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September 13, 2018

Brian Burden, EIT
Project Manager Clean Water Program
Pennsylvania Department of Environment Protection
Northeast Regional Office
2 Public Square
Wilkes-Barre, PA 18701-1915

CLEAN WATER PROGRAM
COUNTY: _____
MUNIC.: _____

SEP 18 2018

FACILITY NAME: _____
PERMIT#: _____
FILE TYPE: _____

RE: Technical Deficiencies -
Pollutant Reduction Plan (PRP)
North Whitehall Township MS4
NPDES Permit No. PAJ132276
Authorization ID No. 1200829
North Whitehall Township, Lehigh County
Benchmark Project No. 607043

Dear Mr. Burden:

Below please find each of your March 9, 2018 review letter comments and how they have been addressed.

The Department of Environmental Protection (DEP) has received your individual permit application for NPDES permit coverage along with your PRP. DEP has determined that there are significant technical deficiencies associated in your PRP that must be corrected. The technical deficiencies are as follows:

- The plan was not made available for public review. Please publish notice of the availability of your plan, provide for a 30-day comment period, provide evidence that the plan was made available for public review as well as evidence that a public meeting was held at which the plan was discussed and the public had an opportunity to provide comments.

Publication to meet the 30 day review and comment period, as well as the Board of Supervisors public meeting was provided in the attached posting as well as the Township Newsletter. Because of holidays and administrative constrains, the public meeting and comments had to be delayed until August, thus the delay in response from North Whitehall until the minutes could be reviewed and approved. Receipt of the minutes, approved

September 10, dictate this response date. Publication and notice of plan availability was made

I have, hopefully, kept you informed of this matter in prior emails.

This information is titled PUBLIC NOTIFICATION AND INFORMATION and included as Attachment A in this response.

- The methodology used to calculate the existing loading and the proposed BMP loading reductions is unclear. Section II.C. of the PRP indicates that the impervious area loading rate used is 1,839 lbs/acre/yr and the pervious loading rate used is 264.96 lbs/acre/yr. Those loading rate values were not found in any of the calculation spreadsheets included in Appendix E of the PRP. The last five columns illustrate the calculators, including TSS lbs/ac/yr, TSS lbs/year, Percent reduction (using rates in BMP + rates for numerous treatment trains), Reduction, and total sediment runoff in pounds.

Loading rate methodology was used, using the wikiwatershed.com data produced. This data provides the loading rates in Kg/ha which were converted. The spreadsheet in Appendix E provides this calculation and summation. The default for the county/township (as listed above and in Section IIC) were not utilized.

The last five columns illustrate the calculations including: 1. TSS lbs/ac/yr. 2. TSS lbs/year, 3. Percent reduction (using rates in BMP + rates for numerous treatment trains), 4. Reduction, and 5. total sediment runoff in pounds.

- The total area calculated for each individual sewershed does not equal the sum of its parts for many sewersheds. For example: DP 002 Coplay Creek has a total area of 82.24 acres. The next page shows that 13.52 acres are considered "open space", 28.15 acres are considered "low intensity", 14.19 acres are considered "medium intensity", and 0.22 acres are considered "high intensity". After summing each of those 4 categories, a result of 56.08 acres is obtained.

The spreadsheet provided was truncated and is taken from the wiki watershed program as listed above. A complete spreadsheet, which provides this complete data from the program is now included with this response.

This information is titled INDIVIDUAL WATERSHED CALCULATIONS and included as Attachment B in this response. This is consistent with the information provided in Appendix E of the initial Plan. Appendix E information is included in this attachment.

- Another calculation in Appendix E of the PRP takes into account the percentage of Soils A, B, C, and D. The use of these soil categories is unclear. The final column gives a TSS estimation (in kg/ha) for each watershed, but it's unclear how that value was arrived at.

The categories are only in this spreadsheet as it is data gathered using the referenced program. The extent that the program algorithm uses this information is unknown, but is provided as it represents output data from the wiki watershed program(s). The complete summation of wiki watersheds information is provided in Attachment B.

- Detailed calculations are not provided for the existing best management practices (BMPs) that serve to reduce existing pollutant loads. All existing BMPs are to be identified on the map(s).

Relative to BMPs in practice included in the PRP, the Township only owns the aforementioned six(6) ponds, which are identified on the maps and spelled out in the prior submitted application/report. Based upon observation and type of facility, the estimated reductions are, in opinion far less than the actual, considering the efficiency of these ponds, excluding the needed work on Ancineta Pond. This reduction is provided in the appropriate column and is based upon the numbers provided in the BMP manual as well as review of actual conditions. Best engineering estimates, co-ordinated with the numbers provided in the BMP manual were used to make this reduction.

Mapping showing the aforementioned six ponds and the coordinates are included in this re-submission.

This information is titled TOWNSHIP POND MAPPING and included as Attachment C in this response.

- All of the proposed best management practices (BMPs) that will be implemented to achieve pollutant reduction objectives are not identified on the map. Please correct and resubmit the map.

The plan was developed with options to meet the required reductions. It is not known exactly which projects will be feasible, practical or implemented. This is why the options were provided. A listing of the anticipated reductions is already included in the original submitted plan/report. The projects that we now anticipate being completed will be listed as probable projects in the mapping provided with this re-submission.

These projects we anticipate include 1. Ancineta Pond construction 2. Stream embankment restoration along the copley creek, and 3. Stream embankment restoration along the Fells Creek and/or Pond upgrades and improvements to the Pond at Laurys Station Park. Because of the nature of stream bank projects, and the preliminary primary phases of this MS4 program, the effectiveness of pollution reduction is only estimated,

- The map shows areas that have been parsed; however, it seems that certain areas have been parsed incorrectly or are unauthorized. All township-owned roads and all areas that drain to those roads are part of the MS4 and are to be included in the planning area.

Where there were not draining facilities or POIs to discharge into the streams of interest, these areas are not mapped, are labeled as NTF (no Township Facilities) and parsed- out. We have revised the map to show parsed out areas as there are either no facilities, or state roads, or only private farms/facilities that drain to the stream and no Points of Interest created or maintained by the Township.

Stormwater generated in any of the parsed subdivisions enters a township-owned conveyance (including roads, pipes, or natural open-channel ditches), then the area cannot be parsed. **See response above, the comment is understood.** If municipal stormwater enters the parsed area, then the area cannot be parsed. **See response above, the comment is understood.** There is a lot of parsed area that does not appear to be part of any subdivisions or NPDES permitted areas. **See response above, the comment is understood** Stormwater is expected to concentrate into channels when given that much of an area. The natural channels are part of the MS4 if they are on township-owned land. **Where these channels exist, it is not within Township right-of-way or on township land, hence the areas have been appropriately parsed out.**

Also, an explanation must be provided in the PRP for each parsed site that demonstrates there is no municipally-sourced flow in the discharge. **Appropriate labeling of parsed out areas is shown the revised map. Simply stated, the parsed out areas consist of PennDOT property/right-of-way/no township facilities, Private areas with no township facilities, and Non Urbanized areas.**

This information is titled PARSED OUT AREA MAPPING and included as Attachment D in this response.

- Many inlets are included on the map(s), however, the piping that connects the inlets is not included. Stormwater conveyances leading to the outfalls are not included on the map(s).

This information is in the ArcGIS programming and mapping. A hard copy of the mapping is included in this supplement and is titled TOWNSHIP PIPING and MAPPING and included as Attachment E in this response

- The plan does not identify the pollutant(s) of concern.

This response should be considered to identify the pollutants of concern. The following is taken from page 106 of 163 revised 10/24/2016 as provided for Lehigh County.

Lehigh River basin (includes Fells and Spring Creek) Metals, Organic Enrichment/Low DO and Siltation.

Jordan Creek Siltation

Copley Creek Pathogens and Siltation

Unnamed tributaries to the Copley Creek - Suspended Solids

Mill Creek Pathogens

This information is titled POLLUTANTS OF CONCERN and included as Attachment F in this response

- The plan takes credit in the form of reduced existing loading by acknowledging existing stormwater BMPs in the Planning Area. However, the information requirements for existing BMPs have not been met. The following information is required for each existing BMP: a detailed description of each BMP, latitude and longitude coordinates, the permit number (if any) that authorized the installation of the BMP, detailed calculations demonstrating the pollutant reductions achieved by the BMP, the date the BMP was installed and a statement that the BMP continues to serve the function(s) it was designed for, the O&M activities for the BMP, the O&M frequencies associated with the BMP.

The attached pond inventory is included which provides in columnar form the requested information. Also included is an O and M plan for the existing facilities that the Township is responsible for and has already implemented.

This information related to ponds location is included in Township Pond Mapping and included at attachment C. Information related to BMP reduction is included in the calculations in Appendix B as well as Appendix E of the initial plan. Further explanation is included in this response letter.

Pursuant to this comment a written O and M plan for existing facilities is included.

This information is titled O and M ACTIVITIES AND PLAN FOR EXISTING BMPS and included as Attachment G in this response

Proposed future BMPs and improvements will have O and M incorporated with each plan approval.

- It is unclear from the information in the plan as to which BMP(s) are being proposed for implementation. Please correct by identifying the BMP name(s) as used in the Chesapeake Bay Model and resubmit your plan.

Various options were investigated during development of the plan. Since that time the specific plans for each basin include the following:

- 1. Jordan Creek Basin –Ancineta Pond design – BMP –Stormwater BMP (pond) for development. [IN DESIGN]**
- 2. Fells Creek Basin –Township Property - BMP - Stream Restoration- Township Owned Property [Conceptual subject to change]**

3. Copley Creek - Township property - BMP Stream Restoration [Conceptual subject to change]

These options are to be reviewed on an annual basis and maybe subject to change.

These projects/BMPs will be constructed and maintained by North Whitehall Township on properties owned by the Township.

- The plan proposes the use of stream restoration as a BMP for pollutant load reductions. However, the calculations of credit are inconsistent with the PRP Instructions (3800-BCW-0100k).

For conceptual purposes a general number was used. As planning proceeds, we will use one of the accepted protocolist for accurately calculating this pollutant reduction via stream restoration. The proper and best protocol to follow to determine the sediment reduction credit will be best determined in the preliminary design phase. The Township appreciates the stream restoration may have to be enlarged (or smaller) based upon the protocol calculations in the design phase.

- The plan does not identify probable sources of funding for each BMP. Plans need to specify probable sources of funding for each BMP, with alternatives in the event the funding sources do not materialize.

The general fund has adequate financial resources in it over the next five years to fund the proposed projects. A stormwater utility fee has been discussed with the BOS and is an alternative, if funding is not achieved and maintained.

- The plan does not identify the entity that will be responsible for the operation and maintenance (O&M) of each proposed BMP.

The plan identifies optional construction of BMPs for each of the drainage basins. The exact options to be implemented are yet finalized. However the plan has been modified to show the proposed BMP (all options) and NWT as the entity responsible for O and M of the BMPs. O and M for any new construction will be included within the plan sets as will responsible entity. If it's a public stream restoration or pond project, NWT will be named as that entity.

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- The plan does not identify O&M activities or frequencies associated with each proposed BMP.

A schedule for O and M activities and their frequencies is added in this attachment to the plan. As provided above, O and M for any new construction will be included within the plan sets established and designed in the future as will responsible entity. If it's a public stream restoration or pond project, NWT will be named as that entity.

This information is titled O and M ACTIVITIES AND PLAN FOR EXITING BMPS and included as Attachment G in this response

Please find two copies of this Supplemental Response for your review.

If you have any questions please do not hesitate to contact me.

Sincerely,



Bernard M. Telatovich, P.E.

BMT/slc
enclosures