
ENVIRONMENTAL Fact Sheet



29 Hazen Drive, Concord, New Hampshire 03301 • (603) 271-3503 • www.des.nh.gov

WD-DWGB-12-3

2012

Performing an Inventory for Drinking Water Protection

New Hampshire's basic approach to protecting drinking water sources consists of three steps: delineate the area to be protected, inventory potential contamination sources (PCSs) in that area, and manage those PCSs. While virtually any human activity can be considered a PCS, only 20 types of activities need to be included in a PCS inventory (see list on reverse) prepared in connection with DES's Drinking Water Source Protection Program. This includes programs for the protection of public water supply wells and surface water sources, as well as protection programs for high-value groundwater resources under the Groundwater Reclassification process. While this fact sheet outlines inventory procedures for "basic" source protection, a wide variety of protection approaches are used in New Hampshire. For more information, please see fact sheet WD-DWGB-12-8 "[Protecting Public Drinking Water Sources Based on Source Assessment Reports](#)." The procedures in this fact sheet meet the requirements of the Chemical Monitoring Waiver program and meet the needs of local source water protection programs.¹ Preparing a PCS inventory does not require any special training.

Here are the basic steps to follow:

1. Obtain a map of the source water protection area and existing inventory of potential and existing sources of groundwater contamination in one of the following ways: contact the N.H. Department of Environmental Services at (603) 271-7017 or johnna.mckenna@des.nh.gov, or create your own map from the DES website at <http://www2.des.state.nh.us/gis/onestop/>.
2. Conduct a "windshield survey." Using the map and inventory from DES, drive or walk through the source water protection area noting where any PCSs occur and verifying their locations. Do not include businesses in a PCS inventory unless they include activities listed on the next page. Please note that some of the known contamination sources on the map may no longer be in business although they remain in DES's GIS system. Updating the PCS inventory involves three types of changes:
 - A. Adding PCSs: Add PCSs that are "on the ground" but are not on the existing map (i.e., they are not reflected in the existing PCS inventory). Using a GPS unit or a paper map, mark the location of any PCS, recording the location that best represents the PCS (e.g., a driveway, front entrance to a building, salt pile, etc.). Do not enter private property without the owner's permission.
 - B. Deleting PCSs: Remove PCSs in the report (and on the map) that no longer exist (e.g., business closed).
 - C. Updating PCSs: Update PCS information that is out of date (e.g., PCS name change, etc.).

¹For local programs under the Groundwater Reclassification Program, please see "[A Guide to Groundwater Reclassification](#)" (November 2011). For local protection programs under the Community Well Siting Program, please see the "[Guide to Conducting and Reporting on a Windshield Survey for New Community Wells](#)" (Part III Section D).

Review the DES map and related PCS inventory report and update both as necessary.

It is important to note that PCSs don't always have a sign that says what they are doing. If something might be a PCS, make a note of what type of activity, the location and street address. Do not enter a private driveway or building during the windshield survey. Obtain the facts on site use later, from town offices or the building owner, in the next step.

3. Check local sources of information. Tax collector, health department, code enforcement, fire department, or planning board records may be of use in identifying PCS businesses within the source water protection area. In some cases, these records will reveal the business name, but not the type of business. The local code enforcement officer, health officer, and fire officials are usually very knowledgeable about businesses in town. For some multi-tenant properties, you may need to contact the owner by phone to see whether there are any PCS businesses on the premises. Remember that many town officials in New Hampshire are volunteers and their offices may only be open part-time.

4. Based on your windshield survey and review of local information, finalize the updated PCS list, GPS data (if applicable) and map and submit the information to DES. Digital GPS data must be submitted in a GIS file format with data content consistent with the current statewide PCS layer. GIS metadata is available from DES by contacting (603) 271-0688.

POTENTIAL CONTAMINATION SOURCES (PCSs)*

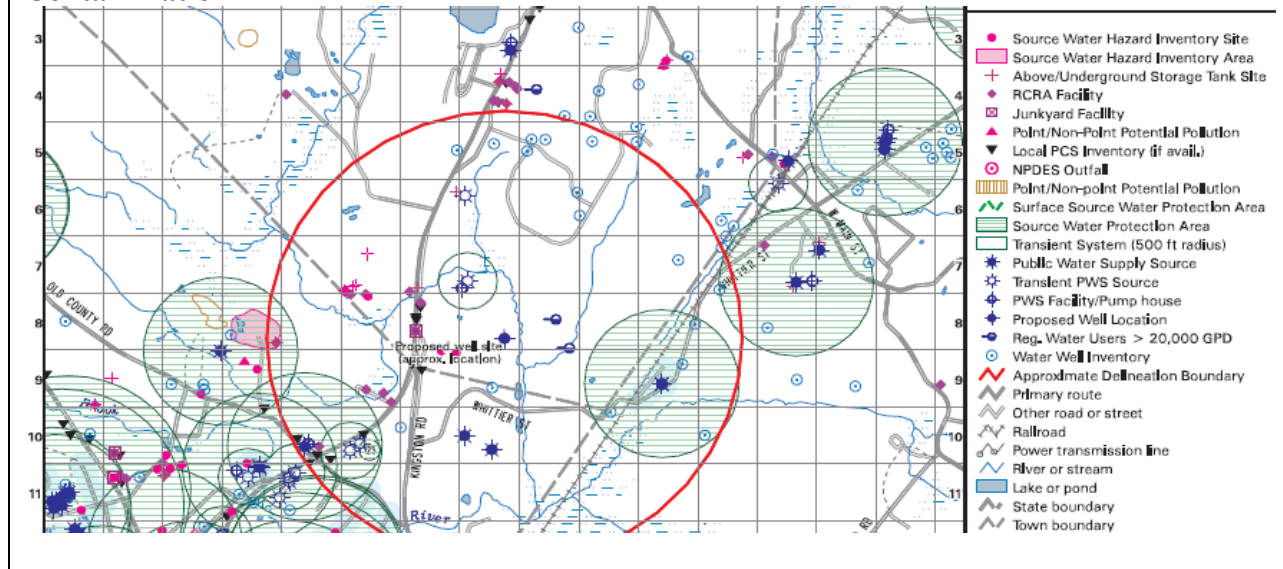
- Vehicle service and repair shops
- General service and repair shops
- Metalworking shops
- Manufacturing facilities
- Underground and aboveground storage tanks
- Waste and scrap processing and storage
- Transportation corridors
- Septic systems (at commercial and industrial facilities)
- Laboratories and certain professional offices (medical, dental, veterinary)
- Use of agricultural chemicals
- Salt storage and use
- Snow dumps
- Stormwater infiltration ponds or leaching catch basins
- Cleaning services
- Food processing plants
- Fueling and maintenance of earth moving equipment
- Concrete, asphalt, and tar manufacture
- Cemeteries
- Hazardous waste facilities
- Farms

* "Potential contamination source" means, as specified in RSA 485-C:7, I, human activities or operations upon the land surface that pose a foreseeable risk of introducing regulated substances into the environment in such quantities as to degrade the natural groundwater quality. Examples of potential contamination sources are listed in RSA 485-C:7, II.

The following documents will assist you with completing a windshield survey:

1. PCS Windshield Survey Form (attached)
2. Key to Land Use Codes (attached)
3. Inventory of Potential and Existing Sources of Groundwater Contamination Map & Report (provided by DES. See example below)

EXAMPLE of Existing Inventory of Known and Potential Sources of Groundwater Contamination



State of New Hampshire Department of Environmental Services Well Siting Inventory of Potential and Existing Sources of Groundwater Contamination for:

SYSTEM NAME: XXXXXXXAUG2011
ADDRESS: 123 MAIN ST
TOWN: XXXXXX

- Notes:**
1. Report prepared August 24, 2011 by the NHDES Drinking Water and Groundwater Bureau.
 2. The map-cell column in the report indicates which 1000-foot grid cell the site or facility is located on the accompanying map. For example, a map-cell value of "G-11" indicates column "G" and row "11".
 3. Please refer to Attachment A for a description of Hazard Inventory Sites Land Use Codes and their associated potential risk.

Source Water Hazard Inventory Sites

This includes all Groundwater Hazard Inventory, Remediation Sites, and Initial Response Spill Sites regulated by NHDES to ensure water resource protection.

MAP CELL	FACILITY SITE#	FACILITY NAME AND ADDRESS	PROJECT TYPE
J-11	1997XXXXX	NH COUNTRY STORE ROUTE 3A XXXXXX	ETHER (INACTIVE) Risk: 8

Aboveground Storage Tank Facilities

These are facilities where there are, or where in the case of inactive sites, aboveground storage tanks. If there is a documented release from a tank, it becomes a LAST project type and is also listed in the Source Water Hazard Inventory.

MAP CELL	FACILITY SITE#	FACILITY NAME AND ADDRESS	# TANKS
J-11	00000XX	NH VEHICLE REPAIR SHOP 108 MAIN ST XXXXXX	TANKS: 1

Underground Storage Tank Facilities

These are facilities where there are, or where in the case of inactive sites, underground storage tanks. If there is a documented release from a tank, it becomes a LUST project type and is also listed in the Source Water Hazard Inventory.

MAP CELL	FACILITY SITE#	FACILITY NAME AND ADDRESS	# TANKS
L-09	011XXXXX	NH GAS STATION 312 RTE 3A XXXXXX TAX MAP: 5, LOT: SEC 2 LOT 51	TANKS: 3

For Additional Information

Please contact the Drinking Water and Groundwater Bureau at (603) 271-2513 or dwgbinfo@des.nh.gov or visit our website at <http://des.nh.gov/organization/divisions/water/dwgb/index.htm>. All of the bureau's fact sheets are on-line at <http://des.nh.gov/organization/commissioner/pip/factsheets/dwgb/index.htm>.

Note: This fact sheet is accurate as of January 2012. Statutory or regulatory changes or the availability of additional information after this date may render this information inaccurate or incomplete.

Potential Contamination Source Windshield Survey Form

Date: _____ Time: _____

Locator Name / Affiliation: _____

Town: _____

Instructions:

This form may be used to collect Potential Contamination Source (PCS) information necessary to complete inventories for DES's Chemical Monitoring Waiver Program and local source water protection programs. Information collected on this form, along with location information (e.g., GPS coordinates) is used to update information within DES's statewide PCS GIS layer. Use this form, along with an existing Inventory of Potential and Existing Sources of Groundwater Contamination Map and Report when conducting windshield surveys to identify new PCS sites, modify existing PCSs (location or certain PCS information) or delete PCS activities that are no longer present or active. The following documents will assist you with completing a windshield survey.

1. Performing an Inventory for Drinking Water Protection (Fact Sheet WD-DWGB-12-3)
<http://des.nh.gov/organization/commissioner/pip/factsheets/dwgb/documents/dwgb-12-3.pdf>
2. PCS Windshield Survey Form (below)
<http://des.nh.gov/organization/divisions/water/dwgb/dwspp/index.htm>
3. Key to Land Use Codes
http://des.nh.gov/organization/divisions/water/dwgb/dwspp/waivers/documents/attach_keys.pdf
4. Inventory of Potential and Existing Sources of Groundwater Contamination Map & Report (PCS information to be updated. Provided by DES)

Note: Other programs that include windshield surveys may require additional information such as the Groundwater Reclassification Program and New Community Well Siting Program.

For the Groundwater Reclassification Program, please see "[A Guide to Groundwater Reclassification](http://des.nh.gov/organization/commissioner/pip/publications/wd/documents/wd-11-24.pdf)."
<http://des.nh.gov/organization/commissioner/pip/publications/wd/documents/wd-11-24.pdf>

For the New Community Well Siting Program, please see [the "Guide to Conducting and Reporting on a Windshield Survey for New Community Wells"](http://des.nh.gov/organization/commissioner/pip/publications/wd/documents/des-wd-04-7.pdf) (found in Part III Section D of the Toolkit for Siting Small Community Wells).
<http://des.nh.gov/organization/commissioner/pip/publications/wd/documents/des-wd-04-7.pdf>

NEW PCS SITES FOUND:

Site Name & Address	Project Type (from Key to Land Use Codes List)	Tax Map & Lot Number	Location Marked on Map (#) or GPS Coordinates	Comments

CHANGES TO EXISTING PCS SITES:

Site Name & Address	Project Type	Old Activity	New Activity



Attachment A: Key to Land Use Codes for Source Water Hazard Inventory Sites

Land Use	Code	Description
Farms with ≥ 10 animal units outdoors or with outdoor manure storage for that number of animals	ANIMAL	A potentially significant source of pathogens and nutrients. Cryptosporidium is particularly problematic. Subject to NH Department of Agriculture regulations, enforced on a complaint basis.* Note - many farms are not in GIS.
Aboveground storage tank facilities	AST	Contain toxic chemicals or oil products capable of contaminating surface or groundwater if released. Releases may occur when transferring product, through accidental damage, or due to lack of maintenance. Regulated by DES.
Superfund Site	CERCLA	Is known to contain toxic chemicals or oil products that have contaminated water bodies or groundwater. Clean-up regulated by DES and EPA.
Cemeteries	CEMETERY	Use of herbicides is a concern; herbicide use by commercial applicators is regulated by the Department of Agriculture and not by DES.
Complaints	COMPLAINTS	Site was referred to the Drinking Water Protection Bureau as a complaint and has not been reassigned to another project type.
Ether	ETHER	Ether contamination from unknown source.
Leaking bulk storage facilities containing fuel oil	FUEL	Is known to have leaked fuel oil (VOCs). Clean up regulated by DES.
Sites which have groundwater release detection permits and no other defined project type	GW RELDET	Groundwater Release Detection Permits issued by DES and monitoring conducted by operator to detect any releases to groundwater that may occur, e.g., lined lagoons, and lined landfills.
Water sample	H2O SAMPLE	Isolated groundwater sample with contaminant detection. Site has not been tied to a known contaminant source.
Hazardous waste project	HAZWASTE	Contain toxic chemicals or oil products that have at some point contaminated or increased contaminant levels in groundwater. Clean-up regulated by DES.
Non-hazardous, non-sanitary holding tank registration	HOLD TANK	Registered with DES. If used improperly, could contain toxic chemicals or oil products capable of contaminating surface or groundwater if released.
Initial response spill	IRSPILL	Initial response spill.
Junkyards	JUNKYARD	May contain toxic chemicals or oil products that could contaminate water bodies or groundwater, for example, from improper disposal of fluids from automobile or chemical tanks. Not regulated by DES.
Lined landfills	LAND/LN	May contain toxic chemicals or oil products that could contaminate water bodies or groundwater if a leak occurs. Monitored by a release detection permit.
Proposed landfill	LAND/PRP	Proposed landfill.
Unlined landfill	LAND/UNLN	Existing landfill or landfill closure.
Leaking above ground bulk storage facilities containing motor fuel	LAST	Is known to have leaked petroleum products (VOCs). Cleanup regulated by DES.
Leaking underground storage tank projects	LUST	Is known to have leaked petroleum products (VOCs). Cleanup regulated by DES.
Lined wastewater lagoon	LWW/LAG	May contribute nitrates, microbiological and other pollutants to groundwater or surface water if a leak occurs. Monitored by a release detection permit.
Leaking motor oil storage tank	MOST	Is known to have leaked motor fuel (VOCs). Cleanup regulated by DES.
Old dump sites (non-landfill)	OLD	Generally benign, potentially could contain toxic chemicals or oil products that could contaminate water bodies or groundwater in the future.
Leaking residential or commercial heating tanks	OPUF	Is known to have leaked motor fuel (VOCs). Cleanup regulated by DES.
Routine pesticide application areas	PESTICIDES	May contribute SOCs, nitrates and microbiological pollution sources to groundwater or surface water. Pesticide applicators are regulated by the Department of Agriculture. Not regulated by DES.
Rapid infiltration basins	RAPID INF	May contribute nitrates and microbiological pollution sources to groundwater or surface water. Monitored by DES under a groundwater discharge permit.
Resource Conservation & Recovery Act - registered hazardous waste handlers	RCRA	Facilities that generate hazardous wastes that could cause contamination if a release occurs. Regulated by DES.
Remediation recharge-treated or remediated	REMED/RCHG	Generally benign activity occurring at a contamination site during cleanup. Could contain toxic chemicals or oil products that could contaminate water bodies or groundwater. Regulated by DES.

Attachment A: Key to Land Use Codes for Source Water Hazard Inventory Sites

Land Use	Code	Description
Bulk uncovered storage of salt	SALT STORAGE	Storage pile of salt for winter deicing. Salt travels readily in surface water and groundwater. Sometimes a problem in wells although health effects on humans at drinking water levels not well established. Usually more harmful to aquatic life.
Septage lagoons	SEPT/LAG	May contribute nitrates and microbiological pollution sources to groundwater or surface water. Regulated by DES with monitoring under a groundwater monitoring permit.
Subsurface wastewater disposal systems greater than 20,000 gallons per day	SEPTIC	May contribute nitrates and microbiological pollution sources to groundwater or surface water. Design and installation are regulated and monitored by DES.
Sewer distribution lines	SEWERED	May break where faults or subsidence occurs or where system is in poor condition or old. Areas not sewerred but developed have individual septic systems.
Unsolicited site assessment was done by others in response to contamination	SITEEVAL	Generally benign. If it contains VOCs, IOCs or SOCs it becomes a HAZWASTE or LUST site.
Sludge lagoons	SLUD/LAG	May contribute nitrates, microbiological, or other pollutants to groundwater or surface water. Regulated by DES. Requires monitoring under a groundwater monitoring permit.
Sludge application sites	SLUDGAP	Regulated by DES to ensure quality. Applied at agronomic rates for beneficial reuse. <i>Note - many of these are not in GIS.</i>
Sludge piles	SLUDG PILE	Regulated by DES, unless temporary, requires a groundwater permit. <i>Note - many of these are not in GIS.</i>
Special projects	SPECIAL	Various special projects.
Spill or release of petroleum	SPILL/RLS	VOCs. Impact depends on the size and nature of the spill. For example, gasoline spills are more hazardous than fuel oil spills. Hazard also depends on the quantity and the location of the spill in relation to wells or surface water bodies. Clean-up regulated by DES.
Spray irrigation projects	SPRAYIRR	May contribute nitrates and microbiological pollution sources and/or pesticides to groundwater or surface water. Monitored by DES under a groundwater discharge permit.
Concentrated discharge of storm water	STORM WATER	May contribute unregulated contaminants, VOCs, IOCs and SOCs and microbiologicals. Treatment at large sites required by DES. Monitoring at certain sites required by EPA.
Stump dump	STUMP/DEMO	Municipal or commercial stump or demo dump.
Solid waste transfer stations with groundwater permits	TRANS.STA	Generally not a threat to groundwater. Could release VOCs, IOCs and SOCs if improperly managed.
Underground injection control - discharge of benign wastewaters not requiring a groundwater discharge permit or request to cease a discharge (i.e., floor drain closure requests)	UIC	Generally benign. If improper discharges occur it could contain contaminants such as VOCs and IOCs. In such cases it would become a hazardous waste site. UICs registered by DES.
Underground storage tank facilities	UST	May contribute VOCs if leaking or if small quantities are released repeatedly during transfers. Regulated by DES.
Unlined wastewater lagoons	UWW/LAG	May contribute nitrates, microbiologicals, or other pollutants to groundwater or surface water. Regulated by DES under a groundwater discharge permit.
DES: Department of Environmental Services N: If groundwater has been impacted, these projects are classified to another project type. VOC: Volatile Organic Compound (such as gasoline, solvents, etc) SOC: Synthetic Organic Compound (mostly pesticides) IOC: Inorganic Compounds (mostly metals) EPA: Environmental Protection Agency GIS: Geographic Information System (if a site is not in GIS, it will not be shown on the map.)		

Attachment A continued: Key To Local Potential Contamination Source Inventory

Land Use	Code	Description
Vehicle Service & Repair Shop	VSR	Auto, truck & equipment service or repair shops; autobody shops, including those associated with fleet maintenance; aircraft refueling, deicing and maintenance; and mobile home dealers.
General Service & Repair Shop	GSR	Furniture stripping, painting, & refinishing; photographic processing; printing; appliance & small engine repair; boat repair, service and refinishing; refrigeration, heating, ventilating & air conditioning shops; and electrical repair shops.
Metalworking Shop	MW	Machine shops; metal plating, heat treating, smelting & jewelry making shops.
Manufacturing Facility	MAN	Electronic & chemical manufacturing, processing & reclamation; paper, leather, plastic, fiberglass, rubber, silicon & glass making; pharmaceutical production; pesticide manufacturing; and chemical preservation of wood and wood products.
Waste & Scrap Processing & Storage	WSPS	Junkyards, scrap yards & auto salvage yards; wastewater (ww)treatment plants; dumps, landfills, transfer stations & other solid waste facilities; ww or septage lagoons.
Laboratories & Professional Services	LAB	Medical, dental, veterinary offices & pet grooming; research, development, testing & analytical labs; and funeral services.
Cleaning Services	CLN	Dry cleaners; laundromats; beauty salons; and car washes.
Food Processing Plants	FP	Meat packing & slaughterhouses; dairies; and processed food manufacture.
Fueling Maintenance of Excavation & Earthmoving Equipment	EEE	Active gravel pits; construction businesses with earthmoving or excavating equipment stored and maintained on site.
Concrete, Asphalt, & Tar Manufacture	CAT	Concrete and asphalt plants.
Car Dealerships	CARD	Car dealerships (with or without service departments).
Construction Sites	CONS	Construction sites (not including housing developments).
Aboveground and Underground Storage Tank facilities	AST/UST	Gas stations; petroleum bulk storage; chemical storage; and on-site heating fuel.
Salt storage & use	SALT	For winter road & parking lot use.
Chemical Application Areas	LANDMNGT	Golf courses, athletic fields, railroads, large over-head powerlines, locations requiring intense landscape management with the application of pesticides and/or chemical applications for maintenance, nurseries, sod farm, and crops.

* If PCS code does not fit any of the above categories (e.g. animal farm, cemetery, underground storage tank, etc.) then use the codes in the first table.

Key To Point/Non-point Sources

Land Use	Code
Combined sewer outfall	CO
Septage/sludge composting facility	CS
Mine, hardrock quarry	MQ
Mine, sand and gravel	MS
No type indicated	NT
Sand/salt storage pile, covered	SC
Storm drain	SD
Septage/sludge lagoon	SL
Snow dump	SN
Septage/sludge land spreading	SS
Sand/salt storage pile, uncovered	SU
Covered/uncovered sand/salt storage pile	SX

Key To Registered Water Users

Type Of Use	Code
Agriculture-Field	AF
Agriculture	AG
Agriculture-Livestock	AL
Aquaculture	AQ
Bottled Water	BW
Commercial	CO
Dust Control	DC
Domestic	DO
Dual Plumbing	DP
Forestry & Lumbering	FL
Flow Mix	FM
Groundwater Remediation	GR
Industrial	IN
Irrigation	IR
Institutional	IT
Mining	MI
Power, Biomass	PB
Power, Fossil Fuel	PF
Power, Geothermal	PG
Power, Hydroelectric	PH
Power, Nuclear energy	PN
Snow making	SM
Sewage treatment	ST
Water Supplies	WS