
What's Going Down Your Drain?



Treatable Parameters

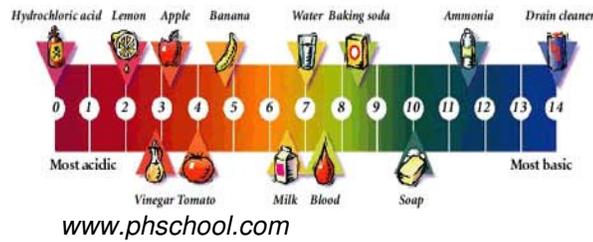
To minimize the impact to the aquatic ecosystem of the Connoquenessing Creek, the Pennsylvania DEP has set stringent treatment parameters that BASA must meet every day. The BASA system is designed to accept and treat normal levels of household and light commercial wastewater discharges. The main parameters that must be met are dissolved oxygen (DO), pH, suspended solids, ammonia nitrogen, phosphorus, chlorine residual, fecal coliform, and biochemical oxygen demand (BOD).

- ❖ **Dissolved Oxygen (DO)** – Dissolved oxygen is the amount of atmospheric oxygen dissolved in the treated discharge. Low levels of dissolved oxygen can be detrimental to aquatic life, especially fish. BASA is required to maintain a level of dissolved oxygen level of at least 5 mg/L.



- ❖ **pH** – Is an expression of the intensity of the basic or acidic condition of a liquid. The pH may range from 0 to 14, where 0 is most acidic, 14 most basic, and 7 neutral. BASA is required to keep the pH between 6 and 9 at all times.

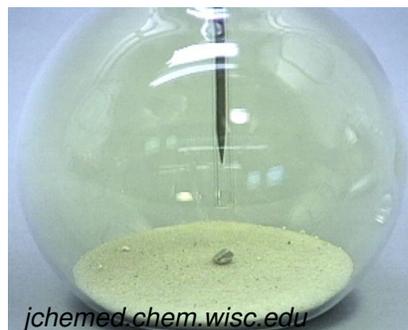
The pH Scale



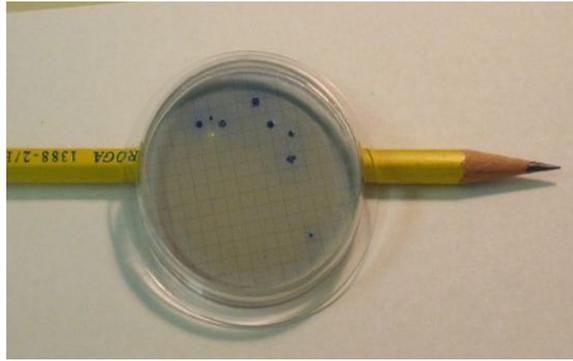
- ❖ **Suspended Solids** – Suspended solids are solids that either float on the surface or are suspended in wastewater. The monthly average for BASA’s treated discharge for this parameter must not exceed 30 mg/L.



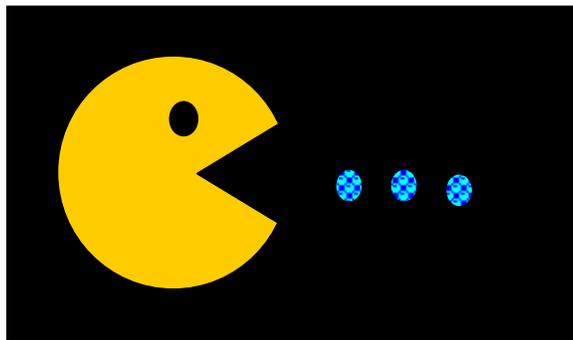
- ❖ **Nitrogen and Phosphorus** – A wastewater treatment plant discharges Nitrogen and Phosphorus. If too much is released, it can lead to oxygen depletion or algae in the Connoquenessing Creek. BASA is required to keep Phosphorus concentrations below 2 mg/L. The Nitrogen concentration is required to be less than 6 mg/L during the winter months and less than 2 mg/L in the summer.
- ❖ **Residual Chlorine** – Chlorine is used to kill any pathogenic microorganisms that may be present in the treated discharge. The monthly average residual chlorine cannot exceed 0.33 mg/L to prevent killing aquatic life in the stream.



- ❖ **Fecal Coliform** – A type of bacteria indicative of possible pathogenic contamination. The DEP permits up to 2000 colonies per 100 mL to be discharged during the winter and a more stringent limit of 200 colonies per 100 mL in the summer.



- ❖ **Biochemical Oxygen Demand (BOD)** – BOD is a measure of the rate at which organisms use dissolved oxygen while decomposing organic matter. In decomposition, organic matter serves as food for the bacteria and energy results from its oxidation. BOD measurements are used as a measure of the organic strength of the treated water. The monthly average for BASA for this parameter must not exceed 24 mg/L during the winter with a more stringent limit of 12 mg/L in the summer.



Untreatable Parameters

There are many chemicals from common household and commercial uses that may make their way to the wastewater BASA treatment plant. Several of these chemicals are completely utilized with the biological treatment processes at BASA's treatment plant. However, many chemicals are not removed at all and simply end up being discharged to the Connoquenessing Creek. Other chemicals can upset and interfere with these biological processes causing BASA to violate its discharge limits. You should do your part by making sure chemicals such as these do not get into the public sanitary sewer system:

- ❖ Bug Spays
- ❖ Prescription Medicines
- ❖ Floor Care Products
- ❖ Metal Polish with Solvent
- ❖ Antifreeze
- ❖ Automatic Transmission Fluid
- ❖ Battery Acid
- ❖ Brake Fluid
- ❖ Diesel Fuel
- ❖ Gasoline
- ❖ Kerosene
- ❖ Motor Oil
- ❖ Paint – Oil Based, Auto, and Model
- ❖ Paint Thinner, and Stripper
- ❖ Turpentine
- ❖ Wood Preservative

- ❖ Fungicides
- ❖ Herbicides
- ❖ Insecticides
- ❖ Weed Killer

These are just some of the materials that could adversely affect the public wastewater treatment system, aquatic life in the Connoquenessing Creek, and downstream water uses, including potable water supplies.

The next time you are in your basement, kitchen, garage, or bathroom think twice before you dump toxic and or hazardous chemicals down the drain, or toilet. We all share the public water systems and it is your job to police your own ranks by making sure to dispose of chemicals properly.

It is up to you to make sure the Connoquenessing Creek stays clean! Do your part; Call the Butler County Office of Recycling & Waste Management at 724-284-5305 for answers about proper disposal of potentially hazardous or toxic chemicals. Do not flush them down the drain.

Please contact us if you have any questions or comments about any of the issues presented in this brochure.

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The logo for Basa, consisting of the lowercase letters 'basa' in a bold, blue, sans-serif font.