Rain Garden with Infiltration as being checked, which is not consistent with what is proposed on the site.
- e. Module 3 identifies rooftop drain disconnect as being utilized on the site, but this is also nowhere else in the application or drawings.
- f. Revise Module 3 to accurately reflect what is proposed, for both E&S and PCSM.

Applicant response: The Antidegradation Module 3 form has been updated to reflect the most recent Erosion & Sedimentation Control Plan and Post-Construction Stormwater Management Plan.

TDL2: The Antidegradation – Post-Construction Stormwater Management (PCSM) Plan section has been left blank. If a Non-Discharge Alternative will not be utilized, explain the rationale for non-selection, including why none of the alternatives are considered environmentally sound and cost-effective. Please provide.

New DEP NOI Comments

224. §102.6(a)(1): An updated NOI could not be located within the submitted application materials. Due to the revisions made to the E&S and PCSM plan designs, it is anticipated that revisions to the following NOI sections may have occurred:

- a. General Information, Item 10.
- b. Project Site and Earth Disturbance Information, Items 2, 3, & 5.
- c. Stormwater Discharge Information, Items 1 & 2.

225. §102.6(a)(1): Module 3 & 4 Certifications. Per the module instructions, the applicant must certify that the information contained in the Module is true, accurate, and complete. The Module must be signed and dated by the person identified as the applicant in the (NOI) application. The NOI was signed by Mr. Jon Kuzma, however the modules were signed by Charles Gauthier. Please review and revise as appropriate.

New DEP E&S Comments

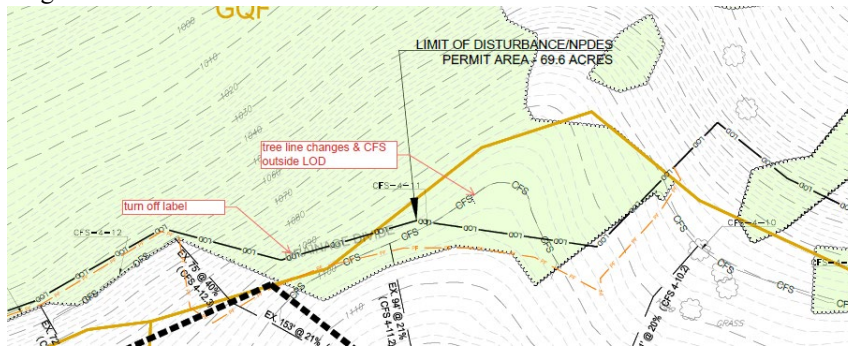
226. §102.4(b)(5)(ix): Please indicate the Diversion Channel-D1 liner type on the Stage 2 plan drawings.

227. §102.4(b)(5)(vii), §102.4(b)(5)(ix): Please provide an erosion potential analysis for the UNT 1 to Little Sewickley Creek during the Stage 2 of the project. As depicted, approximately 3.8 acres are being diverted to this stream as concentrated channel flow, that were originally flowing as sheet and shallow concentrated flows. Additionally, it seems unlikely that the rock filter placed at the confluence of the Diversion Channel

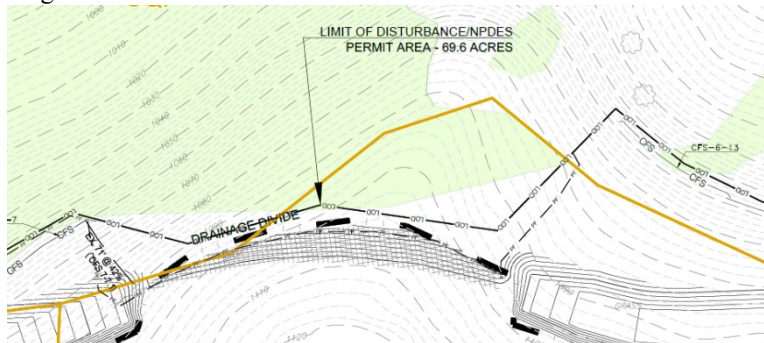
will be withstand the rush of flows from the diversion channel. Consider placing a stilling basin or other BMP within this area to dissipate energy prior to entering the existing stream. Please revise or explain why this information is not necessary.

228. §102.4(b)(5)(ix): Please provide erosion sedimentation control BMPs downslope of the sediment basin SB-1 during the construction phase of this basin. Erosion control blanketing only provides coverage post construction of the basin. Please provide or explain why this is not necessary.
229. §102.4(b)(5)(ix): Emergency spillways should be located on undisturbed ground, wherever possible. Otherwise, the emergency spillway should have a TRM, riprap or other hard armor protection which extends at least 15 feet beyond the toe of the embankment to the receiving waterway (DI), channel or other non-erosive outlet. Minimum width at the end of the armor protection (D_w) should be 0.4 times the length of the apron unless discharging directly into a channel leading away from the apron. Where a TRM is used to line the spillway down the face of the embankment, the channel at the toe of the embankment should be lined with riprap a sufficient length in both directions to prevent scour. Note: Provide supporting calculations for the outlet channels of all emergency spillways.
230. §102.4(b)(5)(viii), & §102.4(b)(5)(ix): Please explain why a keyway has not been provided for the basin embankment. Please respond.
231. §102.4(b)(5)(ix): Trees are being removed and replaced outside the LOD limits between the stages (see screenshots below). Compost filter sock is depicted outside the LOD line during Stage 4. An earlier stage “Drainage Divide” label is also still depicted within the Stage 4 drawings. Please revise to read/depict consistently.

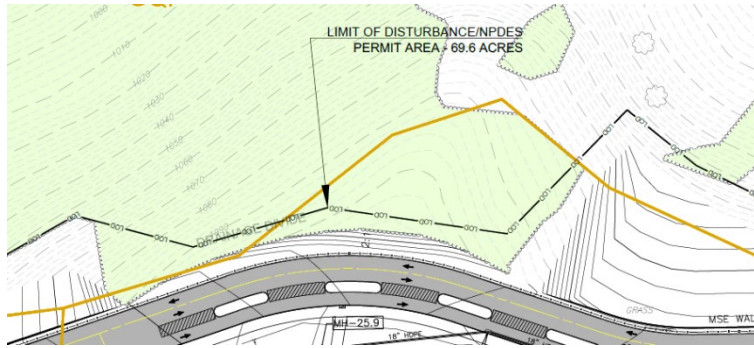
Stage 4:



Stage 7:

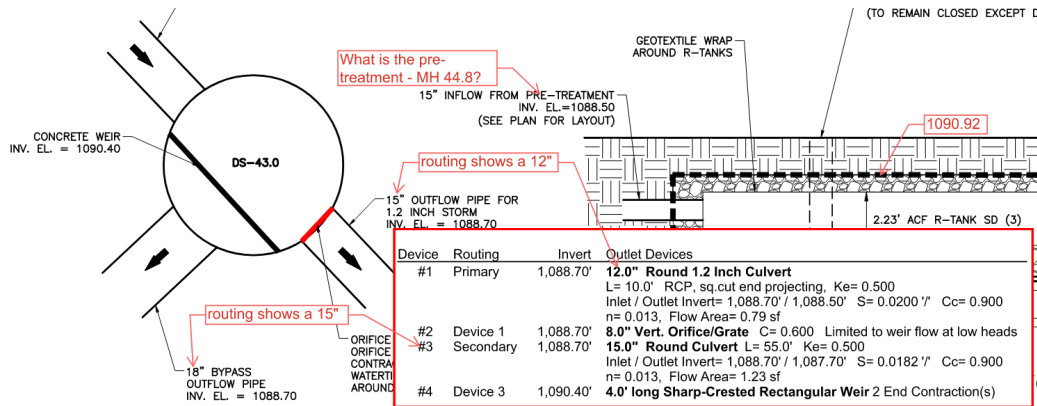


Final Stage:



New DEP PCSM Comments

232. §102.8(f)(8): Each POI NPDES Spreadsheet has been provided with an identical General Information sheet. Each POI should have a unique first sheet, but share the same Total Project Site Area value. The Total Earth Disturbance (In Watershed) and other information presented on the sheet should be unique to the POI's watershed. Please revise as necessary.
233. §102.8(f)(8): The POI 1 NPDES Spreadsheet Volume tab has Tree Planting Credits identified. The values provided could not be verified and the landscape plans provided appear to provide inconsistent tree counts. Additionally, the "Other (Attach Calculations)" box has been checked with additional tree credits of 33,102 being claimed. This is a significant volume credit for which calculations could not be located within the application materials and verified. Please provide and or revise as necessary.
234. §102.8(f)(8): It is not clear how the Total Volumes Routd to SCM (CF) and the Stored Volume (CF) values were obtained for each listed BMP/SCM. Spot checks of SCMs 2 and 3 appear to give conflicting results. Routing analysis shows 0.987 (42,994 CF) and 0.006 (261 CF) acre-feet being routed to each bmp respectively. However, values of 20,000 and 275 cubic feet were entered into these sells. Similarly for the Stored Volume values, due to the lowest orifice on these basins being at the bottoms of these basins, only the engineered void volumes should be credited with stored volumes. SCM 2 provides a soil void volume of $5,000\text{sf} \times 2.0\text{ft} \times 0.4 = 4,000$ cubic feet. SCM 3 provides a soil void volume of $4,180\text{sf} \times 1.5\text{ft} \times 0.4 = 2,508$ cubic feet. The values provided for these SCMs are 37,066 and 156 cubic feet, respectively. Please provide the calculations and the methods/means for quantifying the values entered into this table for each SCM.
235. §102.8(f)(9): The landscaping plan indicates the use of *Carya* spp. (Hickory); however it does not specify which specific species is being proposed. Confirmation of being native to Pennsylvania could not be determined. An online search indicated *Carya* spp is composed of at least seventeen (17) species with only six (6) being native to Pennsylvania. Please revise.
236. §102.8(f)(9): A spot check of the MRC 1 diversion/splitter structure detail on the PCSM plan detail sheet C473, has pipe size information that conflicts with the routing analysis provided. The details shows 15 and 18 inch pipes exiting the diversion/splitter, whereas the routing calculations indicate 12 and 15 inch pipes. Please revise all diversion structure pipes to read consistently with the routing analysis provided.



237. §102.8(f)(8), & §102.8(f)(9): Riprap aprons 2 and 3 (416/C463) have been designed to a MAX condition, indicating the outlet of the 24 and 36-inch diameter pipes (P-34.0 & P-12.0) discharging to these aprons will be completely submerged. Flow depths provided within the channel design calculations do not seem to suggest this to be the case. Please review each apron discharging to collection channels and revise as necessary or explain why this is not necessary.

238. §102.8(f)(9): Please include the riparian buffer line types within the legends of each sheet the buffers are depicted on. PCSM sheets C401 and C404 specifically. Please provide.

New DEP MRC Comments §102.8(f)(15)

239. A spot check of the SCM 4 (MRC 1) MRC Spreadsheet indicates 1.2-inch and 2-year volumes of 3,616 and 9,315 cubic feet respectively, routed to the SCM. The 1.2-inch and 2-year routing analysis for this MRC indicates Inflow Volumes of 0.05 (2,178) and 0.146 (6,359) acre-feet (cubic feet), and storage volumes of 2,879 and 3,320 cubic-feet, respectively for the two storm events. The routing provided also states that the maximum total available storage volume for MRC 1 is 6,077 cubic feet. It appears the design is inadequate in that minimum design volumes are not satisfied. Please double check each MRC design and revise accordingly.

1.2-Inch:

Summary for Pond MRC-1: R-Tank MRC 1 (SCM No. 4)

Inflow Area = 1.100 ac, 70.00% Impervious, Inflow Depth = 0.54" for NJ DEP 1.2 Inch event
 Inflow = 1.87 cfs @ 1.10 hrs, Volume= 0.050 af
 Outflow = 0.02 cfs @ 2.12 hrs, Volume= 0.050 af, Atten= 99%, Lag= 61.1 min
 Primary = 0.02 cfs @ 2.12 hrs, Volume= 0.050 af
 Routed to Pond DS-36.7 : Diversion Structure

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
 Starting Elev= 1,086.69' Surf.Area= 1,957 sf Storage= 783 cf
 Peak Elev= 1,088.48' @ 2.12 hrs Surf.Area= 1,957 sf Storage= 2,879 cf (2,097 cf above start)

2-year

Summary for Pond MRC-1: R-Tank MRC 1 (SCM No. 4)

Inflow Area = 1.100 ac, 70.00% Impervious, Inflow Depth = 1.59" for 2-YR event
 Inflow = 2.11 cfs @ 11.96 hrs, Volume= 0.146 af
 Outflow = 1.66 cfs @ 12.05 hrs, Volume= 0.146 af, Atten= 21%, Lag= 5.9 min
 Primary = 1.66 cfs @ 12.05 hrs, Volume= 0.146 af
 Routed to Pond DS-36.7 : Diversion Structure

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
 Starting Elev= 1,086.69' Surf.Area= 1,957 sf Storage= 783 cf
 Peak Elev= 1,088.74' @ 12.05 hrs Surf.Area= 1,957 sf Storage= 3,320 cf (2,538 cf above start)

Chamber & Stone Volumes:

Chamber Storage + Stone Storage = 6,077.3 cf = 0.140 af
 Overall Storage Efficiency = 59.4%
 Overall System Size = 39.19' x 49.93' x 5.23'

240. The MRC 1 spreadsheet indicates the Storage Unit - Post-Construction 2-Year/24-Hour Peak Rate (cfs) value of 2.53 cfs entered differs from the value of 1.62 cfs observed within the routing analysis provided.

Primary OutFlow Max=1.62 cfs @ 12.05 hrs HW=1,088.74' (Free Discharge)
 1=Culvert (Passes 1.62 cfs of 7.05 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.02 cfs @ 6.84 fps)
 3=Sharp-Crested Vee/Trap Weir (Weir Controls 1.61 cfs @ 1.63 fps)

241. The MRC 1 spreadsheet indicates "False" for the Storage Unit - A Synthetic Liner Will Be Installed cell, however according to the plan drawings and narrative, an impervious liner is being provided. Please revise.

242. The MRC 1 spreadsheet indicates the Storage Unit - Diameter of Managed Release Orifice (in) is 9-inches. Routing analysis and design information provided indicate the orifice is 0.7-inches. Please revise.

Device	Routing	Invert	Outlet Devices
#1	Primary	1,086.69'	15.0" Round Culvert L= 13.0' Ke= 0.500 Inlet / Outlet Invert= 1,086.69' / 1,086.56' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	1,086.69'	0.7" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	1,088.49'	4.0' long Sharp-Crested Vee/Trap Weir Cv= 2.62 (C= 3.28)

243. The plan detail drawing sheet C461 depict an ADS Arcadia Stormwater Separator. It is assumed this is the proposed pre-treatment device. A review of the plan drawings did not reveal where or how many of these units are proposed. Please call out each unit on the plan drawings.

New ACCD comments based on redesign:

Stage 1 – Demolition: RCE #1, #3 installed; CFS #1-x sections

244. §102.4(b)(5)(ix): The rock construction entrances state "with rolling and vacuuming". Does this refer to rolling the RCE? Rolling the rocks along the RCE would defeat the purpose of the RCE's function of knocking soil off of tires. Please provide more information.

245. §102.4(b)(5)(ix): Revise the rock construction entrance call outs to specify that the road should be vacuumed daily.

246. §102.4(b)(5)(ix): Stage 1, Sheet ESC101D – existing concrete foundation is proposed to be razed and buried in place. No E&S controls have been provided to control runoff from this portion of the earth disturbance activity. Please provide E&S controls or discuss why they are not needed for this portion of the project.

247. §102.4(b)(5)(v): 150ft riparian setback area is not shown for UNT4, UNT5 and UNT 6 to Little Sewickley Creek. Please provide or explain why it is not needed.

Stage 2 – Stockpile up top, Sediment Basin 1 installation, Diversion channel DV-1 with Rock Filter RF-1, RCE #2, concrete washout

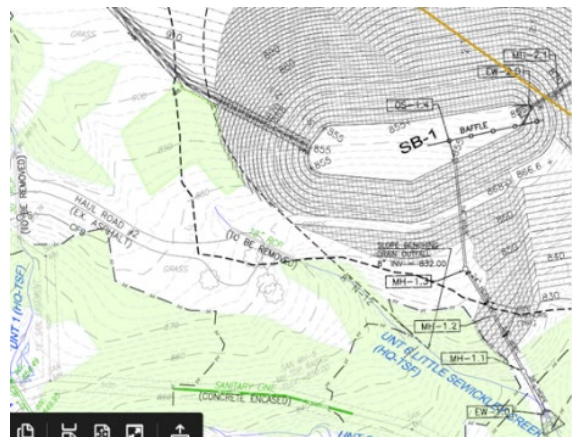
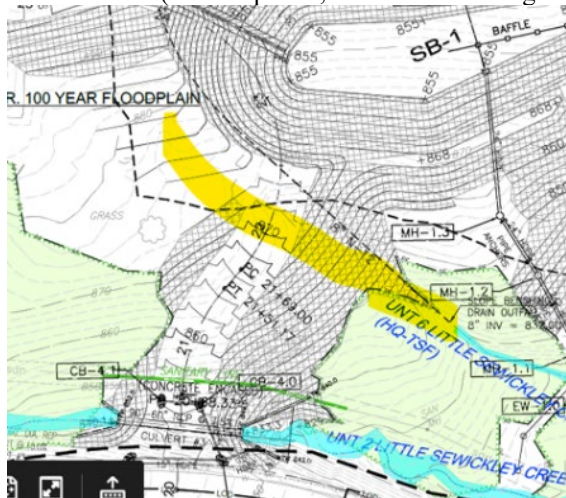
248. §102.4(b)(5)(i): Pages are out of order. Sheet ESC102D is the first page of the series but is labeled as sheet 4 of 4 on the cover sheet.

249. §102.4(b)(5)(v): Consider adding perimeter controls on the S/SE site of the topsoil stockpile on page ESC102D.

250. §102.4(b)(5)(v): The layer showing the floodways for the watercourses are not shown in Stage 2. Please add this layer to this set.

251. §102.4(b)(5)(ix): No CFS is shown in the area where grading will occur for the basin or channel. (Previously CFS #15 was provided.) Similarly, it does not appear that any of the sections of CFS in the calculations pertain to this location indicating that now nothing is proposed to manage sediment laden runoff from the grading activity. Perimeter controls should be provided for the grading required to

261. §102.4(b)(5)(ix): Callout cfs size on plan drawings
262. §102.4(b)(5)(v): The layer showing the floodways for the watercourses are not shown in Stage 2 through Stage 8. Please add this layer to this set.
263. §102.4(b)(5)(ix): Because the system is discharging to an HQ surface water, revise the stone and concrete block inlet protection detail to show a 6-inch-thick compost layer securely anchored on the outside and over top of stone.
264. §102.4(b)(5)(iii): Grading is proposed for outside the LOD on ESC107D. Revise LOD for all stages.
265. §102.4(b)(5)(ix): At Stage 9, the headwaters to UNT 6 to Little Sewickely Creek is filled in with no culvert. A spot check of the JPA application does not show this occurring. Please confirm that this is an approved action under the JPA and discuss how/if the JPA needs to be modified to conform to the IP redesign (sediment basin relocation, different watershed tributaries (Ohio River to Little Sewickely Creek), ect.).
266. §102.4(b)(5)(ix): It is recommended to include an image of the form 3800-FM-BCW0271d (DEP Visual Site Inspection Report) within the plan drawing details.
267. §102.4(b)(5)(vii): Visual Site inspections must be completed by qualified personnel via the criteria determined by DEP. The permittee must provide documentation of the inspector's qualifications prior to conducting site inspections and upon the request of DEP/CCD. A free training option is to complete the Qualified Visual Site Inspector Training Program available here on Clean Water Academy. Please incorporate qualified inspector requirements into the BMP maintenance schedule/notes accordingly.
268. §102.4(b)(5)(vii): Provide instruction in the sequence for initial PCSM recording requirements and scheduling of a pre-construction meeting with the District (refer to Part C, Sections II and III of the general permit conditions for additional information.)
269. §102.4(b)(5)(vii): Provide instruction in the sequence for notification of perimeter E&S control installation to the District (refer to part C, Section IV of the general permit conditions for additional information.)



270. §102.4(b)(5)(vii): Provide instruction in the sequence that the permittee must provide the completed SCM Construction Certification Form (3800-FM-BCW0271j) within 30 days of each SCM being constructed; note that the form must be signed by the licensed professional responsible for oversight of critical stages (refer to Part A, Section III, Monitoring Reporting and Recordkeeping, subsection C, in the general permit conditions for additional information).

271. §102.4(b)(5)(vii): Provide instruction in the sequence that the permittee must submit a complete Annual Report (form 3800-PM-BCW0405e) to the District by December 7 of each year after the first full year of permit coverage (refer to reporting requirements in Part A, Section III, Monitoring Reporting and Recordkeeping, subsection D of the general permit conditions for additional information).
272. §102.4(b)(5)(ix): Fill out the seed types and species on the worksheet on plans. A spot check of the permanent seeding mix used shows that it contains tall fescue, which is classified as an invasive species by the PA DCNR.
273. §102.4(b)(5)(ix): Utility line sequence states that stabilization should occur by the end of the week. As this is HQ watershed, stabilization should happen immediately.
274. §102.4(b)(5)(viii) and §102.4(b)(5)(ix): Estimating based on the drawing scale, the basin SB-1 dimensions are roughly 200 feet long by 50 ft wide, providing a basin bottom footprint of roughly 10,000 square feet. On worksheet #13, and on the drawings, a baffle was added to increase the flow path length to 366 linear feet. This layout does not consider all flows into the basin, from both channels into the sides as well as large slopes. As shown on the plan drawings, much of the water flowing into the basin during construction will bypass the baffle, which is situated on only one side of the basin. From this, the 366 ft length is overestimated. Additional baffles should be incorporated to maximize the flow path length within the basin. The basin size should also be increased to provide a longer basin length. Both of these revisions are preferred, as runoff will collect from all sides, not just one distinct location. Sediment forebays can also be incorporated. Update the design, drawings, details accordingly to ensure that the basin is truly providing a minimum 4:1 flow length to width ratio, to adhere to ABACT standards.
275. §102.4(b)(5)(viii) and §102.4(b)(5)(ix): The discharge point from SB-1 (endwall EW-1.0) is situated to be installed within the stream channel of UNT 6. Is this placement necessary? As shown, the concern is that the upstream flow from UNT 6 will back up against the headwall at EW-1.0. Please shift the discharge point up (shorten the outfall pipe) in a manner which prevents placement of the headwall inside the stream channel, but instead above the stream bank. Reconfigure the apron accordingly. Update throughout all plan sets, and if needed, on the NOI so the coordinates are accurate.

