

Health Consultation

Evaluation of Private Drinking Water within 0.5 miles of the
NORTHAMPTON SANITARY LANDFILL

NORTHAMPTON, HAMPSHIRE COUNTY, MASSACHUSETTS

EPA FACILITY ID: MAR000010512

MARCH 6, 2008

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Agency for Toxic Substances and Disease Registry
Division of Health Assessment and Consultation
Atlanta, Georgia 30333

Health Consultation: A Note of Explanation

An ATSDR health consultation is a verbal or written response from ATSDR to a specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. In order to prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducting health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

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HEALTH CONSULTATION

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EPA FACILITY ID: MAR000010512

Prepared By:

Massachusetts Department of Public Health
Bureau of Environmental Health
Community Assessment Program
Under a Cooperative Agreement with the
U.S. Department of Health and Human Services
Agency for Toxic Substances and Disease Registry

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I. Background and Statement of Issues

At the request of concerned residents via petition letter to ATSDR, the Community Assessment Program (CAP) at the Massachusetts Department of Public Health (MDPH), Bureau of Environmental Health (BEH), conducted an evaluation of analytical results of private well water samples collected in July 2007 from private wells located at residential properties within ½ mile of the Northampton Sanitary Landfill, located at 170 Glendale Road in Northampton, Massachusetts. This evaluation was initiated based on community concerns about possible environmental exposures, including concerns that contaminants from the landfill may have migrated from the site via groundwater to off-site private drinking water wells. In addition to this evaluation, MDPH is currently reviewing available health data, including cancer incidence data, for Northampton, particularly the census tracts in close proximity to the landfill.

MDPH reviewed private well water sample results contained in a report submitted to the Massachusetts Department of Environmental Protection (MassDEP) on behalf of the City of Northampton Department of Public Works (DPW) entitled, *July 2007 Water Quality Monitoring, Private Residences, Park Hill, Westhampton, and Glendale Roads, Northampton, Massachusetts*. In addition, MDPH conducted a file review at the Northampton DPW and MassDEP to obtain and review available environmental information pertaining to the Northampton Sanitary Landfill.

The Northampton Sanitary Landfill is owned and operated by the City of Northampton as a municipal solid waste landfill, which accepts waste from 44 municipalities. The landfill began operating as a municipal solid waste landfill in 1969. Prior to 1969, the landfill property was operated as a gravel pit. The 40-acre landfill is located on a 52-acre parcel consisting of upland and wetland areas. The landfill property is bordered by residential properties to the west along Glendale Road, an undeveloped area owned by the City of Northampton to the north, residential properties to the east along Park Hill Road, and residential and agricultural properties to the south along Park Hill Road (Figure 1). Groundwater flow beneath the landfill is predominantly to the southeast toward Park Hill Road (Dufresne-Henry 2005).

The landfill consists of the original 22-acre unlined landfill cell and four additional lined landfill cells (Phase 1 through Phase 4). Waste is currently deposited in the Phase 3 and 4 cells and the other landfill cells are closed and capped. Currently, the City of Northampton is proposing the construction of an additional 20.5-acre cell, Phase 5/5B, to be constructed north of and overlapping onto the existing landfill areas (Dufresne-Henry 2005). Water samples from private wells were collected at the request of MassDEP as part of the landfill expansion application process.

II. Methods of Evaluating Private Well Water Results

Private well water sampling data were reviewed, and a screening evaluation was conducted to identify those substances that may need to be considered for further evaluation, to determine whether they may represent a potential health concern to residents. The screening analysis compared concentrations of substances detected in private well samples to state drinking water standards known as Massachusetts Maximum Contaminant Levels (MMCLs). MMCLs apply to drinking water provided by public water systems, and hence can be used to evaluate constituents in private drinking water. If a MMCL was not available for a specific substance, private well water results were compared to health-based comparison values established by the United States Agency for Toxic Substances and Disease Registry (ATSDR) (ATSDR 2007). If an ATSDR comparison value was not available for a specific contaminant, private well water results were compared to Risk-Based Concentrations (RBCs) developed by the United States Environmental Protection Agency (EPA) Region III (USEPA 2007a; ATSDR 2007).

ATSDR and EPA comparison values are specific concentrations of a chemical for air, soil, or water that are used by health assessors to identify environmental contaminants that require further evaluation. These comparison values are developed based on health guidelines and assumed exposure situations that represent conservative estimates of human exposure. Chemical concentrations detected in environmental media that are less than a comparison value are not likely to pose a health threat. However, chemical concentrations detected in environmental media above a comparison value do not necessarily indicate that a health threat is present. In order for a compound to impact

one's health, it must not only be present in the environmental media, but one must also come in contact with the compound. Therefore, if a concentration of a chemical is greater than the appropriate comparison value, the potential for exposure to the chemical should be further evaluated to determine whether exposure is occurring and whether health effects might be possible as a result of that exposure. The factors related to exposures that are unique to the specific situation under investigation need to be considered to determine if an adverse health effect from this chemical could occur.

III. Sampling and Analysis

On July 18, 19, and 26, 2007, Fuss & O'Neill, Inc., on behalf of the Northampton DPW, collected 31 water samples from private wells at 31 residences located within ½ mile of the Northampton Sanitary Landfill (Fuss & O'Neill 2007b). Residences with private wells were identified by Northampton DPW through a review of City records (City of Northampton 2007a). Residences sampled were located along Park Hill Road, Glendale Road, and Westhampton Road in Northampton. According to a Draft Environmental Impact Report completed in 2005 by Dufresne-Henry, Inc., groundwater beneath the landfill property flows predominantly to the southeast, toward Park Hill Road (Figure 1). Based on the predominant direction of groundwater flow, the private wells sampled along Westhampton Road are up gradient, Glendale Road and portions of Park Hill Road are cross gradient, and the portion of Park Hill Road located southeast of the landfill is down gradient of the landfill. It should be noted that the private wells located along Glendale Road are no longer used for drinking water. Residents along Glendale Road are connected to the municipal drinking water supply system and obtain their drinking water from the City of Northampton. Two inactive private wells located along Glendale Road were sampled as part of this sampling effort. According to the City of Northampton, residences along Glendale Road were first connected to municipal water in 1930 (City of Northampton 1930 and 2007c).

All water samples from active private wells were collected from exterior spigots. One of the two inactive wells no longer has a pumping mechanism and was sampled using a portable bladder pump; the other inactive well is still connected to a spigot and a cast-

iron hand-pump, which were used to collect a sample; however the spigot and hand-pump had been rendered inaccessible, for all practical purposes, by the construction of an addition to the house over the well, pump, and spigot. The residents at this location confirmed that the well is not used for drinking water, gardening, or any other purpose. With the exception of the residence with the spigot in the basement, samplers did not enter the residences to confirm that water did not pass through a water treatment system prior to the point of sampling. As a result, MassDEP has requested that the Northampton DPW send out a questionnaire to determine what type, if any, water treatment is used by residents. At the time of this report, eight completed questionnaires had been received. Three residents indicated that they have water treatment systems in place, and two of the three indicated that the water treatment systems are installed prior to exterior spigots (the point of sample collection), thereby indicating water samples taken from the spigot were post-treatment (Burkhamer 2007; City of Northampton 2007d).

Water samples were submitted to Phoenix Environmental Laboratories, Inc., of Manchester, Connecticut, for analysis. Samples were analyzed for the list of indicator parameters, inorganic substances, and volatile organic compounds (VOCs) required for groundwater monitoring by MassDEP's Solid Waste Management regulations 310 CMR 19.132 (MassDEP 2005; Fuss & O'Neill 2007b).

IV. Results

Eleven metals (arsenic, barium, cadmium, calcium, chromium, copper, iron, lead, manganese, sodium, and zinc) and two VOCs [methyl ethyl ketone (MEK) and tetrahydrofuran (detected in one inactive well)] were detected in samples collected at the residences previously mentioned (Fuss & O'Neill 2007b). Arsenic, cadmium, and lead were detected, in one well each, at concentrations above standards set for municipal drinking water supplies. Tetrahydrofuran and iron were detected in one inactive well at concentrations above the applicable EPA Risk Based Comparison Value (RBC). Sodium was detected in 19 wells at concentrations above the Massachusetts sodium guideline value for public drinking water. All other substances were detected at concentrations

below comparison values. Table 1 summarizes the maximum concentrations of substances detected above comparison values.

Arsenic was detected in one sample for a residence on Park Hill Road at a concentration slightly exceeding the applicable MMCL of 0.010 parts per million (ppm) (detection of 0.012 ppm). Arsenic was detected in three other private wells at concentrations below the MMCL (range of 0.003 to 0.005 ppm). The private well with the arsenic exceedance was re-sampled on August 30, 2007, and arsenic was detected at a concentration (0.009 ppm) slightly below the MMCL. The presence of a water treatment system was not determined prior to re-sampling on August 30, 2007.

Cadmium was detected (0.006 ppm) above its MMCL of 0.005 ppm in one sample collected from an inactive well located along Glendale Road. The residents at this location confirmed that the well is not used for drinking water, gardening, or any other purpose. Cadmium was not detected in any other private well samples above the reporting limit of 0.001 ppm.

Lead was detected (0.017 ppm) above its MMCL of 0.015 ppm in one sample (residence on Park Hill Road). Lead was detected in six other private well samples at concentrations below the MMCL (range of 0.001 to 0.008 ppm). The private well with the lead exceedance was re-sampled on August 30, 2007. Lead was not detected above the reporting limit of 0.001 ppm. The presence of a water treatment system was not determined prior to re-sampling on August 30, 2007.

No other metals exceeded available MMCLs. For iron and sodium, no MMCLs were available. Iron and sodium were detected in all of the 31 private wells sampled, with maximum concentrations of 79.5 ppm for iron and 194 ppm for sodium. Nineteen of 31 samples exceeded the Massachusetts sodium guidance value of 20 ppm, while iron was detected in one of 31 samples above the guidance value of 26 ppm. This exceedance for iron was detected in the inactive well located along Glendale Road, where residents confirmed that the well is not used for any purpose.

No MMCL was available for tetrahydrofuran. Tetrahydrofuran was detected in one out of 31 wells at a concentration of 1.8 ppm, which is above the guidance value of 0.0088 ppm. This sample was collected from an inactive well located along Glendale Road. The residents at this location confirmed that the well is not used for drinking water, gardening, or any other purpose.

V. Discussion

An exposure pathway is the route a substance takes from its source (where it began) to its end point (where it ends), and how people can come into contact with (or get exposed to) it. An exposure pathway has five parts: a source of contamination (such as an abandoned business); an environmental media and transport mechanism (such as movement through groundwater); a point of exposure (such as a private well); a route of exposure (eating, drinking, breathing, or touching), and a receptor population (people potentially or actually exposed). When all five parts are present, the exposure pathway is termed a completed exposure pathway (ATSDR 2005a).

According to MassDEP, there is insufficient information to determine whether constituents detected in residential private wells may be originating from the landfill. MassDEP is working with the City of Northampton to gather additional hydrogeological data to better determine the possible impact of the landfill on nearby residential private wells.

Testing of private well water revealed three metals (arsenic, lead, and cadmium), in one well each (all different wells), that exceeded corresponding drinking water standards established for public drinking water supplies. In addition, sodium, iron, and tetrahydrofuran also exceeded screening guidelines in 19, one, and one well(s), respectively. However, for cadmium, iron, and tetrahydrofuran, the exceedances were detected in one inactive well along Glendale Road, where residents confirmed that the well is not used for any purpose; hence, there is not a completed exposure pathway and exposure opportunities at this well are not expected. Also, it is important to note that the

spigot from which this sample was collected had been replaced several hours before sampling took place with a PVC spout; tetrahydrofuran is a common component of PVC adhesive (Fuss & O'Neill 2007; Virginia KMP 2005). Due to uncertainties related to the possible contamination of the sample from the adhesive, MassDEP has required the City of Northampton to collect an additional water sample from this well by June 30, 2008 (MassDEP 2008).

Arsenic was detected at one residential private well in two separate samples taken approximately 43 days apart. The average of the two samples (0.012 ppm and 0.009 ppm) was 0.0105 ppm, or approximately equal to the drinking water standard of 0.010 ppm for arsenic in public drinking water supplies. The drinking water standard for arsenic is based on its cancer-causing potential and was derived assuming chronic, or long-term, daily exposures. Given the average concentration in this well, unusual health concerns are not expected to result from arsenic detected in this well. Nonetheless, the MDPH recommends periodic monitoring of this private well to ensure that arsenic concentrations remain at similar or lower concentrations as the MMCL.

One well on Park Hill Road had two samples analyzed for lead (0.017 ppm and non-detect). Assuming one half of the reporting limit (0.0005 ppm) for the non-detect result, the average of these samples (0.0088 ppm) is less than the MMCL for lead (0.015 ppm). Thus, adverse health effects due to exposure to lead in drinking water at this residence are not expected based on these measured concentrations. Lead in drinking water in residences can result from lead leaching from plumbing fixtures within the home. It would be prudent for the homeowner to take tap water samples within the home (e.g., first draw of the morning) as plumbing fixtures may be a source of lead. Nonetheless, the MDPH recommends periodic monitoring of this private well to ensure that lead concentrations remain at similar or lower concentrations.

Sodium was detected in 19 samples, collected from 18 active private drinking water wells and one inactive private well, above the Massachusetts sodium guideline of 20 ppm. These exceedances occurred on all three roads sampled (Park Hill Road, Glendale Road,

and Westhampton Road). Sodium is a naturally occurring element found in water and soil. It is an essential mineral, which is necessary for the normal functioning of the body and maintenance of body fluids. The Massachusetts guideline of 20 ppm in drinking water represents a level of sodium in water that physicians and sodium-sensitive individuals should be aware of in cases where sodium exposures are carefully controlled. People who have difficulty regulating fluid volume as a result of several diseases such as hypertension and kidney failure are particularly affected by elevated levels of sodium (MDPH 2007). BEH's "Sodium in Drinking Water Fact Sheet" is included in Appendix A.

VI. Conclusions

Results of private well sampling indicated that two active private drinking water wells on Park Hill Road had concentrations of arsenic or lead exceeding MMCLs and 18 active private drinking water wells had concentrations of sodium exceeding the Massachusetts guideline. The wells with arsenic and lead exceedances were re-sampled. The average concentrations of arsenic and lead in these wells are approximately at the MMCL or below the MMCL. As a result, the concentrations of these metals are not expected to pose health concerns. Nonetheless, MDPH recommends regular monitoring of the wells to ensure concentrations remain at or below the MMCLs in the future.

For residences with sodium concentrations in drinking water above the Massachusetts guideline of 20 ppm, individuals who are on a sodium restricted diet or who wish to monitor their sodium intake should be aware of the concentration of sodium detected in their drinking water and review the attached "Sodium in Drinking Water Fact Sheet" prepared by the BEH Environmental Health Outreach and Education Program.

ATSDR requires that one of five conclusion categories be used to summarize findings of a health consultation. These categories are as follows: (1) Urgent Public Health Hazard; (2) Public Health Hazard; (3) Indeterminate Public Health Hazard; (4) No Apparent Public Health Hazard; (5) No Public Health Hazard. A category is selected from site-specific conditions such as the degree of public health hazard based on the presence and

duration of human exposure, contaminant concentration, the nature of toxic effects associated with site-related contaminants, presence of physical hazards, and community health concerns. As previously mentioned, MassDEP is working with the City of Northampton to better characterize the potential impact of the landfill on nearby private wells, especially in the future. Given the uncertainty, ATSDR would consider the potential impact of the landfill on private wells, particularly in the future, as an Indeterminate Public Health Hazard. Based on MDPH's evaluation of 2007 drinking water sample data, ATSDR would classify the drinking water from all of the private wells sampled as posing No Apparent Public Health Hazard.

VII. Recommendations

- MDPH recommends regular testing of the two private drinking water wells in which arsenic and lead were detected slightly above MMCLs to ensure that concentrations of these metals remain approximately at or below Massachusetts drinking water standards.
- Due to the proximity of the Northampton Sanitary Landfill and the direction of groundwater flow, MDPH believes it would be prudent for residents who use private drinking water wells located along Park Hill Road as a primary drinking water source to ensure that their wells are tested. MassDEP guidance suggests that residents with wells located in the vicinity of land uses that may potentially impact groundwater test their wells every 3 years (MassDEP 2004).
- MDPH recommends that residents on sodium-restrictive diets who consume drinking water from a well where sodium was detected above 20 ppm consult with their physicians about their sodium intake and review the "Sodium in Drinking Water Fact Sheet" in Appendix A.
- Per MassDEP Private Well Guidelines (2004), MDPH recommends that the City of Northampton consider adopting an ordinance or bylaw to require land owners to properly decommission abandoned water supply systems located on their

property in order to prevent the vertical movement of contamination from the ground surface to the groundwater.

VIII. Public Health Action Plan

The purpose of the Public Health Action Plan is to ensure that this health consultation not only identifies potential public health hazards, but also provides a plan of action designed to mitigate and prevent adverse health effects resulting from exposure to hazardous substances in the environment. Included is a commitment on the part of ATSDR/MDPH to follow up on this plan to ensure that it is implemented. The public health actions to be implemented by ATSDR/MDPH are as follows:

- MDPH will evaluate health outcome data, including cancer incidence data, for the census tracts in the vicinity of the Northampton Sanitary Landfill.
- Upon request, MDPH will review additional environmental data related to the landfill.
- MDPH will follow up with residents whose private well water was evaluated in this report by sending letters to each resident discussing their test results and, when appropriate, supplying residents with health education material regarding private drinking water.

V. References

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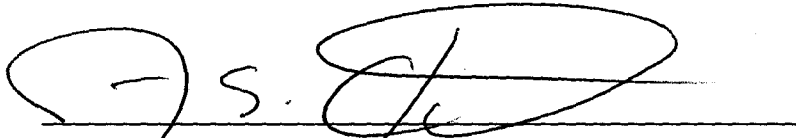
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PREPARER

This document was prepared by the Bureau of Environmental Health of the Massachusetts Department of Public Health. If you have any questions about this document, please contact Suzanne K. Condon, Director of BEH/MDPH at 250 Washington Street, 7th Floor, Boston, MA 02108.

CERTIFICATION

The Health Consultation, *Evaluation of Private Drinking Water within 0.5 miles of the Northampton Sanitary Landfill, Northampton, Hampshire County, Massachusetts, MassDEP RTN 1-0000129*, was prepared by the Massachusetts Department of Public Health under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the Health Consultation was initiated. Editorial review was completed by the cooperative agreement partner.



Technical Project Officer, CAT, SPAB, DHAC, ATSDR

The Division of Health Assessment and Consultation, ATSDR, has reviewed this Health Consultation and concurs with its findings.



Team Lead, CAT, SPAB, DHAC

Tables

Table 1
2007 Off-site private drinking water well sample results comparison table

Substance	Frequency of detection	Maximum detected concentration (ppm)	Comparison value (ppm)	Number of samples above comparison values
Arsenic ¹	4 / 31	0.012	MassDEP MMCL = 0.010	1
Barium	30 / 31	0.161	MassDEP MMCL = 2	0
Cadmium ²	1 / 31	0.006	MassDEP MMCL = 0.005	1
Calcium ³	31 / 31	22.3	NA	NA
Chromium	25 / 31	0.018	MassDEP MMCL = 0.1	0
Copper	31 / 31	0.211	MassDEP MMCL = 1.3	0
Iron ²	31 / 31	79.5	EPA RBC = 26	1
Lead ⁴	7 / 31	0.017	MassDEP MMCL = 0.015	1
Manganese	22 / 31	0.452	RMEG (child) = 0.5 RMEG (adult) = 2	0
Methyl ethyl ketone ²	1 / 31	1.8	EPA RBC = 7	0
Sodium	31 / 31	194	Massachusetts Guidance Value = 20	19
Tetrahydrofuran ²	1 / 31	1.8	EPA RBC = 0.0088	1
Zinc	14 / 31	0.37	Chronic EMEG (child) = 3 Chronic EMEG (adult) = 10	0

Notes:

ppm - Parts per million [equal to milligrams per liter (mg/L)]

NA - Not Applicable

¹ The affected well was re-sampled on August 30, 2007 and arsenic was detected at 0.009 ppm. The average concentration (0.0105 ppm) for the affected well is approximately the MassDEP MMCL (0.010 ppm).

² The affected well is not an active drinking water well.

³ No comparison value available.

⁴ The affected well was re-sampled on August 30, 2007 and lead was not detected above the Reporting Limit of 0.001 ppm. The average concentration (0.0088 ppm) for the affected well is below the MassDEP MMCL (0.015 ppm).

Data sources:

Fuss & O'Neill. 2007a. July 2007 Water Quality Monitoring, Private Residences, Park Hill, Westhampton, and Glendale Roads, Northampton, Massachusetts. August 22, 2007.

Fuss & O'Neill. 2007b. August 2007 Water Quality Monitoring, Private Residences Re-sampling, Park Hill Road, Northampton, Massachusetts. September 12, 2007.

Comparison values (source organization, reference):

Chronic EMEG (adult/child) = Environmental Media Evaluation Guide (i.e., for adult or childhood exposures greater than 1 year) (ATSDR 2006).

EPA RBC = EPA Region 3 Risk Based Concentration for drinking water (U.S. EPA 2007a).

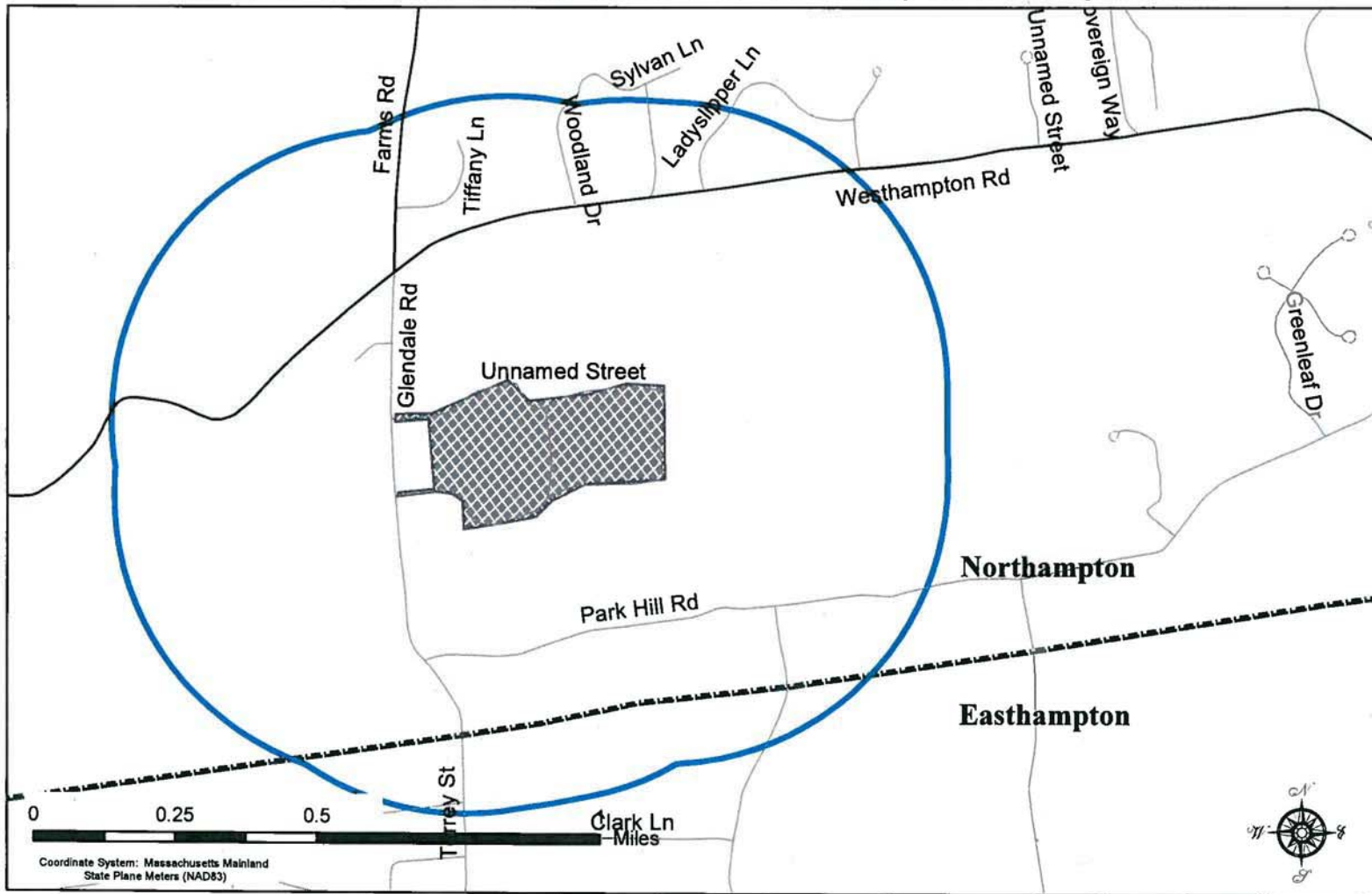
MassDEP MMCL = Massachusetts Department of Environmental Protection Massachusetts Maximum Contaminant Level (MassDEP 2007a).

Massachusetts Guidance Value = Massachusetts guideline for sodium in public drinking water (MassDEP 2007a).

RMEG (adult/child) = Reference Dose Media Evaluation Guides (an estimate of a daily exposure to the general public, including sensitive subgroups, that is likely to be without appreciable risk of deleterious effects during a specified duration of exposure) (ATSDR 2006).

Figures

Figure 1 - Streets within 0.5 miles of the Northampton Sanitary Landfill



Coordinate System: Massachusetts Mainland State Plane Meters (NAD83)

Bureau of Environmental Health (BEH)

 <jb>, <10/24/2007>

 Geographic data supplied by: Massachusetts Executive Office of Environmental Affairs, MassGIS; Geographic Data Technology, Inc.

0.5-mile Radius

 Northampton Sanitary Landfill

 Town Boundary



Appendices

Appendix A

Sodium in Drinking Water Fact Sheet



Bureau of Environmental Health
BEH

Is sodium found in drinking water?

Yes, sodium is found in naturally occurring element found in water and soil. Drinking water contributes only a small fraction (less than 10%) to the overall daily sodium intake which ranges from 115 to 750 milligrams per day (mg/d) for infants, 325 to 2700mg/d for children and 1100 to 3300 mg/d for adults.

The Massachusetts Department of Environmental Protection (MDEP) currently requires all water suppliers to notify the Massachusetts Department of Public Health/Bureau of Environmental Health (MDPH/BEH), MDEP, and local Boards of Health of the detected concentrations of sodium in drinking water. Notification is required so that individuals who are on a sodium restricted diet or wish to monitor their sodium intake for other reasons will have this information.

What is sodium's purpose?

Sodium is an essential mineral which is necessary for the normal functioning of the body and maintenance of body fluids. Nerve function and muscle contraction are also affected by sodium intake.

Where do we get sodium?

Sodium cannot be stored or manufactured in the body and must be consumed in some drinking water and in foods such as animal foods, low-fat dairy products, some canned foods, pickles, and olives.

What is the current guideline for sodium in drinking water and who should be concerned about this guideline?

The MDEP guideline of 20 milligrams of sodium per liter of water represents a level of sodium in water that physicians and sodium-sensitive individuals should be aware of in cases where sodium exposures are carefully controlled. People who have difficulty regulating fluid volume as a result of several diseases such as hypertension and kidney failure are particularly affected by elevated levels of sodium.

Hypertension is the medical name for high blood pressure and is a common chronic medical problem in the United States. It is responsible for a major portion of cardiovascular disease and stroke deaths. Reducing sodium intake not only prevents high blood pressure, but may also prevent heart disease.

Kidney failure occurs when an excess of sodium in the body causes fluid concentrations to change and the kidney fails to remove fluid. The result is a kidney shut-down and the build-up of fluid in the body which can lead to edema and hypertension.

Edema is the collection of water in and around the body tissues. Mild cases of edema affect women prior to the start of their menstrual periods, and many pregnant women suffer with this condition.

How is sodium measured in my body?

Your doctor or health professional measures sodium by taking your blood or checking a urine sample (or both). If your sodium levels are elevated, your physician may prescribe a diet low in sodium.

Where do I go for more information?

If you have any questions about sodium and your health, call your physician or health professional.

If you have any questions regarding sodium in drinking water, call the Massachusetts Department of Environmental Protection's Drinking Water Program at (617) 292-5770.

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