Workshop: Fire and Emergency Service Personnel Knowledge, Skills and Maintaining Proficiency

PROCEEDINGS BY:

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Fire Protection Research Foundation
One Batterymarch Park, Quincy, MA

Held: 1-2 October 2019
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Acknowledgements

This workshop effort was supported by National Fire Protection Association, through the Research Fund to the Fire Protection Research Foundation (FPRF). The FPRF also acknowledge the travel support from the Pro Board® Jim Shannon Leadership Fund to the Fire Protection Research Foundation.

The planning for this Workshop has been guided with the inputs of: William Peterson (NFPA Pro-Qual Project Correlating Committee Chair), Robert Fash (NFPA Staff, Emergency Response & Responder Safety), and Ed Conlin (NFPA Staff, Director, Emergency Response & Responder Safety). In addition to their input with planning aspects of the workshop, they also provided an active role in its implementation as presenters, and facilitators. Their guidance and direction have been a valuable contribution to the success of the workshop and is genuinely appreciated. The FPRF would also like to thank all the presenters, and attendees for their inputs, comments and feedback during this workshop.

This workshop summary report has been prepared by Casey Grant, Executive Director and Sreenivasan Ranganathan, Research Project Manager, at the Fire Protection Research Foundation. The workshop and associated research report were hosted by the Fire Protection Research Foundation (FPRF), independent research affiliate of the National Fire Protection Association (NFPA). Definitive next actionable steps, such as changes to applicable Pro-Qual Standards, are the purview of the NFPA Codes & Standards process and are beyond the scope of the FPRF and this workshop activity. All proposed changes to the NFPA Codes & Standards are in the domain of the NFPA consensus process.

The information contained herein is based on the input and discussion of multiple professionals and subject-matter-experts. While considerable effort has been taken to accurately document these inputs and discussions, the final interpretation of the information contained herein resides with the report authors. The content, opinions and conclusions contained in this report are solely those of the authors and do not necessarily represent the views of the Fire Protection Research Foundation, NFPA, Project Technical Panel or Sponsors. The Fire Protection Research Foundation makes no guaranty or warranty as to the accuracy or completeness of any information published herein.

About the Fire Protection Research Foundation

The Fire Protection Research Foundation plans, manages, and communicates research on a broad range of fire safety issues in collaboration with scientists and laboratories around the world. The Foundation is an affiliate of NFPA.
About the National Fire Protection Association (NFPA)

Founded in 1896, NFPA is a global, nonprofit organization devoted to eliminating death, injury, property and economic loss due to fire, electrical and related hazards. The association delivers information and knowledge through more than 300 consensus codes and standards, research, training, education, outreach and advocacy; and by partnering with others who share an interest in furthering the NFPA mission. All NFPA codes and standards can be viewed online for free. NFPA's membership totals more than 55,000 individuals around the world.

Keywords: professional qualifications, firefighter, fire officer, fire chief, knowledge, certification, competency, continuing education, skills maintenance, proficiency, recertification

Report #: FPRF-2019-21

FPRF Project Manager: Sreenivasan Ranganathan and Casey Grant.
Executive Summary

These are the proceedings of the “Fire and Emergency Service Personnel Knowledge, Skills and Maintaining Proficiency” Workshop. The event was held on 1st and 2nd October 2019 in Quincy, Massachusetts.

The workshop and associated research report were hosted by the Fire Protection Research Foundation (FPRF), independent research affiliate of the National Fire Protection Association (NFPA). Definitive next actionable steps, such as changes to applicable Pro-Qual Standards, are the purview of the NFPA Codes & Standards process and are beyond the scope of the FPRF and this workshop activity. All proposed changes to the NFPA Codes & Standards are in the domain of the NFPA consensus process.

The overall goal of this workshop was to establish an understanding of developing a process to ensure continued demonstration of knowledge and skill proficiency against a given level of credentialing for the fire and emergency services personnel. This was accomplished through an interactive approach involving interested stakeholders that focused:

- Brief review of baseline information; (i.e., evolution, current status and anticipated direction of the Pro-Qual system and JPR development; current landscape of practice for maintaining skill proficiency for fire and emergency personnel in the North America; clarify the relevancy and applicability of process adopted in parallel professions)
- Identify, prioritize, and assess the options to implement such a process for fire and emergency service personnel; and
- Establish recommended action plan to provide guidance to the Pro-Qual infrastructure to meet these needs.

The following are the key points from the summary of this workshop activity (taken from Chapter 5 of this proceedings):

**General Observations:** Among the summary observations, the following are the overarching points that are considered important.

a) This is an important topic for the profession of firefighting. There is value addition for maintaining proficiency program after the initial certification, and this applies to individuals, organizations and the entire fire service community.

b) There is currently an established infrastructure, but with inconsistent characteristics and features addressing maintaining proficiencies to varying extents. Future universal enhancements should seek minimal disruption on the established infrastructure.

c) The Fire Service is unique when compared to other parallel professions that have already embraced maintaining proficiencies. These unique characteristics and features are addressable and are not insurmountable.
d) Any approach going forward should be well thought out, embraced by key stakeholder organizations, implement in realistic phases, and properly communicated.

e) The workshop proceedings and the associated research report did not seek to establish clear lines of consensus in a manner similar to the NFPA codes and standards process, however, based on the discussions some items had strong consensus perspective whereas others were more borderline. The deliverables from the Fire Protection Research Foundation provide supporting guidance for others, such as in the codes and standards arena to take definitive steps to enable progressive change on this topic.

The summary below are the specific observations from the workshop related to actionable next steps.

A. Steering Entity:

1. Establish a steering entity, and consider a title such as “Maintaining Proficiencies Organizational Summit”.
2. Identify and Include all key organizational stakeholder representatives.
3. Implement such an organizational summit as soon as possible, at least in early 2020, with a face to face meeting.
4. Identify a chair who is a proven leader, deeply knowledgeable in this subject matter, recognized and respected in the fire service, able to fairly coordinate the requirements and need of the all impacted stakeholders (e.g., Dr. Denis Onieal, USFA).
5. Steering entity goals and objectives:
   a) Establish the architecture for handling all organizational details, such as roles and responsibilities in support of maintain proficiencies (e.g., National Database; National Repository).
   b) Create a strategic implementation plan with clear timeframes, communication strategy, etc.
   c) Clearly outline the resources necessary to implement this and handling of resources.

B. Philosophical Approach:

1. “Inside-out or Outside-in”: Two basic philosophical approaches were discussed. One is starting centralized key document such as NFPA 1000 that apply to all of the Fire Service and the other starts with narrowly focused documents addressing specialized activities (e.g., NFPA 1041, NFPA 1021). The characteristics of these two approaches, both short term and long term, address the following: stakeholder acceptance, processing efficiencies, likelihood of success, logical sequence of implementation, cost-benefit analysis, and others. Note: NFPA 1000 ensures credibility of the Accreditation process and does not currently mandate specific requirements such as “current knowledge and skills recertification or renewal” in the individual Pro Qual Technical Standards (Section 5.2.7., NFPA 1000, 2017 Edition).
2. Phase-in approach: Consider a phase-in approach with a defined timeline for progressive implementation.
3. Define “Proficiency”:

There needs to be universal agreement on the measures, magnitudes, and thresholds necessary to achieve proficiency (e.g., whether hourly requirements of continuing education can evaluate maintaining proficiency).

C. Application Challenges and Opportunities:

1. Special Considerations:

   Special attention needs to be given to unique application challenges that have direct impact on overall implementation such as:
   
   a. Reciprocity (i.e., universal acceptance across jurisdictions)
   b. Multiple certifications (e.g., HAZMAT, Instructor, Investigator, Tech Rescue, etc.)
   c. Grand fathering (i.e., credit for experience)
   d. Frequency (e.g., bi-annual, annual, etc.)
   e. Consequences (i.e., what to do with those who repeatedly fail), and
   f. Others

2. International implications:

   Addressing the needs of the fire service worldwide as a profession is considered important. There is recognition that there is significant opportunity to extend the well-established North American Pro-Qual infrastructure to other parts of the worldwide fire service that is seeking a similar approach.

D. Critical Assessments:

1. Financial Implications:

   Considerations should be given for assessing all relevant financial implications impacting individuals and organizations to provide clear understanding of value added and necessary resources.

2. Communication Plan:

   Consideration should be given for a thorough and detailed strategic plan for communicating all phases of any planned rollout. This is important to address concerns of all critical stakeholders necessary for success.
Project Technical Panel

The project technical panel for the associated research study, in accordance with the Foundation Policies for the Conduct of Research Projects, are the following individuals:

Angela White, IFSAC & Wisconsin Technical College System

Anthony O’Neill, Pro Board (Primary)

Brian Brauer, University of Illinois Fire Service Institute

Debbie Sobotka, Center for Public Safety Excellence

Fred Piechota, Pro Board (Alternate)

Robert Fash, NFPA

William Peterson, NFPA Pro Qual Correlating Committee Chair
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Abbreviations

CC: Correlating Committee
CPSE: Center for Public Safety Excellence
FDSOA: Fire Department Safety Officers Association
FPRF: Fire Protection Research Foundation
HAZMAT: Hazardous Materials
IAAI: International Association of Arson Investigators
IAFC: International Association of Fire Chiefs
IAFF: International Association of Fire Fighters
IFSAC: International Fire Service Accreditation Congress
IFSI: Illinois Fire Service Institute
ISFSI: International Society of Fire Service Instructors.
JCNFSO: Joint Council of National Fire Service Organizations
NAEMT: National Association of Emergency Medical Technicians
NAFTD: North American Fire Training Directors
NASFM: National Association of State Fire Marshals
NFA: National Fire Academy
NFFF: National Fallen Firefighters Foundation
NFPA: National Fire Protection Association
NIOSH: National Institute for Occupational Safety and Health
NPQB: National Professional Qualifications Board for the Fire Service
NVFC: National Volunteer Fire Council
OSHA: Occupational Safety and Health Administration
TC: Technical Committee
USFA: United States Fire Administration
1) Background and Workshop Overview

This report summarizes a day and one-half workshop held on 1-2 October 2019 in Quincy, Massachusetts, to address the knowledge, skills, and proficiency maintaining requirement for fire and emergency service personnel. The workshop was hosted by the Fire Protection Research Foundation (FPRF), independent research affiliate of the National Fire Protection Association (NFPA), whose mission is to plan, manage, and facilitate research in support of NFPA’s mission. The workshop was hosted with the support from NFPA’s Research Fund to the FPRF and travel support from the Pro Board® Jim Shannon Leadership Fund to FPRF.

**Workshop Background:**
With a few local exceptions, certification of fire and emergency services personnel is conducted on a voluntary basis by public sector or government agencies. Present NFPA Professional Qualification System Standards, upon which are based the international certification systems (e.g., accredited by the Pro Board®), do not contain a requirement for maintaining proficiency on a stated interval. Due to the criticality of credentialing of emergency services personnel and the fact that the Standards upon which certification is based change on a regular basis, there is a need to determine if fire and emergency services personnel need and/or should be required to undergo some other process to demonstrate continued knowledge and skills proficiency on a stated interval so as to maintain the proficiency.

**Workshop Goal:**
The goal of this workshop is to establish an understanding of developing a process to ensure continued demonstration of knowledge and skill proficiency against a given level of credentialing for the fire and emergency services personnel. This will be accomplished through an interactive approach involving interested stakeholders that will focus on the following workshop objectives:

- Brief review of baseline information; (i.e., evolution, current status and anticipated direction of the Pro-Qual system and JPR development; current landscape of practice for maintaining skill proficiency for fire and emergency personnel in the North America; clarify the relevancy and applicability of process adopted in parallel professions)
- Identify, prioritize, and assess the options to implement such a process for fire and emergency service personnel; and
- Establish recommended action plan to provide guidance to the Pro-Qual infrastructure to meet these needs.

The workshop and associated research report were hosted by the Fire Protection Research Foundation (FPRF), independent research affiliate of the National Fire Protection Association (NFPA). Definitive next actionable steps, such as changes to applicable Pro-Qual Standards, are the purview of the NFPA Codes & Standards process and are beyond the scope of the FPRF and this workshop activity. All proposed changes to the NFPA Codes & Standards are in the domain of the NFPA consensus process.
2) Workshop Agenda & Attendees

This one-and-a-half-day workshop was held from 8:00 am to 4:30 pm on Tuesday, 1 October 2019 and from 8:00 am to 12:00 noon on Wednesday, 2 October 2019. The workshop had three parts. The first part included presentations on baseline information including the history, evolution, current status and anticipated direction of the Professional Qualification (Pro-Qual) system and Job Performance Requirement (JPR) development. The outcomes from a recently completed research effort to clarify the current landscape of practice for maintaining skill proficiency for fire and emergency personnel in the North America, the relevancy and applicability of process adopted in parallel professions, and an impact assessment of a proposed continuing education process was presented. The second and third part of workshop followed an interactive approach involving stakeholder discussions in groups that was divided as “Tactical Focus” on day 1 and “Strategic Focus” on day 2. The agenda, presenters and workshop attendees for this 1 ½ day event was as follows:

Table 1: Workshop Agenda.

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Description</th>
<th>Speakers/Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>0730-0800</td>
<td>---Breakfast---</td>
<td></td>
</tr>
<tr>
<td>0800-0815</td>
<td>Welcome, Introductions, Agenda</td>
<td>Casey Grant, FPRF</td>
</tr>
<tr>
<td>0815-0835</td>
<td>Opening Remarks: United States Fire Administration</td>
<td>Denis Onieal, USFA</td>
</tr>
<tr>
<td>0835-0900</td>
<td>History of Pro-Qual Project</td>
<td>Doug Forsman, Fairfield Bay Fire Department</td>
</tr>
<tr>
<td>0900-0920</td>
<td>Job Performance Requirement Development</td>
<td>Bill Peterson, Chair NFPA Pro-Qual Correlating Committee</td>
</tr>
<tr>
<td>0920-0935</td>
<td>FPRF workshop: Pro-Qual Now &amp; Beyond, 2011</td>
<td>Casey Grant, FPRF</td>
</tr>
<tr>
<td>0935-1000</td>
<td>NFPA Standard Development Process</td>
<td>Robert Fash, NFPA</td>
</tr>
<tr>
<td>1000-1015</td>
<td>Update: NFPA Emergency Response and Responder Safety (ERRS) standards</td>
<td>Ed Conlin, NFPA</td>
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<tr>
<td>1015-1030</td>
<td>----Break---</td>
<td></td>
</tr>
<tr>
<td>1030-1200</td>
<td>FPRF Project: Fire and Emergency Service Personnel Knowledge and Skills Proficiency</td>
<td>Jamie McAllister and Brian McAllister, FireTox, LLC.</td>
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<tr>
<td>1200-1210</td>
<td>Breakout session: Introduction</td>
<td>Casey Grant, FPRF</td>
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<tr>
<td>1210-1300</td>
<td>----Lunch----</td>
<td></td>
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<tr>
<td>1300-1500</td>
<td>Day 1 Breakout Sessions: Tactical Focus</td>
<td>All</td>
</tr>
<tr>
<td>1500-1515</td>
<td>----Break----</td>
<td></td>
</tr>
<tr>
<td>1515-1615</td>
<td>Breakout Session Report Out &amp; Plenary Discussion</td>
<td>Group Representatives; All</td>
</tr>
<tr>
<td>1615-1630</td>
<td>Day 1 Recap &amp; Adjourn</td>
<td>Casey Grant, FPRF</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Description</th>
<th>Speakers/Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>0730-0800</td>
<td>---Breakfast---</td>
<td></td>
</tr>
<tr>
<td>0800-0815</td>
<td>Day 1 Summary &amp; Framing Day 2 Discussion</td>
<td>Casey Grant, FPRF</td>
</tr>
</tbody>
</table>
The following were the presenters on “Fire and Emergency Service Personnel Knowledge, Skills and Maintaining Proficiency” Workshop.

Table 2: List of workshop presenters.

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Denis O'Neal, United States Fire Administration</td>
<td></td>
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<tr>
<td>Doug Forsman, Fairfield Bay Fire Department</td>
<td></td>
</tr>
<tr>
<td>William Peterson, NFPA Pro-Qual Correlating Committee</td>
<td></td>
</tr>
<tr>
<td>Casey Grant, Fire Protection Research Foundation</td>
<td></td>
</tr>
<tr>
<td>Robert Fash, National Fire Protection Association</td>
<td></td>
</tr>
<tr>
<td>Ed Conlin, National Fire Protection Association</td>
<td></td>
</tr>
<tr>
<td>Dr. Jamie McAllister, FireTox, LLC.</td>
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</tbody>
</table>

The attendees for the workshop were invited from a wide range of interest backgrounds, and the final attendance list is included in Table 3. In addition to the Chairs of the Pro-Qual Correlating Committee (CC) and Technical Committees (TC), the Chairs of multiple other affected NFPA TCs were invited, as well as representatives from key fire and emergency services organizations impacted by these issues along with publishing groups were also invited.

The following were the participants on “Fire and Emergency Service Personnel Knowledge, Skills and Maintaining Proficiency” Workshop.

Table 3: List of workshop attendees.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Angela White</td>
<td>IFSAC &amp; Wisconsin Technical College System</td>
</tr>
<tr>
<td>2</td>
<td>Anthony O’Neill</td>
<td>Pro Board</td>
</tr>
<tr>
<td>3</td>
<td>Ari Vidali</td>
<td>Envisage Technologies</td>
</tr>
<tr>
<td>4</td>
<td>Bill Larkin</td>
<td>Jones &amp; Bartlett</td>
</tr>
<tr>
<td>5</td>
<td>Bradd Clark</td>
<td>IFSTA</td>
</tr>
<tr>
<td>6</td>
<td>Brian Brauer</td>
<td>Illinois Fire Service Institute</td>
</tr>
<tr>
<td>7</td>
<td>Brian McAllister</td>
<td>FireTox, LLC.</td>
</tr>
<tr>
<td></td>
<td>Name</td>
<td>Organization</td>
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</tr>
<tr>
<td>8</td>
<td>Casey Grant</td>
<td>Fire Protection Research Foundation</td>
</tr>
<tr>
<td>9</td>
<td>Chris Hiener</td>
<td>NFPA 1031 Rep, Acting Fire Marshal, Wakefield, RI.</td>
</tr>
<tr>
<td>10</td>
<td>Christine Emerton</td>
<td>Jones &amp; Bartlett</td>
</tr>
<tr>
<td>11</td>
<td>Debbie Sobotka</td>
<td>Center for Public Safety Excellence</td>
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<tr>
<td>12</td>
<td>Denis Onieal</td>
<td>USFA Deputy Fire Administrator</td>
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<tr>
<td>13</td>
<td>Doug Forsman</td>
<td>Fairfield Bay Fire Department</td>
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<td>14</td>
<td>Ed Conlin</td>
<td>National Fire Protection Association</td>
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<tr>
<td>15</td>
<td>Edward Hawthorne</td>
<td>DFW Dynamics &amp; NFPA 1081 Chair</td>
</tr>
<tr>
<td>16</td>
<td>Eldonna Creager</td>
<td>IFSAC</td>
</tr>
<tr>
<td>17</td>
<td>Erik Holden</td>
<td>National Fire Protection Association</td>
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<tr>
<td>18</td>
<td>Fred Piechota</td>
<td>Pro Board</td>
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<tr>
<td>19</td>
<td>Gerard Fontana</td>
<td>Boston Fire Department</td>
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<td>20</td>
<td>Jake Nunnemacher</td>
<td>Massachusetts Department of Fire Services</td>
</tr>
<tr>
<td>21</td>
<td>Jamie McAllister</td>
<td>FireTox, LLC</td>
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<tr>
<td>22</td>
<td>Jay Clevenger</td>
<td>Ohio Fire Academy</td>
</tr>
<tr>
<td>23</td>
<td>Jay Dornseif, III</td>
<td>Priority Dispach Corporation &amp; NFPA 1061 Chair</td>
</tr>
<tr>
<td>24</td>
<td>Jennifer Hoyt</td>
<td>Massachusetts Department of Fire Services</td>
</tr>
<tr>
<td>25</td>
<td>Jim Stumpf</td>
<td>Organizational Quality Associates &amp; NFPA 1051 Chair</td>
</tr>
<tr>
<td>26</td>
<td>Joe Molis</td>
<td>Providence Fire Department &amp; NFPA</td>
</tr>
<tr>
<td>27</td>
<td>John Cunningham</td>
<td>NAFTD, Nova Scotia Firefighters School, NFPA 1001, 1002, 1005 Chair</td>
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<tr>
<td>28</td>
<td>Jon Jones</td>
<td>Jon Jones &amp; Associates</td>
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<tr>
<td>29</td>
<td>Jonathan Epstein</td>
<td>Jones &amp; Bartlett</td>
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<td>30</td>
<td>Ken Brown</td>
<td>NVFC</td>
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<td>31</td>
<td>Ken Holland</td>
<td>National Fire Protection Association</td>
</tr>
<tr>
<td>32</td>
<td>Kim Williams</td>
<td>NFPA 1041 &amp; North Carolina Office of the State Fire Marshal</td>
</tr>
<tr>
<td>33</td>
<td>Larry Preston</td>
<td>Maryland Fire and Rescue Institute, &amp; NFPA 1021 Chair</td>
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<tr>
<td>34</td>
<td>Matt Perez</td>
<td>Illinois State Fire Marshal</td>
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<td>35</td>
<td>Nancy Trench</td>
<td>Fire Protection Publications, &amp; NFPA 1035 Chair</td>
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<tr>
<td>36</td>
<td>Preet Bassi</td>
<td>Center for Public Safety Excellence</td>
</tr>
<tr>
<td>37</td>
<td>Randal Novak</td>
<td>NFPA 1000 Chair</td>
</tr>
<tr>
<td>38</td>
<td>Rick Dunn</td>
<td>South Carolina State Firefighters’ Association</td>
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<td>39</td>
<td>Rick Edinger</td>
<td>NFPA 1072 &amp; NFPA 472 Chair</td>
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<td>40</td>
<td>Robert Barron</td>
<td>Texas A&amp;M Engineering Extension Service</td>
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<td>41</td>
<td>Robert Fash</td>
<td>National Fire Protection Association</td>
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<tr>
<td>42</td>
<td>Sreenivasan Ranganathan</td>
<td>Fire Protection Research Foundation</td>
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<tr>
<td>43</td>
<td>Thomas Miller</td>
<td>NVFC</td>
</tr>
<tr>
<td>44</td>
<td>Vincent Lampley</td>
<td>Somerville Fire Department</td>
</tr>
<tr>
<td>45</td>
<td>William Peterson</td>
<td>NFPA Pro-Qual Correlating Committee Chair</td>
</tr>
</tbody>
</table>
3) Workshop Presentations: Overview and Discussion

The Fire Protection Research Foundation facilitated this workshop. Casey Grant, FPRF, welcomed the participants and clarified the goal and objectives of the workshop. The first part of the workshop provided key background information including opening remarks by Dr. Denis Onieal, USFA. This section summarizes the presentations in further detail. All the presentations are included in Appendix A for further reference.

Maintain Standards, Dr. Denis Onieal.

Dr. Denis Onieal, U.S. Fire Administration, provided opening remarks. Maintenance of professional standards and reciprocity are the two remaining elements of professional development in the fire and emergency services. The continuing education (CE) system will be a near impossible without reciprocity. Like many things in the fire service this can be also be organized and we can learn from other professions. Some level of “grandfatherring” (often time limited) for incumbents can be considered. The time limit can be related to the level of adversity (i.e., longer time = less adversity). A process can start with easier CE requirements at the beginning, and can increase as time progresses. The focus should be on implementing and improving the system. The process should consider to have as many buy-ins as possible and reward those who are or who will seek certification by giving them benefit. Future issues should also consider how will this be administered and by whom? What will be the cost of administration? How to ensure the integrity of the system.

The fire service professional qualification system in North America, Doug Forsman.

The origin of Pro-Qual system was based on the United Kingdom’s Fire Service Certification System. In 1971, the Joint Council of National Fire Service Organizations (JCNFSO) created the National Professional Qualifications Board for the Fire Service (NPQB) to facilitate the development of nationally applicable performance standards for uniformed fire service personnel. The National Fire Service Professional Qualification Board was created as the certifying or accrediting organization. In 1972, the Board established four technical committees to develop those standards using the National Fire Protection Association (NFPA) standards-making system. The initial framework consisted of five basic standards for firefighter, fire officer, fire instructor, fire inspector, and fire investigator. The firefighter standard (NFPA 1001) was issued in 1974, followed by other four standards. The state and provincial based training agencies then adopted the standards, and developed training and testing instruments. The Pro Board accredited those agencies and issued national level certificates when requested. The reciprocity was slow to evolve. The job performance requirement format was adopted in 1992. Doug concluded the presentation with a note that today there is a demand for new and expanded professional qualification standards and there is broad scope of users. The future direction should reflect the thinking of competent, forward looking fire service leaders. The efforts from this workshop and future steering groups will provide direction to assist with this bigger important effort.
Professional Qualification documents and the JPR format, William Peterson.

In 1990, responsibility for the appointment of professional qualifications committees and the development of the professional qualification standards were assumed by the NFPA. The Correlating Committee of Professional Qualifications was appointed by the NFPA Standards Council in 1990 and assumed the responsibility for coordinating the requirements of all of the Professional Qualifications documents. The intent of the Correlating Committee is to ensure development of clear and concise job performance requirements that can be used to determine that an individual, when measured to the standard, possesses the skills and knowledge to perform in a career area. The committee further contends that these job performance requirements can be used in any fire department in any city and by users outside the traditional uniform fire service. The use of Pro-Qual Standards is intended to evaluate an individual’s ability to perform essential job tasks. The standards are written as job performance requirements and are not intended to be training outlines.

Figure 1: Fourteen legacy Pro-Qual documents

The recent additions to these documents include

- Standard on Fire Marshal Professional Qualifications (NFPA 1037)
- Standard for Electrical Inspector Professional Qualifications (NFPA 1078)
- Standard for Facilities Fire and Life Safety Director Professional Qualifications (NFPA 1082)
- Standard for Traffic Incident Management Personnel Professional Qualifications (NFPA 1091)
- Standard for Fire Department Safety Officer Professional Qualifications (NFPA 1521)
The term professional applies to both career and volunteer personnel without any distinction. Although the committees focus on the performance qualifications of various jobs in and related to the fire service, there are several standards that are used by professionals akin to the fire service (e.g. NFPA 1033, the professional qualifications standard for fire investigators which is used by insurance companies, and the private investigators).

JPR model was implemented nearly 28 years ago (1992). It was a leap forward from instructional objective format that was previously used. It defined what was required on the job, created new approaches to assessment and evaluation in order to help ensure competent performance, aligned with best practices in instructional design models by identifying the actual job requirements to align instructional materials for each Pro Qual, and took a multi-year facilitated implementation in order to “train up” the committees.

The Pro-Qual Standards define minimum standards of professional competence required for successful job performance and the JPRs describes what one must do to successfully perform on the job. The three components of a JPR include:

1. **Task:** What is performed on the job.
2. **Given:** The tools, equipment, or materials need to complete the task.
3. **So that (Standard):** How the performance of the task is evaluated.

Bill concluded the presentation by stating that the professional Qualification is not a “one-stop” destination, it is a career long process.

**Update on the “Now and Beyond” Workshop 2011, Casey Grant.**

Casey Grant provided an overview of the summary of recommendations from the 2011 Pro-Qual workshop “Now and Beyond”. Out of the twenty key recommendations from this workshop, the discussions on recertification was highlighted in this presentation. The panel discussion in 2011 workshop summarized that general mindset is that recertification is desirable, noting that other established professional qualification systems utilize recertification (e.g. EMS, aircraft pilots, etc.). However, discussion on its implementation yielded indication that it will result in multiple new challenges on the existing established infrastructure, and dealing with these challenges is potentially daunting. It was noted that certification itself is not uniformly mandated, and this should be more collectively embraced before requiring recertification. One of the workshop recommendations was to fully assess the impact of recertification prior to any proposed implementation.

**NFPA Code Development Process and the Fire and Life Safety Ecosystem, Robert Fash.**

Bob Fash introduced the NFPA fire and life safety ecosystem and discussed an overview of the code development process. Using the latest codes and standards developed by experts from around the world.
establishes minimum levels of safety to protect people and property. As technology changes, safety advocates constantly assess the risks as well as the behaviors and actions that can create new hazards. Codes and standards are updated (typically on a three- to five-year cycle) to reflect our changing world. As emerging issues and technology evolves, professional qualifications need to be developed for positions to address those challenges. The Standards Council recently authorized the formation of two technical committees. One is to address Emergency Responder Occupational Health and the other is a Professional Qualification for Fire Service Analyst and Information Technical Specialist.

**Participation in NFPA Standard Development Process, Ed Conlin.**
Ed Conlin, NFPA, presented additional details about how to participate in the NFPA Standard Development process. He mentioned that this is an open process and Public inputs are accepted from anyone interested to submit input. Only people who cannot provide public inputs are the NFPA staff. NFPA Technical Committees and Panels serve as the principal consensus bodies responsible for developing and updating all NFPA codes and standards. Ed also gave an update on the plan to consolidate the NFPA Emergency Response and Responder Safety standards, guides and recommended practices. A new revision cycle specifically for these standards has been established. Both the First and Second Draft Meetings of the standards process, as well as any necessary Correlating Committee meetings, will now occur during the same year with one meeting taking place in January and another in November. He mentioned that the first draft meetings for NFPA 1000, 1033, 1051, 1061 and 1072 will be held from January 26 - February 1st, 2020.

**Fire and Emergency Service Personnel Knowledge, Skills, and Maintaining Proficiency, Dr. Jamie McAllister.**
A detailed review of the research study completed prior to this workshop was presented by Jamie McAllister, who is also the lead author of the research report that was published in September 2019. This study primarily involved three major tasks: (1) Evaluate the current approaches utilized in the fire service for proficiency training and continuing education to clarify the history of knowledge and skills proficiency requirements landscape in the fire service; (2) Review and assess approaches utilized by parallel professions, e.g. emergency medical providers, nurses, law enforcement officers, and teachers; (3) Recommend an approach to implement a maintaining proficiency in the fire service and study its impact on fire service personnel and organization, CE model was developed, and stakeholders were surveyed to determine how implementation of this CE model would impact them and their organization.

The current editions of the NFPA Pro-Qual standards require fire service members to “remain current” with the knowledge and skills related to their certification. This need for knowledge and skills proficiency has been expressed in various ways in the NFPA Pro-Qual and Training standards for at least a decade. Advancements in fire science reveal that CE in the fire service goes beyond maintenance of initial skills and core competencies and is necessary to ensure that firefighters are current with changes in
suppression and ventilation techniques, building construction, fire behavior, personal protective equipment, firefighter health and safety, and more.

The study found that every State in the United States and all the Canadian Provinces have at least one Pro Board or IFSAC Accredited Agency, however only 20 States (and no Canadian Provinces) have a continuing education program for recurrent training, recertification, or license renewal. However, only 18 of the 20 States specify hourly requirements. These continuing education programs, along with the NFPA standards, most commonly required recurrent training on an annual basis.

Considering all the professions and average hourly requirements, a 24 hour per year certification “renewal” model was proposed for firefighters as a recommended model in this study. The continuing education program would include a minimum of one live fire training per year, as well as methods to evaluate all associated job performance requirements. A variety of methods could be used to support completion of continuing education requirements including face-to-face and online training.

The goal of impact assessment survey was to determine how implementation of the above CE model, would impact the Firefighter, the Department, the Accredited Agency, and the Accreditation Body. Based on the responses received, the survey showed that the impact of this “renewal” model would be positive apart from the impact on completion of existing continuing education requirements, which was found to be negative. The challenge in developing a CE program is determining a reasonable approach which will ensure the highest level of skills and knowledge proficiency while minimizing the impact to the Individual, the Department, the Accredited Agency, and the Accreditation Body. With the Individual, consideration must be given to those with multiple certifications; this aspect was not evaluated in the impact assessment survey.

Discussion on the research report:
The following key points were discussed about the research study and the subsequent report.

- It was mentioned that the impact of additional training hours on volunteer recruitment and retention is important to be considered.
- An insight on the cost associated and the impact of cost was not studied in detail in the research study. It would have been beneficial to get this insight into the impact of cost on the proposed approach. This will become critical in States that lack resources and facilities.
- It was pointed out that the other professions such as nursing may have incentives for attending trainings and certifications. While proposing CEUs for the fire service a similar incentive approach be considered and the cost requirements be emphasized.
- Another issue that was mentioned during the workshop was about the research study referring to NIOSH LODD reports and recommending the requirement of live fire training as part of the proposed continuing education model. It was clarified by authors that the NIOSH LODD reports were included in the study as case study examples to study the recommendations for firefighter
death reduction and/or prevention and assess the value and benefits of strong proficiency requirements for fire and emergency service personnel.

- Impact assessment survey and volunteer firefighter participation: There was a question about the responses from the volunteer firefighters and the financial impact of implementing the proposed CE model, especially in the volunteer fire service. It was indicated that the responses from volunteer fire service for impact assessment questionnaire were not true indicative of the overall responses of volunteer fire service.
  - The research team indicated that the geographical location of the respondent was not a question that was asked on the impact assessment questionnaire. It was clarified that the initial questionnaire on parallel professions did ask about the geographical location and indicated a wide distribution of respondents. The small sample of responses are not statically significant to do a quantitative analysis; thus, responses have been processed descriptively for the report. It was also mentioned that the responses differed by the role of the personnel (e.g., firefighter versus fire officer).
  - Subsequent post-workshop follow-up discussion further clarified the aforementioned concern in further details. Based on further analysis using the IP address of the respondents of impact assessment questionnaire, it was identified that out of 47 responses that indicated volunteer, 5 responses were from Montgomery County, MD and the others were from the following states: Alaska, California, Delaware, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, New Jersey, Ohio, Pennsylvania, and Virginia. There were also volunteer respondents that indicated they were from other types of jurisdictions beyond those classified as "County". It is important to recognize that the impact assessment was only intended to gauge the climate for the change, it was not intended to drive the change. Additionally, the proposed model was based upon what fire departments across the U. S. are currently doing. The proposed model in research study is a starting point to open up discussions about what should be done, not necessarily what will be done.
4) Workshop Breakout Group Discussions

One of the key goals of this workshop was to identify, prioritize and assess the options to implement a maintaining proficiency process for fire and emergency service personnel and establish a recommended action plan to provide guidance to the Pro-Qual infrastructure to meet these needs. The group discussions were aimed to facilitate a planning effort for the consideration of concepts in support of this objective. Workshop participants were divided into five groups as Red, Blue, Green, Orange, and Yellow. Each group was assigned a facilitator, recorder and time keeper.

Figure 2: Breakout group discussions.
**Breakout Group Discussion Outcomes**: This section presents the feedback responses received from the breakout groups. The discussions are synthesized and presented as feedback from each group. All the groups did not provide responses to all questions, thus, only the responses received are presented under this section.

### Day 1: Tactical Focus

**Group Discussions: 1-3 pm followed by 10 mins of report out from each group (3:15-4:15 pm). Each group will have a Facilitator, Scriber, and Time Keeper.**

In all discussion consider the *continuing education model proposed in the project report*, which has the following components:

- 24 hours per year of training to maintain knowledge and skills,
- taken during work hours,
- available through a combination of online and face-to-face resources,
- approved by and/or provided by a certifying entity or accredited agency,
- includes a minimum of one live fire drill per year as recommended by NIOSH, and
- evaluates all the job performance requirements set forth in NFPA 1001.

1. **Value Addition**: Why is maintaining proficiencies important? (*~15 mins.*)
   
   1.1. What value do you place on requiring maintaining proficiency (knowledge & skills testing) after the initial certification?

   **Table 4: Value of Maintaining Proficiency**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Blue</td>
<td>a)</td>
<td>Potential improvements in firefighter and public safety. Proficiency in doing their job.</td>
</tr>
<tr>
<td>Green</td>
<td>a)</td>
<td>The world, and the profession is changing. To remain competent an individual need to remain current. Individuals can also participate in maintaining competency for self-actualization as a professional responder and to maintain the high expectations of the public. Part of the discussion split the hair of maintaining proficiency AND remaining current in the profession.</td>
</tr>
</tbody>
</table>
   | Orange| a) | Create “smarter” firefighters who are engaged in the profession.  
   |      | b) | Keeping current on technology, tactics, and trends.  
   |      | c) | CQI – Continuous Quality Improvement.  
   |      | d) | Increased Situational Awareness of the changing hazard environment.  
   |      | e) | Improved Customer Service.  |
   | Red | a) | Value is in the eye of the beholder.  
   |     | o | Firefighter CE would lead to increase safety.  
   |     | o | Fire Service CE would lead to performance improvements.  
   |     | b) | Public confidence may be enhanced by CE through documented evidence of maintained proficiency.  
   |     | c) | CE is not only for skills maintenance but to stay updated on industry advancements e.g. ICS.  |
There is a benefit/value:

a) Reinforcing initial skills.
b) Learning new skills - exposure, behavioral health, emerging technologies, etc.
c) Evaluate individuals re-entering position or apply for reciprocity.

1.2. If a universally recognized maintaining proficiency program is established and enabled,

1.2.1. What is the value added for an **individual**, short and long term?

1.2.2. What is the value added for the **organizations** (e.g., Fire Departments, Training Academies, Accrediting Bodies, etc.), short and long term?

**Table 5: Value addition of a maintaining proficiency program for an individual/organization**

<table>
<thead>
<tr>
<th>Group</th>
<th>Individuals</th>
<th>Organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group Blue</strong></td>
<td>a) Personnel health and safety. Keeping current with emerging issues and tactics.</td>
<td>a) Enables the organization to keep up with the rapidly changing mission and technology. Offer best service to the tax payer.</td>
</tr>
<tr>
<td><strong>Group Green</strong></td>
<td>a) As a group, they placed a medium (1)- or high (5)-value on recertification. This adds value to the individual.</td>
<td>b) Lower death and injury to individuals, lower equipment loss to departments, lower fire risk and loss to the communities. Could generate a new income stream for agencies who are tasked with enforcement.</td>
</tr>
</tbody>
</table>
| **Group Orange** | a) Pride.  
b) Increased portability of certifications – reciprocity – impact on career path.  
c) Ability to save yourself and others. | a) Clarity of what is packaged into a firefighter.  
b) Improved long-term engagement. |
| **Group Red** | a) **Improve safety**  
b) **Enhancing professionalism**  
c) Staying current (to be effective)  
d) Performance improvement & public confidence improvement  
e) Documentation  
f) Financial incentives (e.g. tax credits in OK)  
g) Reduces liability through standard of care  
h) Reciprocity | a) **Improve safety**  
b) **Enhancing professionalism**  
c) Staying current  
d) Performance improvement  
e) Documentation |
| **Group Yellow** | a) Reciprocity, personal safety, confidence that everyone is trained the same way. | |
1.3. Should there be a **maintaining proficiency requirement** like JPRs?

*Table 6: Should there be a maintaining proficiency requirement like JPRs*

<table>
<thead>
<tr>
<th>Group Blue</th>
<th>Yes. No additional comments were provided.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Green</td>
<td>If you have a requirement for proficiency, you need a yardstick to measure it. This could be addressed in NFPA 1000 by calling for accrediting bodies to require certifying bodies to meet certain requirements with specific parameters laid out by the standard to ensure maintenance of the skills and knowledge which were required for certification and also ensure that current and emerging topics not addressed in the standards are addressed.</td>
</tr>
<tr>
<td>Group Orange</td>
<td>“YES” – with caveats about being role based and/or AHJ based.</td>
</tr>
<tr>
<td>Group Yellow</td>
<td>Yes, this group believed these should be a requirement but not sure if the JPR format is appropriate. Perhaps it belongs in NFPA 1000.</td>
</tr>
</tbody>
</table>

2. **Target Audience:** Firefighter, Fire Officers, Hazmat, Investigators, Instructors, Wildland etc. and other (Career vs. Volunteer, Generational, Regional, Candidates vs. Incumbents, etc.). Consider 2.1., 2.2., and 2.3., as three columns in a table. (~15 mins.)

2.1. Identify and prioritize the target audiences, with groupings as appropriate.

2.2. Identify the unique knowledge and skills required by the above identified target audiences (e.g., leadership, policy understanding, technical knowledge, communication, physical fitness, etc.)

2.3. Identify the common factors that shall be treated as overlaps for all the target audiences.

*Table 7: Target audiences, unique knowledge & skills, and common factors*

<table>
<thead>
<tr>
<th>Target Audiences</th>
<th>Groupings</th>
<th>Unique knowledge &amp; Skills</th>
<th>Common factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Blue</td>
<td>Firefighter</td>
<td>Career &amp; Vol</td>
<td>Technical knowledge required of emergency responder</td>
</tr>
<tr>
<td></td>
<td>Fire Officer</td>
<td>Career &amp; Vol</td>
<td>Leadership</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group</th>
<th>Fire Inspector</th>
<th>Fire Invest</th>
<th>control, dealing with violence.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>By certification standard/level/chapter.</td>
<td>Generalist knowledge vs. Specialist knowledge.</td>
<td>Some topics, e.g. SCBA, cross multiple standards and should be prioritized higher. Items which are covered by experience need to ensure that they are done correctly. Some incidents, for example an LODD, may trigger a need for additional training. NFPA 1582 compliance.</td>
</tr>
<tr>
<td>Red</td>
<td>Volunteer &amp; Career</td>
<td></td>
<td>Latest standard requirements. Initial training</td>
</tr>
</tbody>
</table>
3. **Approach/Application:** What are the approaches for maintaining proficiency program? (e.g., Online, Classroom, Field Experience, YouTube Videos, etc.). Consider 3.1., 3.2., and 3.3., as three columns in a table. (~15 mins.)

3.1. List the approaches of **on-going** maintaining proficiency programs, especially those not clearly indicated in the project report.

3.2. What are the **benefits** of the approaches/applications? (e.g., Easy vs. Hard programmatic implementation)

3.3. What are the **challenges** of the approaches/applications? (e.g., Easy vs. Hard programmatic implementation)

*Table 8: List of approaches for maintaining proficiency program*

<table>
<thead>
<tr>
<th>List of approaches</th>
<th>Benefits</th>
<th>Challenges</th>
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</thead>
<tbody>
<tr>
<td>Group Blue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classroom</td>
<td>Two-way communication, immediate feedback</td>
<td>Availability, consistency, cost time, scheduling.</td>
</tr>
<tr>
<td>Hands on training</td>
<td>Immediate feedback, supervised skill repetition</td>
<td>Timing, risk, class size, cost</td>
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<tr>
<td>On-line</td>
<td>Consistency, self-paced, management can monitor progress, rapid evaluation of learning, cost. Blend of classroom and on-line provides the benefits of both classroom and on-line.</td>
<td>Access, security, lack of two-way feedback.</td>
</tr>
<tr>
<td>Blended programs</td>
<td></td>
<td>Learning differences of students, timing scheduling, cost.</td>
</tr>
<tr>
<td>Group</td>
<td>Experience</td>
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<tr>
<td>Green</td>
<td>Field Experience</td>
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<td></td>
<td>Online training, watching videos</td>
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<td>In-person training</td>
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<td>This can be tailored to</td>
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<td>meet geographic needs by</td>
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<td>having some national,</td>
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<td>some state, and some local topics.</td>
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<td>Some also cover individual</td>
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<td>learning needs/goals.</td>
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<td>Improved feedback based on</td>
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<td>on-line evaluation.</td>
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<td></td>
<td>Real-world application</td>
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<td></td>
<td>Readily available, convenient</td>
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<td>Supervised, can be criterion-</td>
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<td>referenced back to NFPA standards.</td>
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<td>What if it’s being done</td>
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<td>incorrectly?</td>
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<td>Limited use to assess skills.</td>
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<td>Time- and cost-intensive.</td>
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<td>Some states have incentives for</td>
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<td>departments to maintain</td>
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<td>competency like access to grants.</td>
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<td>How to implement a new system</td>
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<td>without undoing existing systems?</td>
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<td>How to ensure that training from</td>
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<td>outside agencies (DoD) crosses over</td>
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<td>to municipal agencies.</td>
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<td>Orange</td>
<td>IT – Millennials</td>
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<td>• Simulators</td>
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<td>• Apps</td>
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<td>• E-learning</td>
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<td>Video</td>
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<td>Didactic</td>
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<td>Rote</td>
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<td>Muscle memory</td>
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<td>HOT – Hands on live</td>
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<td>Roll-call training/Tailboard talks/AAR</td>
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<td>Adaptation to individual learning</td>
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<td>Various applications have various</td>
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<td>benefits.</td>
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<td>Time.</td>
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<td>Are we measuring “hours” or</td>
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<td>outcomes?</td>
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<td>Data collection.</td>
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<td>Validation of the training/recertification programs.</td>
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<td>TIME for both career and</td>
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<td>volunteers.</td>
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<td>Red</td>
<td>Firefighter Level</td>
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<td>• Skill heavy</td>
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<td>• Not online with some exceptions</td>
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<td>like Fire Dynamics</td>
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<td>Fire Officer</td>
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<td>If online:</td>
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<td>• Cost of implementation will be</td>
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</tr>
<tr>
<td></td>
<td>• Scalable.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Generational differences.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Common assessment protocols.</td>
<td></td>
</tr>
</tbody>
</table>
• Simulations, lecture, interactive activities, research

Data driven needs.

| Group Yellow | Competency based program to be taken through various sources - online, face-to-face, etc. | Online - flexibility to take it when schedule allows, existing classes are online, less expensive; Classroom - face-to-face interaction allows for dialogue with instructor and students, cost of instructor and facility; field experience - credit for performance of skill. | • Reporting
• Compliance
• Records management
• Oversight |

4. **Frequency**: What should be the frequency of a maintaining proficiency program? Is there a minimum and a maximum frequency defined? (e.g., Bi-annual, Annual, etc.) (**15 mins.**)

4.1. What **factors will drive** the frequency? (e.g., changing technical information, trending political influences, emerging issues, etc.)

4.2. **Match the factors** identified above with the target audiences identified in Section 2.

4.3. Propose **appropriate level of frequencies** for the target audiences (i.e., amount of training over a specific timeframe.).

**Table 9: Frequency of maintaining proficiency program**

<table>
<thead>
<tr>
<th>Factors</th>
<th>Target Audiences</th>
<th>Appropriate level of frequencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Blue</td>
<td>Changes in tactics/ emerging issues</td>
<td>Firefighter, fire officers, Hazmat, wildland.</td>
</tr>
<tr>
<td></td>
<td>Skill set refresher</td>
<td>All of the identified positions</td>
</tr>
<tr>
<td></td>
<td>Special skills</td>
<td>All positions</td>
</tr>
<tr>
<td>Group Green</td>
<td>This group broke this down by standards in section 2.</td>
<td>NFPA 1001- All FD members need this.</td>
</tr>
<tr>
<td></td>
<td>NFPA documents: 472, 1001, 1002, 1003/5, 1006, 1021, 1026, 1031, 1033,</td>
<td></td>
</tr>
</tbody>
</table>
1035, 1037, 1041, 1051, 1061, 1071, 1072, 1078, 1081, 1091, 1521, 2400, (3000).

NFPA 1000 would be the place to drive the implementation.
Also include OSHA requirements.

supplement the task books with testing.
Some topics could be drawn from NIOSH and other reports.

Address inactivity. For example, depending on the task and timeframe of inactivity (e.g., one year up to five years), consider completion of a task book or a portion of a task book.
The intent is not to undo anything which currently exists in a state.

<table>
<thead>
<tr>
<th>Group Orange</th>
<th>New equipment/technology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“Industry trends”</td>
</tr>
<tr>
<td></td>
<td>Post-accident/incident/event based.</td>
</tr>
<tr>
<td></td>
<td>Statutory/Regulatory/Standard required and/or changes.</td>
</tr>
<tr>
<td></td>
<td>New FFs should first have to obtain proficiency in order to maintain.</td>
</tr>
<tr>
<td></td>
<td>“Active vs. Inactive”</td>
</tr>
<tr>
<td></td>
<td>Job transfers/promotions/role changes.</td>
</tr>
<tr>
<td></td>
<td>Scheduled.</td>
</tr>
<tr>
<td></td>
<td>Ad hoc.</td>
</tr>
<tr>
<td></td>
<td>Incident/Event based.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group Red</th>
<th>Allow maximum flexibility for training.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Specific, Measurable, Attainable, Realistic, Time-bound (i.e. SMART).</td>
</tr>
<tr>
<td></td>
<td>Frame around applicable Standard changes, e.g. every 3 – 5 years, including one a scaled roll-out basis.</td>
</tr>
<tr>
<td></td>
<td>Emphasis on minimum levels of safety.</td>
</tr>
<tr>
<td></td>
<td>Phase in and rachet frequency</td>
</tr>
</tbody>
</table>
Focus on recurring training basis.

| Group Yellow | Frequency cycle based upon revision of NFPA code and compliance requirements of accredited entity. | Firefighter | 3 to 5-year. Critical JPR to include changes and reoccurring skills. |

5. **Reciprocity**: How is the Fire service going to embrace this? (~15 mins.)

5.1. Are there existing **commonalities** between States/Provinces and other Jurisdictions?

*Table 10: Reciprocity commonalities*

| Group Blue | a) Typically, reciprocity is not a local issue, it is a state issue. A credentialing process might be beneficial. |
| Group Green | a) There would need to be a central, national registry which allows certificates to cross state lines first. This could be a third-party credential which tracks both IFSAC and Pro Board certificates and having an IFSAC seal or Pro Board registry number would have an expiration date. The accredited agencies would be responsible for implementation of maintaining competency. This could be accomplished by having NFPA 1000 address in the certification chapter that all JPRs must be tested, not just a sample of JPRs, to reduce variation in how the different IFSAC and Pro Board allow certified agencies to test JPRs. |
| Group Orange | a) Most states are testing skills and/or competencies. There is a wide degree of variance in what is CERTIFIED and what does it mean. |
| Group Red | a) Already established for certification.  
b) Need to consider impact for CE  
  o Time frame originally certified will be a factor.  
c) Generally important for progression for individual  
d) Job market driving reciprocity as well as time and cost considerations for bringing on new.  
e) Standardization of CE by recognized accreditor. |
| Group Yellow | a) This will be difficult because there is no consistency in how JPRs are evaluated across all States. Certification is a voluntary concept. |

5.2. Are there existing **agreements** across jurisdictions, especially those having strong potential to be adapted more universally?

5.2.1. What are the **Benefits**?

5.2.2. What are the **Challenges/Concerns**?
Table 11: Reciprocity: agreements, benefits, challenges/concerns

<table>
<thead>
<tr>
<th>Agreements</th>
<th>Benefits</th>
<th>Challenges/Concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group Blue</strong></td>
<td>Wildland firefighter Red Card system</td>
<td>National recognition</td>
</tr>
<tr>
<td><strong>Group Yellow</strong></td>
<td>Yes. Some agencies have standing agreements</td>
<td>Streamlined process, ability for firefighters to move across various jurisdiction without challenges to adequacy of qualifications. Financial resources may not be the same across all jurisdiction. Ensuring truly equivalent requirements. Addressing differences that may exist in different departmental modes- some departments which may not use certain JPRs.</td>
</tr>
</tbody>
</table>

6. **Consequence**: Pass/Fail. (~15 mins.)

6.1. What are the consequences for an individual, if maintaining proficiency program is not satisfied?

6.2. What are the consequences for an organization, if maintaining proficiency program is not satisfied?

6.3. What are the options for handling those who fail (especially repeatedly)?

Table 12: Consequence: individual, organization and options

<table>
<thead>
<tr>
<th>Individuals</th>
<th>Organization</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group Blue</strong></td>
<td>Remedial training or loss of job determined by AHJ.</td>
<td>The organization would be operating in violation of state regs.</td>
</tr>
<tr>
<td><strong>Group Green</strong></td>
<td>Can’t work, or work at a higher risk.</td>
<td>The organization accepts all risk for the performance of the individual.</td>
</tr>
</tbody>
</table>
add value and incentives to persons who are nationally credentialed.

<table>
<thead>
<tr>
<th>Group</th>
<th>Lose their certification: Lose employment Loss of time to remediate.</th>
<th>Staffing: Organizational certifications?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orange</td>
<td>Do you/we: • Allow re-test(s) • How? • How many times? • Required refresher training? • Cost(s)? • What happens to the firefighter in the interim?</td>
<td></td>
</tr>
<tr>
<td>Red</td>
<td>See 1.2, Not attaining re-certification is different than losing the original certification (e.g., EMS, you will lose license; Fire and EMS are hard to compare).</td>
<td>See 1.2</td>
</tr>
<tr>
<td>Yellow</td>
<td>See 1.2</td>
<td></td>
</tr>
<tr>
<td>Blue</td>
<td>• Potential legal liability.</td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td>• The capacity across North America for live fire training meeting the JPRs (suppress versus simulate the suppression of). • Constituents who are not part of the fire service. • Alignment with OSHA requirements/state DOL requirements. • Keeping up with technology to make this easier. • Possibility of cost recovery as a result of re-credentialing fees/costs.</td>
<td></td>
</tr>
<tr>
<td>Orange</td>
<td>• Where are they going to find the facilities and/or specialized resources? • Time. • Burden on State training staff.</td>
<td></td>
</tr>
<tr>
<td>Red</td>
<td>• Combination departments as a target audience. • Data-driven CE based on frequent responses. • Consider performance-based CE. • Initial training is consistent for all. • Gaps</td>
<td></td>
</tr>
</tbody>
</table>

Table 13: Other tactical issues

7. **Others**: Any other tactical issues that is not considered. (~15 mins.)
o Phase-in approaches of different states/provinces with current requirement
o Granularity of internal (e.g. paid on call/combination) and external (e.g. ISO, OSHA) influencing factors
o Dual-hatted: When associated with two agencies with different statuses (e.g. career vs. volunteer) which CE requirement would be primary
  • CE requirements driven (partly) by litigation
  • Rollout plan
    o Communication plan
      ▪ Advocating/spokesperson
    o Time implementation
      ▪ Grandfathering
    o Buy-in
    o What organization becomes the driver?

<table>
<thead>
<tr>
<th>Group Yellow</th>
<th>Financial support and potential for funding going away.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Would have to be implemented at State level.</td>
</tr>
</tbody>
</table>

8. **Impact Assessment**: In preparation for strategic focus, consider if maintaining proficiency is required *periodically*. This identifies both smooth and pain points. (~ 15 mins.)

8.1. What are the **positive and negative impacts** (i.e., time, financial, and others)? Classify in two columns.

8.1.1. Clarify the key **impacts on individuals**, e.g., Firefighter, Fire Officers, Hazmat, Investigators, Instructors, Wildland etc. and other (Career vs. Volunteer, Generational, Regional, Candidates vs. Incumbents, etc.).

8.1.2. Clarify the key **impacts on organizations/groups**, i.e., Fire Departments, Standards (e.g., NFPA), Accrediting bodies (e.g., IFSAC, Pro Board), Training Academies, Others (e.g., Publishers).

*Table 14: Impact assessment*

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Blue</td>
<td>Maintain skills and knowledge necessary to assigned duties.</td>
</tr>
<tr>
<td>Group Red</td>
<td>See 1.2</td>
</tr>
</tbody>
</table>

8.2. **Table 14: Impact assessment**

**Individuals**
### Group Yellow
- Increased level of competency
- More confidence in workforce
- Time to take training
- Finances to support training—may have to take time off work (volunteer)

### Group Blue
- **NFPA**: Changes in the documents
- **Pro Board/IFSAC**: Update in process
- **Training Academy**: Adapting to requirements, cost and operations.

### Group Orange
- Firefighter Health & Safety
- Team cohesion'
- Pride
- Portability of credential
- Career advancement
- Career & Volunteer – TIME.
- Costs – Financial.
- Backfill.

### Organizations/groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Impact</th>
</tr>
</thead>
</table>
| Blue      | **NFPA**: Changes in the documents  
**Pro Board/IFSAC**: Update in process  
**Training Academy**: Adapting to requirements, cost and operations.  
**Pro Board/IFSAC**: Is it tested and verifiable  
**Training Academy**: Significant impact  
**Fire departments**: Implementation issues, personnel issues |
| Orange    | Firefighter Health & Safety  
Team cohesion'  
Pride  
Portability of credential  
Career advancement  
Career & Volunteer – TIME.  
Costs – Financial.  
Backfill.                                                                                           |
| Red       | See 1.2  
Must be relevant & realistic.  
Phase-in is critical.  
Financial Impact  
  - Reciprocity  
  - CEUs  
  - Modular approach  
Could alienate large portion of fire service from NFPA process.  
Must be relevant & realistic.  
Phase-in is critical.                                                                 |
| Yellow    | Unified workforce with consistency of knowledge, skills, and abilities.  
Reduced liability and firefighter deaths and injuries.  
Financial impact—cost of training, backfill and providing training.  
Staff impact—staff to backfill, staff to provide training. |

### 8.2. What are the other impacts?

**Table 15: Other impacts**

<table>
<thead>
<tr>
<th>Group</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>Implementation will have to be well sequenced and planned with support of the standards providing excellent guidance.</td>
</tr>
<tr>
<td>Orange</td>
<td>How will this “Project” be packaged and sold to the fire service?</td>
</tr>
</tbody>
</table>
• Must be relevant and realistic.
• Phase-in is critical.
• “Don’t let perfection be the enemy of the very good”.
• Lack of time is a critical societal issue, e.g. volunteer service ability to maintain training requirements.

**Group Red**

**Day 2: Strategic Focus**

*Group Discussions: 8:15-10 am followed by 10 mins of report out from each group (10:15-11:15 am). Each group will have a Facilitator, Scribe, and Time Keeper.*

1. **Impact assessment:** Continued from Day 1. (*~ 15 mins.*)

2. **Proposed approach:** Consider all the factors discussed on Day 1 and propose an approach for a universally recognized maintaining proficiency program? (*~ 30 mins.*)
   a. Consider a phased approach for implementation (e.g., short; medium; long terms).
   b. Consider all Day 1 details.
   c. What are the gaps that need to be filled to propose a maintaining proficiency program?

**Table 16: Proposed Approach**

| Group Blue | a) A framework must be developed (by a task group/steering committee). NFPA 1000 is the vehicle for this framework.
| Group Blue | b) Input and buy-in from stakeholders are important. Other impacted users may be Fallen fighters.
| Group Blue | c) Is this an unfunded mandate? How are we going to fund this? Not only putting the framework of process, be cognizant on the cost associated for certifying entities as well as at the fire departments level. |
| Group Green | Come up with short, medium, and long-term goals. This group proposed an approach based on the NFPA 1000 cycles.
| Group Green | a) Short (Within 1 Cycle of NFPA 1000):
| Group Green | 1. Vision: By 2025 all certificates issued against an NFPA Professional Qualification standard will have an expiration date no more than 5 years from the date of certification. The implementation would roll as standards are revised.
| Group Green | 2. Verify/Triangulate what is currently in place in states, provinces, and accredited entities outside North America. This will need a deeper dive into the data collected for recently completed FPRF project. The next round of study could look for what worked, did not work and areas that needed improvement in the constituencies that have implemented a CE process.
| Group Green | 3. Expand knowledge of the two parallel profession systems which most closely align with firefighter.
| Group Green | 4. NFPA 1000 move 5.2.7 annex material into the core of the document and removes “if applicable.” |
5. NFPA 1000 incorporate language to clarify roles of Accrediting and Certifying bodies in recertification.
6. Each TC captures refresher intervals for each of the JPRs on 1, 3, 5-year intervals.
7. CC defines a role for themselves for coordination of recertification requirements because NFPA documents are not hierarchical.
8. Engage fire service partners to create incentives for participation in certification and recertification programs. (e.g., discount memberships).
9. There should be an educational and informational campaign on the benefits of certification and recertification and explore how do we make a process work?

b) **Medium (2 cycles of NFPA 1000)**
10. Accrediting bodies develop criteria for certifying bodies into accreditation chapter of NFPA 1000.
11. Certifying bodies develop policies and procedures to comply with the certification chapter of NFPA 1000.
12. Certificates issued begin to have an expiration, recertification, or retraining date.
13. Accrediting bodies (or another agency) create a national database for housing a national repository/registry. (NFPA 1000 could add a chapter on what must be maintained at a state, national, and international level).

**c) Long (3+ Cycles of NFPA 1000)**

---

### Group Orange

a) One of the concerns was the lack of consensus about the necessity to “mandate” as opposed to making this a “should” provision. Annex versus “shall” language is critical and need to be evaluated further.

b) Cultural issue: Setting a culture and buy-in can be done by going above the NFPA 1000 levels. There need to be discussion about the process and starting with Instructors, Officers, Technical specialties in order to change cultures. The discussion should also start with constituencies – IAFF, NVFC, IAFC, IAAI, NAFTD, IFSI, NAEMT.

c) Recommend starting to work on “Continuing Education” level versus “Recertification” levels.

### Group Red

a) Major question: Use current accrediting bodies serving fire service or create something new/utilize existing non-fire service accrediting bodies

b) Different “things” to be accredited:
   - Training Development focused on Learning Objectives and some assessment to grant CEU
   - Classroom experience with certificate of attendance
   - Testing protocols
     - ProBoard/IFSAC
   - Professional certification(s)
<table>
<thead>
<tr>
<th>Group Yellow</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td>Expand upon language within NFPA 1000 Section 5.2.7 and A.5.2.7 to provide better guidance on what the policy should look like and the list of competencies and proficiencies to be fulfilled (maybe like NFPA 1033).</td>
<td></td>
</tr>
<tr>
<td>b)</td>
<td>Define renewal, recertification, proficiency in NFPA 1000.</td>
<td></td>
</tr>
<tr>
<td>c)</td>
<td>First step is getting it into the standards. Use the individual TCs to write language within their NFPA Pro-Qual to write language within the Pro-Quals addressing continuing education.</td>
<td></td>
</tr>
<tr>
<td>d)</td>
<td>Possible recommendation of 3 to 5-year renewal or recertification process but certifying entities determines.</td>
<td></td>
</tr>
<tr>
<td>e)</td>
<td>Annual training would still need to be completed to adhere to OSHA regulations as well as other NFPA Training standard frequency cycles.</td>
<td></td>
</tr>
</tbody>
</table>

1910.156(c)(2)
The employer shall assure that training and education is conducted frequently enough to assure that each member of the fire brigade is able to perform the member's assigned duties and functions satisfactorily and in a safe manner so as not to endanger fire brigade members or other employees. All fire brigade members shall be provided with training at least annually. In addition, fire brigade members who are expected to perform interior structural firefighting shall be provided with an education session or training at least quarterly.

1910.156(c)(3)
The quality of the training and education program for fire brigade members shall be similar to those conducted by such fire training schools as the Maryland Fire and Rescue Institute; Iowa Fire Service Extension; West Virginia Fire Service Extension; Georgia Fire Academy, New York State Department, Fire Prevention and Control; Louisiana State University Firemen Training Program, or Washington State's Fire Service Training Commission for Vocational Education. (For example, for the oil refinery industry, with its unique hazards, the training and education program for those fire brigade members shall be similar to those conducted by Texas A & M University, Lamar University, Reno Fire School, or the Delaware State Fire School.)

| NFPA 405 | 2020 | To be evaluated on an annual basis |
f) Assessment of critical JPR to include changes and reoccurring skills.
g) Compounding requirements between various Pro-Quals.
h) Record keeping like the NFPA 405 Section 4.3 should be included in NFPA 1000.

3. **Pro-Qual Standards**: What changes are needed to **Pro-Qual Standards** project? (~30 mins.)

   a. Do you think that it is important for the Pro-Qual Standards to **specify elements** of proficiency maintenance required for the various **levels of certification** or just require that a process be in place?

<table>
<thead>
<tr>
<th>Group Blue</th>
<th>The process should be defined in the documents including NFPA 1000.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Green</td>
<td>NFPA 1000 needs to add language for accreditation and certification agencies, TCs need to identify retraining intervals for each JPR (1, 3, 5-year intervals). TC need to have significant input.</td>
</tr>
<tr>
<td>Group Orange</td>
<td>“NO” to specific elements, but “YES” to continuing education/recertification based on AHJ required core or mission specific competencies</td>
</tr>
<tr>
<td>Group Yellow</td>
<td>Yes. The Standards should address specific elements required to maintain proficiency.</td>
</tr>
</tbody>
</table>

   b. What are the **current gaps** in the Pro-Qual Standards in order to provide elements of proficiency maintenance?
Table 18: Current Gaps in Pro-Qual Standards

<table>
<thead>
<tr>
<th>Group</th>
<th>a)</th>
<th>b)</th>
<th>c)</th>
<th>d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>The technical committees need to identify the specific path for recertification. What areas must be covered to insure proficiency?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange</td>
<td>Technology gaps: Standard process is 5 years cycle and it takes about 7 years for adoption. Technology moves very rapidly and the 5-year revision cycle may be too long to catch up.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange</td>
<td>Lack of Job Task Analysis references.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange</td>
<td>TC get “stagnated”.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange</td>
<td>Conflicts of interest? On the participation in TC.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yellow</td>
<td>NFPA 1000 places the responsibility on the certifying entity to have a policy. In some cases, the policy is to defer to the individual fire department to fulfill the requirements to remain current. There is no standardized process. There are not elements provided to assist the user in understanding the expectation. Additionally, key terms have not been defined such as recertification, renewal, and proficiency.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


c. What operational issues should NFPA consider changing to make the development and revision of Pro-Qual standards more efficient and/or effective?

Table 19: Pro-Qual Standards Operational Issues

<table>
<thead>
<tr>
<th>Group</th>
<th>a)</th>
<th>b)</th>
<th>c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orange</td>
<td>It is difficult for the “boots on the ground” to make public comments and/or submit NITMAM – NFPA need to work to make it more USER FRIENDLY.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange</td>
<td>Communicate the standard development processes better.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange</td>
<td>Outreach is going to be very important, especially for this project. Invite the locals to interact and get their feedback when at TC meetings, when back in their communities.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

d. What changes do you think should be considered to make operation of the Pro-Qual Correlating Committee more effective with the implementation of the NFPA Emergency Response and Responder Safety (ERRS) standards consolidation?

Table 20: Pro-Qual Correlating Committee Operation

<table>
<thead>
<tr>
<th>Group</th>
<th>a)</th>
<th>b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>We do not have sufficient information regarding the ERRS consolidation to respond to this question.</td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td>All documents related to the training and/or certification of first responders must fall under the CC.</td>
<td></td>
</tr>
<tr>
<td>Orange</td>
<td>The CC should ensure balance in the “big picture” between non-hierarchical standards to avoid placing a burden on an individual responder or organization with multiple certifications.</td>
<td></td>
</tr>
<tr>
<td>Orange</td>
<td>Correlating Committee should screen, weigh-in, and/or otherwise have more input on the promulgation of new Standards.</td>
<td></td>
</tr>
<tr>
<td>Orange</td>
<td>CC should be more insistent on seeing/review Job Task Analyses.</td>
<td></td>
</tr>
</tbody>
</table>
4. **Next Steps:** What should the Fire Service community consider to influence better maintaining of proficiencies (e.g., better communication between numerous stakeholders such as Fire Departments, Standards, State/Organization Certifiers, Accrediting agencies, Curriculum Developers, Training Manual/Materials Developers, etc.)? What are the actionable next steps? (~30 mins.)

**Table 21: Next Steps**

<table>
<thead>
<tr>
<th>Group Yellow</th>
<th>a) Pro-Qual Correlating Committee has to ensure that each TC has the appropriate language within the TCs to ensure they have language to address currency requirements.</th>
</tr>
</thead>
</table>

| Group Blue   | a) Define “proficiency”. Proficiency is not defined.  
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | b) The Correlating Committee in conjunction with NFPA staff should draft a process and determine how it will be incorporated into the existing Pro-Qual documents including NFPA 1000. Consider forming a Correlating Committee task group to explore the concept and develop the framework.  
|              | c) Stakeholder involvement and buy-in is important for this process.  
|              | d) Do not reinvent the wheel. Build upon what is existing at the state and national level today.  
|              | e) Is there a need for a standalone document that addresses recertification for all of the Pro-Qual levels? |

| Group Green  | a) Identify who will lead the next steps? A task group of the Correlating Committee?  
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | b) We need to synchronize feedback from workshop and share a model with the current working group. Next, engage the groups that were absent at this workshop - IAFF, NFFF, FDSOA, NFA, USFA, IAFC, NASFM, NIOSH, State Foresters for feedback.  
|              | c) Determine some Standards that are referenced in Pro-Qual document and figure out how they need to be included. E.g., if physical fitness/1582/1500 should be included?  
|              | d) Improve the model and start the process in #1. |

| Group Orange | a) Work with the more State Training entities is the key. Moving forward consciously. |

| Group Red    | a) To get into applicable standard:  
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | o Need major organization support through development of a steering committee on process for maintaining proficiencies.  
|              | ▪ A host is needed: e.g., NAFTD, supported by FPRF, etc.  
|              | ▪ Chair (proposed by this breakout group): Denis Onieal  
|              | ▪ Interested parties include:  
|              | • NAFTD  
|              | • ProBoard  
|              | • IFSAC  
|              | • CPSE  
|              | • USFA (NFA)  
|              | • NFPA  
|              | • NVFC |
- IAFC
- IAFF
- ISFSI
- et al.

- **Tasks:**
  - Clarify communication plan
  - Establish organizational direction
    - Mission
    - Vision
    - Values
    - Leadership
  - Must get collective buy-in
  - Make declarative statement
    - Maintaining proficiency = good
    - Not maintaining proficiency = not good
  - Build on workshop proceedings (10/1 & 10/2/19)
    - Need states (10) already with program to serve as advocates

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| Group | Yellow | f) The need for proficiency involves two parts: (1) maintenance of initial skills, and (2) development of new skills. Many departments are addressing part (1). Better coordination is needed between entities responsible for new skills to ensure that Pro-Qual address these elements. |
5) Summary Observations

The workshop and associated research report were hosted by the Fire Protection Research Foundation (FPRF), independent research affiliate of the National Fire Protection Association (NFPA). Definitive next actionable steps, such as changes to applicable Pro-Qual Standards, are the purview of the NFPA Codes & Standards process and are beyond the scope of the FPRF and this workshop activity. All proposed changes to the NFPA Codes & Standards are in the domain of the NFPA consensus process.

The overall goal of this workshop is to establish an understanding of developing a process to ensure continued demonstration of knowledge and skill proficiency against a given level of credentialing for the fire and emergency services personnel. This was accomplished through an interactive approach involving interested stakeholders that focused on:

- Brief review of baseline information; i.e., evolution, current status and anticipated direction of the Pro-Qual system and JPR development; current landscape of practice for maintaining skill proficiency for fire and emergency personnel in the North America; clarify the relevancy and applicability of process adopted in parallel professions.
- Identify, prioritize, and assess the options to implement such a process for fire and emergency service personnel; and
- Establish recommended action plan to provide guidance to the Pro-Qual infrastructure to meet these needs.

In summary, key points from this workshop are consolidated below as overall summary observations of the workshop.

**General Observations:** Among the summary observations, the following are the overarching points that are considered important.

- a) This is an important topic for the profession of firefighting. There is value addition for maintaining proficiency program after the initial certification, and this applies to individuals, organizations and the entire fire service community.
- b) There is currently an established infrastructure, but with inconsistent characteristics and features addressing maintaining proficiencies to varying extents. Future universal enhancements should seek minimal disruption on the established infrastructure.
- c) The Fire Service is unique when compared to other parallel professions that have already embraced maintaining proficiencies. These unique characteristics and features are addressable and are not insurmountable.
- d) Any approach going forward should be well thought out, embraced by key stakeholder organizations, implement in realistic phases, and properly communicated.
- e) The workshop proceedings and the associated research report did not seek to establish clear lines of consensus in a manner similar to the NFPA codes and standards process, however, based
on the discussions some items had strong consensus perspective whereas others were more borderline. The deliverables from the Fire Protection Research Foundation provide supporting guidance for others, such as in the codes and standards arena to take definitive steps to enable progressive change on this topic.

The summary below are the specific observations from the workshop related to actionable next steps.

**A. Steering Entity:**
1. Establish a steering entity, and consider a title such as “Maintaining Proficiencies Organizational Summit”.
2. Identify and Include all key organizational stakeholder representatives.
3. Implement such an organizational summit as soon as possible, at least in early 2020, with a face to face meeting.
4. Identify a chair who is a proven leader, deeply knowledgeable in this subject matter, recognized and respected in the fire service, able to fairly coordinate the requirements and need of the all impacted stakeholders (e.g., Dr. Denis Onieal, USFA).
5. Steering entity goals and objectives:
   a) Establish the architecture for handling all organizational details, such as roles and responsibilities in support of maintain proficiencies (e.g., National database; National repository).
   b) Create a strategic implementation plan with clear timeframes, communication strategy, etc.
   c) Clearly outline the resources necessary to implement this and handling of resources.

**B. Philosophical Approach:**
1. “Inside-out or Outside-in”: Two basic philosophical approaches were discussed. One is starting centralized key document such as NFPA 1000 that apply to all of the Fire Service and the other starts with narrowly focused documents addressing specialized activities (e.g., NFPA 1041, NFPA 1021). The characteristics of these two approaches, both short term and long term, address the following: stakeholder acceptance, processing efficiencies, likelihood of success, logical sequence of implementation, cost-benefit analysis, and others. Note: NFPA 1000 ensures credibility of the Accreditation process and does not currently mandate specific requirements such as “current knowledge and skills recertification or renewal” in the individual Pro Qual Technical Standards (Section 5.2.7., NFPA 1000, 2017 Edition).
2. Phase-in approach: Consider a phase-in approach with a defined timeline for progressive implementation.
3. Define “Proficiency”: There needs to be universal agreement on the measures, magnitudes, and thresholds necessary to achieve proficiency (e.g., whether hourly requirements of continuing education can evaluate maintaining proficiency).
C. Application Challenges and Opportunities:

1. **Special Considerations:** Special attention needs to be given to unique application challenges that have direct impact on overall implementation such as:
   
a. Reciprocity (i.e., universal acceptance across jurisdictions)
   b. Multiple certifications (e.g., HAZMAT, Instructor, Investigator, Tech Rescue, etc.)
   c. Grand fathering (i.e., credit for experience)
   d. Frequency (e.g., bi-annual, annual, etc.)
   e. Consequences (i.e., what to do with those who repeatedly fail), and
   f. Others

2. **International implications:** Addressing the needs of the fire service worldwide as a profession is considered important. There is recognition that there is significant opportunity to extend the well-established North American Pro-Qual infrastructure to other parts of the worldwide fire service that is seeking a similar approach.

D. Critical Assessments:

1. **Financial Implications:** Considerations should be given for assessing all relevant financial implications impacting individuals and organizations to provide clear understanding of value added and necessary resources.

2. **Communication Plan:** Consideration should be given for a thorough and detailed strategic plan for communicating all phases of any planned rollout. This is important to address concerns of all critical stakeholders necessary for success.
Annex A: PowerPoint Slides

Maintain Standards, Dr. Denis Onieal, U.S. Fire Administration.

If you saw the video, maintenance of professional standards and reciprocity are the two remaining elements of professional development in the fire and emergency services.

In my view, with the implementation of maintenance of professional standards, the issue of reciprocity will soon follow because the CE system will be near impossible to maintain without reciprocity.

For more than 10 years, the NFA has been awarding continuing education units (CEUs) through the International Association of Continuing Education and Training (IACET).

**STRATEGY:** Rather than trying to implement CEUs across the country - dealing with the concerns and pushbacks - we started with the NFA issuing CEUs.

A few people used them, but in most cases it was viewed as an 'unknown bonus'.

The hope was that someday, someone would say, "I've got all these CEUs, how can I use them?"

There are a lot of people out there, more than 100,000, that have CEUs that they're not using nor how to use them.

Read the report – it makes the case, and it does it well. Not sure how others feel, but my feelings and opinions are well known.

This is the next step is how I ended the presentation. If not us, WHO, if not now, WHEN?

Like many things in the fire service that were once disorganized, and are now organized – this can be done.

BUT - we only have one chance to get it right. Fortunately, others in other professions have done this successfully.

Other professions: (some of this is covered in the report)

Some level of grandfathering for incumbents (often time-limited).

The time limit will probably determine the level of adversity (longer time=less adversity). The time limits can be adjusted as time progresses.

Easier CE requirements at the beginning, increase as time goes on.

Every decision that comes to my desk is addressed as one of the following:

1. The greatest thing since sliced bread, or
2. The greatest threat to democracy this nation has ever faced.

There's no in-between. And so it will be with this.

From this desk, I've found the key to success is to turn adversaries into allies. The stronger the adversary, the better the ally.

We all have “X” amount of time, energy and political capital.

It's our choice:

We can spend that “X” implementing and improving the system.

Or

We can spend that “X” trying to overcome adversity and convincing the inconvincible. Meanwhile, we are losing ground and accumulating more adversity.

We can't do both.
The worst kept secret in the world:

Draw up a draft proposal

- Pass it around to the gatekeepers and the power brokers. Ask them to improve it, criticize it, fix it. BUT to keep it confidential because it’s imperfect. You’re asking others their opinion.

- They will identify roadblocks and concerns for you, some that you never thought of

- They will provide some helpful ideas

- Include something of their ideas / fixes in the final (ally)

THOUGHTS ABOUT GRANDFATHERING (Please argue and disagree)

Give everyone a cert. Make it big, suitable for framing. Put a gold seal on it.

Put a current and expiration date on it – not as big as the gold seal. Make it 5 years or 10 years.

Send it out BEFORE you implement the big change. Have them hang it on their wall before the announcement.

Future issues:

How will it be administered? By whom? (I would look to other professions for ideas...).

Cost of administration?

How will you ensure integrity of the system? How do others?
The Fire Service Professional Qualifications System in North America, Doug Forsman, Fairfield Bay Fire Department.

**The Fire Service Professional Qualifications System in North America**
A short history

**Origins of the System**

- Based on the United Kingdom’s Fire Service Certification system - the idea planted by Chief Martin Grimes and advocated by “America Burning” Report.
- Joint Council of National Fire Service Organizations authorized moving forward with NFPA as the Standards maker.
- National Fire Service Professional Qualifications Board created as the certifying/accrediting organization

**The initial framework**

- Five Basic Standards
  - Firefighter
  - Fire Officer
  - Fire Instructor
  - Fire Inspector
  - Fire Investigator
- Steps as needed within the Standards
- Progressive system dependent on a career path approach
- A means for national level certification toward the concept of reciprocity

**The standards**

- Five committees, structured membership, under the NFPA process
- Firefighter Standard (NFPA 1001) issued in 1974
- The other four standards followed
- Each had individual steps/levels

**The System**

- Goal of the process was/is professionalism
- National Board on Fire Service Professional Qualifications- representatives from each of the JCNFSO member organizations
- Technical Committee members selected by NBFSPQ member organizations

- State and Provincial based training agencies adopted the standards, developed training and testing instruments
- The Pro Board accredited those agencies and issued national level certificates when requested
- Reciprocity was slow to evolve
Progression no longer built on standards as a career path (1983 to present)
JCNFSO and NBFSPQ disbanded in 1989
IFSAC (1990), re-established Pro Board (1992)
NFPA assumes all responsibility for standards (1990)
Job Performance Requirement format adopted (1992)

Major Changes

Demand for new and expanded professional qualifications standards.
Broadening scope of users
Pressures on volunteer committees for time and talent
Maintaining proper committee balance
Current thinking in the fields of competency and performance measurement

Where we are today

These are our standards
The future direction should reflect the thinking of competent, forward looking fire service leaders

Your Efforts Provide Direction

Douglas Forsman
Fire Chief
City of Fairfield Bay, Arkansas
firefors@ionet.net

Thank You
Professional Qualification Documents and the JPR Format, William Peterson, NFPA Pro-Qual Correlating Committee Chair.

“It is the intent of the committee to develop performance standards in such a clear and concise manner that any three individuals who are recognized as knowledgeable in the firefighting field could determine without a question or doubt, by use of performance standards, that the man (sic) measured truly possessed those skills necessary to be a firefighter.”

Harold MacC, 1973

Use of Pro Qual Standards

- Developed to evaluate an individual’s ability to perform essential job tasks
- Intended for the evaluation and certification of individuals for specific jobs

Professional Qualifications

- 14 Standards
- Written as Job Performance Requirements (JPRs)
- The NFPA Professional Qualifications Standards are NOT intended to be training outlines

14 Legacy Professional Qualifications Documents

- Firefighter (1981)
- Driver/Operator (1982)
- Airport FF (1982)
- Fire Marshal (1984)
- Shipboard Firefighting (1985)
- Rescue Technician (1986)
- Fire Officer (1981)
- Fire Inspector and Plan Examiner (1983)
- Fire Investigator (1983)
- Public Educator, PIO, YFIS, YFIPM (1985)
- Fire Instructor (1984)
- Wildland FF (1985)
- Telecommunicator (1984)
- Emergency Vehicle Technician (1971)
- Facility Fire Brigade Member (1981)
**RECENT ADDITIONS**

- Fire Marshal (1037)
- Haz-Mat / WMD Response Personnel (1072)
- Electrical Inspector (1078)
- Building Fire & Life Safety Director (1082)
- Traffic Control Incident Management Personnel (1091)
- Safety Officer (1521)
- Unmanned Aerial System Operator (2400)

**JPR Historical Review**

  - Was a leap forward from instructional objective format that was previously used.
  - Defined what was required on the job,
  - Created new approaches to assessment and evaluation in order to help ensure competent performances.
  - Aligned with best practices in instructional design models by identifying the actual job requirements to align instructional materials for each Pro Qual.
  - Took a multi-year facilitated implementation in order to “train up” the committees,
  - Is seen as “Old School” methodology today,
  - The JPR Model has been replaced by the “Training Industry Competency Model” as a “Best Practice”.

**Training Industry Competency Model**

**Professional Qualifications Standards** = **Job Performance Requirements**

- Minimum Standards of professional competence required for successful job performance
- Describes what one must do to successfully perform on the job

**The Role of the Committee**

- Conduct a Task Analysis
- Develop JPRs using standard format
- Consider the end user in the development of requirements
  - Complete list of requisites
  - Provide measurable evaluation criteria

**Development of JPR Requirements**

- Job Task Analysis
- Format of a JPR
- Consistency and usability
Job Task Analysis

- The process of determining precisely what a person does in a specific job.
- Results in a detailed description of what activities must be performed on the job.

Components of a JPR

- Task
  What is to be performed on the job
- Given
  The tools, equipment, or materials that must be provided to complete the task
- So That (Standard)
  How the performance of the task is evaluated

Task Statement

- Written in behavioral terms
- Clearly describes the action or activity to be performed by an individual on the job
- Begins with an action verb
- The verb selected helps to define the performance level of the task

The Process

Do
- Begin tasks with a verb
- List tools & equip
- Make “so that” measurable
- Include a complete list of requisite knowledge & skills
- Use Annex to explain intent of committee
- Each duty has 2-15 JPRs

Don’t
- Modify standard definitions
- Combine two tasks in one JPR
- Require the use of exotic equipment in “given” statement
- Include only one JPR under a duty heading
- Write JPR’s that are at the elemental level
The JPR

4.3.16* Extinguish incipient Class A, Class B, and Class C fires, given a selection of portable fire extinguishers, so that the correct extinguisher is chosen, the fire is completely extinguished, and correct extinguisher-handling techniques are followed.

From NFPA 1001, 2019 Edition

Requisite Knowledge

(a) Requisite Knowledge: The classifications of fire, the types of, rating systems for, and risks associated with each class of fire; and the operating methods of and limitations of portable extinguishers.

Requisite Skills

(b) Requisite Skills: The ability to operate portable fire extinguishers, approach fire with portable fire extinguishers, select an appropriate extinguisher based on the size and type of fire, and safely carry portable fire extinguishers.

Annex Note

A.4.3.16 The Fire Fighter I should be able to extinguish incipient Class A fires such as wastebaskets, small piles of pallets, wood or hay; Class B fires of approximately 9 ft² (.84 m²); and Class C fires where the electrical equipment is energized. The Fire Fighter I should have knowledge of Class D and K fires and their extinguishing agents. If the fire department has Class D and K fire extinguishers, the fire fighter should be knowledgeable on the devices and their use.

The Completed Document

Developing Training Materials Using JPRs

- Define training (module) objective
- Identify the applicable document and resource materials
- Develop lesson plans with enabling objectives
Using JPR’s for Training

- JPR’s are converted to lesson or module objectives with behaviors, conditions and standards that can be measured within the teaching environment.
- Requisite Skills and Knowledge lists become enabling objectives. The enabling objectives help to define the content of the course curriculum.

Lesson Objective

The fire fighter will be able to select and use an appropriate fire extinguisher to extinguish a Class A, B or C fire.

Enabling Objectives

Each item from the Requisite Knowledge list is converted into an enabling objective describing a cognitive behavior

- The classifications of fire
- Risks associated with each class of fire
- Portable extinguisher types
- Extinguisher rating system
- Operating methods and limitations

Enabling Objective

Cognitive Behavior

Given a description of a fire, the student will identify the classification of the fire with 100% accuracy.

Enabling Objectives

Each item from the Requisite Skills list is converted into an enabling objective describing a psychomotor behavior

- Select an appropriate extinguisher based on the size and type of fire
- Approach fire with portable fire extinguishers
- Safely carry portable fire extinguishers
- Operate portable fire extinguishers

Enabling Objective

Psychomotor Behavior

Given a portable fire extinguisher, the student will operate the unit using the PASS method (Pull – Aim – Squeeze – Sweep), with 100% accuracy.
**What You DO with Standards?**

- Performance checklists
- Each item in the “so that” list from the JPR is included
- Identify “critical” items
- Determine the “passing” grade

**Performance Checklist**

*Using Portable Fire Extinguishers*

- The correct extinguisher is chosen
- Proper extinguisher handling techniques are followed
- The fire is completely extinguished

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**Coordinating Committee Oversight Role**

- Did the committee conduct a job task analysis?
- Are the JPRs in the correct format?
- Are the requirements measurable?
- Is the intent of the committee clear to the end user?
- Eliminating conflicting requirements between different Standards / Technical Committees.

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**CURRENT PRO QUAL PROJECT COMPLEXITIES**

- 1. Rapidly expanding scope of topics (outside of fire service)
- 2. Lack of active CC participation of Technical Committee Chairs.
- 3. High turnover Rate of Technical Committee members.
- 4. Technical Committee Member knowledge and competency with JPR development process.

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**CURRENT PRO QUAL PROJECT COMPLEXITIES**

- 6. Multiple Staff Liaisons for Pro Qual documents.
- 7. Inconsistent TC uniformity of operation.
- 8. Technical Committees tend to just add on additional JPRs without revalidating existing requirements.
- 10. Will the Role of the Coordinating Committee Change with Document Consolidation?

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**Professional Qualification / Competency Is Not a “one stop” Destination – It is a Career-Long Process**

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Update on the “Now and Beyond” Workshop 2011, Casey Grant, Fire Protection Research Foundation.
Recertification

- Generally agreed recertification needed
- Suitability due to resources
- NHR could put suggestions rather than requirements
- Put language into standards that doesn’t require
  it, but simply suggests it
- Best practice of recertification, initial
  requirements different from recertification
- NHR should not address recertification or
  recertification

Figure 5-2: Summary of Discussion on Recertification

Overview

- Introduce the NFPA Fire and Life Safety Ecosystem
- Discuss code development process
2.4 References for Extracts in Mandatory Sections.


NFPA 1041
Fire and Emergency Services Instructor Professional Qualifications

Skilled Workforce
Promoting the development of skilled professionals to apply the codes and standards.
CONCLUSION

Here's what we know:

• No single entity can prevent a fire or disaster from occurring.
• There is no single answer to safety.
• We may not be able to prevent every tragedy from occurring, but by working together, recommitting to and promoting prevention, protection and education, we can further our fire and life safety work to help save lives and reduce loss.

It's a big world, let's protect it together.
PARTICPATION IN THE DEVELOPMENT PROCESS

NFPA 1035
Standard on Fire and Life Safety Educator, Public Information Officer, Youth Firefighter Intervention Specialist and Youth Firefighter Program Manager Professional Qualifications

Current Edition: 2015

View Document
Open
Submit Public Input to the Next Edition

Standards Don’t Matter

Until someone says they do!

- Regulator/Enforcer
- AHJ
- Funding authority
- Consensus as recommended best practice
- Courts

NFPA 1006

- Second Draft Report Posting Date: January 22, 2020
  - Time to review the document

- NITMAM Closing Date: February 19, 2020
- NITMAM Posting Date: April 1, 2020
- June 2020 Tech Session
NFPA 1001 - Fire Fighter Professional Qualifications

• Support Personnel
  – Task Group Recommendation
  – Full Technical Committee Balloted

• Approved Committee Scope: This Committee shall have primary responsibility for documents on professional competence qualifications required of the fire fighters and fire service support personnel.

Fire Service Analysts and Information Technical Specialist Professional Qualifications

TC Scope
• This Committee shall have primary responsibility for documents on the professional qualifications for personnel who use, manage, review, analyze, support, or evaluate data and related technical systems in public safety agencies.

Document Scope
• This standard identifies the minimum job performance requirements (JPRs) for public safety personnel who use, manage, review, analyze, support, or evaluate data and related technical systems.

Job Roles with Distinct JPR’s
1. Data Analysis
2. Geographic Information Systems Analysis
3. Management, Process, and Budget Analysis
4. Fire Behavior Analysis
5. Quality Assurance and Improvement Analysis
6. Regional Fire Data Program Management
7. Accreditation/Compliance Management
8. Information Technology Management
Contamination Control

- Project proposal was approved by the Standards Council
- Start-up Technical Committee appointed.
Proposed NFPA 1140 Standards for Wildland Fire Safety

- 1051 - Standard for Wildland Firefighting Professional Qualifications
- 1141 - Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, & Suburban Areas
- 1143 - Standard for Wildland Fire Management
- 1144 - Standard for Reducing Structure Ignition Hazards from Wildland Fire
Fire and Emergency Service Personnel Knowledge, Skills, and Maintaining Proficiency, Dr. Jamie McAllister, FireTox, LLC.

FPRF Workshop:
Fire and Emergency Service Personnel Knowledge, Skills, and Maintaining Proficiency
Jamie McAllister, Ph.D., P.E., C.F.I
Brian McAllister, B.Sc.F.S.

Agenda
- Background
- Project Tasks
- Methodology
- Research Findings
- Conclusions

Background

FPRF Request for Proposal
Determine if fire and emergency services personnel need and/or should be required to demonstrate continued knowledge and skills proficiency on a stated interval.

Research Tasks
- Task 1: Literature review to clarify current landscape
- Task 2: Literature review of parallel professions
- Task 3: Implementation and Assessment

Task 1
- Part A: Historical Context
  - Comparison of current and previous editions of the NFPA Pro-Qual and Training Standards
    - Changes in FEMS knowledge and skills proficiency requirements
    - Reviewed 22 Pro-Qual and 7 Training Standards

Task 1

NFPA Standards for Professional Qualifications:
- NFPA 1000 Standard for Fire Service Professional Qualifications, Accreditation and Certification Systems
- NFPA 1011 Standard for Fire Fighter Professional Qualifications
- NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications
- NFPA 1003 Standard for Airport Fire Fighter Professional Qualifications
- NFPA 1005 Standard for Professional Qualifications for Marine Fire Fighting for Land-Based Fire Fighters
- NFPA 1006 Standard for Technical Rescue Professional Qualifications
- NFPA 1008 Standard for Fire Officer/Professional Qualifications
- NFPA 1036 Standard for Incident Management Personnel Professional Qualifications
- NFPA 1037 Standard for Professional Qualifications for Fire Inspector and Plan Examiner
- NFPA 1033 Standard for Professional Qualifications for Fire Investigator
- NFPA 1035 Standard for Professional Qualifications for Fire and Life Safety Educator, Public Information Officer, and Juvenile Firesetter Intervention Specialist
- NFPA 1036 Standard for Professional Qualifications for Fire Marshal
- NFPA 1041 Standard for Fire Service Instructor/Professional Qualifications
- NFPA 1051 Standard for Wildland Fire Fighter Professional Qualifications
- NFPA 1041 Standard for Professional Qualifications for Public Safety Telecommunicator
- NFPA 1071 Standard for Emergency Vehicle Technician Professional Qualifications
- NFPA 1081 Standard for Industrial Fire Brigade Member Professional Qualifications
- NFPA 1082 Standard for Facilitator Fire and Life Safety Director Professional Qualifications
- NFPA 1091 Standard for Traffic Control Incident Management Professional Qualifications
- NFPA 1094 Standard for Fire Department Safety Officer Professional Qualifications
Task 1

NFPA Standards for Competencies, Proficiencies, and Training

- NFPA 405: Standard for the Recurring Proficiency of Airport Fire Fighters
- NFPA 1404: Standard for Fire Service Respiratory Protection Training
- NFPA 1407: Standard for Training Fire Service Rapid Intervention Crews
- NFPA 1451: Standard for a Fire and Emergency Service Vehicle Operations Training Program
- NFPA 1670: Standard on Operations and Training for Technical Search and Rescue Incidents

Task 1

- All editions, keyword search:
  - annual, competent, competency, continuing education, current, interval, maintain, maintenance, month, periodic, proficient, proficiency, recertification, recurrent, retraining, and year.

Task 1

- Part B: Current Practice
  - Standards that have CE requirements and frequency
  - Jurisdictions which require retraining/recertification
    - Specifics of requirements, e.g. frequency, hours, etc.
    - Gathered from online resources and fire department survey
  - Jurisdictions that certify/license firefighters or similar
    - Gathered from Pro Board and IFSAC directories of accredited agencies/certified entities

Task 1

- Part C: Value and Benefit
  - Potential impact of proficiency reqs through use of FF death and injury data
  - Data gathered from NFPA and Canadian Center for Justice Statistics and NIOSH Firefighter Fatality Investigation and Prevention Program

- Part D: Changing Trends
  - Driving force behind need for CE.
  - Data gathered from:

Task 2

- Part A: Parallel Professions
  - CE requirements in emergency medical care, nursing, law enforcement, teaching profession
  - Gathered from online research and parallel profession survey
    - National Registry of Emergency Medical Technicians, AAACEUs, Lipcott Nursing Center, Target Solutions, Police One Academy, and the National Board for Professional Teaching Standards

Task 2

- Part B: Evaluation and Applicability
  - Determine if a similar proficiency framework would be appropriate for EMS.

- Part C: Methods for Maintaining Proficiency
  - Identify methods used- e.g. CEUs, refresher courses, retraining, recertification, etc.
Task 3

- Part A: Recommended Approaches
  - Model(s) based on findings of Task 1 and 2
  - Best method for implementation
    - Local, State, National, or International

- Part B: Impact Assessment
  - Determine impact of recommended approach on:
    - Individuals in fire service
    - Fire department
    - Certification providers
    - Accreditation Bodies (Pro Board and IFSAC)
  - Impact evaluated through survey of all stakeholders

Pro-Qual Historical Review

2017 - Appendix content moved into core provisions - certifying entity is required to have a policy to address "a continuing education, professional development, and training process to maintain currency of knowledge and skills."

NFPA 1000 - "A.5.2.7 The committee recognizes the importance of formal and continuing education and training programs to ensure individuals have maintained and updated the necessary skills and knowledge for the level of qualification. Continuing education and training programs can be developed or administrated by local, state, provincial, tribal or federal agencies as well as by professional association and accredited institutions of higher education. The method of learning would include areas of technology, refresher training, skills practice, and knowledge application to standards. The subject matter should directly relate to the requirements of this standard."

Pro-Qual Historical Review

- Current editions of most Pro-Qual standards have been modified to locate language in same section (1.2.6 and A.1.2.6)
  - NFPA 1001 (2019): "Fire Fighter I and Fire Fighter II level individuals shall remain current with general knowledge, skills, and JPRs addressed for each level of position of qualifications."
  - NFPA 1021 (1997): required Fire Officer IV to "establish and evaluate a list of education and in-service training goals...so that all members can achieve and maintain required proficiencies."
    - General language exists in current edition
  - NFPA 1031 and 1033 have not been revised since 2014 and do not include new language

Pro-Qual Historical Review

- Prior to 2006, NFPA 1001, 1002, 1003, 1005, 1006, 1026, 1051, 1071, and 1081 absent requirements
- Circa 2008 as part of NFPA Pro-Qual Project, general language added regarding skills maintenance
  - NFPA 1001 (2008), Section 1.3.8 stated "The fire fighters at all levels of progression shall remain current with fire protection technology, fire suppression practices, and applicable standards by attending workshops and, undergoing certification testing, and accessing professional publications."

Training Standards Historical Review

- NFPA 1404: "An annual evaluation of members shall be performed to determine their proficiency for each type of respiratory protection equipment used by the AHJ.
- NFPA 1407: "The training policy shall include an annual performance evaluation of the RIC operations and RIC members based on the requirements of this standard"
- NFPA 1451: "Members shall be reauthorized annually for all vehicles they are expected to operate. Annual training shall include hands-on exercises using actual vehicles they are expected to use."
- NFPA 1670: "All techniques required of the rope rescue team within this standard shall be demonstrated by the team and/or team members on at least an annual basis..."
Training Standards Historical Review

- NFPA 405: Standard for the Recurring Proficiency of Airport Fire Fighters
  - Only standard with the explicit purpose of establishing “the basis for a recurring training program that focuses on measurable performance criteria.”
  - Originally evolved from and builds upon requirements from US Department of Transportation, FAA, FAR, Part 139.
  - In 2004: “Each evaluation of skills and knowledge required by this standard shall be conducted at regular intervals of at least every 18 months by a designated qualified evaluator(s) appointed by the authority having jurisdiction.”
  - In 2015, changed from 18 months to 12 months in 2015 edition to align with FAA requirements.

Current Practice in Standards

<table>
<thead>
<tr>
<th>Standard</th>
<th>Edition</th>
<th>Frequency</th>
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<tbody>
<tr>
<td>NFPA 405</td>
<td>2010</td>
<td>To be evaluated on an annual basis</td>
</tr>
<tr>
<td>NFPA 472</td>
<td>2018</td>
<td>To demonstrate competency on an annual basis</td>
</tr>
<tr>
<td>NFPA 1002</td>
<td>2017</td>
<td>To demonstrate competency on an annual basis</td>
</tr>
<tr>
<td>NFPA 1006</td>
<td>2017</td>
<td>To demonstrate competency on an annual basis</td>
</tr>
<tr>
<td>NFPA 1041</td>
<td>2015</td>
<td>To maintain 20 hours of CE on an annual basis</td>
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<tr>
<td>NFPA 1042</td>
<td>2015</td>
<td>To drill and receive training and evaluation on an annual basis</td>
</tr>
<tr>
<td>NFPA 1044</td>
<td>2018</td>
<td>To be retained and evaluated on an annual basis</td>
</tr>
<tr>
<td>NFPA 1045</td>
<td>2015</td>
<td>To be evaluated on an annual basis</td>
</tr>
<tr>
<td>NFPA 1451</td>
<td>2015</td>
<td>To be maintained on an annual basis</td>
</tr>
<tr>
<td>NFPA 1679</td>
<td>2017</td>
<td>To be evaluated on an annual basis</td>
</tr>
</tbody>
</table>

Current Practice in U.S. and Canada

- Canada: no recurrent training requirements
- U.S.: 20 States
  - Did not include policies within cities, counties, etc.
  - Results based upon those States with web-published policies
  - 18 of the 20 States with hourly requirements
  - 11 of the 20 States with requirements for firefighter certification
  - Only 10 of the 20 States have hourly requirements

States with CE programs

Alabama

- Alabama Administrative Code, Chapters 360-X-1 and Chapter X-2.
- To maintain a Fire Fighter I certification (specific to career personnel) or a Volunteer Fire Firefighter certification complete 30 hours every year of “continuing training that is relevant to the performance of firefighting duties.”
- Training records maintained by the career firefighter’s employing agency or volunteer firefighter’s department
  - Must be made available to the Personnel Standards Commission upon request.

Colorado

- Certificates are issued by the CDFPC – Colorado Division of Fire Prevention & Control
- Renewal of numerous certifications required every three years
- Renewal is completed in the Records Management System “department head or designee is attesting that the applicant meets all of the renewal requirements”
- To renew a certification, the applicant must have “successfully demonstrated proficiency in all of the skill evaluations identified for the level of certification as verified through evaluation by a person certified at or above this level, the Training Officer, Fire Chief or department designee. The applicant must meet the Performance Outcome in each JFR while completing 100% of all JFRs.”
- Meets or exceeds ProQuals in NFPA 1001
- The policy manual does not specify hourly training requirements for renewal, other than for Fire Service Institutions (Level I) – instruct a minimum of 12 hours every 3 years.
- Renewal requirements apply to career and volunteer personnel.
Iowa

- The Iowa Administrative Code (2011) sets minimum standards for firefighter training and certification to be administered by the Department of Public Safety.
- Code requires fire department members to complete 24 hours per year of continuing education within one or more of the 17 subject areas listed in the Code.
- Requirements apply to both volunteer and career departments that participate in the Iowa Fire Service Certification System.
- Training can be provided by Fire Service Training Bureau, Community College, Regional Fire Training Facility, Local Fire Department, or combination thereof.
- Records maintained by Fire Department.

Kentucky

- Kentucky Fire Commission requires 20 hours of training for volunteers and 100 hours of training for career.
- State Fire Rescue Training provides 20 hours of training to each department at no cost.
- Maximum of 25% through online sources such as FireRescue1 Academy and Target Solutions.
- Firefighter training hours monitored by Kentucky Fire Commission Certified Instructor.

Minnesota

- Only State requiring license to be a firefighter (since 2009) per Minnesota Statute 299N.05.
  - Mandatory for all paid, full-time firefighters.
  - Optional for part-time, paid-on-call, and volunteer.
  - Requires 72 hours every three years to renew.
  - Firefighter is responsible for documentation of training.
  - Audited by Minnesota Board of Firefighter Training and Education.
  - Provides reimbursement funding to departments for training.
  - Renewal application signed by AHJ (e.g., Chief Fire) to MBFTE.
  - Allows for 100% online training, such as through Target Solutions.

Texas

- Texas Administrative Code - CE requirements apply to commission-certified personnel.
- TCPP certificate holders who are employed must earn a minimum of 18 hours of CE per year.
- Two additional hours of CE for each discipline to which person is appointed.
  - CE can be in any of the subject areas applicable to their certifications.
  - Exceptions: HazMat Tech (8 hours) and Wildland (4 hours).
- Level 1 subjects - maintain previously learned skills, Level 2 subjects - develop new skills.
- If not assigned to position, but holds certification, no CE is required.

Examples of calculating required CE hours:

1. An employee holds a Structure Fire Fighter certification and a Fire Inspector certification, but is assigned to FPOO for fire suppression duties.
   - Hours: 18
   - Subjects: 1. Any (selected by head of department) 2. Fire Suppression 3. HazMat (technician level)
   - Total: 18

2. An employee holds a Structure Fire Fighter certification and a Fire Inspector certification, but is assigned to FPOO for fire suppression duties.
   - Hours: 18
   - Subjects: 1. Any (selected by head of department) 2. Fire Suppression
   - Total: 18

NOTE: Time of CE for the inspector is not required if the employee is not assigned to those duties, if assigned to inspector duties, and four hours of Inspector CE is held.

3. An employee holds a Structure Fire Fighter certification, a Fire Inspector certification, a Wildland Firefighter certification, and a HazMat Technician certification. The employee is appointed to FPOO for fire suppression and inspector duties.
   - Hours: 18
   - Subjects: 1. Any (selected by head of department) 2. Fire Suppression
   - Total: 18

NOTE: There is no specific CE requirement for incident safety officer. However, training completed in this subject area can be used to satisfy the 18-hour requirement.
Vermont

- Minimum reqs. for volunteer and call firefighters (less than 32 hours per week) set by local AHJ (e.g. Fire Chief)
- Minimum reqs. for a full-time firefighter in accordance with 20 V.S.A. § 3153(a)(2)(A)
- 24 hours of continued training to renew certification every year
  - FF and FO: HazMat refresher for current level, CPR/AED, SCBA training
  - “Additional training in other subjects commensurate with duties and responsibilities of certification level consistent with Training Council curriculum, NFPA 1001 knowledge and skills requirements, and with an emphasis on structural firefighting.”
- Recertification form sent to Chief of Department for verification

Accredited Agencies

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<tr>
<td>IFSA-C</td>
<td>18</td>
<td>1</td>
<td>3</td>
<td>1</td>
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<tr>
<td>Pre-Board</td>
<td>21</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Both</td>
<td>24</td>
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<tr>
<td>Total</td>
<td>63</td>
<td>4</td>
<td>12</td>
<td>1</td>
</tr>
</tbody>
</table>

NFPA 1000: certifying entity is required to have a policy to address “a continuing education, professional development, and training process to maintain currency of knowledge and skills.”

Value and Benefit

- September 2016, Wilmington, DE
- Rowhouse with persons trapped
- Basement fire
  - First floor collapsed
  - Second collapse occurred during rescue efforts
- Three firefighters died, 4 injured

Value and Benefit

- Contributing Factors:
  - Sliding glass door open on Side Charlie
  - Lack of scene size-up, risk assessment, incident management and command safety
  - Lack of an incident action plan, company/crew integrity
  - Inappropriate fireground tactics for below grade fire
  - Lack of personnel accountability system and rapid intervention crew(s)
  - Ineffective fireground communications
  - Lack of professional development for fire officers and fire fighters

Recommendation #17: Fire departments should ensure that all members engaged in emergency operations receive annual proficiency training and evaluation on fireground operations. Process should include annual live fire training.

NFPA 1560 “requires a fire department to establish and maintain a training, education, and professional development program with the goal of preventing occupational deaths, injuries, and illnesses.”

Changing Trends

Task 2 & 3: Results
### Hourly Requirements for Fire Service

![Hourly Requirements for Fire Service](image1)

### Hourly Requirements for EMP

![Hourly Requirements for EMP](image2)

### Hourly Requirement for RNs

![Hourly Requirement for RNs](image3)

### Hourly Requirement for LEO

![Hourly Requirement for LEO](image4)

### Hourly Requirements for Teachers

![Hourly Requirements for Teachers](image5)

### Frequency and Hourly Requirement Comparison

<table>
<thead>
<tr>
<th></th>
<th>Fire Service- All Positions</th>
<th>Emergency Medical Providers</th>
<th>Nurses</th>
<th>Law Enforcement Officers</th>
<th>Teachers</th>
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<tbody>
<tr>
<td>Frequency</td>
<td>Every year</td>
<td>Every 2 years</td>
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<td>Every year</td>
<td>Every 5 years</td>
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<td>N</td>
<td>54</td>
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<td>Mean (hrs)</td>
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<td>Median (hrs)</td>
<td>20</td>
<td>23</td>
<td>12</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>Mode (hrs)</td>
<td>20</td>
<td>N/A</td>
<td>15</td>
<td>20</td>
<td>18</td>
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<tr>
<td>Standard Deviation</td>
<td>11</td>
<td>9</td>
<td>6</td>
<td>20</td>
<td>8</td>
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</tbody>
</table>

![Frequency and Hourly Requirement Comparison Table](image6)
Methods for Maintaining Proficiency

- **Fire Service**
  - Some % of online training is allowed (25-100%)
  - In Departments following JPRs- live fire training would be required

- **Emergency Medical Responders**
  - NR accepts state and CAPCE approved education- college, vocation school, local EMS agencies, online educational providers, EMS conferences and workshops
  - Skills verification
  - **Teachers**
    - Professional Development to include in-service training, workshops, conferences, coursework

- **Law Enforcement**
  - Online training through Target Solutions or PoliceOne Academy (in some cases up to 100%)
  - Firearms requalification

- **Nursing**
  - Combination of work hours, online training, in-person training and contact hours

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Implementation

- **Fire Service**
  - Department level management of training
  - Specific mechanism for meeting training objectives and certification
  - JPRs is left to Department or Local AHJ
  - Recordkeeping at Department or individual level
  - Recertification or renewal managed by Accredited Entity

- **Emergency Medical Providers**
  - License renewal at State and National level
  - Core ED requirements include National, State, and Individual training
  - **Teachers**
    - License or certificate renewed at the State level through DMD
  - Some States allow National level certification to take place of State reqs

- **Law Enforcement**
  - Continuing education is managed at Department level
  - **Nursing**
    - License renewed at State level through Board of Nursing

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Recommended Approaches

- **MODEL 1: Maintain**
  - Process overseen by the Department

- **MODEL 2: Renew**
  - Process overseen by the Licensing Agency or Accredited Agency

- **MODEL 3: Recertify**
  - Process accredited by the Accreditation Body overseen by the Accredited Agency

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Recommended Approaches

- Most States- certificate renewal or recertification
  - Process overseen by the Accredited Agency.

- Five States- annual training only
  - No application process
  - Fire department is responsible for records management

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Recommended Approaches

<table>
<thead>
<tr>
<th>Position Type</th>
<th>N</th>
<th>Mean (hrs)</th>
<th>Median (hrs)</th>
<th>Mode (hrs)</th>
<th>Interquartile Range (hrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft Firefighter</td>
<td>1</td>
<td>39</td>
<td>36</td>
<td>26</td>
<td></td>
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<tr>
<td>Deluxe Operator</td>
<td>3</td>
<td>48</td>
<td>48</td>
<td>25</td>
<td></td>
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<tr>
<td>Firefighter</td>
<td>11</td>
<td>28</td>
<td>24</td>
<td>12</td>
<td></td>
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<tr>
<td>Firefighter</td>
<td>9</td>
<td>25</td>
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<tr>
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<tr>
<td>Firefighter</td>
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<tr>
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<td>8</td>
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<tr>
<td>Firefighter</td>
<td>2</td>
<td>19</td>
<td>8</td>
<td>3</td>
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<tr>
<td>Marine Firefighter</td>
<td>2</td>
<td>40</td>
<td>30</td>
<td>10</td>
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<tr>
<td>Technical Rescue</td>
<td>3</td>
<td>20</td>
<td>8</td>
<td>3</td>
<td></td>
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<tr>
<td>Wildland Firefighter</td>
<td>11</td>
<td>28</td>
<td>20</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

All Firefighter Positions | 74 | 25 | 20 | 20 | 17 |
Recommendation Approaches

Model Details
- 24 hours per year of training
- Taken during work hours
- Available through a combination of online and face-to-face resources
- Approved by and/or provided by a certifying entity or accredited agency
- Includes a minimum of one live fire drill per year as recommended by NIOSH, and
- Evaluates all job performance requirements set forth in NFPA 1001.

Impact Assessment
Impact varies across different departmental models

Survey Questions
1. Do you currently have a Firecheck Line in your department?
2. If yes, how many hours of training does it take to certify a new/old employee?
3. How often does your department conduct drills?
4. What percentage of drills are live fire drills?
5. In your opinion, is the drill time adequate for you?
6. Do you feel the current training protocol is effective?
7. Do you feel the current protocol is effective in preparing firefighters for real-life situations?
8. How does your department track the progress of firefighters during training?
9. Do you feel the current protocol is effective in preparing firefighters for real-life situations?
10. What changes would you recommend to improve the current training protocol?

Survey Results
- 256 responses
- 243 respondents - FFVFII from Accredited Agencies

Frequency of Suppression Activities

Career or Volunteer Distribution
Career/Volunteer Comparison

<table>
<thead>
<tr>
<th>Current Volunteer</th>
<th>Question</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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</thead>
<tbody>
<tr>
<td>V</td>
<td>Q10: Benefits to Me</td>
<td>2%</td>
<td>10%</td>
<td>44%</td>
<td>26%</td>
<td>5%</td>
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<tr>
<td>C</td>
<td>Q11: Benefits to Me</td>
<td>2%</td>
<td>10%</td>
<td>44%</td>
<td>26%</td>
<td>5%</td>
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<tr>
<td>V</td>
<td>Q12: Positive Impact on Proficiency</td>
<td>6%</td>
<td>18%</td>
<td>43%</td>
<td>20%</td>
<td>10%</td>
</tr>
<tr>
<td>C</td>
<td>Q12: Positive Impact on Proficiency</td>
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<td>18%</td>
<td>43%</td>
<td>20%</td>
<td>10%</td>
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<td>C</td>
<td>Q14: Challenge to Complete CE Requirements</td>
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<td>23%</td>
<td>10%</td>
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<tr>
<td>V</td>
<td>Q14: Challenge to Complete CE Requirements</td>
<td>17%</td>
<td>28%</td>
<td>28%</td>
<td>23%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Conclusions

- The current editions of all NFPA Pro-Qual standards require fire service members to “remain current” with knowledge and skills.
- The need for knowledge and skills proficiency has been expressed in various ways in the NFPA Pro-Qual and Training standards for at least a decade.
- A total of 20 States have recurrent training, recertification, or license renewal policies, however, only 18 of the 20 States specify hourly requirements.
- A need for proficiency training on an annual basis, including live fire training, has been indicated in various firefighter death and injury investigations.
- Advancements in fire science reveal that CE in the fire service goes beyond maintenance of initial skills and core competencies and is necessary to ensure that firefighters are current with changes in suppression and ventilation techniques, building construction, fire behavior, personal protective equipment, firefighter health and safety, and more.
- Considering all stakeholders, the survey showed that the impact of the CE model would be positive to very positive with the exception of the impact on completion of existing CE requirements, which was found to be negative.

Other Considerations

- Multiple certifications/Compounding CE requirements
  - Unique JPRs
  - Annual demonstration of all JPRs may be infeasible
  - Approach focusing on individuals assigned role
- Accreditation Body’s Role
  - Current recertification processes are overseen by Accredited Agency
    - Variability from State to State
    - Challenges to Reciprocity Programs