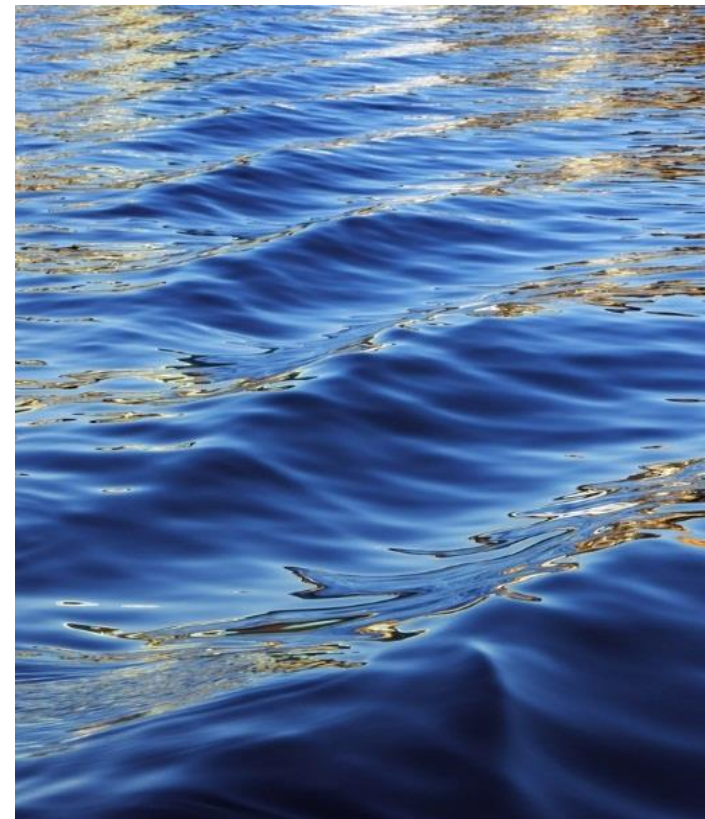




# LSPs: Working to Clean Up Massachusetts' Soil & Water

Massachusetts Association of Health Boards  
November 2016 Annual Certificate Program



# The LSP Association (LSPA)

- Licensed Site Professionals (LSPs) are scientists, engineers and public health specialists licensed by the state to oversee the assessment and cleanup of properties contaminated by oil and hazardous waste releases and spills
- The LSPA is a Massachusetts association of ~800 professionals including LSPs, risk assessors, attorneys, laboratory professionals, and others



# LSPs Are Unique Among Environmental Professionals

- A 23 year old **privatized** program and model for other states
- LSPs are expected to hold paramount public health, safety, welfare, and the environment in the performance of professional services
- Protection of the environment is not included in the regulations governing other licensed professionals:
  - Professional Engineers (PEs)
  - Certified Industrial Hygienists (CIHs)

# Regulations and Licensure

- State environmental regulations for assessment and remediation of releases of oil and hazardous materials:  
Massachusetts General Law **Chapter 21E**  
Massachusetts Contingency Plan (**MCP**), 310 CMR 40.0000
- Required to report releases and other events to state and municipalities
- Public notification and involvement requirements in MCP
- Licensed and disciplined by LSP Board of Registration under 309 CMR

# LSPs Communicate With Boards of Health

- The MCP requires notification to the Board of Health and Chief Municipal Officer
- Most common notifications include:
  - Immediate Response Actions
  - Tier Classifications
  - Milestone Reports
  - Site Closures
- Some circumstances also require public notification and involvement

Massachusetts Department of Environmental Protection  
Bureau of Waste Site Cleanup  
BWSC105  
Release Tracking Number  
IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL FORM  
Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

**A. SITE LOCATION:**

1. Release Name/Location Aid: \_\_\_\_\_

2. Street Address: \_\_\_\_\_

3. City/Town: \_\_\_\_\_ 4. Zip Code: \_\_\_\_\_

☐ 5. Check here if this location is Adequately Regulated, pursuant to 310 CMR 40.0110-0114.

☐ a. CERCLA ☐ b. HSWA Corrective Action ☐ c. Solid Waste Management  
☐ d. RCRA State Program (21C Facilities)

**B. THIS FORM IS BEING USED TO: (check all that apply):**

1. List Submittal Date of Initial IRA Written Plan (if previously submitted): \_\_\_\_\_ (mm/dd/yyyy)

☐ 2. Submit an Initial IRA Plan.

☐ 3. Submit a Modified IRA Plan of a previously submitted written IRA Plan.

☐ 4. Submit an Imminent Hazard Evaluation. (check one)

☐ a. An Imminent Hazard exists in connection with this Release or Threat of Release.

☐ b. An Imminent Hazard does not exist in connection with this Release or Threat of Release.

☐ c. It is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release, and further assessment activities will be undertaken.

☐ d. It is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release. However, response actions will address those conditions that could pose an Imminent Hazard.

☐ 5. Submit a memo to the Board of Health in accordance with the Emergency Response System or Response Action(s) Taken to Address an Imminent Hazard.





# Case Study of a Waste Site Cleanup



# How To Find A 21E Site In Your Town or City

- <http://www.mass.gov/eea/agencies/massdep/cleanup/>
- Under “Most Requested” click on: Searchable Waste Site List/Site Files
- Enter pertinent info in “Waste Site/Reportable Releases Look Up” box
- Example for this Case Study:
  - Town: Chelmsford
  - LSP: Gallinaro
- RTN 3-0031544: address, date, type of chemical, status, and all site files

## RTN 3-0031544: Chelmsford Roadside Spill

- May 2013 - Emergency response involving a gasoline tanker truck
- ~4,000 gallons of gasoline released from the tanker
- Responders to the scene were:
  - Chelmsford Fire Department, **Chelmsford Health Department**
  - E. Chelmsford Water District
  - MassDEP, MassDOT
  - US EPA, US Coast Guard
- Nearby drinking water supply wells were shut down



## RTN 3-0031544: Immediate Response Actions

- **Immediate Response Actions (IRA) were:**
  - Application and Recovery of Absorbent Materials to the Roadway
  - Gasoline Recovery from Affected Catch Basins and Wetland Area  
*(Conservation Commission)*
  - Application and Recovery of Absorbent Materials in the Wetland
  - Storm Drain Cleanout
  - Removal and Replacement of Affected Pavement Area
  - Soil and Sediment Excavation with Offsite Disposal

# Spill Response: Gasoline Release into Wetland



Photos: Common Sense Environmental Inc., New Bedford, MA

## RTN 3-0031544: Assessment Activities

- LSP hired by trucking company (Responsible Party)
- 6 Monitoring Wells Installed for Groundwater Analysis
- 6 Wetland Sediments Sampled
- Surface Water Sampled: 4 samples from wetlands
- Waste Shipped Off Site
  - 44,239 gallons of gasoline impacted water
  - 506 tons of gasoline impacted soil/vegetation
  - 148 tons of gasoline impacted asphalt

# RTN 3-0031544: Continued Activities & Closure

During 2013, 2014, and 2015:

*Chelmsford Board of Health and Chief Municipal Officer notified of each major milestone and report that was submitted to MassDEP*

- Human Health and Ecological Risk Assessments conducted
- Quarterly, then biannual groundwater and surface water sampling
  - Sampling results provided to **Board of Health**
- Soil Vacuum Extraction and Chemical Oxidation completed to reduce gasoline in soil and groundwater
- Situation at site meets requirements for a “Permanent Solution”
- September 2015 – site closed

# Benefits of Coordination & Communication Between Health Dept. and LSP

## Health Department Benefits

- Has up-to-date, pertinent site info
- Can respond to concerns of residents, media
- Acts as a resource for other town officials and departments
- Gets a direct line to LSP and team of contractors

## LSP Benefits

- Gets access to local data resources, regulations, and laws
- Gets a direct line to health officials regarding status of water supplies, access for sampling, public concerns, etc.
- Hears early warnings regarding any emerging issues
- Gets assistance in achieving site closure





LSPs Can Also Help  
With .....





# Assistance During & After Natural Disasters

- Good Samaritan protection for LSPs signed into law August 2014
- Liability protection when an LSP voluntarily renders services at the request of or with the approval of a state or local employee or official
- June 2011 tornado in Western Massachusetts, and “super-storm Sandy” in October 2012: significant quantities of oil from heating oil tanks were released, as well as other oils and hazardous materials
- Many LSPs are willing to volunteer their pro bono services to assist MEMA, FEMA, and local EMAs and public safety agencies



# Management and Movement of Soil

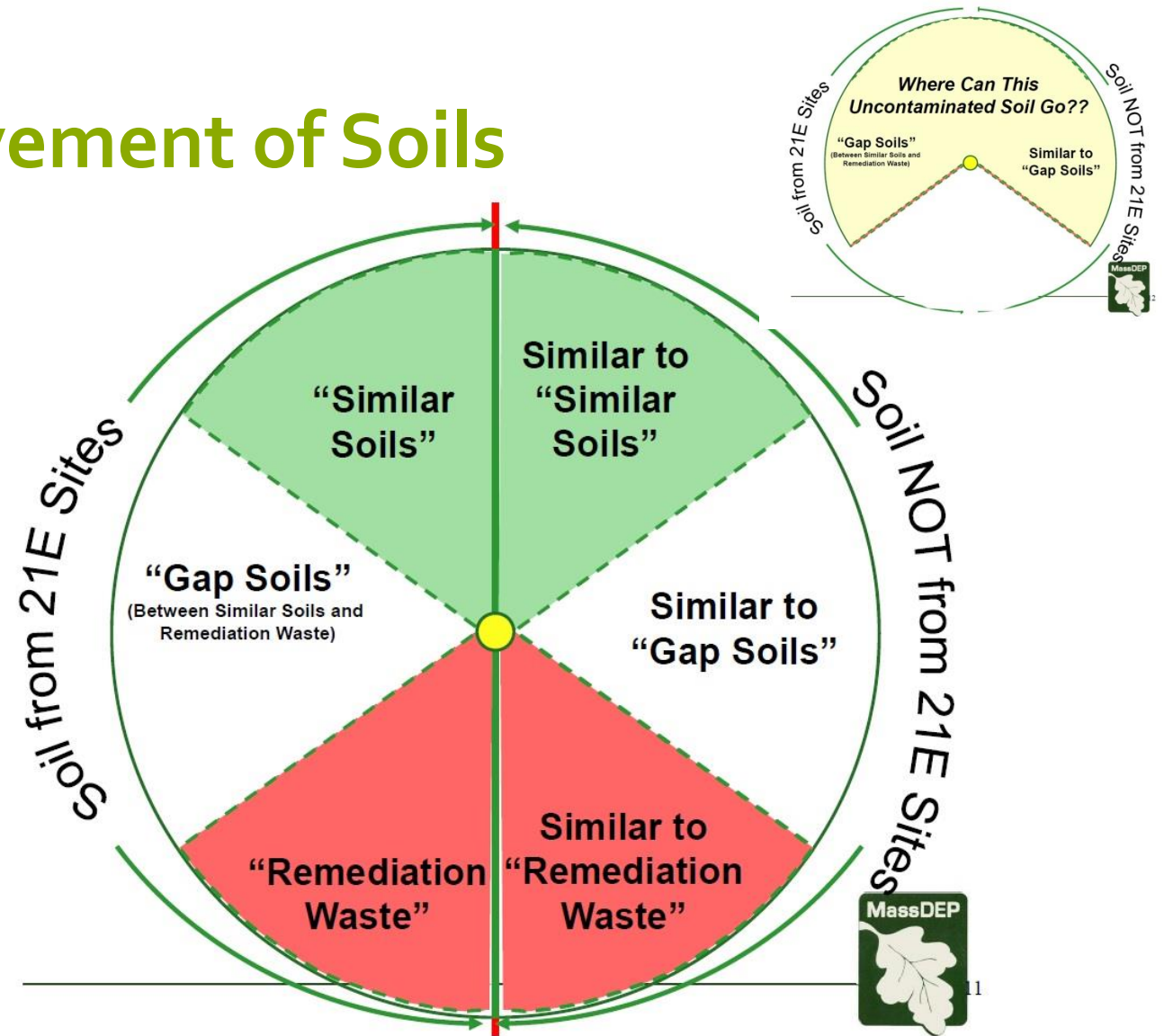
- LSPs know the state rules and regulations about soil: WHAT can be moved, HOW, and WHERE
- Cleaning up roadway spills, landfill cover, construction needs, and more
- Municipalities have bylaws and regulations as well; some are quite strict
- Do not want to move soil improperly and create new site



Photo: Wilcox & Barton, Inc.; 2014

# Management and Movement of Soils

- Where can uncontaminated or slightly contaminated soil go?
- New state policy for quarries, sand pits, and gravel pits
- LSPs can explain regulations, assist with policy development





# Underground and Above Ground Storage Tanks



Photos: Wilcox & Barton, Inc. Rehoboth, MA

# Home Heating Oil Spills: Insurance Coverage

- Insurance companies are required by MA law to offer coverage for leaks and spills of home heating oil
- “Liquid fuel users” need to **opt in** for this coverage
- Homeowner heating systems must also meet certain requirements to qualify
- This coverage is not well publicized



# Home Heating Oil Leaks: Preventing and Responding

- Responsible Party: Property owners or fuel delivery vendors
- Oil leaks and spills can be financially devastating to homeowners
- The LSPA and LSPs can assist:
  - Provide written info for municipalities to post & circulate
  - Assist homeowners in navigating the process
  - Provide health and environmental assessment and cleanup

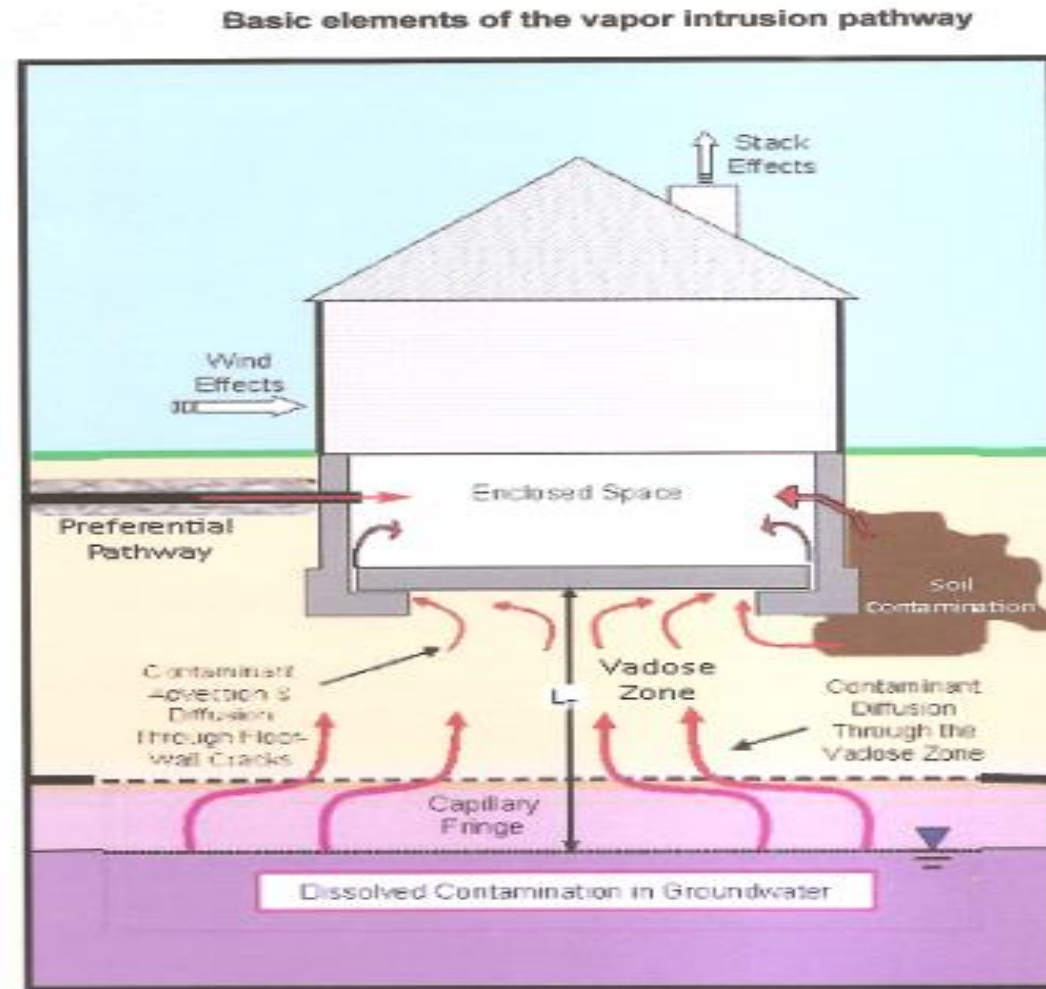


# Remediation: Residential Oil Tank Leak



Photos: Common Sense Environmental Inc., New Bedford, MA

# Basic Elements of the Vapor Intrusion Pathway



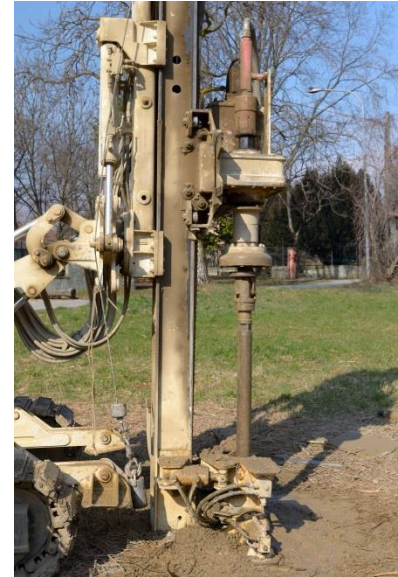
# Vapor Intrusion: Assessment and Mitigation

- Contaminants migrating to indoor air
- Numerous pathways
- Public concern about exposure risk
- LSPs understand the tools available for assessment, mitigation, and resolution



# Protection of Aquifers and Management of Drinking Water Wells

- Pumping well water can unintentionally draw contamination in from other sources.
- Before drinking water wells are sited, a review of area contamination is recommended.
- LSPs understand groundwater flow and other hydrogeological functions.
- LSPs understand the regulations governing aquifer protection zones.





# LSPA: A Resource to You and Your Community



# Expertise Within the LSPA

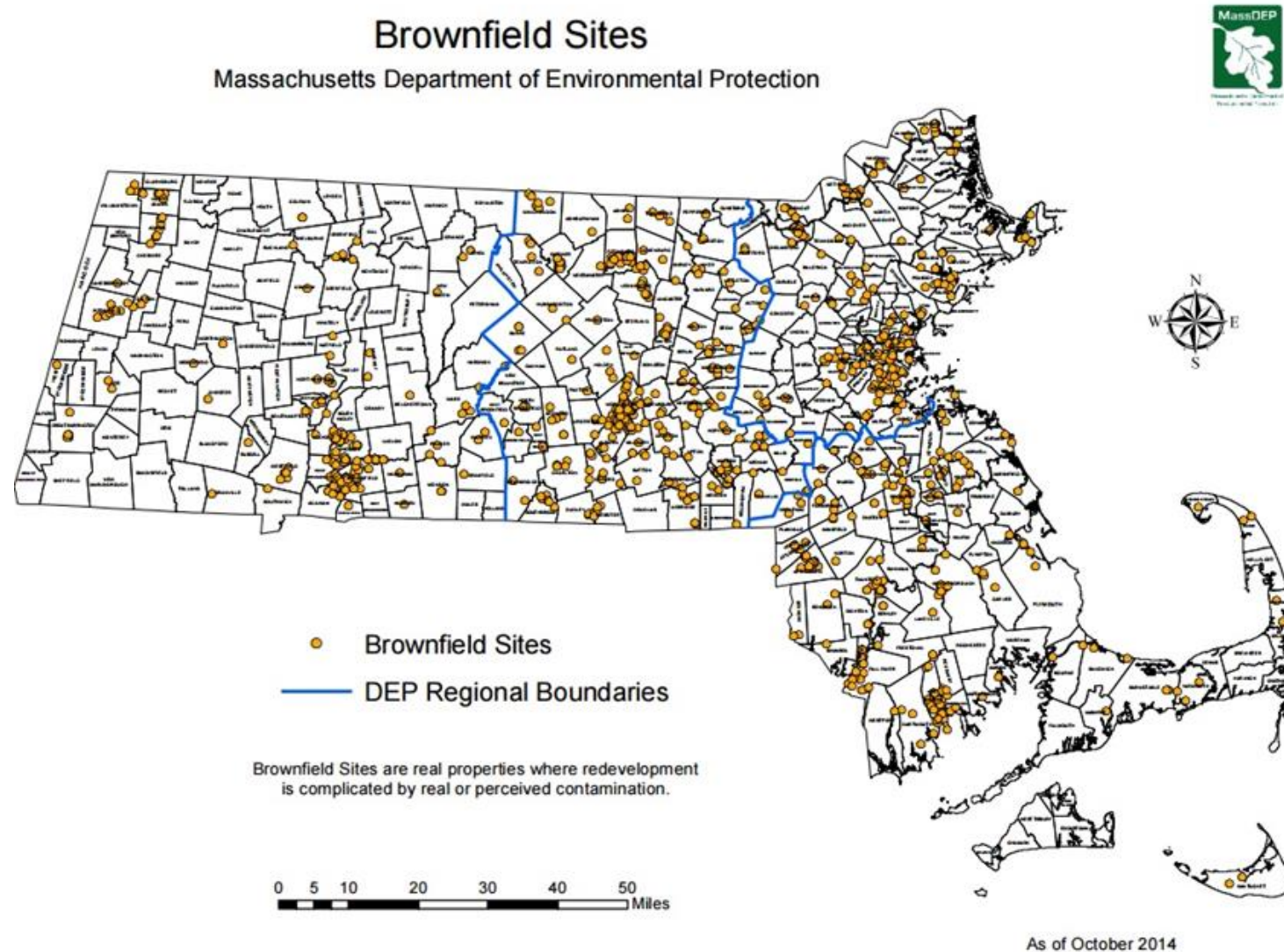
- Engineers, geologists, hydrogeologists, risk assessors, lawyers, planners, and other scientists
- Regular interaction with MassDEP and the legislature
- Participants in development of regulations, policies, and guidance
- Depth of knowledge of state regulations: MCP and others
- Familiarity with local laws and regulations



## How the LSPA Can Assist

- Public speaking and informational / educational sessions
- Referral to appropriate resources
- Draft written information for public audience (newspaper, website, mailing)
- Technical expertise in development of local policy and regulations
- Technical expertise with construction and environmental health and safety
- Information resource on the MCP, other state regulations

# LSPs Work Where You Work



# Public Information and Databases

- MassDEP list of Spills & Disposal Sites

Searchable Database:

<http://public.dep.state.ma.us/SearchableSites2/Search.aspx>

- EPA Region 1 Brownfields:

<http://www2.epa.gov/brownfields>


- MassDevelopment Assistance & Financing:

<http://www.massdevelopment.com/what-we-offer/financing/loans-and-guarantees/>

# The LSPA

- [www.lspa.org](http://www.lspa.org) – The association of licensed environmental professionals in Massachusetts
- Join our mailing list – monthly meetings on topics of interest
- \$20 annual membership for government officials
- Young Professionals Committee – networking, professional development and social events for those in the field less than 10 years
- Scholarship Fund – typically two \$5,000 scholarships annually for undergrad or grad studies. Since 2003, the Fund has awarded 24 scholarships totaling more than \$110,000.





Thank You !  
Don't Hesitate to  
Contact Us

[www.lspa.org](http://www.lspa.org)