

Standard on Surface Water Operations Protective Clothing and Equipment







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NFPA® 1952

Standard on

Surface Water Operations Protective Clothing and Equipment

2021 Edition

This edition of NFPA 1952, *Standard on Surface Water Operations Protective Clothing and Equipment*, was prepared by the Technical Committee on Special Operations Protective Clothing and Equipment and released by the Correlating Committee on Fire and Emergency Services Protective Clothing and Equipment. It was issued by the Standards Council on March 15, 2020, with an effective date of April 4, 2020, and supersedes all previous editions.

This edition of NFPA 1952 was approved as an American National Standard on April 4, 2020.

Origin and Development of NFPA 1952

The Technical Committee on Special Operations Protective Clothing and Equipment began work on the first edition of NFPA 1952 in 2005 to answer the need for personal protective equipment (PPE) for fire and emergency services personnel operating at surface water operations. Surface water operations are technical rescue activities requiring water functional capabilities involving surface water, swift water, tidal water, surf, and ice that do not require underwater respiratory equipment.

The technical committee developed NFPA 1952, *Standard on Surface Water Operations Protective Clothing and Equipment*, with the goal of establishing protection requirements for protective clothing and equipment to reduce the safety risks and health risks associated with exposure of personnel to the hazards of surface water operations.

The majority of performance criteria in this standard were based on the September 1993 U.S. Fire Administration Study "Protective Clothing and Equipment Needs of Emergency Responders for Urban Search and Rescue Missions" (FA-136, Federal Emergency Management Agency). That report documented the protective clothing and equipment needs for emergency responders engaged in technical rescue activities. Input was obtained from an emergency responder user requirements committee and resulted in proposed criteria based on a needs and risk analysis. The U.S. Fire Administration report contains survey results and test data for a number of materials. The jurisdiction of the Technical Committee on Special Operations Protective Clothing and Equipment does not include the respiratory protection that is necessary for these operations; the appropriate respiratory protection needs to be addressed by emergency responder organizations.

This standard specifies requirements for the following types of surface water protective clothing and equipment:

- (1) Dry suits, wet suits, and ice suits
- (2) Dry suit gloves, wet suit gloves, and ice suit gloves
- (3) Dry suit footwear, wet suit footwear, and ice suit footwear
- (4) Helmets
- (5) PFDs

It is left to emergency services organizations to select the appropriate items for the protection of their emergency responders based on the expected and anticipated surface water incidents to which the organizations will or could respond.

In the 2015 edition, the technical committee updated the recertification table, added text to include performance requirements for the evaluation of strength of closures other than zippers, and made several changes to more adequately evaluate performance. This included the following changes made in relation to chemical hazard protection:

(1) Representative challenges in various chemical groupings that are soluble in water, which is a possible hazard

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- (2) Closure testing by incorporating penetration methodology used in other hazmat documents in the PPE project
- (3) Removal of requirements for flexing and abrading zippers/closures due to the testing challenges and followed methods for testing used in other hazmat documents in the PPE project
- (4) Requirements and methods to reflect the use of cumulative permeation mass as an endpoint for permeation testing

Further, the technical committee acknowledged that the permeation test procedures were not standardized for the use of cumulative permeation. Therefore, the revised procedures were based on NFPA 1994 to provide a standardized methodology for measuring permeation resistance as established in other standards. The list of chemicals selected represented potential hazards and various chemical groupings more adequately. The committee also added a penetration test to align with other standards in the PPE project and updated and improved other test methods to reflect code changes as necessary.

The technical committee recognized the important contributions made to the 2015 edition by the late Steve Hudson.

The 2021 edition of NFPA 1952 adds a definition for *facility* to match other documents in the standard, and language in Chapter 4 to cover manufacturing in multiple facilities. There is also an updated Table 4.4.1 to make the recertification schedule easier to understand and apply. The dry suit performance requirements were made consistent with NFPA 1953, as well as the permeation resistance test.

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NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

Committee Scope: This Committee shall have primary responsibility for documents on the design, performance, testing, and certification of protective clothing and protective equipment manufactured for fire and emergency services organizations and personnel, to protect against exposures encountered during emergency incident operations. This Committee shall also have the primary responsibility for documents on the selection, care, and maintenance of such protective clothing and protective equipment by fire and emergency services organizations and personnel.

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