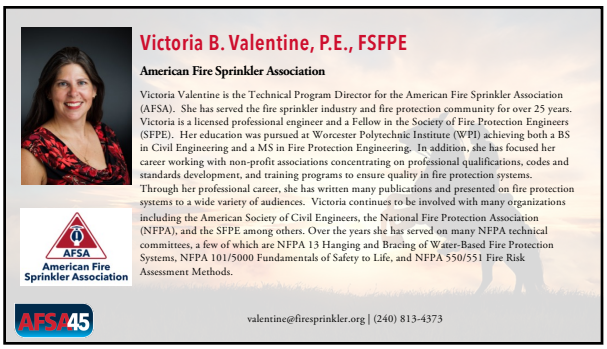
AFSA45
TIAs and Errata
The Forgotten Tool
Victoria B. Valentine, P.E., FSFPE
Technical Program Director
SAN ANTONIO, TX
AFSA
American Fire Sprinkler Association

1


Victoria B. Valentine, P.E., FSFPE
American Fire Sprinkler Association
Victoria Valentine is the Technical Program Director for the American Fire Sprinkler Association (AFSA). She has served the fire sprinkler industry and fire protection community for over 25 years. Victoria is a licensed professional engineer and a Fellow in the Society of Fire Protection Engineers (SFPE). Her education was pursued at Worcester Polytechnic Institute (WPI) achieving both a BS in Civil Engineering and a MS in Fire Protection Engineering. In addition, she has focused her career working with non-profit associations concentrating on professional qualifications, codes and standards development, and training programs to ensure quality in fire protection systems. Through her professional career, she has written many publications and presented on fire protection systems to a wide variety of audiences. Victoria continues to be involved with many organizations including the American Society of Civil Engineers, the National Fire Protection Association (NFPA), and the SFPE among others. Over the years she has served on many NFPA technical committees, a few of which are NFPA 13 Hanging and Bracing of Water-Based Fire Protection Systems, NFPA 101/5000 Fundamentals of Safety to Life, and NFPA 550/551 Fire Risk Assessment Methods.
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3

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2) attend seminar in its entirety, and,
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The authority on fire, electrical, and building safety
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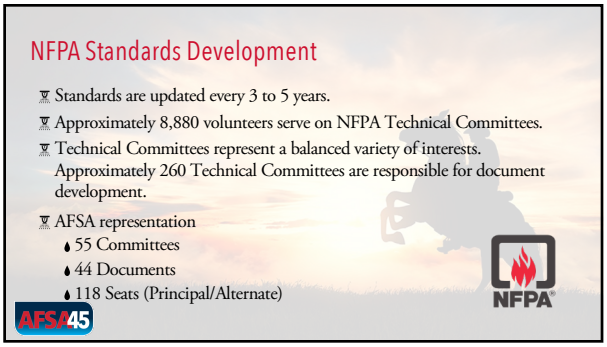
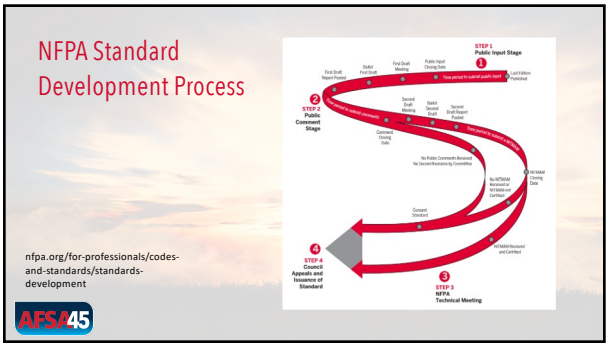
4


NFPA Standards Development
Standards are updated every 3 to 5 years.
Approximately 8,880 volunteers serve on NFPA Technical Committees.
Technical Committees represent a balanced variety of interests. Approximately 260 Technical Committees are responsible for document development.
AFSA representation
55 Committees
44 Documents
118 Seats (Principal/Alternate)
NFPA
AFSA45

6


NFPA Standard Development Process
nfpa.org/for-professionals/codes-and-standards/standards-development
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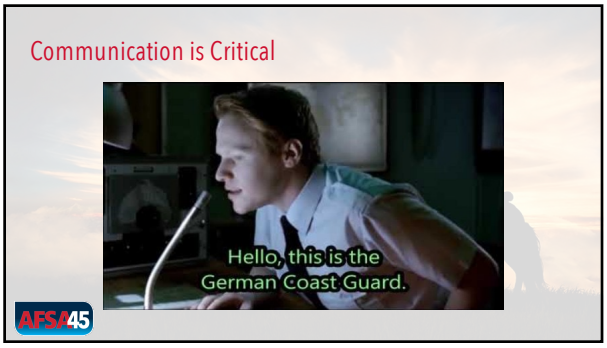
7


Communication is Critical
Hello, this is the German Coast Guard.
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8

Amendments

- Errata
  - Errors or omissions in the standard.
  - The text as balloted was published differently
  - Most often – small typos
- Tentative Interim Amendment
  - Modifications that are of an emergency nature.
    - Overlooked during the revision cycle
    - Conflict within the standard or another related standard
    - Correcting a previously unknown hazard
    - Public safety

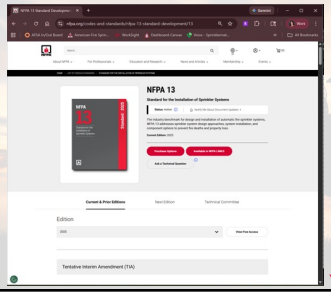
9

NFPA 13, Standard for the Installation of Sprinkler Systems

2022 & 2025 Edition

10

Where to Find Document Information



www.nfpa.org/13

11

Modifications to NFPA 13, 2022 Edition

- Errata
  - 22-1 (August 2021)
  - 22-2 (January 2022)
  - 22-3 (March 2022)
  - 22-4 (March 2024)
- TIAs
  - 22-1 (August 2021)
  - 22-2 (August 2021)
  - 22-3 (August 2021)
  - 22-4 (August 2021)
  - 22-5 (August 2022)
  - 22-6 (March 2023)
  - 22-7 (March 2023)
  - 22-8 (November 2023)
  - 22-9 (April 2024)
  - 22-10 (August 2024)

As of 9/15/2026

12

Errata 13-22-1

- Section 1.6.2
  - Reference Chapter 28, not Chapter 23
- Table 19.2.3.1.1
  - Correct the Imperial density unit in the first row
- Section 31.1.1
  - Reference Chapter 31, not Chapter 30

13

Errata 13-22-2

- Table 21.5.1.1
  - Correct the placement of the horizontal line between 20 (6.1) and 25 (7.7) in the "Storage Height ft (m)" column in Table 21.5.1.1:

14

Errata 13-22-3

- Table 21.4.1.2.2.1, Table 21.4.3.2.1, Table 21.4.1.5.1, and Figure 21.4.1.7.1
  - Apply Figure 21.4.1.7.1 and replace figure
  - The figure show the relationship between the storage height and the percentage of the design curve density
    - Values range from 60% to 175%

15

Errata 13-22-4

- Section 2.3.2
  - Update the reference to ASCE 7-22
    - This coordinates with TIA 22-8 processed December 2023

16

TIA 13-22-1

- ***Note**: Approved for incorporation prior to printing the standard*
- Table 7.3.1.1 – clarification on the filler metals for brazing and braze welding
  - "Specification for Filler Metals for Brazing and Braze Welding (Classification BCuP-3 or BCuP-4)"

Effective September 15, 2021

17

TIA 13-22-2

- ***Note**: Approved for incorporation prior to printing the standard*
- New Section 7.5.1.3
  - "7.5.1.3 Joint compound or tape shall be applied only to male threads."

Effective September 15, 2021

18

TIA 13-22-3

- ***Note**: Approved for incorporation prior to printing the standard*
- New Section 14.2.8.2.4
  - Deviations from the maximum sprinkler spacing near …
  - Parallel to Section 14.2.8.2.3

Effective September 15, 2021

19

TIA 13-22-4

- ***Note**: Approved for incorporation prior to printing the standard*
- Section 21.1.1 and Section 23.1
  - Correct reference to Chapter 20

Effective September 15, 2021

20

TIA 13-22-5

- Section A.8.2.6.4.1
  - Related to the air supply line in a dry pipe sprinkler system
  - Delete the last sentence of the annex language:
    - "**A.8.2.6.4.1** The connection from an air compressor to …. …. adjacent equipment will endure. ~~Flexible hose should be considered suitable when capable of withstanding expected vibration, a maximum pressure of 175 psi (12 bar) or greater, and a maximum temperature of 150°F (66°C) or greater. "~~

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Effective September 1, 2022

21

TIA 13-22-6

- Section 13.2.4.1 and Section 13.2.4.2
  - "**13.2.4 Occupancy and Hazard.**

    13.2.4.1 Quick-response CMSA sprinklers designed to meet any applicable CMSA criteria in ~~Chapter 12 through Chapter 20~~ Chapters 20, 22, 24, 25, and 26 shall be permitted to protect light and ordinary hazard occupancies.

    13.2.4.2 Standard-response CMSA sprinklers designed to meet any applicable CMSA criteria in ~~Chapter 12 through Chapter 20~~ Chapters 20, 22, 24, 25, and 26 shall be permitted to protect ordinary hazard occupancies."

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Effective April 10, 2023

22

TIA 13-22-7

- Section 14.2.7
  - "**14.2.7* Occupancy and Hazard.** ESFR sprinklers designed to meet any applicable ESFR criteria in Chapter 20 or Chapter 23 ~~or~~ through Chapter ~~24~~ 26 shall be permitted to protect light and ordinary hazard occupancies.

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Effective April 10, 2023

23

TIA 13-22-8

- Coordination updates for seismic protection related to ASCE/SEI 7-22
  - Related Sections:
    - Definitions – Horizontal Force, F_{pw}, and Design Spectral Response Acceleration at Short Periods, S_{DS}.
    - Update S_S to S_{DS} as applicable
    - Revise Tables 18.5.5.2(a) through (n)
    - Delete C_p tables and replace with equation
    - Revise restraint load tables
    - Coordinate annex information

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Effective December 20, 2023

24

Determining Seismic Loads

NFPA 13-2019 and earlier	NFPA 13-2022 (TIA) and later
S_S	S_{DS}
Short Period Spectral Response Acceleration Parameter	*Design Spectral Response Acceleration at Short Periods*
Coordinates to ASCE/SEI 7-16	Coordinates to ASCE/SEI 7-22

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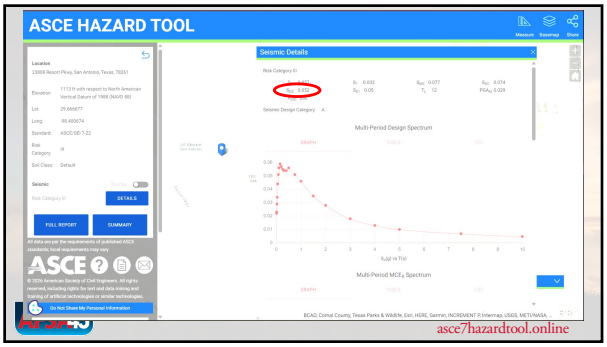
25



26

Determining Seismic Loads

NFPA 13-2019 and earlier

S_S	C_P
0.33 or less	0.35
0.5	0.4
1	0.51
1.8	0.84
3.2	1.49
4	1.87

NFPA 13-2022 (TIA) and later

$$C_p = 0.754 S_{DS}$$

$C_p = 0.754(0.177)$

$C_p = 0.133$

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27

TIA 13-22-9

- Modification to Section 11.3.4.1.4 and Section 11.3.4.4
- Clarification for minimum distance between sprinklers on opposing walls
  - Coordinates with change to permit extended coverage sidewall sprinklers to be installed on opposing walls

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Effective May 8, 2024

28

TIA 13-22-10

- Modification to Table 23.3.1, Footnote c
- Clarification for minimum distance between sprinklers on opposing walls
  - Clarifies that the maximum storage height is 25 ft for the options following this footnote

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Effective September 18, 2024

29

Modifications to NFPA 13, 2025 Edition

- Errata
  - 13-25-1 (June 2026)
- TIAs
  - 25-1 (April 2024)
  - 25-2 (August 2024)
  - 25-3 (August 2024)
  - 25-4 (December 2025)
  - 25-5 (December 2025)
  - 26-6 (April 2026)
- Pending
  - Proposed TIA 1945

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As of 9/15/2026

30

Errata 13-25-1

- Figure 10.2.7.1.4
  - Figure is for sprinklers in combustible concealed spaces with wooden members less than 3 ft (900 mm) on center with slopes 4 in 12 or greater.
  - Correction to references:
    - Section 10.2.6.1.4.2 should be 10.2.7.1.4.2
    - Section 10.2.6.1.4.3 should be 10.2.7.1.4.3

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31

TIA 13-25-1

- Section 11.3.4.1.4 and Section 11.3.4.4
  - *This was simultaneously processed for the 2022 (TIA 22-9) and 2025 editions.*
  - Section 11.3.4.1.4 was relocated to be Section 11.3.4.4.1 appropriately in the section for minimum distance between sprinklers.
  - Section 11.3.4.4.2: Coordinates with change to permit extended coverage sidewall sprinklers to be installed on opposing walls

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NOTE: This TIA was issued and approved prior to document printing.

32

TIA 13-25-2

- Table 23.3.1
  - Fix footnotes
  - Return row for 25 ft of storage under a 40 ft maximum ceiling height
    - 60 psi using K-25.2 option
    - Accidentally removed when the table was consolidated as part of the 2022 edition.

NOTE: This TIA was issued and approved prior to document printing.

33

TIA 13-25-3

- Annex E.3
  - Update "Computing the Seismic Demand on Piping Systems"
  - Edits were missed to update the explanatory information to coordinate with ASCE 7-22 when those modifications were made to the standard.

NOTE: This TIA was issued and approved prior to document printing.

34

TIA 13-25-4

- Section 19.2.3.2.8.1
  - Section 19.2.3.2.5 was missed in the list that are permitted to be compound adjustments for the area of sprinkler operation within the hydraulic calculations.

35

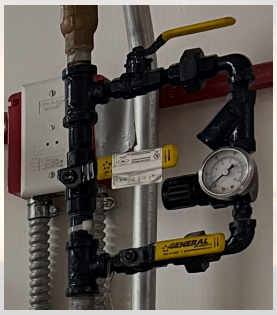
TIA 13-25-5

- Section 19.2.3.2.5, Table 19.2.3.2.5 and Section 19.2.3.2.5.1
  - Includes information for ceiling heights over 30 ft
  - Adds a table that should have been part of the second revision for the 2025 edition.
  - Updates references linked back to other chapters.

36

TIA 13-25-6

- Section 8.2.8.1 – Air Maintenance Devices
  - Removes the reference to 8.2.7.5.2 as other language in the subsequent section now address it



37

TIA 13-25-7

- Section 30.6.5.2 and Section 30.6.5.3
  - Correcting section references
    - 10.2.5 should be 10.2.6
    - 10.2.7.2 should be 10.2.8.2

NOTE: This TIA was issued August 2026.

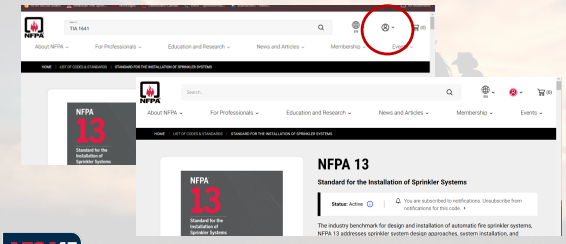
38

Proposed

- TIA 1945 – Applicable to 2025 edition and proposed 2028 edition
  - Section 19.2.2.2
    - Removes the exception
    - There is a conflict since the exception is pointing to an allowance for extra hazard pipe schedule where residual pressure at the remote point of the systems is at least 50 psi.
  - Comment Closing – October 14, 2026

39

Setting Up Notification



40

TIAs in the Following Revision Cycle

- Automatic input for the next cycle.
- Committee must take action in some form.

41

Working with AHJs

42

AFSA TECHNICAL ADVISORY COUNCIL
THE AUTHORITY ON FIRE SPRINKLERS

43

REQUIRED
FOR CEU CREDIT:

- ✓ Badge scanned at start of seminar
- ✓ Attend full seminar
- ✓ Complete survey 1 of 2 ways:
  - ✓ Survey link is emailed to attendees with scanned badges
  - ✓ Event app by EventsAir
    - Login to app
    - Navigate to seminar survey
  - ✓ Surveys close 10/31/26

Thank you!

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Scan QR code to submit questions for **Ask the Experts!**

44

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*

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September 8-11	Manchester Grand Hyatt San Diego, CA

For More Details Visit:
firesprinkler.org

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American Fire Sprinkler Association

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

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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