

**The Importance of Establishing a  
Well-Defined Career Progression  
for Technical Rescue Team  
Members in Accordance with  
NFPA 1670**

Presented by:

*James Russel McCullar II*

**The Importance of Establishing a Well-Defined Career Progression  
For Technical Rescue Team Members  
In Accordance with NFPA 1670<sup>1</sup>**

James Russell McCullar II<sup>2</sup>  
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**Abstract:**

Rescuers and team managers alike need a document that serves as a map to chart the pathway through the training process involved in becoming a proficient rescuer. Regardless of the discipline, there is a sequence in which these training benchmarks are best achieved. Such knowledge serves to enhance rescue member fulfillment and team strategic planning.

A Training Progression Matrix explains the available pathways to become a trained rescuer in various disciplines. The supporting documents for this matrix include NFPA 1670. The matrix and supporting documents are reviewed and ideas for future enhancements are discussed.

The information will allow team managers and budget makers to better understand and make appropriations for training. Methods in which training vendors are selected as well as the merits and pitfalls of accreditation become clearer. Utilizing the training matrix, students will understand the big picture and be able to take more ownership in their educational experience.

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<sup>2</sup> Russell McCullar: [jrmccullar@gmail.com](mailto:jrmccullar@gmail.com)

## **Problem**

The most valuable assets to any technical rescue team are the actual rescuers. Teams and response agencies strive to maintain readiness and initiate response within minutes. It is usually easier to scrounge up an extra generator or tripod lighting than another trained rescuer with the desired knowledge, skills, and abilities. These trained rescuers constitute a team's human capital. Regardless of the rescue discipline, training will exceed hundreds of hours in order for a member to be an effective operator and team member.

In too many instances, new team members do not have a thorough understanding of the training expectations in a specific discipline or field. Team position descriptions and documents such as NFPA 1670 and NFPA 1006 outline requirements for various disciplines, but are not easy for the new member to wade through. Team managers should be able to accurately communicate to team members and their authority having jurisdiction(AHJ) the training pipeline and the prospective cost of training each member. These managers and the members need to have a thorough knowledge of their discipline training process from bottom to top.

Teams and agencies should be able to apply consistent parameters in order to assess the training pathway of members, the time to train, and the cost of training. In addition to forecasting team needs and budgeting, this can greatly enhance memberships recruitment and retention. Team members must be encouraged to understand and take ownership in their educational process. This includes a clear path for moving from point "A" to point "B" within the organization. Many organizations have this knowledge. It resides within its leaders and managers; but new members rarely have a full understanding of their future training requirements.

It is for this reason that documents such as NFPA 1670 and NFPA 1006 should be consolidated and simplified into a guideline for career progression. These valuable standards serve as tools that can be utilized for job descriptions, shopping for training vendors, and curriculum development among others. These documents are not an easy read for the new fire recruit or volunteer rescue team member. That is why teams and agencies need to be responsible for communicating this information and their clear expectations to team members. In order for these documents to be abridged, they must first be understood.

## **Review of Literature**

The National Fire Protection Association (NFPA) regulates the training standards and operational practices within Fire and Emergency Services. NFPA 1670 is the *Standard on Operations and Training of Technical Rescue Incidents* (National Fire Protection Association, 2009). NFPA 1006 is the *Standard for Technical Rescuer Professional Qualifications* (National Fire Protection Association, 2008). The NFPA standards are considered consensus standards that are generated by industry leaders and working professionals who sit on NFPA committees. These standards are only guidelines until a city, department, or Authority Having Jurisdiction (AHJ) adopt them into policy or law.

Search and rescue organizations are not bound by these documents. NFPA 1006 and 1670 remain guidelines for rescue training and operational practices.

The NFPA 1006 Standard for Professional Rescuer Professional Qualifications 2008 Edition is divided into eighteen chapters and multiple appendices. The first four chapters are administration, definitions, and general requirements. Chapters five through eighteen are divided into specific rescue disciplines. Chapter five begins with general rescue technician job performance requirements. The chapters that follow include: Rope Rescue, Confined Space Rescue, Trench Rescue, Structural Collapse, Vehicle and Machinery Rescue, Surface Water Rescue, Dive Rescue, Ice Rescue, Surf Rescue, Wilderness Rescue, Mine and Tunnel Rescue, and Cave Rescue. Within each chapter or discipline, specific job performance requirements are listed that demonstrate competency and proficiency in that discipline.

Each part of the 1006 standard is divided into three parts. The first is the job performance requirement (JPR) to be learned and develop proficiency. The remaining subheadings are knowledge and skills. (A). The *knowledge* is the theoretical information a rescuer should possess about the JPR. (B). *Skills* are the specific tasks the rescuer should be able to perform in reference to the JPR. The section on “knowledge” is a comprehensive theoretical understanding of the task or goal that is being achieved. The “skill” reference specifically outlines the actual task that should be executed. Within each chapter of specialization, specific skill sets are cited that cross-reference other disciplines. This is illustrated in the case where there is not a specific statement mandating that the job performance requirements in rope rescue be learned and mastered prior to instruction in confined space rescue. There are, however, job performance requirements in confined space that are rope rescue skills. Patient packaging and the use of retrieval systems are skills called upon in confined space but more often learned in rope rescue. Without question, there is no single discipline in the field of US&R and technical rescue that stands entirely alone and never calls upon skills and knowledge acquired in other rescue fields. None of the disciplines are independent of the other. This point is very prominent in the NFPA 1670 Standard.

The NFPA 1670 Standard on Operations and Training for Technical Search and Rescue Incidents 2009 Edition reflects the most current standard on rescue training as well as a strong guideline for training progression. Like 1006, NFPA 1670 is divided into chapters referencing the specific rescue disciplines. Chapters one through four deal with issues of administration, definitions, references, and general requirements. Chapters five through fifteen outline training and operational levels for Rope Rescue, Structural Collapse Search and Rescue, Confined Space Search and Rescue, Vehicle Search and Rescue, Water Search and Rescue, Wilderness Search and Rescue, Trench and Excavation Search and Rescue, Machinery Search and Rescue, Cave Search and Rescue, Mine and Tunnel Search and Rescue, and Helicopter Search and Rescue.

Each chapter within NFPA 1670 is divided into three sections constituting the level of operational rescue ability. The levels are Awareness, Operations, and Technician. The standard states that all organizations conduct training to the Awareness level for each

type of search and rescue incident known to be a risk within the jurisdiction of the AHJ. Awareness training is defensive in nature. Rescuers are taught to recognize and identify the technical rescue at hand, isolate the hazards, and prevent others from becoming further endangered. Operational ability is a level that trains teams to begin taking direct intervention in a technical rescue. This level teaches most of the skills necessary to effect rescues and remove victims from the hazardous environment. Technical level ability represents a pinnacle of rescue training and operational capabilities. This generally is a level where the most advanced techniques, equipment, and training, are used to mitigate hazards and rescue victims from hazardous environments.

Each chapter of the 1670 Standard lists general knowledge and job performance requirements expected of organizations that intend to perform or be trained as an “Operations Level Rope Rescue Team” or a “Technician Level Confined Space Team” and all other disciplines and levels. The NFPA 1670 team performance requirements are not as in-depth and skill-specific as the individual JPRs found in NFPA 1006. The difference between the two standards is information provided at the beginning of each level in each chapter. The prerequisite training and knowledge is stated for each level of each rescue discipline in NFPA 1670. Individual chapters in NFPA 1006 are not interconnected. Though some of the individual 1006 JPRs recall skills learned in other disciplines.

## **Research and Discussion**

For the well-known position of “Rescue Specialist” used by US&R teams around the world, the required training is very expensive and time-consuming. A minimum of nine weeks and between 300-400 hours of training is necessary just to address the 1670 requirements of Structural Collapse Rescue Technician. This training does not include other administrative training such as NIMS / ICS, equipment orientation, and human resources requirements. The 400 hours of training will require course fees, per diem, back-fill, and possible overtime. For just one rescuer, the total cost of the Rescue Specialist can balloon to equal or greater than a year’s salary in some jurisdictions. Seasoned rescuers and team members not only represent an asset of human capital, but also a huge asset on the fiscal balance sheet.

A useful tool that can be used by team managers, trainers, and members to assess and appraise training is a training matrix. Rather than using one linear path of progression, a matrix can incorporate the interdependent nature of the various disciplines. Some institutions deliver training from the awareness level through technician level in one weeklong delivery. Others will break up the training into two or three different levels over more time. The training matrix allows the user to understand where they are, where they have been, and how to achieve their goals in a rewarding sequence. It is the intent that students move through each discipline from bottom to top. Students will additionally move through the disciplines from left to right. Blue boxes represent the respective levels in each discipline, while the white boxes represent the prerequisite training that is required to take the next vertical step. This matrix references the standard for operations and training capabilities.

# NFPA 1670 2009 Ed. Training Progression Matrix



Training in the rescue is more effective for students when they move through the courses in a systematic process. All rescuers should be able to provide emergency medical training to the basic life-support level(BLS). This will allow rescuers to render some patient care in all disciplines. Likewise, hazardous materials knowledge is required of students that are learning about confined spaces and how to monitor hazardous atmospheres. Previous knowledge and instruction in hazardous materials enriches the students' learning in confined space, vehicle / machinery, and trench rescue. All of these areas of knowledge and skills will augment and enhance the experience of structural collapse rescue. It is clearly illustrated that the sequence of education is highly influential in level of knowledge and comprehension. Therefore one can deduce that the level of service a rescuer is capable of providing is highly dependent on the order in which their rescue education takes place.

## **Conclusions**

This training matrix is not just a document, but more importantly a concept of the interdependence of the various disciplines with which rescuers are charged. It is paramount that not just team managers and trainers understand the importance of the educational order. The knowledge should not be viewed as exclusive or proprietary. Students and members should have the information at their fingertips so the scope and breadth of their own training pipeline is understood.

This information can also be used to clearly illustrate to administrators the cost of training and areas for future strategic team development. The degree of educational investment that teams place in rescuers cannot be overstated. For this reason, policies for recruitment, retention, and succession planning must be explored and evaluated.

## **Recommendations for Further Research and Discussion**

When is DOT EMT or possibly DOT First Responder training going to move out of the 1006 Appendix and into 1670 / 1006 Requirements?

Would it be more beneficial for NFPA 1006 to have similar disciplinary prerequisites?

Why is there not more guidance in the manner in which NFPA 1006 and 1670 are applied to the SAR Working Group "SAR Job Titles."?

Does your understanding of the SWG Job Titles acknowledge the interdisciplinary reality of the different rescue positions / titles?

Should some level of Wilderness Search and Rescue training be included in position descriptions for more disciplines (i.e. Rescue Specialist)?





# NOTES

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