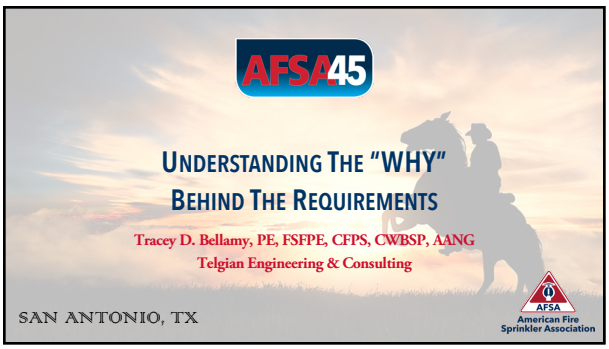
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UNDERSTANDING THE "WHY" BEHIND THE REQUIREMENTS
Tracey D. Bellamy, PE, FSFPE, CFPS, CWBSP, AANG
Telgian Engineering & Consulting
SAN ANTONIO, TX
AFSA
American Fire Sprinkler Association

1

Tracey D. Bellamy, PE, FSFPE, CFPS, CWBSP, AANG
Telgian Engineering & Consulting
Tracey is Chief Engineering Officer with Telgian Engineering & Consulting and has nearly 40 years of experience in Fire Protection Engineering. He serves on a number of NFPA Committees, including NFPA 1, 11, 13, 15, 25, 30, 30B, 101 and 5000 as well as being a major contributor to the NFPA 13, 25 and Fire Protection Handbooks. He is a Member of NFPA Standards Council. Tracey serves as a senior instructor for NFPA's Professional Development Series and has presented at numerous AFSA events . He holds professional engineering licenses in Civil and Fire Protection Engineering in numerous states.
telgian
Engineering & Consulting
AFSA45
tbellamy@telgian.com | 619-961-8258

2

HOUSEKEEPING ITEMS
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The authority on fire, electrical, and building safety
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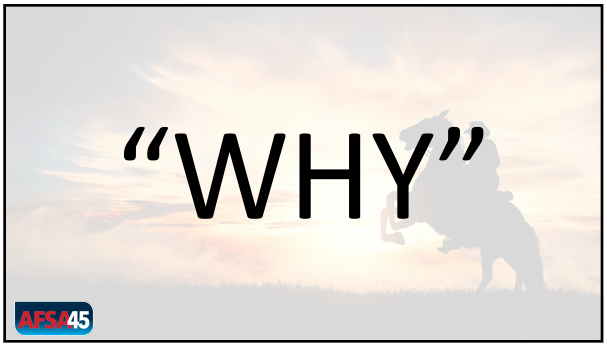
"WHY"
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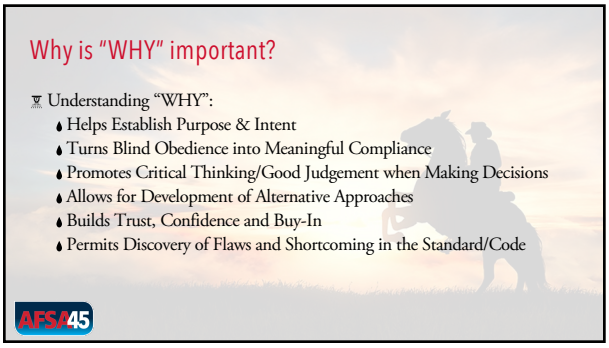
4


Why is "WHY" important?
Understanding "WHY":
Helps Establish Purpose & Intent
Turns Blind Obedience into Meaningful Compliance
Promotes Critical Thinking/Good Judgement when Making Decisions
Allows for Development of Alternative Approaches
Builds Trust, Confidence and Buy-In
Permits Discovery of Flaws and Shortcoming in the Standard/Code
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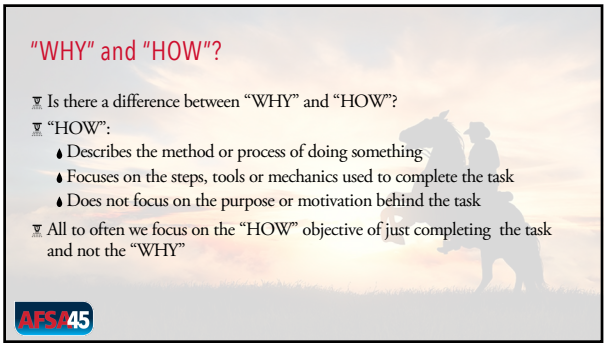
"WHY" and "HOW"?
Is there a difference between "WHY" and "HOW"?
"HOW":
Describes the method or process of doing something
Focuses on the steps, tools or mechanics used to complete the task
Does not focus on the purpose or motivation behind the task
All to often we focus on the "HOW" objective of just completing the task and not the "WHY"
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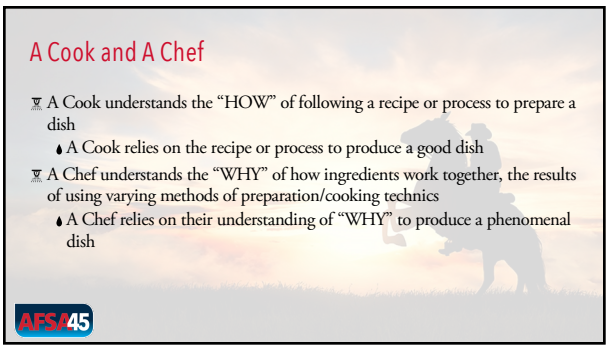
A Cook and A Chef
A Cook understands the "HOW" of following a recipe or process to prepare a dish
A Cook relies on the recipe or process to produce a good dish
A Chef understands the "WHY" of how ingredients work together, the results of using varying methods of preparation/cooking technics
A Chef relies on their understanding of "WHY" to produce a phenomenal dish
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7

LET'S LOOK AT THE BIG PICTURE FIRST
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8

"WHY" Do We Install Sprinklers?
Compliance – Codes/Standards or Insurance Mandate
Offset Other Compliance Issues
If this is the "WHY" then we are incentivized to do it as cheaply as possible.
Put in the minimally compliant system
Put in whatever the AHJ will accept
Is that really what we want? Is that what our customer really wants?
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9

"WHY" Do We Install Sprinklers?
Reduce Risk to Acceptable Levels
Save Lives
Manage Property Damage
If this is the "WHY" then we need to understand what level of risk is acceptable to the customer and how our design works toward that end.
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10

"WHY" ARE YOU IN THE FIRE PROTECTION BUSINESS?
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11

"WHY" DO WE CONTINUE TO TRY AND SELL THE CHEAPEST COMPLIANT FIRE PROTECTION SYSTEM THEY CAN GET?
SHOULD WE SELL THE BEST FIRE PROTECTION VALUE THEY CAN GET?
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12

LET'S LOOK AT THE TECHNICAL "WHY"

13

How do you determine the Technical "WHY"?

- There are numerous available resources to enhance your knowledge of the "WHY"
- You have to know what these are and endeavor to utilize them effectively

14

Attending Classes, Podcasts, Webinars, Seminars

- Attend as many of these as you possibly can
- Take in different presenter perspectives when possible
- Listen with the intension of understanding the "WHY"

15

Read the Codes/Standards

- Codes/Standards are our Industry Bible – We must 1st know what the words say before we can interpret them
- Read them for FUN – You will be better at what you do for it

16

Do Not Forget About the Annex Material

- Annex Material contained in Annex A is intended to contain both nonmandatory recommendations and explanatory material
- This information is often overlooked and seen as unnecessary as it is not mandatory
- The Annex is vetted by the Technical and Correlating Committees for the Standard/Code

17

Utilize Handbook Commentary

- NFPA Publishes (or has Published) Handbooks that relate to Fire Sprinkler/Alarm Design for NFPA 3, NFPA 4, NFPA 13, NFPA 13R/13D, NFPA 14/20, NFPA 25, NFPA 30, and NFPA 72

18

Utilize Handbook Commentary

- Who writes the Commentary
  - Not written or vetted by the Technical/Correlating Committees
  - Used to be written by selected "Contributors" – Usually Committee Members - Often rotated "Contributor" each cycle
  - Now it is written by NFPA Staff
  - Some old "Contributor" stuff still remains

19

Utilize NFPA Link Insights

- NFPA Link contains Insights drop down Commentary
  - Written by NFPA Staff
  - May include some old "Contributor" stuff from older Handbooks

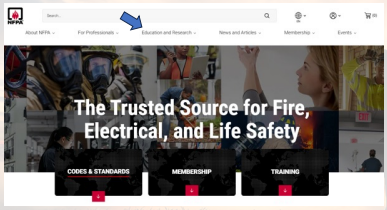
20

Fire Protection Research Foundation Reports

- The Fire Protection Research Foundation is an independent research organization supporting the mission of NFPA by providing data driven research to support the development of NFPA Codes/Standards

21

Fire Protection Research Foundation Reports



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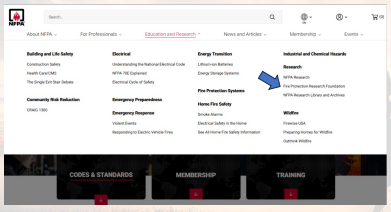
Fire Protection Research Foundation Reports



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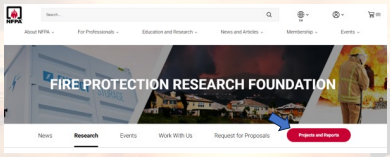
Fire Protection Research Foundation Reports



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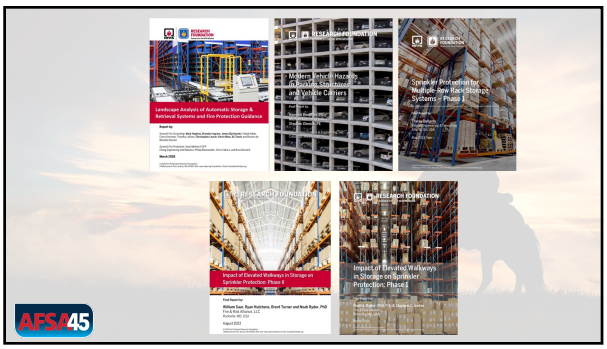

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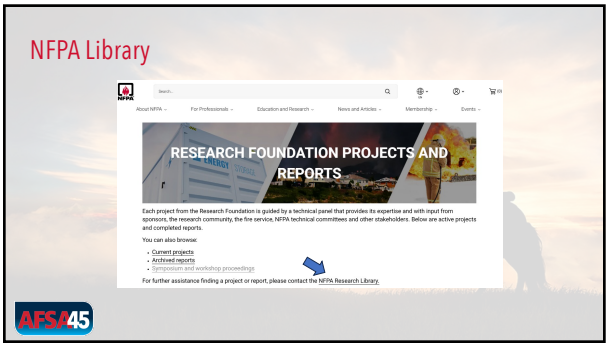

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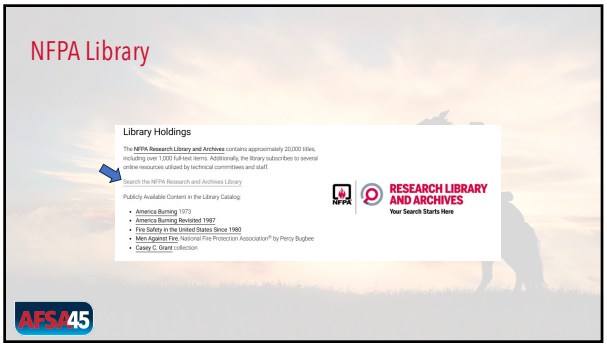

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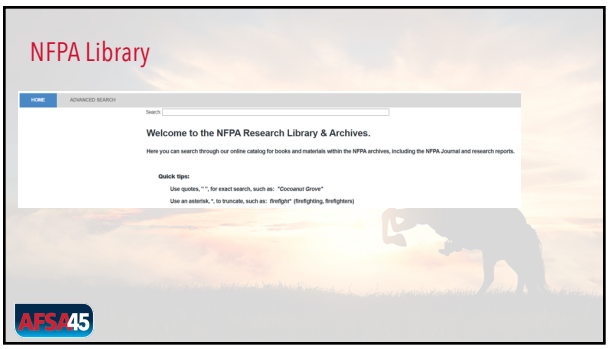

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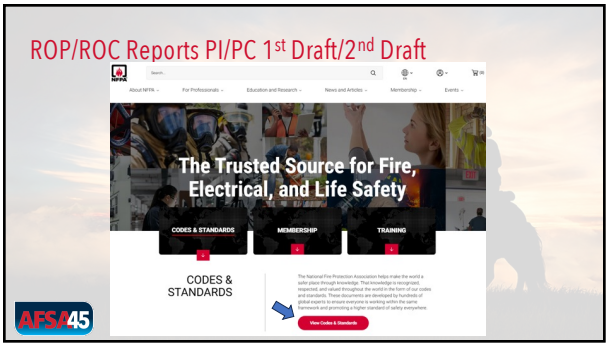

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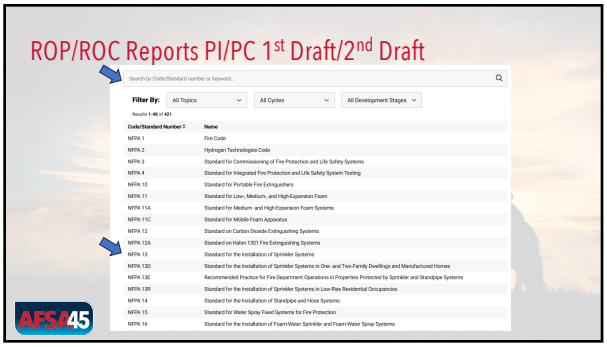

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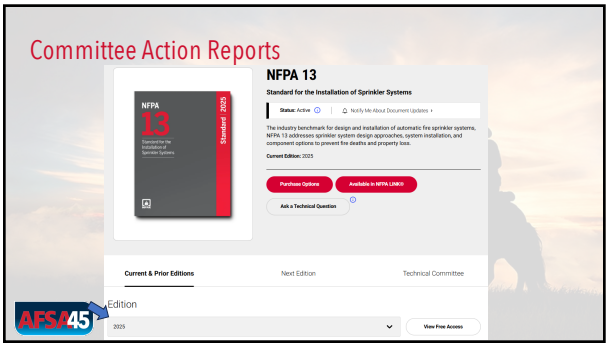

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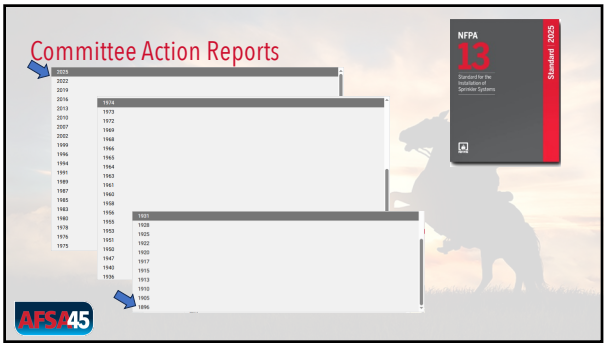

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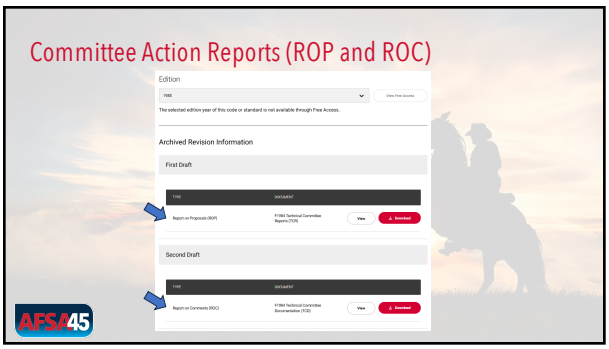

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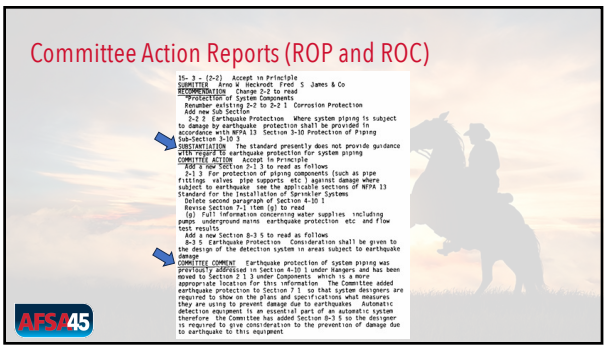

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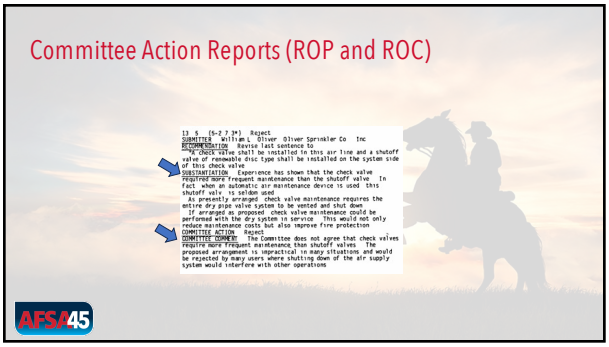

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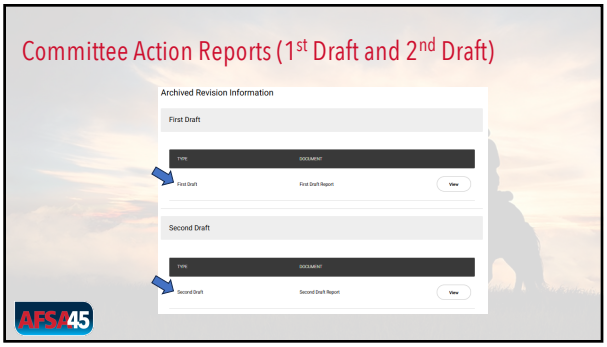

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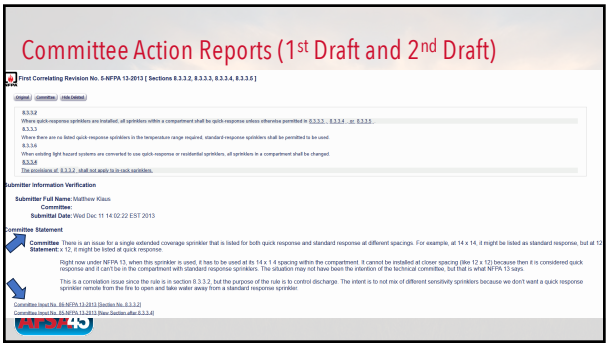

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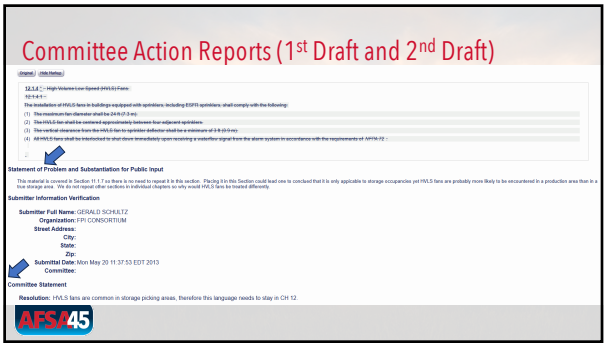

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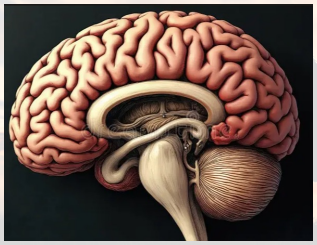
Most Powerful Resource



43

LET'S TALK ABOUT THE WHY BEHIND SOME REQUIREMENTS

44

Minimum Allowable Pressure

- What is the minimum pressure permitted at the suction flange of a fire pump?
  - WHY?
- What is the minimum pressure permitted by the water authority?
  - WHY?

45

Dry Pipe System Design Area Increase

- What is the required design area increase for a dry system?
  - WHY?

46

Clerance to Storage

- What is the required clearance between a sprinkler deflector and the top of storage below?
  - WHY?

47

Solid Shelf Storage Clearance to Storage

- How big is the horizontal project of a shelf permitted to be before it is considered a solid shelf?
  - WHY?

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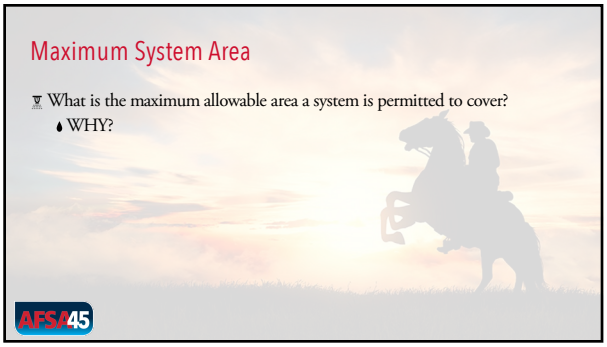

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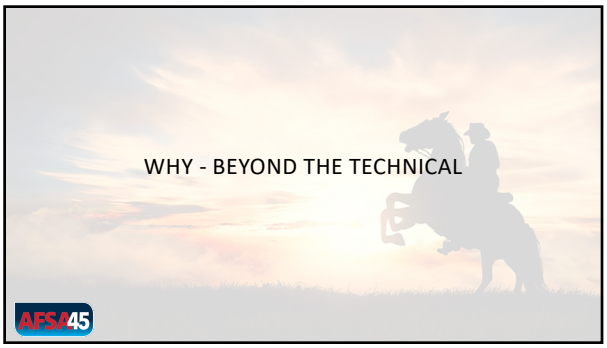

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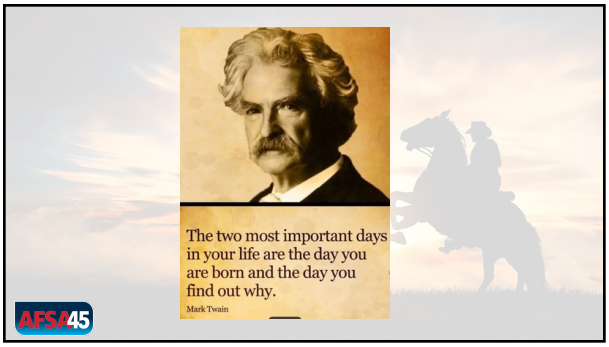
The two most important days in your life are the day you are born and the day you find out why.
Mark Twain
AFSA45

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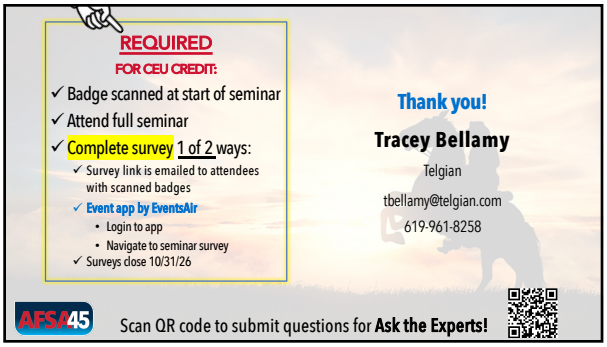
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• Login to app
• Navigate to seminar survey
✓ Surveys close 10/31/26
Thank you!
Tracey Bellamy
Telgian
tbellamy@telgian.com
619-961-8258
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Scan QR code to submit questions for Ask the Experts!

56

2027 Training Schedule

WEBINARS

1/6	Updates to NFPA 20
1/20	Calculating Pressure Reducing Hose Valves
2/3	Consumer Alert: Nitrogen in Sprinkler Systems
2/17	Reviewing Hydraulic Calculations
3/3	Updates to NFPA 13, 2028 Ed.
3/17	Updates to NFPA 13R & 13D, 2028 Eds.
4/7	Topic Coming Soon
4/21	NFPA 25: Roles & Responsibilities
5/5	Standpipe Flow Test Procedures
5/19	Storage 101
6/2	NFPA Technical Meeting - Voting Guide
6/16	Topic Coming Soon
6/30	Topic Coming Soon
7/7	Updates to NFPA 14, 2027 Edition
7/21	Adjacent Hazards & Design Methods
8/4	Acceptance Testing
8/18	Modifications to Existing Systems
9/22	Topic Coming Soon
10/6	Seismic 101
10/20	Proposed Updates to NFPA 25, 2029 Ed.
11/3	Evaluating Fire Pump Flow Tests
11/17	Top 10 Tech Reviews
12/1	Designing Water Storage Tanks
12/15	Pump Room Layout

PROGRAMS

Feb 9 - Mar 5 Apr 20 - May 14 Aug 3 - Aug 27** Oct 26 - Nov 19	Beginning Design School*
Apr 26 - May 7 Nov 1 - 12	Intermediate Design School*
Feb 8 - 10** Apr 12 - 14 Jul 12 - 14 Oct 11 - 13	Sprinkler Hydraulics Calculations Workshop
Apr 19 - 21 Oct 18 - 20	Advanced Hydraulics Calculations Workshop
Feb 11** Apr 30 Jul 23 Sep 24	Introduction to the Fire Sprinkler Industry
Mar 1 - 3 May 17 - 19 Aug 16 - 18 Oct 18 - 20**	NFPA 25 Essentials Workshop
Jun 7 - 10 Sep 20 - 23	Experienced Inspector Skills Lab
Mar 4 - 5 May 20 - 21 Aug 19 - 20 Oct 21 - 22**	NFPA 25 Fire Pump Workshop
Spring Summer Fall	ITM Inspector Development Program* *This program is 20 months.*

** Hybrid course **At General Air Products Lab, Exton, PA*

AFSA46

September 8-11	Manchester Grand Hyatt San Diego, CA

For More Details Visit:
firesprinkler.org

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Dates subject to change. Programs subject to minimum registrations.

rev 9/14/2026

Virtual Instruction Path (VIP)

for Sprinkler Fitting Apprentices

Level 1 - Begins January 2027

Level 2 - Begins February 2027

Level 3 - Begins January 2027

Level 4 - Begins March 2027

www.firesprinkler.org/VIP

AFSA
American Fire Sprinkler Association

HANDS-ON WORKSHOPS FOR 2027

FEATURING AFSA'S TRAINING LAB

NFPA 25 Essentials Workshop

Mar | May | Aug | Oct

Description: Understand roles, responsibilities, and NFPA 25 ITM procedures through hands-on testing of wet systems, dry systems, and fire pumps.

NFPA 25 Fire Pump Workshop

Mar | May | Aug | Oct

Description: Develop practical NFPA 25 fire pump ITM skills, including no-flow and full-flow testing, water supply graphing, and performance evaluation.

Introduction to the Fire Sprinkler Industry

Feb | Apr | Jul | Sep

Description: This course is designed for those new to the industry. An introductory, wide-ranging 8-hour course that provides a broad overview of core fire sprinkler industry concepts for those new to the field.

Experienced Inspector Skills Lab NEW

Mar | Sep

Description: Take your ITM expertise beyond the basics. Designed for experienced technicians, this course combines focused classroom instruction with hands-on system lab training to strengthen your application of current NFPA 25 inspection, testing, and maintenance requirements. Refine fire sprinkler testing practices, improve documentation, deliver more consistent service, and help reduce liability while reinforcing knowledge commonly covered on certification exams.

Learn more about AFSA's fire sprinkler lab featuring functional risers, a spray room, fire pumps, and an interactive classroom.

firesprinkler.org/lab