Fundamentals of Underground Utility Locating Theory, and Applications Hands-on Training

Presented by the New Jersey Water Association and Eastcom Associates

Course objective: To teach the basic theory behind electromagnetic locating, understand the different functions and options offered by today's instruments, and learn how to maximize its use in the field. The course is oriented toward everyday applications.

Who will benefit from this course? Water and wastewater operators, technicians, engineers, supervisors, foremen and others involved in locating underground utilities will benefit by learning how locators work, and why they behave in certain ways in real world applications. The course consists of 2.5 hours classroom presentation plus 30 minutes hands-on use of equipment (indoors or outdoors depending on weather).

Agenda:

8:00-8:30	**Sign-in**
8:30-12:00	Why Locate?
	Background and brief history of locating
	Technologies available today
	Electromagnetic fields
	Break (15 Minutes)
	Passive and Active signals
	Passive signals a) Where do they come from? b) Types of passive signal
	Active Signals
	a) Methods of application
	b) How to verify a good signal is applied
	c) Frequencies i) High vs Low ii) Pros/Cons
	Aerials for locating a signal on a line – receiver response
	Break (15 Minutes)
	Advanced tools
	a) Depth estimation
	b) Current readings
	c) Current direction
	Locating techniques
	a) Steps to an accurate locate
	b) Locating nonmetallic lines – GPR
	Locating a Sonde
	Troubleshooting a locate – distortion
	Practical
12:00	**Dismissal**

Instructor: **Gus Salles, Eastcom Associates** – 20 years in the locating industry. Spent 16 years at Radiodetection Corp. ('92 to '08) providing sales support and technical training for utility locating equipment, water leak detection, cable fault finding, pipeline inspection. Extensive travel to Latin America in the '90s to develop the utility locating market for Radiodetection.
3 years at Eastcom Associates, Inc. Responsible for marketing, tech support, and sales to the water and sewer industry in NJ, and CATV throughout Mid-Atlantic and Northeast. Electro-Mechanical Engineer from Univ. of Buenos Aires - 1981

Accreditation:
3.0 Training Contact Hours for NJ-Licensed Water/Wastewater Operators. TCH Course Number 04-101502-30
3.0 Hours toward license renewal for NJ Certified Public Works Managers: DLGS-NJWA-87 # (3.0 Technical)

August 28, 2025
Wall Township Public Works, 2301 Tiltons Corner Road, Wall, Monmouth County

Registration at www.njwater.org is required

New Jersey Water Association