

NEW JERSEY FARM-A-SYST

A FARMSTEAD WATER QUALITY ASSESSMENT SYSTEM

5 *Fact Sheet: Reducing the Risk of Groundwater Contamination by* Improving Hazardous Waste Management

Two key steps to minimizing the pollution potential on your farm from farmstead, household and farm wastes are to minimize the amount of wastes and recycle when possible.

Some hazardous materials, such as lubricating oils or solvents for cleaning metal parts, are an unavoidable part of farm life. Take some time, though, to examine your activities that involve use of hazardous materials, to make sure that you really need all the products you are using. Keep in mind that hazardous waste generated from farm business activities must be managed in accordance with state and federal rules.

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 drinking water. A few simple management principles apply in every situation:

- Use hazardous products away from your well (150 feet or more), 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; dispose of pesticide container rinse water by spreading on fields at the proper application rate for the pesticide.
- Contain any unusable wastes, spills and drips for appropriate disposal.

1. Farm and household trash

This category of potentially hazardous substances includes:

- **Ash and sludge** from burned farm home and garage trash and waste oil
- **Plastic wraps and containers**
- **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; undiluted photography and swimming pool chemicals; strong acids
- **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; wood-preserving products.
- **Farm business hazardous waste**, including unusable or waste cleaners, solvents, pesticides and other hazardous chemicals that are generated from cleaning, maintaining or general use of farm equipment or farming procedures.

*For glossary,
see page 2 of
Worksheet #5.*

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 in a ditch on the “back 40.”

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.

Updated local, state and federal laws also reflect the increased concern with many disposal practices. For example, new rules require that environmentally protective conditions be met before some disposal practices are permitted. Other previously common disposal practices are now illegal because of their potential risks to human health and the environment.

This new approach suggests several changes in traditional practices:

The typical farm burning site should be eliminated for all but a limited number of needs. Disposal of trash on the farm should be eliminated, with the exception of organic waste that can be composted (such as household garbage, leaves and straw).

Uncontaminated trash should be taken to a recycling facility, a licensed landfill or a municipal incinerator whenever possible.

Farm and household hazardous waste should be separated from general trash and saved for a hazardous waste collection program where available. If not available, approved alternative management recommendations should be followed. (See Contacts and References.)

Household hazardous waste is excluded from hazardous waste management regulations and is often included with regular trash disposal. But neither household hazardous waste nor hazardous waste from the farm business can be safely disposed of in a “pollution-free manner” on the farm site. Disposal of hazardous wastes, with the exception of properly disposed waste pesticides, from the farm business on the farm site is a violation of state law.

Household waste vs. farm business waste

New Jersey divides hazardous waste into two management categories: wastes produced from products used in the home, and wastes produced as part of the farm business.

Any amount of hazardous wastes generated by a household is exempt from regulation under state and federal law. Household hazardous wastes may be safely disposed of at household hazardous waste collection events sponsored by some communities.

For information about locations and dates of collection events, call your county household hazardous waste/solid waste coordinator.

Hazardous waste from the farm business must be disposed of with a permitted hazardous waste disposal contractor. For more information about hazardous waste contractors, contact New Jersey Department of Environmental Protection's (NJDEP) Bureau of Technical Assistance at (609) 984-6620.

Burning

Researchers estimate that ground-level concentrations of 2,3,7,8-TCDD dioxin due to burning household trash in a burn barrel are 7000 times the amount formed during trash burning in a municipal incinerator. Ash and sludge resulting from on-farm burning also contain significant amounts of such toxic substances as lead, cadmium, chromium, dioxin and furan compounds.

New Jersey regulations prohibit open burning of household garbage, wet combustible rubbish, oily substances, asphalt, plastic or rubber products, as per N.J.A.C. 7:27-2.3.

2. Building and wood maintenance cleaners and chemicals

This category of potentially hazardous substances includes:

- **Solvent-based building and wood cleaners**, including wood polishes and products for wood floor and panel cleaning. (Detergent-based cleaners do not pose a threat to groundwater.)
- **Equipment maintenance products**, such as stripping and finishing products, stains and paints, products for brush or spray gun cleaning, and adhesives such as glues and caulk. Also includes solvents as used in degreasers and paint thinners; stains and varnishes; and wood-preservative compounds.

Disposing of these products by dumping them on the ground or in a septic system could allow hazardous constituents to leach to groundwater. Avoid on-farm disposal of these liquids whenever possible.

(For information about proper septic system management, see Worksheet and Fact Sheet #6, *Household Wastewater Treatment*.)

The best disposal method for these products is to use up leftovers or share unused products with others. Dispose of any remaining hazardous liquid or sludge with a hazardous waste contractor or on a household hazardous waste collection day.

Some products, such as paint thinners, can be filtered and reused. Other products, such as wood preservatives and lead-based paints, need to be labeled and saved for disposal by a hazardous waste contractor or on a household hazardous waste collection day.

Because of the volume of these products used on the farm, 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.

3. Leftover or unusable pesticides and container disposal

This category of potentially hazardous substances includes all types of pesticides and pesticide containers, including those used for indoor plants and yard care.

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

The only acceptable management practices for pesticides are to use the pesticide according to current label directions or arrange for disposal with a hazardous waste contractor. When the EPA bans a pesticide it provides a “buy-back” and disposal

program for a period of time. Pesticides purchased in mini-bulk tanks or returnable containers allow the return of excess chemical to the cooperative or retail store. For leftover pesticides that cannot be disposed of in any of these ways, store them safely until they can be disposed of through a community hazardous waste collection program or a hazardous waste contractor. However, waste pesticides generated by farmers from their own use and disposed of on-site in a manner consistent with label instructions are exempt from the hazardous waste regulations (N.J.A.C. 7:26-8.2(a)25 and 9.1(c)5).

Pesticide waste includes empty pesticide containers as well as leftover pesticides. Pesticides come in mini-bulk tanks, five-gallon plastic containers, or paper containers. Mini-bulk tanks are returned to the place of purchase when application has been completed. Some five-gallon plastic containers can be returned to the place of purchase for disposal. Paper containers should be bundled and taken to a licensed solid waste facility. Check with your local cooperative or retail store to learn whether container disposal opportunities have been arranged.

If you cannot return plastic containers to the place of purchase, triple-rinse the containers, return the rinse water to the spray tank and apply following labeled instructions. Take the rinsed containers to a licensed landfill. However, because of liability concerns, some landfills will not accept even triple-rinsed containers. 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*.)

4. 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

It is strongly recommended, when possible, that waste material be recycled. Waste oil, batteries, refrigerants, and antifreeze are the commonly recycled substances associated with motor vehicle maintenance.

Solvents used for cleaning metal parts, oils and fuels include toxic ingredients. Fortunately, good recycling opportunities exist for both solvents and waste oil. Consider contracting with a solvent recycler to rent a parts washer. Old solvents are picked up by the recycler and you are provided with clean solvent. To recycle waste oil from farm equipment, contract with a waste oil transporter.

Do not dump antifreeze into your own drain if you have a septic tank. It may kill the organisms that the system depends on to break down wastes in the tank. Collect used antifreeze in a clean, labelled container to minimize the possibility of cross-contamination. Bring used antifreeze to a household hazardous waste collection day in your community.

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 solvent recycler. Note that filters used with a paint booth may be considered a hazardous waste when discarded.

The design and location of the equipment maintenance area is important. Some farmers use a grease pit. Others allow drips and spills to collect on the shed floor. In both cases, the area is generally “cleaned” through periodic flushing.

If you prefer to keep your shed floor clean through flushing, you will need a system to contain waste liquids so that they will not be flushed onto soil. Flushing to a **paved** outdoor area is an acceptable method of disposal. Using sawdust to soak up drips and spills is another common practice. Burning of these substances can produce air emission deposits that have the potential to contaminate groundwater.

All fluids should be drained from abandoned farm machinery or vehicles to reduce the leaching hazard as the equipment corrodes.

5. Storage of chemicals and hazardous waste

Some farmstead activities may result in leftover or used chemicals, such as waste oil and solvents, that need to be stored until disposal. Locate the storage area for these chemicals and their wastes at least 150 feet from your well. Dike storage areas to prevent well contamination from spills.

Store chemicals in 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. Also, be sure that the storage area provides a means to segregate flammables, poisons and corrosive wastes, to minimize accidental release due to chemical interactions.

Hazardous wastes generated in the course of maintaining farm equipment, such as solvents and parts washer solution, should be collected and placed in closed containers and labeled with the words “hazardous waste,” the name of the waste, and the date the waste was put into the container. Solvents that are hazardous for the characteristic of ignitability only (such as mineral spirits) may be mixed with used oil, as long as the solvent content is less than 10 percent of the total volume of the solvent-oil mixture.

Hazardous wastes generated from household vehicle maintenance should be stored safely until they can be taken to a household hazardous waste collection site. Evaporation of household hazardous wastes is not recommended due to the potential for spills, contact by children, and fire. If you’re not sure whether a particular waste is hazardous, contact the NJDEP’s Bureau of Technical Assistance (609-984-6620).

Outdoor storage of wastes and products, especially liquids, should be on surfaces surrounded by berms or curbs and constructed of materials that will contain any spills. For example, batteries may be stored in a plastic-lined area, but some solvents could dissolve a plastic liner. Spilled solvents may also be able to penetrate concrete or asphalt if they are not cleaned up quickly.

Store flammable chemicals and batteries in an area that will be shaded from direct sunlight. Rags used to clean up solvent spills may also be a fire hazard. Store them with the same care as hazardous materials.

Inspect all storage areas regularly for detection of spills or leaks, proper labeling, and to see that containers are in good condition, closed and not bulging. For more information on proper storage methods, contact the NJDEP's Bureau of Technical Assistance (609-984-6620).

6. Laws regulating disposal of wastes from farms

Disposal of hazardous wastes from farms is regulated under federal statutes in RCRA (Resource Conservation and Recovery Act) and in New Jersey under New Jersey Administrative Code Title 7, Chapter 26.

RCRA Subtitle D provides restrictions for land burial of trash not falling into hazardous waste categories. Open burning and on-farm incineration of trash is prohibited and regulated under the Air Quality Regulations (N.J.A.C 7:27 et seq). On-farm burial of containers and other trash is regulated under the Solid Waste Regulations (N.J.A.C 7:26).

Under state hazardous waste regulations, farms may be considered “small quantity generators.” An operation is a “small quantity generator” (SQG) if it generates less than 1 kilogram of **acutely hazardous waste** or less than 100 kilograms of **hazardous waste** per month and never accumulates more than those amounts on-site at any given time. SQGs are not required to obtain an EPA identification number or a manifest form for disposal. The SQG can dispose of waste through a licensed hazardous waste transporter to a commercial hazardous waste treatment, storage, or disposal facility. If the SQG transports their own waste, they must register with NJDEP as a solid waste transporter (call the Bureau of Registration and Permits at 609-530-4004 for details). Other disposal options include the recycling or reuse of the waste. Also, SQGs should contact their county Solid Waste Coordinator directly to determine if their county has any additional requirements and/or programs pertaining to SQG waste.

“Acutely hazardous” and “hazardous” wastes are listed in federal and state regulations. Aldicarb and heptachlor, for example, are acutely hazardous pesticides.

A word of caution: Because some pesticides commonly used by farmers are listed as acutely hazardous waste in federal statutes, farmers with leftover pesticides may not be “small quantity generators.” Farmers who accumulate more than 1 kilogram of acutely hazardous waste per month need to acquire an EPA identification number and use the manifest system to dispose of those wastes.

Disposal of veterinary medical wastes might present a problem on some farms. Ask your veterinarian for advice on specific wastes (such as antibiotic containers).

CONTACTS AND REFERENCES

Who to call about...

General Contacts

See Introductory Sheet.

Health concerns

Your local health department or the New Jersey Department of Health at (800) 367-6543.

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, at 1(800)CMA-8200. Sponsored by the Chemical Manufacturers' Association, this number will refer you to a specific manufacturer for answers about product questions.

Identification and disposal of hazardous wastes

New Jersey Department of Environmental Protection Bureau of Technical Assistance, (609) 984-6620.

Hazardous waste transporters

To obtain a listing of hazardous waste transporters, contact the New Jersey Department of Environmental Protection, Transportation Oversight Unit, (609) 984-7907.

Chemicals and their disposal in your county

Your county Extension agent or your county office of recycling or solid waste (found in the "Blue pages" of your telephone book).

Pesticides and other agricultural chemicals

Your county Extension office or the NJDEP's Pesticide Control Program, 380 Scotch Rd., CN 411, Trenton, NJ, 08625, (609) 530-5070 (automated attendant) or (609) 530-4124.

Human poisoning

Your physician or the New Jersey Poison Information and Education System at (800)962-1253.

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

Hazardous Chemicals in Your Home: Proper use and disposal. Rutgers Cooperative Extension Fact Sheet #271. (1)

Toxics in the Home. NJ Department of Environmental Protection. (2)

Health and environmental effects of hazardous wastes

Household Cleaning Products: Making Informed Purchasing Decisions to Help Protect the Environment, Rutgers Cooperative Extension Fact Sheet #581. (1)

Household hazardous waste alternatives

Household Cleaners: Suggestions for Environmentally Safer Alternatives, Rutgers Cooperative Extension Fact Sheet #582. (1)

Hazardous pesticides, pesticide waste minimization and disposal

Toxicity of Pesticides, Rutgers Cooperative Extension Fact Sheet #197. (1)

Disposal of Pesticides, Rutgers Cooperative Extension Fact Sheet #198. (1)

Motor oil recycling

Recycling Used Motor Oil in New Jersey. Rutgers Cooperative Extension Fact Sheet #417. (1)

Motor Oil (Clean Water Information Series). NJ Department of Environmental Protection. (1)

Composting

Using Leaf Compost. Rutgers Cooperative Extension Fact Sheet #117. (1)

Publications available from...

1. Your county offices of Rutgers Cooperative Extension (found in the blue pages of your phone book) or directly the Publications Distribution Center, Cook College, Rutgers University, PO Box 231, New Brunswick, NJ 08903, (732) 932-9762.
2. NJ Department of Environmental Protection, Bureau of Hazardous Waste Regulation, 401 East State St., Trenton, NJ 08625, (609) 292-8341.



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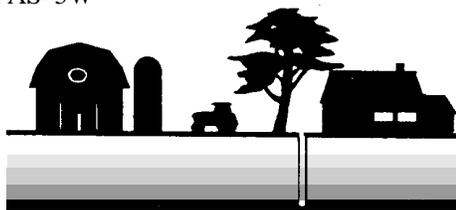
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NEW JERSEY FARM-A-SYST

A FARMSTEAD WATER QUALITY ASSESSMENT SYSTEM

#5 *Worksheet: Assessing the Risk of Groundwater Contamination from Hazardous Waste Management*

Why should I be concerned?

Consider the variety of products commonly used in households and on farms: paints, solvents, oils, cleaners, wood preservatives, batteries, adhesives and pesticides. In addition, some common disposal practices not only threaten groundwater but also may be illegal.

Small, unusable amounts often wind up spilled, buried, dumped or flushed onto farm property. Minimizing the amounts of these substances used on the farm, along with practicing proper disposal practices, can reduce both health risks and the potential for groundwater contamination. Farmers and their families are generally familiar with the hazards of pesticides commonly used in the farm operation, but they may be less aware of the hazards of other chemicals that make many tasks around the home and farm easier or more efficient.

Improper use of hazardous products may cause toxic health effects. Improper storage may allow chemicals to leak, causing potentially dangerous chemical reactions, toxic health effects or groundwater contamination. Improper disposal allows these dangerous chemicals to enter directly into drinking water through surface water or groundwater.

Your drinking water is least likely to be contaminated by your hazardous wastes if you follow appropriate management procedures or dispose of wastes in any location that is **off your farm site**. However, proper offsite disposal practices are essential to avoid risking contamination that could affect the water supplies and health of others.

The goal of Farm•A•Syst is to help you protect the groundwater that supplies your drinking water.

How will this worksheet help me protect my drinking water?

- It will take you step by step through your hazardous waste management practices.
- It will rank your activities according to how they might affect the groundwater that provides your drinking water supplies.
- It will provide you with easy-to-understand rankings that will help you analyze the “risk level” of your hazardous waste management practices.
- It will help you determine which of your practices are reasonably safe and effective, and which practices might require modification to better protect your drinking water.

How do I complete the worksheet?

Follow the directions at the top of the chart on the next page. It should take you about 15-30 minutes to complete this worksheet and figure out your ranking.

Information derived from Farm•A•Syst worksheets is intended only to provide general information and recommendations to farmers regarding their own farmstead practices. It is not the intent of this educational program to keep records of individual results.

Glossary

Hazardous Waste Management

These terms may help you make more accurate assessments when completing Worksheet #5. They may also help clarify some of the terms used in Fact Sheet #5.

Burn barrel: Any on-farm system of open burning, such as burning in a barrel. (See **incinerator**.)

Dump: A local landfill that is not designed to prevent leaching and offers little groundwater protection.

Hazardous waste contractor: A hazardous waste collection service offered by businesses with vehicles licensed to transport hazardous waste to licensed hazardous waste facilities.

Household hazardous waste: Any waste material (including garbage, trash and sanitary waste in septic tanks) derived from households, including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas.

Household hazardous waste collection program: A special program in which a community collects waste for disposal in a specially constructed hazardous waste landfill or incinerator.

Incinerator (municipal): A community incinerator specifically engineered to burn municipal quantities of home waste.

Incinerator (on-farm): Any home-built incinerator or any incinerator purchased for home use.

Licensed landfill: A landfill specifically designed to protect groundwater through the use of a high quality clay or clay/impermeable film liner, accompanied by a system of buried pipes to collect any liquids generated. Meets current state standards.

On-farm disposal: Any method of burning, dumping or land spreading of wastes on the farm. Also includes use of the septic system for disposal.

Recycling: Reusing waste materials to develop another product.

Solvent recycler collection service: A pick-up service provided by businesses that reprocess used solvents.

Hazardous Waste Management: Assessing Drinking Water Contamination Risk

1. Use a pencil. You may want to make changes.
2. For each category listed on the left that is appropriate to your farmstead, read across to the right and circle the statement that **best** describes conditions on your farmstead. (Skip and leave blank any categories that don't apply to your farmstead.)
3. Then look above the description you circled to find your "rank number" (4, 3, 2 or 1) and enter that number in the blank under "your rank."
4. Directions on overall scoring appear at the end of the worksheet.
5. Allow about 15-30 minutes to complete the worksheet and figure out your risk ranking for hazardous waste disposal practices.

| | LOW RISK (rank 4) | LOW-MOD RISK (rank 3) | MOD-HIGH RISK (rank 2) | HIGH RISK (rank 1) | YOUR RANK |
|---|---|--|---|--|--------------|
| ASH DISPOSAL | | | | | |
| From farm burn-barrel or incinerator | Ash collected and disposed of at licensed hazardous waste facility. | <i>Disposal of ash from dry combustibles only, on farm or at dump, or spread on fields.</i> | <i>Disposal of ash from mixed trash at dump or on farm away from well.</i> | Disposal of ash from <i>mixed trash on farm</i> in consistent location near well. | _____ |
| BUILDING/WOOD MAINTENANCE PRODUCTS | | | | | |
| Adhesives, such as caulk and solvent-based glues | Used up or shared with someone else. Hazardous waste contractor collection service used for leftover adhesives. | Liquid evaporated in open air.* Sludge or leftover product taken to licensed landfill or municipal incinerator. | <i>Disposal at dump.</i> | <i>Disposal on farm.</i> | _____ |
| Brush or spray gun cleaners (solvent based) | Cleaned in contained, ventilated area. Solvent recycler collection service used for leftover cleaners. | Cleaned in contained, ventilated area. Filtered cleaning solvents reused or evaporated in open air.* Sludge taken to licensed landfill or municipal incinerator. | Cleaned in uncontained, ventilated area and <i>used cleaning solvents disposed of at dump.</i> | <i>Disposal of leftover cleaning solvents on farm.</i> | _____ |
| Lead-based paint | Hazardous waste contractor collection service used. | Liquid evaporated in open air.* Paint or sludge taken to licensed landfill or municipal incinerator. | <i>Disposal of sludge or paint at dump.</i> | <i>Disposal on farm.</i> | _____ |

Boldface type: These actions **are not legal** for wastes generated from the farm business. (Household wastes are exempt from regulation.) If you are unsure of how to dispose of specific wastes, contact NJDEP Bureau of Technical Assistance at (609) 984-6620.

*These actions require a permit from NJDEP. Contact the Air Quality Permitting Program at (609) 984-6721 for further information.

| | LOW RISK (rank 4) | LOW-MOD RISK (rank 3) | MOD-HIGH RISK (rank 2) | HIGH RISK (rank 1) | YOUR RANK |
|---|--|---|--|--|--------------|
| BUILDING/WOOD MAINTENANCE PRODUCTS (continued) | | | | | |
| Paint or stain (no lead) | Used up or shared with someone else. Hazardous waste contractor used for leftover paint or stain. | Liquid evaporated in open air.* Paint or sludge taken to licensed landfill or municipal incinerator. | Disposal of oil-based paints or stains at dump. Latex paint disposal on farm away from well. | Disposal of oil-based paints or stains on farm. | _____ |
| Stripper or thinner for paint/finish | Spills contained. Unused products used up. Hazardous waste contractor collection service used for leftover stripper or finish. | Liquid evaporated in open air.* Stripper or stripper sludge taken to licensed landfill or municipal incinerator. | Disposal of sludge, stripper or thinner at dump. | Disposal on farm. | _____ |
| Surface cleaners (solvent based) | Used up or shared with someone else. Hazardous waste contractor collection service used for leftover cleaners. | Liquid cleaners evaporated in open air.* Cleaners or sludge taken to licensed land-fill or municipal incinerator. | Disposal of sludge or cleaners at dump. | Disposal on farm. | _____ |
| CONTAINER DISPOSAL | | | | | |
| Paper/cardboard pesticide container | Returned to supplier or hazardous waste collection service used. | Empty container taken to licensed landfill, municipal incinerator or dump.** | Disposal of triple-rinsed empty container on farm. | Disposal of partially filled container on farm. | _____ |
| Plastic pesticide container | Triple-rinsed container returned to retail store for reuse, or taken to licensed landfill or municipal incinerator. Rinsate applied to appropriate crop. | Unrinsed container disposed of at licensed landfill, municipal incinerator or dump.** | Disposal of empty but unrinsed container on farm. Disposal of triple-rinsed container on farm. | Disposal of partially filled container on farm. | _____ |

Boldface type: These actions are not legal for wastes generated from the farm business. (Household wastes are exempt from regulation.) If you are unsure of how to dispose of specific wastes, contact NJDEP Bureau of Technical Assistance at (609) 984-6620.

* These actions require a permit from NJDEP. Contact the Air Quality Permitting Program at (609) 984-6721 for further information.

** Solid waste may only be disposed of at a permitted solid waste facility. Check with your county office of solid waste for specific regulations.

| | LOW RISK (rank 4) | LOW-MOD RISK (rank 3) | MOD-HIGH RISK (rank 2) | HIGH RISK (rank 1) | YOUR RANK |
|---|---|---|--|--|--------------|
| CONTAINER DISPOSAL (continued) | | | | | |
| Plastic container for oil or other vehicle product | Product used up and container recycled. | Any remaining ingredients evaporated in safe conditions. Empty container taken to licensed landfill or municipal incinerator. | Disposal of empty container at dump or on farm. | Disposal of partially filled container on farm. | _____ |
| Hazardous household product containers | Taken to recycling facility or reused for similar product. | Empty container taken to licensed landfill, municipal incinerator or dump . | Disposal of empty container on farm. | Disposal of partially filled container on farm. | _____ |
| PESTICIDES | | | | | |
| Unwanted or banned pesticides | Participation in EPA banned pesticide buy-back program if available. Unused pesticides returned to place of purchase. Hazardous waste contractor collection service used. | Pesticides sold for restricted or general purposes used up or taken to licensed landfill or municipal incinerator. | Disposal of unused pesticides at dump. | Disposal of unused pesticides on farm. | _____ |
| VEHICLE/METAL EQUIPMENT MAINTENANCE PRODUCTS | | | | | |
| Used antifreeze | Saved and taken to antifreeze recycling facility, or filtered and reused as water in other radiators. | Collected and disposed of at municipal sewage treatment drain with permission of municipality. Taken to licensed landfill, municipal incinerator or dump . | Disposal on farm away from well (including in septic system). | Dumped near well. | _____ |

Boldface type: These actions are not legal for wastes generated from the farm business. (Household wastes are exempt from regulation.) If you are unsure of how to dispose of specific wastes, contact NJDEP Bureau of Technical Assistance at (609) 984-6620.

| | LOW RISK (rank 4) | LOW-MOD RISK (rank 3) | MOD-HIGH RISK (rank 2) | HIGH RISK (rank 1) | YOUR RANK |
|---|--|---|--|--|--------------|
| VEHICLE/METAL EQUIPMENT MAINTENANCE PRODUCTS (continued) | | | | | |
| Waste oil and grease | Collected by a hazardous waste contractor. | Reused for lubrication. Burned for heat in an residential incinerator , or collected and disposed of at licensed hazardous waste facility. | Disposal at dump. | Disposal on farm. | _____ |
| Waste oil sludge (left over after burning) | Hazardous waste contractor services used. | Collected and disposed of at licensed hazardous waste facility. | Disposal at dump. | Disposal on farm. | _____ |
| Spent organic solvent/parts cleaner | Solvent recycler collection service used for leftover cleaners. | Filtered in ventilated area and reused or evaporated in open air . Sludge taken to licensed landfill or municipal incinerator. | Disposal of solvents or sludge at dump. | Disposal of solvents or sludge on farm. | _____ |
| Rust-removal products | Used up or shared with someone else. Hazardous waste contractor services used. | Taken to licensed landfill, municipal incinerator or dump. * | Disposal of left-over product on farm. | Disposal of used product on farm. | _____ |
| Lead acid battery | Taken to battery recycler or battery store. | Used batteries taken to licensed landfill or municipal incinerator; or stored away from well. | Used batteries taken to dump or stored near well. | Disposal on farm near well. | _____ |

Boldface type: These actions are not legal for wastes generated from the farm business. (Household wastes are exempt from regulation.) If you are unsure of how to dispose of specific wastes, contact NJDEP Bureau of Technical Assistance at (609) 984-6620.

* Illegal if the substance meets the definition of a hazardous waste.

| | LOW RISK (rank 4) | LOW-MOD RISK (rank 3) | MOD-HIGH RISK (rank 2) | HIGH RISK (rank 1) | YOUR RANK |
|---|--|--|--|--|--------------|
| VEHICLE/METAL EQUIPMENT MAINTENANCE PRODUCTS (continued) | | | | | |
| Vehicle maintenance drips and spills | Contained on paved area with sawdust. Contaminated sawdust disposed of at licensed landfill or municipal incinerator. | Contained on paved area with sawdust. Contaminated sawdust disposed of at dump. | Occasional flushing onto farm property near well. | Frequent flushing onto farm property near well. | _____ |
| WOOD PRESERVING | | | | | |
| Application drips and spills | Drips and spills contained. Applicator and drop cloths disposed of at licensed landfill or municipal incinerator. * | Drips and spills contained. Applicator and drop cloths disposed of at dump. | Application without containment more than 150 feet from well. Applicator and drop cloths disposed of on farm. | Application without containment within 150 feet of well. | _____ |
| Disposal of unused preservatives | Used up or shared with someone else. Hazardous waste contractor collection service used for leftover preservatives. | Disposal at licensed landfill or municipal incinerator. | Disposal at dump. | Disposal on farm. | _____ |

Boldface type: These actions are not legal for wastes generated from the farm business. (Household wastes are exempt from regulation.) If you are unsure of how to dispose of specific wastes, contact NJDEP Bureau of Technical Assistance at (609) 984-6620.

* Illegal if the substance meets the definition of a hazardous waste.

TOTAL

Use this total to calculate risk ranking on back page of worksheet.

What do I do with these rankings?

Step 1: Begin by determining your overall hazardous waste risk ranking. Total the rankings for the categories you completed and divide by the number of categories you ranked:

$$\frac{\text{total of rankings}}{\text{\# of categories ranked}} \text{ divided by } \frac{\text{total of rankings}}{\text{\# of categories ranked}} \text{ equals } \boxed{\text{risk ranking}}^*$$

*Carry your answer out to one decimal place.

3.6–4=low risk, 2.6–3.5=low to moderate risk, 1.6–2.5=moderate to high risk, 1–1.5=high risk

This ranking gives you an idea of how your hazardous waste practices **as a whole** might be affecting your drinking water. This ranking should serve only as a **very general guide, not a precise diagnosis**. Because it represents an **averaging** of many individual rankings, it can mask any **individual** rankings (such as 1's or 2's) that should be of concern. (See Step 2.)

Enter your boxed hazardous waste risk ranking on page 1 of Worksheet #12. Later you will compare this risk ranking with other farmstead management rankings. Worksheet #11 will help you identify your farmstead's site conditions (soil type, soil depth and bedrock characteristics), and Worksheet #12 will show you how these site conditions affect your risk rankings.

Step 2: Look over your rankings for individual activities:

- **Low-risk** practices (4's): ideal; should be your goal despite cost and effort
- **Low-to-moderate-risk** practices (3's): provide reasonable groundwater protection
- **Moderate-to-high-risk** practices (2's): inadequate protection in many circumstances
- **High-risk** practices (1's): inadequate; pose a high risk of polluting groundwater

Regardless of your overall risk ranking, any individual rankings of "1" require immediate attention. Some concerns you can take care of right away; others could be major—or costly—projects, requiring planning and prioritizing before you take action.

Find any activities that you identified as 1's and list them under "High-Risk Activities" on pages 6-7 of Worksheet #12.

Step 3: Read Fact Sheet #5, *Improving Hazardous Waste Management*, and consider how you might modify your farmstead practices to better protect your drinking water.



The New Jersey Farmstead Assessment System is a cooperative project of the USDA Natural Resources Conservation Service, Rutgers Cooperative Extension, and New Jersey Department of Environmental Protection.

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