

## How Are People Being Protected from Arsenic In Groundwater?

In August 2014, the Army released the final report called a “Land Use Control Implementation Plan” (LUCIP), based on the land use controls (LUCs) established per the Shepley Hill Landfill remedy. The LUCIP is part of the remedy for Shepley’s Hill landfill. It establishes the framework for land use controls to protect people from exposure to contaminated groundwater. The final LUCIP is available at:

- Town of Ayer website ([www.ayer.ma.us](http://www.ayer.ma.us))
- Ayer Public Library
- Ayer Town Hall
  - The Board of Health Office
  - The Board of Selectman's Office
  - The Town Clerk

The Army has implemented Land Use Controls that will reduce the risk of arsenic exposure by:

- Supporting compliance with the Ayer Zoning By-laws and the Subdivision Control Regulations.
- Supporting compliance with a Moratorium on Groundwater Use issued by the Town of Ayer Board of Health limiting groundwater use where arsenic groundwater contamination is present.
- Supporting compliance with the Ayer Board of Health Well Regulations (Adopted January 10, 2001) – Town of Ayer permitting requirements for the installation and use of new drinking water wells.
- Continued public education and outreach.
- Continued groundwater monitoring and inspections where arsenic groundwater contamination is present.
- Conducting meetings with the Ayer Board of Health at least once a year.

## Where to Get More Information

Comments on the Land Use Control Implementation Plan can be sent to the Army by mail or email:

Army BRAC Environmental Coordinator  
30 Quebec Street (Unit 100)  
Devens, MA 01434-4479  
[Robert.i.simeone.civ@mail.mil](mailto:Robert.i.simeone.civ@mail.mil)

If you have a water well in or near the affected area contact the Army and the Board of Health with your comments and well information:

Ayer Board of Health  
1 Main Street (3<sup>rd</sup> Floor)  
Ayer, MA -1432

## References & Other Resources

Arsenic in Your Drinking Water: Just the Facts for Consumers  
[http://www.epa.gov/ogwdw/arsenic/pdfs/fs\\_arsenic\\_justthefactsforconsumers.pdf](http://www.epa.gov/ogwdw/arsenic/pdfs/fs_arsenic_justthefactsforconsumers.pdf)

Toxicological Profile for Arsenic  
<http://www.atsdr.cdc.gov/toxprofiles/tp2.pdf>

Town of Ayer 2012 Annual Drinking Water  
Quality Report  
[http://www.ayer.ma.us/Pages/AyerMA\\_DP  
W/AyerMA\\_Water/ccr2012.pdf](http://www.ayer.ma.us/Pages/AyerMA_DP_W/AyerMA_Water/ccr2012.pdf)

Town of Ayer Water Department  
[http://www.ayer.ma.us/Pages/AyerMA\\_DP\\_W/AyerMA\\_Water/index](http://www.ayer.ma.us/Pages/AyerMA_DP_W/AyerMA_Water/index)



## Land Use Control Implementation Plan:

## Restriction of Groundwater Use

*SHEPLEY'S HILL LANDFILL*



## Introduction

A Land Use Control Implementation Plan has been established by the Army to protect human health and the environment from arsenic contamination in groundwater affecting a localized portion of the aquifer in the Town of Ayer. Arsenic contamination in groundwater is attributable to both naturally occurring causes and groundwater discharge from the former Shepley's Hill Landfill (SHL). SHL is located on the northeast corner of the former Main Post at Fort Devens.

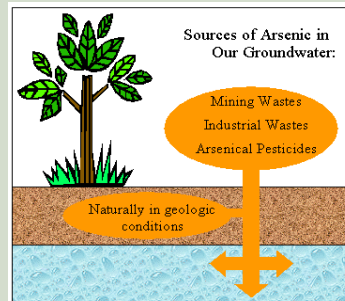
### What Area is Affected?

Groundwater contaminated with arsenic is located north of the SHL. Approximately 65 to 70 homes in the Town of Ayer are located within the impacted area.



## What Is Arsenic?

Arsenic is an odorless and tasteless metal that is both naturally occurring in the environment and also a by-product of agricultural, mining and industrial activities. It can enter the groundwater from runoff or infiltration through the ground.



<http://www.idwr.idaho.gov/WaterInformation/GWQuality/FactSheets/Arsenic/Arsenic.htm>

## Where Does Arsenic Drinking Water Come From?

Arsenic in groundwater can be from anthropogenic sources, originating from human activity, or from natural sources, such as minerals in soil and bedrock. Many arsenic compounds dissolve in water and can enter the groundwater by dissolving in rain or snow or through the discharge of industrial wastes. The arsenic in groundwater in the Town of Ayer is occurring in groundwater because of both natural conditions and from the former operation of the SHL. The SHL has been closed and capped since 1993. Since its closure, the SHL has had long term monitoring and maintenance of the existing landfill cap and groundwater monitoring. A groundwater extraction and treatment system has operated at the SHL since 2006, however, arsenic is still present at high levels in groundwater in an area north of the landfill.

## What Are Health Effects of Consuming Water With Arsenic?

Arsenic is known to cause cancer and is classified as a carcinogen by the Environmental Protection Agency (EPA). Specifically, exposure to arsenic can result in cancer of the bladder, lungs, skin, kidneys, nasal passages, liver and prostate. Arsenic in drinking water can result in the following symptoms:

- Discoloration of the skin
- Irritation of the stomach and intestines
- Fatigue
- Abnormal heart rhythm
- Blood-vessel damage resulting in bruising
- Impaired nerve function causing “pins and needles” sensation in your hands and feet

## How to Avoid Arsenic

Not using private well water for drinking or irrigation purposes where arsenic groundwater contamination is present will prevent exposure of arsenic from groundwater. Drinking public water provided from the Town of Ayer and avoiding drinking private well water will mitigate the risk of arsenic exposure. The Town of Ayer's public drinking water supply meets all state and federal standards. The Town of Ayer Department of Public Works Water Division conducts annual water quality reports to document that the Town of Ayer drinking water quality is safe for drinking. **If you have a private well, you need to notify the Town of Ayer Board of Health at the contact number provided below.** The Ayer Board of Health will work with the Army to make necessary arrangements to properly abandon the well and obtain a new source of water, if necessary.