The Nutrient Management Act and Source Water Protection

Presentation to the
35th Drainage Engineers Conference

October 24, 2003

Today’s Presentation

- Nutrient Management Act
  - Background
  - Requirements
- Source Water Protection
  - Background
  - Potential Implications
- Next Steps
Background

- Environmental issues in agriculture
  - Great Lakes Water Quality
    - Phosphorous
  - Rural Groundwater Surveys & Municipal Groundwater Studies
    - Nitrates and bacteria
  - Liquid Manure Spills
  - Public perception of large livestock operations
  - Patchwork of municipal by-laws

Agricultural Initiatives

- Environmental Farm Plan
- Technology transfer of best management practices
  - education, training, information
- Nutrient management planning
- Minimum Distance Separation I & II
- Farming and Food Production Protection Act
- Healthy Futures for Ontario Agriculture
Nutrient Management Act

- Received Royal Assent on June 27, 2002
- Provides authority to establish province-wide standards for management of materials containing nutrients to:
  - enhance the protection of the natural environment
  - provide a sustainable future for agricultural operations and rural development
- Provincial regulations to supersede municipal by-laws that deal with same subject matter

Ministry Roles: Agriculture & Food

- Technology transfer
- Policy development
- Farm approvals
- Training, certification
- Monitor compliance
- Research
Ministry Roles: Environment

- Policy development
- EPA approvals
- ‘Non-agricultural source material’
- Environmental monitoring
- Investigations
- Prosecutions
- Research

Nutrient Management Regulation

- Who is subject to the regulation?
- September 30, 2003
  - New and expanding large livestock operations
    - all new > 5 Nutrient Units
    - expansions where Nutrient Units will be ≥ 300
- July 1, 2005
  - Existing large livestock operations (≥ 300 Nutrient Units)
**THE NUTRIENT MANAGEMENT PLAN**

A science-based tool identifying how much fertilizer, manure, and other nutrient addition is needed to meet crop needs while minimizing losses to the environment.

**Matching A to B**

**A/ MATERIAL QUALITIES**

- Land Applied Materials

**B/ LAND CAPABILITY & OPTIMAL CROP YIELD**

- Minimum Losses to Water

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**Approval and Certification of Nutrient Management Plans**

<table>
<thead>
<tr>
<th>Size of Livestock Operation</th>
<th>Approval/Certification</th>
<th>Date</th>
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<tbody>
<tr>
<td>New &gt; 5 and &lt; 150 NU</td>
<td>Optional Certification</td>
<td>September 30, 2003</td>
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<tr>
<td>New ≥ 150 NU</td>
<td>Approval *</td>
<td>September 30, 2003</td>
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<tr>
<td>Expanding ≥ 300 NU</td>
<td>Approval *</td>
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*Approvals are valid for 5 years unless a change in circumstances as described in Section 29 or 33 of Regulation 267/03.*
Manure Storage Construction Requirements

- Setbacks for siting of new storages from wells and field drainage tiles
- Storage construction standards appropriate for soil & site conditions
- 240 days minimum capacity

Land Application Requirements

- Application rate determined by soil type and field slope
- 3 metre permanent vegetated buffer adjacent to watercourses
- No spreading on saturated soils
- Restrictions when spreading on frozen or snow covered ground
  - incorporation requirements except for forages and > 30% crop residue
- No winter spreading of municipal biosolids
- Phase out of high trajectory guns by March 31, 2005
Feedlot Requirements

- Permanent only
- Setback requirements for new structures from wells, field drainage tile
- Soil requirements - impervious layer
- Manure runoff controls
- Manure removal & spreading according to nutrient management plan

Other Requirements

- Training
  - OMAF to provide training to farmers & consultants, phased in over time
- Local Advisory Committees
  - Municipalities can establish committees
  - Focus on education & awareness building
- Sampling, Analysis and Quality Standards
Source Water Protection

- Walkerton Tragedy
  - Walkerton Inquiry Parts I and II
- Walkerton Report Part II
  - 22 recommendations concerning source protection planning
  - Encouraged province to develop a SPP Framework
  - Framework should be consistent with recommendations

SPP Advisory Committee

- Announced in November 2002
- Advice to government on minimum requirements for a source protection plan (SPP) and plan development process
- OMAF and Ag Sector Reps
- OMAF on Technical Working Group
- Submitted March/03 outlining SPP framework
- Published to EBR for public comment April/03

- Advisory Committee Membership
  - Aggregate Producers' Association of Ontario
  - Association of Municipalities of Ontario
  - Chiefs of Ontario
  - Conservation Ontario
  - Ducks Unlimited Canada
  - Canadian Environmental Law Association
  - Ontario Chamber of Commerce
  - Ontario Federation of Agriculture
  - Ontario Farm Animal Council
  - Ontario Water Works Association
  - Urban Development Institute
  - University of Toronto
  - MOHLTC. MOE. MMAH, MNR, OMAF
Overview - AC Report

- Provincial Role
  - Require use of watershed-based SPP
    - Enshrine framework in legislation
    - Supercede other legislation where human health is a concern - harmonize otherwise
  - Achieve consistency with SPP principles
    - Review provincial decisions affecting water
    - Amend legislation (e.g., NMA) if needed
  - Has ultimate accountability for SPP
    - MOE has lead
    - OMAF to provide technical support

- Conservation Authority Role
  - Coordinate SPP development
    - Initiate SPP process within 2 years
    - New mandate and resources (funding)
    - 16 South/8 Northern Planning Areas

- Municipal Role
  - Implement SPPs through local planning decisions
  - Ensure consistency of by-laws/instruments
    - New powers to be determined, where needed
Overview - AC Report

- Initial Source Protection Plan Content
  - Objectives and Targets
    - Watershed indicators
  - Technical Information
    - Areas with significant water taking
    - Vulnerable/sensitive water areas
  - Identification of SPP Issues
    - Potential water allocation problem areas
    - Areas where biosolids/septage spreading need special attention
  - Implementation Plan
  - Monitoring Plan
  - Plan Review/Outstanding Issues

Overview - AC Report

- Risk-based approach
  - Technical Support
    - Expert threats assessment working group
      - Define "threats" & "relative risks"
      - Develop risk analysis approach
      - Define "vulnerable areas" & "sensitive water resource" concepts
    - Planning area technical expert panel
    - Provincial Guideline
      - Assessment of cumulative impacts & assimilative capacity
  - Related SPP research
    - Ongoing, provincially-funded
Overview - AC Report

- Funding
  - Province to fund initial SPPs
  - Cost-sharing model to be negotiated to maintain SPPs
    - All those who benefit from SPP should contribute to some degree
  - Incentive programs and payments
    - Especially in sensitive areas/WHPAs
    - Encourage:
      - Implementation of SP measures
      - Provide for long-term sustainability

Potential SPP Impacts

- Water Quality
  - SPP could require in defined vulnerable/sensitive areas
    - Greater focus on storage and land application of nutrients
    - Increased scrutiny of fuel storage and pesticide use
    - Increased treatment of wash waters
      - Dairy, food processing
    - Greater attention to stormwater management
      - Tile drainage, clean water diversions
Potential SPP Impacts

- Water Quantity
  - Permit To Take Water Holders
    - Municipalities, industry, irrigation, food processing, water bottlers
    - Metering/reporting of these operations
    - Important for water budgetting and planning
    - More local input into approvals based on water budgets?
    - PTTW program currently under review

Farm Water Protection Plans

- Justice O’Connor recommended for all large/intensive farms, and all small farms located in areas designated as sensitive or high risk
- Should be consistent with, but separate from, SPP process
- FWPP requirements and linkage with SPPs still to be determined
Next Steps

- Nutrient Management Provincial Advisory Committee (NMPAC)
  - Announced in August 2003
  - Members include farmers, agribusiness, environmentalists, scientists, and municipal representatives
  - Will develop recommendations to province on certain regulatory issues (e.g., manure application on tiled land), cost share program & phase in of non-livestock operations

Next Steps

- OMAF/MOE coordination of nutrient management & source water protection
  - Linkage between advisory/technical expert committees
  - ADM/Director Coordinating Committee
  - OMAF/MOE technical teams to continue to develop standards for nutrient management
Next Steps

- SPP Legislation
  - Previous government committed to introduce legislation in Fall 2003
  - Current government has stated:
    “Source protection is critical. We will pass a law to enhance protection of lands that surround our vital water sources.”
  - Timelines/process to be determined for:
    - Review of existing legislation
    - Review of provincial decisions
    - Development of regulation

Next Steps

- Ontario-based threats assessment expert working group
  - Not yet established
  - Define “threats” & “relative risks”
  - Define threat assessment/risk management methodology?
  - Define “vulnerable area” & “sensitive water resource” concepts
  - Completion within 6 months of AC report?

- AC process to define FWPP requirements?
  - To be determined