

Health Consultation

LOWER DARBY CREEK AREA (LDCA) NPL SITE:
CLEARVIEW LANDFILL

PHILADELPHIA, DELAWARE AND PHILADELPHIA COUNTIES,
PENNSYLVANIA

SEPTEMBER 30, 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

LOWER DARBY CREEK AREA (LDCA) NPL SITE:
CLEARVIEW LANDFILL

PHILADELPHIA, DELAWARE AND PHILADELPHIA COUNTIES,
PENNSYLVANIA

Prepared By:

Pennsylvania Department of Health
Division of Environmental Health Epidemiology
Under Cooperative Agreement with the
The U.S. Department of Health and Human Services
Agency for Toxic Substances and Disease Registry



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Summary

At the request of the US Environmental Protection Agency (EPA), the Pennsylvania Department of Health (PADOH), working under a cooperative agreement with the federal Agency for Toxic Substances and Disease Registry (ATSDR), prepared this **Lower Darby Creek Area (LDCA) NPL site: Clearview Landfill** Health Consultation. The LDCA site was proposed to the national priority list (NPL) on May 11, 2000 and formally added to the list on June 14, 2001. The site consists of two landfills: the *Clearview Landfill* and the *Folcroft Landfill*. The landfills are located along Darby Creek in Philadelphia County though the Clearview Landfill is mostly located in Delaware County. The Darby Creek flows north to south, past the landfills, and empties into the Delaware River. Both landfills were used for disposal of municipal waste from the City of Philadelphia and portions of Delaware County between the 1950s and early 1970s. At the request of the EPA, PADOH and ATSDR reviewed the available environmental sample results taken immediately adjacent to the Clearview Landfill and the physical hazards on the site to determine if the site currently poses or in the past posed a public health hazard. A public health assessment document will be prepared for each site at a later date. The Public Health Assessments (PHAs) will address additional exposure scenarios for the Clearview Landfill and the chemical and physical hazards of the Folcroft Landfill and Folcroft Annex.

The *Clearview Landfill* is located on the east side of Darby Creek near the intersection of 84th Street and Buist Avenue, Philadelphia, Pennsylvania. The landfill was closed in August 1973. For purposes of this health consult, 'on-site' refers to the property that was originally designated the Clearview Landfill and 'off-site' refers to the adjacent Eastwick Community Park and residential area. In the summer of 2000, EPA collected a round of subsurface soil and soil gas samples, creek sediments that resulted from previous flooding, and shallow groundwater both in the nearby community and on the border of the former landfill. More recently, from 2003 through 2007, EPA's contractors collected and analyzed numerous samples in the close-by Eastwick residential area and the Eastwick Community Park next to the landfill, as well as subsurface soil gas samples on-site. The sampling efforts included samples that were analyzed for volatile chemicals. Volatile chemicals may include: organic compounds, including carbon dioxide and methane; volatile organic compounds (VOCs); select semi-volatile organic compounds; and some inorganic analytes, such as elemental mercury and hydrogen sulfide.

PADOH and ATSDR met with EPA and U.S. Fish and Wildlife and conducted site visits in 2006 and 2007. In addition, PADOH and ATSDR participated in conference calls concerning the site in 2007, and attended the EPA pre-public meeting and public meeting with the community in May 2007. Although the public meeting centered around the whole LDCA site (including both landfills) the community's concerns are primarily focused on the Clearview Landfill. In this Health Consultation, PADOH and ATSDR evaluate completed and/or potential on-site pathways of exposure to physical hazards and contaminants (surface soil, sediments, and leachate) by way of recreational uses such as biking and walking, especially on the north/ northeast end of the landfill.

Based on a thorough evaluation, ATSDR and PADOH conclude that currently: 1) The residents entering the landfill for recreational purposes (biking, camping, jogging, walking, dirt motorcycle riding, etc) are exposed to physical hazards; 2) Currently, due to a lack of complete data, it is uncertain if the residents entering the landfill for recreational purposes are potentially exposed to levels of contaminants that would be expected to cause adverse health effects; 3) As a result of the evaluation and conclusions at the time this health consultation was written, ***ATSDR and PADOH classify the landfill as a public health hazard*** due to the physical hazards that are present on the site; and 4) At this time, there are *insufficient data for an evaluation of soil, sediment, groundwater, and vapor intrusion issues to determine if the contaminants on this site pose a public health hazard*. Additional contaminant data is being collected and consolidated by EPA and these data will be reviewed by PADOH and ATSDR.

ATSDR and PADOH recommend that: 1) EPA address the physical hazards on-site by placing barriers and /or signs on the landfill that contain hazards to the residents and visitors trespassing on the landfill for recreational purposes (currently there is public access to the Clearview Landfill); 2) EPA continue to monitor the groundwater on the landfill and in the adjacent residential areas including Eastwick Community Park; 3) PADOH and ATSDR evaluate the results of the surface soil samples taken on the Clearview Landfill as they becomes available; and 4) PADOH and ATSDR will consider reviewing available health outcome data for the residents living adjacent to the site in the public comment version of the LDCA site PHA to be published by ATSDR and PADOH in spring 2008.

PADOH and ATSDR plan to publish the *public comment* version of the LDCA NPL site PHA on the Clearview Landfill and Folcroft Landfill and Annex in the very near future. PADOH and ATSDR will consider evaluating the available health outcome data for the residents living adjacent to the site in the public comment version of the LDCA site PHA to be published later, depending upon the review and conclusions of the most current site data. A public availability meeting will be planned when the *public comment* version of the LDCA NPL site PHA is published.

Introduction

The Pennsylvania Department of Health (PA DOH), working under cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR), was requested by the United States Environmental Protection Agency (EPA) to prepare this **Lower Darby Creek Area (LDCA) NPL site: Clearview Landfill** Health Consultation (HC). A Public Health Assessment (PHA) for the LDCA NPL site in Philadelphia, Pennsylvania will be published at a later date to determine if the landfill *currently* or in the *future* poses or in the past posed a human public health hazard to the nearby community. For purposes of this HC, ‘*on-site*’ refers to the property that was originally designated the Clearview Landfill and ‘*off-site*’ refers to the adjacent Eastwick Community Park and residential area. At the request of EPA, PA DOH and ATSDR reviewed the results from environmental samples taken adjacent to the landfill and reviewed the physical hazards on-site to determine if the landfill *currently* poses a human public health hazard for trespassers and residents living adjacent to the Clearview Landfill. This HC document focuses on and addresses physical hazards, as the preliminary EPA environmental sampling data available are currently insufficient to evaluate and determine if the on-site contaminants pose or do not pose a public health hazard.

Site Layout and History

The LDCA site was proposed to the National Priorities List (NPL) on May 11, 2000 and formally added to the list on June 14, 2001. The site listed is in Darby Township, Pennsylvania (see [Appendix - Figure 1](#)). Originally, the LDCA NPL site as proposed consisted of multiple sources releasing or potentially releasing contaminants into the waters of Darby Creek and other nearby streams. The LDCA NPL site as currently listed consists of two landfills: the *Clearview Landfill* and the *Folcroft Landfill and Annex* (see [Appendix - Figure 2](#)) [1, 2, 3]. These landfills are located two miles apart along the Darby Creek in Philadelphia County though the Clearview Landfill overlaps into Delaware County. The Darby Creek flows north to south into the Delaware River. Both landfills were used for disposal of municipal waste from the City of Philadelphia and portions of Delaware County. Wastes were also placed in wetland areas along the edges of the Darby, Hermesprota and Thoroughfare Creeks between the 1950’s into the early 1970’s. Both landfills closed in the early 1970’s.

CLEARVIEW LANDFILL

The Clearview Landfill is located near the intersections of 84th Street and Buist Avenue and Lindbergh Boulevard, Philadelphia, PA (see [Appendix – Figure 3](#)) and is the focal point of this HC. The specific locational coordinates for this landfill are 39.9026° north and - 75.2541° west (sighted at the end of the access road to the concrete building on-site). Darby and Cobbs Creeks intersect at the Clearview Landfill. The nearest residential backyard of the Eastwick community at the Clearview Landfill, is located approximately 50 yards from the base of the landfill [2]. The Clearview Land Development Corporation owned this landfill, a 50-acre parcel, since the late 1950s. It was operated as an un-permitted municipal waste landfill between the late 1950s and 1973. In the early 1970s, the Pennsylvania Department of Environmental Protection or PADEP,

(formerly the Pennsylvania Department of Environmental Resources or PADER) took measures to stop the dumping of wastes in the landfill. On September 30, 1973, a final order was issued under which all disposal activities at the landfill were to cease and the owners were to follow a prescribed closure plan. EPA completed a number of investigations of the landfill [4]. In 1976, the Philadelphia Redevelopment authority covered and seeded a portion of the landfill. Hundreds of residences were constructed around the eastern and southern borders of the landfill between 1976 and 1977 [2]. A recreation area was built at the northeast corner of the landfill in the late 1970s [5].

Site Contamination and Environmental Sampling History

On June 12, 1980, PADEP investigated reports of dumping and open burning of wastes materials at the Clearview Landfill. Waste materials were being deposited on the southwest face of the landfill, and the area on the east bank of the Lower Darby Creek was being filled in with material that was not determined to be of unused, uncontaminated origin. From 1981 to 1987, six notices of violation were issued to the Clearview Land Development by the PADEP for non-compliance to cease disposal at the Clearview Landfill [2].

Since 2000, EPA has performed a number of sampling events immediately around the landfill and in the nearby areas to characterize the extent of contamination [6]. Specifically, in 2000, EPA collected a round of sediment samples after creek flooding and soil samples were taken near the former landfill [5]. In 2003, EPA sampled soils next to the landfill for metals, VOCs, and semivolatile compounds (sVOCs). In 2004, EPA additionally installed groundwater monitoring wells. In 2005, EPA sampled the groundwater aquifer in the area. In 2006, EPA sampled and evaluated on the Clearview Landfill and evaluated the data using two different EPA soil gas vapor intrusion models [6]. More recently, EPA's contractors are in process of collecting and analyzing numerous surface soil, leachate, and groundwater samples taken on-site. Currently, EPA is conducting a Remedial Investigation / Feasibility Study on the LDCA:Clearview Landfill site [6].

PADOH and ATSDR Site Visits

ATSDR and PADOH Site Visits in 2000 – 2001

ATSDR and PADOH completed visits to the site in 2000 and 2001. It was noted in the December 14, 2000 HC published jointly by ATSDR and PADOH, that the landfill was not fenced and was accessible to the public. It was covered with bushes and trees. The authors said that they did not actually observe prominent physical hazards, but that it was reported that some were present, at this time, such as demolition wastes, automobile shells, and vehicle parts [5].

During a later visit by ATSDR in 2001, staff noted that no barriers and/or signs were present on the landfill borders to prevent trespassers from entering the site, which they stated contained physical hazards. During the site visit, large amounts of uncovered rubbish and various materials with pointed and jagged edges (household appliances and furniture were identified, along with car parts and shells, concrete blocks, and other physical hazards) were present, which they

considered a *physical public health hazard* to trespassing recreational users. They also stated that numerous walking / traveling paths were visible across the Clearview Landfill site.

PADOH and ATSDR Site Visits in 2006 – 2007 and Community Meeting

In August 2006, PADOH, ATSDR, EPA, and U.S. Fish and Wildlife staff visited the Lower Darby Creek site. Also in 2006, staff from PADOH and EPA visited the Clearview and Folcroft Landfills to view the NPL site layout and topography, the monitoring well locations, the soil and soil gas sampling points, and the locations of the potentially affected homes in relationship to the landfills, especially the Clearview Landfill. The locations of seeps, a drainage ditch, and the two creeks in relationship to the Clearview Landfill were noted during this site visit. In 2006, no barriers were observed between the Eastwick Community Park and the Clearview Landfill to deter residents and visitors from trespassing onto the landfill (see [Appendix – Figure 4](#)).

On May 04, 2007, PADOH visited the Clearview Landfill and John Heinz National Wildlife Refuge. PADOH discussed the site and some community concerns about the Clearview Landfill with two members of the Eastwick community. On May 17, 2007, PADOH and ATSDR again visited the LDCA NPL site and attended the EPA pre-public and public community meeting at the Delaware County Emergency Training Facility in Sharon Hill, PA. On June 14, 2007, PADOH and ATSDR met again with EPA to further review data and information about the LDCA NPL site.

Demographics

The Darby Creek Watershed is home to a population of approximately 500,000 people, with an average density of nearly 10 persons per acre. The Darby Creek Watershed, and its tributaries in Chester, Delaware, Montgomery and Philadelphia Counties, encompasses some 77 square miles and 31 municipalities (this watershed encompasses the LDCA NPL site, specifically the two Landfills: Clearview Landfill and Folcroft Landfill and Annex, and the John Heinz National Wildlife Refuge. Historically, population growth and land development in the Watershed originated in the lower downstream portions of Delaware County, which includes some of the earliest settlements in the nation, and spread outwardly from the City of Philadelphia. This older development tends to be very dense; most of it pre-dates current stormwater management practices and governmental land use and site development regulations. At the other extreme are the upper portions of the Watershed in Chester County, where development has been more recent [7]. The total population of people living within a one-mile radius of the LDCA around 2001 was approximately 35,459. The racial makeup of the area is as follows: Whites 22,275; Black 12,581; American Indian 71; Asian 383; Hispanic 407; and Other 142 [1].

The year 2000 census data show that there are about 2300 people living immediately adjacent to the Clearview Landfill (see [Appendix – Figure 3](#)) [8]. More specifically, there are 755 homes in the 6-block area between the Clearview Landfill boundary, 84th and 78th Streets, and Lindbergh Avenue.

Discussion

Exposure Pathways Analysis

ATSDR and PADOH consider how individuals might come into contact with contaminated media or exposure pathways, as well as the *duration* and *frequency* of identified exposures. Exposure pathways are classified as completed, potential, or eliminated, based on 5 elements. The five elements are: (a) a source of contamination; (b) a fate or way of transport; (c) an environmental medium in which the contaminants may be present or may migrate; (d) a human exposure point (such as by drinking water, having skin contact, or by inhalation); and (e) a receptor population. In *completed exposure pathways*, the five elements exist, and so exposure has occurred, is occurring, or will occur. In *potential exposure pathways*, however, one or more of the elements may not be present, but information is insufficient to eliminate or exclude the element. An exposure pathway can be *eliminated* if at least one of the five elements is missing and never will be present.

Overview of the Exposure Pathways Complete and/or Potential, Specifically On-site and Determined to be Significant Human Exposures for the Clearview Landfill

PADOH and ATSDR reviewed the available Clearview Landfill on-site information, noted the recreational uses of trespassers, residents, and/or visitors on-site, and evaluated the results of environmental sampling data for samples taken immediately next to the landfill. At this time, it is determined that there are insufficient environmental sampling data for a complete evaluation of soil, sediment, groundwater, and vapor intrusion issues to determine if the contaminants on this site pose a public health hazard. Additional contaminant data is being collected and consolidated by EPA and these data will be reviewed by PADOH and ATSDR. However, based upon the PADOH and ATSDR review of available information, it has been determined that a current pathway of health concern on the landfill is potential exposure to physical hazards by trespassers, residents and/or visitors. Details of the pathway of exposure are listed in the following table titled *Lower Darby Creek Area Site: Clearview Landfill*

- *Major Completed and/or Potential Human Exposure Pathway.* Currently, the key exposure pathway of human health concern is associated with outdoor physical hazards. This exposure pathway for residents, visitors, and/or trespassers includes exposures during outdoor recreational activities (biking, camping, jogging, walking, dirt motorcycle riding, etc) on or near the site to large amounts of uncovered rubbish and various materials with pointed and jagged edges (e.g. abandoned or waste household appliances and furniture, car parts and shells, concrete blocks, and other physical hazards). The likelihood of these exposures is increased due to the location of the adjacent residential areas and the community park.

Table - Lower Darby Creek Area Site: Clearview Landfill - Major Completed and/or Potential Human Exposure Pathway

<i>Time Frame</i>	<i>Medium</i>	<i>Exposure Medium</i>	<i>Exposure Point</i>	<i>Receptor Population</i>	<i>Adult / Child</i>	<i>Exposure Route</i>	<i>Completed or Potential Pathway</i>	<i>Exposure Pathway</i>
Current	Outdoor Physical Hazards	Outdoor Physical Hazards	Outdoor Activities	Trespasser, Resident, and/or Visitor	Adult / Child	Physical, Contact	Completed / Potential	Outdoor recreational activities on the landfill (playing, biking, camping, jogging, walking, dirt motorcycle riding, etc), especially for small children, adolescents, and homeless persons.

Toxicological and Data Evaluation

PADOH and ATSDR Toxicological Evaluation Process

ATSDR has developed health-based comparison values (CVs) that are chemical-specific concentrations, which help to determine which environmental contaminants are of possible health concern and need further evaluation [10]. If a chemical concentration is found in the environment at levels below the CV, it is not likely to cause adverse health effects, though chemicals that exceed CVs do not necessarily produce adverse health effects. If a contaminant exceeds its corresponding CV or does not have a CV, PADOH evaluates the contaminant level further including a review of health-based guideline levels and toxicological research data for the contaminant [10].

Toxicological Evaluation of the Specific, Significant Exposure Pathways at the Clearview Landfill Site

The central public health issue evaluated in this HC is current exposures to contaminants and physical hazards on-site. Very limited on-site sampling data has been evaluated at this point making it difficult to determine if there is a health concern. Vapor intrusion into adjacent homes from the VOCs in the groundwater and/or subsurface soil could occur if levels of are high enough. Some preliminary soil gasses and modelling has been completed by EPA and is being reviewed by PADOH and ATSDR [6]. Further sampling reports (surface soil, subsurface soil gas, and groundwater from monitoring wells) taken on the landfill are forthcoming in the very near future and will be evaluated in a future public health assessment.

Child Health Considerations

ATSDR and PADOH recognize that children may be especially sensitive when exposed to chemicals or physical hazards. In this HC, ATSDR and PADOH considered the likelihood that children trespassing on the landfill may currently be exposed to contaminants and physical hazards on the landfill. In the planned future LDCA:Clearview Landfill PHA, ATSDR and PADOH will continue to consider the likelihood that children trespassing on the landfill and living adjacent to the site may currently or in the future be or in the past have been exposed to contaminants and physical hazards on the landfill.

Community Health Concerns

Since 1999 (Hurricane Floyd), recurrent flooding of the Darby and Cobbs Creeks caused potentially contaminated sediments to be deposited in the surrounding area. Community health concerns have focused on contamination in the same areas due to the spread of these sediments. Other specific community concerns and the PADOH and ATSDR responses to those concerns are listed below:

- 1) Is there a correlation between documented asthma cases and/or increased cancer cases and the residents that live near the LDCA NPL site, specifically the Clearview Landfill?

Response

The Commonwealth of Pennsylvania maintains health outcome databases including vital statistics and the cancer registry. These databases provide information on total mortality, cancer morbidity, and birth defects (though not asthma). The public comment version of the LDCA NPL site PHA to be published in the near future may evaluate this registry data, if warranted, based on the environmental sampling data and pathways of chemical exposure.

- 2) What permitted activities are still occurring on-site (at the concrete building area on the landfill) and are they affecting or could they potentially affect the health of the residents living adjacent to the landfill?

Response

Numerous permitted activities do still occur near the concrete building on-site. EPA intends to re-review these activities in the near future.

- 3) Is there currently dumping of construction wastes going on at the Clearview Landfill?

Response

EPA noted at the May 2007 public meeting that some permitted activities are still occurring on-site and EPA said the dumping of construction wastes on-site was discontinued several years ago at the Clearview Landfill.

- 4) What public health impact did chemicals burned at the Clearview Landfill have?

Response

There are some soil 'hot spots' of PAHs including benzo(a)pyrene immediately adjacent to the landfill and in the park and residential areas. No air monitoring was being done at the time of the burning so there is no past information other than possibly the residual PAHs in the soil. Therefore, past exposures and contaminant levels are indeterminate.

- 5) Overall, do current conditions on-site and/or off-site at the Clearview Landfill pose a public health threat to the residents living around the site?

Response

Currently, it is not known if the residents entering the landfill for recreational purposes (biking, jogging, walking, dirt motorcycle riding, etc) are exposed to levels of contaminants that would be expected to cause increased health risks. Additionally, residents currently entering the landfill for recreational purposes (biking, jogging, walking, dirt motorcycle riding, etc) are exposed to physical hazards and, therefore, *PADOH and ATSDR are classifying the landfill a public health hazard*. One of many possible solutions could be that the Counties, City of Philadelphia, and/or the Clearview

Landfill owners may wish to install a paved bike/jog path at the northern end of the landfill to replace the area already in use by the public.

Health Outcome Data Evaluation

The Commonwealth of Pennsylvania maintains health outcome databases including vital statistics and the cancer registry. Population and community concerns alone from residents living adjacent to the landfill would not warrant PADOH to conduct a review. This may be completed for the LDCA site PHA to be published in the near future, if warranted based on the environmental sampling data, pathways of chemical exposures, and health implications of such exposures, if any.

Conclusions

Based on the evaluation to date, ATSDR and PADOH conclude that currently:

- 1) The residents and trespassers entering the landfill for recreational purposes (biking, jogging, walking, dirt motorcycle riding, etc) are exposed to physical hazards.
- 2) Currently, it is not known if the residents and trespassers entering the landfill for recreational purposes (biking, jogging, dog walking, dirt motorcycle riding, etc) are exposed to levels of contaminants that would be expected to cause adverse health effects. Additional data are needed and will be reviewed by ATSDR and PADOH when completed.
- 3) As a result of the evaluation and conclusions, based on the data received, ATSDR and PADOH *classify the landfill as a public health hazard*, due to physical hazards that are present on the site per point #1 above.
- 4) The preliminary EPA environmental sampling data are currently insufficient to determine if the on-site contaminants pose a public health hazard. Therefore, contaminants at this site pose an *indeterminate public health hazard*. Contaminant data, which are in the process of being taken on-site and compiled, will be reviewed by PADOH and ATSDR.

Recommendations

ATSDR and PADOH recommend that:

- 1) EPA address the physical and potential chemical hazards on-site such as placing barriers and/or signs on the borders of the landfill for the purposes of deterring trespassers from entering the landfill for recreational purposes (biking, jogging, walking, dirt motorcycle riding, etc).

- 2) EPA should continue to monitor the groundwater on the landfill and in the adjacent residential areas and Eastwick Community Park.
- 3) PADOH and ATSDR will evaluate the surface soil sample data and other sample data taken on the Clearview Landfill, as it is available.
- 4) If warranted, based on the environmental data, chemical exposure pathways, and health implications of such exposures, if any, PADOH and ATSDR will consider reviewing and evaluating the available health outcome data for the residents living adjacent to the site in the public comment version of the LDCA site PHA to be published later.

Public Health Action Plan

The public health action plan contains a description of actions to be taken or that have been taken by PADOH, ATSDR and/or other government agencies at and near this site. The purpose of the public health action plan is to ensure that this health consult not only identifies public health hazards, but also provides a plan of action designed to mitigate and prevent adverse human health effects resulting from exposure to hazardous substances in the environment.

Completed Actions

- 1) ATSDR and PADOH met with EPA and U.S. Fish and Wildlife about the LDCA NPL site on August 01, 2006.
- 2) PADOH and ATSDR conducted three (3) visits to the LDCA NPL site. One visit was conducted in August 2006 and two were conducted in May 2007.
- 3) PADOH and ATSDR attended the EPA pre-public meeting with local officials and public meeting with the community on May 17, 2007 and participated in several conference calls concerning the LDCA NPL site in 2007.
- 4) PADOH and ATSDR briefly discussed with EPA ways to deter the residents and visitors from trespassing onto the landfill.

Ongoing or Planned Actions

- 1) PADOH and ATSDR plan to publish this LDCA: Clearview Landfill NPL site HC.
- 2) ATSDR and PADOH plan to further discuss with EPA ways to deter the residents and visitors from trespassing onto the landfill.



LDCA NPL Site: Clearview Landfill, Philadelphia, PA

- 3) PADOH and ATSDR plan to publish the public comment version of the LDCA NPL site PHA in the near future and, if warranted, potentially review available cancer registry data for the site in the PHA. A public availability meeting will be planned when the public comment version of the LDCA NPL site PHA is published.
- 4) Depending on the results of the environmental data, pathway of chemical exposures, and health implications of such exposures, if any, a review and evaluation of the health outcome data may be included by PADOH and ATSDR in the future publication of the public comment version of the LDCA NPL site PHA.

References

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2. The *Initial Release version Lower Darby Creek Area* PHA (final draft was completed by ATSDR for internal agencies use and comment before the LDCA site was listed in its final form to the NPL), October 9, 2001.
3. The U.S. Environmental Protection Agency's summary for the Lower Darby site is available on-line at: <http://epa.gov/reg3hwmd/npl/PASFN0305521.htm> and <http://www.epa.gov/reg3hwmd/super/sites/PASFN0305521/fs/1999-08.htm>, last accessed 2008 February.
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5. *Lower Darby Creek Area: Clearview Landfill Health Consultation*, Lower Darby Creek Area, Darby Township, Delaware County, Pennsylvania, published December 14, 2000.
6. U.S. Environmental Protection Agency Region III, Philadelphia, Pennsylvania. EPA's information, reports, and sample data for the Lower Darby Creek Area (LDCA) NPL site.
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8. Year 2000 Census Tract Block data available on-line at www.factfinder.census.gov, last accessed 2008 February.
9. *Eastwick Acquisition Project, phase I and phase II Environmental Assessment Report*, prepared by the Federal Emergency Management Agency Mitigation Division for the City of Philadelphia. September 2001.
10. Agency for Toxic Substances and Disease Registry Toxicological Profile. Atlanta: US Department of Health and Human Services; A Web page is available for ATSDR may be found on-line at <http://www.atsdr.cdc.gov/>, last accessed 2008 February.

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LDCA NPL Site: Clearview Landfill, Philadelphia, PA

Certification

This Health Consultation for the Lower Darby Creek Area (LDCA) NPL site: Clearview Landfill was prepared by the PADOH under a cooperative agreement with ATSDR. It is in accordance with approved methodology and procedures existing at the time the Health Consultation were initiated. Editorial review was completed by the cooperative agreement partner.

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Technical Project Officer, CAT, CAPEB, DHAC, ATSDR

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

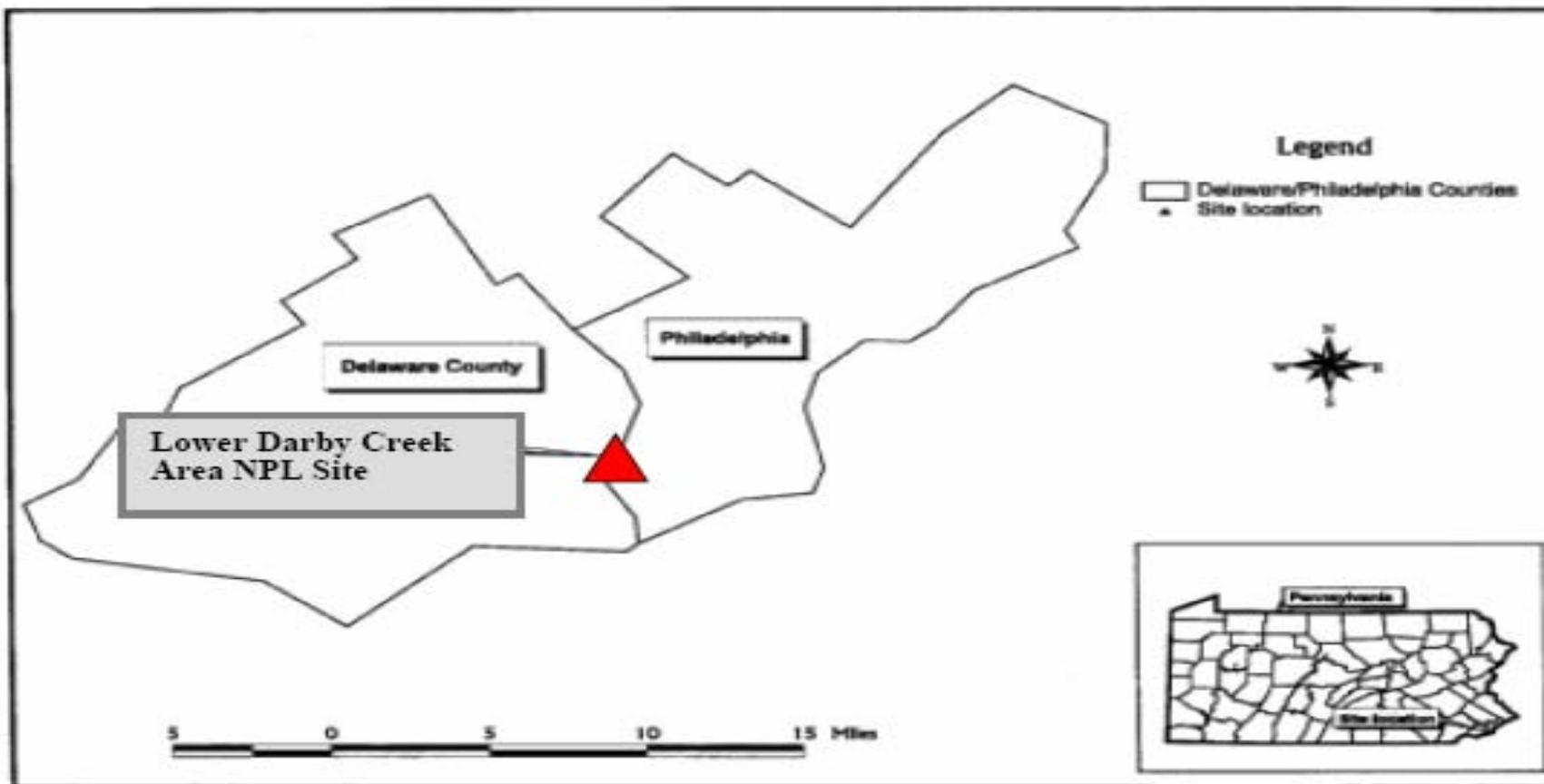
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Appendix - Figures

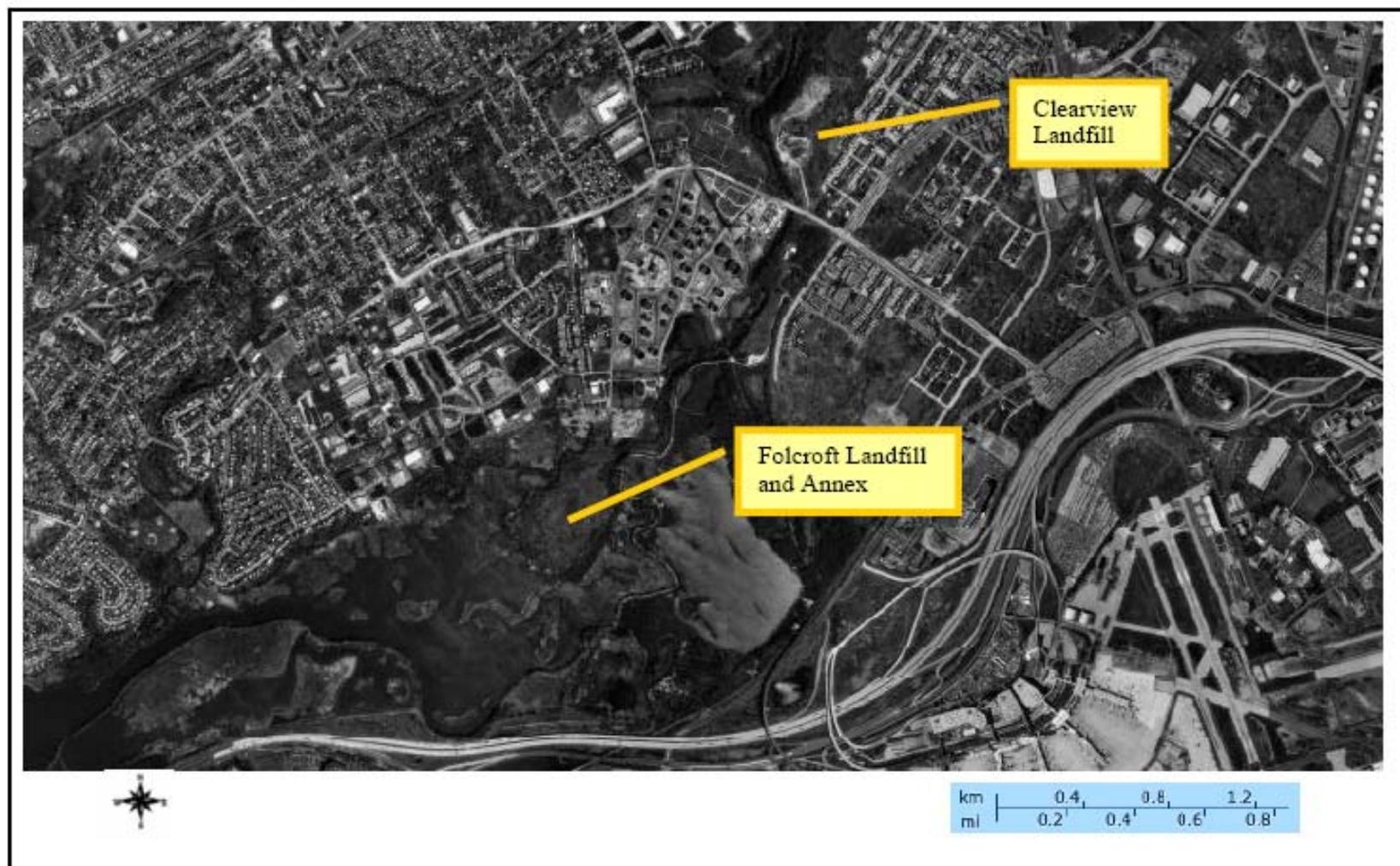
LDCA NPL Site: Clearview Landfill, Philadelphia, Pennsylvania

Figure 1 – Lower Darby Creek Area (LDCA) NPL Site Location in Philadelphia, Pennsylvania



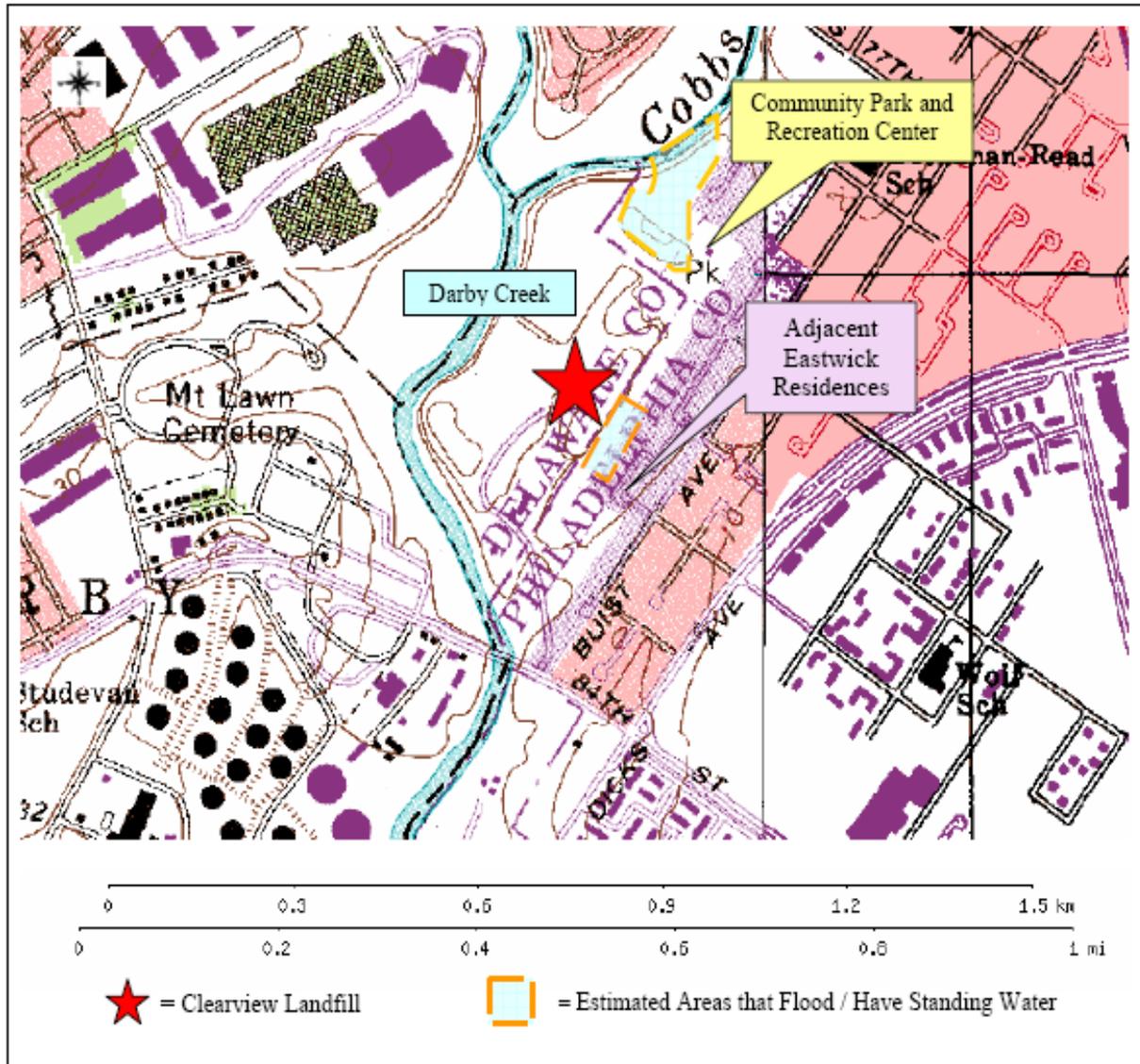
LDCA NPL Site: Clearview Landfill, Philadelphia, Pennsylvania

Figure 2 – Lower Darby Creek Area (LDCA) Site (Clearview and Folcroft Landfills) – Delaware County and Philadelphia County



LDCA NPL Site: Clearview Landfill, Philadelphia, Pennsylvania

Figure 3 – Lower Darby Creek Area (LDCA) NPL Site: Clearview Landfill.
 Location of Adjacent Residences and Community Park – Philadelphia, PA



LDCA NPL Site: Clearview Landfill, Philadelphia, Pennsylvania

Figure 4 – Lower Darby Creek Area (LDCA) NPL Site: Clearview Landfill
Lack of Deterrent Barrier Between Eastwick Community Park and Clearview Landfill; Usage Paths Are Evident

