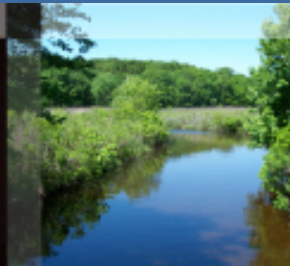
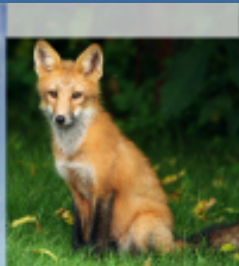




Connecticut Department of Energy and Environmental Protection



Connecticut Department of
**ENERGY &
ENVIRONMENTAL
PROTECTION**

Contaminated Sites

- Identifying contaminated sites
- Environmental Site Assessments
- Remediation Standard Regulations
- CT DEEP Site Cleanup Programs and Transformation
- Licensed Environmental Professionals
- Case studies



Industrial Properties



Industrial Properties



Commercial Properties



Land Disposal Areas



Residential Properties



Brownfield Sites



Any property can be contaminated



Environmental Site Assessments

- PHASE I – Records review to determine current and historic use of a site, and a site inspection to identify areas of concern
- PHASE II – Collect environmental samples from areas of concern. Confirm or deny presence of contamination
- Phase III – Characterize the degree and extent of contamination resulting from each release at the site



Phase I

A review of State and local files and site walk

- Ownership, past & present
- Current and historic use of site
- Operations (painting, degreasing, drilling, etc)
- Substances used in site operations
- Waste management history
- Utilities (water supply wells, coal and oil use)
- Environmental permits and compliance history



Records Review



Identifying Areas of Concern









Common Hazards

- CHEMICAL: solvents, petroleum products, metals, PCBs, asbestos, pesticides, etc
- PHYSICAL: unsafe structure, sharp objects, nails, broken glass, confined spaces
- BIOLOGICAL: poison ivy, animals, human activity





Phase II

Environmental Sampling to confirm or deny the presence of contamination



Phase II & III Environmental Sampling



Phase II & III Environmental Sampling



Remediation Standard Regulations

- Direct Exposure
- Pollutant Mobility
- Groundwater Protection
- Volatilization
- Surface Water Protection



Remediation Strategy - excavation



Remediation Strategy – product recovery



Remediation Strategy - Caps



DEEP Cleanup Programs

- Property Transfer Act
- Federal/State Superfund
- Voluntary Remediation
- Brownfield/Urban Sites
- Potable Water
- RCRA Corrective Action & Closure
- Significant Environmental Hazards



Transformation of Cleanup Programs: Mission

- High risk: focus DEEP's resources; rapid response
- Low risk: new cleanup alternatives; self-implementation of alternative cleanup approaches
- Assist cities and towns to facilitate Brownfield reuse and cleanup by limiting municipal liability



Licensed Environmental Professional (LEP)

- CT DEEP discretion to allow LEP oversight of investigation and remediation
- LEP Credentials: 8 years engaged in investigation and remediation of releases of hazardous waste; 4 years in responsible charge of investigation and remediation; and, passed exam
- CT DEEP audit process



CT DEEP Partnerships with Local Health Depts – Case Studies

Case #1 (Potable Water)
Durham Meadows Federal
Superfund Site

Jing Chen

Two Source Areas:

--- Merriam Manufacturing Co. Study Area

- from 1851 – early 2000s
- The main portion of the factory Was destroyed by fire in 1998
- Soil was excavated by EPA

--- Durham Manufacturing Co. Study Area

- from 1922 – current
- Soil remediation is in Progress - EPA

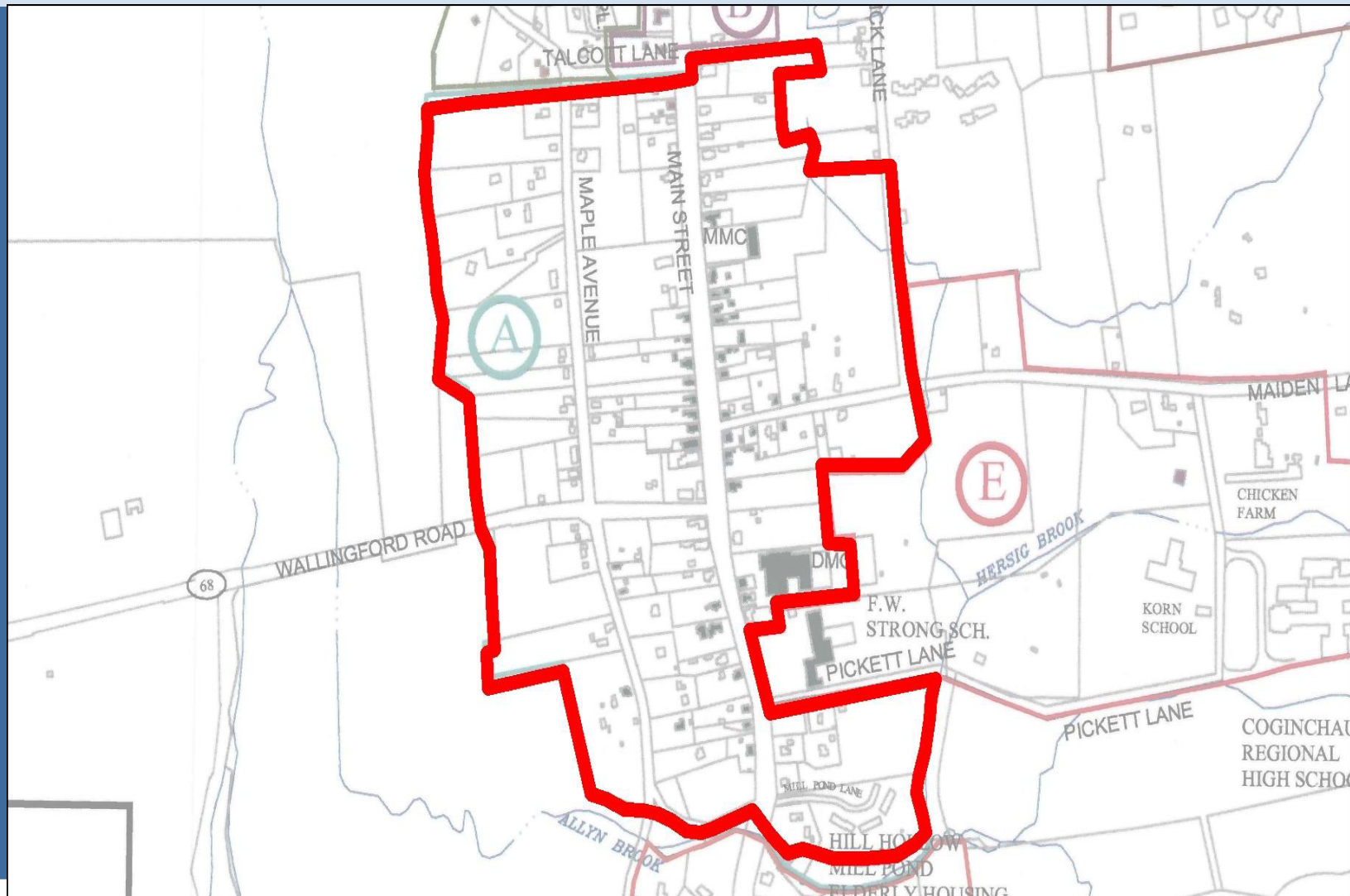


Durham Meadows

- Both Facilities located on Main Street, Historic Section of Durham
- Both Facilities manufacture metal boxes and Stored Waste in Drums and disposed waste (sludge) in onsite lagoons
- Use trichloroethylene (TCE) in the Processes
- Groundwater Contamination
- Both Site Owners Settle with EPA - Consent Decree



Durham Meadows Superfund Site



Connecticut Department of Energy and Environmental Protection

MMC- Past_1 (from EPA)



Connecticut Department of Energy and Environmental Protection

MMC- Past_2 (from EPA)



Connecticut Department of Energy and Environmental Protection

MMC- Past_3 (from EPA)



Connecticut Department of Energy and Environmental Protection

MMC – Remediation (from EPA)



MMC-Current





201 Main Street Durham ct



Groundwater Contamination

- Chlorinated VOCs in Bedrock Aquifer primarily TCE, PCE, 1,1,1-TCA , and Daughter Products
- Volatile Organic Compounds (VOCs) in private wells
- 1,4-Dioxane in Some of Private Potable Wells
- Most are Residential



Contamination in Potable Wells

- MMC Study Area:
 - 25 Homes on Filter
 - 9 Homes on Bottled Water –
1,4-Dioxane
 - Approx. 40 Homes on Routine
Sampling



Contamination in Potable Wells - Cont.

- DMC Study Area:
 - 17 Homes on Filter
 - 17 Homes on Routine Sampling and Additional 13 Homes will be sampled soon.



Contamination in Potable Wells - Cont.

- New Contaminated Wells are recently Discovered South of the Superfund Site Area, South of Allyn Brook
- More sampling is on the Way

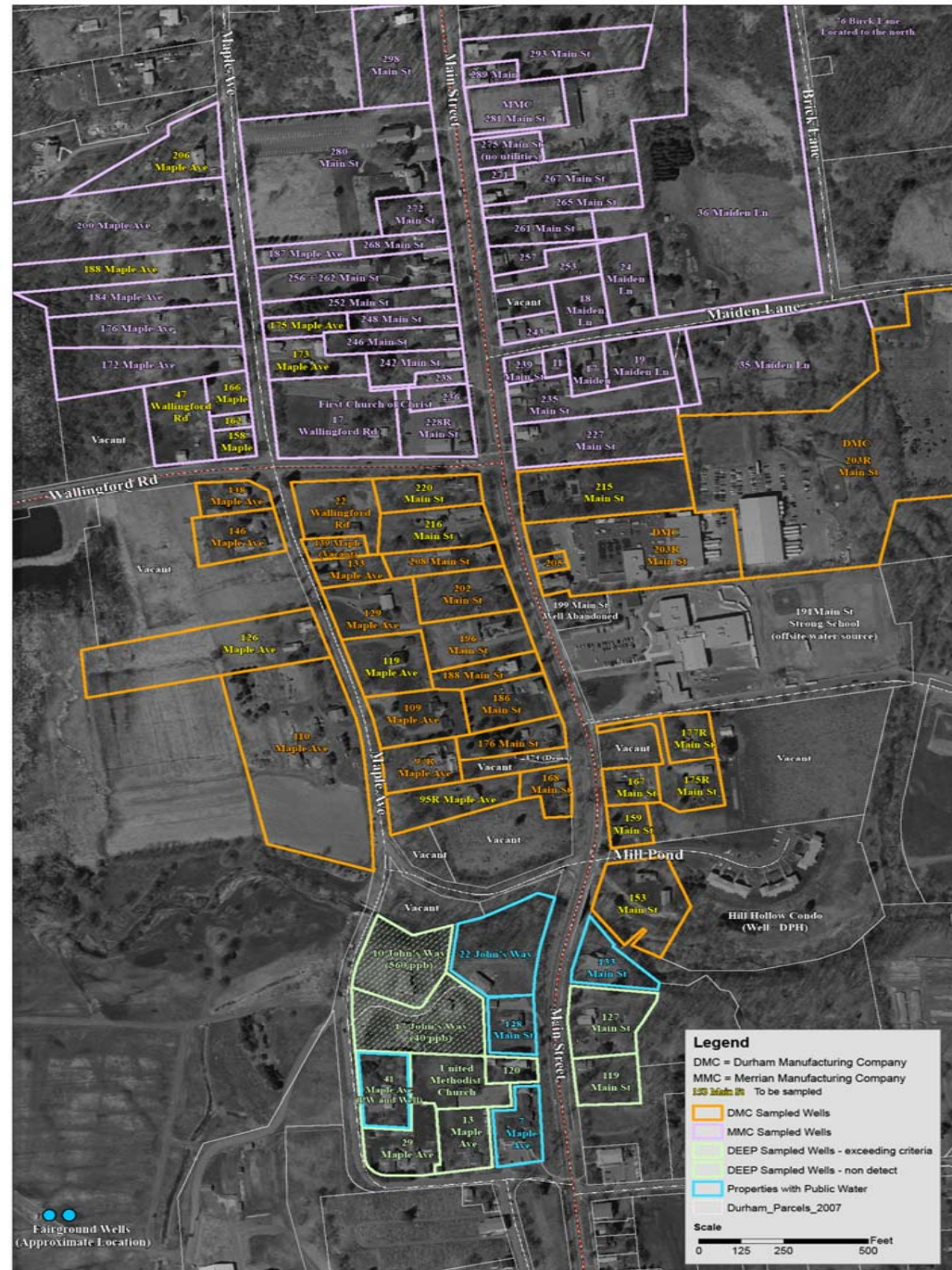


Sampling Map



Connecticut Department of Environmental Protection

Durham Meadows Potable Water Sampling



Remedy Decision for GW Contamination

- EPA's Record of Decision: Water Line to Superfund Site
- Feasibility Study and Environmental Impact Evaluation were Completed
- Water Line Design by EPA is in Progress



Supports from Local Health

-- We are Partners in identifying polluted properties or public risk

- Contaminated Groundwater
- Potable Well Identification
- Potable Well Construction Information
- Helping with Access for Sampling



Supports from Local Health – Cont.

-- We are Partners in communicating health risk information to the general public

- During Public Meeting
- Daily Work –Get Contamination Information and Risk Information to Impacted Residents or General Public

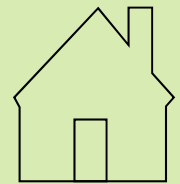


Use knowledge of Contaminated Sites

in your work

- Exceeding GW/Drinking Standards May Pose:
 - Risk to Potable Water
 - Risk to Indoor Air - Vapor Intrusion Risk

- When you know there is a contaminated site nearby
 - New well permit?
 - Require a Treatment System
 - Include VOCs Analysis and Other Tests in the Well Water Test



Use knowledge of Contaminated Sites

in your work



List of Contaminated or Potentially Contaminated Sites in Connecticut (DEEP/Remediation Division Website)

http://www.ct.gov/deep/cwp/view.asp?a=2715&q=325018&deepNav_GID=1626



Connecticut Department of Energy and Environmental Protection

CT DEEP Partnerships with Local Health Depts – Case Studies

Case #2 (Vapor Intrusion) Milford Cleaning Village

Amanda Kileen

Milford Cleaning Village

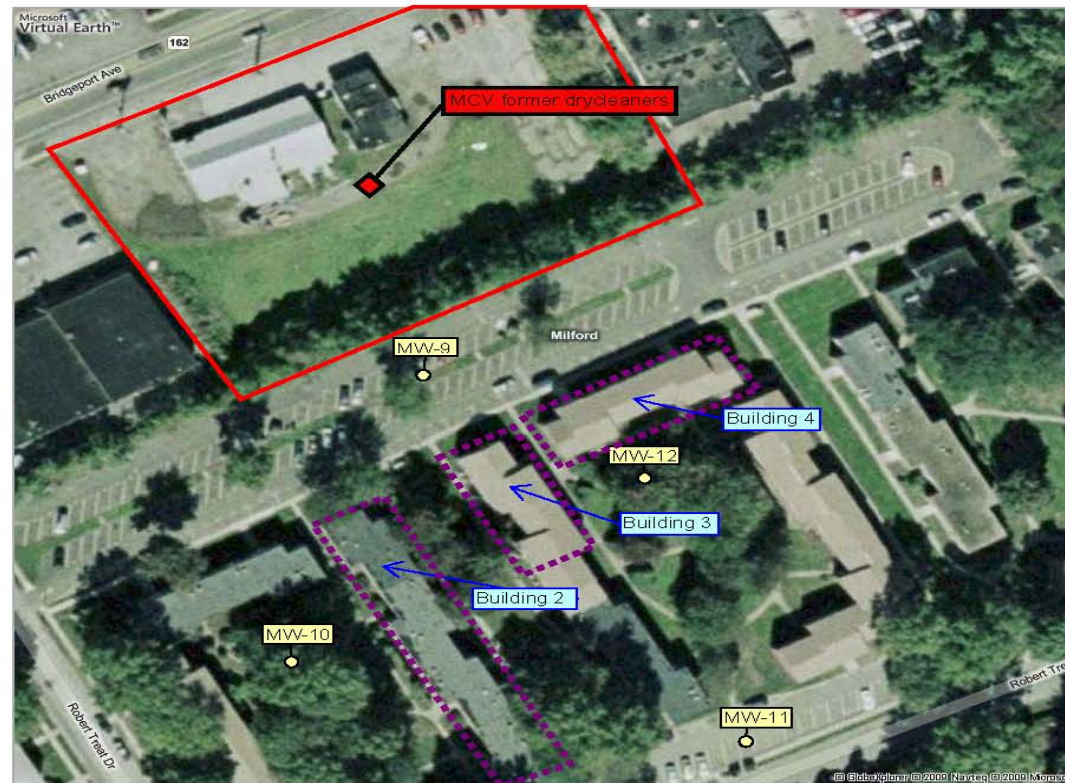
Print - Maps

Page 1 of 1

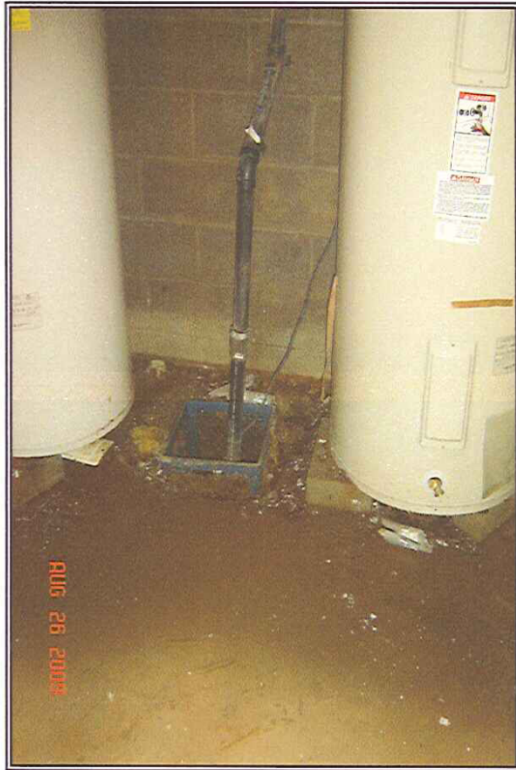
Live Search Maps

My Notes

FREE! Use Live Search 411 to find movies, businesses & more! 800-CALL-411.



Bird's eye view maps can't be printed, so another map view has been substituted.



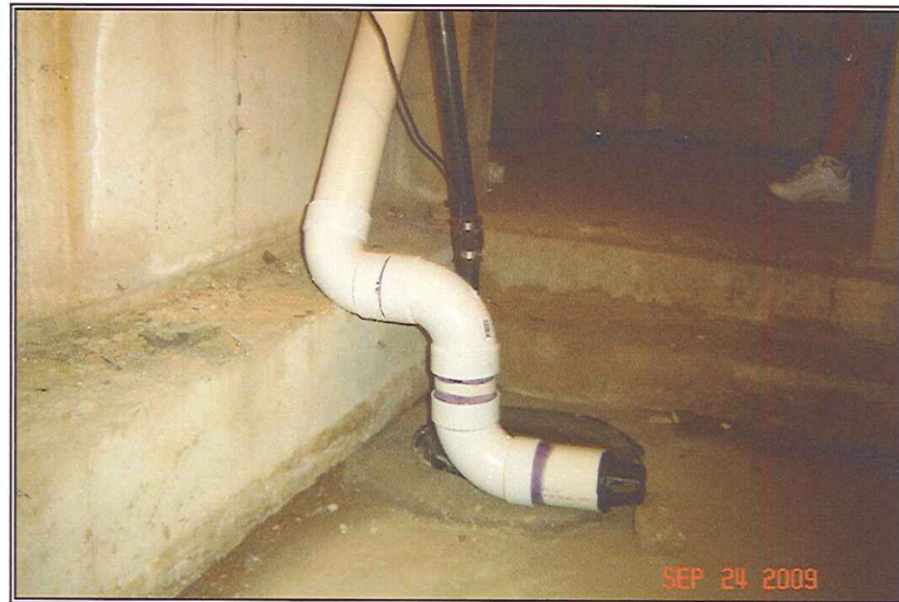
**Photograph 1: Building 2, Unit 38
- Previous Basement Sump**



**Photograph 2: Building 3, Unit 43
- Previous Basement Sump**



**Photograph 3: Building 2, Unit 38
- Typical Basement Radon Proof Sump**



**Photograph 4: Building 4, Unit 45
- Basement Venting System Intake**



**Photograph 8: Building 4, Unit 46
- Basement Venting System**



**Photograph 9: Building 4, Unit 45
- Basement Venting System**

CT DEEP Partnerships with Local Health Depts – Case Studies

Case #3 (Direct Exposure)
Newhall Neighborhood State
Superfund Site

Ray Frigon

Newhall Neighborhood 2001



Newhall Neighborhood 1934









A photograph of a protest sign in a snowy field. The sign is white with red text. At the top, there is a red banner with white text. The sign is placed in a snowy area with several bare, thin trees in the background. The ground is covered in snow, and there are some dark patches of earth or rocks visible.

NEWHALL RESIDENTS ARE UNITED!

**NO PARTIAL CLEANUP!
WE REJECT THE DEP NEWHALL
REMEDICATION PLAN
RESIDENTS DEMAND TOTAL CLEAN-UP
TO
PROTECT OUR HEALTH
AND
RESTORE ECONOMIC VIABILITY**

Public Information Sessions



























