

# Maine Farm-A-Syst

Farmstead Assessment System

Fact Sheet 5

## Reducing the Risk of Groundwater Contamination by... Improving Hazardous Waste Management

Two key steps to minimizing the pollution potential on your farm, household, and shed wastes are:

1. Minimize amount of wastes.
2. Recycle when possible.

Take some time to examine your activities that involve the use of hazardous materials to make sure that you really need all the products you are using. When you are certain that you are purchasing and using only essential products, carefully consider how to use the products safely. Recycle or reuse them when possible and dispose of remaining products in a way that will not pose a risk to your or anyone else's drinking water. A few simple management principles apply in every situation.

- ◆ Use hazardous products away from your well, even when all your spills and drips will be contained.
- ◆ Return excess product, spills or drips to the original activity. For example, reuse filtered waste antifreeze as water in other radiators; contain oil or grease drips and use for future lubrication needs. Triple rinse and manage all pesticide containers in accordance with the label instructions and recycle the containers. The residue and rinsates from these containers should be added to the spray tanks and applied for the purposes stated on the pesticide label.
- ◆ Contain any unusable wastes, spills and drips for appropriate disposal.

### Topics Covered:

Farm and Household Trash

Farm Business Waste

Building and Wood Maintenance Cleaners and Chemicals

Leftover or Unusable Pesticides and Container Disposal

Vehicle Maintenance Chemicals

Storage of Chemicals

Source Water Protection/Wellhead Protection Area

Contacts and References

### Farm and Household Trash

This category of potentially hazardous substances includes:

- ◆ **Personal care products** such as spot removers, dry cleaning fluids, moth balls, and shoe and leather polishes.
- ◆ **Hobby products** such as pesticides used in pet care, artist paints and solvents, and undiluted photography and swimming pool chemicals.

- ◆ **Home cleaning and repair products** such as air fresheners and pest strips, furniture and wood polishes and waxes, lead-based paint, other paints, stains and finishes, paint and finish preparation products, and wood-preserving products.
- ◆ **Fluorescent light bulbs, computer monitors, televisions, and batteries.**

Due to the rural location of farms, many farmers have traditionally disposed of their wastes on the farm site. Common disposal methods have included open air, barrel or domestic incineration of garbage and trash; or simply piling or burying trash. However legislation in 2002 was passed which prohibits the burning of all solid waste except:

- ◆ Wood waste;
- ◆ Painted and unpainted wood from construction and demolition debris;
- ◆ Following the State Fire Marshall rules, explosives and fiberboard boxes and paper bags which contained them.

The burning of agricultural waste such as blueberry field, potato tops, hay fields and the burning of brush from land clearing is still allowed. All open burning requires a permit from the town's fire warden. They can provide a copy of the open burning regulations and guidelines.

Health concerns, toxicity and the increased volume of waste guarantees that a new approach to disposal practices is necessary to ensure that safe drinking water supplies are available for farm families and their neighbors as well as for a safe overall environment.

The typical operation at open burning sites, burn barrels and domestic incinerators is not adequate for burning at temperatures required to eliminate the production of toxic substances. While burning may destroy some toxic substances, others will become concentrated in the smoke, ash, and sludge resulting from burning wastes. Repeated burning on the same location under similar weather conditions may cause the toxic substances in smoke (especially heavy metals such as lead, mercury, and arsenic) to accumulate in a concentrated area around the burn barrel. These substances, as well as the toxic substances in ash and sludge disposed of through land spreading or burial could also result in groundwater contamination.

There are no solutions available to adequately protect the environment from air pollution or groundwater contamination resulting from burning and ash disposal of wet trash, plastic product containers, waste oil, and other hazardous products used on the farm.

Uncontaminated trash should be managed through a recycling facility or your solid waste disposal facility whenever possible. Although it is legal in Maine to dispose of household hazardous wastes (as opposed to hazardous waste generated as part of the farm business) with general solid waste, hazardous waste should be separated from general trash and saved for a hazardous waste collection program where these are available. Some communities hold collection events and the State Planning Office is examining options for addressing the household hazardous waste problem. For collection dates call (207) 287-8054 or go online: <http://www.maine.gov/spo/recycle/hhw/collections.php>.

## Farm Business Waste

Maine law states that hazardous waste “does not include waste resulting from normal household or agricultural activities.” However, “agricultural activities” is defined to exempt only wastes generated during the actual act of growing products. (Agricultural by-products which are returned to the soils as fertilizers are exempt under Maine’s hazardous waste management program as is the disposal of pesticide residue when the rinsate is administered to a farmer’s own land in accordance with the directions for the use of the pesticide, including the correct application rate for the specific type of pesticide.) All other hazardous waste produced as part of a farm business fall under Maine’s hazardous waste rules.

These farm business hazardous wastes include such things as waste cleaners, solvents, unusable pesticides and other hazardous chemicals that are generated from cleaning, maintaining, or general use of farm equipment or farming procedures. These categories of potentially hazardous substances include:

- ◆ Solvent based building and wood cleaners including wood polishes and products for wood floor and panel cleaning.
- ◆ Equipment maintenance products such as stripping and finishing products, stains and paints, products for brush or spray gun cleaning, adhesives, degreasers and paint thinners and wood preservation compounds.
- ◆ Unusable pesticides when the pesticides are used as part of the farm business.
- ◆ Vehicle maintenance chemicals including oil contaminated with hazardous waste, grease, solvents for oil and grease removal and disposal, engine parts and equipment cleaners, lubricants, rust removers, paints and paint preparation products, brush or spray gun cleaners, and lead acid battery replacement.

- ◆ Empty pesticide bags should not be burned.
- ◆ Pesticide bags should be shaken well and disposed of at a solid waste disposal facility that will accept them.

## Building and Wood Maintenance Cleaners and Chemicals

When used for the farm business, on-farm disposal of any of these products is illegal. The best disposal method for these products is to use up leftovers. Some products, such as paint thinners, can be filtered and reused. Other products, such as wood preservatives, should be labeled and saved for disposal by a hazardous waste transporter. If the volume of these products used on your farm is large, even spills and drips can add up to a problem for groundwater.

Avoid maintenance activities within 150 feet of your well. Generally, conduct maintenance activities in a location where spills and drips can be contained. Dispose of spilled materials using a licensed hazardous waste transporter.

Disposing of building and wood maintenance cleaners and chemicals by dumping them on the ground or in a septic system is illegal and can ruin your septic system and could allow hazardous contaminants to leach to groundwater.

## Leftover or Unusable Pesticides and Container Disposal

**Handle all categories of pesticides as directed** on the label to prevent health and environmental problems. Pesticide labels and regulations concerning their use often change over time. Remember that pesticides might not have current warning labels and some may have even been banned since the time of purchase.

**The only acceptable management practices** for pesticides are to use the pesticide according to the **current label** directions or arrange for disposal with a hazardous waste transporter. A farmer, disposing of waste pesticides from his own use on his own farm, is not required to comply with standards used for other hazardous wastes provided he triple-rinses each emptied pesticide container in accordance with state rules and disposes of the pesticide residues on his own farm and in a manner consistent with the disposal instructions on the label.

**For many older, obsolete pesticides** the individual owners of these products are responsible for proper disposal. For leftover pesticides that cannot be disposed of in any other way, store them safely until they can be disposed of through a state-sponsored hazardous waste collection program or a hazardous waste transporter. The Maine Board of Pesticides Control maintains a registry of persons with obsolete and canceled pesticides so that, when funds become available, collection can be done by a licensed hazardous waste transporter at no charge to the home owner or farmer. In recent history the Board of Pesticide Control have been collecting almost annually.

**Never** reuse an empty pesticide container, especially for a purpose other than holding pesticides.

**Remember:** Triple-rinse all pesticide containers, return the rinse water to the spray tank and apply following labeled instructions. Rinsed containers should be picked up by your agricultural chemical supplier for recycling. Triple-rinsed pesticide containers may still contain enough pesticide residue that they should not be used for any other purpose.

(For more detailed information about the management and storage of pesticides on the farm, see Worksheet and Fact Sheet #2, *Pesticide Storage and Handling*.)

## Vehicle Maintenance Chemicals

This category of potentially hazardous substances includes:

- ◆ Vehicle maintenance products, such as antifreeze, oil and grease.
- ◆ Solvents for oil and grease removal and disposal.
- ◆ Engine, parts, and equipment cleaners.
- ◆ Lubricants.
- ◆ Rust removers.
- ◆ Paints and paint preparation products.
- ◆ Brush or spray gun cleaners.

- Lead acid battery replacement.

**Solvents used for cleaning metal parts, oils and fuels include toxic ingredients.** Fortunately, good recycling opportunities exist for both solvents and waste oils. In addition, new non-hazardous products are being developed and some, including a variety of degreasers, are available for purchase. You should be watching for these new non-hazardous products.

Solid and hazardous waste laws prohibit land spreading of waste oil for dust or weed suppression.

**Waste oil can be burned in a waste oil burner if the oil has not been contaminated with solvents or other materials.** The waste oil furnace should be located according to building code requirements and should be vented well over the roof line of the building. Do not vent to ground level because heavy metals, such as lead, can be contained in the smoke and can cause serious health effects, especially in young children.

**Use up old fuels whenever possible.** Dilute one part old fuel with five parts new fuel to protect your engine. Oil should be stored in a protected area where it is unlikely to be hit by heavy equipment. Tanks and drums should be in good condition and should be stored carefully on a firm surface.

**If you find yourself doing a lot of painting** of vehicles or other farm equipment, use a paint booth. Some booths are structured to collect excess paint and spray gun cleaners for later disposal with a hazardous waste transporter. Note that filters used with a paint booth must be considered a hazardous waste when discarded.

**The design and location of the equipment maintenance area is important.** Structures should be made of materials that are solid and impermeable, such as concrete. Floors should be free of cracks and floor drains. Some farmers use a grease pit. Others allow drips and spills to collect on the shed floor. Using sawdust or other absorbant to soak up drips and spills is a common practice. Spills should be collected and placed in appropriate containers as soon as possible. Keep in mind that materials which can be collected in a relatively clean state may still be usable. Spilled material which cannot be used should be placed in containers and shipped off-site using an appropriate contractor.

#### Storing Hazardous Waste

- Collect hazardous waste and placed in closed containers
- Label Container: with the words "hazardous waste", name of the waste, and date waste was put in container
- Store flammable chemicals and batteries out of direct sunlight
- Rags used to clean up solvent spill may also be a fire hazard and need to be handled as you do your other solvent waste.

#### Storage of Chemicals

Some farmstead activities may result in leftover or used chemicals, such as waste oil and solvents, which need to be stored until disposal. Locate the storage area for these chemicals away from your well and preferably inside a building with a firm floor.

Store chemicals in original clearly labeled containers designed to contain that hazard category (flammables, poisons or corrosives). Provide a well-ventilated, flame-free area with sturdy shelving for storage of labeled containers in the building where you commonly use them. When choosing the storage location, keep indoor air quality, safety and

flammability considerations in mind. Be sure that the area is adequately vented to prevent buildup of fumes from leftover products. As a rule of thumb, if you can smell your products, ventilation is inadequate to protect your health, and remember that some products do not have an odor. Also, be sure that the storage area provides a means to segregate flammables, poisons, and corrosive wastes, to minimize chemical interaction do to accidental release.

Inspect all storage areas regularly for detection of spills or leaks, proper labeling, and to see that containers are in good condition, and are closed and not bulging. If possible, the storage area should be located inside a building to protect the containers from the elements and provide groundwater with protection from spills.

If you generate hazardous waste you are subject to Maine's Hazardous Waste Management Rules.

- ◆ If you generate, in a month, 100 kilograms (approx 220 pounds) or less of a non-acute waste or 1 kg less of an acute waste and you do not store more than 55 gallons (200 kg) of non-acute waste at any one time you are considered a Small Quantity Generator and are subject to less stringent standards than Large Quantity Generators.
- ◆ If you generate no more than 100 kilograms per month of a non-acute waste and you wish to store up to three drums on-site, you are considered a Small Quantity Generator Plus and must comply with some additional container management standards.
- ◆ If you generate more than 100 kilograms (non-acute) or 1 kilogram (acute) per calendar month or store more than three drums of waste at any one time (non-acute), you are considered a Large Quantity Generator and are subject to more stringent standards, including personnel training and emergency planning.

These rules contain specific requirements about labeling, storage, transportation and hazardous waste management standards. For more information on proper storage methods or any other additional information on hazardous waste management, call the DEP Bureau of Remediation and Waste Management at 287-2651. The DEP also has the *Handbook for Hazardous Waste Generators*, published in March 2007, which supplement the rules, making the standards easier for individuals to understand.

### [Source Water Protection/Wellhead Protection Area](#)

Almost half of Maine's population depends on groundwater for its drinking water supply from either private or public wells. We are lucky to have some of the best water supplies in the world, and it is our job to keep them safe. Being aware of potential problems on your property that might pollute drinking water sources is important. You may not even know that there is a potential threat. Taking the time to read and fill out the applicable Farm-A-Syst sections is a great first step. From there you will sit down with a district employee or someone trained in Farm-A-Syst to discuss some possible solutions such as best management practices (BMP) that can be applied. BMPs are a method, measure, or practice that, when correctly installed or performed, will prevent,

There are some laws that pertain to areas within a source water protection zone that don't apply to other landowners. Be sure to check with your local water district and municipality for local ordinances or if you are unsure if you live in a source water protection area.

reduce, or minimize water pollution. In this case, the focus is on drinking water supplies and the areas that provide them with water.

It is the landowner's responsibility to know local and state laws pertaining to their land, although it is hard to navigate sites and wade through the legal jargon of written laws.

If you are living or operating in a source water protection area (the surface and subsurface areas surrounding a drinking water supply for a public water system where activities can contaminate the supply) or wellhead protection area (an area used to protect groundwater, a form of source water) you should pay extra special attention. We have tried to find pertinent information pertaining to this section. You can find links to these laws along with helpful information in the following Contact & Reference section as well as in appendices A: Law and Regulations & B: Resources.

The following, authored by Maine Drinking Water Program, is excerpted from the document "Best Management Practices for Groundwater Protection". This manual is intended for the use of local officials, public water suppliers and landowners in Maine. It is intended to encourage educated decisions, informed practice, and directed planning in regard to groundwater protection, particularly in the vicinity of public drinking water supply wells.

<http://www.maine.gov/dhhs/eng/water/forms/Sections/BMPv2%200A.htm>

### **A. Chemical Storage**

BMPs for chemical storage

1. Underground storage tanks are prohibited by State law in Wellhead Protection Areas.
2. All containers shall be clearly labeled with name of chemical, and date of purchase (or generation of waste).
3. Determine if chemicals being stored are "hazardous" by characteristic, or are a listed hazardous waste by state and federal agencies. Information on hazardous materials may be obtained from the Maine DEP. If materials are either, ensure that DEP's hazardous waste regulations are being followed. In any case follow the BMPs above.

### **B. Chemical Use**

Major potential problems

Through spillage or disposal, chemical waste materials can reach soils and move through them to groundwater. Spillage or disposal can be intentional or accidental. Many chemicals have been known to contaminate groundwater to above drinking water standards.

Zoning or land use recommendation:

Zone 1: Prohibit, except for those used by Public Water System

includes land areas immediately surrounding the well. These areas must receive the greatest levels of protection, namely ownership or control by the public water supplier or community.

Zone 2: Use BMPs. Limit amount of use as much as possible.

Surrounds Zone 1, and should receive some measure of protection by land use controls imposed by local officials working cooperatively with the public water supplier and landowner.

BMPs for chemical use:

1. Require the use of non-hazardous alternatives to hazardous chemicals whenever possible. If hazardous chemicals must be used, provide justification for why they cannot be replaced by non-hazardous chemicals.

2. Design chemical feed lines and temporary storage containers to prevent spillage by collision and corrosion.
3. Clearly label all storage vessels and chemical feed lines with chemical name.
4. Check for spillage and leaks at least weekly. Leaking containers must be removed or placed in secure containers that are larger than the leaking container.
5. Prepare a SPCC Plan. This plan shall include provisions for cleaning up small spills and containing large spills in an emergency, and notifying the proper authorities if a spill occurs. Keep emergency cleanup materials on hand. Information on developing an SPCC plan may be obtained from the Maine DEP.
6. All spills must be promptly reported to the Maine DEP, the Town (CEO and Fire Department) and the Water System.

## CONTACTS AND REFERENCES

### Who to call about...

#### Health concerns

The Maine Board of Pesticides Control, weekdays, 8:00-4:00 P.M. (207) 287-2731  
 The Board of Pesticides Control employs a toxicologist who can answer many of your questions.

#### A specific product

Contact the company that makes the product. The company's phone number is frequently on the label. Or, call the Chemical Referral Center 1(800) CMA-8200 Sponsored by the Chemical Manufacturers' Association, this number will refer you to a specific manufacturer for answers about product questions.

#### Oil and hazardous matter discharges

Immediately report oil spills to Maine DEP at 800-482-0777  
 Immediately report hazardous matter and waste spills to the Maine state police at 800-452-4664

#### Identification and disposal of hazardous wastes

Maine Department of Environmental Protection (DEP), Bureau of Remediation and Waste Management 207-287-2651

Maine Department of Environmental Protection offices in:

Central Maine Regional Office - Augusta	207-287-2651; 800-452-1942
Northern Maine Regional Office - Presque Isle	207-764-0477; 888-769-1053
Southern Maine Regional Office - Portland	207-822-6300; 888-769-1036
Eastern Maine Regional Office – Bangor	207-941-4570; 888-769-1137

#### Chemicals and their disposal in your county

Your county Extension office or your district DEP office (listed above)

#### Human poisoning

Your physician, or the Northern New England Poison Control Center at 207-662-0111 or 800-222-1222

#### General information on hazardous waste

Call the DEP/Bureau of Remediation and Waste Management (207) 287-2651

**Household hazardous waste disposal**

Maine State Planning Office Waste Management & Recycling (207) 287-5759

**Agricultural hazardous waste disposal**

Maine DEP/Bureau of Remediation & Waste Management (207) 287-2651

**Motor oil recycling**

Maine DEP (Maine Oil Recycling Program) (207) 287-2651

**What to read about...**

*Publications are available from sources listed at the end of the reference section. (Refer to number in parentheses after each publication.)*

**General information on hazardous waste**

DEP/Bureau of Remediation and Waste (207) 287-2651  
Handbook for Hazardous Waste Generators (2)

**Hazardous waste disposal**

Maine DEP - List of Licensed Hazardous Waste and Waste Oil Transporters . (207) 287-2651

**Hazardous pesticides, pesticide waste minimization and disposal**

Best Management Practices Manual. UMCE Publication #2014. (1)

**Composting**

On-Farm Composting Handbook. TJMCE Publication #1157. (1)  
Composting to Reduce the Waste Stream. UMCE Publication #1 140. (1)

**Publications available from...**

1. Your county Extension office. There may be charges for publications, postage and sales tax.
2. Department of Environmental Protection

**Websites:**

This link will take you to the Natural Resources Conservation Service (NRCS) Conservation Practice Standards. Here you can find technical guides that are the primary scientific references for NRCS. They contain technical information about the conservation of soil, water, air, and related plant and animal resources.

<http://efotg.nrcs.usda.gov/treemenuFS.aspx>

Maine DEP/Bureau of Remediation and Waste Management  
<http://www.maine.gov/dep/rwm/hazardouswaste/>

Maine Board of Pesticides Control  
<http://www.maine.gov/agriculture/pesticides/>

Maine State Planning Office Waste Management & Recycling  
[www.maine.gov/spo/recycle/hhw/](http://www.maine.gov/spo/recycle/hhw/)

Hazardous materials collection dates

<http://www.maine.gov/spo/recycle/hhw/collections.php>.

#### EPA Solid Waste and Emergency Response

Below are a list of links to a series of brochures and fact sheets put out by the EPA.

- Household Hazardous Waste: Steps to Safe management  
<http://www.p2pays.org/ref%5C03/02032.pdf>
- Used Oil Recycling  
<http://www.p2pays.org/ref%5C05/04824.pdf>
- Safe Hazardous Waste Recycling  
<http://www.epa.gov/epaoswer/general/manag-hw/e00-001d.pdf>
- What Makes a Waste Hazardous  
<http://www.epa.gov/epaoswer/general/manag-hw/e00-001e.pdf>

#### Best management Practices for Groundwater Protection

<http://www.maine.gov/dhhs/eng/water/forms/Sections/BMPv2%200A.htm>

**See “Appendix A: Laws and Regulations” and “Appendix B: Resources” for additional links.**

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