

Irrigation System Inspection and Analysis: A Day of Hands-On Training

v24.8.2

8-hour Workshop Description

Evaluating an irrigation system is the first step in determining the costs of maintaining or troubleshooting the system. It requires a tricky balance between being thorough enough to be accurate without spending time that can never be billed. This requires a more structured and repeatable process and methods than a simple “wet check”.

This full day of in-field, hands-on training is a combination defining the business and technical components. The business components cover using an improved inspection process, turning the inspection results into a detailed proposal that focuses on the identified client needs, and present the proposal with potential payback schedules. The technical components include a review of the elements affecting efficient sprinkler coverage and the hydraulic impacts of the water source, scheduling practices, and the soils on even the most uniform systems.

Contractor ownership, management, leadership, supervisors, and technicians will work together on a live irrigation system to learn from the experience and knowledge of the trainers and each other. From the most veteran professional to the 1-year apprentice, everyone will have an opportunity to apply the new methods and see the result to bring back to their jobs and companies.

Who should attend?

Any irrigation installation service contractor, landscape maintenance contractor, service technician, designer, facilities manager, or other who are charged with efficient water use, healthy plants, water quality, or controlling operational costs.

What are the objectives of the workshop?

At the conclusion of the workshop, the learner should be able to:

1. Improve the productivity of a system inspection process using a checklist approach.
2. Better understand the performance indicators and use key techniques to test and assess system performance.
3. Increase understanding of water source limits, irrigation scheduling, soil and landscape health.
4. Recognize basic techniques for performing a catch can test and what information it will provide.
5. Improve ability to make recommendations for effective improvements to an irrigation system.
6. Develop skills to calculate water savings and potential ROI on system improvements.
7. Leave with a format for presenting findings and recommendations to a system owner or manager.

What is the general agenda of the New Jersey workshop?

- 0:15 Introduce the system evaluation process, benefits, and tools
 - Use the *Evaluation Checklist* to keep organized and to report findings.
- 0:40 Evaluating the Water Source – Adequacy of Flow, Pressure, Water Quality, and Code Compliance (using the actual site conditions – video, photo, bench)
 - Different sources: metered, pumped, reclaimed
 - Different backflow preventers to meet local codes
- 0:15 Evaluating the Controls (using the actual site conditions – video, photo, bench)
 - Controller – Run times, start time, cycles, etc. to meet the plant, soil, and site needs, and control runoff
 - Sensors – Rain, soil moisture, ET, flow, etc. including proper settings and calibration and function
- 0:40 Evaluating the Sprinkler Coverage of the Zone
 - Observing and measuring Sprinkler Operating Pressure, Placement, Nozzling, Condition
 - Recording finding on the *Evaluation Checklist*
- 0:15 BREAK
- 0:45 Sprinkler Coverage Field Demonstration
 - Communicate the visual concepts of good and poor coverage using catch cans
 - The basics of conducting and analyzing a catch can test
 - Using the Estimated Uniformity Technique
- 1:10 Practice Session #1: Completing a Zone Inspection
 - Groups will be assigned a zone(s) of the system to inspect using the checklist for organization and reporting
 - Each group facilitator will coach and keep group on track
- 1:00 LUNCH
- 1:15 Practice Session #2: Zone Improvements
 - Groups make upgrades to their assigned zone(s).
- 0:45 Practice Session #3: Reevaluate the Zone Improvements
 - Repeat the zone coverage evaluation
- 0:15 BREAK
- 0:30 Creating and Delivering an Evaluation Report and Recommendations
 - Establishing client goals for evaluation
 - Working with client to establish financial value of goal achievement
 - Discussion with whole group on creating reports with example.
 - Discussion and exercise with calculating water savings.
- 0:45 Practice Session #4: Create an Evaluation Report from Field Work
 - Using the water source and controller evaluations (given) with the field zone coverage inspections and improvements to show the potential water savings vs. cost of improvements
- 0:45 Practice Session #5: Present the evaluation reports to the client
 - Groups present information on their zone(s) to explain their report findings and conclusions.
- 8:00 End of Course

What are the training methods used?

The workshop uses a combination of class discussions, demonstrations and practice on a working commercial irrigation system, technical presentation, and real-world case studies.

What are the prerequisites for this workshop?

This course is ideal for a 30-year irrigation professional or an apprentice with a year or two of general irrigation experience. The attendee should have basic irrigation installation experience and an understanding of the components, and the terminology used in constructing, servicing, and scheduling an irrigation system.

What is included in the course?

- All required handouts.
- All tools and materials required to do the work.
- Lunch and all-day refreshments.

What should the learner bring to the workshop?

- Dress appropriately to work outdoors in typical jobsite conditions with hats, jackets, gloves, etc. for protection and suitable for a variety of weather conditions.
- Pens, pencils, note pad, and calculator

Who are the instructors?

Kurt K. Thompson - Managing partner of IrriTech Training, an on-line and in-person training provider for developing and certifying landscape and irrigation professionals. NC Licensed Irrigation Contractor, Irrigation Association certified contractor, designer, auditor, and technician.

Chris Pine - Managing partner of IrriTech Training, an on-line and in-person training provider for developing and certifying landscape and irrigation professionals. Irrigation Association certified contractor, designer, auditor, and technician.

A host of experienced and highly qualified group leaders to support the groups during the in-filed practice sessions.