A Summary of the Newhall Street Neighborhood State Superfund Project

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Introduction

In response to a request from CT Equity and Environmental Justice Advisory Council (CEEJAC), DEEP has developed a brief history of contamination and cleanup in Hamden's Newhall Street Neighborhood. This summary provides a historical timeline from identification of contamination to cleanup, key actors and their roles and responsibilities, and engagement between the State and local residents. This summary is not comprehensive or complete; please contact DEEP.CEEJAC@ct.gov if there are additional questions.

Site Description

The Newhall Street Neighborhood is an 18-Block area comprising about 100 acres in the southern part of the Town of Hamden. The area includes approximately 300 private properties (mostly residential), the former Hamden Middle School, the Newhall Community Center, two Hamden Housing Authority residential properties and two town parks (Rochford Field and Mill Rock Park).

The area historically consisted of an extensive network of wetlands and localized ponds that were filled with contaminated industrial material and incinerated household trash from the late 1800s through the mid-1900s. The purpose of the filling was to remove wet areas in the greater New Haven area to reduce human exposure to mosquito-borne illness.

Remediation Timeline

A more detailed summary of the site history can be found in the 2007 Remedy Selection Plan Appendix A.

2000

The presence of contaminated waste fill was discovered during exploratory soil borings associated with the proposed expansion of the Hamden Middle School located at 550 Newhall Street. A soil boring is the process of drilling or advancing a narrow hole in the ground to collect soil samples and/or to observe soil conditions at depth. Laboratory results of soil samples collected can reveal the constituents present in the soil. In this instance, the contaminated waste fill materials were observed in soil borings at depths from 2 feet to approximately 26 feet below ground level.

2001 – 2005

Following the discovery of waste materials at the former Middle School, the Remediation Division at the Connecticut Department of Energy and Environmental Protection (DEEP) and the Town of Hamden conducted preliminary environmental assessment activities in the area, which included a review of historical maps, aerial photographs, and town records, soil exploration and interviews with long-time area residents. The body of information revealed that historical filling activities occurred throughout the Newhall Street Neighborhood, not just at the middle school.

Subsequent and more extensive environmental investigations revealed that wastes included batteries, empty ammunition shells, ash, slag and coal waste, as well as other industrial and household refuse. The primary contaminants of concern with the waste fill included: polynuclear aromatic hydrocarbons (PAHs) and heavy metals including lead and arsenic. Additionally, petroleum hydrocarbons (oils), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs) and pesticides were identified in waste material at the former Hamden Middle School parcel.

2003

To immediately address very high concentrations of lead in surficial soil at thirteen residential properties, DEEP requested that the U.S Environmental Protection Agency (EPA) perform emergency soil removal activities as a temporary measure. As a result, EPA implemented emergency removal of surficial waste fill that contained lead concentrations in excess of the immediate action trigger level of 1,200 milligrams per kilogram (mg/kg).

DEEP issued Consent Order (CO) SRD-128 to four Responsible Parties: Olin Corporation (Olin), Town of Hamden (Hamden), South Central Connecticut Regional Water Authority (RWA), and the State Board of Education (BOE).

- Olin accepted responsibility for the environmental investigation & cleanup of about 220 non-public properties within the Consent Order (CO) boundary.
- DEEP accepted the responsibility of BOE and reimbursed Olin for 50% of the remedial construction expense in accordance with the CO and a 2007 Settlement Agreement.
    - Total state expenditure for the 50/50 cost share was approximately $17,350,000.

2009 - 2012

Remedy construction work was implemented, which included:

- excavation of waste fill within the top 4 feet;
- off-site disposal of waste fill with most of the material being reused as cover material at the "Tire Pond" site located on State Street in Hamden/North Haven;
- backfill with clean soil to original grade; and
- restoration of all pre-existing features (landscaping, patios, fencing, driveways, etc.)

The Town of Hamden accepted responsibility for the environmental investigation and cleanup of Mill Rock Park (later renamed Villano Park in 2013 in honor of former State Representative Peter F. Villano) and Rochford Field.

- DEEP contributed $4M through the use of State Superfund monies to implement the cleanup at Rochford Field, with the remainder of the cost borne by the Town of Hamden.
- The cost to clean up and redevelop Villano Park was covered entirely by the Town.
- The remedy for both parks included the placement of a membrane liner to prevent the infiltration of water through contaminated waste fill that was shown to have an impact on local groundwater quality.
- The remedy construction at both parks was completed around 2012.

The Town of Hamden applied a "Local Design District" zoning option to the Consent Order area and beyond, to prevent future exposure to deep waste fill remaining after cleanup.

- A Local Design District zoning option was designed to ensure that cleanup requirements were met while also providing flexibility for the site's future use, development, and enjoyment of the residential properties.
- A requirement of the Local Design District is that property owners must notify the local Building Department for any planned excavation on their property that extends deeper than four feet.

South Central Connecticut Regional Water Authority (RWA) accepted responsibility for the environmental investigation and cleanup of the former Hamden Middle School and Community Center parcel (now known as the small business incubator).

- The remedy at this parcel included placement of 4 feet of clean fill over waste fill, removal of soils impacted with PCBs were excavated for proper off-site disposal, and VOC pollution was addressed through the permitted injection of remedial agents to promote rapid degradation.

2013

Remedy construction work ceased. An Environmental Land Use Restriction was recorded on the land records for the parcel in or around 2015 to prevent future excavation into remaining deep waste fill material.

2019

Town of Hamden established a $2 million Long-Term Soil Management Fund administered for the benefit of residential property owners within the Newhall Local Design District. The purpose of this fund is to cover the cost to manage the proper disposal of any deep waste fill that is unearthed as part of a building permit issued by the Town's Building Department.

Commonly Asked Questions

How has the historical contaminated fill impacted local houses?

In short, it has caused structural damage due to differential settlement. Differential settlement occurs when parts of a building's foundation settle at different rates, which may result in potential structural damage like uneven foundations or visible cracking on walls of the building. Prior to Olin implementing remedy construction inside the CO boundary at the non-public properties, it was determined that numerous houses had suffered severe structural distress due to differential settlement, as they were on top of deep waste fill that contained substantial void space or gaps.

What was the impact of the remedy for clean soil backfill?

Following remedy construction inside the CO boundary by Olin, multiple property owners reported ponding of rainwater following heavy rain events, which did not happen prior to the remedy work. Due to the waste fill being an "unconsolidated porous matrix", stormwater had previously seeped easily through the waste fill, which provided excessive drainage. The residential properties were restored with clean soil to the same elevations and contours (e.g. small hills or elevation changes) that existed prior to remedy construction. The clean soil was also compacted to ensure the long-term viability of replaced property features and to minimize continued settlement in yards where deep waste fill remained at depth. Unfortunately, after heavy rain events it was determined that some restored yards had ponded water accumulate at low spots that lingered for days.

To address this unintended consequence of ponded water in yards, numerous shallow drainage features were installed throughout the neighborhood area by coring through the clean soil layer to promote drainage of the water to the underlying native sand deposit or deep waste fill. This effort was implemented as needed from 2010-2013 and appeared to have addressed this matter.

Did the waste fill extend beyond the Consent Order Boundary?

At the time that the CO was entered, it was presumed that a small fraction of the historically filled area was not encompassed within the CO boundary. Therefore, former DEEP Commissioner Rocque authorized DEEP to perform supplemental environmental investigation and cleanup on residential parcels located outside of the CO boundary, following remedy construction at properties inside the CO boundary.

Following completion of remedy construction inside the CO boundary, DEEP offered to conduct supplemental testing at numerous residential properties located outside the CO boundary area, primarily west of St. Mary Street and immediately south of Goodrich Street. While no deep waste fill was identified on these parcels, there were isolated pockets of shallow waste fill removed from approximately 10 parcels through DEEP's effort. This cleanup effort was completed in 2018 and was consistent with the remedy implemented by Olin at the non-public properties located inside the CO boundary.

What has been done to address structural home repair?

As structural repair for the homes was beyond the scope of Olin's environmental cleanup obligation, Hamden's legislative delegation secured a $5M funding package from the State Bond Commission in 2008 to implement the Structural Repair Program. The bond funds were administered by the Town of Hamden, through the Hamden Economic Development Corporation (HEDC), and were used to purchase severely damaged houses (at fair market value) for demolition prior to remedy construction, in addition to repairing the structural condition of numerous other houses.

How has the State Government engaged local residents on this issue?

The Newhall Street Neighborhood Remediation Project employed a strong community involvement program to communicate testing and cleanup information to the directly affected homeowners and surrounding property owners. When the contaminated soil from historical landfilling was first identified at the former Hamden Middle School property and nearby parks in 2000, DEEP hosted public meetings at the Middle School, with support from the state's Department of Public Health. As investigation of the extent of filling in the neighborhood continued and the scope grew to include more than 200 impacted residential properties, a more robust public involvement plan was needed. The Public Involvement Plan evolved over the course of the project to include the following elements supported by DEEP:

- Providing an independent facilitator to support the Newhall Advisory Committee (NAC), which met regularly for several years during the investigation and remediation process;
- Preparing and distributing project update newsletters, with the assistance of a public relations coordinator;
- Hosting a project website and online document repository, with the assistance of a public relations coordinator;
- Providing copies of key project documents for viewing at the Miller Library;
- Staffing an office located within the community to improve community accessibility to information and DEEP staff;
- Hosting public meetings at the Middle School, Keefe Community Center, Miller Library, and Southern Connecticut State University to share informational sessions on soil testing results, proposed clean-up plans, and cleanup implementation;
- Meeting with property owner's one-on-one to answer questions and explain testing results and the cleanup plan for their property;
- Creating and distributing a DVD video to explain the cleanup process in layman's terms; and
- Hosting "Block" meetings with the cleanup contractor and residents to explain the cleanup process on the residential properties.

The Town of Hamden also solicited input from the community, including hosting a charette to gather input on the redevelopment options for the former Hamden Middle School property, Rochford Field, and Villano Park.

What is the remaining contamination at former Middle School site?

Today, there is deep waste fill remaining under a clean soil cover, which includes primarily lead, arsenic and PAHs. The pollutants with the most significant health risk (PCBs and VOCs) have been removed.

Additional Resources

Remedy Selection Plan for Newhall Street Neighborhood Remediation Project (October 2007)

This document provides a detailed remedy selection plan, history of the site, explanation of why remediation is needed, reuse planning process, and outlines next steps. A historical timeline of the site from the 1800s to 2007 is located in Appendix A.