

***Surveying for Environmental Professionals***  
**LSP Course # 1534**  
**6.0 Technical Credits**

**COURSE SCHEDULE:**

**8:00 – 8:05**

**1.) Introduction and Welcome – Dan Bremser**

**8:05 – 8:20**

**2.) What is Land Surveying? – Dan Bremser**

- Definition of Surveying
- Brief history of the profession
- How historic methods tie into current work
- The thirteen colonies and the rest of the country
- Massachusetts licensing and regulations

**8:20 – 8:40**

**3.) Types of Surveying – Dan Bremser**

- Different types of surveys
- Equipment used for different types of surveys
- Overview of how the AUL survey differs from other surveys (more depth on AUL in section 9)

**8:40 – 8:55**

**4.) The Project and Surveying Basics – Dan Bremser**

- Setting up the project
- Information to supply to your surveyor
- Health and safety protocols
- Retracing the steps of the previous surveyor
- "Peeling the Orange" and state plain coordinate systems

**8:55 – 9:45**

**5.) Research – Dan Bremser**

- The Assessors' Office- maps and data records
- In Massachusetts- the Registry of Deeds and Land Court
- Probate
- Other historical references
- FEMA
- Mass GIS

**9:45 – 10:00 Break**

**10:00 – 10:20**

**6.) Field Work – Dan Bremser**

- Right equipment for the job
- Reconnaissance
- Traversing and its purpose
- Leveling
- Pitfalls in taping in additional information

**10:20-10:40**

**7.) Office Work – Dan Bremser**

- Reviewing research
- Checking field data
- Types of computations
- Drafting and plan preparation
- Preparation of legal descriptions

**10:40-11:40**

**8.) Phase 1 Site Plan Content – Dan Bremser and Matt Hackman**

- Existing Conditions Plan
- Determination of Overburden Groundwater Flow Direction
- Off-Site Migration

**11:40-12:00**

**9.) April 2014 MCP regulation changes relative to AULs – Dan Bremser and Matt Hackman**

- Activity and Use Limitation Plans (AULs)
- Survey Plan of Parcel Containing Area Subject to the AUL [310 CMR 40.1074(2)(a)3.]
- Survey Plan of Area Subject to the AUL [310 CMR 40.1074(2)(a)4.]
- Sketch Plan of Area Subject to AUL in Relation to Boundaries of Disposal Site (Exhibit B)

**12:00-1:00 Lunch**

**1:00-2:00**

**10.) Equipment demonstration – Dan Bremser**

- Equipment set-up
- Demonstration of field techniques utilizing theodolite/total station and level
- Gathering field data and note keeping

**2:00-2:30**

**11.) Legal Issues for the Environmental Professional/LSP and the Surveyor – Dan Bremser**

- Types of documents (e.g., license, easement, takings, rights of way, grant, restriction, notice, lease, mortgage, and various types of deeds)
- The "metes and bounds" description
- Recording your documents (Recorded Land versus Registered Land)

**2:30-3:00**

**12.) Wrap-up - Dan Bremser**

- a. Summary - when it is advisable to use a professional licensed surveyor (PLS) and when less formal location methods can be used
- b. The world is a safer place
- c. Question