

**PADEP MS-4 – NPDES**  
**POLLUTION REDUCTION PLAN**  
**NEW BRITAIN BOROUGH**  
**BUCKS COUNTY, PA**

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## **I. General –**

The scope of the Pollution reduction plan is to reduce pollutants to the local streams to provide healthier and more useable streams for fishing, recreation and swimming. The affected drainage areas are contributory areas to the Neshaminy Creek which in New Britain Borough include the Pine Run Creek, Cooks Run Creek and the Neshaminy Creek.

The pollutants in our creeks are as follows:

Pine Run Creek – Excessive algae growth

Cooks Run – Nutrients

Neshaminy Creek – Pathogens, Nutrients, Organics, low dissolved oxygen, siltation and suspended solids.

These streams have varying issues which must be addressed according to state regulations. The streams' conditions must first be evaluated and verified with the above information, and then proposed alternate methods for correction.

For example, the algae in the Covered Bridge Pond may contribute to the streams health, so a treatment at the pond may benefit. The nutrients at Cooks Run could be caused by over fertilization of the neighboring yards and lack of a riparian buffer. The Neshaminy siltation and suspended solids may be addressed by decreasing the amount of grit put on the roads in the winter and using a more concentrated salt treatment, or brine. Also, point discharge users (such as Del Val Concrete) which generates a lot of sediment, contributes directly to the stream sediment pollution. Additional street sweeping may also benefit.

The Clean Water Act sets a national minimum goal that all waters be “fishable” and “swimmable.” Water quality standards are state regulations that have two components. The first component is a use, such as “warm water fishes” or “recreation.”

Neshaminy Creek is impaired due to high concentrations of phosphorus in the water and silt covering the creek beds. The TMDL includes a plan for decreasing the instream phosphorus concentrations and for reducing the sediment loads delivered to the streams, in order to meet Pennsylvania water quality standards.

## **II. Pollution Reduction -**

We need to determine how much pollution we need to remove as this has a direct reflection on costs. The pollutant levels are measured at different stream flow levels for different pollutants and then evaluated for potential removal. Pollutant levels are sometimes classified by the type and number of species (specifically invertibrates) that live in a stream.

## **III. Recommendations**

At this preliminary stage the following is recommended for the following streams:

1. **All Creeks:** Eliminate use of grit mixed with salt for winter months. This involves discussions and pricing changes to the New Britain salt prices from New Britain Borough.
2. **All Creeks:** Additional street sweeping. This can be arranged with Chalfont Borough, or by hiring other street sweeping contractors.
3. **Neshaminy Creek:**

- a. Develop a plan with Del Val Concrete (DVC) to reduce sediment loading to South Shady Retreat Road. A storm collection filtration system should be considered along with more frequent street sweeping and a watering system to direct the sediment to a filtration system. The Borough has contacted DVC and found that they are interested in working with the Borough to help reduce pollution in this manner.
- b. Investigate methods to reduce the number of pathogens by first investigate the source discharge, or by providing treatment to the water, or embankments themselves.
- c. Investigate methods to reduce the number of nutrients. This would be mostly lawn fertilizers.
- d. Investigate methods to increase dissolved oxygen levels. This can be done by reducing nutrients, fertilizers and phosphorus into the streams.
4. Pine Run Creek: Investigate methods to reduce algae. A primary source of this is shallow slow moving water, or ponds. The Covered Bridge Park is a targeted area to reduce algae from entering Pine Run Creek.
5. Cooks Run Creek: Investigate methods to reduce the number of nutrients. This would be mostly lawn fertilizers