CRANBERRY
• TOWNSHIP •
built for you

724 | 776 | 4806
724 | 776 | 5488
CranberryTownship.org

March 15, 2018

Department of Environmental Protection
Northwest Regional Office
Clean Water Program
Justin C. Dickey, P.E.
Environmental Engineering Manager
230 Chestnut Street
Meadville PA, 16335

Re: Response to Technical Deficiencies – Pollutant Reduction Plan (PRP)
Cranberry Township, Butler County
NPDES Permit No. PAG138318
Authorization ID No. 1201086
Cranberry Township, Butler County
Cranberry Township PRP Amendment #1 (3/15/2018)

Dear Mr. Dickey:

This correspondence is a follow up to the Pollutant Reduction Plan (PRP) technical deficiencies notice dated March 6, 2018 and received March 8, 2018. Below are the technical deficiencies noted in the correspondence along with the Township comments shown in italics and blue font under the deficiency.

- DEP requests that you submit an implementation schedule for the proposed BMPs identified in your plan. The schedule should take into consideration any required permitting, influence on size or number of BMP's constructed as a result of other potential BMPs (i.e. oversizing of future private development BMP's).

  Township Response: Enclosed is the preliminary implementation schedule for proposed BMPs identified as option #1 on page 12 of submitted PRP Plan. The schedule will be amended during the 5-year permit cycle to identify any changes.

- Proposed best management practices (BMPs) that will be implemented to achieve pollutant reduction objectives are not identified on the map. In the event that the final location has not been determined (i.e. vegetative open channels along Township roads), the PRP will need amended during the upcoming permit cycle to identify these locations. Please correct and resubmit the map and/or clarify a plan and schedule for updating the PRP during the upcoming permit cycle (2018 to 2023). In the event that the map cannot be updated This can be addressed in the implementation schedule previously discussed.

Township Response: Preliminary location of vegetative swales has been added to implementation schedule. Amendments will be made to the implementation schedule and these BMPs will be added to the Township BMP quarterly inspection schedule when completed. Location and limits of vegetative swales will be shown on Township BMP map.

- The plan proposes tree planting in Township parks as a proposed BMP. However, the plan provides very little discussion on this BMP. The Department requests that you provide additional details including supporting information for the calculated load reduction for this BMP.

  Township Response: Throughout the 5-year permit cycle the Township intends to plant trees within the Township owned parks. Enclosed is a plan of preliminary tree locations at North Boundary Park. Amendments will be made to the location of future planting throughout the permit cycle.

  Tree Planting Description: The BMP effectiveness value for tree planting is estimated by DEP. DEP estimates the that 100 fully mature trees of mixed species (both deciduous and non-deciduous) provide pollutant load reductions for the equivalent of one acre (i.e. one mature tree=0.01 acre) The BMP effectiveness value given are based on immature trees (seedings or saplings); the effectiveness values are expected to increase as the tree matures. The amount of pollutant load reduction was calculated 1.) multiplying the number of trees planted by 0.01; 2.) Multiply the acreage determined in step 1 by the pollutant loading rate for the land prior to the planting trees. 3.) multiply the results of step 2 by the BMP effectiveness value given.

  Tree Planting - Effectiveness value 20% (200 Trees Proposed)
  = 200 Tree x .01 = 2 Acre x .80 (Impervious Surface) x 1839 lb/acre/yr (Pollutant Load Rate)
  = 2,942.4 lb/acre/yr, 2,942.4 lb/acre/yr x 20% = 588.48 lbs/yr

  = 200 Tree x .01 = 2 Acre x .20 (Pervious Surface) x 265 lb/acre/yr (Pollutant Load Rate)
  = 106 lb/acre/yr, 106 lb/acre/yr x 20% = 21.2 lbs/yr

  = 588.48 (Impervious Surface) + 21.2 (Pervious Surface) = 609.68 lbs/yr or 610 lbs/yr

  Final calculations will be provided as part of the amendment based upon actual location of trees planted.

- Although the plan identifies the entity that is responsible for existing private development BMP's, the plan does not identify the entity that will be responsible for the operation and maintenance (O&M) of each proposed BMP. In other words, the plan should include O&M responsibilities, including specifications for O&M, for proposed municipal owned BMP's (i.e. vegetative open channels, streambank restoration, tree planting, etc.). Please correct and resubmit your plan.

Township Response: *When a new Township owned BMP comes on line the Township incorporates these BMP into the quarterly inspection program as required under Minimal Control Measure #6. The proposed vegetative open channels, streambank restoration and tree planting will be added to the Township Owned Storm Water Control Facility Plan (See attached plan). The Engineering Department performs the inspections and if there is a problem places work orders into Public Works Department to make the repairs.*

I believe these clarifications addressing the technical deficiencies do not change location of the proposed BMPs and will not require public notice to be placed for reviewed and commented. Per my telephone discussion with Stephen McCauley, E.I.T. – Environmental Engineering Specialist, it is the Township's intent to treat this correspondence and attached drawings as Cranberry Township PRP Amendment #1.

If you have any questions, please do not hesitate to contact me 724-776-4806 at extension 1163.

Sincerely,

Timothy Schutzman, P.E.
Engineering & Environmental Services
Waterworks Coordinator

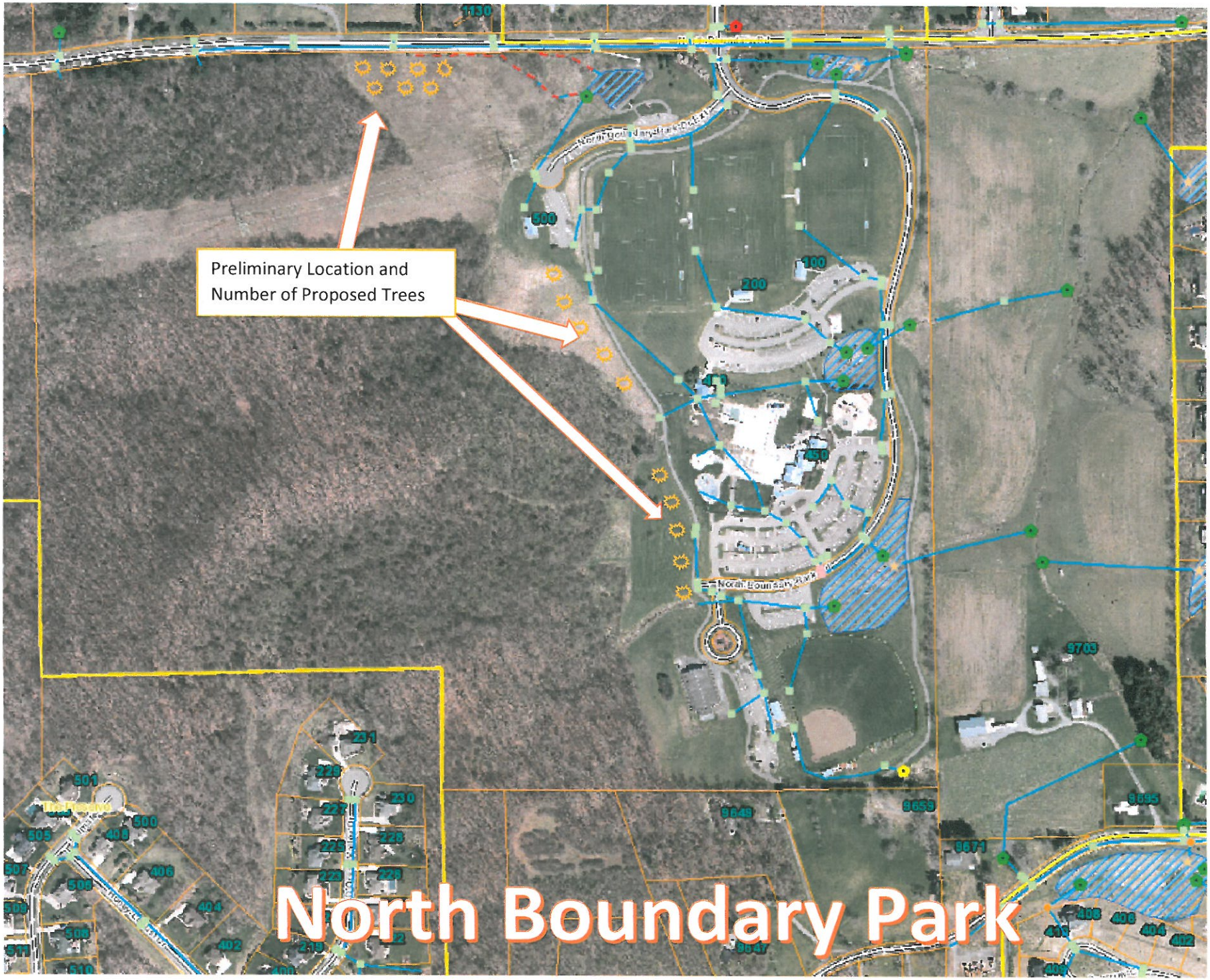
I:\Engineering\MS4\MS4 NOI\2017\DEP Review Comments\CT Response TDL3_2018

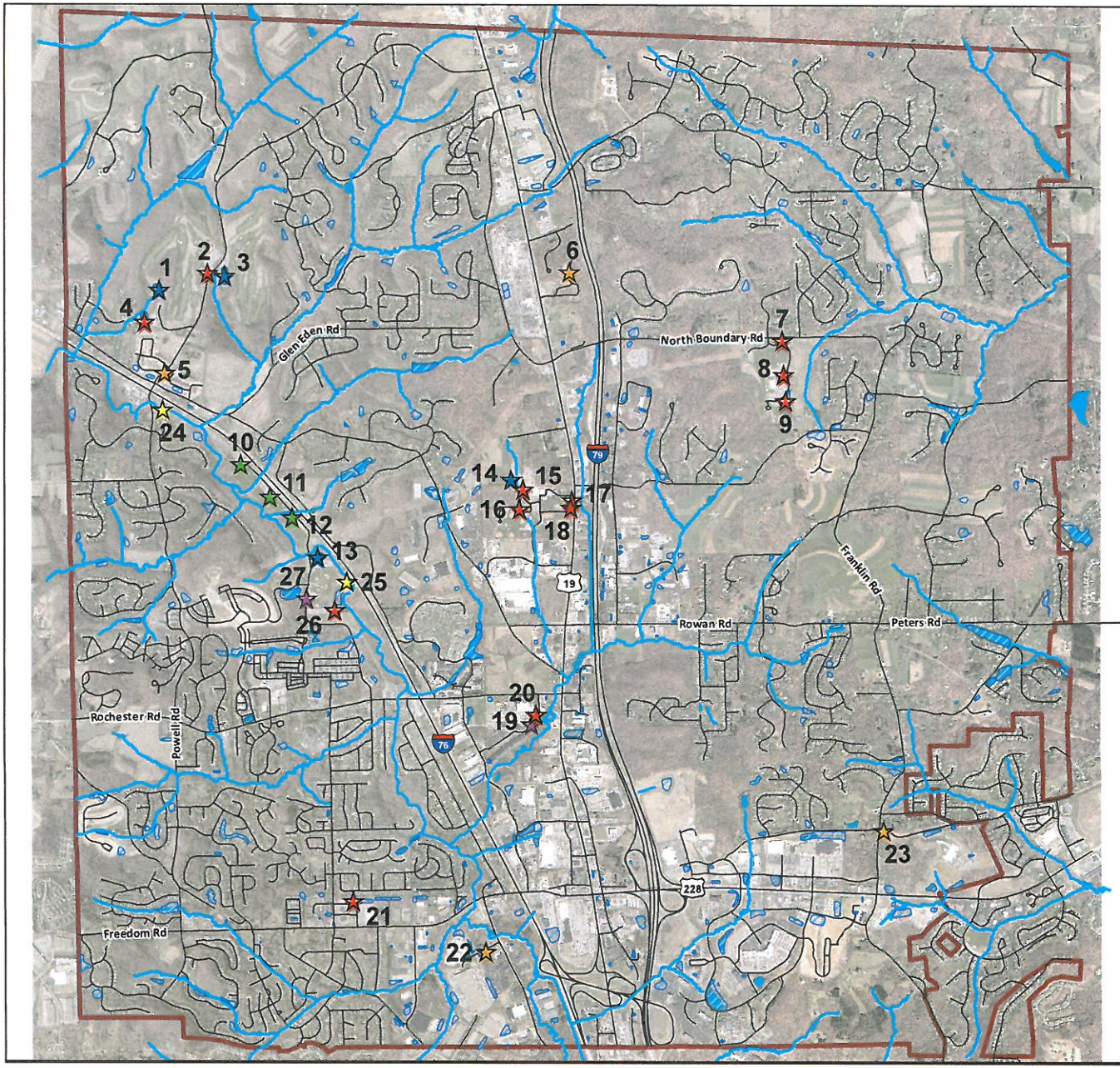
Cranberry Township - PRP -Estimated Implementation Shedule (3/15/18)

Proposed BMP #	Proposed BMP Location	Proposed BMP	Activity Name	Start	Finish
1	Brush Creek	**Stream Bank Restoration**		8/1/18	6/1/23
			Design Process	3/1/19	8/1/19
			Chapter 105 Joint & NPDES Permit Application Submittal and Review	8/1/19	3/1/20
			Bid Contract (Phase 1)	5/1/20	7/1/20
			Construction Phase 1	9/1/20	11/1/20
			Bid Contract (Phase 2)	5/1/21	7/1/21
			Construction Phase 2	9/1/21	11/1/21
2	Twp. Inlets	**Storm Sewer System Solid Removal**		4/1/18	3/1/23
			Public Works Department - Averages 125 Basin Rebuilds & Solid Removal a year	May	Nov
			Jetting & Vacuum Truck brought in on as need bases		
3	Twp. Park	**Tree Planting**		10/1/18	11/1/22
			North Boundary Park - Disc Golf Course Area	10/1/18	11/1/18
4	Along Twp. Streets	**Vegetative Open Channels**			
			Darlington Road - Upgrade and Improvement Project	4/1/18	6/1/18
			Freshcorn Road - Upgrade and Improvement Project	4/1/18	6/1/18
			Hope Road - Upgrade and Improvement Project	4/1/18	6/1/18
5	Twp. Streets	**Street Sweeping**		4/1/18	6/1/23
			Sweeping Program	May	July
			Periodic sweeping performed on as needed bases		

Cranberry Township - PRP -Estimated Implementation Shedule (3/15/18)

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2018			**New MS4 Permit 3/16/18**	Veg Swale - Darlington Road	Street Sweeping Program					Tree Planting - North Boundary Park		
2019				Brush Creek - Stream Bank Restoration Design Process					Brush Creek - Stream Bank Restoration Permit Review			
				Veg Swale - Freshcorn Road	Street Sweeping Program				Tree Planting - Township Parks			
2020	Brush Creek - Stream Bank Restoration Permit Review			Brush Creek Stream Bank Restoration Bid & Construction Phase 1								
				Veg Swale - Hope Road	Street Sweeping Program				Tree Planting - Township Parks			
2021				Brush Creek Stream Bank Restoration Bid & Construction Phase 2								
					Street Sweeping Program				Tree Planting - Township Parks			
2022					Street Sweeping Program				Tree Planting - Township Parks			
2023			**New MS4 Permit 3/16/23**									


Preliminary Location and
Number of Proposed Trees
North Boundary Park



CRANBERRY
TOWNSHIP

Township Owned Storm Water Control Facilities

Legend

Cranberry's Facilities

- Dry Pond
- Wet Pond
- Underground Detention
- Underground Infiltration
- Vegetated Swale
- Bioretention Area
- Other Detention Basins
- Lakes
- Stream
- Streets
- Township Boundary

Cranberry Township
Butler County
January 2nd, 2018

N
W E
S

CRANBERRY TOWNSHIP built for you.