**Massachusetts Department of Environmental Protection**
**Source Water Assessment and Protection (SWAP) Report**
**for**

# Newburyport Water Department

### What is SWAP?

The Source Water Assessment Program (SWAP), established under the federal Safe Drinking Water Act, requires every state to:

- inventory land uses within the recharge areas of all public water supply sources;
- assess the susceptibility of drinking water sources to contamination from these land uses; and
- publicize the results to provide support for improved protection.

### Susceptibility and Water Quality

Susceptibility is a measure of a water supply's potential to become contaminated due to land uses and activities within its recharge area.

A source's susceptibility to contamination does *not* imply poor water quality.

Water suppliers protect drinking water by monitoring for more than 100 chemicals, disinfecting, filtering, or treating water supplies, and using source protection measures to ensure that safe water is delivered to the tap.

Actual water quality is best reflected by the results of regular water tests. To learn more about your water quality, refer to your water supplier's annual Consumer Confidence Reports.

### Table 1: Public Water System Information

| | |
|---|---|
| ***PWS Name*** | Newburyport Water Department |
| ***PWS Address*** | City Hall/P.O. Box 550 |
| ***City/Town*** | Newburyport, Massachusetts 01950 |
| ***PWS ID Number*** | 3206000 |
| ***Local Contact*** | Paul Colby |
| ***Phone Number*** | (978) 465-4466 |

## Introduction

We are all concerned about the quality of the water we drink. Drinking water sources may be threatened by many potential contaminant sources, including storm runoff, road salting, and improper disposal of hazardous materials. Citizens and local officials can work together to better protect these drinking water sources.

**Purpose of this report:**
This report is a planning tool to support local and state efforts to improve water supply protection. By identifying land uses within water supply protection areas that may be potential sources of contamination, the assessment helps focus protection efforts on appropriate best management practices (BMPs) and drinking water source protection measures.

Refer to Table 3 for Recommendations to address potential sources of contamination. Department of Environmental Protection (DEP) staff are available to provide information about funding and other resources that may be available to your community.

**This report includes the following sections:**

1. Description of the Water System
2. Land Uses within Protection Areas
3. Source Water Protection
4. Appendices

## Glossary

**Aquifer:** An underground water-bearing layer of permeable material that will yield water in a usable quantity to a well.

**Hydrogeologic Barrier:** An underground layer of impermeable material (i.e. clay) that resists penetration by water.

**Recharge Area:** The surface area that contributes water to a well.

**Zone I:** The area closest to a well; a 100 to 400 foot radius proportional to the well's pumping rate. This area should be owned or controlled by the water supplier and limited to water supply activities.

**Zone II:** The primary recharge area for the aquifer. This area is defined by hydrogeologic studies that must be approved by DEP. Refer to the attached map to determine the land within your Zone II.

**Zone A:** is the most critical for protection efforts. It is the area 400 feet from the edge of the reservoir and 200 feet from the edge of the tributaries (rivers and/or streams) draining into it.

**Zone B:** is the area one-half mile from the edge of the reservoir but does not go beyond the outer edge of the watershed.

**Zone C:** is the remaining area in the watershed not designated as Zones A or B.

The attached map shows Zone A and your watershed boundary.

## Section 1: Description of the Water System

***Groundwater Sources***

| ***Well Name*** | ***Source ID#*** |
|---|---|
| ***Zone II #:*** **540** | ***Susceptibility:*** **High** |
| Well #1 | 3206000-01G |
| Well #2 | 3206000-02G |

***Surface Water Sources***

| ***Source Name*** | ***Susceptibility: High*** |
|---|---|
| Artichoke Reservoir | 3206000-01S |
| Indian Hill | 3206000-02S |
| Bartlett Spring Pond | 3206000-03S |

The wells for the Newburyport Water Department are located within the same water supply protection area. Each well has a Zone I radius of 400 feet. The wells are located in an aquifer with a high vulnerability to contamination due to the absence of hydrogeologic barriers (i.e. confining clay layer) that can prevent contaminant migration. Please refer to the attached map of the Zone II.

The reservoirs for the Newburyport Water Department are located within two separate yet adjoining water supply protection areas, with a majority of the Artichoke Reservoir water supply protection area extending into the town of West Newbury, and all of the Indian Hill water supply protection area being in the town of West Newbury. Newburyport also has Bartlett Spring Pond as an emergency source, and is in the process of obtaining approval from DEP to make it an active source.

For current information on monitoring results and treatment, please contact the Public Water System contact person listed above in Table 1 for a copy of the most recent Consumer Confidence Report. Drinking water monitoring reporting data is also available on the web at http://www.epa.gov/safewater/ccr1.html

## Section 2: Land Uses in the Protection Areas

The Zone II and Zone Cs for Newburyport are primarily a mixture of residential, agriculture, and forest, with a small portion of the Zone II consisting of recreational land uses (refer to attached map for details). Land uses and activities that are potential sources of contamination are listed in Table 2, with further detail provided in the Table of Regulated Facilities and Table of Underground Storage Tanks in Appendix B.

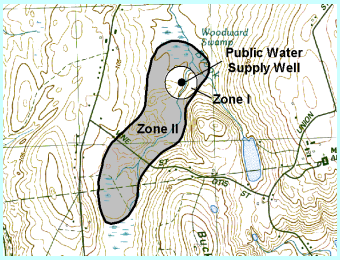
**Key Land Uses and Protection Issues include:**

1. Activities in Zone I
2. Activities in Zone A
3. Golf Course and Agricultural Activities
4. Residential Land Uses
5. Transportation Corridors
6. Oil or Hazardous Material Contamination Sites
7. Comprehensive Wellhead Protection Planning

The overall ranking of susceptibility to contamination for the system is high, based on the presence of at least one high threat land use within the water supply protection areas, as seen in Table 2.

### What is a Protection Area?

A well's water supply protection area is the land around the well where protection activities should be focused. Each well has a Zone I protective radius and a Zone I I protection area.




**1. Activities in Zone I –** The Zone I for each of the wells is a 400 foot radius around the wellhead. Massachusetts drinking water regulations (310 CMR 22.00 Drinking Water) requires public water suppliers to own the Zone I, or control the Zone I through a conservation restriction. Only water supply activities are allowed in the Zone I. However, many public water supplies were developed prior to the Department's regulations and contain non-water supply activities such as homes and public roads. The following non-water supply activities occur in the Zone Is of the system wells:

**Well #2** - Both the uppermost northeast and northwest section of the Zone I have lawns associated with private residences. Also, Ferry Road cuts through the uppermost northeast section.

**Zone I Recommendations:**

- ✓ To the extent possible, remove all non-water supply activities from the Zone Is to comply with DEP's Zone I requirements.
- ✓ Use BMPs for the storage, use, and disposal of hazardous materials such as water supply chemicals and maintenance chemicals.
- ✓ Do not use or store pesticides, fertilizers or road salt within the Zone I.
- ✓ Keep any new non-water supply activities out of the Zone I.

- ✓ Agreement Options - Attempt to obtain a *Memorandum of Understanding.*
  Memorandum of Understanding (MOU) is an agreement between the landowner and public water supplier in which the landowner agrees not to engage in specific threatening activities. The MOU should be specific to the land use or activity. For instance, if the land is residential with a septic system the owner could agree not to place chemicals, petroleum products, or other hazardous or toxic substances, including septic system cleaners into the septic system, and that the system will be pumped at a specific frequency. The application of lawn care chemicals could also be restricted. Understanding how activity threatens drinking water quality is an important component of developing and effective MOU.

**2. Activities in Zone A -** Existing and future land use activities which may have an impact on surface water sources include: on-site septic systems; public and private recreational activities; untreated stormwater runoff; uncontained storage of fertilizers, manure, domestic animals; new construction; spills along roads; above ground and underground storage tanks; erosion; and un-permitted and unauthorized activities. Wild animals, farm animals, and domestic pets can be carriers of waterborne diseases such as Giardia, Cryptosporidium, Salmonella, etc. The following activities occur in the Zone A of the system's reservoirs:

**Artichoke Reservoir** - There are livestock operations, manure storage and spreading, and aquatic wildlife throughout the Zone A of the reservoir and tributaries to the reservoir; numerous homes exist throughout the Zone A of the reservoir and tributaries to the reservoir, most of which are on private septic systems; shoreline fishing occurs at accessible areas throughout the Zone A of the reservoir; and Route 95 passes thorough a small section of the Zone A of a tributary to the reservoir.

**Indian Hill Reservoir** - There are livestock operations, manure storage and spreading, and aquatic wildlife throughout the Zone A of the reservoir and tributaries to the reservoir; numerous homes exist throughout the Zone A of the reservoir and tributaries to the reservoir, most of which are on private septic systems; and shoreline fishing occurs at accessible areas throughout the Zone A of the reservoir.

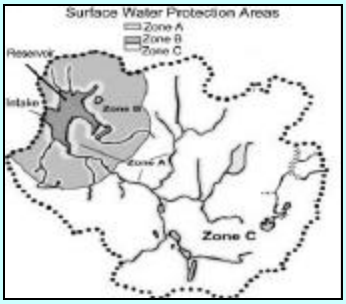
**Bartlett Spring Pond** - A vehicle maintenace area, an abandoned underground storage tank, and one sludge lagoon associated with the Spring Lane Water Treatment Plant are located in the Zone A of the Bartlett Spring Pond. There is also a house and the possibility of an associated septic system located in the Zone A.

**Zone A Recommendations:**

- ✓ To the extent possible, remove all activities from the Zone As to comply with DEP's Zone A requirements.

### What is a Watershed?

A watershed is the land area that catches and drains rainwater down-slope into a river, lake or reservoir. As water travels down from the watershed area it may carry contaminants from the watershed to the drinking water supply source. For protection purposes, watersheds are divided into protection Zones A, B and C.



- ✓ Use BMPs for the storage, use, and disposal of hazardous materials such as water supply chemicals and maintenance chemicals.
- ✓ Storage of pesticides, fertilizers or road salt within the Zone A should be covered and contained.
- ✓ Keep any new prohibited activities out of the Zone A.

**3. Golf Course and Agricultural Activites –** Pesticides and fertilizers have the potential to contaminate a drinking water source if improperly stored, applied, or disposed of. If not contained or applied properly, animal waste from barnyards, manure pits and field application is a potential source of contamination to ground and surface water. If managed improperly, Underground and Aboveground Storage Tanks (USTs and ASTs) can be potential sources of contamination due to leaks or spills of the fuel oil they store.

**What are "BMPs?"**

Best Management Practices (BMPs) are measures that are used to protect and improve surface water and groundwater quality. BMPs can be structural, such as oil & grease trap catch basins, nonstructural, such as hazardous waste collection days or managerial, such as employee training on proper disposal procedures.

**Golf Course and Agricultural Activities Recommendations:**

- ✓ Encourage owners and operators of agricultural operations to consult with the Massachusetts Department of Food and Agriculture's regarding "On-Farm Strategies to Protect Water Quality - An Assessment & Planning Tool for Best Management Practices" (December 1996) for information about technical and financial assistance programs related to erosion and sediment control and nutrient, pest, pesticide, manure, waste, grazing, and irrigation management.
- ✓ Partner with farmers in your protection areas to make them aware of your water supply and to encourage the use of a US Natural Resources Conservation Service (NRCS) farm plan to protect water supplies.
- ✓ Encourage the farmers and golf course managers to incorporate an **Integrated Pest Management** (IPM) approach into their pest management program. IPM is an ecologically-based approach to pest control that links together several related components, including monitoring and scouting, biological controls, mechanical and/or other agricultural practices, and pesticide applications. By combining a number of these different methods and practices, satisfactory pest control can be achieved with less impact on the environment.
- ✓ Promote **Best Management Practices** (BMPs) for fuel oil storage, hazardous material handling, storage, disposal, and emergency response planning.
- ✓ Work with farmers and golf courses to ensure that pesticides and fertilizers are being stored within a structure designed to prevent runoff.

**5. Residential Land Uses –** Approximately 25% of the combined Zone II and Zone Cs consist of residential areas. Ninety-nine percent of the Zone II is served by municipal sewering, however, none of the Zone C areas have public sewers, therefore, all use on-site septic systems. If managed improperly, activities associated with residential areas can contribute to drinking water contamination. Common potential sources of contamination include:

- **Septic Systems** – Improper disposal of household hazardous chemicals to septic systems is a potential source of contamination to the groundwater because septic systems lead to the ground. If septic systems fail or are not properly maintained, they can be a potential source of microbial contamination.

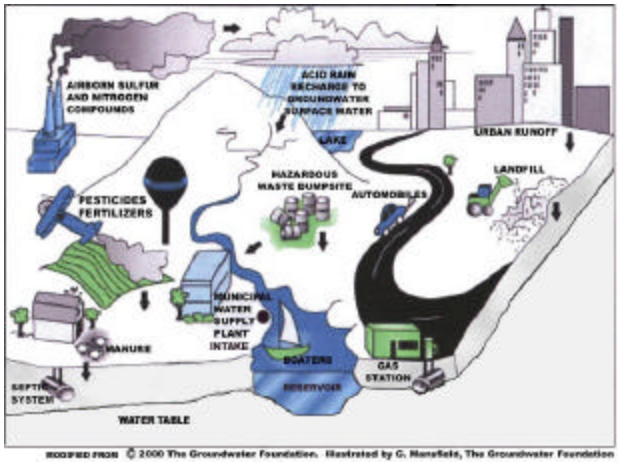



Figure 1: Sample watershed with examples of potential sources of contamination

- **Household Hazardous Materials** - Hazardous materials may include automotive wastes, paints, solvents, pesticides, fertilizers, and other substances. Improper use, storage, and disposal of chemical products used in homes are potential sources of contamination.
- **Heating Oil Storage** - If managed improperly, Underground and Aboveground Storage Tanks (USTs and ASTs) can be potential sources of contamination due to leaks or spills of the fuel oil they store.
- **Stormwater** – Catch basins transport stormwater from roadways and adjacent properties to the ground. As flowing stormwater travels, it picks up debris and contaminants from streets and lawns. Common potential contaminants include lawn chemicals, pet waste, and contaminants from automotive leaks, maintenance, washing, or accidents.

**Potential Source of Contamination vs. Actual Contamination**

The activities listed in Table 2 are those that typically use, produce, or store contaminants of concern, which, if managed improperly, are potential sources of contamination (PSC).

It is important to understand that a release may never occur from the potential source of contamination provided facilities are using best management practices (BMPs). If BMPs are in place, the actual risk may be lower than the threat ranking identified in Table 2. Many potential sources of contamination are regulated at the federal, state and/or local levels, to further reduce the risk.

## Table 2: Land Use in the Watershed

For more information, refer to Appendix B: Regulated Facilities within the Water Supply Protection Area

| Land Uses | Quantity | Threat | Zone II Number | Zone C Source ID | Potential Contaminant Sources* |
|---|---|---|---|---|---|
| **Agricultural** | | | | | |
| Dairy Farms | 1 | M | | 01S | Improper handling of manure (microbial contaminants) |
| Fertilizer Storage or Use | 1 | M | 540 | | Leaks, spills, improper handling, or over-application of fertilizers |
| Livestock Operations | 4 | M | | 01S, 02S | Improper handling of manure (microbial contaminants) |
| Manure Storage or Spreading | 4 | H | | 01S, 02S | Improper handling of manure (microbial contaminants) |
| Pesticide Storage or Use | 2 | H | 540 | 03S | Leaks, spills, improper handling, or over-application of pesticides |
| **Commercial** | | | | | |
| Bus and Truck Terminals | 1 | H | | 01S | Spills, leaks, or improper handling of fuels and maintenance chemicals |
| Cemeteries | 1 | M | | 01S | Leaks, spills, improper handling, or over-application of pesticides and fertilizers; historic embalming fluids (such as arsenic) |
| Golf Courses | 1 | M | 540 | | Over-application or improper handling of fertilizers or pesticides |
| **Residential** | | | | | |
| Fuel Oil Storage (at residences) | Numerous | M | 540 | 01S, 02S, 03S | Spills, leaks, or improper handling of fuel oil |
| Lawn Care/ Gardening | Numerous | M | 540 | 01S, 02S, 03S | Over-application or improper storage and disposal of pesticides |
| Septic Systems/ Cesspools | Numerous | M | | 01S, 02S, 03S | Microbial contaminants, and improper disposal of hazardous chemicals |
| | 5 | | 540 | | |
| **Miscellaneous** | | | | | |
| Aquatic Wildlife | Numerous | L | | 01S, 02S | Microbial contaminants |

| Land Uses | Quantity | Threat | Zone II Number | Zone C Source ID | Potential Contaminant Sources* |
|---|---|---|---|---|---|
| **Miscellaneous** | | | | | |
| Fishing | 2 | L | | 01S, 02S | Fuel and other chemical spills, microbial contaminants |
| Oil or Hazardous Material Sites | 2 | -- | | 01S | Tier Classified Oil or Hazardous Materials Sites are not ranked due to their site-specific character. Individual sites are identified in Appendix B. |
| Road And Maintenance Depots | 2 | M | | 01S, 03S | Spills, leaks, or improper handling or storage of deicing materials, automotive fluids, fuel storage, and other chemicals |
| Stormwater Drains/ Retention Basins | Multiple | L | 540 | 03S | Debris, pet waste, and chemicals in stormwater from roads, parking lots, and lawns |
| Transportation Corridors | 1 | M | 540 | 01S | Accidental leaks or spills of fuels and other hazardous materials, over-application or improper handling of pesticides |
| Underground Storage Tanks | 3 | H | | 01S, 03S | Spills, leaks, or improper handling of stored materials |
| Water Treatment Sludge Lagoon | 2 | M | | 03S | Improper management of sludge and wastewater |

**Notes:**

1. When specific potential contaminants are not known, typical potential contaminants or activities for that type of land use are listed. Facilities within the watershed may not contain all of these potential contaminant sources, may contain other potential contaminant sources, or may use Best Management Practices to prevent contaminants from reaching drinking water supplies.
2. For more information on regulated facilities, refer to Appendix B: Regulated Facilities within the Water Supply Protection Area information about these potential sources of contamination.
3. For information about Oil or Hazardous Materials Sites in your protection areas, refer to Appendix C: Tier Classified Oil and/or Hazardous Material Sites.

*** THREAT RANKING** - The rankings (high, moderate or low) represent the relative threat of each land use compared to other PSCs. The ranking of a particular PSC is based on a number of factors, including: the type and quantity of chemicals typically used or generated by the PSC; the characteristics of the contaminants (such as toxicity, environmental fate and transport); and the behavior and mobility of the pollutants in soils and groundwater.

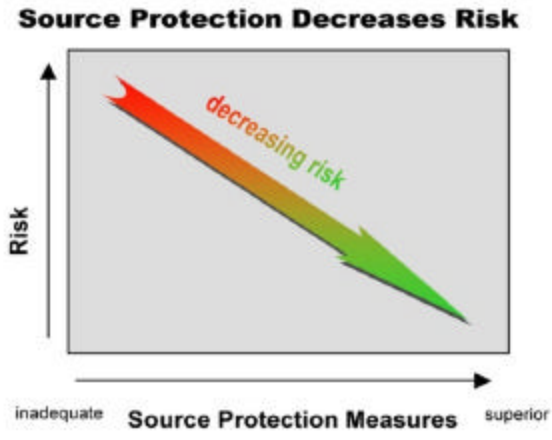


Figure 2: Risk of contamination decreases as source protection increases. This is true for public water systems of any susceptibility ranking, whether High, Moderate, or Low.

**Residential Land Use Recommendations:**

- ✓ Educate residents on best management practices (BMPs) for protecting water supplies. Distribute the fact sheet "Residents Protect Drinking Water" available in Appendix A and on www.mass.gov/dep/brp/dws/protect.htm, which provides BMPs for common residential issues.
- ✓ Work with planners to control new residential developments in the water supply protection areas.
- ✓ Promote BMPs for stormwater management and pollution controls.

**3. Transportation Corridors** - Route 95 runs through the middle of the Zone II for Wells 1 & 2, and through the southeast portion of the Zone C for the Artichoke Reservoir. There are numerous local roads throughout the Zone II and Zone Cs. Roadway construction, maintenance, and typical highway use can all be potential sources of contamination.

Accidents can lead to spills of gasoline and other potentially dangerous transported chemicals. Roadways are frequent sites for illegal dumping of hazardous or other potentially harmful wastes. De-icing salt, automotive chemicals and other debris on roads are picked up by stormwater and wash in to catchbasins.

**Transportation Corridor Recommendations:**

- ✓ Identify stormwater drains and the drainage system along transportation corridors. Wherever possible, ensure that drains discharge stormwater outside of the Zone II and Zone Cs.
- ✓ Work with the City and State to have catch basins inspected, maintained, and cleaned on a regular schedule. Street sweeping reduces the amount of potential contaminants in runoff.
- ✓ Work with City and State emergency response teams to ensure that any spills within the Zone II and Zone Cs can be effectively contained.
- ✓ If storm drainage maps are available, review the maps with emergency response teams. If maps aren't yet available, work with city officials to investigate mapping options such as those in the upcoming Phase II Stormwater Rule requiring some communities to complete stormwater mapping.

**6. Presence of Oil or Hazardous Material Contamination Sites –** The Zone C for the Artichoke Reservoir contains DEP Tier Classified Oil and/or Hazardous Material Release Sites indicated on the map as Release Tracking Numbers 3-0017727 and 3-0019356. Refer to the attached map and Appendix 3 for more information.

**Oil or Hazardous Material Contamination Sites Recommendation:**

- ✓ Monitor progress on any ongoing remedial action conducted for the known oil or contamination sites.

**Top 5 Reasons to Develop a Local Wellhead and Surface Water Protection Plan**

❶ Reduces Risk to Human Health

❷ Cost Effective! Reduces or Eliminates Costs Associated With:

- Increased monitoring and treatment
- Water supply clean up and remediation
- Replacing a water supply
- Purchasing water

❸ Supports municipal bylaws, making them less likely to be challenged

❹ Ensures clean drinking water supplies for future generations

❺ Enhances real estate values – clean drinking water is a local amenity. A community known for its great drinking water in a place people want to live and businesses want to locate.

**7. Protection Planning –** Currently, the City does have water supply protection controls that are implemented through a Water Resource Protection District Ordinance. Protection planning protects drinking water by managing the land area that supplies water to a well or reservoir. A Water Resource Protection Plan coordinates community efforts, identifies protection strategies, establishes a timeframe for implementation, and provides a forum for public participation. There are resources available to help communities develop a plan for protecting drinking water supply wells.

**Protection Planning Recommendations:**

- ✓ Develop a Wellhead Protection Plan. Establish a protection team, and refer them to http://mass.gov/dep/brp/dws/protect.htm for a copy of DEP's guidance, "Developing a Local Wellhead Protection Plan".
- ✓ Coordinate efforts with local officials to compare local wellhead and surface water protection controls with current MA Wellhead Protection Regulations 310 CMR 22.21(2) and Surface Water Supply Protection Regulations 310 CMR 22.20B and 310 CMR 22.20C. If there are no local controls or they do not meet the current regulations, adopt controls that meet 310 CMR 22.21(2), 310 CMR 22.20B and 310 CMR 22.20C. For more information on DEP land use controls see http://mass.gov /dep/brp/dws/protect.htm.
- ✓ If local controls do not regulate floordrains, be sure to include floordrain controls that meet 310 CMR 22.21(2).

Other land uses and activities within the Zone II and Zone Cs that are potential sources of contamination are included in Table 2. Refer to Appendix A for more information about these land uses. Identifying potential sources of contamination is an important initial step in protecting your drinking water sources. Further local investigation will provide more in-depth information and may identify new land uses and activities that are potential sources of contamination. Once potential sources of contamination are identified, specific recommendations like those below should be used to better protect your water supply.

## Section 3: Source Water Protection Conclusions and Recommendations

**Current Land Uses and Source Protection:**

As with many water supply protection areas, the system's Zone II and Zone Cs contain potential sources of contamination. However, source protection measures reduce the risk of actual contamination, as illustrated in Figure 2. The water supplier is commended for taking an active role in promoting source protection measures in the Water

Supply Protection Areas through:

- Pursuing the purchase of property within the surface water protection areas that is not currently owned by the Newburyport Water Department.
- Receiving a Source Protection Grant through DEP to develop a comprehensive surface water supply protection plan.
- Adopting local land use controls for wellhead and surface water protection.
- Requesting that the Town of West Newbury adopt land use controls that meet 310 CMR 22.20B and 310 CMR 22.20C.

**Source Protection Recommendations:**

To better protect the sources for the future:

- ✓ Inspect the Zone I and Zone A regularly, and when feasible, remove any non-water supply activities.
- ✓ Educate residents on ways they can help you to protect drinking water sources.
- ✓ Work with emergency response teams to ensure that they are aware of the stormwater drainage in your Zone II and Zone C and to cooperate on responding to spills or accidents.
- ✓ Partner with local businesses to ensure the proper storage, handling, and disposal of hazardous materials.
- ✓ Monitor progress on any ongoing remedial action conducted for the known oil or contamination sites.
- ✓ Work with farmers in your protection areas to make them aware of your water supply and to encourage the use of a NRCS farm plan to protect water supplies.
- ✓ Develop and implement a Wellhead and Surface Water Protection Plan.

**Additional Documents:**

To help with source protection efforts, more information is available by request or online at www.state.ma.us/dep/brp/dws including:

1. Water Supply Protection Guidance Materials such as model regulations, Best Management Practice information, and general water supply protection information.
2. MA DEP SWAP Strategy
3. Land Use Pollution Potential Matrix
4. Draft Land/Associated Contaminants Matrix

**Conclusions:**

These recommendations are only part of your ongoing local drinking water source protection. Additional source protection recommendations are listed in Table 3, the Key Issues above and Appendix A. DEP staff, informational documents, and resources are available to help you build on this SWAP report as you continue to improve drinking water protection in your community.

The Department's Wellhead Protection Grant Program and Source Protection Grant Program provide funds to assist public water suppliers in addressing water supply source protection through local projects. Protection recommendations discussed in this document may be eligible for funding under the Grant Program. Please note: each spring DEP posts a new Request for Response for the grant program (RFR).

Other grants and loans are available through the Drinking Water State Revolving Loan Fund, the Clean Water State Revolving Fund, and other sources. For more information on grants and loans, visit the Bureau of Resource Protection's Municipal Services web site at: http://mass.gov/dep/brp/mf/mfpubs.htm.

The assessment and protection recommendations in this SWAP report are provided as a tool to encourage community discussion, support ongoing source protection efforts, and help set local drinking water protection priorities. Citizens and community officials should use this SWAP report to spur discussion of local drinking water protection measures. The water supplier should supplement this SWAP report with local information on potential sources of contamination and land uses. Local information should be maintained and updated periodically to reflect land use changes in the Zone II. Use this information to set priorities, target inspections, focus education efforts, and to develop a long-term drinking water source protection plan.

**For More Information**

Contact Anita Wolovick in DEP's Wilmington Office at (978) 661-7768 for more information and assistance on improving current protection measures.

Copies of this report have been provided to the public water supplier, town boards, and the local media.

## Section 4: Appendices

A. Protection Recommendations
B. Regulated Facilities within the Water Supply Protection Area
C. Table of Tier Classified Oil and/or Hazardous Material Sites within the Water Supply Protection Areas
D. Additional Documents on Source Protection

## Table 3: Current Protection and Recommendations

| Protection Measures | Status | Recommendations |
|---|---|---|
| **Zone A** | | |
| Does the Public Water Supplier (PWS) own or control the entire Zone I and/or Zone A? | **YES** (Well #1) | Follow Best Management Practices (BMP's) that focus on good housekeeping, spill prevention, and operational practices to reduce the use and release of hazardous materials. |
| | **NO** (Well #2, Artichoke and Indian Hill Reservoirs, and Bartlett Spring Pond ) | To the extent possible, remove non-water supply activities from each Zone I and prohibited activities in Zone A to comply with DEP's Zone I and Zone A requirements. Investigate options for gaining ownership or control of the Zone I for groundwater sources. |
| Are the Zone 1 and Zone A posted with "Public Drinking Water Supply" Signs? | **YES** | Additional economical signs are available from the Northeast Rural Water Association (802) 660-4988. |
| Are the Zone 1 and Zone A regularly inspected? | **YES** | Continue daily inspections of drinking water protection areas. |
| Are water supply-related activities the only activities within the Zone 1 and Zone A? | **YES** (Well #1) | Continue monitoring for non-water supply activities in Zone As. |
| | **NO** (Well #2, Artichoke and Indian Hill Reservoirs, and Bartlett Spring Pond ) | Monitor non-water supply activities in Zone I and prohibited activities in Zone A, and investigate options for removing these activities. |
| **Municipal Controls** (Zoning Bylaws, Health Regulations, and General Bylaws) | | |
| Does the municipality have Surface Water Protection Controls that meet 310 CMR 22.20C and Wellhead Protection Controls that meet 310 CMR 22.21(2)? | **POSSIBLY** | Work with the Planning Board and the City Council to review the existing Water Resource Protection District Ordinance to determine if it meets land use controls required by 310 CMR 22.21(2) and 310 CMR 22.20B & C. Refer to www.state.ma.us/dep/brp/dws/ for model bylaws and health regulations, and current regulations. |
| Do neighboring communities protect the water supply protection areas extending into their communities? | **NO** | Request that municipal officials in West Newbury develop land use restrictions that meet 310 CMR 22.20B and 310 CMR 22.20C. |
| **Planning** | | |
| Does the PWS have a local surface water and wellhead protection plan? | **NO** | Develop a surface water supply protection plan. Follow "Developing a Local Surface Water Supply Protection Plan" available at: www.state.ma.us/dep/brp/dws/. Develop a wellhead protection plan. Follow "Developing a Local Wellhead Protection Plan" available at: www.state.ma.us/dep/brp/dws/. |
| Does the PWS have a formal "Emergency Response Plan" to deal with spills or other emergencies? | **YES** | Supplement plan by developing a joint emergency response plan with fire department, Board of Health, DPW, and local and state emergency officials. Coordinate emergency response drills with local teams. |
| Does the municipality have a watershed and wellhead protection committee? | **NO** | Establish a committee with representatives from citizens' groups, neighboring communities, and the business community. |
| Does the Board of Health conduct inspections of commercial and industrial activities? | **YES** | Floor drain inspection was conducted in conjunction with DEP. For more guidance see "Hazardous Materials Management: A Community's Guide" at www.state.ma.us/dep/brp/dws/files/hazmat.doc |
| Does the PWS provide watershed protection education? | **SOME** | Currently, the only outreach is through the annual Consumer Confidence Report. Increase residential outreach through bill stuffers, school programs, Drinking Water Week activities, and coordination with local groups. Aim additional efforts at commercial, industrial and municipal uses within the Zone II and Zone C. |

## APPENDIX A: DEP PERMITTED FACILITIES WITHIN NEWBURYPORT WATER SUPPLY PROTECTION AREAS

| DEP FACILITY NUMBER | FACILITY NAME | STREET ADDRESS | TOWN | PERMITTED ACTIVITY | ACTIVITY CLASS |
|---|---|---|---|---|---|
| 310130 | MA HIGHWAY | SCOTLAND ROAD | NEWBURY | FUEL DISPENSER | FUEL DISPENSER |

## UNDERGROUND STORAGE TANKS

| FACILITY NAME | ADDRESS | TOWN | DESCRIPTION | CAPACITY (GAL) | CONTENTS |
|---|---|---|---|---|---|
| MA HIGHWAY | SCOTLAND ROAD | NEWBURY | ROAD AND MAINTENANCE DEPOT | ? | ? |
| SALTER TRANSPORTATION | SCOTLAND ROAD | NEWBURY | BUS TERMINAL | 6000 | GASOLINE |
| SALTER TRANSPORTATION | SCOTLAND ROAD | NEWBURY | BUS TERMINAL | 6000 | DIESEL |

For more information on underground storage tanks, visit the Massachusetts Department of Fire Services web site: http://www.state.ma.us/dfs/ust/ustHome.htm

Note: This appendix includes only those facilities within the water supply protection area(s) that meet state reporting requirements and report to the appropriate agencies. Additional facilities located within the water supply protection area(s) should be considered in local drinking water source protection planning.

**APPENDIX B – Table of Tier Classified Oil and/or Hazardous Material Sites within Newburyport Water Supply Protection Areas**

DEP's datalayer depicting oil and/or hazardous material (OHM) sites is a statewide point data set that contains the approximate location of known sources of contamination that have been both reported and classified under Chapter 21E of the Massachusetts General Laws. Location types presented in the layer include the approximate center of the site, the center of the building on the property where the release occurred, the source of contamination, or the location of an on-site monitoring well. Although this assessment identifies OHM sites near the source of your drinking water, the risks to the source posed by each site may be different. The kind of contaminant and the local geology may have an effect on whether the site poses an actual or potential threat to the source.

The DEP's Chapter 21E program relies on licensed site professionals (LSPs) to oversee cleanups at most sites, while the DEP's Bureau of Waste Site Cleanup (BWSC) program retains oversight at the most serious sites. This privatized program obliges potentially responsible parties and LSPs to comply with DEP regulations (the Massachusetts Contingency Plan – MCP), which require that sites within drinking water source protection areas be cleaned up to drinking water standards.

For more information about the state's OHM site cleanup process to which these sites are subject and how this complements the drinking water protection program, please visit the BWSC web page at http://www.state.ma.us/dep/bwsc. You may obtain site -specific information two ways: by using the BWSC Searchable Sites database at http://:www.state.ma.us/dep/bwsc/sitellst.htm, or you may visit the DEP regional office and review the site file. These files contain more detailed information, including cleanup status, site history, contamination levels, maps, correspondence and investigation reports, however you must call the regional office in order to schedule an appointment to view the file.

The table below contains the list of Tier Classified oil and/or Hazardous Material Release Sites that are located within your drinking water source protection area.

**Table 1**: Bureau of Waste Site Cleanup Tier Classified Oil and/or Hazardous Material Release Sites (Chapter 21E Sites) - Listed by Release Tracking Number (RTN)

| RTN | Release Site Address | Town | Contaminant Type |
|---|---|---|---|
| 3-0017727 | Scotland Road | Newbury | Oil |
| 3-0019356 | 164 Indian Hill Road | West Newbury | Oil |

For more location information, please see the attached map. The map lists the release sites by Release Tracking Number (RTN).