



WATER SUPPLY for FIRE RESPONSE

Protection & Prevention: Storage, Distribution & Controllers.

Join our global industry expert & instructor:
John Redden, and transform your learning



15 Hours Virtual Learning Experience

09 - 11 September, 2024

08:00 - 13:00 Malaysia Standard Time

www.biiworld.com

COURSE OVERVIEW:

The 3-Day Online Water Supplies Course is intended to give the participants an expansive overview of the requirements for the facility, and/or community needs for fire protection.

The sessions start with community or corporate risk assessments and calculating the fire flow requirements then follows through on how they are met by the present Water Supplies.

The base calculations are also used to verify Fire Department apparatus and equipment needs. The calculations are also used for a variety of Water Supply design and improvements. This is necessary to give the best fire flows while maintaining water portability.

LEARNING OBJECTIVES:

- **Identify:** The risk and risk zones within an industry or community
- **Understand:** The design, requirements and maintenance of the overall water supply and suppression needs
- **Key:** Required Fire Flows, Hydrant Flow Testing, Basic Mapping, Basic response
- **Lifecycle:** The design is for a 3-day course. This can easily be expanded and have a separate practical training course available as well
- **Operational:** The water Supply and Suppression within a given area can be met in a variety of ways. It is important that planning and Engineering understand the various implications on taxation and insurance for large complexes
- **Integration:** Typically, it takes up to 5 years for insurance to recognize the changes made. Most time all changes cannot be made at the same time, so it is important to bring in the most critical first.
- **Build:** By design this course can address the needs of all departments at once: fire, water, emergency response, communications and special for fire prevention and maintenance.



TARGET AUDIENCE:

Job Titles :

- Water Supply managers and employees
- Fire Department Personnel
- Planning personnel
- Engineering personnel
- Managers
- Developers

Industries:

- Mining
- Ports
- Industrial parks
- Airports
- Shipping
- Construction



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Instructor:
John Redden
CFPS, AIFireE

International Certifications

1. Associate of the Institution of Fire Engineers (AIFireE) from Institute of Fire Engineering which is focused on Fire Science.
2. Certified Fire Protection Specialist (CFPS) from National Fire Protection Association (NFPA)
3. Certified Level 1 & 2 Instructor Nova Scotia Fire Fighters School
4. Certified Technician for the repair of Survive Air and MSA breathing Apparatus

Profile Highlights

1. Highly skilled in Fire Management, Emergency Management, Confined Space Rescue, Vehicle Extrication and Emergency Medical Services (EMS).
2. He was part of a program development of the specialized program which included Fire Inspection for Institutions, Breathing Apparatus for Trainers and Maintainers, Fire Investigation and Fire Prevention.
3. He was a Training Officer for Federal Government of Canada Office of the Fire Commissioners and which included him as the Fire Investigator for the Fire Commissioner's Office.
4. After becoming Certified Level 1 & 2 Instructor, he became Field Extension coordinator for the Nova Scotia Fire Fighters School.
5. He has completed Fire Service Officer's training and is an instructor for Fire Ground Command.
6. He has also completed train the trainer program in Marine Fire Protection and Hazardous Material First Responder.



PRESENTATIONS:

Day 1:

08:00 - Pre-Course Intro – Delegate Expectation Briefing

Session 1: Fixed Water Storage Supplies for Fire Protection

- Storage Tanks Gravity and Suction
- Tanks and Towers Foundations
- Tank Towers
- Tank Heating Equipment
- Tank Equipment and Accessories
- Embankment-Supported
 - Coated Fabric Suction Tanks
- Pressure Tanks
- Natural and Constructed Suction Facilities

Session 2: Hydraulics for Fire Protection

- Hydraulic Properties of Water
- Bernoulli's Theorem
- Flow of Water Through Orifices
- Coefficients of Flow
- Flow Measurement
- Flow of Water in Pipes
- Water Hammer
- Elastic Wave Theory

Break

Session 3: Water Supply Requirements for Public Supply Systems

- Factors Affecting Public Water Supply Design
- Water Requirements
- Calculating Fire Flow Rates
- Other Flow Considerations
- Pressure Characteristics of Systems
- Systems for Higher Elevations
- Adequacy and Reliability of Supply
- Factors Affecting Water Requirements
- History of Water Supply Systems
- Number of Hose Streams
- Engineering: Distribution Network, Hydrants, Spacing, Storage.
- The Insurance Grading Schedule

Case Study – 1: Effects on Insurance Rates

Exercise – 1: Floor Calculation

Post-Session Q &A

13:00 – End of Day 1



PRESENTATIONS:

Day 2:

08:00 - Review of Day 1

Session 4: Water Supplies for Sprinkler Systems

- Types of Supplies
- Influence of Various Factors on Water Supply Need
- Water Supply Requirements for Sprinkler Systems
- Occupancy Classifications
- Water Supply Requirements for Hose Stream Protection
- Hydraulically Designed Sprinkler Systems

Session 5: Microbiology Influenced Corrosion in Fire Sprinkler Systems

- Defining Corrosion
- The Corrosion Problem
- Defining MIC
- Sources of MIC Infection
- MIC Corrosion Process
- Prevention and Treatment

Break

Session 6: Water Distribution (1)

- Centrifugal Pump
- Positive Displacement Fire Pump
- Principles of Operation
- Characteristic Pump Curves Total Head
- Total Head

- Discharge Specific Speed (Nd)
- Net Positive Suction Head
- Cavitation
- Pump Affinity Laws
- Standard Head Discharge Curves

Session 8: Water Distribution (2)

- Horizontal Shaft Centrifugal Fire Pumps
- Fire Pump Capacity Head Rating
- Horsepower of Fire Pumps
- Fire Pump Drivers
- Field Acceptance Tests
- Location and Housing of Centrifugal Fire Pumps
- Pump Tests
- Pump Operation and Maintenance
- Reciprocating Steam Fire Pumps
- Fire Pump Approval and Listing

Case Study – 2:

Fire Department Needs

Exercise – 2:

Required Fire Flow Calculation

Post-Session Q &A

13:00 – End of Day 2



PRESENTATIONS:

Day 3:

08:00 - Review of Day 2

Session 8: Fire Pump Controllers & Power Supply Arrangements for Motor Driven Pumps

- Worldwide Standards for Fire Pump Controllers
- Electric Power Supply
- Electric Drive Controllers
- Limited-Service Controllers
- Full-Service Controllers
- Variable Speed Electric Motor-Driven Fire Pumps
- Controller Parameters
- Standard Controller Components
- Standard Controller Features
- Non-mandatory Controller Features
- Transfer Switches

Session 9: SCADA Systems

- Supervision and control parameters for a fire-fighting system
- Frequency variation
- Ignition system programming
- Control levels for tanks & pumps

Break

Session 10: Implementing Site Security Measures

- Pump station
- Pump Layout & Sizing

Case Study – 3: Nonprotective Areas

Exercise – 3: Calculating Coverage Deficiency

Post-Session Q &A

13:00 – End of Day 3 & Course



Does BII Online Virtual Training have the same value as traditional classroom training?

Yes, BII Online Virtual Training offers participants; same training system as in-person, i.e face-to-face engagement with instructors, course material, interactive participation of all delegates, and personal support that they would expect to find in a traditional classroom.

What are main features of your online courses? Are they on-demand? Is it different content from the in-person offering?

The content of the virtual training is similar to the in-person sessions and customized presentation makes it a richer online learning experience. As always, we will share presentation materials with attendees for later reference.

The online courses are not on-demand and recordings cannot be purchased. They are set on scheduled dates, live with an instructor and co-host via webinar software. While the day is shorter than an in-person session (4hrs vs 8hrs), timing are adjusted to accommodate attendees in different time zones and allow more time for one-on-one conversations via the Q & A.

What are the technical requirements for participation in a virtual course?

All you need to participate in virtual training are:

- Desktop or Laptop or Tablet Computer, and Internet connection
- Webcam
- Headset with built-in microphone

Can I attend an online training session if I have a Macintosh computer?

Yes, Our Online training systems does allow Macintosh computers, PCs, and computers running Linux to easily enter any of our online training sessions.

What type and version of browser will I need for online classes?

It is recommended that you use the latest version of Firefox, Chrome or Internet Explorer for Windows and Firefox or Safari for Mac. Each of these is available for free download and also suggested you have the PDF Reader

How do I have access to the trainer for questions?

As in the classroom, you will see the trainer in front of you and have the opportunity to ask questions at any time - all via audio and video transmission.

Is there a mute option within an online training session to minimize background noise from my audio connection?

Yes, the Mute button will display to the right of your name as you hover your mouse over your name shown in the Participants panel on the top, right side of the Web conferencing screen.

What if I miss few sessions of the online training program?

The training will be simultaneously recorded which will be provided to you as per request & requirement

Do I get a Certificate at the end?

Yes, you will get a PDF version of your certificate of completion



Certified Fire Protection Specialist (CFPS)

Date : 24 - 28 June, 2024

Timings : 09:00 - 13:30 Philippines / Malaysia Standard Time

The purpose of the Certified Fire Protection Specialist credential is to recognize, through certification, qualified individuals who are dedicated to curtailing fire loss, both physical and financial. Those also who have acquired a level of professionalism through applied work experiences, related education opportunities and through successful completion of a certification examination.

This 5 Day Online Course will highlight the goal of the CFPS program which is to promote the discipline of fire protection & prevention. A specific degree is not mandatory for obtaining your CFPS designation. The credential is a balance of education, experiences that provides an opportunity for the fire protection specialist to achieve professional recognition.

[CLICK HERE](#) To access this course agenda.

Water Supply for Fire Response: Protection & Prevention - Storage, Distribution & Controllers

Date : 09 - 11 September, 2024

Timings : 08:00 - 13:00 Philippines / Malaysia Standard Time

The 3-Day Online Water Supplies Course is intended to give the participants an expansive overview of the requirements for the facility, and/or community needs for fire protection. The sessions start with community or corporate risk assessments and calculating the fire flow requirements then follows through on how they are met by the present Water Supplies. The base calculations are also used to verify Fire Department apparatus and equipment needs. The calculations are also used for a variety of Water Supply design and improvements. This is necessary to give the best fire flows while maintaining water portability.

[CLICK HERE](#) To access this course agenda.

Fire Protection Handbook Guide

Date : 02 - 04 September, 2024

Timings : 08:00 - 13:00 Philippines / Malaysia Standard Time

The handbooks address all aspects of fire protection in some reference and depth. We cannot be expected to memorize the handbooks in their entirety. However, by design we can quickly find the appropriate information within them. The 3-Day course will assist in learning the different sections of the Handbook and to find the correct information faster & better for its usage and CFPS Exam.

[CLICK HERE](#) To access this course agenda.

Facilitator : John Redden

Our Expert Trainer is a Global Fire Protection Specialist with 40+ years of experience and demonstrated history of working in the public safety industry. Our Canada based expert holds global qualifications in CFPS from NFPA, Associated of the Institute of Fire Engineering which is focused on Fire Science. Highly skilled in Fire Management, Emergency Management, Confined Space Rescue, Vehicle Extrication and Emergency Medical Services (EMS). He has also completed train the trainer program in Marine Fire Protection and Hazardous Material First Responder.



