Information Bulletin
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2004-01E

Manitoba Conservation

Monitoring Source Water Quality

Amendments to the *Livestock Manure and Mortalities Management Regulation* were approved on March 30, 2004. The full text of the regulation including amendments may be obtained from http://web2.gov.mb.ca/laws/regs/pdf/e125-042.98.pdf. One of the amendments requires producers with 300 or more animal units of any one species of livestock to submit annually analytical results from samples of the drinking water provided to their livestock. Producers are responsible for the costs of collecting, submitting, analyzing and reporting on the source water quality. Following is a protocol that describes how producers can meet this requirement.

Obtaining sample bottles

Special bottles are required for the analyses. These may be obtained from the analytical laboratory prior to sample collection. Sample bottles should be requested for the following tests:

- Total and fecal coliform bacteria (MF method)
- Conductivity
- Chloride
- Ammonia nitrogen
- Total Kjeldahl nitrogen
- Nitrate-nitrogen

Which source should be sampled?

The primary source of water supply provided to livestock at the farm site should be sampled. In most instances this will be the well or pump that supplies water to the barn or to the confined livestock area. Temporary sources such as water supplies provided in pastures should not be sampled. Operations that provide drinking water to their livestock from water cooperative pipelines are not required to collect and submit samples for analysis because the cooperatives sample and test these waters. However, these operations must still file a report indicating which cooperative provides the source water for their livestock. (See Reporting Form at end of paper.)

Collecting the sample

Analytical laboratories will provide a sampling protocol that must be followed. Generally, samples must be taken directly from the tap or pump rather than from a pipe, trough, or hose. The pump or tap should be allowed to run for approximately five minutes before the sample is taken. The sampling point should be as close to the well as possible without compromising the sample and the water should not have been subjected to treatment (e.g. chlorination, water-softening). Every attempt should be made to sample at approximately the same time each year to reduce to some extent any seasonal variability that may occur.

Label each sample bottle with the name of the operation and the sampling date. Samples should be collected as near as possible to the time of their delivery to the analytical laboratory.

Bottles for bacterial analysis (100 ml in size) must be handled carefully to prevent contamination of the sample. The inside of the cap and the inside of the bottle must not be touched or allowed to come into contact with the tap or any other object. The bottle must not be rinsed as this will remove a preservative that may be present in the bottle. These bottles should be filled only about ¾ full.

Other sample bottles may be rinsed unless the protocol from the analytical laboratory advises otherwise. These bottles should be filled completely. Collected samples that cannot be immediately transported to the analytical facility must be stored in a refrigerator or in a cooler on ice until delivery.

Sending samples for analysis

Samples that are not stored properly or delivered to the analytical laboratory within a certain time frame will deteriorate and the analytical results may not be accurate. Ideally, samples will be placed on ice in coolers and will be transported to the analytical facility immediately after collection. However, this will not be possible for all producers. Some producers may need to arrange for courier service or bus delivery. Consult with the analytical laboratory to determine the best way to ensure that your samples arrive at the laboratory as quickly as possible.

Reporting results

Be sure to fill out the Reporting Form that is provided at the end of this paper. A copy of the analytical results provided by the analytical laboratory should be attached to the Reporting Form and submitted to Manitoba Conservation as soon as they are received. The results must be submitted no later than December 31 of each year. Results may be sent either by fax (Environmental Livestock Program at 204-948-2420) or by mail to:

Livestock Source Water Sampling Test
Environmental Livestock Program
Manitoba Conservation
1007 Century Street
Winnipeg MB R3H 0W4

Which laboratory to use

Samples may be submitted for analysis to any laboratory that has CALA (Canadian Association for Laboratory Accreditation) or SCC (Standards Council of Canada) accreditation for each of the tests. Local laboratories with CALA and/or SCC accreditation for the required analyses include (alphabetical order):

ALS Laboratory Group
Test Package WA8
Unit 12, 1329 Niakwa Road
Winnipeg MB R2J 3T4
Telephone (204) 255-9720
Fax (204) 255-9721

Cantest
Test Package #70
Unit D – 675 Berry Street
Winnipeg MB R3H 1A7
Telephone (204) 772-7276
Fax (204) 772-2386

Questions?

Please contact the Technical Review Officer at (204) 945-5168.

REPORTING FORM – SOURCE WATER SAMPLING

Name of Operation _____

Mailing Address _____

_____ Postal Code _____

Location of Operation _____

Qtr Sec Twp Rge E/WPM or River Lot/Parish

Rural Municipality _____

Name of Contact _____

Contact Numbers _____

Business Residence Cellular Facsimile

Water Source:

- ☐ Well — Well location (legal description) _____
- ☐ Surface water — Name of surface water _____

  Sampling location (legal description) _____
- ☐ Other source — Specify (e.g. name of water cooperative) _____
- ☐ Where was the water sample collected? (e.g. outside hydrant, house outside tap, kitchen tap)

  _____
- ☐ Date and time of sample collection. _____

Comments: _____

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Remember to attach analytical results!

Proprietary (confidential) information will be protected in accordance with Manitoba law.
Personal information is collected under the authority of *The Environment Act*, the *Livestock Manure and Mortalities Management Regulation*, and will be used for administration and enforcement purposes. Information collected is protected by the privacy provisions of *The Freedom of Information and Protection of Privacy Act.* If you have any questions, contact the Access & Privacy Coordinator, 1383 Whyte Avenue, Winnipeg MB R3E 1V7; 1-204-945-4170.