HOT SPOT VISITATIONS
PENNICHUCK WATERSHED

MAY 2002

PREPARED FOR:

PENNICHUCK WATER WORKS
4 WATER STREET
NASHUA, NH 01035

PREPARED BY:

COMPREHENSIVE ENVIRONMENTAL INC.
21 DEPOT STREET
MERRIMACK, NH 03061

Hot Spots Visitation Findings

Automobile Repair/Dealer Site Visitations

In January of 2002, CEI visited 15 auto repair and dealership facilities in the Pennichuck Watershed situated primarily along route 101A. Four of the facilities were located in Amherst, one in Merrimack, and ten were in Nashua. A checklist was made to provide assistance and uniformity at each visitation (see Appendix A). At each facility CEI asked questions pertaining to stormwater pollution issues and walked around the property (with permission) checking storm drains and noting any possible stormwater issues. (CEI did not note any violations occurring within each facility unrelated to stormwater pollution.) An education brochure on good management practices was handed out at the end of each visit (see Appendix B). Table 1 summarizes CEI's findings.

Summary of Findings

CEI found that each facility collected used fluids in tanks, drums, and containers and stored them inside the building for pick up by a licensed transporter. A few facilities burned waste oil on site but most had it hauled away. Half of the facilities had floor drains located in the garage bays. Two of the facilities collected the fluids from the drains in storage tanks. The other facilities had floor drains with oil/grit separators. Personnel at these facilities believed these drains were connected to the sewer system.

Only three facilities had any long time storage of vehicles or parts stored outside. Two of these facilities, Charles Auto Repair and Precision Automotive had vehicles and auto parts stored on bare ground. Leaking fluids from vehicles and parts on these sites could seep into groundwater supplies and into nearby surface waters.

CEI found that overall personnel at the automobile facilities seemed to be aware of the dangers of hazardous vehicle fluids and appeared to be handling waste oils and other fluids appropriately. The biggest concern CEI found was the neglect for the catch basins located on most of the sites. Only two facilities annually cleaned out the catch basins. Personnel at the rest of the facilities did not appear to have any knowledge of who was responsible for maintaining the catch basins or if they drained into the sewer system or nearby stream.

Hot Spots Visitation Findings

Landscape, Nursery, and Agriculture Visitations

In April of 2002, CEI visited six landscape, nursery, and agriculture businesses located in the Pennichuck Watershed. These businesses all stored and handled pesticides and fertilizers. A checklist was made to provide assistance and uniformity at each visitation (see Appendix A). At each facility CEI asked questions pertaining to stormwater pollution issues and walked around the property (with permission) checking storm drains and noting any possible stormwater issues. (CEI did not note any violations occurring within each facility unrelated to stormwater pollution.) An education brochure on good management practices was handed out at the end of each visit (see Appendix B). Table 2 summarizes CEI's findings.

Summary of Findings

As expected, CEI found that the greatest quantities of pesticide and fertilizer were stored at the Wal-Mart and Home Depot retail businesses. These materials are delivered by the pallet load and unloaded off the delivery trucks outside adjacent to the fenced-in garden and landscaping area. Customers buying landscaping materials usually pull their vehicles near the entrance for easier loading. Any torn or damaged bags could spill onto to ground in this unloading and loading process. If the spilled materials are not swept regularly stormwater runoff will most likely wash them into the nearest storm drains in the parking lot.

In the Wal-Mart garden and landscape center, CEI noted poor housekeeping practices. There were many damaged bags of fertilizer with the contents spilled out onto the floor. It did not appear that the garden and landscaping center had been swept recently. However, the manager assured CEI that the center was swept on a regular basis. In addition, a large part of the parking lot in front of the landscape and garden center was being used to store and display many pallet loads of landscaping materials. Spillage material presumably from bags of planting soil, peat moss, and bark mulch was observed in this area. Stormwater runoff most likely washes the materials into the storm drains located in the parking lot. Routine sweeping could eliminate this from happening.

In contrast, CEI found that very little pesticides and fertilizers were stored at the Mixed Border Nursery, Lavoie's Farm, and Woodmont Orchards businesses. Personnel CEI talked to at these sites said that pesticides and fertilizers were bought on an as-needed basis, stored inside buildings, and generally used up by the end of the growing season.

Hot Spots Visitation Findings

Recommendations

For the most part CEI did not observe any major problems with the handling or storage of hazardous materials. Routine outdoor maintenance however, at some of the visited sites, was lacking. Primarily, this amounted to cleaning out catch basins and sweeping up sand and debris in parking lots and loading and unloading areas. A letter could be sent to facilities with storm drains to address cleaning and house keeping practices. A sample letter is included with report.

Catch Basin Cleaning

Businesses should be made aware of the responsibility they have to maintain the catch basins on their property. Businesses should also be made aware that when catch basins becomes full of sediment and debris, suspended materials in the stormwater can freely pass through the system where they eventually settle into the nearest body of water or clog outlet pipes. Clogged outlet pipes can cause flooding to occur potentially damaging property and costing money to clean and repair.

Housekeeping Practices

Businesses should be made aware that routinely sweeping up road sand, trash, and any spillage of materials could reduce the frequency of catch basins cleaning. Performing good housekeeping practices outside can also be more appealing to customers.

Storm Drain Markers

Storm drain markers may help make business personnel become more aware of where runoff ends up. Understanding the "drinking water connection" may motivate personnel to keep areas clean.

May 9, 2002

Name
Title
Company
Address
City, State Zip

SAMPLE LETTER

RE: CATCH BASIN CLEANING

Dear M:

During a recent visit, the catch basins located on your property were observed to be filled or partially filled with sediment and debris. When catch basins become full of sediment and debris, suspended materials in the stormwater can freely pass through the system where they can clog outlet pipes, degrade water quality, and settle into bodies of water. Pennichuck Water Works maintains many reservoirs within the watershed that can be affected by un-maintained catch basins.

Routinely sweeping up road sand, trash, and any spillage of materials could reduce the frequency of catch basin cleaning. Pennichuck Water Works recommends annual cleanings to maintain catch basin effectiveness. We would appreciate your efforts to help protect our watershed. Listed below are a few companies that perform catch basin cleaning services in the area.

- Drain-Pro . . . . . (603) 889-1641
- Free Flow Plumbing & Drain King Inc. . . (603) 378-2581
- Rotor-Man Sewer & Drain Service . . . . . (603) 595-7114

Thank you for your understanding.

Sincerely,

Donald Ware

Table 1 - Hot Spot Site Visitation Findings
Automotive Repair or Dealer Facilities - January 2002

Facility	Long Term Vehicle/Parts Storage (Leakage Present?)	Waste Fluid Handling	Spent Absorbents	Floor Drains	Car Washing (on a regular basis)	Dry Wells	Storm Drain Status	Notes
Charles Auto Service Route 101A, Amherst	Yes, vehicles and auto parts stored outside on bare ground in rear of building. Some dark oily spots visible around the storage yard.	Burns waste oil. All other fluids collected and picked up. Fluids stored inside building.	Absorbents reused and then thrown away. Rags are laundered by a professional laundry service. No leakage found at dumpster.	None	No	None	Single drain located in parking lot appears okay.	Biodegradable solvent used in parts washer. Oil filters punched and drained 24 hours. Manager did not know if catch basin has ever been cleaned out or who is responsible for the maintenance.
Aamco Transmission Route 101A, Amherst	No	All fluids collected in drums and picked up by Total Waste Management. Fluids stored inside building.	Absorbent pads collected and picked up. Rags are laundered by a professional laundry service.	None	No	None	No drains on site. Nearest drain located in street.	On site solvent recycling machine. Particle waste collected & drummed.
Munro Muffler Brake Route 101A, Amherst	Yes, auto parts stored on concrete pad outside near dumpster. A few oily spots found on pad.	All fluids collected in tank and in drums and picked up. Fluids stored inside building.	Absorbents are thrown away. No visible leakage from dumpster.	Yes, with oil/grit separator. Drains are clogged.	No	None	No drains on site. Nearest drain located in street.	Floor drains have been clogged for a few months.

Comprehensive Environmental Inc.
21 Depot Street, Merrimack, NH 03054

Table 1 - Hot Spot Site Visitation Findings
Automotive Repair or Dealer Facilities - January 2002

Facility	Long Term Vehicle/Parts Storage (Leakage Present?)	Waste Fluid Handling	Spent Absorbents	Floor Drains	Car Washing (on a regular basis)	Dry Wells	Storm Drain Status	Notes
Meineke Discount Mufflers 88 Route 101A, Amherst	No	All fluids including parts washer wastes are collected in drums stored inside and picked up. Fluids stored inside building.	Absorbents are collected in plastic bags and thrown away. No leakage found at dumpster.	None	No	None	No drains on site. Runoff flows into perimeter swales.	Swales are under construction. Recently built facility.
Telarico Used Cars 717 Milford Road, Merrimack	No	All fluids collected in tank and in drums and picked up. Fluids stored inside building.	Absorbents collected and picked up by Safety Kleen.	Yes, with oil/grit separator.	Yes, inside garage bays.	None	Yes three drains. Lower drain near entrance appears partially full of sediment.	Four year old facility. Manager said a complex storm drain system was installed beneath parking lot. Health officer, Cec Curran, accompanied CEI on visit.
Sullivan Tire Corp. 369 Amherst Street, Nashua	No	All fluids collected and picked up. Fluids stored inside building.	Absorbents collected and picked up.	Yes, with oil/grit separator.	No	Unknown	No drains on site. Nearest drain located in street.	Large empty parking lot surrounds building.
Precise Automotive Service 91 Deerwood Drive, Nashua	No	All fluids collected in drums and picked up. Fluids stored inside building.	Absorbents collected and picked up.	None	No	None	No drains on site. Nearest drain located in street.	Business attached to house.

Table 1 - Hot Spot Site Visitation Findings
Automotive Repair or Dealer Facilities - January 2002

Facility	Long Term Vehicle/Parts Storage (Leakage Present?)	Waste Fluid Handling	Spent Absorbents	Floor Drains	Car Washing (on a regular basis)	Dry Wells	Storm Drain Status	Notes
Advanced Auto Care 87 Deerwood Drive, Nashua	Yes, vehicles and auto parts stored outside on bare ground. A few oily spots were visible in storage yard.	All fluids collected in drums and picked up. Fluids stored inside building.	Absorbents collected and picked up.	None	No	None	No drains on site. Nearest drain located in street.	Owner recently called the city to have the storm drain cleaned.
Greased Lightening Route 101A, Nashua	No	All fluids collected in tank and in drums and picked up. Fluids stored inside building.	Absorbents collected and picked up.	Yes, drains lead to inside storage tank.	No	None	Two drains located in front of building. Drain nearest the building appears full of sediment.	Large "bay" drains are used to collect oil and limit need for absorbents.
Peters Kia/Honda 280 Amherst Street, Nashua	No	Used oil burned on site. All other fluids collected and picked up. Fluids stored inside building.	Manager not sure if absorbents are collected or thrown away.	Yes, drains catch oil to be burned.	Yes, cars are washed at nearby facility.	Unknown	One drain located in parking lot appears okay.	New facility. Parking lot slopes and drains to nearby swale.
Saturn of Nashua 635 Amherst Street, Nashua	Late model vehicle (employee) was leaking oil/gas into nearby storm drain.	Used oil burned on site. All other fluids collected and picked up. Fluids stored inside building.	Absorbents are thrown away. No visible leakage from dumpster.	Yes, with oil/grit separator.	Yes, inside garage bays.	Unknown	Eleven drains located in parking lot. Many appear partially full.	1992 Facility.

Table 1 - Hot Spot Site Visitation Findings
Automotive Repair or Dealer Facilities - January 2002

Facility	Long Term Vehicle/Parts Storage (Leakage Present?)	Waste Fluid Handling	Spent Absorbents	Floor Drains	Car Washing (on a regular basis)	Dry Wells	Storm Drain Status	Notes
Sunnyside Acura 482 Amherst Street, Nashua	No	All fluids are collected and picked up every two weeks. Fluids stored inside building.	Absorbents are collected and picked up.	Yes, with oil/grit separator.	Yes, inside garage bays.	Unknown	Four drains located in parking lot. Two drains appear partially full of sediment.	Manager said the four storm drains were cleaned out last spring.
Firestone Service Center 475 Amherst Street, Nashua, NH	No	All fluids are collected in tank and in drums and picked up. Fluids stored inside building.	Absorbents are used but unsure if thrown out or collected. No leakage found at dumpster.	Yes, with oil/grit separator.	No	Unknown	Two drains located in front and rear of building. Both appear to be full of sediment.	Sludge from floor drain tank cleaned on an annual basis or as needed.
Midas Auto Experts 518 Amherst Street, Nashua	No	All fluids are collected in tank and in drums and picked up. Fluids stored inside building.	Absorbents are collected and picked up.	None	No	None	One drain located in parking lot appears to be partially full of sediment.	Manager did not know if catch basin has ever been cleaned out or who is responsible for the maintenance.
Texaco Xpress Lube 620 Amherst Street, Nashua	No	Used oil is collected in two tanks and picked up during the summer or burned during the winter. Fluids stored inside building.	No absorbents used. Rags are laundered by Unifirst.	None	Yes. There is a car washing facility on site (Xpress Wash).	None	Six drains located in parking lot. Drains are cleaned annually. All appear okay.	Oil tanks are located in basement.

Table 2 Hot Spot Visitation Findings
Landscape, Nursery, and Agriculture Businesses - April 2002

Facility	Pesticides & Fertilizers			Compost Storage	Storm Drain Status	Notes
	Storage	Loading and Handling	Disposal Practices			
Home Depot Milford Rd. Merrimack	All pesticide and fertilizer bags and containers are stored inside building as required by the Town of Merrimack.	Unloading occurs in paved area southeast of building. Manager was unsure of where the two storm drains located in this area drained to.	Spilled materials are swept daily and collected by the 3M Company. No spillage of materials were observed in landscape and garden area.	No compost storage piles.	Two drains in unloading area may be tied to the large detention pond near driveway entrance	Bark mulch, soils, and plants stored outside on concrete pad in fenced area. Two drains collect runoff in display area and lead to clay lined dry well. Manager said well is periodically cleaned.
PK's Garden Center & Landscape Materials 607 Amherst Street, Nashua	All bags and containers are stored on pallets inside small building on cement floor.	Materials are loaded to customers vehicles parked in nearby dirt lot.	Broken bags are taped up and sold or given to employees. No spillage of materials were observed in storage area.	Large pile located near wetland area.	No storm drains found.	Grass strip between compost pile and vegetated buffer is sloped toward pile preventing runoff from entering water. Silt fence bordering vegetated buffer is in need of repair.
Wal-Mart 85 State Road, 101A Amherst	Pesticides are stored inside building. Fertilizers are stored outside under canopy in fenced-in landscape/garden center area.	Pallet loads of materials are unloaded from trucks in parking lot adjacent to garden center. Customers usually drive their vehicles in front of center for easier loading.	Manager said garden center is periodically swept and material including broken bags are picked up by Amherst Earth Products. However, CEI observed spillage from many open fertilizer bags and lots of spilled planting soils covering the floor in outdoor garden center.	No compost storage piles.	No storm drains located in fenced landscape/garden center area. Runoff appears to flow into parking lot where there are many drains - some possibly covered by pallets of landscaping materials.	Manager did not know where storm drains located in parking lot drained to. Plant soils, peat-moss, bark mulch, plants, and other landscaping materials were displayed on pallets in parking lot area.

Table 2 Hot Spot Visitation Findings
Landscape, Nursery, and Agriculture Businesses - April 2002

Facility	Pesticides & Fertilizers			Compost Storage	Storm Drain Status	Notes
	Storage	Loading and Handling	Disposal Practices			
Woodmont Orchards 207 Silver Lake Road Hollis	Pesticides and fertilizers are stored in locked buildings with cement floors on pallets.	Small quantities are handled and mixed inside buildings before use.	Manager said they only buy what they need and rarely have to store materials for more than a year.	No compost storage piles.	None on site.	Manager said a special spraying technique is used to reduce pesticide use.
Mixed Borders Nursery 363 Pine Hill Road Hollis	A few small containers of pesticides and a few bags of fertilizers are stored inside storage building. Pesticides are stored on metal shelves.	Small quantities are handled and mixed inside storage building before use.	Manager says he does not store materials for very long, buys only what is needed.	No compost storage piles.	None on site.	Manager said very little pesticides are used.
Lavoie's Farm 172 Nartoff Road Hollis	Pesticides and fertilizers are stored in storage buildings with cement floors.	Quantities are handled and mixed undercover.	Materials are generally used up during the farming season. Any stored materials are used during the next growing season.	No compost storage piles present at time of visitation.	None on site.	The farm has worked with the Natural Resource Conservation Service to implement Best Management Practices.

Appendix A – Checklists

- ⇨ Automobile Repair or Dealer Facility Checklist
- ⇨ Agriculture, Nursery, and Landscaping Facility Checklist

Automotive Repair or Dealer Facility Checklist

General Inspection of the Facility

Facility Name: **Site Contact:**
Location: **Phone:**

Questions:	**Notes:**
Are there leaking vehicles stored outside? Where are the fluids leaking to? Automobile fluids that have leaked on the ground could be transported by runoff into nearby surface waters.	
How are you handling spent degreasers and other automobile fluids? Spent fluids dumped down sinks, floor drains, out back, or in the dumpster is illegal and could be leaking directly into nearby surface waters. Spent fluids should be stored in approved leak free containers.	
Where are spent automobile fluids stored? Are they under cover and/or in sealed containers? Fluids should be stored in sealed labeled containers and located in a compliant storage area until they are ready to be collected by a licensed transporter.	
Where are spent absorbent materials stored or disposed of after use? Spent absorbent materials thrown into a dumpster can leak into nearby surface waters. Used absorbent materials should be stored in a leak proof container until properly disposed of. Absorbent materials should be readily available.	

(continued to next page)

Questions:	**Notes:**
Where do the floor drains discharge to? DES prohibits floor drains in auto service stations unless it is connected to the sewer or an above or below ground holding tank.	
Where are the storm drains located? Runoff from leaking vehicles or fueling areas could enter the storm drain.	
Where does the runoff from vehicle wash areas drain to? Are the soaps phosphate free? Vehicle wash water contains oil, grease, metal (paint chips), phosphates, detergents, soaps, cleaners, road salts, and other chemicals that can contaminate source water	
Are there any dry wells in use at the facility? Hazardous wastes dumped down sinks that lead to dry wells can seep into groundwater and nearby surface waters.	

Additional Observations:

Agricultural, Nursery, and Landscaping Facility Checklist

General Inspection of the Facility

Facility Name: **Site Contact:**
Location: **Phone:**

Questions:	**Notes:**
Where are fertilizers and pesticides stored? They should be stored under cover and/or in sealed labeled containers away from surface waters to prevent them from being transported into nearby surface waters.	
Where are the fertilizers and/or pesticides being loaded/handled? These materials should be handled in a contained area where runoff won't transport fallen materials into nearby surface waters.	
Is there any old and unused containers/bags of fertilizers and pesticides, or other harmful wastes lying outside? To prevent runoff into nearby surface waters these materials should be stored in sealed labeled containers and located in a compliant storage area until ready to be transported to a collection facility.	
Where is compost material being stored? Compost storage should be located far away from surface water and be under cover to prevent any runoff from entering nearby surface waters.	

Additional Observations:

Appendix B – Brochures

- **Are You Polluting Your Own Drinking Water?** Information for Agriculture and Landscaping Businesses

- **Are You Polluting Your Own Drinking Water?** Information for Automotive Businesses

What is a Watershed?

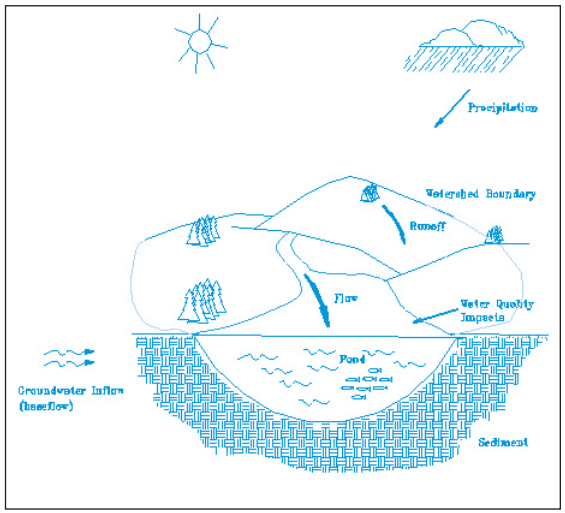
A watershed is the area of land that supplies water to a given stream, lake, wetland, or other waterbody. Automotive businesses in the Pennichuck Watershed drain to the City of Nashua's and other towns' water supply.

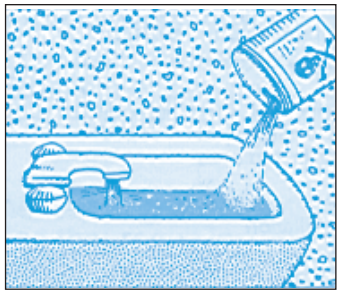
Water Quality

As water from rain or snow travels over the surface of land and through the ground, it can carry contaminants into your drinking water supply such as:

- gasoline and oil products;
- spent solvents and cleaners; and
- detergents, degreasers, and spent washwater and rinsewater.

Keeping your water supply clean is important to your health and the health of others.





Source: Cooperative Extension Service, Michigan State University

Be Informed and Prepared

Do educate yourself and your employees on proper handling procedures for automotive fluids.

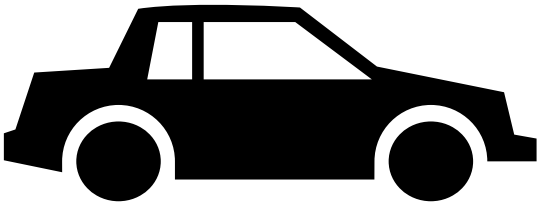
Don't wait for an emergency to plan your response. Keep information on chemical names, material safety data sheets, and emergency phone numbers at hand. This will help others avert a costly crisis.

You Can Take Action To Protect the Water You and Others Drink!

For additional information please contact Rebecca McEnroe at Pennichuck Water Works

(603) 882-5191

Are You Polluting Your Own Drinking Water?



Information for Automotive Businesses

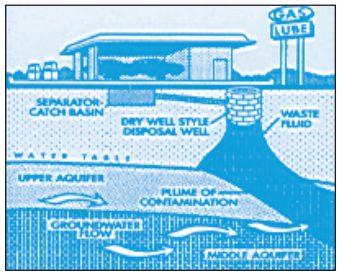
September 12, 1997 – Former Gas Station Owner Sentenced for Illegal Dumping – In September 1997, a Texas man was sentenced to one year in prison and to pay the state of Texas $27,487 in clean up costs for illegally dumping 4,690 gallons of gasoline into the Conroe, Texas storm and sewer systems in January 1994. The gasoline release caused the shutdown of the sewage treatment plant, and the evacuation of children from two schools. The spill also contaminated Possom Creek, which empties into Lake Houston, a major source of drinking water for the city of Houston.

Source: United States Environmental Protection Agency Headquarters Press Release

Automotive businesses can contaminate water sources. How can this happen, and more importantly how can you prevent it?

Automotive repair shops, service stations, and dealerships can pollute water supplies when automotive fluids are discharged to storm drains or floor drains, oil and gas products are spilled, and materials are improperly stored. By using better housekeeping methods and changing a few daily activities, you can help protect your own health and that of others in your community. In addition you can:

- **Reduce liability** at both on-site and off-site treatment, storage, and disposal facilities;
- **Gain customers** who know that the business they choose is helping to keep the watershed clean; and
- Be a **good neighbor** by protecting the water supply.



Source: EPA, Underground Injection Practices Council

What Can I Do?

Safely Fuel Vehicles

Do fuel vehicles on a sound concrete surface. Do install fuel pump shut-off systems.

Don't allow vehicle fueling in unauthorized areas. Don't hose down fueling areas for cleanup since this water can discharge to a floor drain or storm drain and enter the water supply.

Source: Cooperative Extension Service, Michigan State University

Properly Change Automotive Fluids

Do collect leaking or dripping fluids in drip pans or containers.

Don't drain or replace automotive fluids in areas with floor drains or storm drains.

Limit Your Disposal Needs through Recycling

Do store used material in separate containers since some chemicals may be recycled if separated.

Don't mix waste. Mixing can greatly increase disposal costs and reduce your ability to recycle it.

Safely Store Chemicals and Waste

Do locate your storage area on a concrete surface with a protective berm for spill containment. Do label waste containers.

Don't leave containers and storage areas uncovered or open to the weather. Don't let rainwater contact old parts or scrap metal since pollutants can wash off and enter the water supply.

Safeguard Underground Storage Tanks (USTs)

Do provide catchment basins at fill-pipes to contain spills from delivery hoses. Do perform corrective actions in response to leaks, spills or overfills.

Don't forget to check and maintain UST corrosion protection and leak protection systems.

Contain Spills

Do use rags for small spills and dry absorbent material for larger spills. Treat material as hazardous waste if appropriate or send spent rags to an industrial cleaner.

Don't allow drips and splatters to remain on the floor since they may eventually wash into underground or surface water sources.

Clean Parts and Equipment Efficiently

Do use water based parts cleaners. Do use enclosed parts washers that reuse the same solvent many times.

Don't dispose of spent solvents into the sewer or storm drain. They must be disposed of as hazardous waste.

Control Inventory

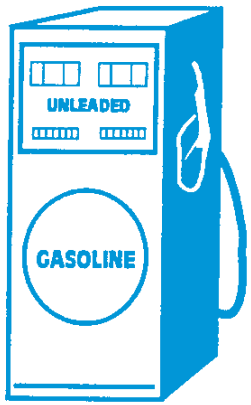
Do know when chemicals were purchased and use these materials before they expire.

Don't store large quantities of rarely used or toxic materials since this increases the chance of material expiration.

Dispose of Waste Responsibly

Do select a hazardous waste hauler and disposal company with care. Ask for customer references and review the hauler's permits.

Don't dispose of waste in sinks, storm drains, septic systems, or floor drains.



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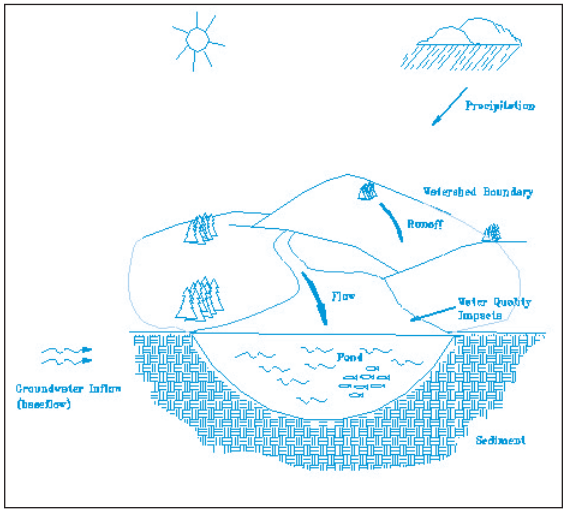
Water Quality

As water from rain or snow travels over the surface of land and through the ground, it can carry contaminants into a water supply source such as:

- Bacteria, viruses and disease causing protozoans such as Giardia and Cryptosporidium found in animal fecal waste;
- Excess nutrients such as phosphorus and nitrogen from chemical fertilizers, and harmful chemicals from pesticides and herbicides.

Keeping your water supply clean is important to your health and the health of others.



Source: Cooperative Extension Service, Michigan State University

Be Informed and Prepared

Do educate yourself and your employees on proper handling procedures for pesticides and fertilizers.

Don't wait for an emergency to plan your response. Keep information on chemical names and emergency phone numbers at hand. This will help others avert a costly crisis.

You Can Take Action To Protect the Water You and Others Drink!

For additional information please contact:

Rebecca McEnroe at
Pennichuck Water Works (603) 882-5191

USDA Service Center:
Rockingham County (603) 679-1587
Hillsborough County (603) 673-2409

UNH Cooperative Extension Office:
Rockingham County (603) 679-5616
Hillsborough County (603) 673-2510

NH DES Grant Program (603) 271-7017

Are You Polluting Your Own Drinking Water?

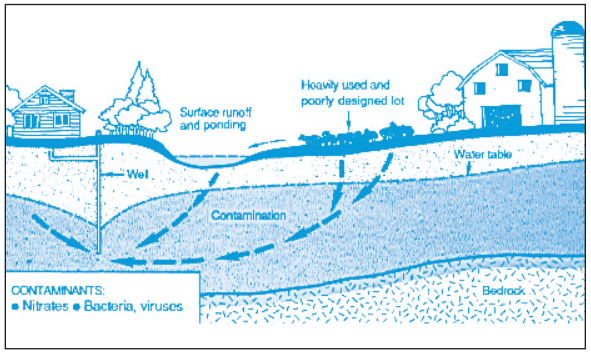
Information for Agricultural and Landscaping Businesses

February 2001 – Dairyman to Pay Nearly $600,000 for Pollution – A dairyman was ordered to pay nearly $600,000 in penalties, attorney fees and court costs. The dairyman was growing his dairy herd beyond the capacity of his facilities. The penalty was related to discharges of manure-laden waste water off the farm and violation of water quality standards.

Farms, stables, landscaping companies, and nurseries can contaminate water sources. How can this happen, and more importantly how you can prevent it?

Livestock next to streams, fertilizers and pesticides can pollute. By keeping cows and other livestock away from surface water and changing a few daily activities, you can help protect your own health and that of others in your community. In addition you can:

- **Save money** by finding ways to reduce or recycle waste;
- **Reduce liability** at both on-site and off-site treatment, storage, and disposal areas;
- **Gain customers** who know that the business they choose is helping to keep the watershed clean; and
- Be a **good neighbor** by protecting community water supplies and public health.



Source: Cooperative Extension Service, Michigan State University

What Can I Do?

Source: Metropolitan District Commission

Separate Livestock from Surface Water

Do relocate livestock feeding, watering, and salt lick areas away from streams and ponds.

Don't destroy or disturb natural streamside buffers including trees and plants. This vegetation can act as a filter for contaminants washing off of the land and into the stream, help stabilize stream banks, and prevent erosion.

Isolate Calving Areas

Do consider additional containment of calves and their manure since they can release much higher densities of Cryptosporidium than adult cows.

Don't locate calving areas near surface water.

Safely Store Manure

Do locate manure storage facilities away from surface water or wells and control runoff from manure.

Do make sure your storage facility is large enough to hold all the manure, runoff water, incidental liquids, and direct rainfall.

Don't overfill manure storage structures or disregard leaks since this may run off in surface water or seep into groundwater, possibly with fatal results

Control Runnoff

Do control runoff from barnyards, feedlots, and manure storage facilities by using vegetative buffers and settling basins.

Do divert runoff away from areas containing manure.

Don't allow clean runoff to travel through areas containing manure.

Safely Store, Mix, and Load Chemicals

Do store, mix, and load pesticides and fertilizers away from surface water in a secure area with an impervious floor such as concrete.

Don't store, mix, or load chemicals outside or on an earthen floor since spills can penetrate the groundwater more easily.

Apply Chemicals Conservatively

Do apply pesticides and fertilizers using the minimum amount needed to be effective.

Don't apply chemicals before storms or when the ground is frozen since chemicals are wasted and can easily run off the land and into a surface water source.

Contain Spills

Do provide a containment area around chemical storage and loading facilities in case of a spill.

Don't ignore small drips and spills since these can eventually reach surface and groundwater.

Dispose of Waste Responsibly

Do bring waste materials to an approved disposal facility.

Don't leave empty waste containers outside since they can often dribble unused chemicals on the ground.