The Nova Scotia Environmental Farm Plan Program (EFP)

March 6, 2018
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Outline

1) How the EFP process works
2) Outreach and Projects
3) Waste stats from our database
Summary of NS EFP Today

Number of Registered Farms in NS: **2350**

Number of Original EFP Reports: **1915**

Number of Follow – up EFP Reports: **1163**

EFP Total Land Area: **> 120,000 ha**

“We were pleased with the detailed work and hope the process will happen on every farm”

Winding River Farms Ltd.
Summary of NS EFP Today

• Voluntary, Confidential and No Cost to the farmer
• Delivered through the NS Federation of Agriculture
• Funded by provincial and federal governments
• Currently 4 EFP coordinators
Goals of the NS Environmental Farm Plan

• Educate farmers about applicable regulations, guidelines, best management practices (BMPs)
• Identify existing and future environmental risks
• Prioritize actions to reduce risks - tailored to the individual farm
• Provides possible solutions to reduce or prevent risk
NS Environmental Farm Plan

Stages

• On-Farm Assessment
• Findings Report
• Follow-up Visits (every 5 years)
On-Farm Environmental Assessments

One-on-one visit with the farmer to:
• present the process
• discuss goals and improvement projects
• inventory farm resources
• water sampling (if interested)

Then:
• Farmer leads a tour of the farm
• Problem areas are identified
• Possible solutions are discussed
• Recommendations are made
What we look at

• **Protection of water quality**
  – Water Use and Management
  – Waste Handling and Disposal
  – Nutrient Management
  – Fuel Storage and Handling
  – Pesticide Storage and Management
  – Livestock and Greenhouse Production
  – Soil and Crop Management

• **Prevention of nuisance**

• **Wildlife habitat/biodiversity**

• **Energy conservation**
What we look at...

...depends on the farm
Waste Handling and Disposal

• Septic Systems
• Disposal of Farm Wastes
  – Silage plastic
  – Used oil
  – Farm sharps
  – Packaging materials
  – Pesticide containers
  – Old pesticides and meds
  – Greenhouse plastic & trays
  – Fertilizer bags & liners
Findings Report

- Provides a summary of the on-farm environmental review
- Is presented to the farmer for discussion
- The report contains no surprises
Findings Report
Assessing the Risk of Surface and Groundwater Contamination

### Appendix A: Potential for Ground and Surface Water Contamination

<table>
<thead>
<tr>
<th>Facility or Activity</th>
<th>Follow-up</th>
<th>Subsequent Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Septic system</td>
<td>Slight</td>
<td>Slight</td>
</tr>
<tr>
<td>Waste disposal</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Manure storage</td>
<td>Low</td>
<td>Slight</td>
</tr>
<tr>
<td>Fertilizer storage</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Pesticide storage</td>
<td>Slight</td>
<td>Slight</td>
</tr>
<tr>
<td>Pesticide mixing</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Fuel storage</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Silage storage</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Cattle watering</td>
<td>Slight</td>
<td>Slight</td>
</tr>
<tr>
<td>Milkhouse washwater</td>
<td>Low</td>
<td>Slight</td>
</tr>
<tr>
<td>Vacuum pump exhaust</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Applied livestock manure</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Applied fertilizer</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Applied pesticides</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Soil erosion</td>
<td>Slight</td>
<td>Slight</td>
</tr>
</tbody>
</table>

#### Environmental Risk Ratings:

- **Low**: No remedial action required
- **Slight**: Remedial action possible but not essential
- **Moderate**: Remedial action should be taken
- **High**: Remedial action required

**Notes:**
Risk ratings are based on:
- a) how quickly water will move into and through the soil,
- b) depth to water table,
- c) the distance to the nearest well water source,
- d) soil texture and organic matter content,
- e) topography (steepest or longest slope),
- f) the distance to the nearest surface water source, and
g) cropping practice.
## Appendix B: Environmental Action Plan

<table>
<thead>
<tr>
<th>Issue</th>
<th>Possible Solutions</th>
<th>Priority</th>
<th>Possible Resources Available</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water quality</td>
<td>Test well water quality at least once a year to ensure it meets the Canadian Drinking Water Guidelines</td>
<td>Annually</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Surface and ground water protection</td>
<td></td>
<td>Minimum Separation Distances for Agricultural Activities factsheet</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ensure minimum separation distances are maintained from wells, watercourses and ditches</td>
<td>Continue to Practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Establish and maintain riparian zones and buffer strips along watercourses</td>
<td>Continue to Practice</td>
<td>*Homegrown Success Program Contact: 1-866-844-4276</td>
<td>Agricultural Riparian Buffer Zones factsheet</td>
</tr>
<tr>
<td>Water withdrawal</td>
<td>Obtain a permit from Nova Scotia Environment if water withdrawal from any source exceeds 23,000 L/day</td>
<td>As Applicable</td>
<td><a href="http://novascotia.ca/nse/water/withdrawalApproval.asp">http://novascotia.ca/nse/water/withdrawalApproval.asp</a></td>
<td></td>
</tr>
<tr>
<td>Farm sharps</td>
<td>Place used needles in a designated sharps container and dispose of with a vet, a pharmacy or contact your regional waste authority for alternative disposal options</td>
<td>Continue to Practice</td>
<td></td>
<td>A Sharps Bucket was delivered to the farm at the time of the farm visit</td>
</tr>
<tr>
<td>Septic system</td>
<td>Upgrade the septic system</td>
<td>Within the Next 2 Years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutrient Management Planning</td>
<td>Contact a certified NMP specialist to renew the farm’s NMP</td>
<td>As Applicable</td>
<td>*Homegrown Success Program Contact: 1-866-844-4276</td>
<td>Nutrient Management Planning factsheet</td>
</tr>
<tr>
<td>Manure testing</td>
<td>Include manure analysis as a component of the NMP and test manure at least once every three years</td>
<td>Within the Next 3 Years</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Follow Up Visit
(5 years after original review)

One-on-one visit with the farmer to:
- identify changes to the farm business
- review the implementation of the action plan
- discuss new environmental concerns, goals and improvement projects

Provide feedback to our program

Track trends on a provincial level
- Develop a database of information collected on farms
Database

• Identify number of EFP farms by commodity in each watershed or county
• Identify high/moderate risk by issues (i.e. manure storage)
• Track changes in farm stewardship
• Information can be used to identify where more attention is needed or funding should be allocated – influence policy decisions (e.g. fuel storage)
Other EFP Resources

We provide the following additional resources and services:

- Water sample testing
- Factsheets
- Field Crop Record Books
- Pesticide Storage Signs
- Pesticide spill kit signs
- Sharps containers
- Old tile drainage plans
- Lend out – soil sampling probes, wind meters, residue management kit
Other Projects

• Environmental stewardship award
• Pesticide sprayer calibration service
• Water metering
• Stream bank protection
• Soil erosion GIS model
• Biodiversity land owners guide
• Collaborate with university and provincial/federal research projects
Waste Projects

- Maritime Agricultural Plastics Study – Clean Farms (2012)
- Recycling of Silage Plastic – Colchester County (2015)
- Pyrolysis – Wayne Adams (2013)
Waste Projects

- Sharps buckets – 5 Liter

- Maple tubing – no connectors
EFP Farm Waste Data

Burning waste - 172 farms out of 1218 burn something

- garbage – 50
- silage plastic – 41
- used oil – 26
- brush – 19
- oil filters – 17
- prunings – 11
- sharps – 9
- chick trays – 8
- cardboard – 7
- dead stock – 7
- empty medicine containers - 4

Environment Act, burning of garbage (plastic, cardboard, treated wood) is not permitted
EFP Farm Waste Data

Silage plastic - 405 farms

- Roadside garbage – 146
- landfill – 130
- dumpster – 51
- burned – 41
- piled – 13
- Recycle/reuse – 5

Farms considered commercial; can limit roadside pickup
EFP Farm Waste Data

Sharps - 513 farms
- Sharps container – 427
- Roadside garbage – 41
- Burn – 9
- Dumpster – 4
- Recycle/reuse – 4
- Landfill – 3

Sharps disposal options vary by Municipality
EFP Farm Waste Data

Used oil - 791 farms

- Used oil furnace – 320
- Recycle/Enviro depot – 161
- Reuse as lubricant – 153
- Picked up – 29
- Burn – 26
- Landfill – 3

*Seller is required to provide a location of a used oil return facility*
EFP Farm Waste Data

Tires - 304 farms
- Recycle/Reuse/Return – 152
- Piled – 29
- Landfill – 23
- Picked up – 6
EFP Farm Waste Data

Deadstock - 437 farms

- Deadstock pickup – 73 - No longer exists
- Wildlife/eagles – 56
- Compost – 52
- Freezer (mink) – 34
- Buried – 26
- Burned – 7
- Manure - 6
- Dumped – 5
- Green bin – 4