



WHAT YOU SHOULD KNOW ABOUT THE SUTTON BROOK AND McDONALD ROAD DISPOSAL AREAS

The preparation of this Brochure was funded by a grant from the National Association of City and County Health Officers (NACCHO). This brochure was prepared by GeoInsight, Inc. of Westford, Massachusetts, in cooperation with the local Committee overseeing the NACCHO grant. The Committee is comprised of concerned citizens of Wilmington and Tewksbury, together with representatives of the Wilmington and Tewksbury Boards of Health. Information in this brochure is current as of August 2001.

This brochure provides information on three former waste disposal areas in northern Wilmington and eastern Tewksbury. The locations of the waste disposal areas are shown on the attached map. The waste disposal areas are surrounded by Route 93, the Boston and Maine railroad bed, and residential properties off of Salem Street in Wilmington and South Street in Tewksbury.

The three waste disposal areas are:

- the former **Rocco's Landfill**, located at 1069 South Street in Tewksbury (now part of the **Sutton Brook Disposal Area**);
- the **79 McDonald Road** site; and
- the "**Pumpkin Patch**."

Rocco's Landfill was used as a "burning dump" beginning in 1957. In 1961, Rocco's was required to operate as a sanitary landfill, meaning that it could only accept municipal waste generated in the Town of Tewksbury. This requirement was not complied with, and the landfill accepted municipal, commercial, and industrial wastes from both inside and outside Tewksbury. The owners of the landfill received numerous citations from state and local officials for violating Massachusetts Sanitary Landfill Regulations.

The landfill was officially closed in 1982, but may have continued to accept wastes until approximately 1986 and possibly later. Most wastes were buried in the "northern lobe," a 25-acre area along South Street. Behind the northern lobe is a smaller, 8-acre mound of buried wastes called the "southern lobe." Sutton Brook flows between the northern and southern lobes.

In 1999, studies by the United States Environmental Protection Agency (USEPA, a Federal Agency) found an area of buried 55-gallon drums west of the northern lobe of Rocco's Landfill. During the summer and fall of 2000, the USEPA removed approximately 25,000 yards of soil and 300 to 400 drums from the ground in this area. As of spring 2001, approximately 7,500 yards of soil had been shipped off the property for disposal. The remainder of the soil is still on the property, awaiting disposal.

The **79 McDonald Road Site** was used as a piggery until approximately 1962. Evidence of industrial waste disposal was found in this area. In 1999, the Massachusetts Department of Environmental Protection (MADEP, a State agency) identified buried drums and other signs of environmental contamination at 79 McDonald Road. Between May and November 2000, approximately 700 drums and 1,109 tons of contaminated soil were excavated and removed from the property.

The **Pumpkin Patch** was used for growing pumpkins for nearby Krochmal Farms. This area, located between Rocco's Landfill and the 79 McDonald Road site, also showed sign of former industrial waste disposal activities. In 1999, the remains of nearly 100 drums were found in this area. The drums, along with 300 to 400 yards of contaminated soil, were removed from the property by the USEPA. The drums contained industrial solvents, and were believed to have been placed several decades ago.

1. How and when were wastes deposited in these disposal areas?

It appears that Rocco's Landfill accepted industrial wastes in drums, and possibly in other containers, for illegal disposal. USEPA estimated that the drums excavated at Rocco's were approximately 20 to 30 years old.

It is suspected that some of the drum disposal activities at 79 McDonald Road and the Pumpkin Patch were related to Rocco's, because paths reportedly led from Rocco's to these areas. Drums in these areas are likely of similar age to those found at Rocco's.

2. Is the Sutton Brook Disposal Area a Federal Superfund site?

Yes. In July 2000, Governor Cellucci signed a letter requesting that the Sutton Brook Disposal Area be granted Superfund status. The former Governor's letter began a process for evaluating whether or not the Sutton Brook Disposal Area qualifies as a Superfund site. On June 14, 2001, the Sutton Brook Disposal Area was formally named as a Superfund site. Superfund sites can be cleaned up using Federal money when no "Responsible Parties" can be identified.

Although the "Sutton Brook Disposal Area" was originally defined to only include Rocco's Landfill, the USEPA will evaluate expanding the boundaries of the Superfund site to include the Pumpkin Patch and other areas if necessary. Because cleanup activities at 79 McDonald Road are currently proceeding under the State cleanup program using private funding, the 79 McDonald Road site is not included in the Superfund site at this time.

3. What will listing as a Superfund site mean to residents near the Sutton Brook Disposal Area?

Superfund sites are eligible for Federal funding for investigation and cleanup costs. The availability of public funds will speed up the investigation and cleanup of the Sutton Brook Disposal Area. The USEPA is also currently in the process of identifying private parties that may be responsible for the contamination. These "Potentially Responsible Parties," or PRPs, have a legal responsibility to fund investigation and cleanup under the Superfund law. In summary, listing as a Superfund site can make public and/or private funds available to perform investigation, risk evaluation, and cleanup of the Sutton Brook Disposal Area.

4. What types of chemicals have been found in these areas?

At each of the three areas, the primary chemicals found fall into three classes: Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), and metals. In general, VOCs are lighter, and tend to evaporate more easily than SVOCs. VOCs are therefore more likely than SVOCs and metals to be found in the air, and are generally more likely to travel in groundwater. In contrast, SVOCs and metals are more likely to be held by soil particles. However, metals can travel with ground water under certain conditions. VOCs found at **Rocco's Landfill** included benzene, toluene, ethylbenzene, and xylenes (pronounced "zy-leens"). These VOCs are components of light petroleum distillates such as gasoline. They also may be used as solvents. Other VOCs detected at elevated concentrations included methylene chloride, tetrachloroethylene (also known as PCE), trichloroethylene (also known as TCE), and 1,1,1-trichloroethane (also known as TCA). These compounds had many uses as cleaners and degreasers. Other VOCs detected, such as 1,1-dichloroethane, *cis*-1,2-dichloroethylene and vinyl chloride, were likely formed as a result of decomposition of other VOCs.

The primary SVOCs found at Rocco's Landfill were phthalates (pronounced "thal-ates") and phenol (pronounced "fee-nol"). Phthalates are plasticizing chemicals found widely throughout the environment. Phenols, found in coal tar, were also commonly-used disinfectants.

Metals found at Rocco's include arsenic, cadmium, lead, and beryllium. Some portion of these metals is naturally occurring. Metals such as arsenic can be released from rock in the presence of ground water containing petroleum-related hydrocarbons. Further study is needed to evaluate whether these metals will travel significantly in ground water at the site.

At **79 McDonald Road**, VOCs, SVOCs, and metals were detected at elevated concentrations. VOCs found in groundwater included benzene, chlorobenzene, *cis*-1,2-dichloroethene, ethylbenzene, methylene chloride, toluene, xylenes, and TCE. Some of these VOCs, such as benzene, toluene, ethylbenzene, and xylenes, appear to be related to petroleum products.

Metals detected at elevated concentrations included arsenic and lead. Arsenic is often found at elevated concentrations in ground water at petroleum disposal sites, as discussed above. SVOCs detected at 79 McDonald Road included petroleum-related compounds, some of which may be derived from coal or wood ash.

Areas of tannery waste were also found at 79 McDonald Road. These wastes, which consist of animal hides and hair, typically contain elevated levels of arsenic, chromium and lead.

At the **Pumpkin Patch**, VOCs, SVOCs, and metals were detected. VOCs included toluene, xylenes, ethylbenzene, TCE, and PCE. The highest concentrations of VOCs were found in samples of drum contents, which were later removed from the property. High concentrations of SVOCs (phthalates) were also reported in samples of former drum contents. High levels of lead were detected in soil samples. Samples of drum contents indicated high levels of antimony (pronounced "ant-a-mow-nee"), cadmium, chromium, lead, mercury and zinc.

5. Are the wastes still there?

Identified wastes have been removed from the **79 McDonald Road** and **Pumpkin Patch** sites. Although further study is planned at both locations, it appears that the most heavily contaminated areas have been cleaned up. It is difficult to quantify what, if any, effect these disposal areas have had or will have on local property values. The removal actions taken to date, and the likelihood that the progress of cleanups at these has not taken place at either the northern or the southern lobes of the landfill. Although the northern and southern lobes likely contain some industrial waste, it is mixed with a large volume of residential and commercial waste, which would make removal operations difficult and impractical. Based on experience at other landfills, it is likely that the wastes in the northern and southern lobes will be left in place and covered with a protective cap. The cap resists erosion and prevents rainwater from washing through the wastes and contaminating ground water.

6. What does a Landfill Cap consist of?

At Superfund sites, a typical landfill cap includes several layers of material that are placed on top of the landfill. Before the cap is placed, the shape of the landfill may be altered to remove low spots and provide more gradual slopes. The layers that make up the cap typically include (from bottom to top):

- a layer of compacted soil that acts as a stable base;
- a barrier material consisting of clay and/or a synthetic material that does not allow water to pass;
- a drainage layer to promote the flow of water away from the landfill; and
- a topsoil layer to support vegetation and resist erosion.

Rainwater falling on an uncapped landfill flows downward, through the waste material, which can contaminate the underlying ground water. Rainwater falling on a capped landfill flows through the drainage layer (above the barrier material), but is prevented from flowing deeper by the barrier material. The drainage layer diverts rainwater into channels that lead away from the landfill.

7. Are other waste disposal areas present?

At this time, other hazardous waste disposal areas have not been identified. As part of the Superfund process, additional studies will be performed to evaluate how great an area has been affected by waste disposal practices in and around the former Rocco's landfill. These additional studies may be performed by the USEPA and/or by the Potentially Responsible Parties (PRPs).

8. What else will be done to clean up the area?

At **Rocco's Landfill**, additional cleanup will proceed under the Federal Superfund program. A Remedial Investigation (RI) will be performed. As part of the RI, the types and extent of contamination will be identified, and the human health and environmental risks will be evaluated. The results of the RI will be used to prepare a Feasibility Study (FS). The purpose of the FS will be to evaluate cleanup options for the Sutton Brook Disposal Area. The selected cleanup option will be identified in the Record of Decision (ROD). The selected option will then be designed and implemented in the Remedial Design/Remedial Action (RD/RA) phase of the project.

At the **Pumpkin Patch**, the need for additional cleanup is being evaluated by the USEPA. If necessary, this area may be included as part of the Superfund site (the Sutton Brook Disposal Area).

At **79 McDonald Road**, additional cleanup activities are being conducted by the owner of the property. These actions are being conducted in accordance with Massachusetts regulations known as the Massachusetts Contingency Plan (MCP).

9. What opportunities are there for public comment on the investigation and cleanup process?

The **79 McDonald Road** property, which is being cleaned up under the privatized State program, has been designated as a Public Involvement Plan (PIP) site. Under the Public Involvement Plan, a local information repository has been established at the Wilmington Public Library. The repository contains documents such as work plans, permits, technical reports, and relevant correspondence, all of which are available for public review. Status updates will be presented and public input will be solicited at public meetings that will be held when major milestones are reached. Notices of public meetings will be sent to all parties on the Site Mailing List. To be added to the Site Mailing List, contact Eric Hulstrom of Woodard & Curran at (781) 251-0200.

Opportunities for public comment on the cleanup of the **Sutton Brook Disposal Area** will be available as part of the Superfund program. Periodic public meetings have been and will continue to be held at strategic points in the cleanup process. After the Proposed Plan for the site cleanup is developed, the public will have an opportunity to provide verbal and written comments. These comments will be considered and addressed in the Record of Decision (ROD), which is the document that outlines the selected remedy for the site.

Public comments can be provided by any concerned individual or organization. The citizen's group TOXIC, based in Wilmington, has been involved in reviewing and commenting on each of the disposal sites discussed in this document. TOXIC has received a Technical Assistance Grant (TAG) from the USEPA to fund outreach activities and technical support related to the Sutton Brook Disposal Area.

10. Is it safe for children to play in these waste disposal areas?

Although further study is needed to fully answer this question, it is recommended that children do not trespass on these waste disposal areas. Evaluations of risk to children and/or adolescent trespassers are important parts of the investigation of each of the areas. To date, only the 79 McDonald Road area has had such an evaluation performed. The result of the evaluation was that significant risks to adolescent trespassers did not exist.

11. Is the Sutton Brook Disposal Area affecting air quality in the surrounding neighborhoods?

Of the compounds detected at the Sutton Brook Disposal Area, the most likely to affect air quality are the Volatile Organic Compounds (VOCs), as described in the response to Question 4. To date, nearly all the VOCs detected have been below the ground surface, and are therefore expected to have only a limited effect on air quality. Furthermore, a substantial volume of VOC-contaminated soil has already been excavated and removed from the area. Additional studies will be done to evaluate effects to air quality.

12. Is the Sutton Brook Disposal Area affecting ground water quality in the surrounding neighborhoods?

To date, the extent of contamination in ground water has not been fully defined. This is one of the major goals of the on-going and future investigations at the Sutton Brook Disposal Area and 79 McDonald Road. Because most area residents obtain drinking water from their Town's municipal water supply systems, it is unlikely that residents will be exposed to contamination from the Sutton Brook Disposal Area or 79 McDonald Road as a result of drinking Town water. (See Question 14 for more information on this issue.) However, owners and users of private wells for irrigation or other purposes should be aware of the potential for contamination, particularly if they are near the known disposal areas. The local Board of Health should be consulted and made aware of the existence and proposed use of private wells.

13. Have surface water bodies (streams, ponds, etc.) been affected?

Yes. Data collected to date have shown volatile organic compounds (VOCs) in the Sutton Brook. The highest concentrations were found where the Sutton Brook flows between the two lobes of Rocco's Landfill. Concentrations were seen to decrease significantly as the water flows further from the landfill.

Compounds detected in Sutton Brook included toluene, methylene chloride, and TCA. These compounds are discussed further in the response to Question 4. The highest concentrations detected were as follows:

<u>Compound</u>	<u>Highest Concentration</u>	<u>Drinking Water Standard</u>
Toluene:	94 parts per billion	1,000 parts per billion
Methylene chloride:	13.4 parts per billion	5 parts per billion
TCA:	10 parts per billion	200 parts per billion

Of the three compounds, only methylene chloride was detected above its drinking water quality standard. However, it should be noted that the Sutton Brook is not used as a source of municipal drinking water.

14. *Are chemicals from the disposal areas entering the Town's water supply?*

Based on information available at this time, the answer is no. The Town of Tewksbury uses the Merrimack River as its water source. The Merrimack River is more than six miles from the disposal areas. In Wilmington, the closest water supply well is the Brown's Crossing well, which approximately one mile east of the 79 McDonald Road site. A portion of the 79 McDonald Road property is within the western edge of the zone of contribution for the Brown's Crossing well (called the Zone II recharge area). At this time, no evidence has been found to show that chemicals from the disposal areas are entering or are likely to enter water supplies in either Tewksbury or Wilmington. However, work to be performed as part of the 79 McDonald Road Site Investigation, and the Remedial Investigation of the Sutton Brook Disposal Area, will provide further information on this issue.

15. *Are chemicals from the Sutton Brook Disposal Area affecting private wells?*

Further study is needed to fully answer this question. In June 1999, chemical testing was done on three known private wells in the area. The wells are located on residential properties on South Street in Tewksbury. Tests were performed for VOCs, SVOCs and metals (see Question 4 for an explanation of what these chemical types are). Results showed no VOCs or SVOCs detected in any of the three wells, except for one SVOC believed to have been inadvertently introduced either during sampling or by the testing laboratory. The SVOC was not found during a subsequent test of the same well.

Metals were detected in each of the well water samples. Cadmium was found at concentrations above the drinking water standard in samples from all three wells. Two wells showed lead concentrations above the drinking water standard, and one well showed antimony above the drinking water standard. It is not unusual to find some quantities of metals in ground water because rocks and soil particles contain metals. However, the concentrations of cadmium, lead, and antimony are of concern because they exceed drinking water standards. Although the metals detected in the drinking water wells were also found at one or more of the disposal areas, further study is needed to establish whether or not the metals in the drinking water wells originated from one or more of the disposal areas.

The Massachusetts Department of Public Health has requested that additional sampling of private wells be performed. It is likely that this work will be included in future site investigations. If your property is served by a private well and is in the vicinity of the disposal sites, it is recommended that you contact your Board of Health.

16. Will the Sutton Brook and 79 McDonald Road Disposal Areas be redeveloped?

When the cleanups are concluded at each of the disposal areas, the properties may be redeveloped. It is possible that a deed restriction may be placed on one or more of the properties as part of the cleanup. A deed restriction can be used to limit future uses of the property, or limit future activities on the property. For example, at a property where cleanup activities have been completed but some contamination remains, future uses may be limited so that residential homes, schools, or day care centers may not be constructed on the property unless and until a higher level of cleanup is performed. Redevelopment options for the former **Rocco's Landfill** will be limited because the northern and southern lobes will likely remain in place and be covered by a protective cap. See Question 6 for further information on landfill caps.

17. Will contamination at these waste disposal areas affect the value of property in the surrounding area?

At **Rocco's Landfill**, some wastes have been removed from the drum disposal area, but a substantial amount of excavated material is currently stockpiled and is awaiting off-site disposal. Removal of material locations will continue, are likely to lessen the perceived effect of these sites on local property values over time. The results of on-going and future investigation activities associated with these sites will serve to better define the limits of contamination, and may result in fluctuations in the value of individual properties or groups of properties.

18. How can I protect my family from exposure to chemicals at the Sutton Brook Disposal Area?

To avoid the greatest potential for direct exposure to chemicals, it is highly recommended that residents do not trespass onto these disposal areas, and, in particular, avoid activities that would result in direct contact with contaminated soil or debris.

19. How can I find out more?

The following are sources for further information:

Local information repositories at the Wilmington and Tewksbury libraries contain work plans, permits, technical reports, and correspondence related to the disposal areas. For information on the **Sutton Brook Disposal Area**, the Tewksbury Library repository is recommended by USEPA because it will house the full set of documents.

USEPA staff assigned to the **Sutton Brook Disposal Area** can be contacted at (617) 918-1111;

The following world wide web sites can be consulted:

<http://www.epa.gov/superfund/sites/npl/ma.htm>: This USEPA site contains summaries of each of the Superfund sites in Massachusetts.

<http://www.clu-in.org>: This is the web site for the USEPA's Technology Information Office. The site contains technical information on a variety of investigation and cleanup methods.

<http://www.state.ma.us/dep/nero/bwsc/nerobwsc.htm>: This is the home page for the MADEP's Northeast Regional Office. The Northeast region includes both Wilmington and Tewksbury.

<http://www.state.ma.us/dep>: This is the home page for the Massachusetts Department of Environmental Protection (MADEP). Links are provided to documents outlining State procedures and requirements for hazardous waste site investigation and cleanup.

- Information on the toxicology of chemicals detected at the disposal areas can be obtained from the Agency for Toxic Substances and Disease Registry (ATSDR), which is part of the U.S. Department of Health and Human Services.
- ATSDR can be contacted by telephone at (888) 422-8737. Information can also be obtained from their world wide web site (<http://www.atsdr.cdc.gov/atsdrhome.html>).