PERSONAL PROTECTIVE EQUIPMENT
as part of
The Fifth Needs Assessment of the
US Fire Service
DECEMBER 2021
Needs Assessment of the United States Fire Service: Personal Protective Equipment

Fire departments are an essential part of public safety, responding to an ever-expanding list of hazards in our communities. While department members continue to fight fires and engage in activities to prevent fires from occurring, beyond these traditional roles fire departments work to mitigate other risks, from providing fall prevention education to addressing the opioid crisis. Firefighters provide emergency medical services, rescue people from a wide variety of dangerous situations, and mitigate incidents involving hazardous materials. The personal protective equipment (PPE) firefighters use must meet the needs of this ever-expanding list of roles, responsibilities, and missions.

Much of firefighters’ work is dangerous, often exposing them to a wide variety of hazardous conditions and substances. The PPE needs of fire departments can range from traditional structural firefighting bunker gear to wildland ensembles and specialized safety equipment, such as personal alert safety system (PASS) devices. Fire departments not only need to have enough of this equipment to meet the needs of their firefighters, but they must also ensure that it can be properly maintained, cleaned, and stored. To help illustrate the changes in fire department best practices, we have included the response data related to cancer prevention and PPE in this module.

The COVID-19 pandemic also impacted firefighters. This year’s survey included special questions to address how fire departments responded to this challenge.

Understanding the Survey

This Fifth Fire Service Needs Assessment Survey was conducted by NFPA beginning in 2020 and concluding in 2021. It follows earlier surveys completed in 2001, 2005, 2010, and 2015.

The goal of the survey was to identify the major needs of the US fire service by comparing what departments actually have with what existing consensus standards, government regulations, and other nationally recognized guidance documents state they need to have to be safe and effective.

Survey responses were received from 2,969 fire departments of all sizes. You can learn more about the survey’s structure and analysis in Appendix A.

All Report Sections:

- Staffing and Operations
- Community Risk Reduction
- Health and Wellness
- Facilities and Apparatus
- Wildland and WUI Firefighting
- Changes Across Five Studies
- Personal Protective Equipment
- Training and Certification
- Executive Summary
NFPA gratefully thanks the many fire departments that responded to the Fifth Fire Service Needs Assessment Survey for again providing us with the data necessary to make national estimates of fire department resources and capabilities. We also greatly appreciate the many contributions made by the following participants in our stakeholder advisory meetings and follow-ups:

Center for Public Safety Excellence: Debbie Sobotka
Fire Department Safety Officers Association: Eric Valliere and Rich Marinucci
International Association of Black Professional Firefighters: Malcolm Alston
International Association of Fire Chiefs: Rob Brown
International Association of Fire Fighters: Pat Morrison
International Fire Marshals Association: David Lynam and Kevin Sehlmeyer
International Association of Wildland Fire: Kelly Martin
Metropolitan Fire Chiefs Association: Edward “Loy” Senter, Jr.
National Association of State Fire Marshals: Philip Oakes
National Association of State Foresters: Dan Smith
National Fallen Firefighters Foundation: Allan Graves and Gamaliel Baer
National Volunteer Fire Council: Dave Finger, Joe Maruca, and Kevin Quinn
US Fire Administration/National Fire Data Center: Richard Patrick and Bill Troup
Women in Fire: Amy Hanifan

Within NFPA, many people helped to make this report possible. Melissa Knight coordinated all stakeholder communication and feedback and was the key author of each module. Ben Evarts analyzed the data. Frank Deely, Jay Petrillo, and Steve Belski processed and entered data from the surveys, in addition to helping with questions from fire departments and contributing to the research questions. Nancy Schwartz provided invaluable support during the entire project from survey redesign to the final product. Doug Sternberg did the graphic design for the report covers. Maeghan Connor provided an editorial review of each module.

To learn more about research at NFPA, visit nfpa.org/research.
Email: research@nfpa.org

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Survey Responses and Defining Unmet Need

The needs assessment study, as it has in the past, defines unmet need as not having the resources required to provide a service. For some questions, the survey asked about the extent of the need within the department. For example:

Question: How many of your emergency responders are equipped with wildland fire personal protective clothing?

<table>
<thead>
<tr>
<th>Answers</th>
<th>Percent of Fire Departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>All (100%)</td>
<td>30%</td>
</tr>
<tr>
<td>Most (76–99%)</td>
<td>12%</td>
</tr>
<tr>
<td>Many (51–75%)</td>
<td>7%</td>
</tr>
<tr>
<td>Some (26–50%)</td>
<td>8%</td>
</tr>
<tr>
<td>Few (1–25%)</td>
<td>11%</td>
</tr>
<tr>
<td>None (0%)</td>
<td>20%</td>
</tr>
<tr>
<td>Department does not perform wildland firefighting</td>
<td>13%</td>
</tr>
</tbody>
</table>

For this question, detailed information on the level of need is required. Unmet need is found by adding together the departments that perform wildland firefighting and cannot equip ALL their emergency responders with wildland firefighting equipment (in this case, a total of all the rows highlighted in yellow, or 57 percent). In some cases in this study, both the detailed survey responses and the aggregated unmet need numbers are shown to provide clarity to the reader. In other cases, detailed survey responses may be available in the accompanying appendix.

Department Size and Nomenclature

The 2020 needs assessment survey was sent to fire departments of all sizes, from those protecting very large communities (500,000 people or more) to those protecting very small communities (fewer than 2,500 people). Table A below shows the total number of survey responses by community size.

Table A. Total number of survey responses by community size

<table>
<thead>
<tr>
<th>Community Size</th>
<th>Number of Departments That Responded to the Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>500,000 or More</td>
<td>24</td>
</tr>
<tr>
<td>250,000 to 499,999</td>
<td>18</td>
</tr>
<tr>
<td>100,000 to 249,999</td>
<td>81</td>
</tr>
<tr>
<td>50,000 to 99,999</td>
<td>171</td>
</tr>
<tr>
<td>25,000 to 49,999</td>
<td>299</td>
</tr>
<tr>
<td>10,000 to 24,999</td>
<td>571</td>
</tr>
<tr>
<td>5,000 to 9,999</td>
<td>464</td>
</tr>
<tr>
<td>2,500 to 4,999</td>
<td>453</td>
</tr>
<tr>
<td>Fewer than 2,500</td>
<td>888</td>
</tr>
<tr>
<td>Total</td>
<td>2,969</td>
</tr>
</tbody>
</table>

The survey results throughout this report are often broken out by community size, as departments of different sizes have different operational capacities and needs. In some cases, departments may be grouped together across these strata (i.e., departments protecting more than 25,000 people would include the top 5 tiers of community size).
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Survey Results: Personal Protective Equipment

What we looked at: The Fifth Fire Service Needs Assessment Survey measured the availability and maintenance of PPE in the fire service. For information on the changes that have been made from study to study, please see our “Changes over Five Studies” module.

Key Takeaways:
- Across the fire service there are many unmet PPE-related needs, particularly in departments serving smaller communities.
- Overall, nearly two-thirds of departments have firefighters wearing personal protective clothing that is 10 years old or older. This unmet need can be found in departments serving communities of all sizes, including one-third of the large departments (which protect a population of half a million people or more). Among the smallest departments, more than three-quarters (76 percent) have at least some personal protective clothing that is 10 years of age or older.
- One-fifth (21 percent) of departments neither test nor inspect their personal protective ensembles each year, and only 13 percent both inspect and test their ensembles.

Providing Personal Protective Clothing

Most fire departments can equip all their emergency responders with personal protective clothing, but among smaller departments, there is still some need. Figure 1 below shows that 13 percent of all departments are unable to equip all their responders with personal protective clothing. Table A-1 in the appendix has detailed information on the responses to this survey question.

Figure 1: Departments’ ability to provide all responders with personal protective clothing (by size of community protected)
Re replacing Personal Protective Equipment

Protecting emergency responders is not just about providing protective equipment; it is also about replacing equipment on a regular basis, and many firefighters are wearing personal protective equipment that is 10 years of age or older. The metric of 10 years of age or older is based on retirement schedules described in NFPA 1851, Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting.

While larger departments generally have newer personal protective clothing (PPC), there is unmet need across all departments. Figure 2 below and Table A-2 in the appendix show the extent of the problem. For example, 35 percent of all departments have no personal protective clothing that is 10 years of age or older, while the remaining 65 percent have at least some quantity of personal protective clothing that is 10 years of age or older or do not know how old their equipment is. For 6 percent of departments, all of their personal protective clothing is 10 years of age or older.

The need for newer equipment is prevalent across departments of all sizes, including nearly one-third of the large departments (which protect a population of half a million people or more). Among the smallest departments, the need is more pronounced: three-quarters (75 percent) of these departments have at least some personal protective clothing that is 10 years of age or older.

**Figure 2: Departments with at least some personal protective clothing that is 10 years of age or older (by size of community protected)**

![Figure 2](image-url)
Many departments also lack reserve personal protective clothing. As shown in Figure 3 below, half (50 percent) of the smallest departments do not have enough personal protective clothing in reserve, and there is at least some unmet need for reserves among departments of all sizes.

**Figure 3: Percent of departments lacking sufficient protective clothing to equip 10 percent of their emergency responders**

<table>
<thead>
<tr>
<th>Population Protected by Department</th>
<th>Do you have reserve personal protective clothing sufficient to equip 10% of your emergency responders?</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL departments</td>
<td>Yes: 57%  No: 40%  Don't know: 4%</td>
</tr>
<tr>
<td>Less than 2,500</td>
<td>Yes: 46%  No: 50%  Don't know: 4%</td>
</tr>
<tr>
<td>2,500 to 4,999</td>
<td>Yes: 59%  No: 37%  Don't know: 4%</td>
</tr>
<tr>
<td>5,000 to 9,999</td>
<td>Yes: 62%  No: 34%  Don't know: 4%</td>
</tr>
<tr>
<td>10,000 to 24,999</td>
<td>Yes: 74%  No: 23%  Don't know: 3%</td>
</tr>
<tr>
<td>25,000 to 49,999</td>
<td>Yes: 85%  No: 12%  Don't know: 3%</td>
</tr>
<tr>
<td>50,000 to 99,999</td>
<td>Yes: 86%  No: 11%  Don't know: 3%</td>
</tr>
<tr>
<td>100,000 to 249,999</td>
<td>Yes: 83%  No: 15%  Don't know: 2%</td>
</tr>
<tr>
<td>250,000 to 499,999</td>
<td>Yes: 89%  No: 11%  Don't know: 0%</td>
</tr>
<tr>
<td>500,000 or More</td>
<td>Yes: 96%  No: 4%  Don't know: 0%</td>
</tr>
</tbody>
</table>

**Maintaining Personal Protective Equipment**

In addition to simply having enough PPE and making sure it is not outdated, departments must maintain their PPE in support of various firefighter health and safety initiatives. The survey looked at several areas of concern, such as inspection and testing, laundering, infection control programs, and cancer prevention best practices. The survey results show that many departments do not have the resources to properly maintain PPE.

**Inspection and Testing**

One-fifth (21 percent) of the departments indicated that they neither test nor inspect their personal protective ensembles each year, and only 13 percent indicated that they both inspect and test ensembles (See Figure 4).
Laundering

PPC (personal protective clothing) must also be cleaned regularly, as firefighters and their equipment can come into contact with hazardous materials that might linger on PPC without proper cleaning. Most departments have in-house laundering capabilities for PPC, but some (particularly smaller departments) do not. Table 1 shows that 80 percent of departments of all sizes either have their own facilities, use an outside service, or both. However, among the smallest departments, one-third (34 percent) do not have access to internal or external PPC laundering facilities or services.

Table 1: Does your department have laundering facilities or provide services (external) to clean contaminated personal protective clothing?

<table>
<thead>
<tr>
<th>Size of Department</th>
<th>We have our own facilities and use an outside service</th>
<th>We have laundering facilities</th>
<th>We utilize an outside service</th>
<th>Neither facilities nor outside service</th>
</tr>
</thead>
<tbody>
<tr>
<td>500,000 or More</td>
<td>48%</td>
<td>43%</td>
<td>9%</td>
<td>0%</td>
</tr>
<tr>
<td>250,000 to 499,999</td>
<td>44%</td>
<td>56%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>100,000 to 249,999</td>
<td>33%</td>
<td>59%</td>
<td>6%</td>
<td>1%</td>
</tr>
<tr>
<td>50,000 to 99,999</td>
<td>32%</td>
<td>65%</td>
<td>4%</td>
<td>0%</td>
</tr>
<tr>
<td>25,000 to 49,999</td>
<td>22%</td>
<td>74%</td>
<td>3%</td>
<td>0%</td>
</tr>
<tr>
<td>10,000 to 24,999</td>
<td>16%</td>
<td>77%</td>
<td>5%</td>
<td>2%</td>
</tr>
<tr>
<td>5,000 to 9,999</td>
<td>13%</td>
<td>73%</td>
<td>9%</td>
<td>5%</td>
</tr>
<tr>
<td>2,500 to 4,999</td>
<td>11%</td>
<td>66%</td>
<td>11%</td>
<td>12%</td>
</tr>
<tr>
<td>Less than 2,500</td>
<td>4%</td>
<td>47%</td>
<td>15%</td>
<td>34%</td>
</tr>
<tr>
<td>ALL departments</td>
<td>10%</td>
<td>59%</td>
<td>12%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Figure 4: Inspection and testing of protective ensembles by size of community protected.
Infection Control Programs

PPE should also be decontaminated as part of exposure and infection control for firefighters, but many departments do not have the requisite programs or facilities for decontamination. Figures 5 and 6 below show that one-third of departments do not have an infection control/PPE decontamination program (infectious and communicable disease). This is an improvement from the 39 percent that did not have one of these programs in 2015.

Figure 5: Fire departments with and without infection control/PPE decontamination programs (by size of community protected)
Thirty-seven percent of departments do not have an exposure control/PPE decontamination program (carcinogens and other toxic hazards), an improvement from 44 percent in the 2015 survey. The proportion of departments facing needs related to both types of decontamination is greater in smaller communities.

**Figure 6: Departments with and without exposure control/PPE decontamination programs (by size of community protected)**
Cancer Prevention Best Practices

PPE cleaning, decontamination, and storage are cancer prevention best practices for firefighters; however, many departments do not currently have the resources to engage in these practices. Figure 7 illustrates the use of PPE-related cancer prevention best practices by community size. Smaller departments, in particular, have many needs in this area. In addition, ensuring the availability of a second set of gear remains a challenge for all departments to varying degrees. This information was not collected in previous editions of the survey, so comparisons over time are not available.

Figure 7: Fire departments’ cancer prevention practices (by size of community protected)
Other Types of PPE

In addition to personal protective clothing for structural firefighting, there are other types of equipment that can help keep firefighters safe in dangerous environments. Not all departments are able to provide their members with this equipment.

Portable Radios

Figure 8 and Table A-3 show that only half of all US fire departments can equip all on-duty first responders with portable radios. This has remained relatively consistent since 2010 (See the “Changes over Five Studies” module.

Figure 8: Departments able and unable to equip all on-duty emergency responders with portable radios (by size of community protected)
Self-Contained Breathing Apparatus

Self-Contained Breathing Apparatus (SCBA) protect firefighters from smoke and airborne hazardous materials and are crucial for safe, effective operations on the fireground and other incident scenes. However, many departments do not have enough SCBA for all their on-duty responders.

Figure 9 and Table A-4 show that more than half (53 percent) of all fire departments cannot equip all of their on-duty emergency responders with SCBA. Departments protecting under 10,000 people have the highest rates of unmet need for SCBA.

**Figure 9: Departments able and unable to equip all on-duty emergency responders with SCBA (by size of community protected)**

<table>
<thead>
<tr>
<th>Population Protected by Department</th>
<th>What percentage of your on-duty emergency responders can be equipped with SCBA?</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL departments</td>
<td>47%</td>
</tr>
<tr>
<td>Less than 2,500</td>
<td>28%</td>
</tr>
<tr>
<td>2,500 to 4,999</td>
<td>44%</td>
</tr>
<tr>
<td>5,000 to 9,999</td>
<td>61%</td>
</tr>
<tr>
<td>10,000 to 24,999</td>
<td>83%</td>
</tr>
<tr>
<td>25,000 to 49,999</td>
<td>92%</td>
</tr>
<tr>
<td>50,000 to 99,999</td>
<td>98%</td>
</tr>
<tr>
<td>100,000 to 249,999</td>
<td>98%</td>
</tr>
<tr>
<td>250,000 to 499,999</td>
<td>100%</td>
</tr>
<tr>
<td>500,000 or More</td>
<td>96%</td>
</tr>
</tbody>
</table>
Many departments use SCBA that is 10 years of age or older. As with other types of personal protective equipment and clothing, SCBA that is 10 years of age or older should be replaced per NFPA 1851, *Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting*. Figure 10 shows that more than half of departments use at least some SCBA that is 10 years of age or older. See Table A-5 in the Appendix for more information.

**Figure 10: Departments with at least some SCBA that is 10 years of age or older (by size of community protected)**

What percentage of your SCBA are 10 years old or older?

<table>
<thead>
<tr>
<th>Population Protected by Department</th>
<th>Need Met</th>
<th>Unmet Need</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL departments</td>
<td>39%</td>
<td>58%</td>
<td>2%</td>
</tr>
<tr>
<td>Less than 2,500</td>
<td>29%</td>
<td>68%</td>
<td>3%</td>
</tr>
<tr>
<td>2,500 to 4,999</td>
<td>42%</td>
<td>57%</td>
<td>2%</td>
</tr>
<tr>
<td>5,000 to 9,999</td>
<td>47%</td>
<td>51%</td>
<td>2%</td>
</tr>
<tr>
<td>10,000 to 24,999</td>
<td>57%</td>
<td>42%</td>
<td>1%</td>
</tr>
<tr>
<td>25,000 to 49,999</td>
<td>63%</td>
<td>36%</td>
<td>1%</td>
</tr>
<tr>
<td>50,000 to 99,999</td>
<td>66%</td>
<td>32%</td>
<td>2%</td>
</tr>
<tr>
<td>100,000 to 249,999</td>
<td>62%</td>
<td>35%</td>
<td>4%</td>
</tr>
<tr>
<td>250,000 to 499,999</td>
<td>78%</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>500,000 or More</td>
<td>71%</td>
<td>29%</td>
<td></td>
</tr>
</tbody>
</table>
Personal Alert Safety System (PASS) Device

Overall, 26 percent of departments say they cannot equip all their on-duty emergency responders with personal alert safety system (PASS) devices. Figure 11 and Table A-6 show this need by the size of the community protected. The need for PASS devices is particularly pronounced among smaller departments. This need may be reflective of departments using older SCBA, as newer units feature an integrated PASS device. The results of this question are consistent with those from the 2015 survey; however, due to a change in the question format, we were unable to make direct comparisons over time.

Figure 11: Departments able and unable to equip all firefighters who work in immediately dangerous to life or health (IDLH) environments with a PASS device (by size of community protected)

<table>
<thead>
<tr>
<th>Population Protected by Department</th>
<th>Need Met</th>
<th>Unmet Need</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL departments</td>
<td>72%</td>
<td>26%</td>
<td>2%</td>
</tr>
<tr>
<td>Less than 2,500</td>
<td>58%</td>
<td>38%</td>
<td>4%</td>
</tr>
<tr>
<td>2,500 to 4,999</td>
<td>78%</td>
<td>21%</td>
<td>1%</td>
</tr>
<tr>
<td>5,000 to 9,999</td>
<td>83%</td>
<td>16%</td>
<td>1%</td>
</tr>
<tr>
<td>10,000 to 24,999</td>
<td>93%</td>
<td>6%</td>
<td>3%</td>
</tr>
<tr>
<td>25,000 to 49,999</td>
<td>97%</td>
<td>5%</td>
<td>2%</td>
</tr>
<tr>
<td>50,000 to 99,999</td>
<td>99%</td>
<td>6%</td>
<td>0%</td>
</tr>
<tr>
<td>100,000 to 249,999</td>
<td>99%</td>
<td>6%</td>
<td>0%</td>
</tr>
<tr>
<td>250,000 to 499,999</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>500,000 or More</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Specialized PPE

There are certain operations where specialized PPE is required to respond to an incident safely and effectively.

Wildland

One such incident type is a wildland or WUI fire. The survey responses from departments that indicated that they do not respond to these types of fires were not included in this section. Figure 12 and Table A-7 indicate that while not all departments respond to wildland fires, there are many departments who do respond but cannot provide all firefighters with wildland personal protective clothing. Figure 12 shows that unmet need for wildland fire personal protective clothing can be found consistently across departments of all sizes.

Figure 12: Departments able and unable to equip all emergency responders with wildland fire personal protective clothing (by size of community protected)
Medical calls

Medical calls, particularly those where infectious diseases may be involved, also require specialized PPE to ensure firefighter safety. The COVID-19 pandemic brought this need into sharp focus. This year’s needs assessment survey asked departments about their ability to provide medical PPE to responders, both at the beginning of the pandemic and at the time the survey was taken. The survey did not contain an exhaustive list of examples or definitions of what exactly constitutes medical PPE because there is such a wide variety. As survey responses were submitted between September 2020 and February 2021, they generally came in six months to one year after the beginning of the pandemic in the United States. While there was an improvement between early 2020 and the time the survey was in the field, nearly half of all departments still had unmet needs for medical PPE at the time they completed the survey. Figures 13–14, Table 2, and Tables A-8–A-9 in the Appendix show the ability of departments to outfit responders with PPE at the beginning of the COVID-19 outbreak and when the survey was taken.

Figure 13: Ability of departments to equip all emergency responders with medical PPE at the beginning of the COVID-19 outbreak (by size of community)
Figure 14: Ability of departments to equip all emergency responders with medical PPE at the time of the survey (September 2020–February 2021) (by Size of Community)

Table 2: Change in departments that could outfit all of their responders with medical PPE from the beginning of the COVID-19 outbreak to the time of the survey (September 2020–February 2021)

<table>
<thead>
<tr>
<th>Population Protected</th>
<th>Departments with Need Met (Beginning)</th>
<th>Departments with Need Met (Time of Survey)</th>
<th>Percentage Point Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>500,000 or More</td>
<td>96%</td>
<td>100%</td>
<td>+4%</td>
</tr>
<tr>
<td>250,000 to 499,999</td>
<td>94%</td>
<td>100%</td>
<td>+6%</td>
</tr>
<tr>
<td>100,000 to 249,999</td>
<td>89%</td>
<td>96%</td>
<td>+7%</td>
</tr>
<tr>
<td>50,000 to 99,999</td>
<td>85%</td>
<td>96%</td>
<td>+11%</td>
</tr>
<tr>
<td>25,000 to 49,999</td>
<td>75%</td>
<td>91%</td>
<td>+16%</td>
</tr>
<tr>
<td>10,000 to 24,999</td>
<td>60%</td>
<td>79%</td>
<td>+19%</td>
</tr>
<tr>
<td>5,000 to 9,999</td>
<td>42%</td>
<td>63%</td>
<td>+21%</td>
</tr>
<tr>
<td>2,500 to 4,999</td>
<td>29%</td>
<td>50%</td>
<td>+21%</td>
</tr>
<tr>
<td>Less than 2,500</td>
<td>25%</td>
<td>39%</td>
<td>+14%</td>
</tr>
<tr>
<td>ALL departments</td>
<td>37%</td>
<td>53%</td>
<td>+17%</td>
</tr>
</tbody>
</table>
Additional Resources and Education about PPE

NFPA 1851, Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting, has information on the best practices for the selection, care, and maintenance of PPE.

NFPA 1971, Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting, provides information on the minimum levels of protection required during structural and proximity firefighting operations to protect against thermal, physical, environmental, and bloodborne pathogen hazards.

The US Fire Administration (USFA) partners with the National Institute of Standards and Technology (NIST) on research projects to improve the protective qualities of clothing and equipment used by firefighters in operational situations. Information on current and recent projects is available on the USFA website: usfa.fema.gov/operations/ops_ppe.html. Additional information is also available on NIST’s website: nist.gov/el/fire-research-division-73300/firegov-fire-service/personal-protective-equipment.

The National Volunteer Fire Council has a series of educational videos about a wide variety of PPE-related topics: youtube.com/playlist?list=PLEhK0BfDztvdKr1c1IDtemsoyByl-Lcm2.

Previous studies are available at nfpa.org/needsassessment, as well as through NFPA’s Library (www.nfpa.org/library).
Appendix A: Survey Structure and Analysis

Survey Structure and Analysis

The survey used in the first four studies was developed by NFPA in collaboration with an ad hoc technical advisory group consisting of representatives from national organizations associated with the management of fire and related hazards and risks in the US. For the 2020 cycle, parts of the survey were redesigned to better reflect the current roles and responsibilities of the fire service. The content was revised based on input from representatives from the following organizations:

- Center for Public Safety Excellence
- Fire Department Safety Officers Association
- International Association of Black Professional Firefighters
- International Association of Fire Chiefs
- International Association of Fire Fighters
- International Fire Marshals Association
- International Association of Wildland Fire
- Metropolitan Fire Chiefs Association
- National Association of State Fire Marshals
- National Association of State Foresters
- National Fallen Firefighters Foundation
- National Volunteer Fire Council
- US Fire Administration/National Fire Data Center
- Women in Fire

While new questions were added, many of the original survey questions did not change, enabling responses to be compared across the years. Any comparison where the question was changed is noted in the text. A copy of the survey is included in Appendix C.

The survey was sent out as a census, meaning that it was sent to all the US fire departments with administrative and fire response responsibilities who were listed in the NFPA fire service inventory. In 2020, 26,258 fire departments were sent the survey. In addition to mailing out a paper version of the questionnaire, the survey was offered online for the first time.

A total of 2,969 fire departments responded to the survey, with approximately 75 percent responding online and 25 percent filling out the paper version. Overall, the response rate was 11 percent, ranging from a 7 percent response from fire departments protecting populations of less than 2,500 to a 39 percent response from fire departments protecting populations of 500,000 or more. Some fire departments that responded in 2020 had not responded in previous years, while some that did respond in past years did not. Consequently, this report estimates overall fire department needs, but not the needs of an identical group over time, as the survey responses did not come from exactly the same fire departments for each of the four surveys.
### Appendix B: Supporting Tables

**Table A-1: How many of your emergency responders are equipped with personal protective clothing?**

<table>
<thead>
<tr>
<th>Population Protected</th>
<th>All (100%)</th>
<th>Most (76–99%)</th>
<th>Many (51–75%)</th>
<th>Some (26–50%)</th>
<th>Few (1–25%)</th>
<th>None (0%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>500,000 or More</td>
<td>96%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>250,000 to 499,999</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>100,000 to 249,999</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>50,000 to 99,999</td>
<td>99%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>25,000 to 49,999</td>
<td>98%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>10,000 to 24,999</td>
<td>95%</td>
<td>3%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>5,000 to 9,999</td>
<td>92%</td>
<td>6%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>2,500 to 4,999</td>
<td>85%</td>
<td>11%</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Less than 2,500</td>
<td>83%</td>
<td>11%</td>
<td>2%</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>ALL departments</td>
<td>87%</td>
<td>9%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

**Table A-2: How many of your department’s personal protective clothing is 10 years of age or older?**

<table>
<thead>
<tr>
<th>Population Protected</th>
<th>None (0%)</th>
<th>Few (1–25%)</th>
<th>Some (26–50%)</th>
<th>Many (51–75%)</th>
<th>Most (76–99%)</th>
<th>All (100%)</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>500,000 or More</td>
<td>67%</td>
<td>29%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>4%</td>
</tr>
<tr>
<td>250,000 to 499,999</td>
<td>72%</td>
<td>22%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>6%</td>
</tr>
<tr>
<td>100,000 to 249,999</td>
<td>81%</td>
<td>11%</td>
<td>1%</td>
<td>2%</td>
<td>0%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>50,000 to 99,999</td>
<td>77%</td>
<td>19%</td>
<td>2%</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>25,000 to 49,999</td>
<td>65%</td>
<td>22%</td>
<td>6%</td>
<td>3%</td>
<td>2%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>10,000 to 24,999</td>
<td>54%</td>
<td>27%</td>
<td>10%</td>
<td>4%</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>5,000 to 9,999</td>
<td>41%</td>
<td>29%</td>
<td>15%</td>
<td>8%</td>
<td>4%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>2,500 to 4,999</td>
<td>35%</td>
<td>31%</td>
<td>15%</td>
<td>11%</td>
<td>6%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>Less than 2,500</td>
<td>24%</td>
<td>25%</td>
<td>17%</td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
<td>1%</td>
</tr>
<tr>
<td>ALL departments</td>
<td>35%</td>
<td>26%</td>
<td>15%</td>
<td>9%</td>
<td>7%</td>
<td>6%</td>
<td>1%</td>
</tr>
</tbody>
</table>
Table A-3: What percentage of your on-duty emergency responders can be equipped with portable radios?

<table>
<thead>
<tr>
<th>Population Protected</th>
<th>All (100%)</th>
<th>Most (76–99%)</th>
<th>Many (51–75%)</th>
<th>Some (26–50%)</th>
<th>Few (1–25%)</th>
<th>None (0%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>500,000 or More</td>
<td>96%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>250,000 to 499,999</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>100,000 to 249,999</td>
<td>96%</td>
<td>2%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>50,000 to 99,999</td>
<td>96%</td>
<td>2%</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>25,000 to 49,999</td>
<td>87%</td>
<td>8%</td>
<td>4%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>10,000 to 24,999</td>
<td>77%</td>
<td>12%</td>
<td>5%</td>
<td>5%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>5,000 to 9,999</td>
<td>58%</td>
<td>17%</td>
<td>9%</td>
<td>11%</td>
<td>5%</td>
<td>0%</td>
</tr>
<tr>
<td>2,500 to 4,999</td>
<td>46%</td>
<td>21%</td>
<td>15%</td>
<td>11%</td>
<td>8%</td>
<td>0%</td>
</tr>
<tr>
<td>Less than 2,500</td>
<td>37%</td>
<td>18%</td>
<td>13%</td>
<td>16%</td>
<td>15%</td>
<td>1%</td>
</tr>
<tr>
<td>ALL departments</td>
<td>50%</td>
<td>17%</td>
<td>11%</td>
<td>12%</td>
<td>9%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Table A-4: What percentage of your on-duty emergency responders can be equipped with SCBA??

<table>
<thead>
<tr>
<th>Population Protected</th>
<th>All (100%)</th>
<th>Most (76–99%)</th>
<th>Many (51–75%)</th>
<th>Some (26–50%)</th>
<th>Few (1–25%)</th>
<th>None (0%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>500,000 or More</td>
<td>96%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>250,000 to 499,999</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>100,000 to 249,999</td>
<td>98%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>50,000 to 99,999</td>
<td>98%</td>
<td>1%</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>25,000 to 49,999</td>
<td>92%</td>
<td>4%</td>
<td>2%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>10,000 to 24,999</td>
<td>83%</td>
<td>10%</td>
<td>5%</td>
<td>1%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>5,000 to 9,999</td>
<td>61%</td>
<td>20%</td>
<td>11%</td>
<td>6%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>2,500 to 4,999</td>
<td>44%</td>
<td>22%</td>
<td>19%</td>
<td>13%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>Less than 2,500</td>
<td>28%</td>
<td>19%</td>
<td>21%</td>
<td>20%</td>
<td>10%</td>
<td>2%</td>
</tr>
<tr>
<td>ALL departments</td>
<td>47%</td>
<td>18%</td>
<td>16%</td>
<td>13%</td>
<td>5%</td>
<td>1%</td>
</tr>
</tbody>
</table>
Table A-5: What percentage of your SCBA are 10 years old or older?

<table>
<thead>
<tr>
<th>Answers</th>
<th>None (0%)</th>
<th>Few (1–25%)</th>
<th>Some (26–50%)</th>
<th>Many (51–75%)</th>
<th>Most (76–99%)</th>
<th>All (100%)</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>500,000 or More</td>
<td>71%</td>
<td>0%</td>
<td>4%</td>
<td>4%</td>
<td>13%</td>
<td>8%</td>
<td>0%</td>
</tr>
<tr>
<td>250,000 to 499,999</td>
<td>78%</td>
<td>6%</td>
<td>0%</td>
<td>0%</td>
<td>6%</td>
<td>11%</td>
<td>0%</td>
</tr>
<tr>
<td>100,000 to 249,999</td>
<td>62%</td>
<td>11%</td>
<td>5%</td>
<td>2%</td>
<td>5%</td>
<td>11%</td>
<td>4%</td>
</tr>
<tr>
<td>50,000 to 99,999</td>
<td>66%</td>
<td>11%</td>
<td>4%</td>
<td>1%</td>
<td>2%</td>
<td>15%</td>
<td>2%</td>
</tr>
<tr>
<td>25,000 to 49,999</td>
<td>63%</td>
<td>8%</td>
<td>4%</td>
<td>4%</td>
<td>5%</td>
<td>16%</td>
<td>1%</td>
</tr>
<tr>
<td>10,000 to 24,999</td>
<td>57%</td>
<td>7%</td>
<td>5%</td>
<td>3%</td>
<td>5%</td>
<td>22%</td>
<td>1%</td>
</tr>
<tr>
<td>5,000 to 9,999</td>
<td>47%</td>
<td>9%</td>
<td>5%</td>
<td>4%</td>
<td>6%</td>
<td>27%</td>
<td>2%</td>
</tr>
<tr>
<td>2,500 to 4,999</td>
<td>42%</td>
<td>7%</td>
<td>7%</td>
<td>4%</td>
<td>8%</td>
<td>31%</td>
<td>2%</td>
</tr>
<tr>
<td>Less than 2,500</td>
<td>29%</td>
<td>9%</td>
<td>8%</td>
<td>5%</td>
<td>7%</td>
<td>40%</td>
<td>3%</td>
</tr>
<tr>
<td>ALL departments</td>
<td>39%</td>
<td>8%</td>
<td>7%</td>
<td>4%</td>
<td>6%</td>
<td>32%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Table A-6: How many responding firefighters who work in immediately dangerous to life or health (IDLH) environment are equipped with a PASS device?

<table>
<thead>
<tr>
<th>Population Protected</th>
<th>All (100%)</th>
<th>Most (76–99%)</th>
<th>Many (51–75%)</th>
<th>Some (26–50%)</th>
<th>Few (1–25%)</th>
<th>None (0%)</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>500,000 or More</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>250,000 to 499,999</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>100,000 to 249,999</td>
<td>99%</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>50,000 to 99,999</td>
<td>99%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>25,000 to 49,999</td>
<td>97%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>10,000 to 24,999</td>
<td>93%</td>
<td>3%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>5,000 to 9,999</td>
<td>83%</td>
<td>6%</td>
<td>4%</td>
<td>2%</td>
<td>1%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>2,500 to 4,999</td>
<td>78%</td>
<td>5%</td>
<td>7%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>Less than 2,500</td>
<td>58%</td>
<td>9%</td>
<td>6%</td>
<td>8%</td>
<td>6%</td>
<td>10%</td>
<td>4%</td>
</tr>
<tr>
<td>ALL departments</td>
<td>72%</td>
<td>7%</td>
<td>5%</td>
<td>5%</td>
<td>4%</td>
<td>6%</td>
<td>2%</td>
</tr>
</tbody>
</table>
Table A-7: How many of your emergency responders are equipped with wildland fire personal protective clothing?

<table>
<thead>
<tr>
<th>Population Protected</th>
<th>All (100%)</th>
<th>Most (76–99%)</th>
<th>Many (51–75%)</th>
<th>Some (26–50%)</th>
<th>Few (1–25%)</th>
<th>None (0%)</th>
<th>No Wildland Firefighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>500,000 or More</td>
<td>54%</td>
<td>4%</td>
<td>0%</td>
<td>4%</td>
<td>8%</td>
<td>13%</td>
<td>17%</td>
</tr>
<tr>
<td>250,000 to 499,999</td>
<td>56%</td>
<td>0%</td>
<td>0%</td>
<td>6%</td>
<td>22%</td>
<td>11%</td>
<td>6%</td>
</tr>
<tr>
<td>100,000 to 249,999</td>
<td>31%</td>
<td>2%</td>
<td>0%</td>
<td>1%</td>
<td>12%</td>
<td>21%</td>
<td>32%</td>
</tr>
<tr>
<td>50,000 to 99,999</td>
<td>30%</td>
<td>2%</td>
<td>1%</td>
<td>5%</td>
<td>10%</td>
<td>13%</td>
<td>38%</td>
</tr>
<tr>
<td>25,000 to 49,999</td>
<td>20%</td>
<td>5%</td>
<td>3%</td>
<td>3%</td>
<td>6%</td>
<td>19%</td>
<td>43%</td>
</tr>
<tr>
<td>10,000 to 24,999</td>
<td>23%</td>
<td>6%</td>
<td>3%</td>
<td>5%</td>
<td>9%</td>
<td>27%</td>
<td>27%</td>
</tr>
<tr>
<td>5,000 to 9,999</td>
<td>26%</td>
<td>12%</td>
<td>5%</td>
<td>6%</td>
<td>13%</td>
<td>19%</td>
<td>18%</td>
</tr>
<tr>
<td>2,500 to 4,999</td>
<td>28%</td>
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<td>9%</td>
<td>10%</td>
<td>11%</td>
<td>18%</td>
<td>10%</td>
</tr>
<tr>
<td>Less than 2,500</td>
<td>34%</td>
<td>14%</td>
<td>8%</td>
<td>9%</td>
<td>11%</td>
<td>19%</td>
<td>6%</td>
</tr>
<tr>
<td>ALL departments</td>
<td>30%</td>
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<td>8%</td>
<td>11%</td>
<td>20%</td>
<td>13%</td>
</tr>
</tbody>
</table>

Table A-8: At the start of the COVID-19 outbreak, what percent of your emergency responders could you outfit with medical PPE?

<table>
<thead>
<tr>
<th>Population Protected</th>
<th>All (100%)</th>
<th>Most (76–99%)</th>
<th>Many (51–75%)</th>
<th>Some (26–50%)</th>
<th>Few (1–25%)</th>
<th>None (0%)</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>500,000 or More</td>
<td>96%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>250,000 to 499,999</td>
<td>94%</td>
<td>0%</td>
<td>6%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>100,000 to 249,999</td>
<td>89%</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>50,000 to 99,999</td>
<td>85%</td>
<td>7%</td>
<td>3%</td>
<td>3%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>25,000 to 49,999</td>
<td>75%</td>
<td>9%</td>
<td>5%</td>
<td>4%</td>
<td>5%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>10,000 to 24,999</td>
<td>60%</td>
<td>10%</td>
<td>6%</td>
<td>11%</td>
<td>9%</td>
<td>3%</td>
<td>0%</td>
</tr>
<tr>
<td>5,000 to 9,999</td>
<td>42%</td>
<td>13%</td>
<td>7%</td>
<td>14%</td>
<td>16%</td>
<td>7%</td>
<td>1%</td>
</tr>
<tr>
<td>2,500 to 4,999</td>
<td>29%</td>
<td>13%</td>
<td>10%</td>
<td>16%</td>
<td>19%</td>
<td>12%</td>
<td>1%</td>
</tr>
<tr>
<td>Less than 2,500</td>
<td>25%</td>
<td>7%</td>
<td>7%</td>
<td>14%</td>
<td>25%</td>
<td>20%</td>
<td>2%</td>
</tr>
<tr>
<td>ALL departments</td>
<td>37%</td>
<td>9%</td>
<td>7%</td>
<td>13%</td>
<td>19%</td>
<td>13%</td>
<td>1%</td>
</tr>
</tbody>
</table>
Table A-9: What percent of your emergency responders can you currently outfit with medical PPE?

<table>
<thead>
<tr>
<th>Population Protected</th>
<th>All (100%)</th>
<th>Most (76–99%)</th>
<th>Many (51–75%)</th>
<th>Some (26–50%)</th>
<th>Few (1–25%)</th>
<th>None (0%)</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>500,000 or More</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>250,000 to 499,999</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>100,000 to 249,999</td>
<td>96%</td>
<td>1%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>50,000 to 99,999</td>
<td>96%</td>
<td>4%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>25,000 to 49,999</td>
<td>91%</td>
<td>4%</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>10,000 to 24,999</td>
<td>79%</td>
<td>10%</td>
<td>4%</td>
<td>3%</td>
<td>3%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>5,000 to 9,999</td>
<td>63%</td>
<td>12%</td>
<td>8%</td>
<td>8%</td>
<td>7%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>2,500 to 4,999</td>
<td>50%</td>
<td>15%</td>
<td>9%</td>
<td>11%</td>
<td>9%</td>
<td>5%</td>
<td>1%</td>
</tr>
<tr>
<td>Less than 2,500</td>
<td>39%</td>
<td>12%</td>
<td>8%</td>
<td>14%</td>
<td>14%</td>
<td>11%</td>
<td>2%</td>
</tr>
<tr>
<td>ALL departments</td>
<td>53%</td>
<td>12%</td>
<td>7%</td>
<td>10%</td>
<td>10%</td>
<td>7%</td>
<td>1%</td>
</tr>
</tbody>
</table>
PART I. BASIC INFORMATION

Name of person completing form: ________________________________

Rank/Title: __________________________________________________

NFIRS/FDID: _________________________________________________

E-mail address: _____________________________________________ Phone: (_____)______

1. Population (permanent residents) your department has primary responsibility to protect (exclude mutual aid areas): __________

2. Area (in square miles) your department has primary responsibility to protect (exclude mutual aid areas): __________

3. Number of buildings in community that are 3 or more stories in height (check one):
   - None
   - 1–4
   - 5–10
   - 11–24
   - 25–49
   - 50 or more

4. What share (%) of your budgeted revenue is from (total 100%)? Taxes: ________% Fundraising: ________% Payment per call/Contract services: ________% Ambulance Billing: ________% Fees: ________% Insurance: ________% SAFER/AFG or similar grants: ________% Other: (specify) ________%

PART II. PERSONNEL AND THEIR CAPABILITIES

5. What was the change in total full-time positions or full-time equivalents (FTE) in each of the following categories for your department since 2016? (Use a negative number for losses, ‘0’ for no change, and a positive number for gains.)
   - Firefighters: ________
   - Enforcement: ________
   - Education: ________
   - Risk Reduction: ________
   - Administration: ________

6. Does your department have a program to ensure diversity and inclusion in your hiring (or volunteer recruiting) and retention practices?  
   - Yes  
   - No

7. Total number of full-time (career) uniformed firefighters: ________ (If none, go to Question 12):  
   - How many are female? ________
   - Average number of full-time career / paid firefighters on duty available to respond to emergencies: ________

8. Minimum number of on-duty career / paid personnel ASSIGNED to an engine / pumper (check one):
   - 1
   - 2
   - 3
   - 4
   - 5+
   - Not applicable

9. Number of on-duty career / paid personnel TYPICALLY STAFFING an engine / pumper (may be the same as the number assigned) (check one):
   - 1
   - 2
   - 3
   - 4
   - 5+
   - Not applicable

10. Minimum number of on-duty career / paid personnel ASSIGNED to a ladder truck / aerial (check one):
    - 1
    - 2
    - 3
    - 4
    - 5+
    - Not applicable

11. Number of on-duty career / paid personnel TYPICALLY STAFFING a ladder truck / aerial (may be the same as the number assigned) (check one):
    - 1
    - 2
    - 3
    - 4
    - 5+
    - Not applicable
12. Total number of active part-time (including call or volunteer) firefighters: _____

   How many are female? _____

   Average number of call / volunteer personnel available who respond to emergencies:
   During weekdays: Days _____ Nights _____
   During weekends: Days _____ Nights _____

13. How many active members of your fire department only fill support or auxiliary roles and have no direct firefighting activities?

   If any, fill only those roles. Check all that apply.
   - First aid
   - Directing traffic
   - Command post ops
   - Rehab
   - Water supply
   - Communications
   - Logistics
   - Other (specify): __________________________


   A. Is this a role your fire department performs? (check one), (If no, go to Question 15)  
   - Yes
   - No

   B. What percentage of the personnel who perform this duty have received formal training (for example, in a classroom or online that meet the qualifications of NFPA 1001) at the local, regional, or state level (not just on-the-job training)?
   - None (0%)
   - Few (1–25%)
   - Some (26–50%)
   - Many (51–75%)
   - Most (76–99%)
   - All (100%)

   C. What percentage of department personnel who perform this duty are certified to Firefighter Level I (NFPA 1001)?
   - None (0%)
   - Few (1–25%)
   - Some (26–50%)
   - Many (51–75%)
   - Most (76–99%)
   - All (100%)

   D. What percentage of your fire department’s firefighters are restricted to exterior firefighting only?
   - None (0%)
   - Few (1–25%)
   - Some (26–50%)
   - Many (51–75%)
   - Most (76–99%)
   - All (100%)

15. Emergency medical service (EMS).

   A. Is this a service your fire department provides? (check one)  
   - Yes
   - No (skip to 15C)

   B. If yes to 15A, what percentage of department personnel performing this duty are certified to the following levels? (For all that apply, include percentages for highest level. Total must equal 100%)
   a. No certification _____%  
   b. EMR: Emergency Medical Responder _____%  
   c. EMT: Emergency Medical Technician _____%  
   d. AEMT: Advanced Emergency Medical Technician _____%  
   e. Paramedic _____%  

   C. Does your community provide ambulance services?  
   - Yes: Fire Department Based Service
   - Yes: Government or Third Service
   - Yes: Hospital Based
   - Yes: Private
   - Yes: Other (specify) ________
   - No ambulance service

   D. Does your fire department provide Tactical EMS for law enforcement operations?  
   - Yes
   - No


   A. Is this a service your fire department provides? (check one)  
   - Yes
   - No (If no, go to Question 17)

   B. What percentage of department personnel performing this duty are certified to the following levels? (For all that apply, include percentages for highest level. Total must equal 100%)
   a. No certification _____%  
   b. Awareness _____%  
   c. Operational_____%  
   d. Technician _____%  

17. Wildland-Urban Interface (WUI)/Wildland (brush, grass, forest) firefighting.

   A. Is this a role your fire department performs? (check one)  
   - Yes
   - No (If no, go to Question 18)

   B. What percentage of the personnel who perform this duty have received formal training (for example, in a classroom or online that meet the qualifications of NFPA 1051) at the local, regional, or state level (not just on-the-job training)?
   - None (0%)
   - Few (1–25%)
   - Some (26–50%)
   - Many (51–75%)
   - Most (76–99%)
   - All (100%)

   C. Does this training include specialized Wildland-Urban Interface firefighting operations training?
   - Yes
   - No

   D. How many of your emergency responders are equipped with wildland fire personal protective clothing?
   - None (0%)
   - Few (1–25%)
   - Some (26–50%)
   - Many (51–75%)
   - Most (76–99%)
   - All (100%)

18. Fire prevention (preparedness & mitigation).

   A. Is this a role your fire department performs? (check one)  
   - Yes
   - No (If no, go to Question 19)

   B. If yes, what percentage of the personnel who perform this duty have received formal training (for example, in a classroom or online that meet the qualifications of NFPA 1031) at the local, regional, or state level (not just on-the-job training)?
   - None (0%)
   - Few (1–25%)
   - Some (26–50%)
   - Many (51–75%)
   - Most (76–99%)
   - All (100%)
   A. Is this a role your fire department performs? (check one)  
      □ Yes □ No
   B. If yes, what percentage of the personnel who perform this duty have received formal training (for example, in a classroom or online that meet the qualifications of NFPA 1031 and 1033) at the local, regional, or state level (not just on-the-job training)?  
      □ None (0%) □ Few (1–25%) □ Some (26–50%) □ Many (51–75%) □ Most (76–99%) □ All (100%)

20. Active shooter response.
   A. Is this a role your fire department performs? (check one)  
      □ Yes □ No (If no, go to Question 21)
   B. If yes, does your department have SOPs (Standard Operating Procedures) / SOGs (Standard Operating Guidelines) in place addressing proper response and action taken at an active shooter event? (check one)  
      □ Yes □ No
   C. Have your department’s personnel received multi-agency training (police, fire, EMS, Sheriffs, etc.) and been tested on the training and special equipment required? (check one)  
      □ Yes □ No

21. Traffic control.
   A. Is this a role your department performs? (check one)  
      □ Yes □ No
   B. If yes, what percentage of the personnel who perform this duty have received formal training (for example, in a classroom or online that meet the qualifications of NFPA 1091) at the local, regional, or state level (not just on-the-job training)?  
      □ None (0%) □ Few (1–25%) □ Some (26–50%) □ Many (51–75%) □ Most (76–99%) □ All (100%)

22. Basic firefighter fitness and health.
   A. Does your department have a program to maintain basic firefighter fitness and health (e.g., NFPA 1500)? (check one)  
      □ Yes □ No (If no, go to Question 22C)
   B. Is the program associated with the IAFC / IAFF Wellness-Fitness Initiative (WFI)?  
      □ Yes □ No
   C. Do you provide medical and physical evaluations meeting NFPA 1582 for all firefighters?  
      □ Yes □ No (If no, skip to Question 23)
   D. How often?  
      □ New firefighters only □ Every six months or annually □ Every two years □ Every three years □ Other _____
   E. Does this program include a fitness assessment for all firefighters?  
      □ Yes □ No (if no, skip to question 23)
   F. How often?  
      □ New firefighters only □ Every six months or annually □ Every two years □ Every three years □ Other _____

23. Does your department have a Behavioral Health Program?  
   □ Yes □ No (If no, go to Question 25)

24. Which of the following are included in your behavioral health program (check all that apply)?  
   □ Fitness for duty evaluation □ Cancer prevention education □ Physical health education □ Heart attack prevention education
   □ Post-Traumatic Stress support □ Trained behavioral peer support □ Behavioral health education □ Suicide prevention education
   □ Relationship with a Behavior Specialist □ Volunteer clinical interventions □ Wellness preventative education
   □ Other (please specify): ____________

25. Does your department actively track exposures or have a mechanism for individual exposure tracking (including carcinogens, hazardous materials, and infectious diseases)?  
   □ Yes—Department actively tracks □ Yes—Mechanism for individuals □ Yes—Both □ No—None of these

26. Does your department have an Infection Control / PPE Decontamination Program (infectious and communicable disease hazards)? (check one)  
   □ Yes □ No

27. Does your department have an Exposure Control / PPE Decontamination Program (carcinogen and other toxic hazards)? (check one)  
   □ Yes □ No

28. Which of the following air quality measures does your department monitor at the fireground? (check all that apply)  
   □ O2 (Oxygen) □ HCN (Cyanide) □ CO (Carbon Monoxide) □ Volatile Organic Compound (VOC)
   □ Other (please specify) __________________________ □ Do not monitor

29. Which of the following cancer prevention best practices apply to your department? (check all that apply)  
   □ Cancer screening program □ Second set of structural firefighter gear for all firefighters
   □ SOPs/SOGs for cleaning gear after a fire □ Gross decontamination of gear at the fireground
   □ Provide cleaning wipes for use on face/neck/hands □ Training to ‘shower within an hour’ after a fire
   □ Prohibit structural firefighter gear in living quarters of fire stations □ Other (please specify) ________ □ None of these
PART III. COMMUNITY RISK REDUCTION ACTIVITIES

30. Which of the following engineering programs or activities does your department conduct? (check all that apply)
   - Construction plans review
   - Permit approval
   - Permit inspections (for new construction)
   - Certificate of occupancy
   - Pre-incident planning
   - Routine testing of active automatic systems (e.g., fire sprinkler, detection/alarm, smoke control)
   - Hazard Mitigation Planning Assessment
     - Natural disasters (hurricanes, wildfire, tornadoes, floods, earthquakes)
     - Industrial chemical disasters
     - Transportation disasters
   - No such engineering programs

If you have a Hazard Mitigation Planning Risk Assessment program, does your plan include:
   - Natural disasters (hurricanes, wildfire, tornadoes, floods, earthquakes)
   - Industrial chemical disasters
   - Transportation disasters
   - No such engineering programs

31. Who conducts the fire code inspections in your community? (check all that apply)
   - Full-time fire department inspectors
   - In-service (on duty) firefighters
   - Separate inspection bureau
   - Building department
   - State department/fire prevention bureau
   - No one
   - Other (please specify) _________________

32. What percentage of commercial or inspectable properties are inspected once a year?
   - None (0%)
   - Few (1–25%)
   - Some (26–50%)
   - Many (51–75%)
   - Most (76–99%)
   - All (100%)
   - Not responsible for conducting inspections

33. Who determines that a fire was deliberately set? (check all that apply)
   - Fire department fire investigator
   - Regional/state fire task force investigator
   - Incident command or other front line or company fire officer
   - Police department
   - Contract investigator
   - Insurance investigator
   - Other (please specify) _________________

34. Which of the following education programs or activities does your department conduct? (check all that apply)
   - Youth firesetter program
   - School fire safety education program based on a national model curriculum
   - Car seat installation
   - Home fire sprinkler education
   - Home safety visits
   - Cardiopulmonary Resuscitation (CPR) instruction
   - Wildfire safety program based on a national model program
   - Older adult fire safety program based on a national model program
   - Fire Prevention Week™ activities
   - Free distribution of home smoke alarms
   - Free installation of home smoke alarms
   - Other prevention program (please specify) _________________
   - No education program

35. Which of the following apply to the education programs or activities your department conducts? (check all that apply)
   - Based on a Community Risk Assessment
   - Ensure diversity & inclusion based on your community's demographics
   - Collect data on number of people reached
   - Measure impact over time
   - None of these

PART IV. FACILITIES, APPARATUS, AND EQUIPMENT

36. Number of fire stations: __________  Number of stations over 40 years old: __________
   - Number of stations having backup power: __________
   - Number of stations equipped for exhaust emission control (e.g. diesel exhaust extraction): __________
   - Number of stations with private or separate facilities for men and women: __________

37. Number of each type of apparatus in service and reserves (numbers by age should sum to total):

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Engines / Pumps</th>
<th>Ladders / Aerials</th>
<th>Tankers / Tenders</th>
<th>Ambulances or Other Transport Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In Service</td>
<td>Reserve</td>
<td>In Service</td>
<td>Reserve</td>
</tr>
<tr>
<td>0–14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>15–19</td>
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<td>20–29</td>
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</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

38. Does your fire department have a plan for apparatus replacement on a regular schedule?
   - Yes, plan and budget
   - Plan only
   - No plan or budget
39. Which of the following does your department require prior to a member driving an emergency vehicle?
(check all that apply)  
- Certification or specific training  
- Hands-on training using the actual vehicle  
- Demonstration of competency at least once a year  
- Formal driver’s training at least twice a year  
- None of these

40. Portable radios.
A. What percentage of your on-duty emergency responders can be equipped with portable radios?
- None (0%)  
- Few (1–25%)  
- Some (26–50%)  
- Many (51–75%)  
- Most (76–99%)  
- All (100%)

41. Self-contained breathing apparatus (SCBA).
A. What percentage of your on-duty emergency responders can be equipped with SCBA?
- None (0%)  
- Few (1–25%)  
- Some (26–50%)  
- Many (51–75%)  
- Most (76–99%)  
- All (100%)  
- Don’t know
B. What percentage of your SCBA are 10 years old or older?
- None (0%)  
- Few (1–25%)  
- Some (26–50%)  
- Many (51–75%)  
- Most (76–99%)  
- All (100%)  
- Don’t know

42. Personal alert safety system (PASS) devices.
A. How many responding firefighters who work in immediately dangerous to life or health (IDLH) environment are equipped
with a PASS device?
- None (0%)  
- Few (1–25%)  
- Some (26–50%)  
- Many (51–75%)  
- Most (76–99%)  
- All (100%)  
- Don’t know

43. Personal protective clothing.
A. How many of your emergency responders are equipped with personal protective clothing?
- None (0%)  
- Few (1–25%)  
- Some (26–50%)  
- Many (51–75%)  
- Most (76–99%)  
- All (100%)  
- Don’t know
B. How many of your department’s personal protective clothing is 10 years of age or older?
- None (0%)  
- Few (1–25%)  
- Some (26–50%)  
- Many (51–75%)  
- Most (76–99%)  
- All (100%)  
- Don’t know
C. Do you have reserve personal protective clothing sufficient to equip 10% of your emergency responders? (check one)
- Yes  
- No  
- Don’t know
D. Is your personal protective ensemble inspected and tested each year?
- Inspected only  
- Tested only  
- Inspected and tested  
- None of these
E. Does your department have laundering facilities or provide services (external) to clean contaminated personal protective
clothing?
- We have laundering facilities  
- We utilize an outside service  
- We have our own facilities and use an outside service  
- Neither facilities nor outside service

44. For what percentage of fireground incidents do you have a thermal imager / thermal imaging cameras available?
- None (0%)  
- Few (1–25%)  
- Some (26–50%)  
- Many (51–75%)  
- Most (76–99%)  
- All (100%)  
- Don’t know

PART V. COMMUNICATIONS AND COMMUNICATIONS EQUIPMENT

45. Multi-agency communication.
A. Can you communicate by radio on an incident scene with your local/state/federal emergency response partners (includes
frequency compatibility)? (check one)
- Yes  
- No  
- Don’t know
B. If yes to 45A, how many of your partners (agencies/departments) can you communicate with at an incident scene?
- None (0%)  
- Few (1–25%)  
- Some (26–50%)  
- Many (51–75%)  
- Most (76–99%)  
- All (100%)  
- Don’t know

46. Dispatch.
A. Who has the primary responsibilities [i.e., public safety answering point (PSAP)] of answering 911 calls?
- PSAP that answers police, fire, and EMS calls  
- PSAP that answers fire and EMS calls  
- Police department
- Fire department  
- Private company
B. If the 911 call is determined to be a fire call, is that call processed by the same center that answered the initial 911 call?
- Yes  
- No, the call is transferred to another center to be processed
C. Does the 911 center that processes the fire call typically have one person that processes and dispatch the same fire call?
- Yes  
- No, we typically have call takers and separate dispatchers.
D. If no to 46C, does the 911 center that processes the fire call typically have at least 2 people on duty at all times?
- Yes  
- No, sometimes we cut back to one person on duty  
- No, we never have two persons on duty
E. Do you also have a backup dispatch facility? (check one)
- Yes  
- No
PART VI. ABILITY TO HANDLE UNUSUALLY CHALLENGING INCIDENTS

47. Wildland-Urban Interface (WUI) fire affecting structures.
   A. Is protecting structures in the Wildland-Urban Interface (WUI) a role your fire department performs? (check one)
      □ Yes □ No (If no, go to Question 48.)
   B. What is the maximum number of involved structures during a wildfire event your department could handle alone?
      □ 1 □ 2–5 □ 6–20 □ 21+
   C. What is the maximum area of a wildfire (acres) your department could handle alone?
      □ Less than 1 acre □ 1–10 acres □ 11–50 acres □ 51–100 acres □ Greater than 100 acres
   D. If you had a wildfire incident affecting 2–5 structures how far would you have to go to obtain enough people with specialized training and equipment for this incident? (check one)
      □ Local would be enough □ Regional □ State □ National
   E. If you had a wildfire incident affecting 6–20 structures how far would you have to go to obtain enough people with specialized training and equipment for this incident? (check one)
      □ Local would be enough □ Regional □ State □ National
   F. If you had a wildfire incident affecting more than 20 structures how far would you have to go to obtain enough people with specialized training and equipment for this incident? (check one)
      □ Local would be enough □ Regional □ State □ National
   G. Do you have a plan for obtaining assistance from others for a wildfire? (check one)
      □ Yes, written agreement □ Yes, informal □ Yes, other (specify) ___________________________ □ No

48. At the start of the COVID-19 outbreak, did your department have an infection control program that meets the qualifications of NFPA 1581? □ Yes □ No

49. Does your department currently have an infection control program that meets the qualifications of NFPA 1581? □ Yes □ No

50. At the start of the COVID-19 outbreak, what percent of your emergency responders could you outfit with medical PPE?
    □ None (0%) □ Few (1–25%) □ Some (26–50%) □ Many (51–75%) □ Most (76–99%) □ All (100%) □ Don’t know

51. What percent of your emergency responders can you currently outfit with medical PPE?
    □ None (0%) □ Few (1–25%) □ Some (26–50%) □ Many (51–75%) □ Most (76–99%) □ All (100%) □ Don’t know

PART VIII. YOUR TOP 3 NEEDS IN YOUR WORDS:

1. ____________________________________________________________

2. ____________________________________________________________

3. ____________________________________________________________