

Livestock Water Testing GUIDELINES



Miranda Meehan, NDSU Extension Livestock Environmental Stewardship Specialist

Aaron Larsen, North Dakota Department of Environmental Quality Watershed Management Program Manager

Michelle Mostrom, NDSU Veterinary Toxicologist

Sample Protocol

- 1 Collect sample in clean 1-quart or larger plastic (preferred) or glass container
 - a. Sample containers can be obtained from your county office of the NDSU Extension Service or the watershed coordinator with your local Soil Conservation District.
 - b. The Astro Chem Lab prefers you contact it to get a sample kit/container.
- 2 Collect sample from area where livestock are drinking. If collecting cyanobacteria (blue-green algae), take a sample in the bloom and wear gloves because it can be toxic to humans.
- 3 Rinse container several times using water to be sampled
- 4 Fill container completely. Being sure to collect water from deeper in the water and the surface.
- 5 Label the container with following information:
 - a. name of waterbody
 - b. name of sampler
 - c. date collected
 - d. time collected
- 6 Seal the container tightly and wrap the top with tape to prevent leaking. Place the water in a sealed plastic bag.
- 7 Complete laboratory sample custody form required to be submitted with the sample; contact the laboratory if needed
- 8 If submitting a cyanobacteria sample, **ship immediately** on an ice pack (**no wet ice please**) by next-day delivery. Do not freeze the sample or leave it on the dashboard of your vehicle (avoid temperature extremes). Fresh samples yield the best results. Many samples begin to degrade rapidly after collection; therefore, samples should be received by the laboratory within 24 hours whenever possible.
**We recommend collecting and shipping samples before Friday to avoid shipping delays.*

Testing Labs

NDSU Veterinary Diagnostic Laboratory

701-231-7527 or 701-231-8307 • www.vdl.ndsu.edu

- Water screen: nitrates, pH, total dissolved solids (TDS), sulfates
 - Cost: \$25 for test and \$10 submission fee (submission paid once when submitting multiple samples)
- Cyanobacteria (blue-green algae)
 - Cost: \$20 for test and \$10 submission fee (submission paid once when submitting multiple samples)
- Turnaround: within one day of samples arriving at lab
- Shipping:

U.S. Postal Service

Veterinary Diagnostic Laboratory
NDSU Dept. 7691
PO Box 6050
Fargo, ND 58108-6050

FedEx/UPS

Veterinary Diagnostic Laboratory
4035 19th Ave. N.
Fargo, ND 58102

North Dakota Department of Environmental Quality - Chemistry Division

- Water Quality Screen: pH, sulfate, nitrate + nitrite, total dissolved solids (TDS)
 - Cost: \$62.22
- Arsenic (not included in the water screen)
 - Cost: \$42.38
- Turnaround: Seven to 10 business days
- Shipping:
 - Samples **must** be cooled with an ice pack.
 - Samples **must** arrive at the lab within 48 hours of collection.
- Shipping: Environmental Quality Chemistry Laboratory
2635 East Main
Bismarck, ND 58501

Minnesota Valley Testing Laboratories Inc.

701-258-9720 • www.mvttl.com

- Water screen: nitrates, conductivity, total dissolved solids (TDS), sulfates
 - Cost: \$52
- Turnaround: seven days
- Shipping: Minnesota Valley Testing Laboratories
2616 East Broadway Ave.
Bismarck, ND 58501

Astro Chem Lab Inc.

701-572-7355 • <http://astrochemlab.com>

- Water screen: pH, conductivity, residual sodium carbonate, hardness, sodium adsorption ratio, total dissolved solids, sodium chloride, calcium, magnesium, sodium, iron, potassium, chloride, carbonate, bicarbonate, sulfate and nitrate-N
 - Cost: \$60
- Turnaround: seven days
- Shipping: Astro Chem Lab
4102 2nd Ave. W.
PO Box 972
Williston, ND 58802

NDSU

EXTENSION

JUNE 2021

The NDSU Extension Service does not endorse commercial products or companies even though reference may be made to tradenames, trademarks or service names. NDSU encourages you to use and share this content, but please do so under the conditions of our Creative Commons license. You may copy, distribute, transmit and adapt this work as long as you give full attribution, don't use the work for commercial purposes and share your resulting work similarly. For more information, visit www.ag.ndsu.edu/agcomm/creative-commons.
County commissions, North Dakota State University and U.S. Department of Agriculture cooperating. NDSU does not discriminate in its programs and activities on the basis of age, color, gender expression/identity, genetic information, marital status, national origin, participation in lawful off-campus activity, physical or mental disability, pregnancy, public assistance status, race, religion, sex, sexual orientation, spousal relationship to current employee, or veteran status, as applicable. Direct inquiries to Vice Provost for Title IX/ADA Coordinator, Old Main 201, NDSU Main Campus, 701-231-7708, ndsuoaa@ndsu.edu. This publication will be made available in alternative formats for people with disabilities upon request, 701-231-7881.