



3M Personal Safety Division

Standards Update

NFPA 1970, 2025 Edition

1981 and 1982 Chapters

August 2025



Standards Update

NFPA 1970, 2025 Edition*

- ▶ The purpose of this presentation is to provide an overview of the effective changes for NFPA 1970, Standard on Protective Ensembles for Structural and Proximity Firefighting, Work Apparel and Open-Circuit Self-Contained Breathing Apparatus (SCBA) for Emergency Services, and Personal Alert Safety Systems (PASS).
- ▶ Topics:
 - ▶ NFPA 1970, 2025 Edition (1981 Chapter) – *Current Schedule*
 - ▶ NFPA 1970, 2025 Edition (1981 Chapter) – *Published Changes*
 - ▶ NFPA 1970, 2025 Edition (1982 Chapter) – *Current Schedule*
 - ▶ NFPA 1970, 2025 Edition (1982 Chapter) – *Published Changes*
 - ▶ NFPA 1970, 2025 Edition (1981 and 1982 Chapters) – *Certification Process*

*The year of the standard edition has been updated to 2025.

NFPA 1970, 2025 Edition

1981 chapter

Current Schedule



NFPA 1970, 2025 Edition — 1981 chapter

Current Schedule

- ▶ The standard is published as the 2025 Edition
- ▶ The Issuance Date was August 29, 2024
- ▶ The Effective Date is September 18, 2024
- ▶ The last ship date for NFPA 1981, 2018 Edition SCBA will be March 18, 2026.

NFPA 1981, 2025 Edition

Published Changes



NFPA 1970, 2025 Edition — 1981 chapter

Published Changes

- Change to EOSTI to adjust the low air alarm set point to reflect rated cylinder volume and correction factor for the incompressibility of air at high pressure.

	2216 psig	3000 psig	4500 psig	5500 psig	6000 psig
EOSTI Activation	34% +/- 2% rated service pressure	33% +/- 2% rated service pressure	31% +/- 2% rated service pressure	29% +/- 2% rated service pressure	28% +/- 2% rated service pressure

- Due to the incompressibility of air at high pressure, the relationship between SCBA pressure, estimated cylinder volume, and calculated time remaining volume is not linear. In practice, when an EOSTI activates at 35 percent of SCBA rated service pressure, the remaining volume exceeds 35 percent of rated cylinder volume. The amount of deviation is dependent on the SCBA rated service pressure; higher service pressure SCBA exhibit higher deviations.
- To account for the incompressibility of air at high pressure, EOSTI activation pressures were revised to specify values that correspond with 35 percent of the SCBA rated cylinder volume. Each SCBA rated service pressure has a distinct EOSTI activation pressure. However, EOSTI activation pressures will be equal for SCBA with common service pressures and different rated cylinder durations.
- For example, 4500 psig 30-minute (~1200 liter nominal rated cylinder volume), 4500 psig 45-minute (~1800 liter nominal rated cylinder volume), and 4500 psig 60-minute (~2400 liter nominal rated cylinder volume) SCBA share a common EOSTI activation pressure. The calculations that define the new EOSTI activation pressures are based on the nominal rated cylinder volume as derived from the NIOSH certified rated service time and NIOSH breathing rate. Actual cylinder volumes may exceed nominal rated cylinder volumes to account for additional capacity that may be provided to operate pneumatic alarms and/or other non-respiratory features.

NFPA 1970, 2025 Edition — 1981 chapter

Published Changes

- ▶ New requirement that all backframe soft goods must be removable.
 - ▶ SCBA shall be designed to permit the removal of all porous, textile-based components mounted on the backframe, including, but not limited to, the harness system, shoulder straps, waist straps, chest straps, and padding by the end user.
- ▶ Allowance of alternate breathing machine for testing SCBA breathing performance.
 - ▶ There is concern from testing laboratories about specifying a single type of breathing machine and the impact of future obsolescence.

NFPA 1970, 2025 Edition — 1981 chapter

Published Changes

- ▶ New requirement to include cleaning instructions in the SCBA User Instructions.
 - ▶ Cleaning instructions and precautions shall include procedures and pertinent information for the preliminary exposure reduction, advanced cleaning, and decontamination of SCBA that includes the following minimum information:
 - (1) Information for when and how SCBA is subjected to preliminary exposure reduction after being contaminated
 - (2) A statement that SCBA subject to exposure to products of combustion on the fireground usually warrants advanced cleaning
 - (3) The specific technique(s) that can be applied for cleaning, including hand washing, machine washing, or other processes that the manufacturer indicates as safe for the SCBA
 - (4) The identification of any SCBA components that should be removed for separate cleaning
 - (5) Any specific detergents for cleaning the SCBA or specific SCBA components, or a list of acceptable parameters for a detergent such as pH, chemical constituents that are acceptable, and chemical constituents to be excluded
 - (6) *Warnings against the use of any specific substances
 - (7) *Characteristics of any tools or equipment
 - (8) *Specifications of any other cleaning parameters
 - (9) Specific procedures for carrying out advanced cleaning, including drying of SCBA
 - (10) *Specific precautions related to decontamination where SCBA are exposed to hazardous substances, including where SCBA exposure to certain hazardous substances requires specialized cleaning, replacement of components, or disposal
 - (11) A requirement for the organization or end user to inspect the SCBA following preliminary exposure reduction, advanced cleaning, or decontamination

NFPA 1970, 2025 Edition — 1981 chapter

Published Changes

- ▶ New requirement to include disinfecting instructions in the SCBA User Instructions.
 - ▶ Information provided on disinfecting procedures shall include the following minimum information:
 - (1) A list of considerations for when SCBA or SCBA components are to be subject to disinfection
 - (2) A warning that sharing of SCBA facepieces and other SCBA components require disinfection and advanced cleaning between individuals
 - (3) The identification of specific sanitizers or disinfectants that are suitable for SCBA, and if these disinfectants have been registered with the US Environmental Protection Agency for disinfection of specific infectious diseases
 - (4) Specific procedures for the application of the disinfectant, including the concentration, manner of application, dwell time, and any subsequent requirement for rinsing, drying, or advanced cleaning

NFPA 1970, 2025 Edition — 1981 chapter

Published Changes

- ▶ Change to Minimum Requirements for Hazardous Location from Intrinsically Safe Class 1, Division 1 to Non-incendive Class 1, Division 2.

2018 edition

- ▶ “All electric circuits integral to an SCBA or to any SCBA accessories shall be certified to the requirements for Class I, Groups C and D; Class II, Groups E, F, and G, Division 1 hazardous locations specified in UL 913, Standard for Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, and III, Division 1 Hazardous (Classified) Locations.”

2025 edition

- ▶ “SCBA and SCBA accessories shall, at a minimum, be suitable for use in Class I, Division 2, Groups A, B, C, and D; Class II, Division 2, Groups F and G; and Class III, Divisions 1 and 2 hazardous (classified) locations, and with a temperature class within the range of T3 through T6 inclusive. This suitability is demonstrated by being certified as one of the following in accordance with ANSI/UL 121201, Non-incendive Electric Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations.”
- ▶ Manufacturers can choose to certify to Class I, Division I for Intrinsic Safety, as stated in the NFPA 1981, 2018 Edition standard.

NFPA 1970, 2025 Edition — 1981 chapter

Published Changes

- ▶ If SCBA is intended to be connected to an NFPA 1802 certified radio, a new requirement will specify a matching connector.
 - ▶ NFPA 1802, Standard on Two-Way, Portable RF Voice Communications Devices for Use by Emergency Services Personnel in the Hazard Zone
 - ▶ “If the SCBA incorporates an optional wired interface for connection to NFPA 1802-compliant RF devices or NFPA 1802-compliant remote speaker devices/microphones (RSD/RSM), the SCBA shall include an RF device connector (RFDC) that complies with the requirements for compatible devices as specified in Section 6.10 of NFPA 1802.”
- ▶ The low battery alarm has been decreased from 2 hours to 1 hour for the Heads-Up Display (HUD).
 - ▶ This aligns with the low power specification for the Personal Alert Safety System (PASS) and improves ability to use rechargeable power sources.

NFPA 1970, 2025 Edition — 1981 chapter

Published Changes

- ▶ New wireless interface connectivity visual requirements for Bluetooth® connected devices, where applicable.
 - ▶ “If the SCBA incorporates an optional wireless interface for connection to NFPA 1802-compliant RF devices or NFPA 1802-compliant remote speaker devices/microphones(RSD/RSM), the HUD shall display a visual alert signal when the SCBA loses connection with a paired NFPA 1802-compliant device.”
 - ▶ “If the SCBA incorporates an optional wired interface for connection to NFPA 1802-compliant RF devices or NFPA 1802-compliant remote speaker devices/microphones (RSD/RSM), the SCBA shall include an RF device connector (RFDC) that complies with the requirements for compatible devices as specified in Section 6.10 of NFPA 1802.”
 - ▶ “If the SCBA incorporates wireless interfaces for connection to non-NFPA 1802-compliant SCBA accessories, the SCBA shall include visual signals that indicate the connection status for each wireless connection.”
 - ▶ Wireless interface connection status signals shall be permitted to be located on the HUD or other SCBA components.
 - ▶ Wireless interface connection status signals shall be visible to the user when the SCBA and facepiece are donned.
 - ▶ Wireless interface connection status signals shall indicate when the SCBA is connected to paired SCBA accessories.
 - ▶ Wireless interface connection status signals shall indicate when the SCBA loses connection with paired SCBA accessories.

NFPA 1970, 2025 Edition

1982 chapter

Current Schedule



NFPA 1970, 2025 Edition — 1982 chapter

Current Schedule

- ▶ The standard is published as the 2025 Edition
- ▶ The Issuance Date was August 29, 2024
- ▶ The Effective Date is September 18, 2024
- ▶ The last ship date for NFPA 1982, 2018 Edition PASS will be March 18, 2026.

NFPA 1970, 2025 Edition

1982 chapter

Published Changes



NFPA 1970, 2025 Edition — 1982 chapter

Published Changes

- ▶ Change to Minimum Requirements for Hazardous Location from Intrinsically Safe Class 1, Division 1 to Non-incendive Class 1, Division 2.

2018 edition

- ▶ “All electric circuits integral to an SCBA or to any SCBA accessories shall be certified to the requirements for Class I, Groups C and D; Class II, Groups E, F, and G, Division 1 hazardous locations specified in UL 913, Standard for Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, and III, Division 1 Hazardous (Classified) Locations.”

2025 edition

- ▶ “SCBA and SCBA accessories shall, at a minimum, be suitable for use in Class I, Division 2, Groups A, B, C, and D; Class II, Division 2, Groups F and G; and Class III, Divisions 1 and 2 hazardous (classified) locations, and with a temperature class within the range of T3 through T6 inclusive. This suitability is demonstrated by being certified as one of the following in accordance with ANSI/UL 121201, Non-incendive Electric Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations.”
- ▶ Manufacturers can choose to certify to Class I, Division I for Intrinsic Safety, as stated in the NFPA 1981, 2018 Edition standard.

NFPA 1970, 2025 Edition — 1982 chapter

Published Changes

- ▶ Provision to allow User Information to be provided via digital link, as opposed to requiring direct attachment to the SCBA.
 - ▶ “The PASS manufacturer shall attach the required user information or packaging containing the user information, or links to digital user information, to the PASS in such a manner that it is not possible to initially use the PASS without being aware of the information.”

NFPA 1970, 2025 Edition

Certification Process



NFPA 1970, 2025 Edition

Certification Process — SCBA

The information below outlines the certification requirements for the NFPA 1970, 2025 edition standard.

- ▶ The NFPA Standards Council issued the NFPA 1970 standard on August 29, 2024.
 - ▶ The effective date was September 18, 2024.
- ▶ NIOSH requires new TC approval numbers to be issued for each revision of the NFPA 1970 standard. This means that a manufacturer wishing to obtain NFPA 1970, 2025 edition certification must submit specific SCBA configurations to NIOSH in order to obtain new TC approval numbers.
- ▶ Manufacturers are required to submit (3) separate applications, as listed below, for each SCBA that they wish to have tested and certified to the NFPA 1970, 2025 edition standard.
 - ▶ NIOSH 42 CFR, Part 84
 - ▶ NFPA 1970
 - ▶ NIOSH CBRN

NFPA 1970, 2025 Edition

Certification Process — SCBA

- ▶ Test requirements include:
 - ▶ NIOSH 42 CFR, Part 84
 - ▶ This testing is conducted at the NIOSH NPPTL labs in Pittsburgh, PA.
 - ▶ NFPA 1970
 - ▶ This testing is conducted at Intertek in Cortland, NY.
 - ▶ NIOSH CBRN
 - ▶ This testing is conducted jointly at NIOSH NPPTL in Pittsburgh, PA and RDECOM in Edgewood, MD.
- ▶ Evaluation of products submitted for approval includes in-depth performance and qualification testing. This process typically takes 8-10 months for completion.

NFPA 1970, 2025 Edition

Certification Process — SCBA

- ▶ Approvals and certifications are granted in the following order:
 - ▶ NIOSH 42 CFR, Part 84
 - ▶ NFPA 1970, 2025 edition and NIOSH CBRN jointly issued by SEI and NIOSH
- ▶ NFPA certification will be announced using a “first in, first out” method, meaning the first manufacturer to submit and successfully complete testing will receive their certification first.

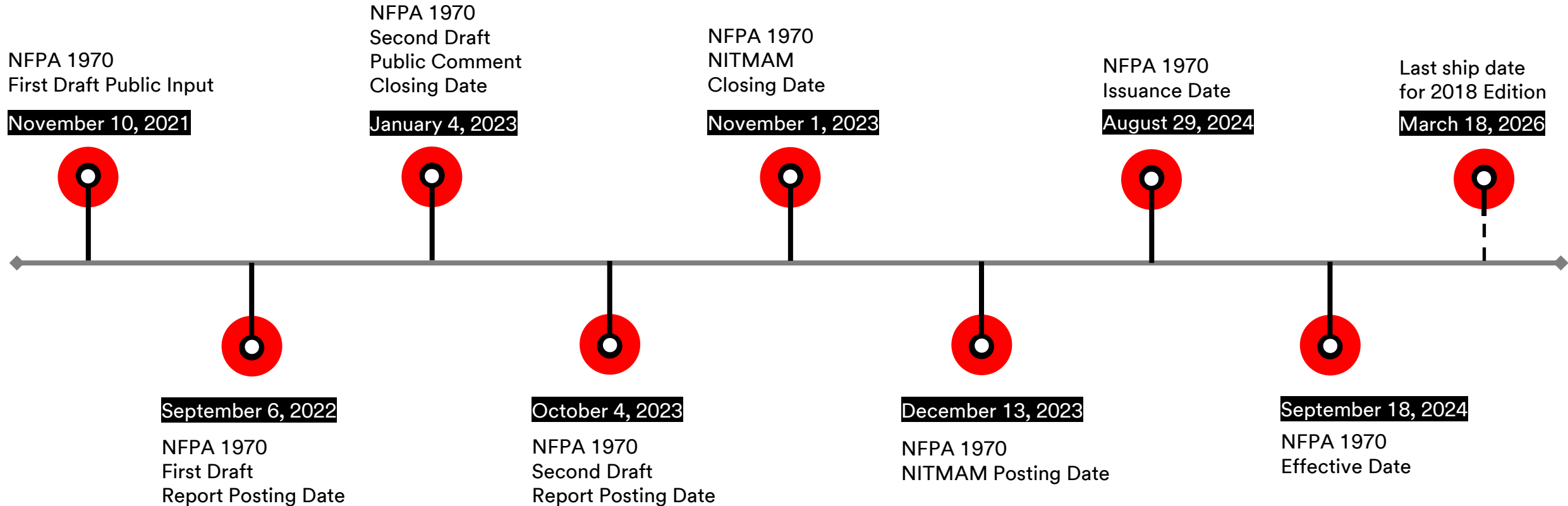
NFPA 1970, 2025 Edition

Timeline



NFPA 1970, 2025 Edition

Publication Timeline





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