DMR Parameter Definitions for the public

Loading rate – the amount of pollutant in the effluent to be discharged over time (measured as weight/time).

Concentration rate – the amount of organic matter in the effluent, per unit volume of water (measured as Mass/volume).

Dissolved Oxygen (DO) – The amount of free, non-compounded oxygen molecules (O_2) present in a body of water. This is a key indicator of water quality as it is essential for aquatic life, but too low or too high DO levels can be harmful to aquatic ecosystems. DO levels depend on the physical, chemical, and biological activities in the water source.

DO(Simplified) - Dissolved oxygen, the oxygen mixed in water that aquatic organisms need to survive. Too little or too much DO can be harmful to the aquatic ecosystem.

Biological Oxygen Demand (BOD) – BOD is a measurement of the oxygen required for the biochemical degradation of organic material (carbonaceous demand) and the oxygen mount of dissolved oxygen that microorganisms consume while breaking down organic matter in water. BOD is determined by an empirical test, over five days, computed by the difference between initial and final DO (dissolved Oxygen)

BOD(simplified) - Biological Oxygen Demand, The amount of oxygen needed by bacteria to break down organic waste in water (signifies the carbon is present. It helps measure how polluted the water is.

pH – pH is a scale from 0 to 14 that measures how acidic or basic a liquid is by determining the concentration of hydrogen ions. A pH of 7 is neutral, a pH of less than 7 is acidic, and a pH greater than 7 is basic or alkaline. Treated water should have a pH of between 6.5 and 8.5

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Total Suspended Solids (TSS) – TSS are solid particles that are able to be captured by a filter, usually both organic and inorganic materials such as silt, sand, clay, and general pollutants. High TSS can increase turbidity in water, which can affect its temperature, increase pollutants and reduce its suitability for public use of the water.

TSS (Simplified) – Total suspended solids, small solids like dirt, sand, or other pollutants that float in wastewater and can be caught in a filter. When there are a lot of solids, the water gets cloudy, which can make it dirtier, and less safe or useful for things like drinking, bathing, etc.

Total Nitrogen (TN) – There are three forms of nitrogen that are commonly measured in water bodies; ammonia (NH3), Nitrates (NO3) and Nitrites (NO2). Total Nitrogen is the sum of total kjeldahl nitrogen (organic and reduced nitrogen) ammonia, and nitrate-nitrites, which are monitored individually by treatment plants.

TN (Simplified) - Total Nitrogen, the total amount of nitrogen in water, including different forms like ammonia, nitrates, nitrites. These are all types of nitrogen that can come from sewage, fertilizers, or natural waste. Treatment plants monitor each type to help protect water quality.

Sample Types

Grab Sample – A grab sample is an individual sample collected at a specific time and location to show the condition of the wastewater at the sample time. (usually within 15 min.)

24 Hour Composite Sample – A Composite sample is a collection of samples over time, either continuous sampling or a mix of discrete samples over time. This type shows the average wasterwater characteristics over the period samples are collected. (24 Hour period)

Calculated Sample – A calculated sample is an mathematical determination of a wastewater characteristic, based on the samples gathered previously.

Recorded Sample – Recording is a continuous monitoring of a wastewater trait, to keep a record of where the value is at any point in time at the treatment plant.

Other Pollutants monitored by Back River

Total Phosphorus

E.coli

Total residual Chlorine

Ortho Phosphorus

Total Ammonia Nitrogen

Free Cyanide

Chromium (Hex)

Zinc

Chlordane

Total Polychlorinated Biphenyls (tPCBs)

Whole effluent Toxicity; Acute and Chronic

Units of Measurement

mg/L – Milligrams per Liter

lb/d – Pounds per day

lb/mo – Pounds per month

lb/yr – Pounds per year

SU – Standard units