Nutrient Management Act

Drainage Engineers Conference
October 25, 2002

**Nutrient Management Framework: Principles**

- Comprehensive, integrated approach to land application of materials
- Sustainable, beneficial management
- Consistent province-wide regulations & standards
NM Components

- Outreach and support
  - OMAF technical assistance, training, financial assistance?

- Research & monitoring
  - science-based, continuous improvement, land application registry, water quality monitoring

NM Components

Clear standards and approvals

mandatory Nutrient Management Plans & Strategies for all farms
OMAF Approval of large and medium sized livestock operations
  Certificate of Operation for large

MOE Certificate of Approval for municipal & pulp & paper biosolids
NM Components

Effective Inspection & Enforcement
MOE lead beginning April 2003

trained staff (environment & ag)

compliance tools
inspections, voluntary abatement,
orders, tickets, spill/incident response,
prosecutions

MOE & OMAF Responsibilities

MOE lead
Enforcement
Environmental Protection Act approvals
Monitoring

Joint
Policy
Standards
Regulations
Research

OMAF lead
Technical farm support
Nutrient Management Act review/approval
Training, certification
Registry
Consultation on Draft Regulations

❖ Stage 1 - started August 2002
❖ Stage 2 - Fall 2002
❖ Stage 3 - Spring 2003

❖ Minister-led province-wide regional meetings, Environmental Bill of Rights registry posting, ministry websites, key stakeholder meetings

Stage 1 Draft Regulations

Content requirements for Nutrient Management Plans & Strategies for farm operations

Categories of livestock operations determines timing of mandatory requirement for a nutrient management plan
Nutrient Management Plan

Define a nutrient management plan
Identify application rates, distances, tile drainage monitoring, adequate land base for spreading
Specify who will have to prepare a plan
Renewal every 3 years or when significant change in operation occurs
Requires records be kept of NMP & actual land application

Nutrient Unit

Number of animals housed, or pastured, at one time, that produce enough manure to fertilize the same acre of crop landbase under most limiting of either nitrogen, or phosphorus, as determined using OMAF’s NMAN software
Nutrient Unit Examples

<table>
<thead>
<tr>
<th>1 Nutrient Unit</th>
<th>300 Nutrient Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 beef cow</td>
<td>300 beef cows</td>
</tr>
<tr>
<td>6 finishing pigs</td>
<td>1800 finishing pigs</td>
</tr>
<tr>
<td>8 ewes</td>
<td>2400 ewes</td>
</tr>
<tr>
<td>1 horse</td>
<td>300 horses</td>
</tr>
<tr>
<td>150 laying hens</td>
<td>45,000 laying hens</td>
</tr>
</tbody>
</table>

Categories of Livestock Farms

*Deﬁnes farm operations:

  - Category I: 30 Nutrient Units or less
  - Category II: 31 -150 Nutrient Units
  - Category III: 151 - 299 Nutrient Units
  - Category IV: 300 Nutrient Units or more

*Categories to allow phasing in of regulatory requirements
Phasing in of Mandatory Nutrient Management Plans

<table>
<thead>
<tr>
<th>Category</th>
<th>Date Regulations Would Apply to New and Expanding Operations</th>
<th>Date Regulations Would Apply to Existing Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV</td>
<td>March 2003</td>
<td>2004</td>
</tr>
<tr>
<td>&gt;300 Nutrient Units</td>
<td></td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>March 2003</td>
<td>2005</td>
</tr>
<tr>
<td>151 - 299 Nutrient Units</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>March 2003</td>
<td>2005 liquid manure</td>
</tr>
<tr>
<td>31 - 150 Nutrient Units</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>March 2003</td>
<td>2008</td>
</tr>
<tr>
<td>&lt; 30 Nutrient Units</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Stage 2 Draft Regulations

Define categories of non-livestock farms, municipal & industrial generators
Construction and Siting (e.g. siting of buildings, manure storage, site characterization study)
Role of Local Advisory Committees
Feedlot standards
Use of alternative technology
Five year phase out of untreated septage
Review of MOE biosolids land application program
Stage 2 Draft Regulations

Quality standards (e.g. nitrogen, phosphorous, heavy metals)

Certification and licensing

Land application (e.g. setback distances from sensitive features, timing of spreading)

Biosecurity protocols for farm entry

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Stage 3 Draft Regulations

Control of livestock access to waterbodies

Agricultural washwater standards

On-farm dead animal disposal requirements

Manure haulage & transfer

Record keeping and data filing
Drainage Contractors - Roles

Things to consider:
- drains should be geo-referenced
  need to know where they are when spreading manure

- closed drains may be required to have inspection ports
  number of field tiles outletting may be restricted

- shut-offs and pump-outs may be required on main tile drain outlets

Drainage Contractors - Cont’d

Things to consider:
- all surface inlets will be treated the same as an open waterway
- blind inlets (Clearly identify or do not use???)
- make sure tiles not connected to something they shouldn’t be (Milk house, septic, barnyard etc.)
- drainage systems may be required to better manage nutrients and sediment
  filtering basins; buffer strips; tree plantings

Warn what problems may result!
Other Considerations

Provide adequate livestock and vehicle crossings
Restrict livestock access to open drains and watercourses
Manage runoff from yards and manure storage areas through filter strips
Provide filter strips next to watercourses and grass waterways
Provide signs on all outlet drains