



16013 Watson Seed Farm Road, Whitakers, NC 27891

Chain of Custody: COC13370 **LABORATORY REPORT**

**Customer Company Customer Contact**

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**Waterbody Information**

Waterbody:	Breezy Lake - RI
Waterbody size:	20
Depth Average:	4

Sample ID	Sample Location	Test	Method	Results	Sampling Date / Time
CTM37473-1	Breezy	Turbidity (NTU)	EPA 180.1	8.5	07/28/2022

**ANALYSIS STATEMENTS:**

**SAMPLE RECEIPT /HOLDING TIMES:** All samples arrived in an acceptable condition and were analyzed within prescribed holding times in accordance with the SRTC Laboratory Sample Receipt Policy unless otherwise noted in the report.

**PRESERVATION:** Samples requiring preservation were verified prior to sample analysis and any qualifiers will be noted in the report.

**QA/QC CRITERIA:** All analyses met method criteria, except as noted in the report with data qualifiers.

**COMMENTS:** No significant observations were made unless noted in the report.

**MEASUREMENT UNCERTAINTY:** Uncertainty of measurement has been determined and is available upon request.

**Laboratory Information**

Date / Time Received: 07/29/22 11:00 AM  
Date Results Sent: Wednesday, August 3, 2022

*Disclaimer: The results listed within this Laboratory Report relate only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a dry weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the exclusive use of SRTC Laboratory and its client. This report shall not be reproduced, except in full, without written permission from SRTC Laboratory. The Chain of Custody is included and is an essential component of this report.*

*This entire report was reviewed and approved for release.*



*Reviewed By: Laboratory Supervisor*

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## Water Quality Analysis Explanation

These water quality parameters are essential to document the condition of a water body and design custom treatment prescriptions to achieve desired management objective

**pH:** Measure of how acidic or basic the water is ( pH 7 is considered neutral).

**<6 notably acidic**      **6 - 9 standard for typical freshwaters**      **>9 notably basic**



0    1    2    3    4    5    6    7    8    9    10    11    12    13    14

**Hardness:** Measure of the concentration of divalent cations, primarily consisting of calcium and magnesium in typical freshwaters. *0-60 mg/L as CaCO<sub>3</sub> soft; 61-120 moderately hard; 121-180 hard; > 181 very hard*

**Alkalinity-** Measure of the buffering capacity of water, primarily consisting of carbonate, bicarbonate and hydroxide in typical freshwaters. Waters with lower levels are more susceptible to pH shifts.  
*<= 50 mg/L as CaCO<sub>3</sub> low buffered; 51-100 moderately buffered; 101-200 buffered; > 200 high buffered*

**Conductivity-** Measure of the waters ability to transfer an electrical current, increases with more dissolved ions.  
*< 50 uS/cm relatively low concentration may not provide sufficient dissolved ions for ecosystem health; 50-1500 typical freshwaters; > 1500 may be stressful to some freshwater organisms, though not uncommon in many areas*

**Dissolved Oxygen-** amount of diatomic oxygen dissolved in the water.  
*< 2 mg/L likely toxicity with sufficient exposure duration; < 5 stressful to many aquatic organisms; >= 5 able to support most fish and invertebrates*

**Phosphorus:** Essential nutrient often correlating to growth of algae in freshwaters.

**Total Phosphorus (TP)** is the measure of all phosphorus in a sample as measured by persulfate strong digestion and includes: inorganic, oxidizable organic and polyphosphates. This includes what is readily available, potential to become available and stable forms. *<12 Åµg/L oligotrophic; 12-24 Åµg/L mesotrophic; 25-96 Åµg/L eutrophic; > 96 Åµg/L hypereutrophic*

**Free Reactive Phosphorus (FRP)** is the measure of inorganic dissolved reactive phosphorus (PO<sub>4</sub>-3, HPO<sub>4</sub>-2, etc). This form is readily available in the water column for algae growth.

**Nitrogen:** Essential nutrient that can enhance growth of algae.

**Total N** is all nitrogen in the sample (organic N<sup>+</sup> and Ammonia) determined by the sum of the measurements for Total Kjeldahl Nitrogen (TKN) and ionic forms.

**Nitrites and Nitrates** are the sum of total oxidized nitrogen, often readily free for algae uptake.

*< 1 mg/L typical freshwater; 1-10 potentially harmful; >10 possible toxicity, above many regulated guidelines*

**Chlorophyll a:** primary light-harvesting pigment found in algae and a measure of the algal productivity and water quality in a system.

*0-2.6Åµg/L oligotrophic; 2.7-20 Åµg/L mesotrophic; 21-56 Åµg/L eutrophic; > 56 Åµg/L hypereutrophic*

**Turbidity-** Measurement of water clarity. Suspended particulates (algae, clay, silt, dead organic matter) are the common constituents impacting turbidity.

*< 10 NTU drinking water standards and typical trout waters; 10-50 NTU moderate; > 50 NTU potential impact to aquatic life.*