LSP Association
assess. advise. restore.
405 Concord Avenue #352, Belmont, MA 02478
617-977-4304 • info@lspa.org • www.lspa.org

# Using Simplicity to Address Contaminant Problems Under Conditions of Uncertainty, AKA "Keeping It Simple:" Part II

## Course Agenda

(30 minutes) 10:00-10:30am
**Necessary Review of Part I: Why Uncertainty is Much Greater Than Assumed**

- Subsurface heterogeneity
- Darcy's law and scale dependency
- Why it can be difficult to determine where flow paths move

(55 Minutes) 10:30-11:25am
**Practical Hydraulic Potential Theory Under Water Table and Confined Conditions**

- How water moves from low to high pressure
- How to properly construct a potentiometic surface
- Constructing water table maps with no data

(55 Minutes) 11:25-12:20pm
**Nested Flow Systems and Hydraulic No-Flow Boundaries Separating Them: Theory and Practice**

- History of groundwater hydraulics and drivers of flow: engineering versus geological understanding
- TOPODRIVE—the amazing and relatively little known USGS online finite element model to scope out complex hydrogeology and flow paths that can deliver contamination
- Surface water-groundwater interaction: the hyporheic zone and when streams may not be hydraulic boundaries for contamination or groundwater flow.

(10 minutes) 12:20-12:30pm
**Q&A**

**12:30-1:00pm BREAK**

(60 minutes) 1:00-2:00pm
**Case Studies: Practicing What You Learned**

- Critique of three hydrogeologic cross sections from professional reports (anon.)
- Transport of PFAS at stream hydraulic boundaries: Grand Rapids, MI.
- Transport of PFAS at Hoosick Falls, NY

(15 minutes) 2:00-2:15pm
**Recap and Q&A**