

Nutrient Management Newsletter

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Liquid Transfer System Design Requirements Under the Nutrient Management Act

The Liquid Transfer System is an important part of the farm operations.

It is designed to transfer manure to a permanent storage facility easily and efficiently. In the past, construction contractors and farmers have installed these transfer systems with minimal design work. The Nutrient Management regulation requires all transfer systems be designed and inspected by a professional engineer.

The **liquid transfer system** includes components that come into contact with agricultural source materials such as pumps (hydraulic/mechanical/air), cross augers, pump-out chambers, mechanical scrapers, collection pits and all associated pipes. It does not include the floors of the permanent storage facilities.

The engineer-designed transfer system must include all the designed gasketed fittings including tees, end caps, and elbows that are compatible with the pipe material. **All pipes that enter through the floor or wall of a storage tank (pump-out chamber or transfer/collection pit) must have a flexible watertight gasket or membrane to serve as an anti-seepage collar.**

Contractors who install liquid transfer systems must be aware of the requirements of the Nutrient Management regulations. Before installing the transfer system, contact:

- the barn design engineer; to understand how the transfer system will be connected to the barn and/or transfer pits,
- the transfer design engineer; to ensure you understand construction requirements of the transfer system, and
- the storage tank design engineer; to ensure the tank is sized and placed correctly, and to know how the engineer will seal the pipe that will be penetrating the tank wall.

For more information www.omafra.gov.on.ca/english/nm/liqtrans.htm

Certification Requirements for a NASM Plan Developer– Upcoming Course Dates

Are you planning to prepare a non-agricultural source material (NASM) plan for your own agricultural operation or someone else's?

If so, then you must hold a NASM Plan Development Certificate, issued by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA). Certificate numbers are required on all NASM plans prepared by consultants.

To achieve the certificate, there are specific certification requirements. There are three required courses:

- Introduction to Nutrient Management
- How to Prepare a NMS/P using NMAN
- NASM Plan Developer's Course ***New***

Introduction to Nutrient Management and How to Prepare a NMS/P using NMAN are prerequisite courses for the NASM Plan Developer's course.

The upcoming NASM Plan Developer's Courses are:

June 15 & 16, 2010 – Kingston
June 24 & 25, 2010 – Barrie
July 13 & 14, 2010 – London
August 24 & 25, 2010 - Dunnville

Refer the OMAFRA website for schedule registration details (www.omafra.gov.on.ca/english/nm/cert/courses.htm).

In addition to the course requirements, certificate candidates will be required to successfully complete two fictitious scenarios and pass an exam before applying for a certificate. The fictitious scenarios and exam are available in English and French.

For more information on NASM, refer to www.omafra.gov.on.ca/english/nm/cert/nasm_plandev.htm.

How Does NMAN Get Its Databank Values?

NMAN database numbers are a baseline and caution should be used in calculating nutrients from a sample.

The manure data bank is updated every few years with samples from Ontario labs. There is a range in sample data, but once 40 samples are submitted, the changes to the average are very small. NMAN has over 1,000 samples for dairy, hogs and poultry.

There is some concern that advancements in feed are changing the nutrient content of manure, which could potentially impact the nutrient management plan and land application rates. Feed ration is the biggest indicator of nutrients in the manure. Dairy manure is generally low in Phosphorus (P) compared to other livestock types (including beef and sheep), and this is likely because of the National Research Council (NRC) ration formulation guidelines for dairy. P and Potassium (K) are the more variable than Nitrogen (N), especially on dairy farms, perhaps because of soil fertility relationships to hay quality. Phytase can make a difference in hog and poultry phosphorus levels (as long as P in the ration is also being reduced), but phytase does not change the manure phosphorus in ruminants.

NMAN database numbers are a baseline and caution should be used in calculating nutrients from a sample. Sampling protocol and consistency are key. There can be wide variability in the samples taken from any liquid or solid manure source depending on:

- The sampling method
- The number of sub samples taken to prepare the lab sample
- How the manure storage is agitated (or lack of agitation)
- Sampling depth
- Change in management practice
- Amount of rainfall for the storage period compared to normal

Even if the management practices are creating a manure type that contains lower P values, justifiable analysis requires samples using consistent sampling protocol at consistent times of the year, for several years in a row. This must be provided to the Approvals Unit when using sample analysis that varies significantly from the NMAN databank values.

While the database provides a reasonable estimation of nutrient values of different types of manure, as a Best Management Practice, farmers are encouraged to regularly take a representative sample of the manure from their farm and have it analyzed. From this analysis, farmers can optimize the use of manure in their cropping program. Here's a link to more information on sampling manure from OMAFRA's Agronomy Guide Publication 811:

For more information please visit: <http://www.omafra.gov.on.ca/english/crops/pub811/9manure.htm#manure>

Milking Centre Washwater Regulation

On January 1, 2011, the General Nutrient Management Regulation (O. Reg. 267/03) under the *Nutrient Management Act, 2002 (NMA)* has been amended and will come into effect, changing how milking centre washwater can be disposed. The intent of the regulation is to stop milking centre washwater from entering water sources by not allowing the washwater to be emptied directly into drainage ditches, streams, or field drainage tiles.

What this will mean to the dairy producer?

The first thing to know is that the part of the regulation that deals with milking centre washwater will come into effect on January 1, 2011.

How soon after January 1, 2011 you have to comply with this regulation depends on whether:

- You are currently required to have a nutrient management strategy by O. Reg. 267/03 and
- You make changes to your milking house or your milking house washwater treatment system.

For most operations, complying will mean either having a liquid storage facility that can store the washwater for eventual land application or sediment tank with treatment trench (i.e. septic system) after the first rinse is diverted. For more information on how this will effect your Nutrient Management Strategy please see refer to:

www.omafra.gov.on.ca/english/nm/nasm/milkingwash.htm

WE WANT TO HEAR FROM YOU!

Do you have questions? Need more information? Have a comment about what you would like to see in the next issue? Please contact your area Environmental Specialist at:

Jacqui Laporte
Clinton Resource Centre
100 Don Street, Clinton, Ontario. N0M 1L0
Email Jacqui.laporte@ontario.ca Telephone (519) 482-1288 Cell (519) 357-7331