First Revision No. 10-NFPA 1006-2018 [Global Input]

The committee reaffirms the language of TIA 17-1 (Log 1303). See attached.

Supplemental Information

File Name	Description	Approved
TIA_1006_17_1.pdf		

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 18 15:21:41 EDT 2018

Committee Statement

Committee Statement: NOTE: This public input originates from Tentative Interim Amendment No. 17-1 (Log 1303) issued by the Standards Council on November 18, 2017 and per the NFPA Regs., needs to be reconsidered by the Technical Committee for the next edition of the Document.

Substantiation: This corrects an error in the published version of NFPA 1006 (2017) that is not reflective of the final work product of the committee.

Emergency Nature: The standard contains an error or an omission that was overlooked during the regular revision process.

Response Message: FR-10-NFPA 1006-2018

Public Input No. 67-NFPA 1006-2018 [Global Input]

Tentative Interim Amendment

NFPA® 1006

Standard for Technical Rescue Personnel Professional Qualifications

2017 Edition

Reference: 4.2, and 4.2.10(A) and (B)
TIA 17-1
(TIA Log #1303)

Pursuant to Section 5 of the NFPA *Regulations Governing the Development of NFPA Standards*, the National Fire Protection Association has issued the following Tentative Interim Amendment to NFPA 1006, *Standard for Technical Rescue Personnel Professional Qualifications*, 2017 edition. The TIA was processed by the Technical Committee on Rescue Technician Professional Qualifications, and the Correlating Committee on Professional Qualifications, and was issued by the Standards Council on November 18, 2017, with an effective date of December 8, 2017.

A Tentative Interim Amendment is tentative because it has not been processed through the entire standards-making procedures. It is interim because it is effective only between editions of the standard. A TIA automatically becomes a public input of the proponent for the next edition of the standard; as such, it then is subject to all of the procedures of the standards-making process.

1. *Revise 4.2 to read as follows:*

   4.2 Operations Level. The job performance requirements defined in Section 5.2, Section 4.1, and 4.2.1 through ~~4.2.10~~ 4.2.11 shall be met prior to operations-level qualification in tower rescue.

2. *Revise 4.2.10(A) and (B) to read as follows:*

   4.2.10 Develop and adhere to contingency plans for when inclement weather or other factors make operations-level response ineffective or dangerous to rescuers, given an incident so that a risk/benefit decision can be made.
   (A) Requisite Knowledge. ~~**(Reserved)**~~ AHJ policies and procedures, risk versus benefit analysis application, site safety and hazard control techniques, and pre-incident rescue action planning.
   (B) Requisite Skills. ~~**(Reserved)**~~ Apply policies and protocols, apply risk versus benefit analysis information, apply pre-incident planning data, risk management, and site safety control techniques.

Issue Date: November 18, 2017
Effective Date: December 8, 2017

(Note: For further information on NFPA Codes and Standards, please see www.nfpa.org/docinfo**)**

First Revision No. 11-NFPA 1006-2018 [Global Input]

The committee reaffirms the language of TIA 17-2 (Log 1304). See attached.

Supplemental Information

File Name	Description	Approved
TIA_1006_17_2.pdf		

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 18 15:22:49 EDT 2018

Committee Statement

Committee Statement: NOTE: This public input originates from Tentative Interim Amendment No. 17-2 (Log 1304) issued by the Standards Council on November 18, 2017 and per the NFPA Regs., needs to be reconsidered by the Technical Committee for the next edition of the Document.

Substantiation. This corrects an error in the published version of NFPA 1006 (2017) that is not reflective of the final work product of the committee.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process.

Response Message: FR-11-NFPA 1006-2018

Public Input No. 68-NFPA 1006-2018 [Global Input]

Tentative Interim Amendment

NFPA® 1006

Standard for Technical Rescue Personnel Professional Qualifications

2017 Edition

Reference: 5.3
TIA 17-2
(TIA Log #1304)

Pursuant to Section 5 of the NFPA *Regulations Governing the Development of NFPA Standards*, the National Fire Protection Association has issued the following Tentative Interim Amendment to NFPA 1006, *Standard for Technical Rescue Personnel Professional Qualifications*, 2017 edition. The TIA was processed by the Technical Committee on Rescue Technician Professional Qualifications, and the Correlating Committee on Professional Qualifications, and was issued by the Standards Council on November 18, 2017, with an effective date of December 8, 2017.

A Tentative Interim Amendment is tentative because it has not been processed through the entire standards-making procedures. It is interim because it is effective only between editions of the standard. A TIA automatically becomes a public input of the proponent for the next edition of the standard; as such, it then is subject to all of the procedures of the standards-making process.

1. *Revise 5.3 to read as follows:*

5.3 Technician Level. The job performance requirements defined in Section 5.2 and 5.3.1 through ~~5.3.6~~ 5.3.8 shall be met prior to technician-level qualification in rope rescue.

Issue Date: November 18, 2017

Effective Date: December 8, 2017

(Note: For further information on NFPA Codes and Standards, please see www.nfpa.org/docinfo**)**

First Revision No. 12-NFPA 1006-2018 [Global Input]

The committee reaffirms the language of TIA 17-3 (Log 1306). See attached.

Supplemental Information

File Name	Description	Approved
TIA_1006_17_3.pdf		

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 18 15:23:22 EDT 2018

Committee Statement

Committee Statement: NOTE: This public input originates from Tentative Interim Amendment No. 17-3 (Log 1306) issued by the Standards Council on November 18, 2017 and per the NFPA Regs., needs to be reconsidered by the Technical Committee for the next edition of the Document.

Substantiation. This corrects an error in the published version of NFPA 1006 (2017) that is not reflective of the final work product of the committee.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process.

Response Message: FR-12-NFPA 1006-2018

Public Input No. 69-NFPA 1006-2018 [Global Input]

Tentative Interim Amendment

NFPA® 1006

Standard for Technical Rescue Personnel Professional Qualifications

2017 Edition

Reference: 10.2 and 10.3
TIA 17-3
(TIA Log #1306)

Pursuant to Section 5 of the NFPA *Regulations Governing the Development of NFPA Standards*, the National Fire Protection Association has issued the following Tentative Interim Amendment to NFPA 1006, *Standard for Technical Rescue Personnel Professional Qualifications*, 2017 edition. The TIA was processed by the Technical Committee on Rescue Technician Professional Qualifications, and the Correlating Committee on Professional Qualifications, and was issued by the Standards Council on November 18, 2017, with an effective date of December 8, 2017.

A Tentative Interim Amendment is tentative because it has not been processed through the entire standards-making procedures. It is interim because it is effective only between editions of the standard. A TIA automatically becomes a public input of the proponent for the next edition of the standard; as such, it then is subject to all of the procedures of the standards-making process.

1. *Revise 10.2 to read as follows:*

   10.2 Operations Level. The job performance requirements defined in Section 5.2, ~~4.2 and~~ Section 10.1, and ~~in~~ 10.2.1 through 10.2.12 ~~10.2.10 and in Section 5.2~~ shall be met prior to operations-level qualification in wilderness search and rescue.

2. *Revise 10.3 to read as follows:*

   10.3 Technician Level. The job performance requirements defined in Section 5.2, ~~9.2,~~ Section 10.2, ~~and 15.2~~, and 10.3.1 through ~~10.3.8~~ 10.3.11 shall be met prior to technician-level qualification in wilderness search and rescue.

Issue Date: November 18, 2017
Effective Date: December 8, 2017

(Note: For further information on NFPA Codes and Standards, please see www.nfpa.org/docinfo**)**

First Revision No. 13-NFPA 1006-2018 [Global Input]

The committee reaffirms the language of TIA 17-5 (Log 1308). See attached.

Supplemental Information

File Name	Description	Approved
TIA_1006_17_5.pdf		

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 18 15:24:50 EDT 2018

Committee Statement

Committee Statement: NOTE: This public input originates from Tentative Interim Amendment No. 17-5 (Log 1308) issued by the Standards Council on November 18, 2017 and per the NFPA Regs., needs to be reconsidered by the Technical Committee for the next edition of the Document.

Substantiation. This change is being made based on language submitted as final work product that never made it into the 2017 version of the document.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA corrects errors in the current published version of the document, which incorrectly refers to or identifies pre-requisites for this chapter. The TIA corrects these errors, and points the user to the correct pre-requisite and location.

Response Message: FR-13-NFPA 1006-2018

Public Input No. 71-NFPA 1006-2018 [Global Input]

Tentative Interim Amendment

NFPA® 1006

Standard for Technical Rescue Personnel Professional Qualifications

2017 Edition

Reference: 17.2 and 17.3
TIA 17-5
(TIA Log #1308)

Pursuant to Section 5 of the NFPA *Regulations Governing the Development of NFPA Standards*, the National Fire Protection Association has issued the following Tentative Interim Amendment to NFPA 1006, *Standard for Technical Rescue Personnel Professional Qualifications*, 2017 edition. The TIA was processed by the Technical Committee on Rescue Technician Professional Qualifications, and the Correlating Committee on Professional Qualifications, and was issued by the Standards Council on November 18, 2017, with an effective date of December 8, 2017.

A Tentative Interim Amendment is tentative because it has not been processed through the entire standards-making procedures. It is interim because it is effective only between editions of the standard. A TIA automatically becomes a public input of the proponent for the next edition of the standard; as such, it then is subject to all of the procedures of the standards-making process.

1. *Revise 17.2 and 17.3 to read as follows:*

17.2 Operations Level. The job performance requirements defined in Section 16.1, 16.2.1 through 16.2.14, Section 17.1, and ~~10.1 10.2.1~~ 17.2.1 through 17.2.5 ~~10.2.5 Section 16.1 and 16.2.1 through 16.2.13~~ shall be met prior to operations-level qualification in swiftwater rescue.

17.3 Technician Level. The job performance requirements defined in 16.3.1 through 16.3.4, Section 17.2, and ~~10.2 10.3.1~~ 17.3.1 through 17.3.3 ~~10.3.3 and 16.3.1 through 16.3.4~~ shall be met prior to technician-level qualification in swiftwater rescue.

Issue Date: November 18, 2017

Effective Date: December 8, 2017

(Note: For further information on NFPA Codes and Standards, please see www.nfpa.org/docinfo**)**

First Revision No. 14-NFPA 1006-2018 [Global Input]

The committee reaffirms the language of TIA 17-6 (Log 1309). See attached.

Supplemental Information

File Name	Description	Approved
TIA_1006_17_6.pdf		

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 18 15:25:27 EDT 2018

Committee Statement

Committee Statement: NOTE: This public input originates from Tentative Interim Amendment No. 17-6 (Log 1309) issued by the Standards Council on November 18, 2017 and per the NFPA Regs., needs to be reconsidered by the Technical Committee for the next edition of the Document.

Substantiation. This corrects an error in the published version of NFPA 1006 (2017) that is not reflective of the final work product of the committee.

Emergency Nature. The standard contains an error or an omission that was overlooked during the regular revision process. The current version of the standard incorrectly identifies and references pre-requisites for this chapter. The proposed TIA corrects this error by referring users to the correct pre-requisites.

Response Message: FR-14-NFPA 1006-2018

Public Input No. 72-NFPA 1006-2018 [Global Input]

Tentative Interim Amendment

NFPA® 1006

Standard for Technical Rescue Personnel Professional Qualifications

2017 Edition

Reference: 22.2
TIA 17-6
(TIA Log #1309)

Pursuant to Section 5 of the NFPA *Regulations Governing the Development of NFPA Standards*, the National Fire Protection Association has issued the following Tentative Interim Amendment to NFPA 1006, *Standard for Technical Rescue Personnel Professional Qualifications*, 2017 edition. The TIA was processed by the Technical Committee on Rescue Technician Professional Qualifications, and the Correlating Committee on Professional Qualifications, and was issued by the Standards Council on November 18, 2017, with an effective date of December 8, 2017.

A Tentative Interim Amendment is tentative because it has not been processed through the entire standards-making procedures. It is interim because it is effective only between editions of the standard. A TIA automatically becomes a public input of the proponent for the next edition of the standard; as such, it then is subject to all of the procedures of the standards-making process.

1. *Revise 22.2 to read as follows:*

22.2* Operations Level. The job performance requirements defined in Sections ~~16.1~~ 16.2, ~~17.1~~, 17.2, and 22.1 and 22.2.1 through 22.2.11 ~~22.2.5~~ shall be met prior to operations-level qualification in floodwater rescue.

Issue Date: November 18, 2017

Effective Date: December 8, 2017

(Note: For further information on NFPA Codes and Standards, please see www.nfpa.org/docinfo**)**

First Revision No. 162-NFPA 1006-2018 [Global Input]

Throughout the document change "go" rescuers to in-water rescuers.

Submitter Information Verification

Committee:
Submittal Date: Mon Jul 30 09:47:57 EDT 2018

Committee Statement

Committee Statement: The committee is making this change as the new text is what is commonly used.
Response Message: FR-162-NFPA 1006-2018

First Revision No. 191-NFPA 1006-2018 [Global Input]

See attached for a new Chapter 9

Supplemental Information

File Name	Description	Approved
NEW_Chapter_9_Heavy_Vehicle_Rescue_KH_jul_30.docx	New chapter 9--for staff use	
1006_Global_FR-191_Chapter_9-NEW.docx	For ballot	

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 11:36:56 EDT 2018

Committee Statement

Committee Statement: The committee has developed a new chapter 9 in order to address the need for qualifications for heavy vehicles, which can be very different than common passenger vehicles as noted in the individual chapters as well as in chapter 3.

Response Message: FR-191-NFPA 1006-2018

Chapter 9 Heavy Vehicle Rescue

9.1 Awareness Level.

Prior to qualification at the awareness level in heavy vehicle rescue, the individual shall meet the requirements in 1.5(1) as defined by the AHJ.

9.2 Operations Level.

The job performance requirements defined in Sections 8.3, 9.1, and 9.2 shall be met prior to operations-level qualification in heavy vehicle rescue.

9.2.1

Create an incident action plan for a heavy vehicle incident, and conduct an initial and ongoing size-up, given agency guidelines, planning forms, and an operations-level vehicle incident or simulation, so that a standard approach is used during training and operational scenarios, emergency situation hazards are identified, isolation methods and scene security measures are considered, fire suppression and safety measures are identified, vehicle stabilization needs are evaluated, and resource needs are identified and documented for future use.

(A) Requisite Knowledge.

Operational protocols, specific planning forms, types of vehicles common to the AHJ boundaries, vehicle hazards, incident support operations and resources, vehicle anatomy, and fire suppression and safety measures.

(B) Requisite Skills.

The ability to apply operational protocols, select specific planning forms based on the types of vehicles, identify and evaluate various types of vehicles within the AHJ boundaries, request support and resources, identify vehicle anatomy, and determine the required fire suppression and safety measures.

9.2.2

Establish fire protection, given an extrication incident and fire control support, so that fire and explosion potential is managed and fire hazards and rescue objectives are communicated to the fire suppression crew.

(A) Requisite Knowledge.

Types of fire and explosion hazards, incident management systems, types of extinguishing devices, agency policies and procedures, types of flammable and combustible substances and types of ignition sources, and extinguishment or control options.

(B) Requisite Skills.

The ability to identify fire and explosion hazards, operate within the incident management system, use extinguishing devices, apply fire control strategies, and manage ignition potential.

9.2.3

Stabilize a heavy vehicle that has come to rest in its position of use on the road or other stable surface, given a vehicle tool kit and PPE, so that the vehicle is prevented from moving during the rescue operations; entry, exit, and tool placement points are not compromised; anticipated rescue activities will not compromise vehicle stability; selected stabilization points are structurally sound; stabilization equipment can be monitored; and the risk to rescuers is minimized.

(A) Requisite Knowledge.

Types of stabilization devices, mechanism of heavy vehicle movement, types of stabilization points, types of stabilization surfaces, AHJ policies and procedures, and types of vehicle construction components as they apply to stabilization.

(B) Requisite Skills.

The ability to apply and operate stabilization devices.

9.2.4

Isolate potentially harmful energy sources, including propulsion power, restraint systems, and construction materials, given a heavy vehicle, vehicle tool kit, and PPE, so that all hazards are identified, systems are managed, beneficial system use is evaluated, and hazards to rescue personnel and victims are minimized.

(A) Requisite Knowledge.

Types and uses of PPE, types of energy sources, system isolation methods, specialized system features, tools for disabling hazards, and policies and procedures of the AHJ.

(B) Requisite Skills.

The ability to select and use hazard-specific PPE, identify hazards, operate beneficial systems in support of tactical objectives, and operate tools and devices for securing and disabling hazards.

9.2.5

Determine the heavy vehicle access and egress points, given the structural and damage characteristics and potential victim location(s), so that the victim location(s) is identified; entry and exit points for victims, rescuers, and equipment are designated; flows of personnel, victims, and equipment are identified; existing entry points are used; time constraints are factored; selected entry and egress points do not compromise vehicle stability; chosen points can be protected; equipment and victim stabilization are initiated; and AHJ safety and emergency procedures are followed.

(A) Requisite Knowledge.

Heavy vehicle construction/features, entry and exit points, routes and hazards operating systems, AHJ standard operating procedure, and emergency evacuation and safety signals.

(B) Requisite Skills.

The ability to identify entry and exit points and probable victim locations, and to assess and evaluate impact of vehicle stability on the victim.

9.2.6

Create access and egress openings for rescue from a heavy vehicle on its wheels given a vehicle tool kit, specialized tools and equipment, PPE, and an assignment, so that the movement of rescuers and equipment complements victim care and removal, an emergency escape route is provided, the technique chosen is expedient, victim and rescuer protection is afforded, and vehicle stability is maintained.

(A) Requisite Knowledge.

Heavy vehicle construction and features; electrical, mechanical, hydraulic, pneumatic, and alternative entry and exit equipment; points and routes of ingress and egress; techniques and hazards; agency policies and procedures; and emergency evacuation and safety signals.

(B) Requisite Skills.

The ability to identify heavy vehicle construction features, select and operate tools and equipment, apply tactics and strategy based on assignment, apply victim care and stabilization devices, perform hazard control based on techniques selected, and demonstrate safety procedures and emergency evacuation signals.

9.2.7

Disentangle victim(s), given an extrication incident, a vehicle tool kit, PPE, and specialized equipment, so that undue victim injury is prevented, victim protection is provided, and stabilization is maintained.

(A) Requisite Knowledge.

Tool selection and application, stabilization systems, protection methods, disentanglement points and techniques, and dynamics of disentanglement.

(B) Requisite Skills.

The ability to operate disentanglement tools, initiate protective measures, identify and eliminate points of entrapment, and maintain incident stability and scene safety.

9.2.8

Remove a packaged victim to a designated safe area, as a member of a team, given a victim transfer device, a designated egress route, and PPE, so that the team effort is coordinated, the designated egress route is used, the victim is removed without compromising victim packaging, undue injury is prevented, and stabilization is maintained.

(A) Requisite Knowledge.

Patient handling techniques; incident management system; types of immobilization, packaging, and transfer devices; types of immobilization techniques; and uses of immobilization devices.

(B) Requisite Skills.

Use of immobilization, packaging, and transfer devices for specific situations; immobilization techniques; application of medical protocols and safety features to immobilize, package, and transfer; and all techniques for lifting the patient.

9.2.9

Terminate a heavy vehicle incident, given PPE specific to the incident, isolation barriers, and an extrication tool kit, so that rescuers and bystanders are protected during termination operations; the party responsible for the operation, maintenance, or removal of the affected vehicle is notified of any modification or damage created during the extrication process; scene control is transferred to a responsible party; potential or existing hazards are communicated to that responsible party; and command is terminated.

(A) Requisite Knowledge.

PPE characteristics, hazard and risk identification, isolation techniques, statutory requirements identifying responsible parties, accountability system use, reporting methods, postincident analysis techniques.

(B) Requisite Skills.

Selection and use of hazard-specific PPE; decontamination of PPE; use of barrier protection techniques, data collection and record keeping/reporting protocols, and postincident analysis activities.

9.3 Technician Level.

The job performance requirements defined in Sections 9.2 and 9.3 shall be met prior to technician-level qualification in heavy vehicle rescue.

9.3.1

Create an incident action plan for a heavy vehicle incident, given agency guidelines, planning forms, and a heavy vehicle incident or simulation, so that a standard approach is used during training and operational scenarios, emergency situation hazards are identified, isolation methods and scene security measures are considered, fire suppression and safety measures are identified, vehicle stabilization needs are evaluated, and resource needs are and documented for future use.

(A) Requisite Knowledge.

Operational protocols, specific planning forms, common heavy vehicles, vehicle hazards, incident support operations and resources, heavy identified vehicle anatomy, and fire suppression and safety measures.

(B) Requisite Skills.

The ability to apply operational protocols, select specific planning forms based on the position of the heavy vehicles, identify and evaluate various types of common heavy vehicles, request support and resources, identify commercial/heavy vehicles anatomy, and determine the required fire suppression and safety measures.

9.3.2

Create an incident action plan for an incident where a heavy vehicle has come to rest in a configuration or environment where multiple concurrent hazards must be managed to

access or remove the occupants, given agency guidelines, planning forms, and a technician-level vehicle incident or simulation, so that a standard approach is used during training and operational scenarios, emergency situation hazards are identified, isolation methods and scene security measures are considered, fire suppression and safety measures are identified, vehicle stabilization needs are evaluated, and resource needs are identified and documented for future use.

(A) Requisite Knowledge.

Operational protocols, specific planning forms, common heavy vehicles, heavy vehicle hazards, incident support operations and resources, heavy vehicle anatomy, and fire suppression and safety measures.

(B) Requisite Skills.

The ability to apply operational protocols, select specific planning forms based on the position of the heavy vehicle, identify and evaluate various types of common heavy vehicles, request support and resources, identify commercial/heavy vehicles anatomy, and determine the required fire suppression and safety measures.

9.3.3

Stabilize a heavy vehicle that has come to rest in a configuration or environment where multiple concurrent hazards must be managed to access or remove the occupants, given a vehicle and machinery tool kit and PPE, so that the vehicle is prevented from moving during the rescue operations; entry, exit, and tool placement points are not compromised; anticipated rescue activities will not compromise vehicle stability; selected stabilization points are structurally sound; stabilization equipment can be monitored; and the risk to rescuers is minimized.

(A) Requisite Knowledge.

Types of stabilization devices, mechanism of vehicle movement, types of stabilization points, types of stabilization surfaces, AHJ policies and procedures, and types of heavy vehicle construction components as they apply to stabilization.

(B) Requisite Skills.

The ability to apply and operate stabilization devices on heavy vehicles.

9.3.4

Lift a heavy vehicle, given a heavy vehicle incident, a vehicle and machinery tool kit and PPE, so that unanticipated movement is prevented during the rescue operations; entry, exit, and tool placement points are not compromised; anticipated rescue activities will not compromise vehicle stability; selected lift points are structurally sound; lifting equipment can be monitored; and the risk to rescuers is minimized.

(A) Requisite Knowledge.

Types of lifting devices, mechanism of vehicle movement, types of lifting points, types of lifting surfaces, types of cribbing, AHJ policies and procedures, and types of vehicle construction components as they apply to lifting.

(B) Requisite Skills.

The ability to deploy and operate lifting devices, ability to deploy cribbing, recognition of competent lift points, calculation of weights and center of gravity, assessment of vehicle stability, use of tools or systems to prevent unwanted movement.

9.3.5

Coordinate the use of heavy equipment as a part of a plan to lift, move, or stabilize a heavy vehicle, given a heavy vehicle incident, heavy equipment and an operator, a vehicle and machinery tool kit, and PPE, so that the objective is met and the risks to the responders are minimized.

(A) Requisite Knowledge.

Methods of requesting heavy equipment, methods of communication, use of rigging.

(B) Requisite Skills.

Weight calculation and center of gravity determination, capacity of heavy equipment, rigging load calculation.

9.3.6

Create access and egress openings for rescue from a heavy vehicle that has come to rest in a configuration or environment where multiple concurrent hazards must be managed to access or remove the occupants, given a vehicle tool kit, specialized tools and equipment, PPE, and an assignment, so that the movement of rescuers and equipment complements victim care and removal, an emergency escape route is provided, the technique chosen is expedient, victim and rescuer protection is afforded, and vehicle stability is maintained.

(A) Requisite Knowledge.

Heavy vehicle construction and features; electrical, mechanical, hydraulic, pneumatic, and alternative entry and exit equipment; points and routes of ingress and egress; techniques and hazards; agency policies and procedures; and emergency evacuation and safety signals.

(B) Requisite Skills.

The ability to identify heavy vehicle construction features, select and operate tools and equipment, apply tactics and strategy based on assignment, apply victim care and stabilization devices, perform hazard control based on techniques selected, and demonstrate safety procedures and emergency evacuation signals.

9.3.7

Disentangle victim(s) from a heavy vehicle that has come to rest in a configuration or environment where multiple concurrent hazards must be managed to access or remove the occupants, given a heavy vehicle extrication incident, a vehicle tool kit, PPE, and specialized equipment, so that undue victim injury is prevented, victim protection is provided, and stabilization is maintained.

(A) Requisite Knowledge.

Tool selection and application, stabilization systems, protection methods, disentanglement points and techniques, and dynamics of disentanglement.

(B) Requisite Skills.

The ability to operate disentanglement tools, initiate protective measures, identify and eliminate points of entrapment, and maintain incident stability and scene safety.

9.3.8

Remove a packaged victim to a designated safe area, as a member of a team from a heavy vehicle that has come to rest in a configuration or environment where multiple concurrent hazards must be managed to access or remove the occupants, given a victim transfer device, a designated egress route, and PPE, so that the team effort is coordinated, the designated egress route is used, the victim is removed without compromising victim packaging, undue injury is prevented, compartment syndrome due to crush injuries is managed, and stabilization is maintained.

(A) Requisite Knowledge.

Patient handling techniques; incident management system; types of immobilization, packaging, and transfer devices; types of immobilization techniques; and uses of immobilization devices.

(B) Requisite Skills.

Use of immobilization, packaging, and transfer devices for specific situations; immobilization techniques; application of medical protocols and safety features to immobilize, package, and transfer; and all techniques for lifting the patient.

First Revision No. 192-NFPA 1006-2018 [Global Input]

See attached for new Annex L

Supplemental Information

File Name	Description	Approved
NEW_Annex_X_Water_Flood_Incident_Checklist.docx	For staff use	
1006_Global_FR-192_Annex_L-NEW.docx	For ballot	

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 11:57:23 EDT 2018

Committee Statement

Committee Statement: The committee has added this new checklist in order to assist in rescue or recovery at a water or flood rescue incident.

Response Message: FR-192-NFPA 1006-2018

Annex L Water/Flood Incident Checklist

L.1 Water/Flood Incident Checklist.

Figure L.1 contains a checklist that can be used by the AHJ or incident commander to ensure that the items contained on this checklist are completed and accounted for.

Figure L.1 Water/Flood Incident Checklist.

Water/Flood Incident Checklist.

Inc. name/location: _____

Time: _____ Radio net: _____ Inc. #: _____

I.C.: _____ Rescue group: _____ LE contact: _____ Safety: _____

EXACT point last seen: _____

Victim description: _____

Resources en route? Rescue HELO Sheriff BOAT 2nd Alarm Fire Crew

RESCUE OR RECOVERY?

Tactical Priorities:

1. Establish joint ICP
2. Announce staging area
3. Identify search box
4. Brief **all** units
5. Rapid search team
6. Close search box
7. River right team
8. River left team
9. Downstream safety
10. Upstream spotter
11. View area maps
12. Prepare for secondary search

Safety Considerations:

Within 10 ft (3 m) of water must wear PFD, NO fire gear

PAR at all times / 10-minute PAR checks, NO searching alone

Night operation personnel will carry lights **and** light sticks

Rescue Objectives:

REACH: Long tool, Ladder, Inflatable hose, Oar

THROW: Throw bags, Rope, PFDs, Rescue can/tube/ring, Float

ROW: Rescue boat, Watercraft, Tethered raft

GO: Rescue swimmer, Two-point river board, Tension diagonal, Divers

HELO: Land and pick up, Short haul, Hoist, Short haul w/rescuer

Use backside for sketches and areas of probability (AOP) for secondary search.

 NFPA 1006

First Revision No. 70-NFPA 1006-2018 [Global Input]

There are many instances in the document that state: hazard specific PPE, task specific PPE, or hazard and task specific PPE. It should read "hazard specific PPE" throughout the document.

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 25 11:40:27 EDT 2018

Committee Statement

Committee Statement: The committee has made this change for document consistency as well as consistency with commonly used terminology. These changes were made for the purposes of consistency and that PPE is chosen based on the hazard that one is expected to be exposed to rather than what task is to be completed.

Response Message: FR-70-NFPA 1006-2018

First Revision No. 222-NFPA 1006-2018 [Detail]

11.2.3 [from 10.3.2]

Identify ~~how certain~~ factors ~~affect~~ affecting the ~~preparing, choosing, and using~~ preparation, selection, and use of PPE and equipment ~~in~~ given the AHJ's wilderness ~~area~~ environment, PPE, and equipment; so that rescuer safety is maintained and the hazards are mitigated .

(A) Requisite Knowledge.

Describe how ~~the following~~ factors ~~affect the effective and safe operation of a training or incident, given a variety of such conditions in the AHJ area:~~ such as temperature, weather, terrain, flora, fauna, altitude, travel time, patient care, duration of the incident, logistics, communications, navigation, and management needs, affect training or an incident in a wilderness environment.

~~(1) Temperature~~

~~(2) Weather~~

~~(3) Terrain~~

~~(4) Flora and fauna~~

~~(5) Altitude~~

~~(6) Travel time~~

~~(7) Patient care~~

~~(8) Duration of incident~~

~~(9) Logistics~~

~~(10) Communications~~

~~(11) Navigation~~

~~(12) Management needs~~

(B) Requisite Skills.

Ability to apply these factors in the selection of PPE and equipment, given classroom-type discussions, in-field training, and incidents.

Submitter Information Verification

Committee: PQU-RES

Submittal Date: Tue Aug 28 12:59:53 EDT 2018

Committee Statement

Committee Statement: The committee is making these changes to ensure that the correct PPE is being selected and used based on the environmental conditions that the individual will be exposed to and working in.

Response Message: FR-222-NFPA 1006-2018

First Revision No. 223-NFPA 1006-2018 [Detail]

14.2.1~~0~~6
Implement emergency procedures to provide respiratory protection and self-rescue, given a mine and tunnel rescue incident, a device to provide emergency respiratory protection, and conditions that require self-rescue, so that the device is properly donned, respiratory protection is maintained, and emergency egress is accomplished.
(A) Requisite Knowledge.
Conditions requiring egress, conditions requiring donning respiratory protection, methods for implementing emergency egress and donning self-rescue devices.
(B) Requisite Skills.
The ability to recognize conditions that require self-rescue, don an emergency egress self-rescue device, and accomplish self-rescue.

Submitter Information Verification

Committee: PQU-RES
Submittal Date: Tue Aug 28 14:20:11 EDT 2018

Committee Statement

Committee Statement: The committee is renumbering this section to be moved to follow the existing 14.2.9 to become a new 14.2.10 and renumber the existing sections as they believe the new placement of this text is more appropriate.
Response Message: FR-223-NFPA 1006-2018

First Revision No. 226-NFPA 1006-2018 [Section No. 1.2.6]

1.2.6*

Technical rescue personnel shall remain current with the general knowledge, skills, and JPRs addressed for each level or position of qualification.

A.1.2.6

The committee recognizes the importance of formal and continuing education and training programs to ensure technical rescue personnel have maintained and updated the necessary skills and knowledge for the level of qualification. Continuing education and training programs can be developed or administered by local, state, provincial, or federal agencies as well as professional associations and accredited institutions of higher education. The methods of learning would include areas of technology, refresher training, skills practices, and knowledge application to standards. The subject matter should relate directly to the requirements of this standard.

1.2.7*

Technical rescue personnel shall remain current with technical rescue practices and applicable standards and shall demonstrate competency on an annual basis.

A.1.2.7

Ongoing training and continuing education are necessary to ensure that technical rescue personnel remain current in the ever-changing field of technical rescue. Attending workshops and seminars, reading professional publications, and participating in refresher training are ways technical rescue personnel can update their knowledge and skills. Proficiency in current rescue practices can be demonstrated by achieving and maintaining certification through a national certifying body.

Submitter Information Verification

Committee: PQU-RES

Submittal Date: Fri Sep 28 11:37:07 EDT 2018

Committee Statement

Committee Statement: The committee has made these changes as the existing 1.2.6 has two "shall" statements and by splitting that requirement into two it created a need to have a new 1.2.7. The annex text was also re-aligned with the relevant text from the main body of the document.

Response Message: FR-226-NFPA 1006-2018

First Revision No. 193-NFPA 1006-2018 [Section No. 1.3.5]

1.3.5

Prior to being qualified, personnel assigned to certain duties shall meet all the requirements of such duties as defined in the following ~~chapter~~ chapters ~~outlining those requirements. Requirements for specific duties are defined in the following chapters~~ :

(1) The duties of tower rescue are defined in Chapter 4.

(2) The duties of rope rescue are defined in Chapter 5.

(3) The duties of structural collapse rescue are defined in Chapter 6.

(4) The duties of confined space rescue are defined in Chapter 7.

(5) The duties of vehicle rescue are defined in Chapter 8.

(6) The duties of heavy vehicle rescue are defined in Chapter 9 .

(7) The duties of animal rescue are defined in Chapter 10.

(8) The duties of wilderness rescue are defined in Chapter 11.

(9) The duties of trench rescue are defined in Chapter 12.

(10) The duties of machinery rescue are defined in Chapter 13.

(11) The duties of cave rescue are defined in Chapter 14.

(12) The duties of mine and tunnel rescue are defined in Chapter 15.

(13) The duties of helicopter rescue are defined in Chapter 16.

(14) The duties of surface water rescue are defined in Chapter 17.

(15) The duties of swiftwater rescue are defined in Chapter 18.

(16) The duties of dive rescue are defined in Chapter 19.

(17) The duties of ice rescue are defined in Chapter 20.

(18) The duties of surf rescue are defined in Chapter 21.

(19) The duties of watercraft rescue are defined in Chapter 22.

(20) The duties of flood rescue are defined in Chapter 23.

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 12:03:15 EDT 2018

Committee Statement

Committee Statement: These changes have been made as the committee has added a new chapter on heavy vehicle rescue, which is to come after the current chapter 8.

Response Message: FR-193-NFPA 1006-2018

First Revision No. 17-NFPA 1006-2018 [Section No. 1.5]

1.5 Operational Levels.

The AHJ shall establish written standard operating procedures (SOPs) consistent with one of the following operational levels for each of the disciplines defined in this document:

(1)* *Awareness level.* This level represents the minimum capability of individuals who provide response to technical search and rescue incidents. as well as posses the fundamental knowledge, skills, and abilities to allow them to do the following:

(a) Perform initial size-up of the incident, including, the needs for rescue or recovery

(b) Recognize when an incident has unique hazards that are beyond the scope of their capabilities

(c) Take defensive measures to protect themselves or others from harm

(d) Summon resources that have the capability to take definitive actions to mitigate the incident

(e) Perform support functions at a technical rescue incident under the direct supervision of individuals inside their existing level of training and capabilities

A.1.5(1)

The committee wants to ensure that the AHJ understands that Section 1.5 is a minimum standard and that what is included in the awareness level is just the minimum and that nothing prohibits the AHJ from requiring additional items that awareness-level personnel are required to meet. For example, should the AHJ require additional requirements to be met, in addition to the minimum requirements identified in this standard, the AHJ can make that determination based on unique hazards and include items that might be required in higher levels. The AHJ can "pull-down" from higher levels within the same discipline or other disciplines, but that is something the AHJ will have to address within their own jurisdiction.

(2) *Operations level.* This level represents the capability of individuals to respond to technical search and rescue incidents and to identify hazards, use equipment, and apply limited techniques specified in this standard to support and participate in technical search and rescue incidents.

(3) *Technician level.* This level represents the capability of individuals to respond to technical search and rescue incidents and to identify hazards, use equipment, and apply advanced techniques specified in this standard necessary to coordinate, perform, and supervise technical search and rescue incidents.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 23 11:55:01 EDT 2018

Committee Statement

Committee Statement: The committee has included this new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The new text is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction.

Response Message: FR-17-NFPA 1006-2018

Public Input No. 47-NFPA 1006-2018 [Section No. 1.5]

First Revision No. 19-NFPA 1006-2018 [New Section after 1.6.2]

1.6.3

The AHJ shall make provisions for implementing search operations at a technical rescue incident to determine the presence of victim(s), their location, and their condition.

1.6.4

When multiple victims are present, the AHJ shall make provisions for prioritizing the rescue of victims based on their location, medical condition, and survival profile.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 23 12:42:56 EDT 2018

Committee Statement

Committee Statement: The committee has added this new text to ensure that, if applicable, the AHJ was addressing the need for search and triage at technical rescue incidents.

Response Message: FR-19-NFPA 1006-2018

First Revision No. 219-NFPA 1006-2018 [Section No. 2.4]

2.4 References for Extracts in Mandatory Sections.

NFPA 1, *Fire Code,* ~~2015~~ 2018 edition.

NFPA 402, *Guide for Aircraft Rescue and Fire-Fighting Operations,* 2013 edition.

NFPA 1000, *Standard for Fire Service Professional Qualifications Accreditation and Certification Systems,* 2017 edition.

NFPA 1002, *Standard for Fire Apparatus Driver/Operator Professional Qualifications,* 2017 edition.

~~NFPA 1500~~ NFPA 1500 ™ , *Standard on Fire Department Occupational Safety and Health Program,* ~~2013~~ 2018 edition.

NFPA 1521, *Standard for Fire Department Safety Officer Professional Qualifications,* 2015 edition.

NFPA 1581, *Standard on Fire Department Infection Control Program,* 2015 edition.

NFPA 1620, *Standard for Pre-Incident Planning,* 2015 edition.

NFPA 1670, *Standard on Operations and Training for Technical Search and Rescue Incidents,* 2017 edition.

NFPA 1983, *Standard on Life Safety Rope and Equipment for Emergency Services,* 2017 edition.

Submitter Information Verification

Committee:

Submittal Date: Thu Aug 02 13:28:04 EDT 2018

Committee Statement

Committee Statement: Edition updates.

Response Message: FR-219-NFPA 1006-2018

First Revision No. 187-NFPA 1006-2018 [Section No. 3.3.43]

3.3.43* ~~Crush~~ Compartment Syndrome.

A condition in which muscle death occurs because of pressure applied by an external load (e.g., a vehicle, parts of a fallen building, a rock, or a squeeze in a tight hole).

A.3.3.43 ~~Crush~~ Compartment Syndrome.

This muscle death can lead to myoglobinuria, renal failure, muscle loss, and contractions.

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 11:10:25 EDT 2018

Committee Statement

Committee Statement: This change was made as the term that was being defined is not accurate.

Response Message: FR-187-NFPA 1006-2018

First Revision No. 4-NFPA 1006-2018 [Section No. 3.3.55]

3.3.55* Dive Tables.

Tools used to calculate a diver's nitrogen loading based on depth, length of exposure to a hyperbaric environment, and intervals between exposures of an actual or a planned dive.

A.3.3.55 Dive Tables.

Many organizations publish or refer to tables for controlling and managing a diver's hyperbaric exposure. While all dive tables are based on common scientific principles, the exposure limits in the tables themselves can vary significantly based on the type of breathing gas, diving environment, activity performed by the diver, and their fitness level. For this reason, the standard does not refer to a specific table or the authors of tables. The AHJ should perform their own research for the tables that best suit their agency for the type of diving they will undertake and to meet local regulations.

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 18 13:05:24 EDT 2018

Committee Statement

Committee Statement: The committee is adding this new annex material to provide further clarification as to what they mean by "Dive Tables" and why they did not call out one specific type of dive table.

Response Message: FR-4-NFPA 1006-2018

Public Input No. 60-NFPA 1006-2018 [Section No. M.1.2.3]

Public Input No. 53-NFPA 1006-2018 [Section No. 18.3.1 [Excluding any Sub-Sections]]

Public Input No. 59-NFPA 1006-2018 [Section No. M.1.2.2]

First Revision No. 177-NFPA 1006-2018 [New Section after 3.3.125]

3.3.126* Preclimb Checklist.

A tool used in tower rescue as part of a rescue preplan that describes the conditions that must be met before rescuers climb the tower to perform a rescue operation and must continue to exist for sustained operation on the tower.

A.3.3.126 Preclimb Checklist.

A preclimb checklist can include the following:

(1) A location-specific examination of key structural elements to ensure they are not compromised
(2) An examination of pre-engineered fall protection systems
(3) Proper resources on hand, including the type and quantity of rescuers and equipment
(4) Weather and environmental conditions
(5) Protection from sources of energy (i.e., mechanical, electrical, RF)

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 11:57:02 EDT 2018

Committee Statement

Committee Statement: The committee has added this definition as it was previously not defined and the committee believes it would be beneficial to now include it in the document.

Response Message: FR-177-NFPA 1006-2018

First Revision No. 18-NFPA 1006-2018 [Section No. 4.1]

4.1 Awareness Level.

~~The job performance requirements defined in 4.1.1 through 4.1.5 shall be met prior to awareness-level qualification in tower rescue.~~

~~4.1.1~~

~~Recognize the need for technical rescue resources at an incident, given AHJ guidelines, an operations- or technician-level incident, so that the need for additional resources is identified, the response system is initiated, the scene is secured and rendered safe until additional resources arrive, and awareness-level personnel are incorporated into the operational plan.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Operational protocols, specific planning forms, types of incidents common to the AHJ, hazards, incident support operations and resources, and safety measures.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to apply operational protocols, select specific planning forms based on the types of incidents, identify and evaluate various types of hazards within the AHJ, request support and resources, and determine the required safety measures.~~

~~4.1.2~~

~~Establish scene safety zones, given an incident, scene security barriers, incident location, incident information, and personal protective equipment (PPE), so that safety zones are designated, zone perimeters are consistent with incident requirements, perimeter markings can be recognized and understood by others, zone boundaries are communicated to incident command, and only authorized personnel are allowed access to the scene.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Use and selection of PPE, zone or area control flow and concepts, types of control devices and tools, types of existing and potential hazards, methods of hazard mitigation, organizational standard operating procedure, and staffing requirements.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to select and use PPE, apply crowd control concepts, position zone control devices, identify and mitigate existing or potential hazards, and personal safety techniques.~~

~~4.1.3~~

~~Identify and support an operations- or technician-level incident, given an incident, an assignment, incident action plan, and resources from the tool kit, so that the assignment is carried out, progress is reported to command, environmental concerns are managed, personnel rehabilitation is facilitated, and the incident action plan is supported.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~AHJ operational protocols, hazard recognition, incident management, PPE selection, resource selection and use, scene support requirements including lighting, and ventilation and monitoring hazards zones.~~

~~(B)~~ ~~Requisite Skills.~~

~~Application of operational protocols, function within an incident management system (IMS), follow and implement an incident action plan, report task progress status to supervisor or Incident Command.~~

~~4.1.4~~

~~Size up an incident, given an incident, background information, and applicable reference materials, so that the operational mode is defined, resource availability and response time are considered, types of rescues are determined, the number of victims is ascertained, the last reported location of all victims is established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, search parameters are identified, and information required to develop an incident action plan is obtained.~~

~~**(A)** Requisite Knowledge.~~

~~Types of reference materials and their uses, risk/benefit assessment, availability and capability of the resources, elements of an action plan and related information, relationship of size-up to the IMS, and information gathering techniques and how that information is used in the size-up process.~~

~~**(B)** Requisite Skills.~~

~~The ability to read specific rescue reference materials, interview and gather information, relay information, manage witnesses, and use information sources.~~

~~**4.1.5**~~

~~Perform a tower rescue using an aerial truck or other similar equipment without ascending the tower, given an incident, the means to transfer the victim to the aerial apparatus, fall protection, and the rescue objective, so that risks to victims and rescue personnel are minimized.~~

~~**(A)** Requisite Knowledge.~~

~~Standard operating procedure for aerial equipment, specific procedures for using aerial equipment for victim transfer from tower.~~

~~**(B)** Requisite Skills.~~

~~Perform from or operate aerial equipment capable of accessing and rescuing the tower victim providing positive transfer from the tower to the aerial while providing fall protection to the victim and rescue personnel.~~

4.1.1

Prior to qualification at the awareness level, the individual shall meet the requirements in 1.5 (1) as defined by the AHJ in addition to the job performance requirements defined in Section 4.1 .

4.1.2*

Perform the rescue of a person from a tower while working from ground ladders, aerial ladders, or other elevated devices employed by the AHJ, given an incident not requiring the rescuer to be solely supported by the tower, so that the patient is transferred from the tower to the elevated device, the agency's protocol for the use of the device is followed, and the risks to the victim and rescuer are minimized.

A.4.1.2

Agencies that have established practices for using conventional tools in the rescue of persons from an abovegrade environment should not be prevented by this standard from using those tools to perform a rescue from a tower. This job performance requirement is not meant to address rescues requiring rescuers to climb on or work from the tower itself but rather the utilization of elevated devices to make external access to the patient for removal from the tower. Where this is possible, rescuers must utilize due caution to minimize fall hazards.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 23 12:28:45 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-18-NFPA 1006-2018

Public Input No. 63-NFPA 1006-2018 [Chapter 4]

First Revision No. 20-NFPA 1006-2018 [Section No. 4.2 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ ~~5.2~~ , ~~Section~~ Sections 4.1, 4.2 , and ~~4.2.1~~ 5.2 ~~through~~ ~~4.2.11~~ shall be met prior to operations-level qualification in tower rescue.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 23 12:46:31 EDT 2018

Committee Statement

Committee Statement: The committee has made this change in order to eliminate any confusion as to what qualifications have to be met.

Response Message: FR-20-NFPA 1006-2018

First Revision No. 16-NFPA 1006-2018 [Section No. 4.2.3]

4.2.3

Assess the integrity of the tower structure and related components, given an incident, a preclimb checklist, and an unobstructed climb path so that safe access to the victim is assured, and determine any integrated safety systems such as vertical lifelines (e.g., cable or ~~rail type~~ rail-type structure) are accessible.

(A) Requisite Knowledge.

Types of structures within area of response, including self-supported ~~lattice type~~ lattice-type , guyed, monopole, or ~~non-standard type~~ non-standard-type towers~~,~~ ; potential structural compromise that would create additional hazards to rescuers.

(B) Requisite Skills.

Perform physical inspection of accessible tower components ~~to determine structural integrity to the extent possible~~ in accordance with a preclimb checklist .

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 18 15:41:57 EDT 2018

Committee Statement

Committee Statement: As worded, the JPR would require members at the operations level to assess the overall integrity of the tower and it's systems, something that arguably could require an SME with specialized training to perform. Its more realistic to identify key conditions that must be met prior to climbing, these can include the status or appearance of specific mechanical elements of the tower or its systems. Additionally, it might be hard to define what is meant by "unobstructed climb path" would a protected transition qualify if part of the preplan? The intent of the paragraph was for the rescuer to ensure the conditions at the incident were inside the parameters of the preplan that related to climbing and access.

Response Message: FR-16-NFPA 1006-2018

First Revision No. 15-NFPA 1006-2018 [Sections 4.2.8, 4.2.9]

4.2.8

Perform the removal of a victim ~~suspended~~ from ~~rope, webbing, or integrated safety system in~~ a preplanned tower environment, given an incident, ~~methods requiring up to a 15-degree deviation from plumb and can be performed with a tag line and a rescue preplan, so that there is~~ a rescue preplan, and a prescribed means of removal of the victim to the ~~ground~~ objective , so that risks to victims and rescuers are minimized, ~~injury to the victim is minimized, the means of attachment to the rope rescue system is maintained, the~~ all the elements of the preplan are ~~maintained~~ complied with , and the objective is achieved.

(A) Requisite Knowledge.

Tactics identified in the rescue preplan for the removal of a victim ~~suspended from rope, webbing, or integrated safety system~~ on a tower .

(B) Requisite Skills.

Employ tactics identified in the rescue preplan for the removal of a victim ~~suspended from rope, webbing, or integrated safety system~~ on a tower .

4.2.9

Direct a team in removal of a victim ~~suspended~~ from ~~rope, webbing, or integrated safety system in a~~ a preplanned tower environment, given an incident, ~~methods requiring up to~~ a ~~15-degree deviation from plumb and can be performed with a tag line, a~~ rescue preplan, and a prescribed means of removal of the victim to the ~~ground or other safe area~~ objective , so that risks to victims and rescuers are minimized, ~~injury to the victim is minimized, the means of attachment to the rope rescue system is maintained, the~~ all the elements of the preplan are ~~maintained~~ complied with , and the objective is achieved.

(A) Requisite Knowledge.

Tactics identified in the rescue preplan for the removal of a victim ~~suspended from rope, webbing, or integrated safety system~~ on a tower .

(B) Requisite Skills.

Direct the employment of tactics identified in the rescue preplan for the removal of a victim ~~suspended from rope, webbing, or integrated safety system~~ on a tower .

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 18 15:34:04 EDT 2018

Committee Statement

Committee Statement: Eliminates language that is duplicative and hard to measure (i.e., “15” degrees). The original intent for the JPRs at this level of service was to ensure the individuals performing the tasks had practiced them in the specific environment they were intended to be performed and knew they could be successful without additional planning or tools. Any deviation from the circumstances of the incident, or the prescribed scripted techniques needed to solve the problem, would require technician level resources. Additionally, the language limits the preplanned solutions open to the rescuers; It’s possible the best solution could include rope offsets which can be safely executed if properly preplanned with minimal training. Additionally, the language as written would technically exclude the rescue of persons on the tower who were not suspended or otherwise attached to the tower even if pre-planned.

Response Message: FR-15-NFPA 1006-2018

First Revision No. 21-NFPA 1006-2018 [Section No. 4.3 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 4.2 and ~~4.3.1~~ 4.3 ~~through~~ ~~4.3.5~~ shall be met prior to technician-level qualification in tower rescue.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 23 12:49:47 EDT 2018

Committee Statement

Committee Statement: The committee has made this change in order to eliminate any confusion as to what qualifications have to be met.

Response Message: FR-21-NFPA 1006-2018

First Revision No. 25-NFPA 1006-2018 [Section No. 4.3.1 [Excluding any Sub-Sections]]

Direct a tower rescue team, given a tower rescue ~~technician-level~~ scenario, incident action plan, preincident plan data, and resources from the tower rescue tool kit, so that resources are deployed to best advantage, the incident action plan is supported, and objectives are attained.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 23 13:30:03 EDT 2018

Committee Statement

Committee Statement:	The committee has deleted this text as they believe it is redundant or unnecessary since it is already in the technician level.
Response Message:	FR-25-NFPA 1006-2018

First Revision No. 22-NFPA 1006-2018 [Section No. 4.3.2 [Excluding any Sub-Sections]]

Develop an incident action plan for a ~~technician-level~~ tower rescue incident on a structure ~~that might~~ whose size, shape, or configuration would accommodate only one rescuer, given ~~an unfamiliar (not preplanned)~~ a tower rescue scenario, so that a climbing path plan is established ~~in the absence of an integrated ladder~~ , ~~climbing pegs, or an integrated vertical lifeline,~~ hazardous energy sources are identified and managed, fall protection is maintained throughout the event, anchor points are identified and utilized to best advantage, and the incident ~~application~~ action plan objectives are met.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 23 12:52:31 EDT 2018

Committee Statement

Committee Statement: The committee made these changes as they are largely editorial in nature and eliminate unnecessary text.

Response Message: FR-22-NFPA 1006-2018

First Revision No. 23-NFPA 1006-2018 [Section No. 4.3.3]

4.3.3*

Ascend a simulated or actual tower to conduct a ~~technician-level~~ rescue, given an incident action ~~and site safety plan~~ plan and a preclimb checklist , so that ~~a pre-climb~~ the preclimb checklist ~~is used~~ and hazard control measures are implemented; ~~,~~ fall protection systems are utilized~~,~~ ; and ~~horizontal lifelines are utilized,~~ the rescuer ~~transitions~~ moves both horizontally and vertically between structural elements of the tower ~~and the rescue system, and~~ , with or without the benefit of climbing pegs, ladders, or vertical lifelines, to achieve the objectives of the incident action plan ~~are attained in a safe and expedient manner~~ .

(A) Requisite Knowledge.

Incident action plan ~~data~~ , preclimb checklist ~~data~~ , identification of ~~site specific~~ site-specific tower features and components, type- and hazard-specific PPE selection, and climbing plan ~~development~~ .

(B) Requisite Skills.

Use of incident action plans, development and use of preclimbing checklists and site safety plans, types of fall protection and lifeline systems, tower anatomy and features, climbing techniques and methods~~,~~ ~~ground-based tower rescue techniques~~ .

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 23 13:07:34 EDT 2018

Committee Statement

Committee Statement: The committee made these changes as they are largely editorial in nature and eliminate unnecessary text.

Response Message: FR-23-NFPA 1006-2018

First Revision No. 24-NFPA 1006-2018 [Section No. 4.3.4]

Global FR-70

4.3.4

Perform a ~~technician-level~~ ground-based tower rescue requiring the ~~release~~ rescue of ~~an entrapped~~ a suspended victim from an elevated position, given an incident action plan, climbing plan, ~~task-specific PPE~~ hazard-specific PPE , and resources from the tower rescue tool kit, so that the victim is released/transferred from an existing fall arrest system to one created by the rescuer, and the victim is moved both horizontally and vertically a distance representative of ~~demonstrating competency~~ the rescue environment .

(A) Requisite Knowledge.

Incident action plan ~~data~~, hazard and risk assessment, climbing plan elements, PPE selection and use, types of fall protection systems, fall protection system transfer procedures, and horizontal and vertical movement methods.

(B) Requisite Skills.

~~Data collection and analysis, scene~~ Scene assessment, hazard control techniques, PPE use and application, fall protection system operation, horizontal and vertical climbing and movement techniques.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 23 13:23:59 EDT 2018

Committee Statement

Committee Statement: The committee made these changes as they are largely editorial in nature and eliminate unnecessary text. The committee has also deleted some this text as they believe it is redundant or unnecessary since it is already in the technician level.

Response Message: FR-24-NFPA 1006-2018

First Revision No. 27-NFPA 1006-2018 [Section No. 4.3.5]

4.3.5

Perform a ~~technician-level tower-based~~ rescue requiring the ~~release~~ rescue of ~~an entrapped~~ a victim suspended from a ~~an elevated position in excess of~~ tower at a height ~~allowing for ground-based rescue~~ beyond the scope of a ground-based rope rescue system , given an incident action plan, climbing plan, ~~task-specific~~ hazard-specific PPE, and resources from the tower rescue tool kit, so that the victim is ~~released/~~ transferred ~~from an existing fall arrest system~~ to ~~one created by~~ the ~~rescuer~~ rescue system and ~~the victim~~ is moved both horizontally and vertically a distance representative of ~~demonstrating competency~~ the rescue environment .

(A) Requisite Knowledge.

Incident action plan ~~data~~ , hazard and risk assessment, climbing plan elements, PPE selection and use, types of fall protection systems, fall protection system transfer procedures, and horizontal and vertical movement methods.

(B) Requisite Skills.

~~Data collection and analysis, scene~~ Scene assessment, hazard control techniques, PPE use and application, fall protection system operation, horizontal and vertical climbing and movement techniques, and tower-based rescue techniques ~~including multi-pitch techniques~~ .

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 23 13:37:59 EDT 2018

Committee Statement

Committee Statement: The committee made these changes as they are largely editorial in nature and eliminate unnecessary text. The committee has also made these changes as they have developed a new JPR that will address the deleted text.

Response Message: FR-27-NFPA 1006-2018

First Revision No. 26-NFPA 1006-2018 [New Section after 4.3.5(B)]

4.3.6

Perform a lowering operation of a victim from a tower or elevated structure where the travel path or height of the objective requires establishment of multiple sets of sequential rope systems, given a tower rescue scenario and a tower rescue tool kit, so that the victim is protected from a fall, rope movement is managed without entanglement, and the objective is achieved.

(A) Requisite Knowledge.

Incident action plan, hazard and risk assessment, climbing plan elements, PPE selection and use, types of fall protection systems, fall protection system transfer procedures, and horizontal and vertical movement methods.

(B) Requisite Skills.

Scene assessment, hazard control techniques, PPE use and application, fall protection system operation, horizontal and vertical climbing and movement techniques, and multi-pitch tower-based rescue techniques.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 23 13:34:48 EDT 2018

Committee Statement

Committee Statement: The committee has added this new JPR for the technician level individual as they believe it should have been added during the last revision cycle due to the need for the individual operating at this level to be able to accomplish this task.

Response Message: FR-26-NFPA 1006-2018

First Revision No. 28-NFPA 1006-2018 [Section No. 5.1]

5.1 Awareness Level.

~~The job performance requirements defined in 5.1.1 through 5.1.7 shall be met prior to awareness level qualification in rope rescue.~~

~~5.1.2~~

~~Recognize incident hazards and initiate isolation procedures, given scene control barriers, personal protective equipment (PPE), requisite equipment, and available specialized resources, so that all hazards are identified, resource application fits the operational requirements, hazard isolation is considered, risks to rescuers and victims are minimized, and rescue time constraints are taken into account.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Resource capabilities and limitations, types and nature of incident hazards, equipment types and their use, isolation terminology, methods, equipment and implementation, operational requirement concerns, common types of rescuer and victim risk, risk/benefit analysis methods and practices, and types of technical references.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to identify resource capabilities and limitations, identify incident hazards, assess victim viability (risk/benefit), utilize technical references, place scene control barriers, and operate control and mitigation equipment.~~

~~5.1.3~~

~~Recognize needed resources for a rescue incident, given incident information, a means of communication, resources, tactical worksheets, personnel accountability protocol, applicable references, and standard operating procedures, so that references are utilized, personnel are accounted for, necessary resources are deployed to achieve desired objectives, incident actions are documented, rescue efforts are coordinated, the command structure is established, task assignments are communicated and monitored, and actions are consistent with applicable regulations.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Incident management system; tactical worksheet application and purposes; accountability protocols; resource types and deployment methods; documentation methods and requirements; availability, capabilities, and limitations of rescuers and other resources; communication problems and needs; communications requirements, methods, and means; types of tasks and assignment responsibilities; policies and procedures of the agency; and technical references related to the type of rescue incident.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to implement an incident management system, complete tactical worksheets, use reference materials, evaluate incident information, match resources to operational needs, operate communications equipment, manage incident communications, and communicate in a manner so that objectives are met.~~

~~5.1.4~~

~~Initiate a discipline-specific search, given hazard-specific PPE, equipment pertinent to search mission, an incident location, and victim investigative information, so that search parameters are established; the victim profile is established; the entry and exit of all people either involved in the search or already within the search area are questioned and the information is updated and relayed to command; the personnel assignments match their expertise; all victims are located as quickly as possible; applicable technical rescue concerns are managed; risks to searchers are minimized; and all searchers are accounted for.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Local policies and procedures and how to operate in the site-specific search environment.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to enter, maneuver in, and exit the search environment and provide for and perform self-escape/self-rescue.~~

~~5.1.5*~~

~~Perform ground support operations for helicopter activities, given a rescue scenario/incident, helicopter, operational plans, PPE, requisite equipment, and available specialized resources, so that rescue personnel are aware of the operational characteristics of the aircraft and demonstrate operational proficiency in establishing and securing landing zones and communicating with aircraft personnel until the assignment is complete.~~

~~A.5.1.5~~

~~It is the intent of this JPR is for the technical rescuers to be familiar with the types of aircraft or helicopter services available to assist in their area, including operational standard operating procedure, equipment carried on the aircraft, safety and onboard aircraft systems and hazards associated with type-specific aircraft, and the ability to communicate via an established radio system with aircrews to complete a task or assignment (e.g., air medical evacuation or search). It is also expected that technical rescuers be aware of and provide for fire suppression in the event of an aircraft mishap while on location. *(See Figure A.7.2.4 .)*~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Ground support operations relating to helicopter use and deployment, operation plans for helicopter service activities, type-specific PPE, aircraft familiarization and hazard areas specific to helicopters, scene control and landing zone requirements, aircraft safety systems, and communications protocols.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to provide ground support operations, review standard operating procedures for helicopter operations, use PPE, establish and control landing zones, and communicate with aircrews.~~

~~5.1.6~~

~~Initiate triage of victims, given triage tags and local protocol, so that rescue versus recovery factors are assessed, triage decisions reflect resource capabilities, severity of injuries is determined, and victim care and rescue priorities are established in accordance with local protocol.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Types and systems of triage according to local protocol, resource availability, methods to determine injury severity, ways to manage resources, and prioritization requirements.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to use triage materials, techniques, and resources and to categorize victims correctly.~~

5.1.1

Prior to qualification at the awareness level, the individual shall meet the requirements in 1.5 (1) as defined by the AHJ in addition to the job performance requirements defined in Section 5.1 .

5.1.2

Assist a team in operation of the haul line of a rope mechanical advantage system raising operation, given rescue personnel, an established rope rescue system, a load to be moved, and an anchor system, so that the movement is controlled; a reset is accomplished; the load can be held in place when needed; commands are followed in direction of the operation; and potential problems are identified, communicated, and managed.

(A) Requisite Knowledge.

Principles of mechanical advantage, operation of a haul line in a raising operation, personnel assignments, and operational commands.

(B) Requisite Skills.

The ability to recognize operational commands and identify safety concerns during raising operations.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 23 13:57:04 EDT 2018

Committee Statement

Committee Statement:	The committee has made these changes based on FR-17. As for the existing 5.1.6, the material is being deleted as the committee believes that they have addressed it other areas of the document.
Response Message:	FR-28-NFPA 1006-2018

First Revision No. 29-NFPA 1006-2018 [Section No. 5.2 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 5.1 and ~~5.2.1~~ 5.2 ~~through~~ ~~5.2.27~~ shall be met prior to operations-level qualification in rope rescue.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 23 14:36:48 EDT 2018

Committee Statement

Committee Statement: The committee has made this change in order to eliminate confusion.

Response Message: FR-29-NFPA 1006-2018

First Revision No. 1-NFPA 1006-2018 [Section No. 5.2.1 [Excluding any Sub-Sections]]

Perform size up of a rescue incident, given background information and applicable reference materials, so that the type of rescue is determined, the number of victims is identified, the last reported location of all victims is established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, search parameters are identified, and information required to develop an incident action plan is obtained.

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 18 10:54:26 EDT 2018

Committee Statement

Committee Statement: Grammatical error

Response Message: FR-1-NFPA 1006-2018

Public Input No. 37-NFPA 1006-2018 [Section No. 5.2.1 [Excluding any Sub-Sections]]

First Revision No. 194-NFPA 1006-2018 [Section No. 5.2.2 [Excluding any Sub-Sections]]

~~Inspect and maintain~~ Maintain hazard-specific PPE, given clothing or equipment for the protection of the rescuers, inspection procedures, cleaning and sanitation supplies, maintenance logs or records, and such tools and resources as are indicated by the manufacturer's guidelines for assembly or disassembly of components during repair or maintenance, so that damage, defects, and wear are identified and reported or repaired, equipment functions as designed, and preventive maintenance has been performed and documented consistent with the manufacturer's recommendations.

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 14:35:07 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper development of a JPR.

Response Message: FR-194-NFPA 1006-2018

First Revision No. 195-NFPA 1006-2018 [Section No. 5.2.3 [Excluding any Sub-Sections]]

Maintain rescue equipment, given maintenance logs and records, tools, and resources as indicated by the manufacturer's guidelines, inspection procedures, equipment replacement protocol, and organizational standard operating procedure, so that the operational status of equipment is verified and documented, all components are checked for operation, deficiencies are repaired or reported as indicated by standard operating procedure, and items subject to replacement protocol are correctly disposed of and changed.

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 14:37:15 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper development of a JPR.

Response Message: FR-195-NFPA 1006-2018

First Revision No. 30-NFPA 1006-2018 [Section No. 5.2.6]

5.2.6

Construct a multiple-point anchor system, given life safety rope and other auxiliary rope rescue equipment, so that the chosen anchor system fits the incident needs, the system strength meets or exceeds the expected load and does not interfere with rescue operations, equipment is visually inspected prior to being put in service, the ~~nearest anchor point that will support the load is~~ most appropriate anchor points are chosen, the anchor system is system safety checked prior to being placed into service, the integrity of the system is maintained throughout the operation, and ~~weight~~ the force will be distributed — proportionally or disproportionally — between more than one anchor point.

(A)* Requisite Knowledge.

Relationship of angles to forces created in the rigging of multiple-point anchor systems, safety issues in choosing anchor points, system safety check methods that allow for visual and physical assessment of system components, methods to evaluate the system during operations, integrity concerns, weight distribution issues and methods, knots and applications, selection and inspection criteria for hardware and software, formulas needed to calculate safety factors for load distribution, and the concepts of static loads versus dynamic loads.

(B) Requisite Skills.

The ability to determine incident needs as related to choosing anchor systems, select effective knots, determine expected loads, evaluate incident operations as related to interference concerns and setup, choose anchor points, perform a system safety check, and evaluate system components for compromised integrity.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 09:52:01 EDT 2018

Committee Statement

Committee Statement: The committee has made these changes because the previous verbiage does not provide enough clarification of the JPR's intent for construction of Multiple-point anchor systems.

Response Message: FR-30-NFPA 1006-2018

First Revision No. 31-NFPA 1006-2018 [Section No. 5.2.8]

5.2.8

Place edge protection, given life safety rope or webbing traversing a sharp or abrasive edge, edge protection, and other auxiliary rope rescue equipment, so that the rope or webbing is protected from abrasion or cutting, the rescuer is safe from falling while placing the edge protection, the edge protection is secure, and the rope or webbing is securely placed on the edge protection.

(A) Requisite Knowledge.

Materials and devices that can be used to protect ropes or webbing from sharp or abrasive edges, fall protection measures, dangers associated with sharp or abrasive edges, and methods for negotiation of sharp or abrasive edges.

(B) Requisite Skills.

The ability to select protective devices for rope and webbing, ~~provide~~ protect personnel ~~fall protection~~ from falls while working near edges, secure edge protection, and secure ropes or webbing in a specific location.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 09:55:52 EDT 2018

Committee Statement

Committee Statement: The committee has made this change as it now includes a standard option previously unmentioned.

Response Message: FR-31-NFPA 1006-2018

First Revision No. 32-NFPA 1006-2018 [Section No. 5.2.9]

5.2.9*

Construct a system intended to provide belay within a single- or two-tensioned rope system, given life safety rope, anchor systems, PPE, and rope rescue equipment, so that the system is capable of arresting a fall, a fall will not result in system failure, the system is not loaded unless actuated, actuation of the system will not injure or otherwise incapacitate the ~~belayer~~ belay operator, the ~~belayer~~ belay operator is not rigged into the equipment components of the system, and the system is suitable to the site and is connected to an anchor system and the load.

A.5.2.9

Belay systems are a component of single-tensioned rope systems that apply a tensioned main system on which the entire load is suspended and a nontensioned system with minimal slack (i.e., belay) designed, constructed, and operated to arrest a falling load in the event of a main system malfunction or failure. While these traditional systems used for lowering and raising are in common use, two-tensioned rope systems can also be used to suspend the load while maintaining near equal tension on each rope, theoretically reducing the fall distance and shock force in the event of a singular rope failure. To be effective, two-tensioned rope systems must utilize devices that will compensate appropriately for the immediate transfer of additional force associated with such failures.

This document is not intended to limit a rescue team ~~from~~ to the use of either a single- or two-tensioned rope ~~systems that can~~ system, because either can be utilized ~~anywhere~~ in rope-based lowering or mechanical advantage systems ~~are required~~. In either case, redundancy is important to compensate for potential system equipment or operational failures.

Global FR-70

(A) Requisite Knowledge.

Principles of belay systems, capabilities and limitations of various devices used to provide belay ~~devices~~, application of knots, rigging principles, and system safety check procedures.

(B) Requisite Skills.

The ability to select a system, tie knots, perform rigging, attach to anchor system and load, don and use ~~task-specific~~ hazard-specific PPE, and perform a system safety check.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 10:04:45 EDT 2018

Committee Statement

Committee Statement: The changes have been made in order to support two-tensioned rope systems.

Response Message: FR-32-NFPA 1006-2018

First Revision No. 33-NFPA 1006-2018 [Section No. 5.2.10]

5.2.10

Operate a system intended to provide belay within a single- or two-tensioned rope system during a lowering or raising operation, given an operating lowering or raising mechanical advantage system, a specified minimum travel distance for the load, a ~~belay~~ system, and a load, so that the potential fall factor is minimized, the belay ~~device system~~ is not actuated during ~~operation of the primary rope rescue system~~ normal lowering and raising operations , the belay system is prepared for actuation at all times during the operation, the ~~belayer~~ belay operator is attentive at all times during the operation, the load's position is continually monitored, and the ~~belayer~~ belay operator moves rope through the belay device as designed.

(A) Requisite Knowledge.

Application and use of belay devices, proper operation of ~~belay~~ systems in conjunction with normal lowering and raising operations, and operational commands.

(B) Requisite Skills.

The ability to tend a belay ~~system~~ device as designed, tie approved knots, assess system effectiveness, properly attach a ~~belay line~~ rope to a belay device, don and use ~~task-specific~~ hazard-specific PPE, perform a system safety check, and manage and communicate belay system status effectively.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 10:08:25 EDT 2018

Committee Statement

Committee Statement: The changes have been made in order to support two-tensioned rope systems.

Response Message: FR-33-NFPA 1006-2018

First Revision No. 34-NFPA 1006-2018 [Section No. 5.2.11]

5.2.11*

Belay a falling load in a high-angle environment, given a belay ~~system~~ and a failed line creating a dropped load, so that the belay line is not taut until the load is falling, the belay device is actuated when the load falls, the fall is arrested in a manner that minimizes the force transmitted to the load, the ~~belayer~~ belay operator utilizes the belay ~~system~~ device as designed, and the ~~belayer~~ belay operator is not injured or otherwise incapacitated during actuation of the belay system.

A.5.2.11

The intent of the JPR is to assess the ability of the rescuer to arrest a falling load effectively, whether within a single- or two-tensioned rope system . This can be accomplished by having a person perform a hard, unexpected jerk on the distal end of the belay system or other methods to simulate the sudden addition of force due to a system failure . Testing methods should not include the use of people or persons as live loads.

(A) Requisite Knowledge.

Application and use of belay devices, effective emergency operation of belay devices to arrest falls, use of PPE, and operating procedures.

Global FR-70

(B) Requisite Skills.

The ability to operate a belay system as designed, tie approved knots, use ~~task-specific~~hazard-specific PPE, recognize and arrest a falling load, and communicate belay system actuation.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 10:12:40 EDT 2018

Committee Statement

Committee Statement: The changes have been made in order to support two-tensioned rope systems.

Response Message: FR-34-NFPA 1006-2018

First Revision No. 2-NFPA 1006-2018 [Sections 5.2.13, 5.2.14, 5.2.15]

5.3.8*

Ascend a fixed rope in a high-angle environment, given an anchored fixed-rope system, a specified minimum distance for the rescuer, a system to allow ascent of a fixed rope, a structure, a belay system, a life safety harness worn by the person ascending, and PPE, so that the person ascending is secured to the fixed rope in a manner that will not allow him or her to fall; the person ascending is attached to the rope by means of an ascent control device(s) with at least two points of contact; injury to the person ascending is minimized; the person ascending can stop at any point on the fixed rope and rest suspended by his or her harness; the system will not be stressed to the point of failure; the person ascending can convert his or her ascending system to a descending system; obstacles are negotiated; the system is suitable for the site; and the objective is reached.

A.5.3.8

The specified minimum travel distance will vary based on the response area and the discipline-specific application. The distance traveled should depict accurately the typical distance that would be experienced by the person performing the skill, and the operational components of the entire system should be utilized fully (i.e., commands, progress capture, reset mechanisms). For example, an appropriate minimum travel distance for a technical rescuer in the urban/industrial environment for a raising operation might be 10 ft to 20 ft (3.05 m to 6.1 m), while the minimum for the wilderness/cave environment might be considerably more at 30 ft to 50 ft (9.15 m to 15.25 m).

(A) Requisite Knowledge.

Task-specific selection criteria for life safety harnesses and systems for ascending a fixed rope, PPE selection criteria, design and intended purpose of ascent control devices utilized, rigging principles, techniques for high-angle environments, converting ascending systems to descending systems, and common hazards posed by maneuvering and harnessing.

(B) Requisite Skills.

The ability to select and use rescuer harness, a system for ascending a fixed rope, and PPE for common environments; attach the life safety ~~harness~~ harnesses to the rope rescue system; configure ascent control devices to form a system for ascending a fixed rope; make connections to the ascending system; maneuver around existing environment and system-specific obstacles; convert the ascending system to a descending system while suspended from the fixed rope; and evaluate surroundings for potential hazards.

5.3.9*

Descend a fixed rope in a high-angle environment, given an anchored fixed-rope system, a specified minimum travel distance for the rescuer, a system to allow descent of a fixed rope, a belay system, a life safety harness worn by the person descending, and PPE, so that the person descending is attached to the fixed rope in a manner that will not allow him or her to fall; the person descending is attached to the rope by means of a descent control device; the speed of descent is controlled; injury to the person descending is minimized; the person descending can stop at any point on the fixed rope and rest suspended by his or her harness; the system will not be stressed to the point of failure; the system is suitable for the site; and the objective is reached.

A.5.3.9

The specified minimum travel distance will vary based on the response area and the discipline-specific application. The distance traveled should depict accurately the typical distance that would be experienced by the person performing the skill. For example, an appropriate minimum travel distance for a technical rescuer in the urban/industrial environment for ascending rope might be 10 ft to 20 ft (3.05 m to 6.1 m), while the minimum for the wilderness/cave environment might be considerably more at 30 ft to 50 ft (9.15 m to 15.25 m).

(A) Requisite Knowledge.

Task-specific selection criteria for life safety harnesses and systems for descending a fixed rope; PPE selection criteria; design, intended purpose, and operation of descent control devices utilized; safe rigging principles; techniques for high-angle environments; and common hazards posed by maneuvering and harnessing.

(B) Requisite Skills.

The ability to select and use rescuer ~~harness~~ harnesses , a system for descending a fixed rope, and PPE for common environments; attach the life safety harness to the rope rescue system; make attachment of the descent control device to the rope and life safety harness; operate the descent control device; maneuver around existing environment and system-specific obstacles; and evaluate surroundings for potential hazards.

5.3.10

Demonstrate the ability to escape from a jammed or malfunctioning device during a fixed-rope descent in a high-angle environment, given an anchored fixed-rope system with a simulated malfunctioning descent control device, a system to allow escape from the malfunctioning device, a belay system, a life safety harness worn by the person descending, and PPE, so that the person descending is attached to the fixed rope in a manner that will not allow him or her to fall~~;~~ , the person descending is attached to the rope by means of a descent control device~~;~~ , the means for escape will allow the rescuer to escape either upward or downward from the malfunctioning descent control device~~;~~ , injury potential to the rescuer is minimized~~;~~ , the system will not be stressed to the point of failure~~;~~ , the system is suitable for the site~~;~~ , and the objective is reached.

(A) Requisite Knowledge.

Task-specific selection criteria for escape equipment and methods used for escape from a malfunctioning descent control device; PPE selection criteria; design, intended purpose, and operation of escape systems utilized; safe rigging principles; techniques for high-angle environments; and common hazards posed by malfunctioning descent control devices.

(B) Requisite Skills.

The ability to select and use rescuer ~~harness~~ harnesses , a system for escaping a malfunctioning descent control device, and PPE for common environments; attach the life safety harness to the rope rescue system; make attachment of the descent control device to the rope and life safety harness; attach and operate the escape system to remove the rescuer from the malfunctioning descent control device while maintaining patent attachment to the fixed rope and belay; use the escape system to maneuver upward or downward from the malfunctioning descent control device; and evaluate surroundings for potential hazards.

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 18 11:27:49 EDT 2018

Committee Statement

Committee Statement: The committee has made these changes because the premise of the “operations” level for rope was for a rescuer to merely use the rope as a transportation system without the need to perform work while suspended. Including the “Ascend and Descend” at the operations level was the focus of a lot of discussion. Some committee members felt that not every agency is staffed in a manner that would allow the rescuer to be lowered, and so it should be included. In hindsight, as the standard is intended to set minimum JPRs it could be moved and agencies that need to incorporate it could do so.

Response Message: FR-2-NFPA 1006-2018

Public Input No. 48-NFPA 1006-2018 [Sections 5.2.13, 5.2.14, 5.2.15]

First Revision No. 35-NFPA 1006-2018 [Section No. 5.2.21(A)]

(A) Requisite Knowledge.

Methods to determine incident needs, types of interference concerns, rope commands, system safety check protocol, procedures for continued evaluation of system components for compromised integrity, common personnel assignments and duties, common ~~and critical~~ commands, methods for controlling a load's movement, system stress issues during operations, and management methods for common problems.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 10:17:05 EDT 2018

Committee Statement

Committee Statement: This term is not defined and is unnecessary to the intent of the section.

Response Message: FR-35-NFPA 1006-2018

First Revision No. 196-NFPA 1006-2018 [Section No. 5.2.23 [Excluding any Sub-Sections]]

~~Access, assess, stabilize, package, and~~ Prepare for transfer of victims, given diagnostic and packaging equipment and an actual or simulated EMS agency, so that rescuers and ~~victim~~ victims are protected from hazards, ~~the victim's~~ victim injuries or illnesses are managed, and ~~the victim is~~ victims are delivered to the ~~appropriate~~ EMS provider with information regarding the history of the rescue activity and ~~victim's condition~~ victim conditions .

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 14:38:44 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper development of a JPR.

Response Message: FR-196-NFPA 1006-2018

First Revision No. 7-NFPA 1006-2018 [Section No. 5.2.24(B)]

(B) Requisite Skills.

The ability to direct personnel, use operational commands, analyze system efficiency, manage movement of the litter in a high-angle environment, identify safety concerns in a ~~high~~ low -angle litter operation, and perform a system safety check.

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 18 13:38:30 EDT 2018

Committee Statement

Committee Statement: This change corrects an editorial error.

Response Message: FR-7-NFPA 1006-2018

First Revision No. 8-NFPA 1006-2018 [Section No. 5.2.26(B)]

(B) Requisite Skills.

The ability to direct personnel, use operational commands, analyze system efficiency, manage movement of the litter in a ~~low~~ high -angle environment, identify safety concerns in a ~~low~~ high -angle environment, and perform a system safety check.

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 18 13:39:26 EDT 2018

Committee Statement

Committee Statement: This change corrects an error in the text.

Response Message: FR-8-NFPA 1006-2018

First Revision No. 37-NFPA 1006-2018 [Section No. 5.3 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 5.2 and ~~5.3.1 through 5.3.11~~ 5.3 shall be met prior to technician-level qualification in rope rescue.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 10:26:14 EDT 2018

Committee Statement

Committee Statement: This change was made in order to reduce confusion.

Response Message: FR-37-NFPA 1006-2018

First Revision No. 197-NFPA 1006-2018 [Section No. 5.3.3 [Excluding any Sub-Sections]]

While suspended from a rope rescue system, perform the transfer ~~and movement~~ of a victim suspended from rope or webbing in a high-angle environment to a separate rope rescue lowering or mechanical advantage system, given a rope rescue system, a specified minimum travel distance for the victim, victim transfer systems, and specialized equipment necessary for the environment, so that risks to victims and rescuers are minimized~~;~~, undesirable victim movement during the transfer is minimized~~;~~, the means of attachment to the rope rescue system is maintained~~;~~, the victim is removed from the static line and lowered or raised to a stable surface~~;~~, victim positioning is managed to reduce adverse effects associated with suspension-induced injuries~~;~~, selected specialized equipment facilitates efficient victim movement~~;~~, and the victim can be transported to the local EMS provider.

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 14:40:27 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper development of a JPR.

Response Message: FR-197-NFPA 1006-2018

First Revision No. 3-NFPA 1006-2018 [Section No. 5.3.7]

5.3.7

Climb~~, ascend, descend,~~ and traverse natural features or man-made structures that require the use of climbing aids, positioning equipment, or fall protection systems to prevent the fall or unwanted movement of the rescuer, given the equipment used by the agency, and a task that reflects the anticipated rescue environment so that the objective is achieved, the rescuer can perform the required task, and fall protection is maintained.

(A)* Requisite Knowledge.

The application and limitations of climbing, positioning, and fall protection systems and equipment commensurate with the organization's needs.

(B) Requisite Skills.

The ability to climb vertical or near-vertical paths using the surfaces provided by the environment or climbing aids used by the agency and the use of positioning equipment to support the weight of the rescuer in a vertical or near-vertical environment permitting the rescuer to perform a task.

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 18 11:33:28 EDT 2018

Committee Statement

Committee Statement: The committee has made this change as they believe it should remain in this section of the document, however the textual changes they have provided whould further clarify the JPR.

Response Message: FR-3-NFPA 1006-2018

Public Input No. 76-NFPA 1006-2018 [Section No. 5.3.7]

First Revision No. 38-NFPA 1006-2018 [Section No. 6.1]

6.1 Awareness Level.

~~The job performance requirements defined in~~ 6.1.1 ~~through~~ 6.1.8 ~~shall be met prior to awareness level qualification in structural collapse rescue.~~ Prior to qualification at the awareness level in structural collapse rescue, the individual shall meet the requirements in 1.5 (1) as defined by the AHJ in addition to the job performance requirements defined in Section 6.1 .

~~**6.1.1**~~

~~Identify the need for structural collapse rescue, given a specific type of collapse incident, so that resource needs are identified and the emergency response system for structural collapse is initiated.~~

~~**(A)** Requisite Knowledge.~~

~~Characteristics of structural collapse incidents, resource capabilities, procedures for activation of emergency response for collapse incidents.~~

~~**(B)** Requisite Skills.~~

~~Ability to use communication equipment, track resources, and communicate needs.~~

~~**6.1.2**~~

~~Size up a collapse rescue incident, given background information and applicable reference materials, so that the scope of the rescue is determined, the number of victims is identified, the last reported location of all victims is established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, primary search parameters are identified, and information required to develop an initial incident action plan is obtained.~~

~~**(A)** Requisite Knowledge.~~

~~Types of reference materials and their uses, availability and capability of the resources, elements of an incident action plan and related information, relationship of size-up to the incident management system, and information gathering techniques and how that information is used in the size-up process, and basic search criteria for collapse incidents.~~

~~**(B)** Requisite Skills.~~

~~The ability to read technical rescue reference materials, gather information, use interview techniques, relay information, and use information-gathering sources.~~

~~**6.1.3**~~

~~Initiate the incident management system given a structural collapse incident, so that scene management is initiated, initial command structure is identified, resource tracking and accountability is established, and the incident action plan is developed.~~

~~**(A)** Requisite Knowledge.~~

~~Incident management system structure, implementation procedures, expansion methodology, resource management techniques, tracking methods, incident action plan components, accountability systems, IMS documentation forms, and rescuer rehabilitation criteria.~~

~~**(B)** Requisite Skills.~~

~~Ability to utilize IMS forms and command tools, and use communication devices and accountability tracking systems.~~

6.1.1

Identify incident hazards, given a specific type of collapse incident, so that ~~scene control barriers, PPE, requisite safety equipment, and available specialized resources, so that~~ construction type is determined, all associated hazards are identified, ~~safety perimeter is established, hazard isolation is initiated, risks to rescuers and victims are minimized,~~ and rescue time constraints are taken into account.

(A) Requisite Knowledge.

Resource capabilities and limitations, types and nature of incident hazards, isolation terminology, methods and equipment, implementation techniques, operational requirement concerns, common risks in collapse incidents, risk/benefit analysis methods and practices, construction types and collapse characteristics, 13 building collapse types, subsequent collapse potential and causes, and associated types of technical references.

(B) Requisite Skills.

The ability to identify resource capabilities and limitations, identify incident hazards based on construction type, identify collapse zones, assess victim viability based on collapse type and access (risk/benefit), utilize technical references, ~~place scene control barriers,~~ and operate control and mitigation equipment.

6.1.2

Initiate a search, given PPE, an incident location, and victim investigative information, so that search parameters are established and include surface and nonentry void search~~;~~, the information found is updated and relayed to command~~;~~, the personnel assignments match their expertise~~;~~, all victims are located as quickly as possible~~;~~, risks to searchers are minimized~~;~~, and accountability is achieved.

(A) Requisite Knowledge.

Local policies and procedures, basic sight and hailing search techniques, and operational techniques necessary to operate in the search environment.

(B) Requisite Skills.

The ability to use hailing techniques, PPE, and triangulation methods, and to provide for and perform self-escape/self-rescue.

6.1.3

Apply the building marking system given a structural collapse incident, so that the search phase of the floor or structure is marked, victim locations and condition are applied to the area, hazards are noted on the structure, and the access and egress points are marked.

(A) Requisite Knowledge.

FEMA and United Nations' International Search and Rescue Advisory Group (INSARAG) search marking systems, victim marking systems, structural marking systems, and the location criteria for application of each system.

(B) Requisite Skills.

The ability to use marking materials, and recognize hazards.

~~**6.1.7**~~

~~Perform triage of victims, given triage tags and local protocol, so that rescue versus recovery factors are assessed, triage decisions reflect resource capabilities, severity of injuries is determined, and victim care and rescue priorities are established in accordance with local protocol.~~

~~**(A)** Requisite Knowledge.~~

~~Types and systems of triage according to local protocol, resource availability, methods to determine injury severity, ways to manage resources, and prioritization requirements.~~

~~**(B)** Requisite Skills.~~

~~The ability to use triage materials, techniques, and resources and to categorize victims correctly.~~

6.1.4

Move a victim, given victim transport equipment, litters, other specialized equipment, and victim removal systems specific to the rescue environment, so that the victim is moved without further injuries, risks to rescuers are minimized, the victim is secured to the transfer device, and the victim is removed from the hazard.

(A) Requisite Knowledge.

Types of transport equipment and removal systems, selection factors with regard to specific rescue environments, methods to reduce and prevent further injuries, types of risks to rescuers, ways to secure the victim to transport devices, and transport techniques.

(B) Requisite Skills.

The ability to secure a victim to transport equipment, assemble and operate environment-specific victim removal systems, and choose an incident-specific transport device.

6.1.5

Perform collapse support operations at a rescue incident, given an assignment and available resources, so that scene lighting is provided for the tasks to be undertaken, environmental concerns are addressed, personnel rehabilitation is facilitated, and the support operations facilitate rescue operational objectives.

(A) Requisite Knowledge.

Resource management protocols, principles for establishing lighting, environmental control methods, and rescuer rehabilitation protocols.

(B) Requisite Skills.

The ability to access resources, set up lights, initiate environmental controls, and set up rehabilitation for rescuers.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 10:41:49 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-38-NFPA 1006-2018

First Revision No. 39-NFPA 1006-2018 [Section No. 6.2 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections ~~5.2~~ , ~~Section~~ 6.1, and 6.2 ~~6.2.1 through 6.2.16~~ shall be met prior to operations-level qualification in structural collapse rescue.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 10:51:48 EDT 2018

Committee Statement

Committee Statement: This change was made in order to reduce confusion.

Response Message: FR-39-NFPA 1006-2018

First Revision No. 40-NFPA 1006-2018 [Section No. 6.2.7]

~~6.2.7~~

~~Implement collapse support operations at a rescue incident, given an assignment and available resources, so that scene lighting is adequate for the tasks to be undertaken, environmental concerns are managed, personnel rehabilitation is facilitated, and the support operations facilitate rescue operational objectives.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Resource management protocols, principles for establishing lighting, environmental control methods, and rescuer rehabilitation protocols.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to manage resources, set up lights, initiate environmental controls, and set up rehabilitation for rescuers.~~

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 10:53:09 EDT 2018

Committee Statement

Committee Statement:	The committee has deleted this as they believe it is not necessary here and is already covered in the document. See FR 38
Response Message:	FR-40-NFPA 1006-2018

First Revision No. 188-NFPA 1006-2018 [Sections 6.2.8, 6.2.9]

6.2.7

Release a victim from entrapment by components of a light frame and URM construction collapsed structure, given PPE and resources for breaching, breaking, lifting, prying, shoring, and/or otherwise moving or penetrating the offending structural component, so that hazards to rescue personnel and victims are minimized, considerations are given to compartment syndrome due to crush ~~syndrome~~ injuries , techniques enhance patient survivability, tasks are accomplished within projected time frames, and techniques do not compromise the integrity of the existing structure or structural support systems.

(A) Requisite Knowledge.

Identification, utilization, and required care of PPE; general hazards associated with each type of structural collapse; methods of evaluating structural integrity; ~~crush~~ compartment syndrome protocols; identification of construction types and collapse characteristics of ~~light frame~~ light-frame and URM construction structures; causes and associated effects of structural collapses; potential signs of impending secondary collapse; selection and application of rescue tools and resources; and risk/benefit assessment techniques for extrication methods and time constraints.

(B) Requisite Skills.

The ability to select, use, and care for PPE, operate rescue tools and stabilization systems, recognize ~~crush~~ compartment syndrome indicators, and complete risk/benefit assessments for selected methods of rescue and time constraints.

6.2.8*

Remove a victim from a ~~light frame~~ light-frame and URM construction collapse incident, given a disentangled victim, a basic first aid kit, and victim packaging resources, so that basic life functions are supported as required, victim is evaluated for signs of compartment syndrome due to crush ~~syndrome~~ injuries , advanced life support is called if needed, methods and packaging devices selected are compatible with intended routes of transfer, universal precautions are employed to protect personnel from bloodborne pathogens, and extraction times meet time constraints for medical management.

(A) Requisite Knowledge.

Identification, utilization, and required care of PPE resources for structural collapse incidents; general hazards associated with structural collapse; identification of ~~light frame~~ light-frame and URM construction types; characteristics and expected behavior of each type in a structural collapse incident; causes and associated effects of structural collapses; recognition of potential for and signs of impending secondary collapse; characteristic mechanisms of ~~injury~~ compartment syndrome due to crush injuries and basic life support; and patient packaging principles.

(B) Requisite Skills.

Selection, use, and care of PPE, basic prehospital care of soft-tissue injuries, fracture stabilization, airway maintenance techniques, and cardiopulmonary resuscitation; and selection and use of patient packaging equipment.

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 11:12:31 EDT 2018

Committee Statement

Committee Statement: The changes were made to ensure the correct term is being used.

Response Message: FR-188-NFPA 1006-2018

First Revision No. 198-NFPA 1006-2018 [Section No. 6.2.14 [Excluding any Sub-Sections]]

~~Inspect and maintain~~ Maintain hazard-specific PPE, given clothing or equipment for the protection of the rescuers, including respiratory protection, cleaning and sanitation supplies, maintenance logs or records, inspection procedures, and such tools and resources as are indicated by the manufacturer's guidelines for assembly or disassembly of components during repair or maintenance, so that damage, defects, and wear are identified and reported or repaired~~,~~ ; equipment functions as designed~~,~~ ; and preventive maintenance has been performed and documented consistent with the manufacturer's recommendations.

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 14:46:04 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper development of a JPR.

Response Message: FR-198-NFPA 1006-2018

First Revision No. 199-NFPA 1006-2018 [Section No. 6.2.15 [Excluding any Sub-Sections]]

~~Inspect and maintain~~ Maintain rescue equipment, given maintenance logs and records, tools, and resources as indicated by the manufacturer's guidelines, inspection procedures, equipment replacement protocol, and organizational standard operating procedure, so that the operational status of equipment is verified and documented, all components are checked for operation, deficiencies are repaired or reported as indicated by standard operating procedure, and items subject to replacement are correctly disposed of and changed out.

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 14:46:47 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper development of a JPR.

Response Message: FR-199-NFPA 1006-2018

First Revision No. 41-NFPA 1006-2018 [Section No. 6.3 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 6.2 and ~~6.3.1 through 6.3.16~~ 6.3 shall be met prior to ~~technician level~~ technician-level qualification in structural collapse rescue.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 10:54:58 EDT 2018

Committee Statement

Committee Statement: This change was made in order to reduce confusion.

Response Message: FR-41-NFPA 1006-2018

First Revision No. 42-NFPA 1006-2018 [Section No. 6.3.7]

~~6.3.7~~

~~Implement collapse support operations at a rescue incident, given an assignment and available resources, so that scene lighting is adequate for the tasks to be undertaken, environmental concerns are managed, personnel rehabilitation is facilitated, and the support operations facilitate rescue operational objectives.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Resource management protocols, principles for establishing lighting, environmental control methods, and rescuer rehabilitation protocols.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to manage resources, set up lights, initiate environmental controls, and set up rehabilitation for rescuers.~~

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 10:55:55 EDT 2018

Committee Statement

Committee Statement: The committee is deleting this as they have added it to section 6.1, see FR 38.

Response Message: FR-42-NFPA 1006-2018

First Revision No. 189-NFPA 1006-2018 [Sections 6.3.8, 6.3.9]

6.3.7

Release a victim from entrapment by components of a heavy construction–type collapsed structure, given PPE and resources for breaching, breaking, lifting, prying, shoring, and/or otherwise moving or penetrating the offending structural component, so that hazards to rescue personnel and victims are minimized, considerations are given to compartment syndrome due to crush ~~syndrome~~ injuries , techniques enhance patient survivability, tasks are accomplished within projected time frames, and techniques do not compromise the integrity of the existing structure or structural support systems.

(A) Requisite Knowledge.

Identification, utilization, and required care of PPE; general hazards associated with each type of structural collapse; methods of evaluating structural integrity; ~~crush~~ compartment syndrome protocols; identification of construction types and collapse characteristics of heavy construction–type structures; causes and associated effects of structural collapses; potential signs of impending secondary collapse; selection and application of rescue tools and resources; and risk/benefit assessment techniques for extrication methods and time constraints.

(B) Requisite Skills.

The ability to select, use, and care for PPE, operate rescue tools and stabilization systems, recognize ~~crush~~ compartment syndrome ~~indicators~~ signs and symptoms , and complete risk/benefit assessments for selected methods of rescue and time constraints.

6.3.8

Remove a victim from a heavy construction–type collapse incident, given a disentangled victim, a basic first aid kit, and victim packaging resources, so that basic life functions are supported as required, victim is evaluated for signs of ~~crush~~ compartment syndrome, advanced life support is called if needed, methods and packaging devices selected are compatible with intended routes of transfer, universal precautions are employed to protect personnel from bloodborne pathogens, and extraction times meet time constraints for medical management.

(A) Requisite Knowledge.

Identification, utilization, and required care of PPE resources for structural collapse incidents; general hazards associated with structural collapse; identification of heavy construction types; characteristics and expected behavior of each type in a structural collapse incident; causes and associated effects of structural collapses; recognition of, potential for, and signs of impending secondary collapse; characteristic mechanisms of injury and basic life support; and patient packaging principles.

(B) Requisite Skills.

Selection, use, and care of PPE; basic ~~pre-hospital~~ prehospital care of soft-tissue injuries; fracture stabilization; airway maintenance techniques~~,~~ and cardiopulmonary resuscitation; signs and symptoms of compartment syndrome; and selection and use of patient packaging equipment.

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 11:15:39 EDT 2018

Committee Statement

Committee Statement: These changes were made in order to ensure the proper term is being used.

Response Message: FR-189-NFPA 1006-2018

First Revision No. 44-NFPA 1006-2018 [Section No. 7.1 [Excluding any Sub-Sections]]

~~The job performance requirements defined in~~ 7.1.1 ~~through~~ 7.1.6 ~~shall be met prior to awareness-level qualification in confined space rescue.~~ Prior to qualification at the awareness level for confined space rescue, the individual shall meet the requirements in 1.5 (1) as defined by the AHJ in addition to the job performance requirements defined in Section 7.1 .

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 11:03:39 EDT 2018

Committee Statement

Committee Statement: The committee has made this change in order to reduce confusion.

Response Message: FR-44-NFPA 1006-2018

First Revision No. 45-NFPA 1006-2018 [Section No. 7.1.1]

~~7.1.1~~

~~Recognize the need for confined space support resources, given a specific type of rescue incident, so that the confined space is recognized, a resource cache is managed, scene lighting is provided for the tasks to be undertaken, environmental concerns are managed, personnel rehabilitation is facilitated, and the support operation facilitates rescue operational objectives.~~

~~**(A)** Requisite Knowledge.~~

~~Confined space incident recognition, equipment organization and tracking methods, lighting resource type(s), shelter and thermal control options, and rehab criteria.~~

~~**(B)** Requisite Skills.~~

~~The ability to recognize confined spaces, track equipment inventory, identify lighting resources and structures for shelter and thermal protection, select rehab areas, and manage personnel rotations.~~

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 11:05:18 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-45-NFPA 1006-2018

First Revision No. 36-NFPA 1006-2018 [Section No. 7.1.2]

7.1.1

~~Recognize incident hazards and initiate~~ Initiate isolation procedures for a specific confined space incident , given scene control barriers, personal protective equipment (PPE), requisite equipment, and available specialized resources, so that all hazards are identified~~,~~ ; unauthorized entry to the confined space and adjacent areas are controlled; resource application fits the operational requirements~~,~~ ; hazard isolation is considered~~,~~ ; risks to rescuers, bystanders , and victims are minimized~~,~~ ; and rescue time constraints are taken into account.

(A) Requisite Knowledge.

Resource capabilities and limitations, ~~types and nature of incident hazards, equipment types and their use, isolation terminology, methods, equipment and implementation, operational requirement concerns, common types of rescuer and victim risk, risk/benefit analysis methods and practices~~ hazard recognition, isolation methods and terminology, methods for controlling access to the scene , and types of technical references.

(B) Requisite Skills.

The ability to identify resource capabilities and limitations, identify ~~incident hazards, assess victim viability (risk/benefit), utilize technical references~~ potential hazards to rescuers and bystanders, identify potential paths for entry to the confined space and its adjacent areas, utilize scene entry control methods , place scene control barriers, and operate control and mitigation equipment.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 10:19:10 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-36-NFPA 1006-2018

First Revision No. 46-NFPA 1006-2018 [Section No. 7.1.3]

~~7.1.3~~

~~Recognize the need for technical rescue resources at an incident, given incident information, a means of communication, resources, tactical worksheets, personnel accountability protocol, applicable references, and standard operating procedures, so that references are utilized, personnel are accounted for, necessary resources are deployed to achieve desired objectives, incident actions are documented, rescue efforts are coordinated, the command structure is established, task assignments are communicated and monitored, and actions are consistent with applicable regulations.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Incident management system; tactical worksheet application and purposes; accountability protocols; resource types and deployment methods; documentation methods and requirements; availability, capabilities, and limitations of rescuers and other resources; communication problems and needs; communications requirements, methods, and means; types of tasks and assignment responsibilities; policies and procedures of the agency; and technical references related to the type of rescue incident.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to implement an incident management system, complete tactical worksheets, use reference materials, evaluate incident information, match resources to operational needs, operate communications equipment, manage incident communications, and communicate in a manner so that objectives are met.~~

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 11:06:20 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-46-NFPA 1006-2018

First Revision No. 47-NFPA 1006-2018 [Section No. 7.1.4 [Excluding any Sub-Sections]]

Initiate a search in areas immediately adjacent to the confined space, given hazard-specific PPE, equipment pertinent to search mission, a confined space incident location, and victim investigative information, so that search parameters are established; the victim survival profile is established; the entry and exit of all people either involved in the search or already within the search area are questioned and the information is updated and relayed to command; the personnel assignments match their expertise; all victims in the adjacent areas to the confined space are located as quickly as possible; applicable technical rescue concerns are managed; risks to searchers are minimized; and all searchers are accounted for.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 11:07:15 EDT 2018

Committee Statement

Committee Statement: These changes were made in order to clarify the section.

Response Message: FR-47-NFPA 1006-2018

First Revision No. 48-NFPA 1006-2018 [Section No. 7.2 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 5.2, ~~Section~~ 7.1, and ~~7.2.1 through 7.2.18~~ 7.2 shall be met prior to operations-level qualification in confined space rescue.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 11:10:24 EDT 2018

Committee Statement

Committee Statement: This change was made in order to reduce confusion.

Response Message: FR-48-NFPA 1006-2018

First Revision No. 200-NFPA 1006-2018 [Section No. 7.2.6 [Excluding any Sub-Sections]]

Apply and use self-contained breathing apparatus (SCBA) as a rescue entrant, given a confined space incident requiring respiratory protection, a rescue assignment, a means of entry into and exit from the space, a rescue attendant outside the space, SCBA, breathing apparatus cylinders, and a confined space, ~~with the following characteristics:~~ so that the internal configuration of the space is clear and unobstructed so retrieval systems can be utilized for rescuers without possibility of entanglement, the victim can be seen easily from the outside of the space's primary access opening, rescuers can pass easily through the access/egress opening(s) with room to spare when PPE is worn in the manner recommended by the manufacturer, the space can accommodate two or more rescuers in addition to the victim, all hazards in and around the confined space have been identified and can be mitigated by using respiratory protection, ~~so that~~ the rescue entrant passes through the portal without removal of the SCBA, the assigned rescue duty is performed, the rescue entrant frequently assesses the level of air remaining in the cylinder and communicates this level to rescuers outside of the space, and the rescue entrant exits the space prior to activation of the low-pressure alarm on the SCBA.

~~The internal configuration of the space is clear and unobstructed so retrieval systems can be utilized for rescuers without possibility of entanglement.~~

~~The victim can be seen easily from the outside of the space's primary access opening.~~

~~Rescuers can pass easily through the access/egress opening(s) with room to spare when PPE is worn in the manner recommended by the manufacturer.~~

~~The space can accommodate two or more rescuers in addition to the victim.~~

~~All hazards in and around the confined space have been identified and can be mitigated by using respiratory protection so that the rescue entrant passes through the portal without removal of the SCBA, the assigned rescue duty is performed, the rescue entrant frequently assesses the level of air remaining in the cylinder and communicates this level to rescuers outside of the space, and the rescue entrant exits the space prior to activation of the low-pressure alarm on the SCBA.~~

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 14:48:45 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper development of a JPR.

Response Message: FR-200-NFPA 1006-2018

First Revision No. 201-NFPA 1006-2018 [Section No. 7.2.7 [Excluding any Sub-Sections]]

Apply an ~~atmosphere supplying~~ atmosphere-supplying respirator to a victim, given a confined space incident requiring respiratory protection, a live victim, an ~~atmosphere supplying~~ atmosphere-supplying respirator and associated equipment, and a confined space, ~~with the following characteristics:~~ so that the internal configuration of the space is clear and unobstructed so retrieval systems can be utilized for rescuers without possibility of entanglement; the victim can be easily seen from the outside of the space's primary access opening; rescuers can pass easily through the access/egress opening(s) with room to spare when PPE is worn in the manner recommended by the manufacturer; the space can accommodate two or more rescuers in addition to the victim; all hazards in and around the confined space have been identified and can be mitigated by using respiratory protection; ~~so that~~ the apparatus face piece is applied rapidly, positioned properly on the face and without air leakage; application of the face piece can be performed simultaneously with spinal precautions; the breathing apparatus unit is securely placed during victim movement so the face piece will not be pulled from the victim's face during movement; the level of air remaining in the victim's breathing apparatus is frequently accessed and communicated; and the victim is removed from the space without interruption of the air supply.

~~The internal configuration of the space is clear and unobstructed so retrieval systems can be utilized for rescuers without possibility of entanglement.~~

~~The victim can be easily seen from the outside of the space's primary access opening.~~

~~Rescuers can pass easily through the access/egress opening(s) with room to spare when PPE is worn in the manner recommended by the manufacturer.~~

~~The space can accommodate two or more rescuers in addition to the victim.~~

~~All hazards in and around the confined space have been identified and can be mitigated by using respiratory protection so that the apparatus face piece is applied rapidly, positioned properly on the face and without air leakage; application of the face piece can be performed simultaneously with spinal precautions; the breathing apparatus unit is securely placed during victim movement, the face piece will not be pulled from the victim's face during movement; the level of air remaining in the victim's breathing apparatus is frequently accessed and communicated, and the victim is removed from the space without interruption of the air supply.~~

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 14:56:03 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper development of a JPR.

Response Message: FR-201-NFPA 1006-2018

First Revision No. 202-NFPA 1006-2018 [Section No. 7.2.8 [Excluding any Sub-Sections]]

Perform full spinal immobilization of a victim inside a confined space, given a confined space incident requiring spinal precautions, a victim, full spinal immobilization equipment, a second rescuer to assist, and a confined space, ~~with the following characteristics:~~ so that the internal configuration of the space is clear and unobstructed so retrieval systems can be utilized for rescuers without possibility of entanglement; , the victim can be easily seen from the outside of the space's primary access opening, rescuers can pass easily through the access/egress opening(s) with room to spare when PPE is worn in the manner recommended by the manufacturer, the space can accommodate two or more rescuers in addition to the victim, all hazards in and around the confined space have been identified and can be mitigated by using respiratory protection so that the victim's cervical spine is manually maintained in a neutral position immediately on contact and maintained until the body and head are completely immobilized and secure, victim movement onto the spinal immobilization device creates minimal manipulation of the spine, void spaces between the victim and immobilization device are padded as appropriate, victim securement to the immobilization device will prevent spinal manipulation during movement, and applicable local treatment protocols are followed.

~~The internal configuration of the space is clear and unobstructed so retrieval systems can be utilized for rescuers without possibility of entanglement.~~

~~The victim can be easily seen from the outside of the space's primary access opening.~~

~~Rescuers can pass easily through the access/egress opening(s) with room to spare when PPE is worn in the manner recommended by the manufacturer.~~

~~The space can accommodate two or more rescuers in addition to the victim.~~

~~All hazards in and around the confined space have been identified and can be mitigated by using respiratory protection so that the victim's cervical spine is manually maintained in a neutral position immediately on contact and maintained until the body and head are completely immobilized and secure, victim movement onto the spinal immobilization device creates minimal manipulation of the spine, void spaces between the victim and immobilization device are padded as appropriate, victim securement to the immobilization device will prevent spinal manipulation during movement, and applicable local treatment protocols are followed.~~

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 14:57:56 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper development of a JPR.

Response Message: FR-202-NFPA 1006-2018

First Revision No. 203-NFPA 1006-2018 [Section No. 7.2.9 [Excluding any Sub-Sections]]

Prepare for entry into horizontally oriented confined space, given a confined space rescue tool kit and a confined space, ~~with the following characteristics:~~ so that the internal configuration of the space is clear and unobstructed so retrieval systems can be utilized for rescuers without possibility of entanglement, the victim can be easily seen from the outside of the space's primary access opening, rescuers can pass easily through the access/egress opening(s) with room to spare when PPE is worn in the manner recommended by the manufacturer, the space can accommodate two or more rescuers in addition to the victim, all hazards in and around the confined space have been identified and can be mitigated by using respiratory protection so that victim communication is established when possible, continuous atmospheric monitoring is initiated, rescuer readiness is verified, rescuers' limitations are identified and evaluated, rescuers unsuitable to confined space entry operations are reassigned and replaced, route and methods of entry are determined, and rescuer evacuation is planned.

~~The internal configuration of the space is clear and unobstructed so retrieval systems can be utilized for rescuers without possibility of entanglement.~~

~~The victim can be easily seen from the outside of the space's primary access opening.~~

~~Rescuers can pass easily through the access/egress opening(s) with room to spare when PPE is worn in the manner recommended by the manufacturer.~~

~~The space can accommodate two or more rescuers in addition to the victim.~~

~~All hazards in and around the confined space have been identified and can be mitigated by using respiratory protection so that victim communication is established when possible, continuous atmospheric monitoring is initiated, rescuer readiness is verified, rescuers' limitations are identified and evaluated, rescuers unsuitable to confined space entry operations are reassigned and replaced, route and methods of entry are determined, and rescuer evacuation is planned.~~

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 14:59:18 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper development of a JPR.

Response Message: FR-203-NFPA 1006-2018

First Revision No. 204-NFPA 1006-2018 [Section No. 7.2.10 [Excluding any Sub-Sections]]

Enter a horizontally oriented confined space for rescue, given PPE; safety, communication, and operational protocols; portable lighting; and a confined space rescue tool kit~~,~~ ; a retrieval system~~,~~ ; and a confined space, ~~with the following characteristics:~~ so that the internal configuration of the space is clear and unobstructed so retrieval systems can be utilized for rescuers without possibility of entanglement, the victim can be easily seen from the outside of the space's primary access opening, rescuers can pass easily through the access/egress opening(s) with room to spare when PPE is worn in the manner recommended by the manufacturer, the space can accommodate two or more rescuers in addition to the victim, all hazards in and around the confined space have been identified and can be mitigated by using respiratory protection so that the victim is contacted, controlled confined space entry is established and maintained, atmosphere is monitored continuously, the victim's mental and physical conditions are assessed further, the rescue entrant is aided by portable lighting, rescue entrants are attached to retrieval lines at all times, patient care is initiated, the patient is packaged to restrictions of the space, and patient removal can be initiated.

~~The internal configuration of the space is clear and unobstructed so retrieval systems can be utilized for rescuers without possibility of entanglement.~~

~~The victim can be easily seen from the outside of the space's primary access opening.~~

~~Rescuers can pass easily through the access/egress opening(s) with room to spare when PPE is worn in the manner recommended by the manufacturer.~~

~~The space can accommodate two or more rescuers in addition to the victim.~~

~~All hazards in and around the confined space have been identified and can be mitigated by using respiratory protection so that the victim is contacted, controlled confined space entry is established and maintained, atmosphere is monitored continuously, the victim's mental and physical conditions are assessed further, the rescue entrant is aided by portable lighting, rescue entrants are attached to retrieval lines at all times, patient care is initiated, the patient is packaged to restrictions of the space, and patient removal can be initiated.~~

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 15:00:35 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper development of a JPR.

Response Message: FR-204-NFPA 1006-2018

First Revision No. 205-NFPA 1006-2018 [Section No. 7.2.13 [Excluding any Sub-Sections]]

Prepare for entry into vertically oriented confined space, given a confined space rescue tool kit and a confined space, ~~with the following characteristics: The~~ so that the internal configuration of the space is clear and unobstructed so retrieval systems can be utilized for rescuers without possibility of entanglement, the victim can be easily seen from the outside of the space's primary access opening ~~victim can be easily seen from the outside of the space's primary access opening~~ rescuers can pass easily through the access/egress opening(s) with room to spare when PPE is worn in the manner recommended by the manufacturer, the space can accommodate two or more rescuers in addition to the victim, all hazards in and around the confined space have been identified and can be mitigated by using respiratory protection so that victim communication is established when possible, continuous atmospheric monitoring is initiated, rescuer readiness is verified, rescuers' limitations are identified and evaluated, rescuers unsuitable to entry operations are reassigned and replaced, route and methods of confined space entry are determined, and rescuer evacuation is planned.

~~The internal configuration of the space is clear and unobstructed so retrieval systems can be utilized for rescuers without possibility of entanglement.~~

~~The victim can be easily seen from the outside of the space's primary access opening.~~

~~Rescuers can pass easily through the access/egress opening(s) with room to spare when PPE is worn in the manner recommended by the manufacturer.~~

~~The space can accommodate two or more rescuers in addition to the victim.~~

~~All hazards in and around the confined space have been identified and can be mitigated by using respiratory protection so that victim communication is established when possible, continuous atmospheric monitoring is initiated, rescuer readiness is verified, rescuers' limitations are identified and evaluated, rescuers unsuitable to entry operations are reassigned and replaced, route and methods of confined space entry are determined, and rescuer evacuation is planned.~~

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 15:01:58 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper development of a JPR.

Response Message: FR-205-NFPA 1006-2018

First Revision No. 206-NFPA 1006-2018 [Section No. 7.2.14 [Excluding any Sub-Sections]]

Enter a vertically oriented confined space for rescue, given PPE; safety, communication, operational protocols; a confined space rescue tool kit; and a confined space, so that the ~~with the following characteristics: The~~ internal configuration of the space is clear and unobstructed so retrieval systems can be utilized for rescuers without possibility of entanglement, the victim can be easily seen from the outside of the space's primary access opening, rescuers can pass easily through the access/egress opening(s) with room to spare when PPE is worn in the manner recommended by the manufacturer, the space can accommodate two or more rescuers in addition to the victim, all hazards in and around the confined space have been identified and can be mitigated by using respiratory protection so that the victim is contacted, controlled confined space entry is established and maintained, atmosphere is continuously monitored, the victim's mental and physical conditions are further assessed, patient care is initiated, the patient is packaged to restrictions of the space, and patient removal can be initiated.

~~The internal configuration of the space is clear and unobstructed so retrieval systems can be utilized for rescuers without possibility of entanglement.~~

~~The victim can be easily seen from the outside of the space's primary access opening.~~

~~Rescuers can pass easily through the access/egress opening(s) with room to spare when PPE is worn in the manner recommended by the manufacturer.~~

~~The space can accommodate two or more rescuers in addition to the victim.~~

~~All hazards in and around the confined space have been identified and can be mitigated by using respiratory protection so that the victim is contacted, controlled confined space entry is established and maintained, atmosphere is continuously monitored, the victim's mental and physical conditions are further assessed, patient care is initiated, the patient is packaged to restrictions of the space, and patient removal can be initiated.~~

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 15:04:34 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper development of a JPR.

Response Message: FR-206-NFPA 1006-2018

First Revision No. 207-NFPA 1006-2018 [Section No. 7.2.16 [Excluding any Sub-Sections]]

~~Access and rapidly remove~~ Remove a victim from a vertically oriented confined space, given a confined space rescue tool kit, victim harnesses and rigging, a victim who has been discovered to be in respiratory arrest, and conditions inside the space requiring immediate extraction to prevent imminent death of the victim, so that the victim is rapidly secured in an extraction harness, the harness is secured to the rescue system, and the victim is removed from the space.

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 15:06:29 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper development of a JPR.

Response Message: FR-207-NFPA 1006-2018

First Revision No. 49-NFPA 1006-2018 [Section No. 7.3 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 7.2 and ~~7.3.1 through 7.3.6~~ 7.3 shall be met prior to technician-level qualification in confined space rescue.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 11:16:14 EDT 2018

Committee Statement

Committee Statement: This change was made in order to reduce confusion.

Response Message: FR-49-NFPA 1006-2018

First Revision No. 208-NFPA 1006-2018 [Section No. 7.3.3 [Excluding any Sub-Sections]]

Apply and use supplied-air respirators (SARs) as a rescue entrant, given a confined space incident requiring respiratory protection, a rescue assignment, a means of entry into and exit from the space, a rescue attendant outside the space, personnel to manage air lines outside of the space, a SAR, a breathing air supply system with air lines to supply the SAR, breathing apparatus cylinders, personnel to monitor and maintain the air supply system, and a confined space, ~~with the following characteristics:~~ so that the internal configuration of the space will not create entanglement hazards when using air lines, the victim cannot be seen from the outside of the space's primary access opening, the portal size and configuration will not allow a rescuer to pass through the access/egress opening(s) using SCBA when worn in the manner recommended by the manufacturer, all hazards in and around the confined space have been identified and might be mitigated by using respiratory protection so that the rescue entrant passes through the portal without removal of the SAR and the assigned rescue duty is performed.

~~The internal configuration of the space will not create entanglement hazards when using air lines.~~

~~The victim cannot be seen from the outside of the space's primary access opening.~~

~~The portal size and configuration will not allow a rescuer to pass through the access/egress opening(s) using SCBA when worn in the manner recommended by the manufacturer.~~

~~All hazards in and around the confined space have been identified and might be mitigated by using respiratory protection so that the rescue entrant passes through the portal without removal of the SAR and the assigned rescue duty is performed.~~

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 15:07:23 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper development of a JPR.

Response Message: FR-208-NFPA 1006-2018

First Revision No. 209-NFPA 1006-2018 [Section No. 7.3.4 [Excluding any Sub-Sections]]

Perform short spinal immobilization of a victim inside a confined space, given a confined space incident requiring spinal precautions, a stable victim, a short spinal immobilization device, a second rescuer to assist, and a confined space, ~~with the following characteristics: The~~ so that the portal size or internal configuration will not allow the application of a full spine immobilization device, all hazards in and around the confined space have been identified and might be mitigated by using respiratory protection so that the victim's cervical spine is manually maintained in a neutral position immediately on contact and maintained until the short immobilization device is completely applied and secure, victim movement onto the spinal immobilization device creates minimal manipulation of the spine, void spaces between the victim and immobilization device are padded as appropriate, victim securement to the immobilization device will reduce spinal manipulation during movement, and applicable local treatment protocols are followed.

~~The portal size or internal configuration will not allow the application of a full spine immobilization device.~~

~~All hazards in and around the confined space have been identified and might be mitigated by using respiratory protection so that the victim's cervical spine is manually maintained in a neutral position immediately on contact and maintained until the short immobilization device is completely applied and secure, victim movement onto the spinal immobilization device creates minimal manipulation of the spine, void spaces between the victim and immobilization device are padded as appropriate, victim securement to the immobilization device will reduce spinal manipulation during movement, and applicable local treatment protocols are followed.~~

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 15:18:36 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper development of a JPR.

Response Message: FR-209-NFPA 1006-2018

First Revision No. 210-NFPA 1006-2018 [Section No. 7.3.5 [Excluding any Sub-Sections]]

Prepare for entry into the confined space with a hazardous atmosphere, given a confined space with a hazardous atmosphere, atmosphere-supplied respirators, and a confined space ~~rescue~~ tool kit, so that entry can be made into ~~and~~ a confined space that contains one or more of the following characteristics: the internal configuration of the space could create entanglement hazards and retrieval might not be effective, the victim cannot be seen from the outside of the space's primary access opening, the portal size and configuration will not allow a rescuer to pass through the access/egress opening(s) using SCBA when worn in the manner recommended by the manufacturer, all hazards in and around the confined space have been identified and can be mitigated by using respiratory protection so that continuous atmospheric monitoring is initiated, the atmosphere is assessed to be manageable with ~~atmosphere supplying~~ atmosphere-supplying respirators, victim communication is established when possible, ~~atmosphere supplying~~ atmosphere-supplying respirators are used by rescue entrants while within the space, atmosphere-supplying respirators are rapidly applied to the victim, rescuer readiness is verified, rescuers' limitations are identified and evaluated, rescuers unsuitable to entry operations are reassigned and replaced, route and methods of confined space entry are determined, and rescuer evacuation is planned.

~~The internal configuration of the space could create entanglement hazards and retrieval might not be effective.~~

~~The victim cannot be seen from the outside of the space's primary access opening.~~

~~The portal size and configuration will not allow a rescuer to pass through the access/egress opening(s) using SCBA when worn in the manner recommended by the manufacturer.~~

~~All hazards in and around the confined space have been identified and can be mitigated by using respiratory protection so that continuous atmospheric monitoring is initiated, the atmosphere is assessed to be manageable with atmosphere supplying respirators, victim communication is established when possible, atmosphere supplying respirators are used by rescue entrants while within the space, atmosphere supplying respirators are rapidly applied to the victim, rescuer readiness is verified, rescuers' limitations are identified and evaluated, rescuers unsuitable to entry operations are reassigned and replaced, route and methods of confined space entry are determined, and rescuer evacuation is planned.~~

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 15:19:35 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper development of a JPR.

Response Message: FR-210-NFPA 1006-2018

First Revision No. 211-NFPA 1006-2018 [Section No. 7.3.6 [Excluding any Sub-Sections]]

Enter a confined space with atmospheric hazards, given hazard-specific PPE; safety, communication, and operational protocols; a confined space with a hazardous atmosphere; a confined space rescue tool kit so that the victim is contacted; and a confined space, ~~that contains one or more of the following characteristics:~~ so that the ~~The~~ internal configuration of the space could create entanglement hazards and retrieval might not be effective, the victim cannot be seen from the outside of the space's primary access opening, the portal size and configuration will not allow a rescuer to pass through the access/egress opening(s) using SCBA when worn in the manner recommended by the manufacturer, all hazards in and around the confined space have been identified and can be mitigated by using respiratory protection so that a controlled confined space entry is established and maintained, the atmosphere is continuously monitored, the rescuers and patient(s) are protected from the hazards, the victim's mental and physical conditions are further assessed, patient care is initiated, the patient is packaged to restrictions of the space, and patient removal can be initiated.

~~The internal configuration of the space could create entanglement hazards and retrieval might not be effective.~~

~~The victim cannot be seen from the outside of the space's primary access opening.~~

~~The portal size and configuration will not allow a rescuer to pass through the access/egress opening(s) using SCBA when worn in the manner recommended by the manufacturer.~~

~~All hazards in and around the confined space have been identified and can be mitigated by using respiratory protection so that a controlled confined space entry is established and maintained, the atmosphere is continuously monitored, the rescuers and patient(s) are protected from the hazards, the victim's mental and physical conditions are further assessed, patient care is initiated, the patient is packaged to restrictions of the space, and patient removal can be initiated.~~

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 15:23:27 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper development of a JPR.

Response Message: FR-211-NFPA 1006-2018

First Revision No. 55-NFPA 1006-2018 [Chapter 8 [Title Only]]

Common Passenger Vehicle Rescue

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 11:36:13 EDT 2018

Committee Statement

Committee Statement: The committee has made this change in order to more accurately capture what the content of this chapter is and this is the term that is defined in chapter 3.

Response Message: FR-55-NFPA 1006-2018

First Revision No. 50-NFPA 1006-2018 [Section No. 8.1]

8.1 Awareness Level.

~~The job performance requirements defined in 8.1.1 through 8.1.4 shall be met prior to awareness-level qualification in vehicle rescue.~~

~~**8.1.1**~~

~~Recognize the need for technical rescue resources at an incident, given AHJ guidelines, an operations- or technician-level incident, so that the need for additional resources is identified, the response system is initiated, the scene is secured and rendered safe until additional resources arrive, and awareness-level personnel are incorporated into the operational plan.~~

~~**(A)** Requisite Knowledge.~~

~~Operational protocols, specific planning forms, types of incidents common to the AHJ, hazards, incident support operations and resources, and safety measures.~~

~~**(B)** Requisite Skills.~~

~~The ability to apply operational protocols, select specific planning forms based on the types of incidents, identify and evaluate various types of hazards within the AHJ, request support and resources, and determine the required safety measures.~~

8.1.1

Prior to qualification at the awareness level for passenger vehicle rescue, the individual shall meet the requirements in 1.5 (1) as defined by the AHJ in addition to the job performance requirements defined in Section 8.1 .

8.1.2

Establish scene safety zones, given ~~an~~ a passenger vehicle incident, scene security barriers, incident location, incident information, and personal protective equipment (PPE), so that the scene and responders are visible to approaching vehicles, safety zones are designated, zone perimeters are consistent with incident requirements, perimeter markings can be recognized and understood by others, zone boundaries are communicated to incident command, and ~~only authorized personnel are allowed access to the scene~~ traffic flow is controlled .

(A) Requisite Knowledge.

Use and selection of PPE, zone or area control flow and concepts, types of control devices and tools, types of existing and potential hazards, methods of hazard mitigation, organizational standard operating procedure, and staffing requirements.

(B) Requisite Skills.

The ability to select and use PPE, apply crowd control concepts, position zone control devices, identify and mitigate existing or potential hazards, and maintain personal safety techniques.

~~**8.1.3**~~

~~Identify and support an operations- or technician-level incident, given an incident, an assignment, incident action plan, and resources from the tool kit, so that the assignment is carried out, progress is reported to command, environmental concerns are managed, personnel rehabilitation is facilitated, and the incident action plan is supported.~~

~~**(A)** Requisite Knowledge.~~

~~AHJ operational protocols, hazard recognition, incident management, PPE selection, resource selection and use, scene support requirements including lighting, ventilation, and monitoring hazards zones.~~

~~**(B)** Requisite Skills.~~

~~Application of operational protocols, function within an IMS, follow and implement an incident action plan, report task progress status to supervisor or Incident Command.~~

8.1.3

Size up an incident, given an incident, background information and applicable reference materials, so that the operational mode is defined, resource availability and response time, types of rescues are determined, the number of victims are identified, the last reported location of all victims are established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, search parameters are identified, and information required to develop an incident action plan is obtained.

(A) Requisite Knowledge.

Types of reference materials and their uses, risk benefit assessment, availability and capability of the resources, elements of an action plan and related information, relationship of size-up to the incident management system, and information gathering techniques and how that information is used in the size-up process.

(B) Requisite Skills.

The ability to read specific rescue reference materials, interview and gather information, relay information, manage witnesses, and use information sources.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 11:19:53 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-50-NFPA 1006-2018

First Revision No. 51-NFPA 1006-2018 [Section No. 8.2 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~5.2.5~~ , ~~5.2.7~~ , ~~5.2.9~~ , ~~5.2.10~~ , ~~5.2.13~~ , ~~5.2.15~~ , ~~Section~~ Sections 8.1, and ~~8.2.1 through~~ 8.2.9 8.2 shall be met prior to operations-level qualification in vehicle rescue.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 11:24:41 EDT 2018

Committee Statement

Committee Statement: The committee has made this change in order to reduce confusion.

Response Message: FR-51-NFPA 1006-2018

Public Input No. 46-NFPA 1006-2018 [Section No. 8.2 [Excluding any Sub-Sections]]

Public Input No. 74-NFPA 1006-2018 [Section No. 8.2 [Excluding any Sub-Sections]]

Public Input No. 38-NFPA 1006-2018 [Section No. 8.2 [Excluding any Sub-Sections]]

First Revision No. 56-NFPA 1006-2018 [Section No. 8.2.1]

8.2.1

Create an incident action plan for a passenger vehicle incident, ~~and conduct an initial and ongoing size-up,~~ given agency guidelines, planning forms, and an operations-level vehicle incident or simulation, so that a standard approach is used during training and operational scenarios~~;~~ , emergency situation hazards are identified~~;~~ , isolation methods and scene security measures are considered~~;~~ , fire suppression and safety measures are identified~~;~~ , passenger vehicle stabilization needs are evaluated~~;~~ , and resource needs are identified and documented for future use.

(A) Requisite Knowledge.

Operational protocols, specific planning forms, types of passenger vehicles common to the AHJ boundaries, passenger vehicle hazards, incident support operations and resources, passenger vehicle anatomy, and fire suppression and safety measures.

(B) Requisite Skills.

The ability to apply operational protocols, select specific planning forms based on the types of passenger vehicles, identify and evaluate various types of passenger vehicles within the AHJ boundaries, request support and resources, identify passenger vehicle anatomy, and determine the required fire suppression and safety measures.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 11:38:26 EDT 2018

Committee Statement

Committee Statement: The committee has made these changes to reflect the change in the chapter title. This change was also made in order to comply with proper development of a JPR.

Response Message: FR-56-NFPA 1006-2018

First Revision No. 53-NFPA 1006-2018 [Section No. 8.2.3]

8.2.3*

Stabilize a common passenger vehicle that has come to rest on its wheels on the road surface or similar flat stable environment , given a vehicle tool kit and PPE, so that the passenger vehicle is prevented from moving during the rescue operations; entry, exit, and tool placement points are not compromised; anticipated rescue activities will not compromise vehicle stability; selected stabilization points are structurally sound; stabilization equipment can be monitored; and the risk to rescuers is minimized.

(A) Requisite Knowledge.

Types of stabilization devices, mechanism of common passenger vehicle movement, types of stabilization points, types of stabilization surfaces, AHJ policies and procedures, and types of vehicle construction components as they apply to stabilization.

(B) Requisite Skills.

The ability to apply and operate stabilization devices.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 11:29:14 EDT 2018

Committee Statement

Committee Statement: This change has been made in order to provide clarification and specificity to the section.

Response Message: FR-53-NFPA 1006-2018

First Revision No. 212-NFPA 1006-2018 [Section No. 8.2.4 [Excluding any Sub-Sections]]

~~Isolate and manage~~ Manage potentially harmful energy sources, including propulsion power, restraint systems, and construction materials, given passenger vehicle, vehicle tool kit, and PPE, so that all hazards are identified and isolated ~~;~~ , systems are managed~~;~~ , beneficial system use is evaluated~~;~~ , and hazards to rescue personnel and victims are minimized.

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 15:27:14 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper development of a JPR.

Response Message: FR-212-NFPA 1006-2018

First Revision No. 54-NFPA 1006-2018 [Section No. 8.2.6]

8.2.6

Create access and egress openings for rescue from a common passenger vehicle on its wheels , given a vehicle tool kit, specialized tools and equipment, PPE, and an assignment, so that the movement of rescuers and equipment complements victim care and removal~~;~~ , an emergency escape route is provided~~;~~ , the technique chosen is expedient~~;~~ , victim and rescuer protection is afforded~~;~~ , and vehicle stability is maintained.

(A) Requisite Knowledge.

Common passenger vehicle construction and features; electrical, mechanical, hydraulic, pneumatic, and alternative entry and exit equipment; points and routes of ingress and egress; techniques and hazards; agency policies and procedures; and emergency evacuation and safety signals.

(B) Requisite Skills.

The ability to identify common passenger vehicle construction features, select and operate tools and equipment, apply tactics and strategy based on assignment, apply victim care and stabilization devices, perform hazard control based on techniques selected, and demonstrate safety procedures and emergency evacuation signals.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 11:30:23 EDT 2018

Committee Statement

Committee Statement: The committee has made this change in order to provide clarification and specificity.

Response Message: FR-54-NFPA 1006-2018

First Revision No. 58-NFPA 1006-2018 [Section No. 8.2.8(A)]

(A) Requisite Knowledge.

Patient handling techniques; incident management system; types of immobilization, packaging, and transfer devices; types of immobilization techniques; signs and symptoms of compartment syndrome as a result of crush injuries; and uses of immobilization devices.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 12:58:50 EDT 2018

Committee Statement

Committee Statement: The committee has added this as they believe that this is am important condition to be aware of and knowledgeable of as it relates to victim stabilization and immobilization.

Response Message: FR-58-NFPA 1006-2018

First Revision No. 57-NFPA 1006-2018 [Section No. 8.3]

8.3 Technician Level .

The job performance requirements defined in ~~Section~~ Sections 8.2 and ~~8.3.1 through 8.3.6~~ 8.3 shall be met prior to ~~technician level~~ technician-level qualification in passenger vehicle rescue.

8.3.1

Create an incident action plan for ~~a commercial or heavy vehicle~~ an incident~~, and conduct initial and ongoing size-up~~ where a common passenger vehicle has come to rest on its roof , given agency guidelines, planning forms, and a technician-level vehicle incident or simulation, so that a standard approach is used during training and operational scenarios~~;~~ , emergency situation hazards are identified~~;~~ , isolation methods and scene security measures are considered~~;~~ , fire suppression and safety measures are identified~~;~~ , vehicle stabilization needs are evaluated~~;~~ , and resource needs are identified and documented for future use.

~~A.8.3.1~~

~~It is the intent of the committee that the differentiation between Level I and Level II incidents correlate to both the environment in which the rescue is to be conducted as well as the level or degree of entrapment. It is recommended that provider agencies develop clear guidelines for making this determination based on the AHJ's resources and capabilities.~~

~~Level I rescue skills are applicable to vehicle events involving common passenger vehicles and involving environments where rescuer intervention does not constitute a high level of risk based upon the environment or other factors.~~

~~Level II skills apply to those incidents where commercial or heavy vehicles are involved; complex extrication processes have to be applied; multiple uncommon concurrent hazards are present; or more than digital entrapment of a victim is involved.~~

~~This is an example of a standard operating guideline (SOG) dealing with making this determination for transportation incidents:~~

> ~~*Level I Intervention* : Any situation involving rescue of entrapped civilians or personnel that involves common passenger vehicles (autos, light trucks)~~
>
> ~~*Level II Intervention* : Any situation that exceeds the criteria for a Level I Intervention or meets the following criteria:~~
>
> > ~~Complex passenger extrications~~
> >
> > ~~Extrications involving other disciplines (hazmat, changes in elevation, etc.)~~
> >
> > ~~Truck, bus, or special vehicle extrications~~
> >
> > ~~Multi-vehicle extrications exceeding AHJ resources~~

(A) Requisite Knowledge.

Operational protocols, specific planning forms, types of ~~commercial/heavy~~ passenger vehicles common to the AHJ boundaries, vehicle hazards, incident support operations and resources, vehicle anatomy, and fire suppression and safety measures.

(B) Requisite Skills.

The ability to apply operational protocols, select specific planning forms based on the ~~types~~ position of ~~commercial/heavy vehicles~~ the vehicle , identify and evaluate various types of ~~commercial/heavy~~ vehicles within the AHJ boundaries, request support and resources, identify ~~commercial/heavy~~ passenger vehicles anatomy, and determine the required fire suppression and safety measures.

8.3.2

Stabilize ~~commercial/heavy vehicles~~ a passenger vehicle that has come to rest on its roof, given a passenger vehicle, a technician-level vehicle incident or simulation , given a vehicle and machinery tool kit and PPE, so that the vehicle is prevented from moving during the rescue operations; entry, exit, and tool placement points are not compromised; anticipated rescue activities will not compromise vehicle stability; selected stabilization points are structurally sound; stabilization equipment can be monitored; and the risk to rescuers is minimized.

~~A.8.3.2~~

~~See A.8.3.1 .~~

(A) Requisite Knowledge.

Types of stabilization devices, mechanism of ~~heavy~~ passenger vehicle movement, types of stabilization points, types of stabilization surfaces, AHJ policies and procedures, and types of vehicle construction components as they apply to stabilization.

(B) Requisite Skills.

The ability to apply and operate stabilization devices.

~~8.3.3~~

~~Determine the heavy vehicle access and egress points, given the structural and damage characteristics and potential victim location(s), so that the victim location(s) is identified; entry and exit points for victims, rescuers, and equipment are designated; flows of personnel, the victim(s), and equipment are identified; existing entry points are used; time constraints are factored; selected entry and egress points do not compromise vehicle stability; chosen points can be protected; equipment and victim stabilization are initiated; and AHJ safety and emergency procedures are enforced.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Heavy vehicle construction/features, entry and exit points, routes and hazards, operating systems, AHJ standard operating procedure, and emergency evacuation and safety signals.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to identify entry and exit points and probable victim locations and assess and evaluate impact of heavy vehicle stability on the victim(s).~~

8.3.3

Create access and egress openings for rescue from a ~~heavy~~ passenger vehicle that has come to rest on its roof , given a technician-level vehicle incident or simulation, a vehicle tool kit, specialized tools and equipment, PPE, and an assignment, so that the movement of rescuers and equipment complements victim care and removal~~;~~ , an emergency escape route is provided~~;~~ , the technique chosen is expedient~~;~~ , victim and rescuer protection is afforded~~;~~ , and vehicle stability is maintained.

(A) Requisite Knowledge.

~~Heavy~~ Passenger vehicle construction and features; electrical, mechanical, hydraulic, and pneumatic systems; alternative entry and exit equipment; points and routes of ingress and egress; techniques and hazards; agency policies and procedures; and emergency evacuation and safety signals.

(B) Requisite Skills.

The ability to identify ~~heavy~~ passenger vehicle construction features, select and operate tools and equipment, apply tactics and strategy based on assignment, apply victim care and stabilization devices, perform hazard control based on techniques selected, and demonstrate safety procedures and emergency evacuation signals.

8.3.4

Create an incident action plan for an incident where a common passenger vehicle has come to rest on its side, given agency guidelines, planning forms, and a technician-level vehicle incident or simulation, so that a standard approach is used during training and operational scenarios, emergency situation hazards are identified, isolation methods and scene security measures are considered, fire suppression crew and safety measures are identified, vehicle stabilization needs are evaluated, and resource needs are identified and documented for future use.

(A) Requisite Knowledge.

Operational protocols, specific planning forms, vehicles common to the AHJ boundaries, vehicle hazards, incident support operations and resources, vehicle anatomy, and fire suppression crew and safety measures.

(B) Requisite Skills.

The ability to apply operational protocols, select specific planning forms based on the position of the vehicle, identify and evaluate various types of common passenger vehicles within the jurisdiction of the AHJ, request support and resources, and determine the required fire suppression crew and safety measures.

8.3.5

Stabilize a passenger vehicle that has come to rest on its side, given a passenger vehicle and machinery tool kit and PPE, so that the passenger vehicle is prevented from moving during the rescue operations; entry, exit, and tool placement points are not compromised; anticipated rescue activities will not compromise vehicle stability; selected stabilization points are structurally sound; stabilization equipment can be monitored; and the risk to rescuers is minimized.

(A) Requisite Knowledge.

Types of stabilization devices, mechanism of vehicle movement, types of stabilization points, types of stabilization surfaces, AHJ policies and procedures, and types of vehicle construction components as they apply to stabilization.

(B) Requisite Skills.

The ability to apply and operate stabilization devices.

8.3.6

Create access and egress openings for rescue from a vehicle that has come to rest on its side, given vehicle tool kit, specialized tools and equipment, PPE, and an assignment, so that the movement of rescuers and equipment complements victim care and removal, an emergency escape route is provided, the technique chosen is expedient, victim and rescuer protection is afforded, and vehicle stability is maintained.

(A) Requisite Knowledge.

Common passenger vehicle construction and features; electrical, mechanical, hydraulic, and pneumatic systems; alternative entry and exit equipment; points and routes of ingress and egress; techniques and hazards; agency policies and procedures; and emergency evacuation and safety signals.

(B) Requisite Skills.

The ability to identify common passenger vehicle construction features, select and operate tools and equipment, apply tactics and strategy based on assignment, apply victim care and stabilization devices, perform hazard control based on techniques selected, and demonstrate safety procedures and emergency evacuation signals.

8.3.7

Create an incident action plan for an incident where a common passenger vehicle has come to rest in a configuration or environment where multiple concurrent hazards must be managed to access or remove the occupants, given agency guidelines, planning forms, and a technician-level vehicle incident or simulation, so that a standard approach is used during training and operational scenarios, emergency situation hazards are identified, isolation methods and scene security measures are considered, fire suppression and safety measures are identified, vehicle stabilization needs are evaluated, and resource needs are identified and documented for future use.

(A) Requisite Knowledge.

Operational protocols, specific planning forms, common passenger vehicles, vehicle hazards, incident support operations and resources, vehicle anatomy, and fire suppression and safety measures.

(B) Requisite Skills.

The ability to apply operational protocols, select specific planning forms based on the position of the vehicle, identify and evaluate various types of common passenger vehicles, request support and resources, identify anatomy, and determine the required fire suppression crew and safety measures.

8.3.8

Stabilize a common passenger vehicle that has come to rest in a configuration or environment where multiple concurrent hazards must be managed to access or remove the occupants, given a vehicle and machinery tool kit and PPE, so that the vehicle is prevented from moving during the rescue operations; entry, exit, and tool placement points are not compromised; anticipated rescue activities will not compromise vehicle stability; selected stabilization points are structurally sound; stabilization equipment can be monitored; and the risk to rescuers is minimized.

(A) Requisite Knowledge.

Types of stabilization devices, mechanism of vehicle movement, types of stabilization points, types of stabilization surfaces, AHJ policies and procedures, and types of vehicle construction components as they apply to stabilization.

(B) Requisite Skills.

The ability to apply and operate stabilization devices.

8.3.9

Disentangle victim(s), given an extrication incident, a vehicle tool kit, PPE, and specialized equipment, so that undue victim injury is prevented~~;~~, victim protection is provided~~;~~, and stabilization is maintained.

(A) Requisite Knowledge.

Tool selection and application, stabilization systems, protection methods, disentanglement points and techniques, and dynamics of disentanglement.

(B) Requisite Skills.

The ability to operate disentanglement tools, initiate protective measures, identify and eliminate points of entrapment, and maintain incident stability and scene safety.

~~**8.3.10**~~

~~Isolate and manage potentially harmful energy sources, including propulsion power, restraint systems, and construction materials, given heavy vehicle, vehicle tool kit, and PPE, so that all hazards are identified; systems are managed; beneficial system use is evaluated; and hazards to rescue personnel and victims are minimized.~~

~~**(A)** Requisite Knowledge.~~

~~Types and uses of PPE, types of energy sources, system isolation methods, specialized system features, tools for disabling hazards, and policies and procedures of the AHJ.~~

~~**(B)** Requisite Skills.~~

~~The ability to select and use task- and incident-specific PPE, identify hazards, operate beneficial systems in support of tactical objectives, and operate tools and devices for securing and disabling hazards.~~

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 11:46:12 EDT 2018

Committee Statement

Committee Statement: The committee has made these changes based on the changing of the title of the chapter, the development of a new chapter, and to include items that were previously not included. The annex material was deleted as it was supposed to have been during the last revision of the document.

Response Message: FR-57-NFPA 1006-2018

First Revision No. 59-NFPA 1006-2018 [Section No. 9.1]

10.1 Awareness Level.

~~The job performance requirements defined in 9.1.1 through 9.1.4 shall be met prior to awareness-level qualification in animal technical rescue.~~

10.1.1

~~Recognize the need for technical rescue resources at an incident, given AHJ guidelines, an operations- or technician-level incident, so that the need for additional resources is identified, the response system is initiated, the scene is secured and rendered safe until additional resources arrive, and awareness-level personnel are incorporated into the operational plan.~~ Prior to qualification at the awareness level for animal rescue, the individual shall meet the requirements in 1.5 (1) as defined by the AHJ.

~~(A)~~ ~~Requisite Knowledge.~~

~~Operational protocols, specific planning forms, types of incidents common to the AHJ, hazards, incident support operations and resources, and safety measures.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to apply operational protocols, select specific planning forms based on the types of incidents, identify and evaluate various types of hazards within the AHJ, request support and resources, and determine the required safety measures.~~

10.1.2

~~Establish scene safety zones, given an incident, scene security barriers, incident location, incident information, and personal protective equipment, so that safety zones are designated, zone perimeters are consistent with incident requirements, perimeter markings can be recognized and understood by others, zone boundaries are communicated to incident command, and only authorized personnel are allowed access to the scene.~~ Recognize basic animal handling and behavior principles, given a representative animal, so that the incident is managed, risks to rescuers are minimized, and risks to the animal are minimized.

Global FR-70

(A) Requisite Knowledge.

~~Use and selection of personal protective equipment, zone or area control flow and concepts, types of control devices and tools, types of existing and potential hazards, methods of hazard mitigation, organizational standard operating procedure, and staffing requirements.~~ Hazard-specific PPE selection and use, fight/flight behavior principles, and species-specific containment methods and devices.

(B) Requisite Skills.

~~The ability to select and use personal protective equipment, apply crowd control concepts, position zone control devices, identify and mitigate existing or potential hazards, and personal safety techniques~~ The ability to select and use hazard-specific PPE, apply species-specific handling principles, and identify species-specific behavioral cues.

~~9.1.3~~

~~Identify and support an operations- or technician-level incident, given an incident, an assignment, incident action plan, and resources from the tool kit, so that the assignment is carried out, progress is reported to command, environmental concerns are managed, personnel rehabilitation is facilitated, and the incident action plan is supported.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~AHJ operational protocols, hazard recognition, incident management, PPE selection, resource selection and use, scene support requirements including lighting, ventilation and monitoring hazards zones.~~

~~(B)~~ ~~Requisite Skills.~~

~~Application of operational protocols, function within an IMS, follow and implement an incident action plan, report task progress status to supervisor or IC.~~

~~9.1.4~~

~~Size up an incident, given an incident, background information and applicable reference materials, so that the operational mode is defined, resource availability and response time, types of rescues are determined, the number of victims are identified, the last reported location of all victims are established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, search parameters are identified, and information required to develop an incident action plan is obtained.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Types of reference materials and their uses, risk benefit assessment, availability and capability of the resources, elements of an action plan and related information, relationship of size-up to the incident management system, and information gathering techniques and how that information is used in the size-up process.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to read specific rescue reference materials, interview and gather information, relay information, manage witnesses, and use information sources.~~

Submitter Information Verification

Committee:

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Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-59-NFPA 1006-2018

First Revision No. 60-NFPA 1006-2018 [Section No. 9.2]

10.2 Operations-Level General Requirements.

The job performance requirements defined in ~~Section~~ Sections 5.2, ~~Section~~ 10.1, and 10.2 ~~9.2.1 through 9.2.14~~ shall be met prior to operations-level qualification in animal technical rescue.

10.2.1*

~~Assess and stabilize~~ Stabilize a representative ~~victim~~ animal , given a first aid kit, and an actual or simulated EMS agency, so that rescuers and a representative ~~victim~~ animal are protected from hazards, the representative ~~victim's~~ animal's injuries or illnesses are assessed and managed, and the representative ~~victim~~ animal is delivered to the appropriate EMS provider with information regarding the history of the rescue activity and the representative ~~victim's~~ animal's condition with the assistance of ~~local policy~~ local-policy- determined personnel, when available.

A.10.2.1

A representative animal could include a live animal or mannequin, and could include a small animal (i.e., under 300 lb) or large animal (i.e., over 300 lb).

(A) Requisite Knowledge.

Animal and scene assessment methods; animal treatment, methods of physical and chemical immobilization, and packaging methods; resource availability; and medical information management and communication methods.

(B) Requisite Skills.

The ability to use animal immobilization, packaging, and treatment methods appropriate to the situation and provide animal transfer reports, both verbally and in ~~written format~~ writing .

10.2.2*

Perform ~~basic level~~ basic-level triage, given triage tags and AHJ protocols, so that determination between rescue and recovery modes are made, triage decisions reflect resource capabilities, severity of injuries are determined, and animal care and rescue priorities are established in accordance with local protocol.

A.10.2.2

~~Local~~ The local authority will determine who is qualified to ~~determine~~ decide if an animal should be euthanized~~, and~~ as well as who within that jurisdiction is authorized to conduct it, and by what means. ~~Rescuer~~ Rescuers ~~needs~~ need to work through the process of determining ~~if a real~~ rescue~~,~~ versus humane euthanasia and who can accomplish it in their zone of response.

(A) Requisite Knowledge.

Types and systems of triage according to AHJ protocol, resource availability, methods to determine injury severity, ways to manage resources, and prioritization requirements.

(B) Requisite Skills.

The ability to use triage materials, techniques, and resources.

10.2.3

Construct an improvised restraint device, given an available rope or accessory cord, so that the device includes a long enough standing end to ensure rescuer control and that the representative ~~victim~~ animal is able to be led to a safe area.

Global FR-70

(A) Requisite Knowledge.

~~Task specific~~Hazard-specific PPE selection and use, application of knots, animal halter pressure principles, rope or webbing material selection, and device positioning techniques on animals.

(B) Requisite Skills.

Select and use ~~task and hazard specific~~ hazard-specific PPE, tie knots, construct and rig animal halters, and evaluate correct placement.

10.2.4

Move a representative ~~victim~~ animal , in a low-angle environment, as a member of a team, given an incident action plan~~,~~ and basic animal transport equipment, so that hazards are identified, the representative ~~victim~~ animal is moved without further injury, risks to rescuers are managed, the representative ~~victim~~ animal securement is maintained, and the objective is attained.

(A) Requisite Knowledge.

Types of basic animal transport equipment, hazard identification, ~~task and hazard specific~~ hazard-specific PPE, methods to reduce and prevent further injuries from the environment and/or ~~specie specific~~ species-specific ~~, animal~~ securement methods (physical and chemical), and transport techniques.

Global FR-70

(B) Requisite Skills.

Operate transport equipment, assemble and operate ~~environment/task~~environment- or~~specific~~hazard-specific animal removal systems, and the use of transport devices.

10.2.5

Move a representative ~~victim~~ animal in a low-angle environment, as a member of a team, given animal transport equipment, litters, and animal removal systems specific to the rescue environment, so that the a representative ~~victim~~ animal is moved without further injuries, risks to rescuers are minimized from both the hazard and the representative ~~victim~~ animal , the integrity of ~~the~~ a representative ~~victim's~~ animal's securement within the transfer device is established and maintained, the means of attachment to the rope rescue system is maintained, and the ~~a~~ representative ~~victim~~ animal is removed from the hazard.

(A) Requisite Knowledge.

Types of transport equipment and removal systems, selection factors with regard to specific rescue environments, methods to reduce and prevent further injuries from the hazard and from the ~~specie specific~~ species-specific hazards, types of risks to rescuers to include the hazard as well as ~~specie specific~~ species-specific hazards, ways to establish and maintain animal securement (both physical and chemical), transport techniques, rope rigging applications and methods, and types of specialized equipment and their uses.

(B) Requisite Skills.

The ability to secure an animal to transport equipment, the ability to assemble and operate environment-specific animal removal systems, and to choose an incident-specific transport device.

10.2.6

~~Inspect and maintain~~ Maintain rescue equipment, given maintenance logs and records, tools, resources, manufacturer's guidelines, and organizational standard operating procedures, which should include keeping the large animal technical rescue cache subjected to greater than 600 lb (272 kg) loads separate from the regular cache, so that the operational status of equipment is verified and documented, components are checked for operation, deficiencies are repaired or reported as indicated by standard operating procedure, and items subject to replacement protocol are correctly disposed of and changed.

(A) Requisite Knowledge.

Functions and operations of rescue equipment, use of record-keeping systems, manufacturer and organizational care and maintenance requirements, selection and use of maintenance tools, replacement protocol and procedures, disposal methods, and organizational standard operating procedures.

(B) Requisite Skills.

The ability to identify wear and damage indicators for rescue equipment, evaluate operation readiness of equipment, complete logs and records, and select and use maintenance tools.

10.2.7*

Construct a simple, rope mechanical advantage system, given an incident, representative ~~victim~~ animal load, an anchor system, life safety rope, carabiners, pulleys, rope grab devices, and rope rescue equipment, so that the system constructed accommodates the load and reduces the force required to lift the load~~,~~ ; operational interference is factored and minimized~~,~~ ; the system is efficient~~,~~ ; a system safety check is completed~~,~~ ; and the system is connected to an anchor system and the load, with recognition a suboptimal static system safety factor (SSSF) ~~SSSF~~ might be required to accomplish the rescue.

A.10.2.7

Animal technical rescue often includes marginal SSSF. Rescues as low as 2:1 are not uncommon due to a single component in the system ~~which~~ that cannot be mitigated.

(A) Requisite Knowledge.

Determination of incident needs as related to choosing simple rope systems, the elements of efficient design for compound rope systems, knot selection, methods for reducing excessive force to system components, evaluation of incident operations as related to interference concerns and set-up, rope commands, rigging principles, system safety check procedures, and methods of evaluating system components for compromised integrity.

(B) Requisite Skills.

The ability to determine incident needs as related to choosing simple rope systems, select effective knots, calculate expected loads, evaluate incident operations as related to interference concerns and setup, perform a system safety check, and evaluate system components for compromised integrity.

10.2.8*

Construct a compound rope mechanical advantage system, given an incident, a representative ~~victim~~ animal load, an anchor system, life safety rope, carabiners, pulleys, rope grab devices, and rope rescue equipment, so that the system constructed accommodates the load and reduces the force required to lift the load~~,~~ ; operational interference is factored and minimized~~,~~ ; the system is efficient~~,~~ ; a system safety check is completed~~,~~ ; and the system is connected to an anchor system and the load, with recognition a sub optimal SSSF might be required to accomplish the rescue.

A.10.2.8

Animal technical rescue often includes marginal SSSF. Rescues as low as 2:1 are not uncommon due to a single component in the system ~~which~~ that cannot be mitigated.

(A) Requisite Knowledge.

Determination of incident needs as related to choosing compound rope systems, the elements of efficient design for compound rope systems, knot selection, methods for reducing excessive force to system components, evaluation of incident operations as related to interference concerns and set-up, rope commands, rigging principles, system safety check procedures, and methods of evaluating system components for compromised integrity.

(B) Requisite Skills.

The ability to determine incident needs as related to choosing compound rope systems, select effective knots, calculate expected loads, evaluate incident operations as related to interference concerns and set-up, perform a system safety check, and evaluate system components for compromised integrity.

10.2.9

~~Construct and operate~~ Manage a portable highpoint anchor and multiple compound rope mechanical advantage system in a high-angle environment, as a member of a team, given an incident, multiple rope rescue systems incorporating a compound rope mechanical advantage system, a representative ~~victim~~ animal load to be moved, and a specified minimum travel distance for the load, so that a system safety check is performed; a reset is accomplished, and the movement is controlled; the load can be held in place when needed; operating methods do not stress the system to the point of failure; operational commands are clearly communicated; and potential problems are identified, communicated, and managed.

(A) Requisite Knowledge.

Methods to determine incident needs, types of interference concerns, rope commands, safe operating limits of the portable highpoint anchor, system safety check protocol, procedures for continued evaluation of system components for compromised integrity, common personnel assignments and duties, common ~~and critical~~ commands, methods for controlling a load's movement, system stress issues during operations, animal stress issues during movement, and management methods for common problems.

(B) Requisite Skills.

The ability to determine incident needs, evaluate incident operations as related to interference concerns, complete a system safety check, continually evaluate system components for compromised integrity, direct personnel effectively, operate multiple mechanical advantage systems in balance, communicate commands, analyze system efficiency, manage load movement, and identify concerns.

10.2.10

Move a representative ~~victim~~ animal load in a high-angle environment, as a member of a team, given animal transport equipment, litters, other specialized equipment, and animal removal systems specific to the rescue environment, so that the representative ~~victim~~ animal is moved without further injury, risks to rescuers are minimized from both the hazard and the ~~a~~ representative ~~victim~~ animal , the integrity of the representative ~~victim's~~ animal's securement within the transfer device is established and maintained, the means of attachment to the rescue system is maintained, and the representative ~~victim~~ animal is removed from the hazard.

(A) Requisite Knowledge.

Types of transport equipment and removal systems, selection factors with regard to specific rescue environments, methods to reduce and prevent further injuries from the hazard and from the ~~specie specific hazards~~ species-specific , types of risks to rescuers to include the hazard as well as ~~specie specific~~ species-specific hazards, ways to establish and maintain animal securement (~~specie specific~~ species-specific), transport techniques, rope rigging applications and methods, and types of specialized equipment and their uses.

(B) Requisite Skills.

The ability to secure an animal to transport equipment, assemble and operate environment-specific animal removal systems, and choose an incident-specific transport device.

10.2.11

~~Release~~ Develop a plan to release a representative ~~victim~~ animal from soil entrapment, as a member of a team, given an incident, a representative ~~victim~~ animal load, personal protective equipment, a mud rescue tool kit, and specialized equipment, so that hazards to rescue personnel and a representative ~~victim~~ animal are minimized~~,~~ ; considerations are given to animal hypothermia, dehydration, and other injuries~~,~~ ; techniques are used to enhance animal survivability~~,~~ ; tasks are accomplished within projected time frames.

(A) Requisite Knowledge.

Identification, utilization, and required care of personal equipment; general hazards associated with mud rescue to both the animal and the rescuers to include adhesive forces; selection and application of rescue tools and resources; risk/benefit assessment techniques for extrication methods; and time restraints.

(B) Requisite Skills.

The ability to select, use, and care for personal protective equipment, operate rescue tools and stabilization systems, and complete risk/benefit assessments for selected methods of rescue and time restraints.

10.2.12

Develop a plan for an animal transport vehicle incident, given an incident, agency guidelines, and planning forms, so that size-up is conducted and continued throughout the incident; a standard approach is used during training and operational scenarios; hazards are identified; isolation methods and scene security measures are considered; fire suppression and safety measures are identified; vehicle stabilization needs are evaluated; and resource needs, including veterinary personnel, are identified.

(A) Requisite Knowledge.

Operational protocols, specific planning forms, types of vehicles common to the AHJ boundaries, vehicle hazards, animal hazards to the rescuers, incident support operations and resources, vehicle anatomy, and fire suppression and safety measures.

(B) Requisite Skills.

The ability to apply operational protocols, select specific planning forms based on the types of vehicles, identify and evaluate various types of vehicles within the AHJ boundaries, request support and resources, identify vehicle anatomy, and determine the required fire suppression and safety measures.

10.2.13

Remove a packaged representative ~~victim~~ animal to a designated safe area, as a member of a team, given an animal transfer device, a designated egress route, and personal protective equipment, so that effort is coordinated~~;~~ , the designated egress routes are used~~;~~ , a representative ~~victim~~ animal is removed without compromising animal packaging~~;~~ , injury is prevented~~;~~ , and stabilization is maintained.

(A) Requisite Knowledge.

Animal handling techniques; incident management system; types of immobilization, packaging, appropriate animal attachment points, and transfer devices; types of immobilization techniques; and uses of immobilization devices.

(B) Requisite Skills.

Use of immobilization, packaging, and transfer devices for specific situations; immobilization techniques~~;~~ , ~~to include~~ including chemical with the ~~assistant~~ assistance of AHJ designated personnel~~,~~ ; application of medical protocols and safety features to immobilize, package, and transfer; and all techniques for lifting or moving the animal.

10.2.14*

Terminate an incident, given personal protective equipment specific to the incident, isolation barriers, and tool kit, so that rescuers and bystanders are protected and accounted for during termination operations; the party responsible is notified of any modification or damage created during the operational period; documentation of loss or material use is accounted for~~,~~ ; scene documentation is performed~~,~~ ; scene control is transferred to a responsible party; potential or existing hazards are communicated to that responsible party; debriefing and postincident analysis and critique are considered~~,~~ ; and command is terminated.

A.10.2.14

The committee recognizes that technical rescue incidents pose unique challenges in terms of safely concluding or demobilizing an event. The sequence and manner in which resources are transitioned out of an event require careful analysis to ensure that scene and rescuer safety are not compromised. Risk management strategies can include both active and nonintervention strategies, such as not removing (i.e., abandoning in place) equipment, denying entry to a site, and so forth. A large number of catastrophic events have occurred during the end or termination stages of such events when personnel are fatigued and resources are in a state of transition from active event participation to a return to service.

(A) Requisite Knowledge.

PPE characteristics, hazard and risk identification, isolation techniques, statutory requirements identifying responsible parties, accountability system use, reporting methods, postincident analysis techniques.

Global FR-70

(B) Requisite Skills.

Selection and use of ~~task and hazard specific~~hazard-specific PPE, ~~decontamination,~~ use of barrier protection techniques, data collection and record keeping/reporting protocols, postincident analysis activities.

Submitter Information Verification

Committee:

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Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the

awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document. The committee has also made these changes to reflect use of current terminology and proper JPR format.

Response Message: FR-60-NFPA 1006-2018

First Revision No. 61-NFPA 1006-2018 [Section No. 9.3]

10.3 Technician Level.

The job performance requirements defined in ~~Section~~ Sections 10.2 and ~~9.3.1 through 9.3.5~~ 10.3 shall be met prior to technician-level qualification in animal technical rescue.

10.3.1

Move a representative ~~victim~~ animal load in an extended duration high-angle environment, as a member of a team, given animal transport equipment, litters, and animal removal systems specific to the rescue environment, so that the ~~a~~ representative ~~victim~~ animal is moved without further injuries, risks to rescuers are minimized from both the hazard and the ~~a~~ representative ~~victim~~ animal , the integrity of the ~~a~~ representative ~~victim's~~ animal's securement within the transfer device is established and maintained, the means of attachment to the rope rescue system is maintained, and the representative ~~victim~~ animal is removed from the hazard.

(A) Requisite Knowledge.

Types of transport equipment and removal systems~~,~~ ; selection factors with regard to specific rescue environments~~,~~ ; methods to reduce and prevent further injuries from the hazard and from the ~~specie specific~~ species-specific hazards~~,~~ ; types of risks to rescuers~~,~~ ~~to include~~ including the hazard as well as ~~specie specific~~ species-specific hazards~~,~~ ; ways to establish and maintain animal securement (both physical and chemical)~~,~~ ; transport techniques~~,~~ ; rope rigging applications and methods~~,~~ ; and types of specialized equipment and their uses.

(B) Requisite Skills.

The ability to secure an animal to transport equipment, ~~ability to~~ assemble and operate environment-specific animal removal systems, and ~~to~~ choose an incident-specific transport device.

~~**9.3.2**~~

~~Direct a team in the removal of a representative victim, in a high-angle environmentusing a means of transporting the representative victim to the ground or other safe area, given an incident, a representative victim load, a high-angle rope system when raising or lowering animals, an assignment, life safety harnesses, litters, bridles, and specialized equipment necessary for the environment, so that risks to animals and rescuers are minimized, injury to the animal is minimized, the means of attachment to the rope rescue system is maintained, and a representative victim is brought to a safe area for transfer to appropriate authorities.~~

~~**(A)** Requisite Knowledge.~~

~~Techniques and systems for safe transfer of animals from an existing stable platform, various techniques for handling and securing animals.~~

~~**(B)** Requisite Skills.~~

~~Select and construct systems for securing animals from a stable platform, manage operation of the selected system, determine condition of the animal, reduce hazards for rescuers and animals, and determine specialized equipment needs for animal movement.~~

10.3.2

Complete an assignment while suspended from a rope rescue system in a high-angle environment, given ~~an independent rescuer rope rescue system~~ a team , a representative ~~victim and an independent animal rope rescue system,~~ animal when raising or lowering animals ~~in excess of 300 lbs (136 kgs)~~ , an assignment, life safety harnesses, litters, bridles, and specialized equipment necessary for the environment, so that risks to animals and rescuers are minimized~~;~~ , the means of attachment to the rope rescue system is secure~~;~~ , selected specialized equipment facilitates efficient rescuer movement~~;~~ , and specialized equipment does not unduly increase risks to rescuers or animals.

(A) Requisite Knowledge.

Task-specific selection criteria for life safety harnesses, personal protective equipment selection criteria, variations in litter design and intended purpose, rigging principles, techniques and practices for high-angle environments, and common hazards posed by improper maneuvering and harnessing.

(B) Requisite Skills.

The ability to select and use rescuer harness and personal protective equipment for common environments, attach the life safety harness to the rope rescue system, maneuver around existing environment and system-specific obstacles, perform work while suspended from the rope rescue system, and evaluate surroundings for potential hazards.

10.3.3

~~Direct a team in the operation of a~~ Operate a rope system as a member of a team to move a suspended representative ~~victim~~ animal load along a horizontal path, given rescue personnel, an established system, a target for the load, a load to be moved, and personal protective equipment, so that the movement is controlled; the load is held in place when needed; the weight of the rescuer and a representative ~~victim~~ animal , or a representative ~~victim~~ animal being moved alone, is under 600 lb~~s~~ (272 kg~~s~~); operating methods do not stress the system to the point of failure; personnel assignments are made; tasks are communicated; and potential problems are identified, communicated, and managed.

(A) Requisite Knowledge.

Determination of incident needs as related to the operation of a system, capabilities and limitations of various systems, incident site evaluation as related to interference concerns and obstacle negotiation, system safety check protocol, procedures to evaluate system components for compromised integrity, common personnel assignments and duties, common ~~and critical operational~~ commands, common problems and ways to minimize or manage those problems, and ways to increase the efficiency of load movement.

(B) Requisite Skills.

The ability to determine incident needs, complete a system safety check, evaluate system components for compromised integrity, select personnel, communicate with personnel effectively, manage movement of the load, and evaluate for any potential problems.

10.3.4*

Conduct an animal helicopter rescue, as a member of a team, given a representative helicopter system, size-up information, and a representative ~~victim~~ animal needing rescue, so that initial size-up information is utilized, an incident management system is incorporated, existing and potential conditions are included, specialized resource needs are identified, work parameters are determined, associated hazards are identified, incident objectives are established, and scene security and safety measures are addressed.

(A) Requisite Knowledge.

Incident-specific size-up information~~,~~ ; incident management system components~~,~~ ; dynamics of incident conditions and peripheral areas~~,~~ ; incident-specific resources, including specific helicopter selection~~,~~ and animal chemical restraint assistance~~,~~ ; scene security and safety requirements~~,~~ ; use of specialized animal technical rescue sling systems for extended duration lifts~~,~~ ; and hazards to rescuers.

(B) Requisite Skills.

The ability to utilize size-up information, implement an incident management system, monitor changing conditions specific to the incident, identify potential specialized resources, use ~~of~~ specialized animal technical rescue sling systems for extended duration lifts, identify specific incident security and safety requirements.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 14:35:48 EDT 2018

Committee Statement

Committee Statement:	The committee has made these changes to reflect use of current terminology and accepted practice, as well as to reduce confusion.
Response Message:	FR-61-NFPA 1006-2018

First Revision No. 62-NFPA 1006-2018 [Section No. 10.1]

11.1 Awareness Level.

~~The job performance requirements defined in 10.1.1 through 10.1.5 shall be met prior to awareness-level qualification in wilderness search and rescue.~~

11.1.1

Prior to qualification at the awareness level in wilderness search and rescue, the individual shall meet the requirements in 1.5 (1) as defined by the AHJ in addition to the job performance requirements defined in Section 11.1 .

11.1.2

Identify the environment, type of terrain, and associated hazards involved in a wilderness incident given the environment, terrain, and hazards involved in the incident so that the personnel and equipment match the environment and terrain.

(A) Requisite Knowledge.

Distinguish between types of environment such as wilderness *(see 3.3.220)* as it applies in the area of the AHJ, forest, alpine, altitude affected, desert, swamp, jungle, subterranean, and others found in the area of the AHJ; types of terrain such as high- or low-angle, snow-covered, water-covered, dense vegetation, and others found in the area of the AHJ; and associated hazards such as disorientation, darkness, weather extremes, hazardous vegetation and wildlife, avalanche, and others found in the area of the AHJ.

(B) Requisite Skills.

The ability to describe the ~~environmental~~ environment , terrain, and hazard types found in the AHJ's jurisdiction.

~~**10.1.2**~~

~~Recognize the need for technical search and rescue resources at an incident, given AHJ guidelines, an operations- or technician-level incident, so that the need for additional resources is identified, the response system is initiated, the scene is secured and rendered safe until additional resources arrive, and awareness-level personnel are incorporated into the operational plan.~~

~~**(A)** Requisite Knowledge.~~

~~Operational protocols, specific planning forms, types of incidents common to the AHJ, hazards, incident support operations and resources, and safety measures.~~

~~**(B)** Requisite Skills.~~

~~The ability to apply operational protocols, select specific planning forms based on the types of incidents, collect and record necessary information, identify and evaluate various types of hazards within the AHJ, request support and resources, and determine the required safety measures.~~

~~**10.1.3**~~

~~Establish scene hazard zones, given an incident, scene barriers, incident location, and incident information, so that hazard zones are designated, zone perimeters are consistent with incident requirements, perimeter markings can be recognized and understood by others, zone boundaries are communicated to Incident Command, and only authorized personnel are allowed access to the scene.~~

~~**(A)** Requisite Knowledge.~~

~~Zone or area control flow and concepts, types of control devices and tools, types of existing and potential hazards, methods of hazard mitigation, organizational standard operating procedure, and staffing requirements.~~

~~**(B)** Requisite Skills.~~

~~The ability to apply crowd control concepts, position zone control devices, identify and mitigate existing or potential hazards, and personal safety techniques.~~

~~**10.1.4**~~

~~Identify and support an operations- or technician-level incident, given an incident, an assignment, incident action plan, and resources from the tool kit, so that the assignment is carried out, progress is reported to command, environmental concerns are managed, personnel rehabilitation is facilitated, and the incident action plan is supported.~~

~~**(A)** Requisite Knowledge.~~

~~Operational protocols; hazard recognition; initial incident management; resource selection and use while recognizing the limitations of conventional resources; scene support requirements including lighting, food, water, and supplies; and monitoring access into the environment.~~

~~**(B)** Requisite Skills.~~

~~The ability to apply operational protocols, function within an incident management system (IMS), follow an incident action plan, and report task progress status to supervisor or Incident Command.~~

~~**10.1.5**~~

~~Size up a given incident; obtain background information and applicable reference materials so that the operational mode is defined; determine resource availability and response time; determine potential types of searches and rescues; identify the number of subjects; establish the last reported location of all subjects; identify, interview, and retain for further information witnesses and reporting parties; assess resource needs; identify search parameters; and obtain information required to develop an incident action plan.~~

~~**(A)** Requisite Knowledge.~~

~~Types of reference materials and their uses, risk/benefit assessment, availability and capability of the resources, elements of an action plan and related information, relationship of size-up to the IMS, and information-gathering techniques and how that information is used in the size-up process.~~

~~**(B)** Requisite Skills.~~

~~The ability to read specific search and rescue reference materials, interview and gather information, relay information, manage witnesses, and use information sources.~~

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 14:55:14 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-62-NFPA 1006-2018

First Revision No. 63-NFPA 1006-2018 [Section No. 10.2]

Global FR-12

11.2 Operations Level.

The job performance requirements defined in ~~Section~~ Sections ~~5.2 , Section~~ 11.1~~,~~ and ~~10.2.1 through 10.2.12~~ 11.2 shall be met prior to operations-level qualification in wilderness search and rescue.

11.2.1

Identify ~~specific environments~~ environmental and incident conditions ~~in their~~ , given the response area ~~in which~~ as defined by the AHJ, so that operations-level search and rescue ~~incidents~~ functions and the need for additional resources are ~~permitted as well as exceeded~~ established .

(A) Requisite Knowledge.

Environments, hazards, and AHJ procedures that will assist in determining when operations-level search and rescue operations are permitted or exceeded.

(B) Requisite Skills.

The ability to apply AHJ procedures and specific environments into decisions to conduct or not to conduct operations-level search and rescue and to request additional specialized resources.

11.2.2

~~Preplan and size-up~~ Implement a wilderness search and rescue preplan, given existing and potential conditions ~~where~~ , so that wilderness search and rescue ~~will be~~ is performed.

(A) Requisite Knowledge.

Where to acquire in advance ~~an incident-by-incident~~ weather history for a specific incident site; weather forecast; reports on winds, avalanches, tides, areas, trails, climbing routes; topographical maps; ~~and~~ other AHJ-specific tactical information.~~;~~ ~~Perform~~ ICS-consistent size-up; size-up of environment, terrain, weather, and other actual or potential hazards; ongoing search versus rescue versus recovery decision making~~;~~, given checklists and resources to help determine the general and specialized ~~resources~~needs, personnel, and equipment necessary ~~to perform~~for each.

(B) Requisite Skills.

The ability to describe or ~~perform how to acquire~~obtain weather history, forecasts, and maps~~. The ability to~~; apply the size-up components together, given checklists, to ~~form plans~~plans for~~,~~ and ~~execution of,~~execute the search and rescue.

Detail FR-222

11.2.3

Identify ~~how certain~~ factors ~~affect~~ affecting the ~~preparing, choosing, and using~~ preparation, selection, and use of PPE and equipment ~~in~~ given the AHJ's wilderness ~~area~~ environment, PPE, and equipment; so that rescuer safety is maintained and the hazards are mitigated .

(A) Requisite Knowledge.

Describe how ~~the following~~ factors ~~affect the effective and safe operation of a training or incident, given a variety of such conditions in the AHJ area:~~ such as temperature, weather, terrain, flora, fauna, altitude, travel time, patient care, duration of the incident, logistics, communications, navigation, and management needs, affect training or an incident in a wilderness environment.

- ~~Temperature~~
- ~~Weather~~
- ~~Terrain~~
- ~~Flora and fauna~~
- ~~Altitude~~
- ~~Travel time~~
- ~~Patient care~~
- ~~Duration of incident~~
- ~~Logistics~~
- ~~Communications~~
- ~~Navigation~~
- ~~Management needs~~

(B) Requisite Skills.

Ability to apply these factors in the selection of PPE and equipment, given classroom-type discussions, in-field training, and incidents.

11.2.4

~~Request and interface~~ Interface with wilderness search and rescue resources, given an available wilderness search and rescue resource list, so that the resources are requested and employed .

(A) Requisite Knowledge.

How to request various internal and external resources related to wilderness search and rescue and other related emergency services; recognizing other interface agencies' equipment.

(B) Requisite Skills.

Ability to apply the request for resources and to interface ~~effectively~~ with other responding wilderness search and rescue and emergency response resources~~. Ability~~, ability to recognize interface agencies' equipment.

11.2.5

Interview reporting ~~party(ies)~~ parties, given interview recording forms, so that available information in regard to the potential ~~locationof~~ location of the subject and other factors affecting the incident are documented.

(A) Requisite Knowledge.

Interviewing techniques, interviewing forms, subject identity and description, and other information that will assist the responding resources.

(B) Requisite Skills.

The ability to apply interviewing techniques and documentation.

11.2.6

Collect~~, interpret, and document~~ evidence to determine subject's potential location, given various items of evidence, collection and documentation equipment, and wilderness tool kit, so that the scene (i.e., area) is searched and evidence is protected, documented, cataloged, and collected.

(A) Requisite Knowledge.

How to maintain the chain of evidence, scene protection, search procedures, evidence protection methods, documentation and catalog methods, and evidence collection procedures.

(B) Requisite Skills.

The ability to protect the scene, operate photography equipment, utilize standard evidence collection tools, and implement procedures to collect, document, and catalog evidence.

11.2.7*

Prepare to work in a wilderness environment for an ~~8-hour~~ assigned operational period, given personal support equipment, so that the rescuer can be self-sustaining in the wilderness environment.

A.11.2.7

It is the intent of the committee that the technical rescuer have enough survival equipment, food, water, and other necessary materials to operate independently for 3 days in the wilderness environment. Wilderness skills and knowledge include the ability to construct improvised shelter, prepare supplied food, purify drinking water, utilize established primary and emergency communications mediums, select and use layered clothing, and apply land navigation resources.

(A) Requisite Knowledge.

How to prepare for personal ~~(self)~~ first aid needs, anticipated environment, anticipated weather conditions, hydration and nutrition requirements for mission duration, personal safety, medical and comfort needs, night operations, and wilderness navigation.

(B) Requisite Skills.

The ability to prepare for wilderness search and rescue incidents by assembling, packing, and carrying the following supplies: personal medical supplies~~,~~; clothing for the environment~~,~~; hydration and nutrition~~,~~; lighting equipment~~,~~; navigation tools~~,~~; general marking and documentation tools~~,~~; emergency shelter or bivouac~~,~~; and communications, including emergency backup~~,~~; and by operating effectively for 8 hours in such an environment in the AHJ area.

11.2.8*

Navigate ~~to~~ in a wilderness environment, given a location with directions from reporting parties, ~~on nontechnical~~ nontechnical terrain, ~~given~~ and maps and trail guides, so that ~~local recreational areas are known~~ the rescuer arrives at the destination to locate the subject .

A.11.2.8

The National Search and Rescue Committee recommends using the georeferencing (coordinate) systems as shown in Table A.11.2.8.

Table A.11.2.8 National SAR Committee's Georeferencing Matrix

Georeference ~~system user~~System User	U.S. National Grid (USNG)	Latitude/longitude DD-MM.mm[1]	GARS[2]
Land SAR responder[3]	Primary	Secondary	N/A
Aeronautical SAR responders[4]	Secondary	Primary	As needed
Air space deconfliction[5]	N/A	Primary	N/A
Land SAR responder/ aeronautical SAR responder interface[6]	Primary	Secondary	N/A
Incident Command:			
Air SAR coordination	Secondary	Primary	N/A
Land SAR coordination	Primary	Secondary	N/A
Area organization and accountability[7]	Secondary	Tertiary	Primary

[1] During SAR operations (and to avoid confusion), latitude and longitude should be in one standard format: DD-MM.mm. If required, use up to two digits to the right of the decimal. If required, allow three digits in the degrees field for longitude (i.e., DDD-MM.mm). Do not use leading zeros to the left of the decimal for degrees or minutes that require fewer than the maximum number of possible digits to express their value. The minimum number of digits is always one, even if it is a zero. (Example: Recommended: 9-0.3N 4-2.45W; Not Recommended: 09-00.300N 004-02.45W).

[2] GARS: Global Area Reference System.

[3] Land SAR responders use USNG; however, a good familiarity with latitude and longitude is necessary to ensure effective interface between land and aeronautical SAR responders (note: Land SAR includes SAR on flooded terrain).

[4] Aeronautical SAR responders will use latitude and longitude for SAR response. However, aeronautical SAR responders that work directly with land SAR responders should understand the USNG system for effective land SAR/aeronautical SAR interface.

[5] Air space deconfliction will only be implemented and managed using latitude and longitude.

[6] Aeronautical SAR responders working with land SAR responders have the primary responsibility of coordinating SAR using USNG. However, both groups must become familiar with both georeference systems.

[7] Describes the requirement for providing situational awareness of SAR operations geographically to federal, military, state, local, and tribal leadership, and provides for quick reference to send SAR resources closest to incident.

(A) Requisite Knowledge.

Location of response area trails and recreational areas with history of search and rescue incidents.

(B) Requisite Skills.

Ability to read trail maps and trail guides, describe access to trail heads, and navigate on established trails to locate subject.

11.2.9

Establish the need for specialized resources in wilderness search and rescue operations, given aircraft, watercraft, or specialized vehicles and trained operators, ~~given~~ as well as operational protocols and specialized vehicle resources, so that resources are allocated and utilized during the operation to locate and/or remove the subject.

(A) Requisite Knowledge.

Available specialized resources and their capabilities, landing zone requirements, risk factors associated with specialized resource operations, and local protocols and procedures.

(B) Requisite Skills.

The ability to establish and control landing zones and helispots, assess fire protection needs as they pertain to landing zones and helispots, and identify hazards associated with specialized resources.

11.2.10*

Manage a subject in a wilderness environment, given basic life support equipment and a wilderness tool kit, so that the basic medical care of the subject is managed during transport and the potential for further injury is minimized.

A.11.2.10

It is the intent of the committee that a person working in a wilderness environment will be able to manage the long-term medical care of a victim, with *long-term* meaning the time it takes to remove the victim from the wilderness environment and deliver him or her to a medical facility (possibly ranging from 1 hour to 5 days or longer, depending on the environment). The wilderness technician should have at least a thorough knowledge of basic life support~~,~~ and ~~advanced life support training is recommended so that IV fluids and other~~recognize the need for advanced life support ~~measures can be utilized~~.

(A) Requisite Knowledge.

Medical care in a wilderness environment.

(B) Requisite Skills.

The ability to provide medical care in a wilderness environment.

11.2.11*

Move a subject in a wilderness environment a minimum of 0.25 mi (0.4 km), given subject transport equipment, litters, other specialized equipment, and subject removal systems specific to the search and rescue environment, so that the subject is moved without further injuries, risks to rescuers are minimized, the integrity of the subject's packaging within the transfer device is established and maintained, and the subject is removed from the hazard.

(A) Requisite Knowledge.

Types of transport equipment and removal systems; selection factors with regard to specific search and rescue environments~~,~~; methods to reduce, treat, and prevent further medical, nutritional, hydration, waste, and environmental challenges and injuries; types of risks to rescuers; ways to establish and maintain subject packaging transport techniques; and types of specialized equipment and their uses.

(B) Requisite Skills.

The ability to address the subject's medical, nutritional, hydration, waste, and environmental challenges; secure a subject to transport equipment, assemble and operate environment-specific subject removal systems; and choose an incident-specific transport device.

11.2.12

Terminate an incident, given PPE specific to the ~~incident, isolation barriers, and tool kit~~ environment , so that rescuers and bystanders are protected and accounted for during termination operations; the ~~party responsible~~ AHJ is notified of any modification or damage created during the operational period; ~~documentation of loss~~ damaged or ~~material use~~ lost equipment is ~~accounted for,~~ assessed and documented; scene documentation is performed~~,~~ ; scene control is transferred to a responsible party; remaining potential or existing hazards are communicated to that responsible party; debriefing and postincident analysis and critique are considered; and command is terminated.

~~**A.10.2.11**~~

~~The committee recognizes that due to incident complexity, technician-level skills might be required to terminate some incidents. Examples would be complex stabilization issues, multiple concurrent hazards, industrial processes involved, presence of fatalities or multiple injuries, or chemical releases.~~

(A) Requisite Knowledge.

PPE characteristics, environment-specific hazard and risk identification~~, isolation techniques~~, statutory requirements identifying responsible parties, accountability system use, reporting methods, and postincident analysis techniques.

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(B) Requisite Skills.

The ability to select and use ~~task and~~ hazard-specific PPE, decontamination of PPE, use ~~of~~ barrier protection techniques, administer data collection and recordkeeping/reporting protocols, and conduct postincident analysis activities.

11.2.13

~~Travel~~ Traverse through a wilderness environment by foot, given an off-road ~~on a~~ trail or ~~on~~ nontechnical terrain typical of the response area of the AHJ, so that the rescuer ~~maintains personal safety and has~~ demonstrates the ability to reach the subject and maintain personal safety.

(A) Requisite Knowledge.

~~Selection~~ Characteristics of PPE; travel footwear and ~~travel~~ equipment such as hiking boots, snowshoes, and poles as determined by the terrain.

(B) Requisite Skills.

The ability to select, don, and use footwear and travel equipment on a trail or on nontechnical terrain typical of the AHJ's ~~wilderness areas~~ environment.

Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 15:05:19 EDT 2018

Committee Statement

Committee Statement: The committee has made these changes to reflect current terminology and accepted practice, as well as to ensure that all sub sections of text were written in JPR format. Also there were several sections with annex material but did not have the asterisk's in the main body of the document, so they were added where needed.

Response Message: FR-63-NFPA 1006-2018

First Revision No. 64-NFPA 1006-2018 [Section No. 10.3 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ 5.2 ~~, Section~~ Sections 11.2~~,~~ and ~~10.3.1 through 10.3.11~~ 11.3 shall be met prior to technician-level qualification in wilderness search and rescue.

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 25 10:22:14 EDT 2018

Committee Statement

Committee Statement: The committee has made this change in order to reduce confusion.

Response Message: FR-64-NFPA 1006-2018

First Revision No. 65-NFPA 1006-2018 [Section No. 10.3.1 [Excluding any Sub-Sections]]

Identify environment- and incident- specific ~~environments and conditions in their area in which~~ conditions, given the response area of the AHJ, so that the technician-level search and rescue ~~incidents are permitted as well as exceeded~~ functions are identified and the need for additional resources is established .

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 25 11:01:41 EDT 2018

Committee Statement

Committee Statement: The committee had made these changes in order to comply with the requirements for a JPR.

Response Message: FR-65-NFPA 1006-2018

First Revision No. 67-NFPA 1006-2018 [Sections 10.3.4.1, 10.3.4.2]

(A) Requisite Knowledge.

Water filters and purifiers, collection methods, and potential water sources.

(B) Requisite Skills.

The ability to use water filters and purifiers, collect water, and identify water sources.

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 25 11:10:09 EDT 2018

Committee Statement

Committee Statement: These changes were editorial in nature.

Response Message: FR-67-NFPA 1006-2018

First Revision No. 68-NFPA 1006-2018 [Section No. 10.3.6]

11.3.5

Develop a search plan given standard search tactics, ~~the lost person~~ lost-person profile, ~~lost person~~ lost-person behavior statistics, reporting party interviews, and available resources, and revise the search plan based on clues identified by search teams, so that resources can be deployed and managed, and the plan continually updated .

(A) Requisite Knowledge.

Search tactics, ~~developing~~ development of ~~a~~ lost-person ~~profile~~ profiles , ~~lost person~~ lost-person ~~behavior~~ behaviors , ~~interviewing~~ reporting parties interviewed , and ~~revising the~~ revised search ~~plan~~ plans given located clues and areas searched .

(B) Requisite Skills.

The ability to develop an initial search plan after interviewing a reporting party, develop a ~~lost person~~ lost-person profile, and update the search plan ~~given~~ to include search areas covered and clues located by a field team.

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 25 11:12:20 EDT 2018

Committee Statement

Committee Statement: The committee made these changes to ensure that certain aspects of the plan were included in the technician level qualification as well as to adhere to correct JPR development.

Response Message: FR-68-NFPA 1006-2018

First Revision No. 213-NFPA 1006-2018 [Section No. 10.3.8 [Excluding any Sub-Sections]]

Manage ~~and direct~~ a team at a wilderness search and rescue incident, given search and rescue personnel, capabilities and limitations of search and rescue members, and incident and site information, so that an IMS is established, direction is given, needed support resources are identified, the incident action plan is communicated, tasks are communicated, resources are allocated, the incident is stabilized, personnel assignments are made, potential problems are identified and managed, and accountability is provided.

Submitter Information Verification

Committee:

Submittal Date: Thu Aug 02 12:29:59 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper JPR development.

Response Message: FR-213-NFPA 1006-2018

First Revision No. 71-NFPA 1006-2018 [Section No. 11.1 [Excluding any Sub-Sections]]

~~The job performance requirements defined in~~ 11.1.1 ~~through~~ 11.1.5 ~~shall be met prior to awareness-level qualification in trench rescue.~~ Prior to qualification at the awareness level in trench rescue, the individual shall meet the requirements in 1.5 (1) as defined by the AHJ in addition to the job performance requirements defined in Section 12.1 .

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 25 11:58:05 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-71-NFPA 1006-2018

First Revision No. 72-NFPA 1006-2018 [Sections 11.1.1, 11.1.2, 11.1.3, 11.1.4, 11.1.5]

~~11.1.1~~

~~Identify the need for trench and excavation collapse rescue, given a specific type of collapse incident, so that resource needs are identified and the emergency response system for trench and excavation collapse is initiated.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Equipment organization and tracking method, recognition the hazards associated with the weight of soil and its entrapping characteristics, resource capabilities, procedures for activation of emergency response for collapse incidents.~~

~~(B)~~ ~~Requisite Skills.~~

~~Ability to use communication equipment, track resources and communicate needs.~~

~~11.1.2*~~

~~Conduct a size-up of a collapsed trench, given an incident and background information and applicable reference material, so that the size-up is conducted within the scope of the incident management system; the existing and potential conditions are evaluated within the trench and the rescue area; general hazards are identified; a witness or "competent person" is secured; the probability of victim existence, number, condition, and location is determined; potential for rapid, nonentry rescues or victim self-rescue is recognized; needed personnel, supply, and equipment resources are evaluated; and utility involvement and location are determined.~~ ~~*(See Annex H .)*~~

~~A.11.1.2~~

~~Personnel operating at awareness level need to be able to recognize hazardous situations and rescue problems that are beyond their capabilities. In these situations, awareness-level responders need to know where and how to request operations- or technician-level resources to manage difficult trench collapse rescue events. See Annex H for a full list of hazards and a better understanding of situations that can require an operations- or technician-level response.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Methods to distinguish soil types, collapse mechanics, and other contributing factors such as severe environmental conditions and other general hazards; need to immediately secure "competent person" or witness; signs and evidence of victim involvement, number, and location; jurisdictional and community resource lists and agreements; effects and hazards of collapse and rescue efforts on utilities at the incident site; personnel training level and availability; risk/benefit analysis; protocols; incident management system; and all applicable regulations, laws, and standards.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to measure dimensions of trench, categorize soil, identify type and degree of collapse, and determine severe environmental conditions with implications for secondary collapse and victim survivability; demonstrate interview techniques; implement protocols and resource acquisition agreements; implement public works utility notification, response, and location procedures; perform a risk/benefit analysis for determining self-rescue, rescue, or recovery mode; implement an incident management system for span of control; and apply governing regulations, laws, and standards.~~

~~11.1.3*~~

~~Implement a trench emergency action plan, given size-up information and a trench incident, so that initial size-up information is utilized; prebriefing is given to rescuers; documentation is ongoing; the collapse zone is established; a risk/benefit analysis is conducted; rapid, nonentry rescues or victim self-rescues are performed; the rescue area and general area are made safe; strategy and tactics are confirmed and initiated for existing and potential conditions; rapid intervention team and operational tasks are assigned; other hazards are mitigated; rescue resources are staged; and a protective system is being utilized.~~

~~A.11.1.3~~

A prebriefing should include, but is not limited to, information regarding the following:

- Tactical assignments with explicit instructions
- General hazards and safety instructions
- Communications protocols, procedures, and details
- Anticipated environmental concerns
- Time frames for operations
- Emergency procedures
- Specific equipment needs
- Debriefing procedures
- Anticipated logistical needs

Documentation for confined space entry operations, as a minimum, should include the following:

- Development of some type of representation of incident management system command structure
- Time of incident
- Total time of operation
- Environmental conditions
- Location of victim
- Creation of a tactical checklist that includes entry times, exit times, personal accountability reports, atmospheric readings, rehabilitation information, injuries sustained, and incident number

An example of a tactical checklist is shown in Figure A.11.1.3 .

Figure A.11.1.3 Sample Trench Rescue Tactical Worksheet.

TRENCH RESCUE TACTICAL WORKSHEET

Location of incident: ..... Date: .....
Time: .....

SITE ASSESSMENT/INCIDENT INFORMATION

❑ Knowledgeable contact person: .....
❑ Cut sheet ❑ Tabulated data ❑ Other documentation
❑ # and condition of victims: Total burial ..... Partial burial ..... Not trapped .....
❑ Determine mode of operation: ❑ Rescue mode ❑ Recovery mode
❑ Size and area of collapse: Width ..... Length ..... Depth .....
❑ Soil type: A B C Typing method used: ❑ Visual ❑ Manual ❑ Mechanical device

HAZARD ASSESSMENT

❑ Utilities
❑ Secondary collapse
❑ Water in trench
❑ Atmospheric hazards
❑ Ground-level hazards
❑ Tripping hazards
❑ Surface encumbrances
❑ Building instability
❑ Heavy equipment
❑ Blasting
❑ Road traffic
❑ Railroads
❑ Other vibration sources

RESOURCE ASSESSMENT/REQUEST

❑ Trench rescue staffing
❑ Trench rescue equipment
❑ EMS
❑ Police department
❑ Hazardous materials resources
❑ Utility companies
❑ Heavy equipment
❑ Other resources

HAZARD CONTROL

❑ Secure perimeter
❑ Establish an entry control point
❑ Stage incoming apparatus
❑ Atmospheric monitoring
❑ Ventilation
❑ Control vibrations
❑ Remove tripping hazards
❑ Control trench lip (ground pads)
❑ Install ladder in trench
❑ Control utility leaks
❑ Support utilities
❑ Move spoil pile as needed
❑ Install shoring

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TRENCH RESCUE TACTICAL WORKSHEET *(continued)*

MANAGEMENT & COORDINATION

- ❑ Scene control
- ❑ Hazard control
- ❑ Team briefing
- ❑ Establish tool/equipment area
- ❑ Assign panel and shore install teams
- ❑ EMS care from outside of trench
- ❑ Plan extrication
- ❑ Prepare patient packaging materials
- ❑ Prepare patient removal rigging
- ❑ EMS interface with patient after trench is shored
- ❑ Removal and transport of patient
- ❑ Rehab of personnel
- ❑ Termination operations
- ❑ Documentation

FUNCTIONS

- ❑ Incident Commander
- ❑ Rescue Group Supervisor
- ❑ Safety
- ❑ Logistics
- ❑ Panel Installation Crew
- ❑ Shore Installation Crew

NOTES

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~~Rapid, nonentry rescues can include placing a ladder to allow a victim to perform a self-rescue or to allow noninjured workers already in the trench to remove a victim. The ladder can be dropped in quickly at the end(s) of the trench by first responders before ground pads are placed. *(See also Rapid, Nonentry Rescues in Annex H .)*~~

~~The general area around a trench or excavation emergency is the entire area within 91.44 m (300 ft) (or more, as established by the incident commander). Making the general area safe includes, but is not necessarily limited to, the following procedures:~~

- ~~Placing ground pads around the lip of the trench to minimize the effect of rescuers' weight on secondary collapse potential.~~
- ~~Controlling or limiting traffic and sources of vibration in the area, including shutting down all vehicles and equipment.~~
- ~~Controlling or limiting access to the area by unnecessary personnel.~~
- ~~Identifying general hazards and affected utilities, and isolating, removing, and/or reducing their impact; also refer to General Hazards in Annex H , for more detailed information on general and other hazard types.~~
- ~~Controlling of the utilities in and around a trench or excavation emergency to ensure the safety of responding personnel and victims; the AHJ should have available to rescuers or local public works employees training in the control of these services in order to provide a safe environment in which to operate and to ensure the safety of victims. The following utilities should be considered when providing training:~~
  - ~~Electrical services (primary and secondary)~~
  - ~~Gas, propane, fuel oil, or other alternative energy sources (primary systems)~~
  - ~~Water/steam~~
  - ~~Sanitary systems~~
  - ~~Communications~~
  - ~~Secondary service systems (such as compressed, medical, or industrial gases)~~

~~An RIC, as specified in Section 8.8 of NFPA 1500 , should consist of rescuers at or above the capability level at which the incident is operating.~~

~~**(A)** Requisite Knowledge.~~

~~Size-up information and documentation; need to brief rescuers; areas that could be affected by collapse; variables to factor risk/benefit analysis; criteria for rapid, nonentry rescues; methods to control hazards in the general area; options for strategy and tactical approach by factoring time frame, risk/benefit, approved shoring techniques, and personnel and equipment available; incident management system; rescue personnel and equipment cache staging; and options for victim isolation and/or protective systems.~~

~~**(B)** Requisite Skills.~~

~~The ability to use and document tactical worksheets; disseminate information; understand mechanics and extent of collapse effects; perform risk/benefit analysis; execute rapid, nonentry rescues; mitigate hazards by isolation, removal, or control; reduce imposed loads at or near the lip of the trench; choose strategy and tactics that will enhance successful outcome; use incident management system and resource staging; and apply choice of isolation and/or protective system promptly to surround victim.~~

See FR-132

~~**11.1.4**~~

~~Implement support operations at trench emergencies, given an assignment, and equipment and other resources, so that a resource cache is managed, scene lighting is provided for the tasks to be undertaken, environmental concerns are managed, a cut station is established, supplemental power is provided for all equipment, atmospheric monitoring and ventilation are implemented, personnel rehab is facilitated, operations proceed without interruption, extrication methods are in place, and the support operations facilitate rescue operational objectives.~~

~~**(A)** Requisite Knowledge.~~

~~Equipment organization and tracking methods, lighting resources, dewatering methods, shelter and thermal control options, basic carpentry methods, hand and power tool applications, atmospheric monitoring protocol, rehab criteria, and extrication and removal equipment options.~~

~~**(B)** Requisite Skills.~~

~~The ability to track equipment inventory, provide power, use lighting, choose and deploy dewatering techniques, acquire or construct structures for shelter and thermal protection, select rehab areas and personnel rotations, operate atmospheric monitoring and ventilation equipment, and perform patient packaging and removal.~~

~~**11.1.5**~~

~~Initiate the incident management system given a trench or excavation collapse incident, so that scene management is initiated, initial command structure is identified, resource tracking and accountability is established, and the incident action plan is developed.~~

~~**(A)** Requisite Knowledge.~~

~~Incident management system structure, implementation procedures, expansion methodology, resource management techniques, tracking methods, incident action plan components, accountability systems, and IMS documentation forms rescuer rehabilitation criteria.~~

~~**(B)** Requisite Skills.~~

~~Ability to utilize IMS forms and command tools, and use communication devices and accountability tracking systems.~~

12.1.1

Interview any witness or "competent person," given a specific trench collapse incident, so that potential for rapid, nonentry rescue or victim self-rescue is recognized.

(A) Requisite Knowledge.

Need to secure “competent person” or witness; signs and evidence of victim involvement, number, and location.

(B) Requisite Skills.

Determine severe environmental conditions with implications for secondary collapse and victim survivability; interview techniques.

12.1.2

Facilitate a nonentry rescue or victim self-rescue, given a trench collapse incident, tools used for self-rescue, and the rescue area and general area are made safe, so that the nonentry and self-rescue tactics can be initiated.

(A) Requisite Knowledge.

Understand mechanics and extent of collapse effects; need to brief rescuers; criteria for rapid, nonentry rescues.

(B) Requisite Skills.

Ability to implement nonentry rescue and self-rescue tactics; select and deploy tools used to facilitate nonentry and self-rescue; reduce imposed loads at or near the lip of the trench.

12.1.3

Identify hazardous areas specific to a trench environment, given a trench collapse incident, so that the scene is secured, hazards are managed, and an approach path to the trench is identified.

(A) Requisite Knowledge.

Areas at risk for increased likelihood of collapse, general collapse patterns of trench's, methods of bridging and weight distribution, securing of scenes, and tactics for approaching the trench while minimizing the likelihood of collapse.

(B) Requisite Skills.

Ability to identify areas of high risk for additional collapse, select and deploy tools or materials for bridging or weight distribution, communicate high-risk areas to other responders.

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 25 12:06:28 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-72-NFPA 1006-2018

First Revision No. 73-NFPA 1006-2018 [Section No. 11.2]

12.2 Operations Level.

The job performance requirements defined in ~~Section~~ Sections ~~5.2~~ , ~~Section~~ 12.1, and ~~11.2.1 through 11.2.5~~ 12.2 shall be met prior to operation-level qualification in trench rescue.

See FR-132

12.2.1*

Identify potential hazards to victims and rescuers in and around a trench excavation, given a trench collapse incident, a trench rescue toolkit so that potential areas of additional collapse in the trench are identified, utility lines are located, spoil piles are monitored, additional superimposed weight is identified, sources of atmospheric contamination are assessed, sources of water are identified, and environmental hazards are considered.

A.12.2.1

Support operations can include, but are not limited to, the following functional sectors in the incident management system:

(1) *Ventilation Sector.* Monitors and ventilates personnel

(2) *Extrication Sector.* Prepares for extrication methods and tactics

(3) *EMS Sector.* Plans for ongoing patient care, transfer, and transport in coordination with the incident commander and receiving hospital

(4) *Support Sector.* Can handle lighting, power, and environmental management

(5) *Cut Station.* Handles construction and fabrication of shoring materials

(A) Requisite Knowledge.

Methods to distinguish soil types, collapse mechanics, and other contributing factors such as severe environmental conditions and other general hazards; effects and hazards of collapse and rescue efforts on utilities at the incident site; jurisdictional and community resource lists and agreements; atmospheric monitoring; effects of additional superimposed weight and vibrations on trench walls; effects of water in and around trench.

(B) Requisite Skills.

The ability to interpret tabulated data information and tables; perform atmospheric monitoring; monitor spoil piles; assess and address the effects of water on trench stability.

12.2.2

Implement a hazard control plan given a trench collapse incident, hazard control plan and trench rescue tool kit so that provisions for ventilation, dewatering, energy control, air monitoring; and falls, and prevention of unplanned soil movement are accomplished.

(A) Requisite Knowledge.

Protocols on making the general area safe, criteria for a safe zone within the trench, atmospheric monitoring and ventilation, types of collapses and techniques to stabilize, emergency procedures, selection of PPE, and consideration of selected stabilization tactics on extrication and victim safety.

(B) Requisite Skills.

Employ hazard control plan to protect personnel inside and outside of trench, establish safe zones, perform atmospheric monitoring and initiate ventilation as needed, initiate dewatering, provide energy control, ability to select and use PPE, apply fall prevention, and implement strategies to minimize unplanned soil movement.

12.2.3

~~Support a nonintersecting straight wall trench of 8 ft (2.4 m) or less in depth as a member of a team, given size-up information, an action plan, a trench tool kit, and an assignment, so that strategies to minimize the further movement of soil are implemented effectively; trench walls, lip, and spoil pile are monitored continuously; rescue entry team(s) remains in a safe zone; any slough-in and wall shears are mitigated; emergency procedures and warning systems are established and understood by participating personnel; incident-specific personal protective equipment is utilized; physical hazards are identified and managed; victim and rescuer protection is maximized; victim extrication methods are considered; and a rapid intervention team is staged.~~ Develop a shoring plan for a nonintersecting trench no more than 8 ft (2.4 m) deep, given a trench collapse incident and trench rescue tool kit, so that the methods of potential collapse are recognized, the mechanisms of entrapment are identified, areas of the trench that are blown out or undercut are addressed, related tabulated data is consulted, the weights and hazards associated with the soils are considered, and the location of the victim and projected path for removal are incorporated.

~~A.11.2.1~~

~~It is the intent of the committee to define the outcomes desired for each job performance requirement. The methods and equipment used to reach that outcome, in this case the shoring of a "nonintersecting" trench, should be those that best suit the particular needs and resource availability of the AHJ.~~

~~When considering stabilization tactics, it is critical to recognize logistical needs in terms of space required to remove the victim(s) from the trench. A forest of wales and struts placed without regard to the location of the victim can demonstrate technical abilities but will do nothing for victim survival. The survivability time frame, depth and width of the trench, soil conditions, and type of injuries sustained are only a few examples of the variables that need to be addressed. This process will involve thinking ahead and looking at all options available to shore in an approved manner, in acceptable time frames, while placed in locations that will enhance ease and safety of victim(s) removal.~~

(A) Requisite Knowledge.

Shoring and shielding, tabulated data, strategies and tactics, protocols on making the general area safe, criteria for a safe zone within the trench, types of collapses and techniques to stabilize, emergency procedures, selection of personal protective equipment, and consideration of selected stabilization tactics on extrication and victim safety.

(B) Requisite Skills.

~~The ability to interpret tabulated data information and tables, place shoring and shielding systems, install supplemental shoring, use protocols, choose methods to stabilize, use personal protective equipment, anticipate extrication logistics, and create systems in trenches 8 ft (2.4 m) deep.~~ Determine shoring strategies, designate cut station location, and material and equipment needs; establish safe zones; ability to prebrief team on shoring strategies, victim release, and projected path for removal.

12.2.4

Implement a trench shoring plan for a nonintersecting trench no more than 8 ft (2.4 m) deep, given a trench collapse incident, trench shoring plan, and a trench rescue tool kit, so that the victim is protected from additional collapse, the trench walls are supported, prior areas of collapse are addressed, shoring team members work from protected areas, and shoring systems are installed so they perform their intended function.

(A) Requisite Knowledge.

Shoring and shielding, criteria for a safe zone within the trench, types of collapse and techniques to stabilize, emergency procedures, selection of personal protective equipment, and consideration of selected stabilization tactics for extrication and victim safety.

(B)

~~The ability to interpret tabulated data information and tables, place~~ The ability to place shoring and shielding systems, install supplemental shoring, use protocols, choose methods to stabilize, establish a cut station, use personal protective equipment, anticipate extrication logistics, and create systems in trenches 8 ft (2.4 m) deep. *(See Annex I.)*

12.2.5

Release a victim from soil entrapment ~~by components of~~ in a nonintersecting ~~collapsed~~ trench of 8 ft (2.4 m) or less in depth, given ~~personal protective equipment,~~ a trench collapse incident and a trench rescue tool kit, ~~and specialized equipment,~~ so that hazards to rescue personnel and victims are minimized~~,~~ ; considerations are given to ~~crush~~ the victim's injuries, crush injuries related to compartment syndrome, and other injuries~~,~~ ; techniques are used to enhance patient survivability~~, tasks are accomplished within projected time frames,~~ ; and techniques do not compromise the integrity of the existing trench shoring system.

~~**A.11.2.2**~~

~~Trench rescue by nature is a time-consuming endeavor. The time can be minimized by careful planning and division of the tasks that need to be performed simultaneously. The rescuers in the trench should identify the tools needed to disentangle the victim. These tools can be limited to shovels to remove entrapping soil or can include exothermic torches, air bags, and cribbing, depending on the nature of the entrapment. There should be rescuers assigned topside to assemble, prepare, and deploy whatever resources are necessary to complete disentanglement (i.e., an extrication sector). Any unwarranted delay can severely affect the survivability of the victim. In addition, an EMS sector should be assigned so that information on victim injuries and stabilization equipment can be processed so that treatment can be initiated and maintained. The treatment of crush syndrome must begin *before* the victim is released from the offending compressive weight, or the victim will quickly succumb to the effects of the toxins released into the bloodstream.~~

(A) Requisite Knowledge.

Identification, utilization, and required care of personal equipment; general hazards associated with each type of trench collapse; methods of evaluating shoring systems and trench wall stability; ~~crush~~ compartment syndrome protocols; identification of collapse characteristics; causes and associated effects of trench collapse; potential signs of subsequent collapse; selection and application of rescue tools and resources; risk/benefit assessment techniques for extrication methods; and time ~~restraints~~ constraints .

(B) Requisite Skills.

The ability to select, use, and care for ~~personal protective equipment~~ PPE ; operate rescue tools and stabilization systems; identify crush injuries related to compartment syndrome ~~clinical settings~~ ; and complete risk/benefit assessments for selected methods of rescue and time ~~restraints~~ constraints .

12.2.6

Remove a victim from a trench, given a disentangled victim, a basic first aid kit, and victim packaging resources, so that basic life functions are supported as required; the victim is evaluated for signs of ~~crush~~ compartment syndrome; methods and packaging devices selected are compatible with intended routes of transfer; universal precautions are employed to protect personnel from ~~bloodborne~~ blood-borne pathogens; and extraction times meet time constraints for medical management.

~~**A.11.2.3**~~

~~It is imperative that the route of transfer be identified and the ambulance to the nearest hospital or trauma center be positioned to transport as soon as a victim is removed. An advanced life support–equipped and staffed medical unit is the preferred level of care and transport. The receiving hospital should already be aware of the condition of the patient and the estimated time of arrival. The rescuers should always be cognizant of the hazards and utilize universal precautions in the rescue area.~~

(A) Requisite Knowledge.

Medical protocols, available medical resources, transfer methods and time needed to execute, universal precautions protocol, rope rescue systems, high-point anchor options, and patient ladder raise removal techniques.

(B) Requisite Skills.

The ability to select and use personal protective equipment, provide basic medical care and immobilization techniques, identify the need for advanced life support and ~~crush~~ compartment syndrome management, and use a removal system that matches logistical and medical management time frame concerns.

12.2.7

Disassemble support systems at a trench emergency incident, given personal protective equipment, trench tool kit, and removal of victim(s), so that soil movement is minimized, all rescue equipment is removed from the trench, sheeting and shoring are removed in the reverse order of their placement, emergency protocols and safe zones in the trench are adhered to, rescue personnel are removed from the trench, the last supporting shores are pulled free with ropes, equipment is cleaned and serviced, reports are completed, and a ~~postbriefing~~ post-briefing is performed.

~~A.11.2.4~~

~~Disassembly of trench support systems is often the most dangerous portion of a rescue operation. The victim has been removed and transported, the tension and adrenaline have subsided, and it is a setting for potential catastrophe. Rescuers must maintain their attentiveness and safety policies until all equipment and shoring material is removed from the trench. The trench entrants must be vigilant about staying within the "safe zone" while removing struts in the reverse order that they were placed. They must leave the trench completely before pulling the last shores out with ropes. Arrangements should be made to have physical barriers placed to minimize further opportunities for an accident and to turn control of the incident site over to the AHJ or jobsite contractor. Equipment should be cleaned thoroughly and maintained to the manufacturers' recommendations. Damaged and lost equipment should be documented, and reports should be completed for recordkeeping and review. The rescue team should have a postbriefing to discuss effectiveness of strategies, tactics, equipment, and personnel. Signs of critical incident stress syndrome should be monitored and addressed.~~

(A) Requisite Knowledge.

Selection of personal protective equipment, equipment used and its location, shoring and shielding tactics and order of placement, shoring removal protocols, criteria for a "safe zone" within the trench, personnel accountability, emergency procedures, manufacturer's recommended care and maintenance procedures, and briefing protocols.

(B) Requisite Skills.

The ability to use personal protective equipment, remove equipment and protective systems, use trench safety protocols, clean and service equipment, and perform an incident debriefing.

12.2.8*

Terminate a technical rescue operation, given an incident scenario, assigned resources, and site safety data, so that rescuer risk and site safety are managed; scene security is maintained and custody transferred to a responsible party; personnel and resources are returned to a state of readiness; recordkeeping and documentation occur; and post-event analysis is conducted.

(A) Requisite Knowledge.

Incident ~~Command~~ command functions and resources, hazard identification and risk management strategies, logistics and resource management, personnel accountability systems, and AHJ-specific procedures or protocols related to personnel rehab.

(B) Requisite Skills.

Hazard recognition, risk analysis, use of site control equipment and methods, use of data collection and management systems, and use of asset and personnel tracking systems.

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 25 12:30:56 EDT 2018

Committee Statement

Committee Statement: These changes were made to reduce confusion and to address issues that were raised as a result of the past revision cycle of things that were missed or not included in the document.

Response Message: FR-73-NFPA 1006-2018

First Revision No. 74-NFPA 1006-2018 [Section No. 11.3]

12.3 Technician Level.

The job performance requirements defined in ~~Section~~ Sections 12.2 and ~~11.3.1 through 11.3.6~~ 12.3 shall be met prior to technician level qualification in trench rescue.

12.3.1

Develop a shoring plan for an intersecting trench, given a trench collapse incident and trench rescue tool kit, so that the methods of potential collapse are recognized, the mechanisms of entrapment are identified, areas of the trench that are blown out or undercut are addressed, related tabulated data is consulted, the weights and hazards associated with the soils are considered, and the location of the victim and projected path for removal are incorporated.

(A) Requisite Knowledge.

Shoring and shielding, tabulated data, strategies and tactics, protocols on making the general area safe, criteria for a safe zone within the trench, types of collapses and techniques to stabilize, emergency procedures, selection of PPE, and consideration of selected stabilization tactics for extrication and victim safety.

(B) Requisite Skills.

Determine shoring strategies; designate cut station location and material and equipment needs; establish safe zones; pre-brief team on shoring strategies, victim release, and projected path for removal.

12.3.2

Implement a trench shoring plan for intersecting trench, given a trench collapse incident, trench shoring plan, and a trench rescue tool kit, so that the victim is protected from additional collapse, the trench walls are supported, prior areas of collapse are addressed, shoring team members work from protected areas, and shoring systems are installed so they perform their intended function.

(A) Requisite Knowledge.

Shoring and shielding, criteria for a safe zone within the trench, types of collapses and techniques to stabilize, emergency procedures, selection of PPE, and consideration of selected stabilization tactics on extrication and victim safety.

(B) Requisite Skills.

Ability to place shoring and shielding systems, install supplemental shoring, use protocols, choose methods to stabilize, establish a cut station, use personal protective equipment, anticipate extrication logistics, and create shoring systems in trenches 8 ft (2.4 m) deep. *(See Annex H .)*

12.3.3

Develop a shoring plan for a trench more than 8 ft (2.4 m) deep, given a trench collapse incident, and trench rescue tool kit, so that the methods of potential collapse are recognized, the mechanisms of entrapment are identified, areas of the trench that are blown out or undercut are addressed, related tabulated data is consulted, the weights and hazards associated with the soils are considered, the location of the victim and projected path for removal are incorporated.

(A) Requisite Knowledge.

Shoring and shielding, tabulated data, strategies and tactics, protocols on making the general area safe, criteria for a safe zone within the trench, types of collapses and techniques to stabilize, emergency procedures, selection of PPE, and consideration of selected stabilization tactics on extrication and victim safety.

(B) Requisite Skills.

Ability to determine shoring strategies; designate cut station location and material and equipment needs; establish safe zones; pre-brief team on shoring strategies, victim release, and projected path for removal.

12.3.4

Implement a trench shoring plan for a trench more than 8 ft (2.4 m) deep, given a trench collapse incident, trench shoring plan, and a trench rescue tool kit, so that the victim is protected from additional collapse, the trench walls are supported, prior areas of collapse are addressed, shoring team members work from protected areas, and shoring systems are installed so they perform their intended function.

(A) Requisite Knowledge.

Shoring and shielding, criteria for a safe zone within the trench, types of collapses and techniques to stabilize, emergency procedures, selection of personal protective equipment, and consideration of selected stabilization tactics on extraction and victim safety.

(B) Requisite Skills.

Ability to place shoring and shielding systems, install supplemental shoring, use protocols, choose methods to stabilize, establish a cut station, use personal protective equipment, anticipate extrication logistics, and create systems in trenches more than 8 ft (2.4 m) deep. *(See Annex H .)*

12.3.5

Support an intersecting trench as a member of a team, given size-up information and an action plan, a trench tool kit, and an assignment, so that strategies to minimize the further movement of soil are implemented effectively; trench walls, lip, and spoil pile are monitored continuously; rescue entry team(s) in the trench remains in a safe zone; any slough-in and wall shears are mitigated; emergency procedures and warning systems are established and understood by participating personnel; incident-specific personal protective equipment is utilized; physical hazards are identified and managed; victim protection is maximized; victim extrication methods are considered; and a rapid intervention team is staged.

~~**A.11.3.1**~~

~~Different types of intersecting trenches can include an "L," "T," or "X" configuration. In most cases, a trench is backfilled as the intended installation continues. There are times, however, when an exposure to an unprotected intersecting trench will present itself. Protecting the victim and quickly stabilizing the inside corners are priorities in this type of trench collapse. Use of a shield system or trench box located on site and rated for the trench in question can be a "quick and dirty" way to protect the victim if a competent heavy equipment operator is present. Where shoring with timber, hydraulics, or pneumatic struts, it is recommended that both sides of an inside corner are stabilized simultaneously to prevent the possible "blow out" of the unsupported corner. Shoring the inside corners and the unopposed floating panels necessitates additional skills, equipment, and training. In any case, the shoring of intersecting trenches should be done in a well-thought-out manner with an awareness of the particular vulnerability to collapse of an inside corner.~~

(A) Requisite Knowledge.

Shoring and shielding, tabulated data, strategies and tactics, types of intersecting trenches and techniques to stabilize, protocols on making the general area safe, criteria for safe zones in the trench, types of collapses and techniques to stabilize, emergency procedures, selection of personal protective equipment, and consideration of selected stabilization tactics on extrication and victim safety.

(B) Requisite Skills.

The ability to interpret tabulated data information and tables, place shoring and shielding systems, identify type of intersecting trench, use trench rescue protocols, ~~select~~ identify types of collapse and methods to stabilize, identify hazards in a trench, use personal protective equipment, and anticipate extrication logistics.

12.3.6

Install supplemental sheeting and shoring for each 2 ft (0.61 m) of depth dug below an existing approved shoring system, given size-up information, an action plan, and a trench tool kit, so that the movement of soil is minimized effectively, initial trench support strategies are facilitated, rescue entry team safe zones are maintained, excavation of entrapping soil is continued, victim protection is maximized, victim extrication methods are considered, and a rapid intervention team is staged.

~~A.11.3.2~~

~~Lateral pressures and potential for collapse increase as the depth of the trench increases. For that reason, supplemental shoring that extends below the initial sheeting and shoring is most critical to the stability of the entire system. The dirt should be excavated over a wide enough area to uncover the victim completely while allowing enough room for placing supplemental shoring and facilitating safety, treatment, and removal. This approach will maintain the integrity of the protective system and provide competent patient management.~~

(A) Requisite Knowledge.

Shoring and shielding, tabulated data, strategies and tactics, methods and techniques to install supplemental sheeting and shoring, protocols on making the general area safe, criteria for safe zones in the trench, types of collapses and techniques to stabilize, emergency procedures, selection of personal protective equipment, and consideration of selected stabilization tactics on extrication and victim safety.

(B) Requisite Skills.

The ability to interpret tabulated data information and tables, place shoring and shielding systems, identify supplemental sheeting and shoring, use all trench rescue protocols, identify types of collapse and methods to stabilize, identify exposure to hazards within the trench relative to existing safe zones, select and use personal protective equipment, and anticipate extrication logistics.

12.3.7

Utilize spot shoring techniques to support soil without incorporating uprights or panels as part of the shoring plan, given a trench collapse incident, trench rescue toolbox, tabulated data, and trench shoring plan, so that the soil is prevented from further collapse.

(A) Requisite Knowledge.

Shoring and shielding, tabulated data, strategies and tactics, methods and techniques to install supplemental sheeting and shoring, protocols on making the general area safe, criteria for safe zones in the trench, types of collapses and techniques to stabilize, emergency procedures, selection of personal protective equipment, and consideration of selected stabilization tactics on extrication and victim safety.

(B) Requisite Skills.

The ability to interpret tabulated data information and tables, place shoring and shielding systems, identify supplemental sheeting and shoring, use all trench rescue protocols, identify types of collapse and methods to stabilize, identify exposure to hazards within the trench relative to existing safe zones, select and use personal protective equipment, and anticipate extrication logistics.

12.3.8

Construct load stabilization systems, given an assignment, personal protective equipment, and a trench tool kit, so that the stabilization system will support the load safely, the system is stable, and the assignment is completed.

~~A.11.3.3~~

~~Cribbing systems in the trench rescue environment have a multitude of applications. Such applications can include, but are not limited to, the following:~~

- ~~Stabilizing or securing a heavy load~~
- ~~Providing a base for lifting entrapping loads (heavy reinforced concrete pipes or boulders) from within the trench or from the top of the trench~~
- ~~Maintaining lift by cribbing under the load as it is lifted~~

~~Examples of available curricula that outline various lifting and rigging principle areas are as follows:~~

- ~~Rescue Systems 1~~
- ~~Rescue Systems 2~~
- ~~FEMA Rescue Specialist~~

~~Lifting and stabilization topics that are detailed include the following:~~

- ~~Gravity and mechanics, general principles~~
- ~~Load stabilization utilizing mechanical principles~~
- ~~Using power with an advantage (classes of levers, inclined planes, hydraulic or pneumatic presses, etc.)~~
- ~~Overcoming friction~~
- ~~Estimating load weights~~
- ~~Mechanics of lifting~~
- ~~Lifting and rigging~~

(A) Requisite Knowledge.

Different types of stabilization systems and their construction methods, limitations of the system, load calculations, principles of and applications for stabilization systems, and safety considerations.

(B) Requisite Skills.

The ability to select and construct stabilization systems, evaluate structural integrity of the system, determine stability, and calculate loads.

12.3.9

Lift a load, given a trench tool kit, so that the load is lifted the required distance to gain access; settling or dropping of the load is prevented; control and stabilization are maintained before, during, and after the lift; and operational objectives are attained.

~~A.11.3.4~~

~~See~~ A.11.3.3 ~~.~~

(A) Requisite Knowledge.

Applications of levers; classes of levers; principles of leverage, gravity, and load balance; resistance force; mechanics and types of load stabilization; mechanics of load lifting; application of pneumatic, hydraulic, mechanical, and manual lifting tools; how to calculate the weight of the load; and safety protocols.

(B) Requisite Skills.

The ability to evaluate and estimate the weight of the load, ~~the correct operations of~~ operate the tools correctly , ~~operation~~ operate ~~of~~ a lever, and ~~application~~ apply ~~of~~ load stabilization systems.

12.3.10

Coordinate the use of heavy equipment, given personal protective equipment, means of communication, equipment, ~~and~~ operator, and an assignment, so that operator capabilities and limitations for task are evaluated, common communications are maintained, equipment usage supports the operational objectives, and hazards are avoided.

~~A.11.3.5~~

~~Deciding the mode of operation (rescue vs. recovery) and conducting a risk/benefit analysis should guide the selection of strategy in the possible use of heavy equipment. Strong consideration has to be given to the great surcharge loads and vibration created by using heavy equipment in the area of the collapse and the ultimate effect these factors have on the continued safety and condition of the victim and rescuers at the incident. It is strongly recommended to use heavy equipment only in support or recovery operations. Where possible, the job site supervisor or another competent excavating professional should be kept at the command post to assist in problem solving. Ultimately, however, the decision to utilize heavy equipment at a trench collapse incident should be made on a case-by-case basis. Operational support tasks for heavy equipment can include the following:~~

- ~~Placing a trench box or isolation system~~
- ~~Excavating around an existing protective reinforced or engineered structure for access~~
- ~~Sloping or benching operations in recovery operations, or where an existing trench collapse, due to running, saturated, or extremely unstable soil conditions, cannot be safely shored or protected~~
- ~~Lifting or moving a heavy load, where other options are not feasible~~
- ~~Utilization as a high-point anchor for rope rescue systems (carefully monitored)~~

~~The suitability of the operator to complete a rescue operational objective is based, subjectively at times, on his/her experience, training, recommendation by peers, familiarity to rescuers, and a calm, professional demeanor in an often emotionally charged situation. The incident commander should maintain control of the scene.~~

(A) Requisite Knowledge.

Types of heavy equipment~~,~~ ; capabilities", application, and hazards of heavy equipment and rigging~~,~~ ; operator training~~,~~ ; types of communication~~,~~ ; and methods to establish communications.

(B) Requisite Skills.

The ability to use hand signals, use radio equipment, recognize hazards, assess operator for skill and calm demeanor, assess heavy equipment for precision of movement and maintenance, monitor rescuer and victim safety, and use personal protective equipment.

12.3.11

Release a victim from entrapment by components of a collapsed trench, given personal protective equipment, a trench rescue tool kit, and specialized equipment, so that hazards to rescue personnel and victims are minimized, considerations are given to ~~crush~~ compartment syndrome related to crush injuries and other injuries, techniques are used to enhance patient survivability, tasks are accomplished within projected time frames, and techniques do not compromise the integrity of the existing trench shoring system.

~~A.11.3.6~~

~~Trench rescue by nature is a time-consuming endeavor. The time can be minimized by careful planning and division of the tasks that need to be performed simultaneously. The rescuers in the trench should identify the tools needed to disentangle the victim. These tools can be limited to shovels to remove entrapping soil or can include exothermic torches, air bags, and cribbing, depending on the nature of the entrapment. There should be rescuers assigned topside to assemble, prepare, and deploy whatever resources are necessary to complete disentanglement (i.e., extrication sector).~~

~~Any unwarranted delay can severely affect the survivability of the victim. In addition, an EMS resource should be assigned so that information on victim injuries and stabilization equipment can be processed and so that treatment can be initiated and maintained. The treatment of crush syndrome must begin *before* the victim is released from the offending compressive weight, or the victim will quickly succumb to the effects of the toxins released into the bloodstream.~~

(A) Requisite Knowledge.

Identification, utilization, and required care of personal equipment; general hazards associated with each type of trench collapse; methods of evaluating shoring systems and trench wall stability; ~~crush~~ compartment syndrome protocols; identification of collapse characteristics; causes and associated effects of trench collapse; potential signs of subsequent collapse; selection and application of rescue tools and resources; risk/benefit assessment techniques for extrication methods; and time restraints.

(B) Requisite Skills.

The ability to select, use, and care for personal protective equipment; operate rescue tools and stabilization systems; identify crush syndrome clinical settings; and complete risk/benefit assessments for selected methods of rescue and time ~~restraints~~ constraints .

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 25 14:02:56 EDT 2018

Committee Statement

Committee Statement: The committee has made these changes to reduce confusion as well as to bring the sections of text into compliance with regards to correct JPR format.

Response Message: FR-74-NFPA 1006-2018

First Revision No. 75-NFPA 1006-2018 [Section No. 12.1 [Excluding any Sub-Sections]]

~~The job performance requirements defined in~~ 12.1.1 ~~through~~ 12.1.4 ~~shall be met prior to awareness-level qualification in machinery rescue.~~ Prior to qualification at the awareness level in machinery rescue, the individual shall meet the requirements in 1.5 (1) as defined by the AHJ in addition to the job performance requirements defined in Section 13.1 .

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 25 14:33:18 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-75-NFPA 1006-2018

First Revision No. 76-NFPA 1006-2018 [Sections 12.1.1, 12.1.2, 12.1.3, 12.1.4]

~~12.1.1~~

~~Recognize the need for technical rescue resources at a machinery incident, given AHJ guidelines, an operations- or technician-level machinery incident or simulation, so that the need for additional resources is identified, the response system is initiated, the scene is secured and rendered safe until additional resources arrive, and awareness-level personnel are incorporated into the operational/incident action plan.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Operational protocols, specific planning forms, types of machinery common to the AHJ boundaries, machinery hazards, incident support operations and resources, machinery anatomy, and fire suppression and safety measures.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to apply operational protocols, select specific planning forms based on the types of machinery, identify and evaluate various types of machinery within the AHJ boundaries, request support and resources, identify machinery anatomy, and determine the required fire suppression and safety measures.~~

~~12.1.2~~

~~Establish scene safety zones, given prearrival instructions from operations- or technician-level resources, scene security barriers, incident location, incident information, and personal protective equipment (PPE), so that action hot, warm, and cold safety zones are designated; zone perimeters are consistent with incident requirements; perimeter markings can be recognized and understood by others; zone boundaries are communicated to incident command; and only authorized personnel are allowed access to the rescue scene.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Use and selection of PPE, barrier control flow and concepts, types of control devices and tools, types of existing and potential hazards, methods of hazard mitigation, organizational standard operating procedure, and types of zones and staffing requirements.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to select and use PPE, apply traffic control concepts, position traffic control devices, identify and mitigate existing or potential hazards, and apply zone identification and personal safety techniques.~~

~~12.1.3~~

~~Identify the needed support resources, given a specific type of rescue incident, so that a resource cache is managed, scene lighting is provided for the tasks to be undertaken, environmental concerns are managed, personnel rehabilitation is facilitated, and the support operation facilitates rescue operational objectives.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Equipment organization and tracking methods, lighting resource type(s), shelter and thermal control options, and rehab criteria.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to track equipment inventory, identify lighting resources and structures for shelter and thermal protection, select rehab areas, and manage personnel rotations.~~

~~12.1.4~~

~~Size up an incident, given an incident, background information and applicable reference materials, so that the operational mode is defined; resource availability, response time, and types of rescues are determined; the number of victims are identified; the last reported location of all victims are established; witnesses and reporting parties are identified and interviewed; resource needs are assessed; search parameters are identified; and information required to develop an incident action plan is obtained.~~

~~**(A)** Requisite Knowledge.~~

~~Types of reference materials and their uses, risk benefit assessment, availability and capability of the resources, elements of an action plan and related information, relationship of size-up to the incident management system (IMS), and information gathering techniques and how that information is used in the size-up process.~~

~~**(B)** Requisite Skills.~~

~~The ability to read specific rescue reference materials, interview and gather information, relay information, manage witnesses, and use information sources.~~

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 25 14:34:53 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-76-NFPA 1006-2018

First Revision No. 77-NFPA 1006-2018 [Section No. 12.2 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ ~~5.2~~ , ~~Section~~ Sections 13.1~~,~~ and ~~12.2.1~~ ~~through~~ ~~12.2.11~~ 13.2 shall be met prior to operations-level qualification in machinery rescue.

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 25 14:35:55 EDT 2018

Committee Statement

Committee Statement: Requiring machinery students to be able to accomplish high angle rescue skills as listed in section 5.2, especially 5.2.11,13,14,15,20,21,22,26, prevents those who cannot successfully accomplish high angle rescue certification from completing a course focused on machinery rescues during which high angle rescue skills are almost never employed. As it is written, the machinery rescue portion requires even more rope rescue skills than vehicle rescue, where although slight, the likelihood of needing rope rescue skills is greater than the likelihood of needing high angle rope rescue skills in machinery rescue scenarios.

Response Message: FR-77-NFPA 1006-2018

Public Input No. 75-NFPA 1006-2018 [Section No. 12.2 [Excluding any Sub-Sections]]

First Revision No. 78-NFPA 1006-2018 [Section No. 12.2.1 [Excluding any Sub-Sections]]

~~Plan~~ Preplan for a small machinery incident, ~~and conduct an initial and ongoing size-up,~~ given agency guidelines, planning forms, and an operations-level machinery incident or simulation, so that a standard approach is used during training and operational scenarios; initial and ongoing size-ups are being completed; emergency situation hazards are identified; isolation methods and scene security measures are considered; fire suppression and safety measures are identified; machinery stabilization needs are evaluated; and resource needs are identified and documented for future use.

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 25 14:36:59 EDT 2018

Committee Statement

Committee Statement: This change was made for document consistency since large machinery is covered later in the document and to comply with proper JPR formatting.

Response Message: FR-78-NFPA 1006-2018

First Revision No. 79-NFPA 1006-2018 [Section No. 12.2.3 [Excluding any Sub-Sections]]

Establish fire protection, given an extrication incident and fire control support, so that fire and explosion potential is managed and fire hazards and rescue objectives are communicated to the fire ~~support team~~ suppression crew .

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 25 14:38:19 EDT 2018

Committee Statement

Committee Statement: This change was made in order to reflect common terminology and use of the phrase.

Response Message: FR-79-NFPA 1006-2018

First Revision No. 80-NFPA 1006-2018 [Section No. 12.2.9]

13.2.9*

Identify potential emergency ~~events in buildings where~~ incidents involving mechanical equipment ~~exists, such as elevators. Determine entry and egress points~~ , given the associated structural and damage characteristics ~~and potential victim location(s)~~ , so that ~~victim location(s) is~~ incident-specific resources are identified and hazard control plans are developed ~~; designate entry and exit points for victim(s) and rescuer(s); chosen points can be protected; determine the need for a specialized elevator technician; stabilize and isolate all machinery involved, given an elevator tool kit and PPE; control the hazards presented by the release of fluids or mechanical release devices; determine elevator position to optimize the removal of victim(s); secure all elevators and weight systems in common hoistways so that chosen points do not compromise the removal of a victim or rescuer; equipment and victim stabilization are initiated; package and remove victim(s) so that undue injury is prevented; and AHJ safety points are enforced~~ .

A.13.2.9

It is the intent of this standard to acquire and analyze information about mechanical equipment within a building or structure that could lend to emergency incidents. Because the type of mechanical equipment is greatly varied, it is important for rescuers to assess and understand the risks posed by the type of equipment within a given jurisdiction. While not all types of emergencies can be easily determined, a general understanding of the characteristics of the building, content, and exposure, could allow rescuers to plan for those incidents that are most likely to occur.

(A) Requisite Knowledge.

Types of stabilization devices, mechanism of ~~elevator~~ machinery movement and travel, types of stabilization points, types of energy sources, system isolation and release methods, entry and exit points, specialized system features, tool selection and application, and special features of ~~elevator systems~~ unique machinery systems and accompanying subject matter experts .

(B) Requisite Skills.

The ability to identify entry and exit points and probable victim locations, ~~the ability to~~ identify common ~~elevator~~ energy control devices~~,~~ and construction ~~and energy sources~~ , perform hazard control based on techniques selected, apply tactics and strategy based on assignment, select and operate tools and equipment specific to ~~elevator~~ machinery rescue, apply victim care and stabilization devices, and demonstrate safety procedures.

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 25 14:40:34 EDT 2018

Committee Statement

Committee Statement: The committee has made these changes in order to comply with the development of JPR's.

Response Message: FR-80-NFPA 1006-2018

First Revision No. 81-NFPA 1006-2018 [Sections 12.2.10, 12.2.11]

13.2.10

Designate entry and exit points for victim(s) and rescuer(s), given a machinery rescue tool kit and hazard-specific PPE, so that all machinery involved is stabilized and isolated, and chosen points can be protected.

(A) Requisite Knowledge.

Types of stabilization devices, mechanism of machinery movement and travel, types of stabilization points, types of energy sources, system isolation and release methods, entry and exit points, specialized system features, tool selection and application, and special features of unique machinery systems.

(B) Requisite Skills.

The ability to identify entry and exit points and probable victim locations, identify common energy control devices and construction, perform hazard control based on techniques selected, apply tactics and strategy based on assignment, select and operate tools and equipment specific to machinery rescue, apply victim care and stabilization devices, and demonstrate safety procedures.

13.2.11

Control the hazards presented by the release of fluids or mechanical release devices; given an entrapment within machinery, so that mechanical processes are secured, the position of machinery is determined to optimize the removal of victim(s), and chosen points do not compromise the removal of a victim or rescuer.

(A) Requisite Knowledge.

Types of stabilization devices, mechanism of machinery movement and travel, types of stabilization points, types of energy sources, system isolation and release methods, entry and exit points, specialized system features, tool selection and application, and special features of unique machinery systems.

(B) Requisite Skills.

The ability to identify entry and exit points and probable victim locations, identify common energy control devices and construction, perform hazard control based on techniques selected, apply tactics and strategy based on assignment, select and operate tools and equipment specific to machinery rescue, apply victim care and stabilization devices, and demonstrate safety procedures.

13.2.12

Initiate stabilization of energized equipment, given an entrapment within machinery, so that undue injury is prevented and safety guideline points are followed.

(A) Requisite Knowledge.

Types of stabilization devices, mechanism of machinery movement and travel, types of stabilization points, types of energy sources, system isolation and release methods, entry and exit points, specialized system features, tool selection and application, and special features of unique machinery systems.

(B) Requisite Skills.

The ability to identify entry and exit points and probable victim locations, identify common energy control devices and construction, perform hazard control based on techniques selected, apply tactics and strategy based on assignment, select and operate tools and equipment specific to machinery rescue.

13.2.13*

Utilize specific information from a subject matter expert (SME), given a machinery rescue event and an SME capable of supplying event- or system-specific technical guidance, so that the technical guidance supports decision making and operational considerations applied during the event.

A.13.2.13

It is the intent of the committee that the skill of identifying and applying information from an SME (on site or remotely) is essential to the successful outcome of a machinery rescue incident. An SME that is applicable to this type of event includes, but is not limited to, manufacturers, installers, specially trained mechanics or technicians, or plant maintenance personnel, all who possess specialized technical and/or institutional knowledge of the device, equipment, or process involved in the event. Identifying and keeping relevant SMEs in contact with command staff of the event is a critical component of machinery rescue incident management.

(A) Requisite Knowledge.

Operational protocols, data collection, and data interpretation.

(B) Requisite Skills.

Interviewing, note taking, diagram/technical drawing interpretation.

13.2.14

Remove a packaged victim to a designated safe area, as a member of a team, given a victim transfer device, a designated egress route, and PPE, so that the team effort is coordinated~~;~~, the designated egress route is used~~;~~, the victim is removed without compromising victim packaging~~;~~, undue injury is prevented~~;~~, and stabilization is maintained.

(A) Requisite Knowledge.

Patient handling techniques; operation of IMS; types of immobilization, packaging, and transfer devices; types of immobilization techniques; and uses of immobilization devices.

(B) Requisite Skills.

Use of immobilization, packaging, and transfer devices for specific situations; use of immobilization techniques; application of medical protocols and safety features to immobilize, package, and transfer; and use of all techniques for lifting the patient.

13.2.15*

Terminate an incident, given PPE specific to the incident, isolation barriers, and tool kit, so that rescuers and bystanders are protected and accounted for during termination operations~~;~~, the party responsible is notified of any modification or damage created during the operational period~~;~~, documentation of loss or material use is accounted for, scene documentation is performed, scene control is transferred to a responsible party~~;~~, potential or existing hazards are communicated to that responsible party~~;~~, debriefing and postincident analysis and critique are considered, and command is terminated.

A.13.2.15

The committee recognizes that technical rescue incidents pose unique challenges in terms of safely concluding or demobilizing an event. The sequence and manner in which resources are transitioned out of an event require careful analysis to ensure that scene and rescuer safety are not compromised. Risk management strategies can include both active and nonintervention strategies, such as not removing (i.e., abandoning in place) equipment, denying entry to a site, and so forth. A large number of catastrophic events have occurred during the end or termination stages of such events when personnel are fatigued and resources are in a state of transition from active event participation to a return to service.

(A) Requisite Knowledge.

PPE characteristics, hazard and risk identification, isolation techniques, statutory requirements identifying responsible parties, accountability system use, reporting methods, and postincident analysis techniques.

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(B) Requisite Skills.

Selection and use of ~~task and hazard~~hazard-specific PPE, decontamination~~,~~ of PPE; use of barrier protection techniques, data collection and recordkeeping/reporting protocols, postincident analysis activities.

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 25 14:54:32 EDT 2018

Committee Statement

Committee Statement: The committee has made these changes in order to comply with the correct development of a JPR as well as to include new material that was not included in the previous revision.

Response Message: FR-81-NFPA 1006-2018

First Revision No. 83-NFPA 1006-2018 [Section No. 12.3 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 13.2 and ~~12.3.1 through 12.3.5~~ 13.3 shall be met prior to technician-level qualification in machinery rescue.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 08:44:46 EDT 2018

Committee Statement

Committee Statement: The committee has made this change in order to reduce confusion.

Response Message: FR-83-NFPA 1006-2018

First Revision No. 84-NFPA 1006-2018 [Section No. 12.3.1]

13.3.1*

Plan for a large machinery incident, and conduct initial and ongoing size-up, given agency guidelines, planning forms, and operations-level machinery incident or simulation, so that a standard approach is used during training and operational scenarios; emergency situation hazards are identified; isolation methods and scene security measures are considered; fire suppression and safety measures are identified; machinery stabilization needs are evaluated; and resource needs are identified and documented for future use.

A.13.3.1

It is the intent of the committee that the differentiation between awareness level ~~Level I~~ and operations ~~Level~~ level ~~II~~ incidents correlate to both the environment in which the rescue is to be conducted as well as the level or degree of entrapment. It is recommended that provider agencies develop clear guidelines for making this determination based on the AHJ's resources and capabilities.

~~Level I~~ Awareness level rescue skills are applicable to vehicle or machinery events that involve simple or small machinery, that are limited to digital entrapment of the victim, and that involve environments where rescuer intervention does not constitute a high level of risk to either the victim or rescuers, based on the environment or other factors.

~~Level II~~ Operations level skills apply to those incidents that involve heavy machinery; the application of complex extrication processes; the presence of multiple uncommon concurrent hazards; or situations including more than digital entrapment of a victim.

(A) Requisite Knowledge.

Operational protocols, specific planning forms, types of large, commercial/heavy machinery common to the AHJ boundaries, machinery hazards, incident support operations and resources, machinery anatomy, and fire suppression and safety measures.

(B) Requisite Skills.

The ability to apply operational protocols, select specific planning forms based on the types of large machinery, identify and evaluate various types of large machinery within the AHJ boundaries, request support and resources, identify large machinery anatomy, and determine the required fire suppression and safety measures. ~~Level I~~ Awareness level rescue skills are applicable to vehicle or machinery events that involve simple or small machinery, are limited to digital entrapment of the victim, and involve environments where rescuer intervention does not constitute a high level of risk to either the victim or rescuers based on the environment or other factors. ~~Level II~~ Operations level skills apply to those incidents that involve heavy machinery, complex extrication processes, multiple uncommon concurrent hazards, or more than digital entrapment of a victim.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 08:47:02 EDT 2018

Committee Statement

Committee Statement: These changes were made as they were missed from the previous revision cycle.

Response Message: FR-84-NFPA 1006-2018

First Revision No. 85-NFPA 1006-2018 [Section No. 13.1 [Excluding any Sub-Sections]]

~~The job performance requirements defined in~~ 13.1.1 ~~through~~ 13.1.5 ~~shall be met prior to awareness level qualification in cave rescue.~~ Prior to qualification at the awareness level in cave rescue, the individual shall meet the requirements in 1.5 (1) as defined by the AHJ in addition to the job performance requirements defined in Section 14.1 .

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 08:57:05 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-85-NFPA 1006-2018

First Revision No. 86-NFPA 1006-2018 [Section No. 13.1.2]

14.1.2*

Conduct a size-up of a cave incident, given an incident and background information, site maps, charts, diagrams, blueprints, forms, information from technical resources and on-site personnel, monitoring equipment, and personal protective equipment (PPE) necessary to perform the assessment, so that existing and potential conditions within the cave and the rescue area are evaluated; general and site-specific hazards are identified; witnesses are interviewed; the total number and probability of victim ~~existence~~ presence , number, condition, and location is determined; a risk/benefit analysis is performed; potential for rapid, nonentry rescues or victim self-rescue is recognized; ventilation requirements are determined; entry and egress points are identified; and specialized resource needs are identified.

(A) Requisite Knowledge.

Methods to distinguish geologic ~~and construction types,~~ collapse mechanics, and other contributing factors such as severe environmental conditions and other general hazards; need to immediately secure ~~"competent person"~~ a site-specific SME or witness; signs and evidence of victim involvement, number, and location; jurisdictional and community resource lists and agreements; personnel training level and availability; risk/benefit analysis; protocols; incident management system (IMS); and all applicable regulations, laws, and standards; cave hazards and characteristics~~,~~ ; specialized resource requirements~~,~~ ; information sources~~,~~ ; search guidelines~~,~~ ; risk/benefit analysis criteria~~,~~ ; ventilation requirements~~,~~ ; means of controlled entry and egress of ~~cave spaces~~ caves ~~,~~ ; and terminology.

(B) Requisite Skills.

Categorize geology, identify type and degree of collapse, and determine severe environmental conditions with implications for secondary collapse and victim survivability; demonstrate interview techniques; implement protocols and resource acquisition agreements; implement public works utility notification, response, and location procedures; perform a risk/benefit analysis for determining self-rescue, rescue, or recovery mode; implement an IMS for span of control; ~~and~~ apply governing regulations, laws, and standards~~. The~~ ; the ability to interpret size-up information, and choose and utilize PPE, identify hazard mitigation options, identify potential victim locations, and recognize characteristics and hazards of ~~manmade~~ man-made ~~cave spaces~~ caves .

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 08:58:55 EDT 2018

Committee Statement

Committee Statement: These changes were editorial in nature and to provide clarification as to whom would be needed at the incident, with regards to an SME versus a "competent person".

Response Message: FR-86-NFPA 1006-2018

First Revision No. 88-NFPA 1006-2018 [Section No. 13.2 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 5.2, ~~Section~~ 14.1, and ~~13.2.1 through 13.2.15~~ 14.2 shall be met prior to operations-level qualification in cave rescue.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 09:03:09 EDT 2018

Committee Statement

Committee Statement: These changes have been made in order to reduce confusion.

Response Message: FR-88-NFPA 1006-2018

First Revision No. 214-NFPA 1006-2018 [Section No. 13.2.1 [Excluding any Sub-Sections]]

Establish ~~and maintain~~ entrance control, given perimeter markings that can be recognized and understood by others, perimeter boundaries are communicated to ~~Incident Command~~ incident command , and only authorized personnel are allowed access to the rescue scene, so that all known entrances are identified, maintained, and secured.

Submitter Information Verification

Committee:

Submittal Date: Thu Aug 02 12:41:28 EDT 2018

Committee Statement

Committee Statement: These changes were made in order to comply with proper JPR formatting.

Response Message: FR-214-NFPA 1006-2018

First Revision No. 94-NFPA 1006-2018 [Section No. 13.2.12(A)]

(A) Requisite Knowledge.

Spinal management techniques, victim packaging techniques, use of vapor barriers to minimize further hypothermic injury, limitations and use of low-profile packaging devices and equipment, methods to ensure design limitations are not exceeded, and the similarities and differences between packaging for ~~cave space~~ caves and other types of rescue.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 09:12:27 EDT 2018

Committee Statement

Committee Statement: This change was editorial in nature.

Response Message: FR-94-NFPA 1006-2018

First Revision No. 215-NFPA 1006-2018 [Section No. 13.2.13 [Excluding any Sub-Sections]]

~~Construct and use~~ Manage rope rescue systems as a member of a cave rescue rigging team, given rope rescue equipment designed for the cave rescue environment, so that natural anchor points are identified; anchoring hardware compatible with available anchor points is selected; load factors are considered; an anchor system is constructed; and ascent, descent, lifting, and lowering systems are attached and utilized as required.

Submitter Information Verification

Committee:

Submittal Date: Thu Aug 02 12:43:55 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper JPR formatting.

Response Message: FR-215-NFPA 1006-2018

First Revision No. 89-NFPA 1006-2018 [Section No. 13.2.15]

~~13.2.15*~~

~~Terminate an incident, given PPE specific to the incident, isolation barriers, and tool kit, so that rescuers and bystanders are protected and accounted for during termination operations; the party responsible is notified of any modification or damage created during the operational period; documentation of loss or material use is accounted for, scene documentation is performed, scene control is transferred to a responsible party; potential or existing hazards are communicated to that responsible party; debriefing and postincident analysis and critique are considered, and command is terminated.~~

~~A.13.2.15~~

~~The committee recognizes that technical rescue incidents pose unique challenges in terms of safely concluding or demobilizing an event. The sequence and manner in which resources are transitioned out of an event require careful analysis to ensure that scene and rescuer safety are not compromised. Risk management strategies can include both active and nonintervention strategies, such as not removing (abandoning in place) equipment, denying entry to a site, and so forth. A large number of catastrophic events have occurred during the end or termination stages of such events when personnel are fatigued and resources are in a state of transition from active event participation to a return to service.~~

~~(A)~~

~~PPE characteristics, hazard and risk identification, isolation techniques, statutory requirements identifying responsible parties, accountability system use, reporting methods, and postincident analysis techniques.~~

~~(B)~~

~~Selection and use of task and hazard specific PPE, decontamination, use of barrier protection techniques, data collection and recordkeeping/reporting protocols, and postincident analysis activities.~~

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 09:04:53 EDT 2018

Committee Statement

Committee Statement: The committee has deleted this as it is repeated in the Technician level section, which is where the committee believes it should reside.

Response Message: FR-89-NFPA 1006-2018

First Revision No. 90-NFPA 1006-2018 [Section No. 13.3 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 14.2 and ~~13.3.1 through 13.3.5~~ 14.3 shall be met prior to ~~technician level~~ technician-level qualification in cave rescue.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 09:05:47 EDT 2018

Committee Statement

Committee Statement: The committee has made this change in order to reduce confusion.

Response Message: FR-90-NFPA 1006-2018

First Revision No. 92-NFPA 1006-2018 [Section No. 13.3.1(A)]

(A) Requisite Knowledge.

Cave hazards, specialized resource requirements, information sources, search guidelines, risk/benefit analysis, means of controlled entry and egress of ~~cave spaces~~ caves , and terminology.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 09:07:35 EDT 2018

Committee Statement

Committee Statement: Editorial in nature.

Response Message: FR-92-NFPA 1006-2018

First Revision No. 93-NFPA 1006-2018 [Section No. 13.3.5]

14.2.15

Terminate the cave rescue incident, given isolation barriers, documentation forms, and a cave rescue tool kit, so that all personnel are accounted for and removed from the ~~space~~ cave , injuries are avoided, further entry into the ~~space~~ cave is denied, and the scene is secured.

(A) Requisite Knowledge.

Methods to secure a scene, forms for documentation, tools for securing ~~space~~ cave access points, accountability protocols, and methods for denying further entry.

(B) Requisite Skills.

The ability to apply regulations as needed, use tools, complete reporting documentation of the incident, and apply protocols.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 09:08:40 EDT 2018

Committee Statement

Committee Statement: The committee has renumbered this section as they believe this text is better than the text that is already in 13.2.15 as well as making some editorial changes to the text.

Response Message: FR-93-NFPA 1006-2018

First Revision No. 99-NFPA 1006-2018 [Section No. 14.1]

15.1 Awareness Level.

~~The~~ Prior to qualification at the awareness level in mine and tunnel rescue, the individual shall meet the requirements in 1.5 (1) as defined by the AHJ in addition to the job performance requirements defined in Section ~~14.1.1 through 14.1.5 shall be met prior to awareness level qualification in mine and tunnel rescue~~ 15.1 .

15.1.1

Identify the need for mine and tunnel rescue, given a mine and tunnel incident, so that resource needs are identified and the emergency response system for mine and tunnel rescue incident is initiated.

(A) Requisite Knowledge.

Equipment organization and tracking method, recognition of the hazards associated with mine and tunnel rescue incident and its entrapping characteristics, resource capabilities, and procedures for activation of emergency response for mine and tunnel incidents.

(B) Requisite Skills.

Ability to use communication equipment, track resources, and communicate needs.

~~**14.1.2***~~

~~Conduct a size-up of a mine and tunnel rescue incident, given an incident and background information, site maps, charts, diagrams, blueprints, forms, information from technical resources and on-site personnel, monitoring equipment, and personal protective equipment (PPE) necessary to perform the assessment, so that existing and potential conditions within the mine and tunnel and the rescue area are evaluated; general and site-specific hazards are identified; witnesses are interviewed; the total number and probability of victim existence, number, condition, and location is determined; a risk/benefit analysis is performed; potential for rapid, nonentry rescues or victim self-rescue is recognized; ventilation requirements are determined; entry and egress points are identified; and specialized resource needs are identified.~~

~~**A.14.1.2**~~

~~Personnel operating at awareness level need to be able to recognize hazardous situations and rescue problems that are beyond their capabilities. In these situations, awareness-level responders need to know where and how to request operations- or technician-level resources to manage difficult mine and tunnel rescue incidents. See Annex H for a full list of hazards and a better understanding of situations that can require an operations- or technician-level response.~~

~~Size-up conditions in a mine or tunnel incident have to be evaluated beyond the normal emergency response since many will occur far below the surface. Critical background information has to, at a minimum, include the following:~~

- ~~Schematic drawings of the spaces~~
- ~~Known or potential hazards from the space as well as the equipment working within the space~~
- ~~Number of workers and their potential positions based on job type~~
- ~~Access/egress problems~~
- ~~Environmental problems either naturally occurring or man-made~~
- ~~Special rescue resource availability~~
- ~~Risk/benefit analysis based on information that has been gathered~~

~~**(A)** Requisite Knowledge.~~

~~Methods to distinguish geologic and construction types, collapse mechanics, and other contributing factors such as severe environmental conditions and other general hazards; need to immediately secure "competent person" or witness; signs and evidence of victim involvement, number, and location; jurisdictional and community resource lists and agreements; personnel training level and availability; risk/benefit analysis; protocols; incident management system; and all applicable regulations, laws, and standards. Mine and tunnel hazards and characteristics, specialized resource requirements, information sources, search guidelines, risk/benefit analysis criteria, ventilation requirements, means of controlled entry and egress of mine and tunnel spaces, and terminology.~~

~~**(B)** Requisite Skills.~~

~~Categorize geology, identify type and degree of collapse, and determine severe environmental conditions with implications for secondary collapse and victim survivability; demonstrate interview techniques; implement protocols and resource acquisition agreements; implement public works utility notification, response, and location procedures; perform a risk/benefit analysis for determining self-rescue, rescue, or recovery mode; implement an incident management system (IMS) for span of control; and apply governing regulations, laws, and standards. The ability to interpret size-up information, choose and utilize personal protective equipment, identify hazard mitigation options, identify potential victim locations, and recognize characteristics and hazards of manmade mine and tunnel spaces.~~

See FR-224

~~**14.1.2**~~

~~Implement an emergency action plan, given size-up information and an incident, so that initial size-up information is utilized; prebriefing is given to rescuers; documentation is ongoing; the hazard zone is established; a risk/benefit analysis is conducted; rapid, nonentry rescues or victim self-rescues are performed; the rescue area and general area are made safe; strategy and tactics are confirmed and initiated for existing and potential conditions; rapid intervention team and operational tasks are assigned; other hazards are mitigated; rescue resources are staged; and a protective system is utilized.~~

~~**(A)** Requisite Knowledge.~~

~~Size-up information and documentation; need to brief rescuers; areas that could be affected by collapse; variables to factor risk/benefit analysis; criteria for rapid, nonentry rescues; methods to control hazards in the general area; options for strategy and tactical approach by factoring time frame, risk/benefit, approved shoring techniques, and personnel and equipment available; incident management system; rescue personnel and equipment cache staging; and options for victim isolation and protective systems.~~

~~**(B)** Requisite Skills.~~

~~The ability to use and document tactical worksheets; disseminate information; understand mechanics and extent of collapse effects; perform risk/benefit analysis; execute rapid, nonentry rescues; mitigate hazards by isolation, removal, or control; choose strategy and tactics that will enhance successful outcome; use IMS and resource staging; and apply choice of isolation and protective system promptly to surround victim.~~

15.1.2*

Implement support operations at mine and tunnel emergencies, given an assignment, equipment, and other resources, so that a resource cache is managed, scene lighting is provided for the tasks to be undertaken, environmental concerns are managed, a cut station is established, supplemental power is provided for all equipment, atmospheric monitoring and ventilation are implemented, personnel rehab is facilitated, operations proceed without interruption, extrication methods are in place, and the support operations facilitate rescue operational objectives.

(A) Requisite Knowledge.

Equipment organization and tracking methods, lighting resources, dewatering methods, shelter and thermal control options, basic carpentry methods, hand and power tool applications, atmospheric monitoring protocol, rehab criteria, and extrication and removal equipment options.

(B) Requisite Skills.

The ability to track equipment inventory, provide power, use lighting, choose and deploy dewatering techniques, acquire or construct structures for shelter and thermal protection, select rehab areas and personnel rotations, operate atmospheric monitoring and ventilation equipment, and perform patient packaging and removal.

15.1.3

Assist in establishing scene safety zones, given a mine and tunnel incident, scene security barriers, incident location, incident information, and PPE, so that action hot, warm, and cold safety zones are designated; zone perimeters are consistent with incident requirements; perimeter markings can be recognized and understood by others; zone boundaries are communicated to incident command; and personnel access to the rescue scene is managed.

(A) Requisite Knowledge.

Use and selection of hazard-specific PPE, traffic control flow and concepts, types of control devices and tools, types of existing and potential hazards, methods of hazard mitigation, organizational standard operating procedure, and types of zones and staffing requirements.

(B) Requisite Skills.

The ability to select and use hazard-specific PPE, apply traffic control concepts, position traffic control devices, identify and mitigate existing or potential hazards, and apply zone identification and personal safety techniques.

~~**14.1.3**~~

~~Initiate the IMS given a trench or excavation collapse incident, so that scene management is initiated, initial command structure is identified, resource tracking and accountability is established, and the incident action plan is developed.~~

~~**(A)** Requisite Knowledge.~~

~~IMS structure, implementation procedures, expansion methodology, resource management techniques, tracking methods, incident action plan components, accountability systems, IMS documentation forms, and rescuer rehabilitation criteria.~~

~~**(B)** Requisite Skills.~~

~~Ability to utilize IMS forms and command tools, and use communication devices and accountability tracking systems.~~

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 09:32:32 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-99-NFPA 1006-2018

First Revision No. 96-NFPA 1006-2018 [Section No. 14.2 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 5.2, ~~Section~~ 15.1, and ~~14.2.1 through 14.2.16~~ 15.2 shall be met prior to operations-level qualification in mine and tunnel rescue.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 09:26:39 EDT 2018

Committee Statement

Committee Statement: These changes were made in order to reduce confusion.

Response Message: FR-96-NFPA 1006-2018

First Revision No. 179-NFPA 1006-2018 [Section No. 14.2.2]

~~14.2.2*~~

~~Establish scene safety zones, given a mine and tunnel incident, scene security barriers, incident location, incident information, and PPE, so that action hot, warm, and cold safety zones are designated; zone perimeters are consistent with incident requirements; perimeter markings can be recognized and understood by others; zone boundaries are communicated to incident command; and personnel access to the rescue scene is managed.~~

~~A.14.2.2~~

~~Scene safety zones will be established based on the involved area and the projected resources needed to control the incident. These should be easily identified work areas, regardless of the incident size or type, and should share some of the same characteristics, as follows:~~

- ~~Well marked and easy to access~~
- ~~Large enough to contain the equipment and personnel operating in the area~~
- ~~Secure from media, general public, and non-essential personnel access~~
- ~~With personnel accountability entry and exit points~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Use and selection of PPE, traffic control flow and concepts, types of control devices and tools, types of existing and potential hazards, methods of hazard mitigation, organizational standard operating procedure, and types of zones and staffing requirements.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to select and use PPE, apply traffic control concepts, position traffic control devices, identify and mitigate existing or potential hazards, and apply zone identification and personal safety techniques.~~

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 14:29:33 EDT 2018

Committee Statement

Committee Statement: The committee is deleting this as they believe it is already covered in the new text that was created for 1.5(1)

Response Message: FR-179-NFPA 1006-2018

First Revision No. 100-NFPA 1006-2018 [Sections 14.2.4, 14.2.5]

15.2.3*

Conduct atmospheric monitoring of the mine and tunnel environment, given hazard-specific PPE, atmospheric monitoring equipment, and reference material, so that atmospheric readings are continually assessed, readings are documented, and changes in the involved area are tracked and communicated to the incident command post (ICP).

A.15.2.3

The intent of 15.2.3 is for the rescuer to anticipate additional atmospheric hazards during the rescue operation. Atmospheric monitoring information can be derived from several sources at the time of the incident. Rescuers should be in contact with the responsible person at the incident to determine what atmospheric records have been kept during the normal operation periods so they have a basis to determine the projected hazard levels.

(A) Requisite Knowledge.

Capabilities and limitations of monitoring equipment, calibration methods, atmospheric hazards associated with mine and tunnel spaces and underground construction, hazard-specific PPE required for mine and tunnel rescue, use of reference material specific to mine and tunnel rescue, and communication methods.

(B) Requisite Skills.

The ability to use and calibrate atmospheric monitoring equipment, interpret resource information, choose and utilize hazard-specific PPE, operate communications equipment, and utilize tracking documents.

15.2.4*

Establish mine and tunnel ventilation, given size-up information and atmospheric monitoring results, so that airflow needs are determined, the required airflow is established and maintained, required air changes are accomplished, and atmospheric hazards are monitored and controlled.

A.15.2.4

Each space will have specific airflow needs based on size, air hazards, and air change requirements. Rescuers need to be familiar with the methods and procedures to support, maintain, or ~~re-establish~~ reestablish air movement within the space(s) utilizing in-place air movement systems. Rescuers also need to be familiar with the types, uses, applications, and limitations of auxiliary air movement equipment used in these spaces.

(A) Requisite Knowledge.

Airflow criteria for mine and tunnel rescue, potential space configurations, types of ventilation equipment, and atmospheric hazards that are present in work spaces and that can pose problems during the rescue.

(B) Requisite Skills.

The ability to set up and operate ventilation equipment, establish required airflow based on mine and tunnel configuration and calculate using recognized measuring equipment , and initiate monitoring and hazard control measures specific to ventilation.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 09:38:23 EDT 2018

Committee Statement

Committee The committee has made these changes as PPE is chosen/selected based on the type of hazard

Statement:	that one is expected or could potentially be exposed to, rather than the task that is going to be performed. Other changes were made in order to clarify the use of specific equipment and to ensure the correct ones were being used.
Response Message:	FR-100-NFPA 1006-2018

First Revision No. 181-NFPA 1006-2018 [Section No. 14.2.6]

15.2.5

Establish dewatering operations, given a mine and tunnel collapse incident, dewatering pumps, hose, and appliances, so that water is removed and directed away from the affected area, atmospheric conditions are not affected by the pumping equipment, and there are no power or flow interruptions during the operation.

(A) Requisite Knowledge.

Basic pump theory and hydraulics, hose and pump configurations for mines and tunnels, and power supply requirements for dewatering equipment.

(B) Requisite Skills.

The ability to connect components and create a dewatering ~~systemand~~ system and pump operation, troubleshooting, and hose management.

15.2.6*

Participate in a preresCue survey given a tunnel or mine rescue preplan, the specific location targeted in the rescue preplan, an operations-level tunnel rescue tool kit, and an operations-level tunnel rescue team, so that the targeted location or distance into the space is attained using the tools and techniques designated for use during an actual rescue operation, all elements of the rescue plan are implemented, and the full scope of the plan is exercised.

A.15.2.6

Tunnels under construction and former mines pose unique hazards and challenging working conditions that might be unfamiliar to potential rescuers. Skills, tools, and capabilities to manage the risks posed by this environment can be highly specialized and are not commonly found in most operations-level or even technician-level technical rescue tool kits for other disciplines. Because teams with access to these expanded capabilities are more unique, they often have longer reflex and response times even beyond those associated with technician-level resources in other disciplines. This potential for delay in service could either expose rescuers at the scene to additional risk by attempting to perform a rescue without fully comprehending the hazards or increase the risk to the victim or the public by deferring any action until arrival of technician-level resources. While this is a problem common to many technical rescue disciplines, the gap is even more pronounced in the tunnel and mine environment. To help reduce the risks to the responders at this level while enabling a designated scope of service delivery under specific conditions, a comprehensive survey and prerescue plan needs to be present and physically exercised prior to deploying resources at this level. The prerescue plan clearly establishes conditions for entry for rescue at the operations level and the specific methods to be employed. These conditions for entry will ultimately be established by the AHJ, but typically operations-level resources are limited to responding to emergencies in the space that can be definitively determined as not caused by, or otherwise impacting, the environment in the space. Resources at this level can conduct entry only if they can determine with a reasonable degree of certainty that there are no atmospheric hazards, fire, or collapse, and that the rescue operations will not unintentionally introduce those hazards. Because each tunnel and space is unique, the elements of the prerescue rescue plan must specifically identify how those conditions are established and outline the definitive criteria to allow entry. The operations-level resources shall than practice the prerescue plan and each member who might be required to enter the space should be familiar with the actual work environment by physically being present in the space.

(A) Requisite Knowledge.

Tunnel preplan, contents and use of the operations-level tunnel rescue tool kit, and organization policies and procedures for operations tunnel rescue.

(B) Requisite Skills.

The ability to assemble the required tools and PPE; assess conditions at the site; ensure all required preentry elements are in place; and penetrate into the space using the designated tools, PPE, and transportation modes.

15.2.7*

Employ egress-only respiratory protection given a rescue scenario requiring emergency egress and a device recognized by the AHJ as an emergency egress respiratory protection device so that the conditions for use are recognized, the device is donned, egress is accomplished, and the rescuer is protected from harm.

A.15.2.7

Individuals operating at the operations level would not be expected to make entry into a tunnel or mine where an atmospheric hazard is known to exist. However, an entry team could be deployed and a subsequent hazard or condition might develop or be detected that would require immediate evacuation. In such cases, the size of the space or length of tunnel might prevent safe egress before the individual is overcome by exposure from the toxic or oxygen-deficient atmosphere. Mining and tunneling regulations typically require all workers to have access to “self-rescuers” or “self-contained self-rescuers” for use in an evacuation. In some cases emergency response agencies that do not have access to such devices have used conventional open circuit SCBA, requiring entrants to carry them with them and don them in the event of an emergency. Care must be taken to ensure the service life of the SCBA exceeds the potential time it could take to make egress or reach an area of refuge under emergency conditions.

(A) Requisite Knowledge.

Situations requiring emergency egress; location, deployment, and methods of donning an emergency egress protection device.

(B) Requisite Skills.

The ability to deploy and don the recognized emergency egress respiratory protection device.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 14:49:29 EDT 2018

Committee Statement

Committee Statement: The committee has added this new text as it was omitted during the last revision cycle.

Response Message: FR-181-NFPA 1006-2018

First Revision No. 101-NFPA 1006-2018 [Sections 14.2.7, 14.2.8, 14.2.9]

~~14.2.8*~~

~~Implement support operations at mine and tunnel rescue scene given an assignment, equipment, and other resources, so that a resource staging area is established and managed, scene lighting is provided for the tasks to be undertaken, environmental concerns are managed, supplemental power is provided for all equipment, atmospheric monitoring and ventilation are implemented, personnel rehab is facilitated, provisions for extended patient care and prolonged search and recovery are established, and the support operations facilitate operational objectives.~~

~~A.14.2.7~~

~~Individuals operating at the operations-level would not be expected to make entry into a tunnel or mine where an atmospheric hazard is known to exist. However, an entry team could be deployed and a subsequent hazard or condition might develop or be detected that would require immediate evacuation. In such cases the size of the space or length of tunnel might prevent safe egress before the individual is overcome by exposure of the toxic or oxygen-deficient atmosphere. Mining and tunneling regulations typically require all workers to have access to self rescuers or self-contained self rescuers for use in an evacuation. In some cases emergency response agencies that do not have access to such devices have used conventional open circuit SCBA, requiring entrants to carry them with them and don them in the event of an emergency. Care must be taken to ensure that the service life of the SCBA exceeds the potential time it might take to make egress or reach an area of refuge under emergency conditions.~~

~~(A) Requisite Knowledge.~~

~~Equipment organization and tracking methods, lighting resources, dewatering methods, thermal control options, hand and power tool applications, atmospheric monitoring protocol, rehab criteria, extrication and removal equipment options, and logistics and supply methodology for extended operations.~~

~~(B) Requisite Skills.~~

~~The ability to track equipment inventory, provide power, use lighting, choose and deploy dewatering techniques, use thermal control personal protective equipment (PPE) for rescuers and victims, select rehab areas and personnel rotations, and operate atmospheric monitoring and ventilation equipment.~~

15.2.8*

~~Develop~~ Participate in a mine and tunnel rescue incident action plan, given a mine and tunnel collapse incident and size-up information, so that size-up information and the IMS are utilized~~;~~, safety requirements and communication needs are addressed~~;~~, existing and potential conditions in the mine and tunnel space are identified~~;~~, and incident objectives are established and resources are managed.

A.15.2.8

Tunnels under construction and former mines pose unique hazards and challenging working conditions that could be unfamiliar to potential rescuers. Skills, tools, and capabilities to manage the risks posed by this environment can be highly specialized and are not commonly found in most operations-level or even technician-level technical rescue tool kits for other disciplines. ~~Since~~ Because teams with access to these expanded capabilities are more unique, they often have longer reflex and response times, even beyond those associated with technician-level resources in other disciplines. This potential for delay in service could either expose rescuers at the scene to additional risk by attempting to perform a rescue without fully comprehending the hazards or by increasing the risk to the victim or the public by deferring any action until arrival of technician-level resources. While this is a problem common to many technical rescue disciplines, the gap is even more pronounced in the tunnel and mine environment. To help reduce the risks to the responders at this level while enabling a designated scope of service delivery under specific conditions, a comprehensive survey and prerescue plan needs to be present and physically exercised prior to deploying resources at this level. The prerescue plan clearly establishes conditions for entry for rescue at the operations-level and the specific methods to be employed. These conditions for entry will ultimately be established by the AHJ, but typically operations-level resources are limited to responding to emergencies in the space that can be definitively determined as not caused by, or otherwise affecting, the environment in the space. Resources at this level can conduct entry only if they can determine with a reasonable degree of certainty that there are no atmospheric hazards, fire, and collapse and that the rescue operations will not unintentionally introduce those hazards. Because each tunnel and space is unique, the elements of the prerescue plan must specifically identify how those conditions are established and outline the definitive criteria to allow entry. The operations-level resources ~~shall~~ should then practice the prerescue plan and each member who might be required to enter the space ~~shall~~ should be familiar with the actual work environment by physically being present in the space.

(A) Requisite Knowledge.

Incident-specific size-up information, incident management system, safety planning, communication resources, mine and tunnel hazards and work conditions, and specialized resources for mine and tunnel rescue.

(B) Requisite Skills.

The ability to use size-up assessment information, implement an incident management system, identify special resource needs, create written documentation, and develop safety and communications plans.

15.2.9

Participate in the development of a breathing air management plan, given breathing apparatus, maintenance equipment, refill materials, and maintenance and tracking documentation, so that a breathing air maintenance program and repair facility can be established with a repair and usage schedule.

(A) Requisite Knowledge.

Apparatus use, apparatus capabilities, apparatus inspection, apparatus disassembly, apparatus repair, component identification, apparatus testing, and apparatus rotation schedule.

(B) Requisite Skills.

The ability to don apparatus, measure apparatus capabilities, inspect apparatus, disassemble apparatus, repair apparatus, identify components, test apparatus, and create an apparatus rotation schedule.

Detail FR-223

15.2.10

Implement emergency procedures to provide respiratory protection and self-rescue, given a mine and tunnel rescue incident, a device to provide emergency respiratory protection, and conditions that require self-rescue, so that the device is properly donned, respiratory protection is maintained, and emergency egress is accomplished.

(A) Requisite Knowledge.

Conditions requiring egress, conditions requiring donning respiratory protection, methods for implementing emergency egress and donning self-rescue devices.

(B) Requisite Skills.

The ability to recognize conditions that require self-rescue, don an emergency egress self-rescue device, and accomplish self-rescue.

15.2.11

Prepare for entry into a mine and tunnel space, given size-up information, mine and tunnel classification, site map, and a mine and tunnel rescue tool kit, so that hazard-specific PPE is checked for readiness~~;~~ , specific routes for rescue are identified~~;~~ , accountability is maintained~~;~~ , the rapid intervention crew (RIC) is standing by~~;~~ , entry team readiness is confirmed~~;~~ , surface-to-underground and rescue team member to rescue team member communications systems are in place, continuous atmospheric monitoring capabilities are used, lighting is established~~;~~ , refuge locations are identified, and safe access and egress control points are identified and managed.

(A) Requisite Knowledge.

Use of technical and size-up information, knowledge of mine and tunnel rescue PPE, mine and tunnel classifications, mapping and routing systems, accountability systems, rescue team requirements, surface-to-underground and rescue team member to rescue team member communications methods, atmospheric monitoring requirements, lighting methods, use and operation of refuge locations, and mine and tunnel ingress and egress control points.

(B) Requisite Skills.

The ability to choose and use hazard-specific PPE, follow identified rescue routes, interpret information sources, utilize accountability systems, operate surface-to-underground and rescue team member to rescue team member communications systems, utilize monitoring equipment, use and operation of refuge stations, and utilize lighting equipment.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 09:43:19 EDT 2018

Committee Statement

Committee Statement:	The committee has made these changes to include things that were missed from the last revision cycle, as well as some editorial and re-numbering changes. The committee is also deleting 14.2.7 and the associated annex as it is already covered in the new text for 1.5(1)
Response Message:	FR-101-NFPA 1006-2018

First Revision No. 183-NFPA 1006-2018 [Section No. 14.2.10]

15.2.12*

Enter a mine and tunnel for rescue as a member of a team, given hazard-specific PPE, ~~identified access/egress routes, a~~ egress-only emergency respiratory protection, a site-specific rescue preplan, a mine and tunnel rescue tool kit, and a ~~pre-entry~~ preentry briefing, so that identified routes are followed~~;~~ , specific mine and tunnel environmental obstacles are negotiated~~;~~ , victims are located~~;~~ , patient respiratory protection is initiated~~;~~ , disentanglement is accomplished~~;~~ , atmospheric monitoring is maintained~~;~~ , hazard assessment continues~~;~~ , and ~~secondary~~ collapse potential is assessed.

(A) Requisite Knowledge.

Use of technical and size-up information, construction and use of rope or other systems for access as applicable to a given environment, methods for following identified routes, classifications of mine and tunnel spaces, respiratory protection options, atmospheric monitoring considerations, and hazard assessment methods.

(B) Requisite Skills.

The ability to interpret information sources; assess hazards; construct and use rope or other systems for access if applicable to the environment entered; apply PPE; interpret symbols; locate and use identified routes for rescue, surface, and mine and tunnel movement; and operate monitoring equipment.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 15:08:35 EDT 2018

Committee Statement

Committee Statement: The committee has made these changes in order to ensure that the individual is qualified in the use of proper PPE and respiratory protection.

Response Message: FR-183-NFPA 1006-2018

First Revision No. 184-NFPA 1006-2018 [Section No. 14.2.12 [Excluding any Sub-Sections]]

Package the victim for removal from a mine and tunnel, given a mine and tunnel tool kit and patient transfer devices identified for use in the rescue preplan , so that design limitations are not exceeded~~;~~ , the victim is given the best profile for removal~~;~~ , and further harm to the victim is minimized.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 15:11:37 EDT 2018

Committee Statement

Committee Statement: The committee has made this change in order to ensure the individual is qualified in using the transfer devices that were identified in the pre-plan.

Response Message: FR-184-NFPA 1006-2018

First Revision No. 185-NFPA 1006-2018 [Section No. 14.2.14]

~~14.2.15*~~

~~Terminate an incident, given PPE specific to the incident, isolation barriers, and tool kit, so that rescuers and bystanders are protected and accounted for during termination operations; the party responsible is notified of any modification or damage created during the operational period; documentation of loss or material use is accounted for, scene documentation is performed, scene control is transferred to a responsible party; potential or existing hazards are communicated to that responsible party; debriefing and postincident analysis and critique are considered, and command is terminated.~~

~~A.14.2.14~~

~~The committee recognizes that technical rescue incidents pose unique challenges in terms of safely concluding or demobilizing an event. The sequence and manner in which resources are transitioned out of an event require careful analysis to ensure that scene and rescuer safety are not compromised. Risk management strategies can include both active and nonintervention strategies, such as not removing (abandoning in place) equipment, denying entry to a site, and so forth. A large number of catastrophic events have occurred during the end or termination stages of such events when personnel are fatigued and resources are in a state of transition from active event participation to a return to service.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~PPE characteristics, hazard and risk identification, isolation techniques, statutory requirements identifying responsible parties, accountability system use, reporting methods, and postincident analysis techniques.~~

~~(B)~~ ~~Requisite Skills.~~

~~Selection and use of task and hazard specific PPE, decontamination, use of barrier protection techniques, data collection and recordkeeping/reporting protocols, postincident analysis activities.~~

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 15:50:09 EDT 2018

Committee Statement

Committee Statement: The committee is deleting this as it is in the technician level requirements of this document.

Response Message: FR-185-NFPA 1006-2018

First Revision No. 104-NFPA 1006-2018 [Section No. 14.3 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 15.2 and ~~14.3.1 through 14.3.10~~ 15.3 shall be met prior to ~~technician level~~ technician-level qualification in mine and tunnel rescue.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 09:53:10 EDT 2018

Committee Statement

Committee Statement: These changes were made to reduce confusion.

Response Message: FR-104-NFPA 1006-2018

First Revision No. 176-NFPA 1006-2018 [Section No. 14.3.1]

15.3.1*

~~Select and use specialized PPE and~~ Use of atmosphere-supplying respirators and life-support equipment designated by the AHJ , consistent with the size, shape, and length of the tunnel or mine and the most demanding potential work environment , given a rescue mission, so that the rescuer is protected from atmospheric hazards, ~~temperature extremes, and environmental hazards;~~ emergency procedures are followed, work load and rescuer physiology are considered, service life and reserves are not exceeded, self-rescue needs have been evaluated and provided for~~;~~ , and ~~pre-entry~~ preentry safety checks have been conducted.

A.15.3.1

The intent ~~of this requirement~~ 15.3.1 is to ensure that ~~Level II technicians~~ technician-level rescuers have evaluated and selected proper personal protective equipment (PPE) that includes, but is not limited to, long-duration closed-circuit closed circuit breathing apparatus (CCBA) and other specialized respiratory protective equipment. In addition to the use of PPE, additional concerns must be addressed, such as the physiological impact of long work cycles while using PPE and protracted exposure to the tunnel and mine environment.

(A) Requisite Knowledge.

Manufacturer's recommendations; standard operating procedures; basic signals and communications techniques; selection criteria of service life; closed or open circuits; personal escape techniques; applications for, and capabilities of, personal escape equipment; hazard assessment; and AHJ protocols for rest and rehydration.

(B) Requisite Skills.

The ability to use PPE according to the manufacturer's directions, proficiency in emergency procedures, proficiency in communications, ability to don and doff equipment in an expedient manner, and use of preentry checklists.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 11:37:28 EDT 2018

Committee Statement

Committee Statement: The committee has made these changes as PPE is selected based on hazards in which one could be exposed to. Also some of these changes were made as terminology has changed between editions and needed to be corrected/updated and items that were missed during the last revision cycle.

Response Message: FR-176-NFPA 1006-2018

First Revision No. 105-NFPA 1006-2018 [New Section after 14.3.1(B)]

15.3.2

Implement support operations at mine and tunnel rescue scene, given equipment and other resources, so that a resource staging area is established and managed, scene lighting is provided for the tasks to be undertaken, environmental concerns are managed, supplemental power is provided for all equipment, atmospheric monitoring and ventilation are implemented, personnel rehabilitation is facilitated, provisions for extended patient care and prolonged search and recovery are established, and the support operations facilitate operational objectives.

(A) Requisite Knowledge.

Equipment organization and tracking methods, lighting resources, dewatering methods, thermal control options, hand and power tool applications, atmospheric monitoring protocol, rehabilitation criteria, extrication and removal equipment options, and logistics and supply methodology for extended operations.

(B) Requisite Skills.

The ability to track equipment inventory, provide power, use lighting, choose and deploy dewatering techniques, use thermal control and task-specific personal protective equipment (PPE) for rescuers and victims, select rehabilitation areas and personnel rotations, and operate atmospheric monitoring and ventilation equipment.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 09:56:11 EDT 2018

Committee Statement

Committee Statement: The committee is adding this section of text as it should have been done so in the previous revision.

Response Message: FR-105-NFPA 1006-2018

First Revision No. 108-NFPA 1006-2018 [Section No. 14.3.2]

15.3.3*

Coordinate the use of specialized resources at a mine and tunnel rescue incident, given a prebriefing, hazard-specific PPE, communications equipment, size-up information, specialized resources, ~~and an~~ incident action plan, ventilation plans, and refuge stations, so that specialized resources usage supports incident objectives; hazards are identified, avoided, monitored, or controlled; and rescuer and resource safety is maintained.

(A) Requisite Knowledge.

Specialized resources specific to mine and tunnel rescue~~,~~ ; IMS~~,~~ ; use of incident action plans, ventilation plans, and refuge stations; communications methods~~,~~ ; and mine and tunnel rescue hazards.

(B) Requisite Skills.

The ability to coordinate resources, implement IMS components, utilize incident action plans, operate ventilation systems, operate refuge stations, operate communications equipment, and interpret size-up information.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 10:14:51 EDT 2018

Committee Statement

Committee Statement: The committee has added this new text as they believe that there are things the individual at the technician level should be able to accomplish as well as including commonly used terms.

Response Message: FR-108-NFPA 1006-2018

First Revision No. 107-NFPA 1006-2018 [New Section after 14.3.2(B)]

15.3.4

Develop a breathing-air management plan given breathing apparatus, maintenance equipment, refill materials, and maintenance and tracking documentation, so that a breathing-air maintenance program and repair facility can be established with a repair and usage schedule.

(A) Requisite Knowledge.

Apparatus use, apparatus capabilities, apparatus inspection, apparatus disassembly, apparatus repair, component identification, apparatus testing, apparatus rotation schedule.

(B) Requisite Skills.

Ability to don apparatus, measure apparatus capabilities, inspect apparatus, disassemble apparatus, repair apparatus, identify components, test apparatus, and create an apparatus rotation schedule.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 10:11:27 EDT 2018

Committee Statement

Committee Statement: The committee has added this as it they believe this is a skill the individual at the technician level should be able to accomplish.

Response Message: FR-107-NFPA 1006-2018

First Revision No. 110-NFPA 1006-2018 [Sections 14.3.6, 14.3.7, 14.3.8, 14.3.9, 14.3.10]

15.3.8

Coordinate the use of heavy equipment, given hazard-specific PPE, means of communication, equipment and operator, and an assignment, so that common communications are established, equipment usage supports the operational objective, hazards are avoided, and rescuer and operator safety protocols are followed.

(A) Requisite Knowledge.

Types of heavy equipment; capabilities, application, and hazards of heavy equipment and rigging; safety protocols; and types and methods of communication.

(B) Requisite Skills.

The ability to use hand signals and radio equipment, recognize hazards, assess for operator and rescuer safety, and use hazard-specific PPE.

15.3.9*

Stabilize a collapsed mine and tunnel as a member of a team, given size-up information, hazard-specific PPE, a collapse assignment, a mine and tunnel rescue tool kit, engineering resources if needed, and specialized equipment necessary to complete the task, so that hazards are identified and acknowledged by team members, all unstable structural components are identified, egress routes are established, expert resource needs are determined and requested from command, load estimates are calculated for support system requirements, cribbing and shoring systems are constructed and monitored continuously for integrity, safety protocols are followed, rapid intervention crew (RIC) is staged, an accountability system is established, and progress is communicated as required.

(A) Requisite Knowledge.

Identification and required care of hazard-specific PPE, structural load calculations for required shoring system for stabilization, specific hazards associated with mine and tunnel collapse, hazard warning systems, specialized resource and equipment needs, communications and rescuer safety protocols, atmospheric monitoring equipment needs, identification of mine and tunnel configurations, characteristics and cause and associated effects of mine and tunnel collapse incidents, and recognition of potential signs of impending secondary collapse.

(B) Requisite Skills.

The ability to select and construct shoring systems to carry heavy loads, use hazard-specific PPE, perform load calculations, determine resource needs, select and operate basic and specialized tools and equipment, implement communications and rescuer safety protocol, and mitigate specific hazards associated with shoring tasks.

15.3.10

Conduct a search in a mine and tunnel collapse environment, given hazard-specific PPE, the mine and tunnel rescue tool kit, operational protocols, and size-up information, so that all victim locations and potential hazards are identified, marked, and reported; protocols are followed; the mode of operation can be determined; and rescuer safety is maintained.

(A) Requisite Knowledge.

Concepts and operation of the IMS as applied to the search function, application of specialty tools and locating devices, application of recognized marking systems, voice sounding techniques, potential victim locations, mine and tunnel construction and potential collapse types and their influence on the search function, operational protocols, and various hazards and their recognition.

(B) Requisite Skills.

The ability to implement an IMS, apply search techniques, use marking systems, identify and mitigate hazards, and select and use victim locating devices.

15.3.11*

Stabilize a vehicle or machine in a mine and tunnel environment, given a basic extrication tool kit and hazard-specific PPE, so that the vehicle or machinery is locked/tagged out during the rescue operation, vehicle or machinery is supported, rescue activities will not compromise vehicle or machinery stability, stabilization equipment can be monitored, and the risk to rescuers is minimized.

(A) Requisite Knowledge.

Types of stabilization devices, lock-out/tag-out procedures for vehicles and machinery, methods of vehicle and machinery movement, types of stabilization points and surfaces, AHJ policies and procedures, and vehicle and machinery construction components as they apply to stabilization.

(B) Requisite Skills.

The ability to apply and operate stabilization devices.

15.3.12

Disentangle victim(s), given a mine and tunnel incident involving vehicles or machinery, a mine and tunnel tool kit, hazard-specific PPE, and specialized equipment as needed, so that victim injury is prevented, victim protection is provided, and stabilization is maintained.

(A) Requisite Knowledge.

Tool selection and application, stabilization systems, protection methods, disentanglement points and techniques, and dynamics of disentanglement.

(B) Requisite Skills.

The ability to operate disentanglement tools, initiate protective measures, identify and eliminate points of entrapment, and maintain incident stability and scene safety.

15.3.13

Perform intervention tactics, as part of a team, on behalf of a team member who is unresponsive and has experienced a failure of their respiratory protection in a contaminated or hazardous atmosphere at the most remote location in a tunnel or mine; given an unresponsive team member in a tunnel, a team, and identified intervention tools, so that the member's exposure to the hazardous atmosphere is minimized, a survivable environment is provided, the unresponsive member is removed from the tunnel or to an area of refuge without further disruption to their respiratory protection, and all members are protected from harm.

(A) Requisite Knowledge.

Identification of intervention tools and techniques used by the agency; identification of emergency conditions and procedures in the event of a failure of the specific respiratory equipment used by the team; identification of areas of refuge, and methods of transporting an unresponsive team member while providing the greatest likelihood of survival.

(B) Requisite Skills.

Ability to apply and operate rapid intervention tools, redundant air supplies, emergency systems, and components of respiratory protection devices; manage patients, manage movement of tools, implement tactics, and use and operate refuge areas.

15.3.14

Implement tactics and techniques specific to the work environment typically found in tunnels and mines where there are exceptionally long travel distances between the work location and areas of refuge or points of egress, given a tunnel or mine rescue team, a tunnel or mine rescue tool kit, and a tunnel or mine rescue scenario, so that the work load is managed; injury to the team members is eliminated; team integrity, accountability, and communication is maintained; mission continuity is sustained; and the objective is achieved.

(A) Requisite Knowledge.

Identification of physiological effects on the wearer of closed-circuit and other specialty respiratory equipment; how work load, pace, and PPE impact heat retention and member fatigue; impacts on team size on mission continuity and team member intervention; and impact on travel distances on survival of victims and rescuers who encounter emergencies while in the tunnel.

(B) Requisite Skills.

Ability to structure team size, composition, and equipment to maximize potential success and minimize adverse impacts of unplanned events on the safety of the team members and mission continuity; and implement heat shedding and workload management techniques in the hot zone.

15.3.15*

Terminate the mine and tunnel incident, given PPE specific to the incident, isolation barriers, and tool kit, so that rescuers and bystanders are protected and accounted for during termination operations, the party responsible is notified of any modification or damage created during the operational period, documentation of loss or material use is accounted for, scene documentation is performed, scene control is transferred to a responsible party, potential or existing hazards are communicated to that responsible party, debriefing and post-incident analysis and critique are considered, and command is terminated.

A.15.3.15

The committee recognizes that technical rescue incidents pose unique challenges in terms of safely concluding or demobilizing an event. The sequence and manner in which resources are transitioned out of an event require careful analysis to ensure that scene and rescuer safety are not compromised. Risk management strategies can include both active and nonintervention strategies, such as not removing (i.e., abandoning in place) equipment, denying entry to a site, and so forth. A large number of catastrophic events have occurred during the end or termination stages of such events when personnel are fatigued and resources are in a state of transition from active event participation to a return to service.

(A) Requisite Knowledge.

Hazard-specific PPE characteristics, hazard and risk identification, isolation techniques, statutory requirements identifying responsible parties, accountability system use, reporting methods, and post-incident analysis techniques.

Global FR-70

(B) Requisite Skills.

Ability to select and use hazard-specific PPE, decontamination of PPE, use barrier protection techniques, implement data collection and recordkeeping/reporting protocols, and conduct post-incident analysis activities.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 10:22:53 EDT 2018

Committee Statement

Committee Statement: The committee has made these changes as PPE is chosen based on the hazard that one could be exposed to, rather than the task. Also the committee has added new text in order to provide the technician level individual with the skill and knowledge needed in order to terminate an incident. The committee has also added 14.3.13 and 14.3.14 as that was supposed to be included in the previous revision cycle, but was missed.

Response Message: FR-110-NFPA 1006-2018

First Revision No. 111-NFPA 1006-2018 [Section No. 15.1]

16.1 Awareness Level.

~~The~~ Prior to qualification at the awareness level in helicopter search and rescue, the individual shall meet the requirements in 1.5 (1) as defined by the AHJ in addition to the job performance requirements defined in Section 16.1 . ~~15.1.1 through 15.1.5 shall be met prior to awareness-level qualification in helicopter search and rescue.~~

16.1.1

Recognize ~~the need for~~ a technical search and rescue ~~resources at an~~ incident requiring the need for helicopter assets , given a ~~AHJ guidelines and an operations- or technician-level~~ technical rescue incident, so that the selected air assets support ~~need for additional resources is identified,~~ the ~~response system is initiated, the scene is secured and rendered safe until additional resources arrive, and awareness-level personnel are incorporated into the operational plan.~~ event's terminal objective.

(A) Requisite Knowledge.

Operational protocols, specific planning forms, types of incidents common to the AHJ, requiring aircraft hazards, incident support operations and resources, and safety measures.

(B) Requisite Skills.

The ability to apply operational protocols, select specific planning forms based on ~~the types of~~ incidents requiring aircraft , identify and evaluate various types of hazards within the jurisdiction familiar to the AHJ that would limit aircraft usage , request support and resources, and determine the required safety measures.

~~**15.1.2**~~

~~Establish scene safety zones, given an incident, scene security barriers, incident location, incident information, and personal protective equipment (PPE), so that safety zones are designated, zone perimeters are consistent with incident requirements, perimeter markings can be recognized and understood by others, zone boundaries are communicated to incident command, and only authorized personnel are allowed access to the scene.~~

~~**(A)** Requisite Knowledge.~~

~~Use and selection of PPE, zone or area control flow and concepts, types of control devices and tools, types of existing and potential hazards, methods of hazard mitigation, organizational standard operating procedure, and staffing requirements.~~

~~**(B)** Requisite Skills.~~

~~The ability to select and use PPE, apply crowd control concepts, position zone control devices, identify and mitigate existing or potential hazards, and personal safety techniques.~~

~~**15.1.3**~~

~~Identify and support an operations- or technician-level incident, given an incident, an assignment, incident action plan, and resources from the tool kit, so that the assignment is carried out, progress is reported to command, environmental concerns are managed, personnel rehabilitation is facilitated, and the incident action plan is supported.~~

~~**(A)** Requisite Knowledge.~~

~~AHJ operational protocols, hazard recognition, incident management, PPE selection, resource selection and use, scene support requirements including lighting, ventilation and monitoring hazards zones.~~

~~**(B)** Requisite Skills.~~

~~Apply operational protocols, function within an IMS, follow and implement an incident action plan, and report task progress status to supervisor or Incident Command.~~

~~**15.1.4**~~

~~Size up an incident, given an incident, background information and applicable reference materials, so that the operational mode is defined, resource availability and response time is considered, types of rescues are determined, the number of victims is ascertained, the last reported location of all victims is established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, search parameters are identified, and information required to develop an incident action plan is obtained.~~

~~**(A)** Requisite Knowledge.~~

~~Types of reference materials and their uses, risk/benefit assessment, availability and capability of the resources, elements of an action plan and related information, relationship of size-up to the IMS, and information gathering techniques and how that information is used in the size-up process.~~

~~**(B)** Requisite Skills.~~

~~The ability to read specific rescue reference materials, interview and gather information, relay information, manage witnesses, and use information sources.~~

16.1.2

Identify potential landing zones (LZs) and helispots, given a search and/or rescue incident, so that the rescuer can begin the mitigation of the general hazards and the use of PPE, providing for the safety of rescuers, victims, and others within the operational area.

(A) Requisite Knowledge.

LZ requirements of search and rescue (SAR) helicopters used by the AHJ, effects of rotor wash on terrain and materials; manufacturers' recommendations; policies, procedures, and guidelines for the appropriate AHJ; and applicable standards.

(B) Requisite Skills.

Set up an LZ for SAR helicopters used by the AHJ and removal of foreign objects and debris within the LZ and operational areas.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 12:15:55 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-111-NFPA 1006-2018

First Revision No. 112-NFPA 1006-2018 [Section No. 15.2 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 16.1 and ~~15.2.1 through 15.2.7~~ 16.2 shall be met prior to operations-level qualification in helicopter rescue.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 12:26:10 EDT 2018

Committee Statement

Committee Statement: This change was made in order to reduce confusion.

Response Message: FR-112-NFPA 1006-2018

First Revision No. 115-NFPA 1006-2018 [Section No. 15.2.4 [Excluding any Sub-Sections]]

Demonstrate airframe-specific emergency procedures while operating as a member of a flight/rescue crew, ground support, or others in or attached to the aircraft, given an assignment and airframe, so that pre- and postemergency operations are completed, airframe safety systems are engaged, and the aircraft is egressed within established time frames.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 12:28:51 EDT 2018

Committee Statement

Committee Statement: Editorial in nature.

Response Message: FR-115-NFPA 1006-2018

First Revision No. 116-NFPA 1006-2018 [Section No. 15.2.5(A)]

(A) Requisite Knowledge.

~~Observations~~ Observation techniques for inflight ~~search techniques~~ searches , helicopter configurations, passenger restraint systems, communications equipment, policies, search modes, protocols, hand signals, flight crew roles and responsibilities, use of airframe-specific search tools, procedures, and guidelines for the appropriate AHJ.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 12:29:37 EDT 2018

Committee Statement

Committee Statement: Editorial in nature

Response Message: FR-116-NFPA 1006-2018

First Revision No. 117-NFPA 1006-2018 [Section No. 15.2.7]

16.2.7

Terminate an incident, given PPE specific to the incident, isolation barriers, and tool kit, so that search and rescuers and bystanders are protected and accounted for during termination operations; the party responsible is notified of any modification or damage created during the operational period; documentation of loss or material use is accounted for~~,~~; scene documentation is performed~~,~~; scene control is transferred to a responsible party; potential or existing hazards are communicated to that responsible party; debriefing and postincident analysis and critique are considered~~,~~; and command is terminated.

~~**A.15.2.7**~~

~~The committee recognizes that due to incident complexity, technician-level skills might be required to terminate some incidents. Examples would be complex stabilization issues, multiple concurrent hazards, industrial processes involved, presence of fatalities or multiple injuries, or chemical releases.~~

(A) Requisite Knowledge.

PPE characteristics, hazard and risk identification, isolation techniques, statutory requirements identifying responsible parties, accountability system use, reporting methods, and postincident analysis techniques.

Global FR-70

(B) Requisite Skills.

~~Selection~~Ability to select and use ~~of task- and~~ hazard-specific PPE~~,~~; decontamination~~,~~of PPE; use ~~of~~ barrier protection techniques, data collection, and recordkeeping/reporting protocols~~, and postincident~~and conduct postincident analysis activities.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 12:30:53 EDT 2018

Committee Statement

Committee Statement: These changes were editorial in nature and the annex text was deleted as they committee believes it is not needed.

Response Message: FR-117-NFPA 1006-2018

First Revision No. 118-NFPA 1006-2018 [Section No. 15.3 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 16.2 and ~~15.3.1 through 15.3.5~~ 16.3 shall be met prior to technician-level qualification in helicopter rescue.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 13:53:03 EDT 2018

Committee Statement

Committee Statement: The committee has made this change in order to reduce confusion.

Response Message: FR-118-NFPA 1006-2018

First Revision No. 119-NFPA 1006-2018 [Sections 15.3.1, 15.3.2]

16.3.1

~~Construct and manage~~ Manage a human and nonhuman external load to the aircraft, given an airframe, an assignment, and a load, so that all attachment points are connected, the load is lifted in a controlled manner, and the task is completed.

(A) Requisite Knowledge.

Airframe-specific operational requirements, weight and balance ~~considerations~~ , load and force ~~calculations~~ considerations , ground crew roles and responsibilities, ground-to-air communications methods and protocols, hazard identification, scene control, emergency procedures, manufacturers' recommendations, policies, procedures, and guidelines for the appropriate AHJ.

(B) Requisite Skills.

~~Weight~~ Consideration of weight and balance ~~calculation~~ , select and use PPE, select and use load management components, anchor point and lift point identification, ground-to-air communications techniques and protocols, emergency procedures, connecting life safety harness to the short haul or hoist line, and scene safety management techniques.

16.3.2

Demonstrate hoisting techniques, as a member of a flight/rescue crew, given an airframe, an assignment, a packaged load, and an incident, so that the load is moved in a controlled and safe manner, hoist activities are coordinated with flight operations, the airframe operational envelope is not exceeded, and the task is completed.

(A) Requisite Knowledge.

Airframe-specific operational characteristics~~,~~ ; weight and balance considerations~~,~~ ; roles and responsibilities of the flight crew and others in or attached to the aircraft and ground support~~,~~ ; operation of airframe-specific communications systems~~,~~ ; hoist system operation~~,~~ ; hoist specifications~~,~~ ; load management~~,~~ ; dynamic load factors and ~~calculation~~ consideration ~~,~~ ; manufacturers' recommendations~~,~~ ; environmental hazards~~,~~ ; emergency procedures~~,~~ ; communications equipment~~,~~ ; hand signals~~,~~ ; signaling devices~~,~~ ; and policies, procedures, and guidelines for the appropriate AHJ.

(B) Requisite Skills.

Hazard analysis, weight and balance calculation, dynamic load ~~estimating~~ consideration , hoist preparation, delivery and recovery from environment-specific hazards, flight crew roles and responsibilities, situational awareness, flight crew communications protocols, and terminology specific to hoist operations.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 13:54:19 EDT 2018

Committee Statement

Committee Statement: The committee has made these changes as the calculations of weights and balances relative to the flight of aircraft is not within the scope of this document and is not something a technical rescuer would be expected to know how to do.

Response Message: FR-119-NFPA 1006-2018

First Revision No. 120-NFPA 1006-2018 [Section No. 15.3.5]

16.3.5

~~Perform~~ Interpret weight and balance ~~calculations~~ considerations for a specific airframe and task, given an assignment, reference materials, weather forecast, and airframe-specific operational parameters, so that the total weight of occupants, as well as the flight crew, fuel, external loads, and equipment~~,~~ is incorporated into the weight and balance calculations~~,~~ ; the load does not exceed airframe operational parameters~~,~~ ; and the task is completed.

(A) Requisite Knowledge.

Helicopter operational specifications~~,~~ ; weight and balance ~~calculation formulas~~ considerations ~~,~~ ; center of gravity determination~~,~~ ; and policies, procedures, and guidelines for the appropriate AHJ.

(B) Requisite Skills.

Weight and balance ~~calculation procedures~~ considerations and protocols, task-specific performance factors, and interpret and apply technical data.

16.3.6*

Establish a helispot or LZ, given a requirement to land a helicopter in an unimproved/undesignated area to support a technical search and rescue mission.

A.16.3.6

This is intended to support helicopter rescue missions and not for common air medical evacuations.

(A) Requisite Knowledge.

Helicopter operational specifications; including minimum size for an unimproved landing zone, based on the airframe; and policies, procedures, and guidelines for the appropriate AHJ.

(B) Requisite Skills.

Identify sufficient areas to support helicopter landing operations, object and debris removal, topography and composition of land.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 13:59:09 EDT 2018

Committee Statement

Committee Statement: The committee has made these changes based on the fact that calculating weights and balances for aircraft is outside of the scope of this document. While the committee believes it is important to understand the impact that weights and balances have on aircraft, the expectation that they would be the ones actually calculating them is not realistic.

The committee has also added a new requirement for the establishment of an LZ, which they believe is a skill that is within the scope of this document.

Response Message: FR-120-NFPA 1006-2018

First Revision No. 121-NFPA 1006-2018 [Section No. 16.1 [Excluding any Sub-Sections]]

~~The job performance requirements defined in~~ 16.1.1 ~~through~~ 16.1.4 ~~shall be met prior to awareness-level qualification in surface water rescue.~~ Prior to qualification at the awareness level, the individual shall meet the requirements in 1.5 (1) as defined by the AHJ in addition to the job performance requirements defined in Section 17.1 .

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 14:18:23 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-121-NFPA 1006-2018

First Revision No. 122-NFPA 1006-2018 [Sections 16.1.1, 16.1.2, 16.1.3, 16.1.4]

~~16.1.1~~

~~Recognize the need for technical rescue resources at an incident, given AHJ guidelines, an operations- or technician-level incident, so that the need for additional resources is identified, the response system is initiated, the scene is secured and rendered safe until additional resources arrive, and awareness-level personnel are incorporated into the operational plan.~~

~~(A) Requisite Knowledge.~~

~~Operational protocols, specific planning forms, types of incidents common to the AHJ, hazards, incident support operations and resources, and safety measures.~~

~~(B) Requisite Skills.~~

~~The ability to apply operational protocols, select specific planning forms based on the types of incidents, identify and evaluate various types of hazards, request support and resources, and determine the required safety measures.~~

~~16.1.2~~

~~Establish scene safety zones, given an incident, scene security barriers, incident location, incident information, and personal protective equipment (PPE), so that safety zones are designated, zone perimeters are consistent with incident requirements, perimeter markings can be recognized and understood by others, zone boundaries are communicated to Incident Command, and only authorized personnel are allowed access to the scene.~~

~~(A) Requisite Knowledge.~~

~~Use and selection of PPE, zone or area control flow and concepts, types of control devices and tools, types of existing and potential hazards, methods of hazard mitigation, organizational standard operating procedure, and staffing requirements.~~

~~(B) Requisite Skills.~~

~~The ability to select and use PPE, apply crowd control concepts, position zone control devices, identify and mitigate existing or potential hazards, and personal safety techniques.~~

~~16.1.3~~

~~Identify and support an operations- or technician-level incident, given an incident, an assignment, incident action plan, and resources from the tool kit, so that the assignment is carried out, progress is reported to command, environmental concerns are managed, personnel rehabilitation is facilitated, and the incident action plan is supported.~~

~~(A) Requisite Knowledge.~~

~~AHJ operational protocols, hazard recognition, incident management, PPE selection, resource selection and use, scene support requirements including lighting, ventilation, and monitoring hazards zones.~~

~~(B) Requisite Skills.~~

~~Application of operational protocols, functioning within an IMS, following and implementing an incident action plan, and reporting task progress status to supervisor or Incident Command.~~

17.1.1

Size up ~~an~~ a surface water incident, given an incident, ~~background information, and applicable reference materials,~~ so that ~~the operational mode is defined, resource availability and response time is considered,~~ types of rescues are determined, the number of victims are identified, the last reported location of all victims is established, witnesses and reporting parties are identified and interviewed, ~~resource needs are assessed,~~ and search parameters are identified~~, and information required to develop an incident action plan is obtained~~ .

(A) Requisite Knowledge.

~~Types of reference materials and their uses, risk/benefit assessment, availability and capability of resources, elements of an action plan and related information, relationship of size-up to the incident management system, and information~~ Information gathering techniques and how that information is used in the size-up process.

(B) Requisite Skills.

The ability to ~~read specific rescue reference materials,~~ interview people, gather information, relay information, manage witnesses, and use information sources.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 14:19:52 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-122-NFPA 1006-2018

First Revision No. 123-NFPA 1006-2018 [Section No. 16.2 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 17.1 and ~~16.2.1 through 16.2.14~~ 17.2 shall be met prior to operations-level qualification in surface water rescue.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 14:23:14 EDT 2018

Committee Statement

Committee Statement: The committee made these changes in order to reduce confusion.

Response Message: FR-123-NFPA 1006-2018

First Revision No. 124-NFPA 1006-2018 [Section No. 16.2.2(A)]

(A) Requisite Knowledge.

Manufacturer's recommendations for PPE ; standard operating procedures; basic signals and communications techniques; selection criteria of insulating garments; buoyancy characteristics; personal escape techniques; applications for and capabilities of personal escape equipment; hazard assessment; AHJ protocols for equipment positioning; classes of personal flotation devices; selection criteria for personal protective clothing, personal flotation devices, and water rescue helmets; personal escape techniques; applications for and capabilities of personal escape equipment; and equipment and procedures for signaling distress.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 14:24:08 EDT 2018

Committee Statement

Committee Statement: This change was editorial in nature.

Response Message: FR-124-NFPA 1006-2018

First Revision No. 125-NFPA 1006-2018 [Section No. 16.2.5]

~~16.2.5~~

~~Conduct a witness interview, given witnesses and checklists, so that witnesses are secured, information is gathered, last seen point can be determined, last known activity can be determined, procedures to re-contact the witnesses are established, and reference objects can be utilized.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Elements of an action plan; types of and information provided by reference materials and size-up; hydrology; types of hazards associated with water rescue practices; risk/benefit analysis; identification of hazard-specific PPE; factors influencing access and egress routes; behavioral patterns of victims; environmental conditions that influence victim location; safety, communications, and operational protocols; and resource capability and availability.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to interpret and correlate reference and size-up information; evaluate site conditions; complete risk/benefit analysis; apply safety, communications, and operational protocols; specify PPE requirements; and determine rescue personnel requirements.~~

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 14:25:16 EDT 2018

Committee Statement

Committee Statement: The committee is deleting this as it is already covered in 16.1

Response Message: FR-125-NFPA 1006-2018

First Revision No. 126-NFPA 1006-2018 [Section No. 16.2.14(B)]

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(B) Requisite Skills.

~~Selection~~ Ability to select and use ~~of task and hazard~~ hazard-specific PPE~~,~~; decontamination~~,~~ of PPE; use ~~of~~ barrier protection techniques, data collection, and recordkeeping/reporting protocols, conduct postincident analysis activities.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 14:27:18 EDT 2018

Committee Statement

Committee Statement: Editorial in nature.

Response Message: FR-126-NFPA 1006-2018

First Revision No. 127-NFPA 1006-2018 [Section No. 16.3 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 17.2 and ~~16.3.1 through 16.3.4~~ 17.3 shall be met prior to technician-level qualification in surface water rescue.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 14:27:54 EDT 2018

Committee Statement

Committee Statement: The committee has made this change in order to reduce confusion.

Response Message: FR-127-NFPA 1006-2018

First Revision No. 128-NFPA 1006-2018 [Section No. 17.1 [Excluding any Sub-Sections]]

~~The job performance requirements defined in~~ 17.1.1 ~~through~~ 17.1.4 ~~shall be met prior to awareness-level qualification in swiftwater rescue.~~ Prior to qualification at the awareness level, the individual shall meet the requirements in 1.5 (1) as defined by the AHJ in addition to the job performance requirements defined in Section 18.1 .

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 14:31:13 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-128-NFPA 1006-2018

First Revision No. 129-NFPA 1006-2018 [Sections 17.1.1, 17.1.2, 17.1.3, 17.1.4]

~~17.1.1~~

~~Recognize the need for technical rescue resources at an incident, given AHJ guidelines, an operations- or technician-level incident, so that the need for additional resources is identified, the response system is initiated, the scene is secured and rendered safe until additional resources arrive, and awareness-level personnel are incorporated into the operational plan.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Operational protocols, specific planning forms, types of incidents common to the AHJ, hazards, incident support operations and resources, and safety measures.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to apply operational protocols, select specific planning forms based on the types of incidents, identify and evaluate various types of hazards within the AHJ, request support and resources, and determine the required safety measures.~~

~~17.1.2~~

~~Establish scene safety zones, given an incident, scene security barriers, incident location, incident information, and personal protective equipment (PPE), so that safety zones are designated, zone perimeters are consistent with incident requirements, perimeter markings can be recognized and understood by others, zone boundaries are communicated to incident command, and only authorized personnel are allowed access to the scene.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Use and selection of PPE, zone or area control flow and concepts, types of control devices and tools, types of existing and potential hazards, methods of hazard mitigation, organizational standard operating procedure, and staffing requirements.~~

~~(B)~~ ~~Requisite Skills.~~

~~The ability to select and use PPE, apply crowd control concepts, position zone control devices, identify and mitigate existing or potential hazards, and personal safety techniques.~~

~~17.1.3~~

~~Identify and support an operations- or technician-level incident, given an incident, an assignment, incident action plan, and resources from the tool kit, so that the assignment is carried out, progress is reported to command, environmental concerns are managed, personnel rehabilitation is facilitated, and the incident action plan is supported.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~AHJ operational protocols, hazard recognition, incident management, PPE selection, resource selection and use, scene support requirements including lighting, ventilation, and monitoring hazards zones.~~

~~(B)~~ ~~Requisite Skills.~~

~~Apply operational protocols, function within an IMS, follow and implement an incident action plan, and report task progress status to supervisor or Incident Command.~~

~~17.1.4~~

~~Size up an incident, given an incident, background information, and applicable reference materials, so that the operational mode is defined, resource availability and response time, types of rescues are determined, the number of victims are identified, the last reported locations of all victims are established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, search parameters are identified, and information required to develop an incident action plan is obtained.~~

~~(A)~~ ~~Requisite Knowledge.~~

~~Types of reference materials and their uses, risk/benefit assessment, availability and capability of the resources, elements of an action plan and related information, relationship of size-up to the incident management system, and information gathering techniques and how that information is used in the size-up process.~~

~~**(B)** Requisite Skills.~~

~~The ability to read specific rescue reference materials, interview people, gather information, relay information, manage witnesses, and use information sources.~~

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 14:33:04 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-129-NFPA 1006-2018

First Revision No. 130-NFPA 1006-2018 [Section No. 17.2 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ ~~16.1~~ , ~~16.2.1~~ 5.2.1 through 5.2.10 , 5.2.12 , 5.2.16 , 5.2.18 through 5.2.20 , 5.2.23 , 5.2.24 ~~16.2.14~~ , and ~~Section~~ Sections ~~17.1~~ 17.1 , 17.2 , 18.1 , and ~~17.2.1 through 17.2.5~~ 18.2 shall be met prior to operations-level qualification in swiftwater rescue.

Submitter Information Verification

Committee:

Submittal Date: Thu Jul 26 14:34:16 EDT 2018

Committee Statement

Committee Statement: The committee has made these changes in order to reduce confusion and to include the relevant rope requirements the committee believes would also need to be met.

Response Message: FR-130-NFPA 1006-2018

First Revision No. 136-NFPA 1006-2018 [Section No. 17.2.5]

18.2.5*

Terminate an incident, given PPE specific to the incident, isolation barriers, and tool kit, so that rescuers and bystanders are protected and accounted for during termination operations; the party responsible is notified of any modification or damage created during the operational period; documentation of loss or material use is accounted for, scene documentation is performed, and scene control is transferred to a responsible party; potential or existing hazards are communicated to that responsible party; debriefing and postincident analysis and critique are considered; and command is terminated.

(A)

PPE characteristics, hazard and risk identification, isolation techniques, statutory requirements identifying responsible parties, accountability system use, reporting methods, postincident analysis techniques.

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(B)

~~Selection~~Ability to select and use of ~~task and~~ hazard-specific PPE~~,~~; decontamination~~,~~of PPE; use ~~of~~ barrier protection techniques, data collection, and recordkeeping/reporting protocols; ~~postincident~~conduct postincident analysis activities.

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 10:33:02 EDT 2018

Committee Statement

Committee Statement: Editorial in nature.

Response Message: FR-136-NFPA 1006-2018

First Revision No. 137-NFPA 1006-2018 [Section No. 17.3 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~16.3.1 through 16.3.4~~ 5.3.5 , 5.3.6 , ~~Section 17.2~~ 17.3.1 , ~~and 17.3.1~~ through 17.3.4 ~~17.3.3~~ and Sections 18.2 and 18.3 shall be met prior to technician-level qualification in swiftwater rescue.

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 10:33:52 EDT 2018

Committee Statement

Committee Statement: The committee has made these changes in order to reduce confusion as well as to ensure the relative rope requirements are also being met.

Response Message: FR-137-NFPA 1006-2018

First Revision No. 138-NFPA 1006-2018 [Section No. 18.1]

19.1 Awareness Level.

~~The job performance requirements defined in 18.1.1 through 18.1.4 shall be met prior to awareness-level qualification in dive rescue.~~ Prior to qualification at the awareness level in dive rescue, the individual shall meet the requirements in 1.5 (1) as defined by the AHJ.

~~**18.1.1**~~

~~Recognize the need for technical rescue resources at an incident, given AHJ guidelines, an operations- or technician-level incident, so that the need for additional resources is identified, the response system is initiated, the scene is secured and rendered safe until additional resources arrive, and awareness-level personnel are incorporated into the operational plan.~~

~~**(A)** Requisite Knowledge.~~

~~Operational protocols, specific planning forms, types of incidents common to the AHJ, hazards, incident support operations and resources, and safety measures.~~

~~**(B)** Requisite Skills.~~

~~The ability to apply operational protocols, select specific planning forms based on the types of incidents, identify and evaluate various types of hazards within the AHJ, request support and resources, and determine the required safety measures.~~

~~**18.1.2**~~

~~Establish scene safety zones, given an incident, scene security barriers, incident location, incident information, and personal protective equipment (PPE), so that safety zones are designated, zone perimeters are consistent with incident requirements, perimeter markings can be recognized and understood by others, zone boundaries are communicated to incident command, and only authorized personnel are allowed access to the scene.~~

~~**(A)** Requisite Knowledge.~~

~~Use and selection of PPE, zone or area control flow and concepts, types of control devices and tools, types of existing and potential hazards, methods of hazard mitigation, organizational standard operating procedure, and staffing requirements.~~

~~**(B)** Requisite Skills.~~

~~The ability to select and use PPE, apply crowd control concepts, position zone control devices, identify and mitigate existing or potential hazards, and personal safety techniques.~~

~~**18.1.3**~~

~~Identify and support an operations- or technician-level incident, given an incident, an assignment, incident action plan, and resources from the tool kit, so that the assignment is carried out, progress is reported to command, environmental concerns are managed, personnel rehabilitation is facilitated, and the incident action plan is supported.~~

~~**(A)** Requisite Knowledge.~~

~~AHJ operational protocols, hazard recognition, incident management, PPE selection, resource selection and use, scene support requirements including lighting, ventilation, and monitoring hazards zones.~~

~~**(B)** Requisite Skills.~~

~~Application of operational protocols, function within an incident management system, follow and implement an incident action plan, report task progress status to supervisor or Incident Command.~~

~~**18.1.4**~~

~~Size up an incident, given an incident, background information and applicable reference materials, so that the operational mode is defined, resource availability and response time, types of rescues are determined, the number of victims is ascertained, the last reported location of all victims is established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, search parameters are identified, and information required to develop an incident action plan is obtained.~~

~~**(A)** Requisite Knowledge.~~

~~Types of reference materials and their uses, risk benefit assessment, availability and capability of the resources, elements of an action plan and related information, relationship of size-up to the incident management system, and information gathering techniques and how that information is used in the size-up process.~~

~~**(B)** Requisite Skills.~~

~~The ability to read specific rescue reference materials, interview and gather information, relay information, manage witnesses, and use information sources.~~

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 10:47:44 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-138-NFPA 1006-2018

First Revision No. 139-NFPA 1006-2018 [Section No. 18.2 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 19.1 and ~~18.2.1 through 18.2.8~~ 19.2 shall be met prior to operations-level qualification in dive rescue.

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 10:53:32 EDT 2018

Committee Statement

Committee Statement: The committee has made this change in order to reduce confusion.

Response Message: FR-139-NFPA 1006-2018

First Revision No. 140-NFPA 1006-2018 [Sections 18.2.1, 18.2.2, 18.2.3]

19.2.1

Define search parameters for a dive rescue incident, given topographical maps of a search area, descriptions of all missing persons and incident history, and hydrologic data, including speed and direction of ~~current or tides~~ water movement , so that areas likely to contain the subject are differentiated from other areas, witnesses are interviewed, critical interview information is recorded, passive (i.e., indirect) and active (i.e., direct) search tactics are implemented, personnel resources are considered and used, and search parameters are communicated.

(A) Requisite Knowledge.

Criteria for determining rescue versus recovery modes, human physiology related to dive environment, ~~re-float~~ refloat theory, topographical map components, hydrologic and weather factors, methods to increase probability of detection, methods to determine areas likely to contain the subject, critical interview questions and practices, methods to identify track traps, ways to identify spotter areas and purposes for spotters, personnel available and effects on parameter definition, the effect of search strategy defining the parameter, communication methods, and reporting requirements.

(B) Requisite Skills.

The ability to interpret reference materials, perform a scene assessment, evaluate site conditions, complete risk/benefit analysis, and select and use necessary PPE.

19.2.2*

Implement an action plan for a dive operation, given an operational plan and a dive rescue tool kit, so that all information is factored, risk/benefit analysis is conducted, protocols are followed, hazards are identified and minimized, personnel and equipment resources will not be exceeded, assignments are defined, consideration is given to evaluating changing conditions, and the selected strategy and tactics fit the conditions.

(A) Requisite Knowledge.

Elements of an action plan; types of and information provided by reference materials and size-up; hydrology and weather ; types of hazards associated with dive rescue practices; risk/benefit analysis; identification of hazard-specific PPE; factors influencing access and egress routes; behavioral patterns of victims; environmental conditions that influence victim location; safety, communications, and operational protocols; and resource capability and availability.

(B) Requisite Skills.

The ability to interpret and correlate reference and size-up information; evaluate site conditions; complete risk/benefit analysis; apply safety, communications, and operational protocols; specify PPE requirements; determine rescue personnel requirements; and monitor and record submerged diver location, ~~breathing~~ depth, respiratory rates , and dive times.

19.2.3*

Implement procedures for use of watercraft in dive operations, given watercraft used by the AHJ, trained operator(s), and the agency's procedures, so that watercraft ~~pre-deployment~~ predeployment checks are completed; watercraft launch or recovery is achieved as stipulated by AHJ operational protocols; divers are deployed, recovered, and protected from harm; both ~~onboard~~ vessel and dive rescue operations conform with watercraft operational protocols and capabilities; communications are clear and concise; and the candidate is familiar with watercraft nomenclature, operational protocols, design limitations, and launch/recovery site issues.

(A) Requisite Knowledge.

Entry/exit procedures, communications techniques, boat anchoring and station keeping procedures specific to dive operations, and boat diving operation techniques.

(B) Requisite Skills.

The ability to implement entry/exit procedures and communications with watercraft crew and use emergency/safety equipment.

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 10:54:31 EDT 2018

Committee Statement

Committee Statement: These changes were made to include commonly used terminology as well as editorial in nature.

Response Message: FR-140-NFPA 1006-2018

First Revision No. 141-NFPA 1006-2018 [Section No. 18.2.5]

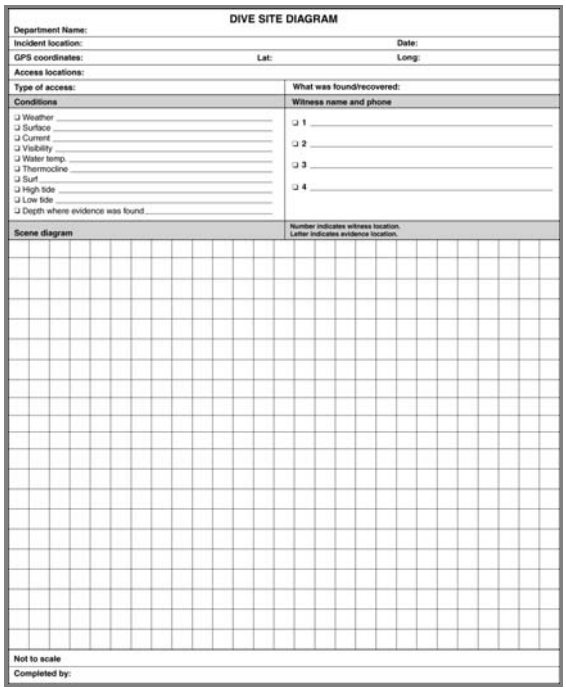
19.2.5*

Secure the area as a potential crime scene and generate an accurate record of possible evidence and its environment, given ~~paper and pencil~~ documentation tools , evidence tube or container, marker float, GPS, and last seen point, so that items are secured; possible evidence is preserved by taking notes on, documenting, making sketches of, photographing, or retrieving evidence; chain of custody and evidentiary nature is maintained; and information is passed to law enforcement.

A.19.2.5

Drowned victims ~~can~~ should be treated as potential homicides until proven otherwise. Therefore, the search area should be treated as a potential crime scene and appropriate evidence secured and documented *(see Figure A.19.2.5)* according to AHJ protocol.

Figure A.19.2.5 Sample Form for Dive Site Diagram.


DIVE SITE DIAGRAM

Department Name:

Incident location: Date:

GPS coordinates: Lat: Long:

Access locations:

Type of access: What was found/recovered:

Conditions Witness name and phone

❑ Weather
❑ Surface
❑ Current
❑ Visibility
❑ Water temp.
❑ Thermocline
❑ Surf
❑ High tide
❑ Low tide
❑ Depth where evidence was found

❑ 1
❑ 2
❑ 3
❑ 4

Scene diagram — Number indicates witness location. Letter indicates evidence location.

Not to scale

Completed by:

(A) Requisite Knowledge.

Understand and maintain the “chain of evidence,” camera operations, scent article handling and preservation, clue awareness, and specific scene situation considerations (i.e., wreckage, bodies, injury, evidence).

(B) Requisite Skills.

Interview skills of corroborating witnesses and basic ~~drawing~~ documentation skills.

Supplemental Information

File Name	Description	Approved
1006_FR-141_A.18.2.5.docx	For staff use	

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 11:04:58 EDT 2018

Committee Statement

Committee Statement: These changes were made to make the requirement more generic and allow for different ways to document items.

Annex: The committee has made this change in an attempt to accomplish what the submitter was trying to do, however with what the submitter provided did not comply with the NFPA MOS.

Response Message: FR-141-NFPA 1006-2018

Public Input No. 57-NFPA 1006-2018 [Section No. A.18.2.5]

First Revision No. 142-NFPA 1006-2018 [Section No. 18.2.8]

19.2.8*

Terminate an incident, given PPE specific to the incident, isolation barriers, and tool kit, so that rescuers and bystanders are protected and accounted for during termination operations; the party responsible is notified of any modification or damage created during the operational period; documentation of loss or material use is accounted for, scene documentation is performed, and scene control is transferred to a responsible party; potential or existing hazards are communicated to that responsible party; debriefing and postincident analysis and critique are considered; and command is terminated.

(A) Requisite Knowledge.

PPE characteristics, hazard and risk identification, isolation techniques, statutory requirements identifying responsible parties, accountability system use, reporting methods, postincident analysis techniques.

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(B) Requisite Skills.

~~Selection~~ Ability to select and use of ~~task and hazard~~ hazard-specific PPE; decontamination of PPE; use ~~of~~ barrier protection techniques, data collection, and recordkeeping/reporting protocols; ~~postincident~~ conduct postincident analysis activities.

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 11:06:57 EDT 2018

Committee Statement

Committee Statement: Editorial in nature.

Response Message: FR-142-NFPA 1006-2018

First Revision No. 143-NFPA 1006-2018 [Section No. 18.3 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 19.2 and ~~18.3.1 through 18.3.10~~ 19.3 shall be met prior to technician-level qualification in dive rescue.

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 11:12:04 EDT 2018

Committee Statement

Committee Statement: These change were made in order to reduce confusion.

Response Message: FR-143-NFPA 1006-2018

First Revision No. 145-NFPA 1006-2018 [Sections 18.3.3(A), 18.3.3(B)]

(A) Requisite Knowledge.

Manufacturer's recommendations, standard operating procedures, basic signals, communications techniques, ~~selection criteria of insulating garments,~~ buoyancy characteristics, personal escape techniques, applications for and capabilities of personal escape equipment, hazard assessment, and AHJ protocols for equipment positioning.

(B) Requisite Skills.

The ability to use ~~PPE~~ a full face mask according to the manufacturer's directions, be proficient in emergency escape procedures, be proficient in communications, don and doff equipment in an expedient manner, and use predive checklists.

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 11:19:59 EDT 2018

Committee Statement

Committee Statement: These changes were made to eliminate confusion and remove unnecessary items.

Response Message: FR-145-NFPA 1006-2018

First Revision No. 147-NFPA 1006-2018 [Section No. 18.3.5]

19.3.5

Supervise~~, coordinate, and lead~~ dive teams during operations, given incident checklists, dive checklists, maps, topographic surveys, charts, and predive/postdive medical evaluation checklist, so that teams are managed, personnel are supervised, hazards are assessed and identified, safety and health of team is ensured, qualifications/abilities of divers are verified, predive briefing is conducted, and postdive medical evaluation and briefing are performed.

(A) Requisite Knowledge.

~~Divemaster-level~~ Dive supervisor-level knowledge; knowledge of supervisory practices, dive tables, emergency procedures, communications procedures, local protocols, and predive safety checks.

(B) Requisite Skills.

The ability to use ~~SCUBA~~ dive equipment , dive tables, emergency procedures, and communication procedures~~,~~ ; and leadership and management skills.

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 11:24:13 EDT 2018

Committee Statement

Committee Statement: These changes were made for document consistency.

Response Message: FR-147-NFPA 1006-2018

First Revision No. 216-NFPA 1006-2018 [Section No. 18.3.6 [Excluding any Sub-Sections]]

Select ~~and use~~ dive rescue equipment, given a dive rescue assignment and assorted items of personal protective and life-support equipment, so that the rescuer is protected from temperature extremes, correct buoyancy is maintained, AHJ protocols are complied with, swimming ability is maximized, routine and emergency communications are established between components of the team, self-rescue needs have been evaluated and provided for, predive safety checks have been conducted, and the diver returns to the surface with no less than the minimum specified reserve primary air supply pressure.

Submitter Information Verification

Committee:

Submittal Date: Thu Aug 02 12:59:29 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper JPR development.

Response Message: FR-216-NFPA 1006-2018

First Revision No. 5-NFPA 1006-2018 [Section No. 18.3.8(B)]

(B) Requisite Skills.

The ability to use PPE, techniques for rescue or assistance of conscious and unconscious divers, buoyancy control devices, and regulators~~,~~ ; remove weight ~~belt removal~~ systems , ~~communication~~ communicate via hand signals, and conduct emergency ascents.

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 18 13:22:12 EDT 2018

Committee Statement

Committee Statement: The committee has made this change as they believe it meets what the submitter is attempting to do as well as to provide further clarification.

Response Message: FR-5-NFPA 1006-2018

Public Input No. 56-NFPA 1006-2018 [Section No. 18.3.8(B)]

First Revision No. 148-NFPA 1006-2018 [Section No. 18.3.9]

19.3.9*

Escape from simulated life-threatening situations, including out-of-air emergencies, entanglements, malfunction of primary air supply source, loss of buoyancy control, and disorientation, given safety equipment, a pool or controlled water environment, SCUBA equipment, and props, so that hazards are recognized, emergency procedures are performed, diver escapes from situation to safety, and problems can be identified prior to work in a high-stress environment.

A.19.3.9

The committee's intent is that skills for this JPR should be performed in a controlled situation that replicates the worst conditions expected to be encountered in the AHJ's territory. The intent is to determine the candidate's ability to perform assigned tasks and to effect self-rescue. The skills involved in this test should be at least as strenuous as those expected to be demonstrated by civilians for ~~Divemaster~~ dive supervisor certification.

(A) Requisite Knowledge.

Basic SCUBA emergency procedures for applicable environments and emergency medical treatment protocols for oxygen toxicity, bends, decompression ~~injuries~~ illness , and other dive-related injuries and illnesses.

(B) Requisite Skills.

The ability to implement loss of communications procedures; regulator loss, failure, or out-of-air procedures; disentanglement and self-extrication procedures; severed or entangled umbilical or tag line procedures; and equipment loss or failure procedures; and weight system removal and emergency treatment of injured divers.

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 11:29:25 EDT 2018

Committee Statement

Committee Statement: These changes were made for document consistency and to update to commonly used terminology.

Response Message: FR-148-NFPA 1006-2018

First Revision No. 150-NFPA 1006-2018 [Section No. 19.1 [Excluding any Sub-Sections]]

~~The job performance requirements defined in~~ 19.1.1 ~~through~~ 19.1.4 ~~shall be met prior to awareness-level qualification in ice rescue.~~ Prior to qualification at the awareness level in ice rescue, the individual shall meet the requirements in 1.5 (1) as defined by the AHJ.

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 11:54:58 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-150-NFPA 1006-2018

First Revision No. 151-NFPA 1006-2018 [Sections 19.1.1, 19.1.2, 19.1.3, 19.1.4]

~~**19.1.1**~~

~~Recognize the need for technical rescue resources at an incident, given AHJ guidelines, an operations- or technician-level incident, so that the need for additional resources is identified, the response system is initiated, the scene is secured and rendered safe until additional resources arrive, and awareness-level personnel are incorporated into the operational plan.~~

~~**(A)** Requisite Knowledge.~~

~~Operational protocols, specific planning forms, types of incidents common to the AHJ, hazards, incident support operations and resources, and safety measures.~~

~~**(B)** Requisite Skills.~~

~~The ability to apply operational protocols, select specific planning forms based on the types of incidents, identify and evaluate various types of hazards, request support and resources, and determine the required safety measures.~~

~~**19.1.2**~~

~~Establish scene safety zones, given an incident, scene security barriers, incident location, incident information, and personal protective equipment (PPE), so that safety zones are designated, zone perimeters are consistent with incident requirements, perimeter markings can be recognized and understood by others, zone boundaries are communicated to incident command, and only authorized personnel are allowed access to the scene.~~

~~**(A)** Requisite Knowledge.~~

~~Use and selection of PPE, zone or area control flow and concepts, types of control devices and tools, types of existing and potential hazards, methods of hazard mitigation, organizational standard operating procedure, and staffing requirements.~~

~~**(B)** Requisite Skills.~~

~~The ability to select and use PPE, apply crowd control concepts, position zone control devices, identify and mitigate existing or potential hazards, and personal safety techniques.~~

~~**19.1.3**~~

~~Identify and support an operations- or technician-level incident, given an incident, an assignment, incident action plan, and resources from the tool kit, so that the assignment is carried out, progress is reported to command, environmental concerns are managed, personnel rehabilitation is facilitated, and the incident action plan is supported.~~

~~**(A)** Requisite Knowledge.~~

~~AHJ operational protocols, hazard recognition, incident management, PPE selection, resource selection and use, scene support requirements including lighting, ventilation, and monitoring hazards zones.~~

~~**(B)** Requisite Skills.~~

~~Application of operational protocols, function within an IMS, follow and implement an incident action plan, report task progress status to supervisor or Incident Command.~~

~~**19.1.4**~~

~~Size up an incident, given an incident, background information and applicable reference materials, so that the operational mode is defined, resource availability and response time, types of rescues are determined, the number of victims is identified, the last reported location of all victims is established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, search parameters are identified, and information required to develop an incident action plan is obtained.~~

~~**(A)** Requisite Knowledge.~~

~~Types of reference materials and their uses, risk benefit assessment, availability and capability of the resources, elements of an action plan and related information, relationship of size-up to the incident management system, and information gathering techniques and how that information is used in the size-up process.~~

~~**(B)** Requisite Skills.~~

~~The ability to read specific rescue reference materials, interview and gather information, relay information, manage witnesses, and use information sources.~~

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 11:56:24 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-151-NFPA 1006-2018

First Revision No. 175-NFPA 1006-2018 [Section No. 19.2.1 [Excluding any Sub-Sections]]

Support ~~Level II~~ technician-level operations, given a designated mission, safety equipment, props, and water body, so that skills are demonstrated in a controlled environment, performance parameters are achieved, hazards are assessed continually, and emergency procedures are demonstrated.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 11:32:58 EDT 2018

Committee Statement

Committee Statement: This change was made as it was supposed to have been removed/changed during the last revision cycle.

Response Message: FR-175-NFPA 1006-2018

First Revision No. 153-NFPA 1006-2018 [Section No. 19.2.4]

20.2.4*

Terminate an incident, given PPE specific to the incident, isolation barriers, and tool kit, so that rescuers and bystanders are protected and accounted for during termination operations; the party responsible is notified of any modification or damage created during the operational period; documentation of loss or material use is accounted for, scene documentation is performed, and scene control is transferred to a responsible party; potential or existing hazards are communicated to that responsible party; debriefing and postincident analysis and critique are considered~~,~~ ; and command is terminated.

(A) Requisite Knowledge.

PPE characteristics, hazard and risk identification, isolation techniques, statutory requirements identifying responsible parties, accountability system use, reporting methods, postincident analysis techniques.

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(B) Requisite Skills.

~~Selection~~ Ability to select and use ~~of task and hazard~~ hazard-specific PPE~~,~~ ; decontamination PPE, use ~~of~~ barrier protection techniques, data collection, and recordkeeping/reporting protocols~~,~~ ; conduct postincident analysis activities.

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 11:58:32 EDT 2018

Committee Statement

Committee Statement: Editorial in nature.

Response Message: FR-153-NFPA 1006-2018

First Revision No. 154-NFPA 1006-2018 [New Section after 19.3.1(B)]

20.3.2

Perform a self-rescue in the ice rescue environment, given an incident scenario and PPE, so that a self-rescue is achieved.

(A) Requisite Knowledge.

Types and capabilities of PPE, effects of hydrodynamic forces on rescuers, hydrology and characteristics of water, physiological effects of immersion and cold water near-drowning, methods to affect movement onto or through the ice, water rescue rope-handling techniques, incident-specific hazard identification, hazards and limitations of entry rescue, and information on local water environments.

(B) Requisite Skills.

The ability to select PPE and equipment specific to the water/ice environment, don PPE, identify hazards directly related to the specific self-rescue, and demonstrate appropriate self-rescue techniques.

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 12:01:22 EDT 2018

Committee Statement

Committee Statement: The committee has added this as it was not in the document in previous editions.

Response Message: FR-154-NFPA 1006-2018

First Revision No. 156-NFPA 1006-2018 [Section No. 20.1]

21.1 Awareness Level.

~~The job performance requirements defined in~~ 20.1.1 ~~through~~ 20.1.4 ~~shall be met prior to awareness-level qualification in surf rescue.~~ Prior to qualification at the awareness level in surf rescue, the individual shall meet the requirements in 1.5 (1) as defined by the AHJ.

~~**20.1.1**~~

~~Recognize the need for technical rescue resources at an incident, given AHJ guidelines, an operations- or technician-level incident, so that the need for additional resources is identified, the response system is initiated, the scene is secured and rendered safe until additional resources arrive, and awareness-level personnel are incorporated into the operational plan.~~

~~**(A)** Requisite Knowledge.~~

~~Operational protocols, specific planning forms, types of incidents common to the AHJ, hazards, incident support operations and resources, and safety measures.~~

~~**(B)** Requisite Skills.~~

~~The ability to apply operational protocols, select specific planning forms based on the types of incidents, identify and evaluate various types of hazards within the AHJ, request support and resources, and determine the required safety measures.~~

~~**20.1.2**~~

~~Establish scene safety zones, given an incident, scene security barriers, incident location, incident information, and personal protective equipment (PPE), so that safety zones are designated, zone perimeters are consistent with incident requirements, perimeter markings can be recognized and understood by others, zone boundaries are communicated to incident command, and only authorized personnel are allowed access to the scene.~~

~~**(A)** Requisite Knowledge.~~

~~Use and selection of PPE, zone or area control flow and concepts, types of control devices and tools, types of existing and potential hazards, methods of hazard mitigation, organizational standard operating procedure, and staffing requirements.~~

~~**(B)** Requisite Skills.~~

~~The ability to select and use PPE, apply crowd control concepts, position zone control devices, identify and mitigate existing or potential hazards, and personal safety techniques~~

~~**20.1.3**~~

~~Identify and support an operations- or technician-level incident, given an incident, an assignment, incident action plan, and resources from the tool kit, so that the assignment is carried out, progress is reported to command, environmental concerns are managed, personnel rehabilitation is facilitated, and the incident action plan is supported.~~

~~**(A)** Requisite Knowledge.~~

~~AHJ operational protocols, hazard recognition, incident management, PPE selection, resource selection and use, scene support requirements including lighting, ventilation, and monitoring hazards zones.~~

~~**(B)** Requisite Skills.~~

~~Application of operational protocols, function within an IMS, follow and implement an incident action plan, report task progress status to supervisor or Incident Command.~~

~~**20.1.4**~~

~~Size up an incident, given an incident, background information and applicable reference materials, so that the operational mode is defined, resource availability and response time, types of rescues are determined, the number of victims are identified, the last reported location of all victims are established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, search parameters are identified, and information required to develop an incident action plan is obtained.~~

~~**(A)** Requisite Knowledge.~~

~~Types of reference materials and their uses, risk benefit assessment, availability and capability of the resources, elements of an action plan and related information, relationship of size-up to the incident management system, and information gathering techniques and how that information is used in the size-up process.~~

~~**(B)** Requisite Skills.~~

~~The ability to read specific rescue reference materials, interview and gather information, relay information, manage witnesses, and use information sources.~~

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 12:10:06 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-156-NFPA 1006-2018

First Revision No. 157-NFPA 1006-2018 [Section No. 20.2 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 21.1 and ~~20.2.1 through 20.2.5~~ 21.2 shall be met prior to operations-level qualification in surf rescue.

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 12:11:55 EDT 2018

Committee Statement

Committee Statement: These changes were made in order to reduce confusion.

Response Message: FR-157-NFPA 1006-2018

First Revision No. 158-NFPA 1006-2018 [Section No. 20.3 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 21.2 and ~~20.3.1 through 20.3.3~~ 21.3 shall be met prior to technician-level qualification in surf rescue.

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 12:15:11 EDT 2018

Committee Statement

Committee Statement: These changes were made in order to reduce confusion.

Response Message: FR-158-NFPA 1006-2018

First Revision No. 159-NFPA 1006-2018 [Sections 20.3.2, 20.3.3]

21.3.2

Perform a swimming rescue for a waterbound surf victim, given PPE, including a pair of swimming fins and a ~~surf rescue tube with a shoulder strap~~ rescue flotation device , safety equipment, and a water body with high surf representative of the jurisdiction's conditions, so that the victim is secured within the surf rescue tube and towed out of the surf impact zone to shore or to a surf-free zone for pickup by a watercraft, boat, or helicopter.

(A) Requisite Knowledge.

Types of fundamental swimming skills to enter, maneuver, and exit a surf zone; wave formation theory; wave types; dynamics of surf-related currents such as longshore and rip currents; and familiarity with victim behavior and recreational equipment used.

(B) Requisite Skills.

The ability to perform advanced swimming skills in the surf zone, including the ability to enter, maneuver in, and exit the surf zone; swim in different surf conditions with and without flotation aids or swim aids; apply water survival skills; complete a distance swim in any open body of water using any stroke without the aid of any surf rescue equipment; identify wave types, current types, and potential victim behavior; and maneuver in the surf zone with a surf rescue tube, tow a victim with the tube, and demonstrate victim removal techniques.

21.3.3

Perform a subsurface retrieval of a submerged victim in a surf environment, given PPE~~;~~ , including swimming fins, dive mask, and snorkel, and a water body with high surf representative of the jurisdiction's conditions, so that the victim is located and brought to the surface, removed out of the surf impact zone to shore or to a surf-free zone for pickup by a watercraft, boat, or helicopter.

(A) Requisite Knowledge.

Types of fundamental swimming skills to enter, maneuver, and exit a surf zone; wave formation theory; wave types; dynamics of surf-related currents such as longshore and rip currents; and familiarity with victim behavior and recreational equipment used.

(B) Requisite Skills.

The ability to perform free diving skills in the surf zone, including the ability to enter, maneuver in, and exit the surf zone while towing a victim; swim in different surf conditions with and without flotation aids or swim aids; apply water survival skills; complete a distance swim in any open body of water using any stroke without the aid of any surf rescue equipment; identify wave types, current types, and potential victim behavior; and maneuver in the surf zone with a ~~surf~~ rescue ~~tube~~ flotation device , tow a victim with the tube, and demonstrate victim removal techniques.

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 12:15:51 EDT 2018

Committee Statement

Committee Statement: These changes were made in order to comply with commonly accept and used terminology.

Response Message: FR-159-NFPA 1006-2018

First Revision No. 160-NFPA 1006-2018 [Section No. 21.1]

22.1* Awareness Level.

~~The job performance requirements defined in~~ 21.1.1 ~~through~~ 21.1.8 ~~shall be met prior to awareness level qualification in watercraft rescue.~~ Prior to qualification at the awareness level in watercraft rescue, the individual shall meet the requirements in 1.5 (1) as defined by the AHJ in addition to the job performance requirements defined in Section 22.1 .

A.22.1

~~This chapter~~ Chapter 22 outlines the requirement for use of both powered and nonpowered watercraft to perform rescue operations. The AHJ ~~shall~~ should ensure its members that meet the requirements of ~~this section~~ Section 22.1 do so in conditions representative of the waters and weather typical to the jurisdiction.

For ~~the purposes of this chapter~~ Chapter 22 , a rescue watercraft includes powered and nonpowered vessels and craft that are intended to carry rescuers and victims. It is not intended to include rescue devices such as swim aids, paddle boards, and rescue boards that might accommodate a victim but are typically not classified as vessels or watercraft.

~~This section~~ Section 22.1 is for rescue situations with water moving less than 1 knot. Awareness-level water rescue skills are applicable only to survival swimming skills and support of water rescue operations.

~~**21.1.1**~~

~~Recognize the need for support resources, given a specific type of rescue incident, so that a resource cache is managed, scene lighting is provided for the tasks to be undertaken, environmental concerns are managed, personnel rehabilitation is facilitated, and the support operation facilitates rescue operational objectives.~~

~~**(A)** Requisite Knowledge.~~

~~Equipment organization and tracking methods, lighting resource type(s), shelter and thermal control options, and rehab criteria.~~

~~**(B)** Requisite Skills.~~

~~The ability to track equipment inventory, identify lighting resources and structures for shelter and thermal protection, select rehab areas, and manage personnel rotations.~~

~~**21.1.2**~~

~~Recognize incident hazards and initiate isolation procedures, given scene control barriers, personal protective equipment (PPE), requisite equipment, and available specialized resources, so that all hazards are identified, resource application fits the operational requirements, hazard isolation is considered, risks to rescuers and victims are minimized, and rescue time constraints are taken into account.~~

~~**(A)** Requisite Knowledge.~~

~~Resource capabilities and limitations, types and nature of incident hazards, equipment types and their use, isolation terminology, methods, equipment and implementation, operational requirement concerns, common types of rescuer and victim risk, risk/benefit analysis methods and practices, and types of technical references.~~

~~**(B)** Requisite Skills.~~

~~The ability to identify resource capabilities and limitations, identify incident hazards, assess victim viability (risk/benefit), utilize technical references, place scene control barriers, and operate control and mitigation equipment.~~

~~**21.1.3**~~

~~Recognize needed resources for a rescue incident, given incident information, a means of communication, resources, tactical worksheets, personnel accountability protocol, applicable references, and standard operating procedures, so that references are utilized, personnel are accounted for, necessary resources are deployed to achieve desired objectives, incident actions are documented, rescue efforts are coordinated, the command structure is established, task assignments are communicated and monitored, and actions are consistent with applicable regulations.~~

~~**(A)** Requisite Knowledge.~~

~~Incident management system (IMS); tactical worksheet application and purposes; accountability protocols; resource types and deployment methods; documentation methods and requirements; availability, capabilities, and limitations of rescuers and other resources; communication problems and needs; communications requirements, methods, and means; types of tasks and assignment responsibilities; policies and procedures of the agency; and technical references related to the type of rescue incident.~~

~~**(B)** Requisite Skills.~~

~~The ability to implement an IMS, complete tactical worksheets, use reference materials, evaluate incident information, match resources to operational needs, operate communications equipment, manage incident communications, and communicate in a manner so that objectives are met.~~

22.1.1

Initiate a ~~discipline specific~~ discipline-specific search, given hazard-specific PPE, equipment pertinent to the search mission, an incident location, and victim investigative information, so that search parameters are established~~;~~, the victim profile is established~~;~~, the entry and exit of all people either involved in the search or already within the search area are questioned and the information is updated and relayed to command; the personnel assignments match their expertise~~;~~, all victims are located as quickly as possible~~;~~, applicable technical rescue concerns are managed~~;~~, risks to searchers are minimized~~;~~, and all searchers are accounted for.

(A) Requisite Knowledge.

Local policies and procedures and how to operate in the site-specific search environment.

(B) Requisite Skills.

The ability to enter, maneuver in, and exit the search environment and provide for and perform self-escape and self-rescue.

22.1.2*

Perform ground support operations for helicopter activities, given a rescue scenario/incident, helicopter, operational plans, PPE, requisite equipment, and available specialized resources, so that rescue personnel are aware of the operational characteristics of the aircraft and demonstrate operational proficiency in establishing and securing landing zones and communicating with aircraft personnel until the assignment is complete.

(A) Requisite Knowledge.

Ground support operations relating to helicopter use and deployment, operation plans for helicopter service activities, type-specific PPE, aircraft familiarization and hazard areas specific to helicopters, scene control and landing zone requirements, aircraft safety systems, and communications protocols.

(B) Requisite Skills.

The ability to provide ground support operations, review standard operating procedures for helicopter operations, use PPE, establish and control landing zones, and communicate with aircrews.

~~**21.1.6**~~

~~Initiate triage of victims, given triage tags and local protocol, so that rescue versus recovery factors are assessed, triage decisions reflect resource capabilities, severity of injuries is determined, and victim care and rescue priorities are established in accordance with local protocol.~~

~~**(A)** Requisite Knowledge.~~

~~Types and systems of triage according to local protocol, resource availability, methods to determine injury severity, ways to manage resources, and prioritization requirements.~~

~~**(B)** Requisite Skills.~~

~~The ability to use triage materials, techniques, and resources and to categorize victims correctly.~~

22.1.3

Select ~~and don~~ hazard-specific PPE, given PPE, including ~~PFDs,~~ personal flotation devices (PFDs), helmets, and exposure garments that are consistent with the needs of the incident and type of watercraft, so that the wearer is protected from the effects of accidental immersion, exposure to the elements, and injury from unanticipated movement of the watercraft.

(A) Requisite Knowledge.

Hazards present on and near the water and aboard watercraft used by the AHJ including those presented by weather, current, ~~and~~ water conditions, and the capacities.

(B) Requisite Skills.

~~Locate~~ Ability to locate , identify, and don PPE and flotation devices.

22.1.4

~~Board and exit a~~ Maintain watercraft stability, given a selected watercraft used by the AHJ, so that the stability of the craft is not compromised, the possibility of a fall is minimized, and the rescuer is protected from harm.

(A) Requisite Knowledge.

Elements that affect the stability of watercraft, including mass, center of gravity, weight distribution, impact loads, current, sail area, and wind and water conditions.

(B) Requisite Skills.

Boarding and exiting a watercraft in a manner that prevents injury and minimizes the impact on the stability of the watercraft.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 09:43:18 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-160-NFPA 1006-2018

First Revision No. 161-NFPA 1006-2018 [Section No. 21.2 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 22.1 and ~~21.2.1 through 21.2.18~~ 22.2 shall be met prior to ~~operations level~~ operations-level qualification in watercraft rescue.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 09:46:32 EDT 2018

Committee Statement

Committee Statement: The committee has made this change in order to reduce confusion.

Response Message: FR-161-NFPA 1006-2018

First Revision No. 164-NFPA 1006-2018 [Section No. 21.2.5]

22.2.5

~~Identify and interpret~~ Interpret navigational aids given marine lights, structures and markings on land, other vessels, or on the water, so that nautical landmarks and other vessels are identified, intended course is selected, and collisions are avoided.

(A) Requisite Knowledge.

Appearance and color of visual aids and navigation markers and their meaning.

(B) Requisite Skills.

Interpret markers, lights, and signals to determine a course that will avoid other vessels.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 10:06:44 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with the proper JPR format.

Response Message: FR-164-NFPA 1006-2018

First Revision No. 165-NFPA 1006-2018 [Section No. 21.2.7]

22.2.7

Use ~~PPE according to the manufacturer's directions, be proficient in emergency escape procedures, be proficient in communications, don and doff equipment in an expedient manner, use preoperation checklists, select personal flotation devices, don and doff personal flotation devices, select water rescue helmets, don and doff water rescue helmets, select personal protective clothing and equipment, don and doff in-water insulating garments, be proficient in emergency escape procedures, and be proficient in communicating distress signals.~~ of hazard-specific PPE, given a watercraft rescue incident/scenario, so that the PPE is used in accordance with AHJ policies relative to the specific incident/scenario, PPE emergency escape procedures are followed, and distress signals are communicated.

(A) Requisite Knowledge.

The capabilities and limitations of hazard-specific PPE and personal flotation devices, distress signals, emergency escape procedures, and preoperational checklists for the PPE .

(B) Requisite Skills.

~~Donning and doffing~~ Ability to don and doff PPE and personal flotation devices, including water rescue helmets and water insulating garments; communicate distress signals; follow emergency escape procedures for the PPE; use preoperational checklists for the PPE .

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 10:21:39 EDT 2018

Committee Statement

Committee Statement: These changes have been made in order to comply with the proper format for JPR's.

Response Message: FR-165-NFPA 1006-2018

First Revision No. 217-NFPA 1006-2018 [Section No. 21.2.10 [Excluding any Sub-Sections]]

Launch ~~or deploy~~ a watercraft from a pier, dock, slip, trailer, or other conveyance, given a watercraft and an operator, so that communication is maintained with the operator, current and wind are accounted for, mooring lines are managed, and equipment is secured against unintended movement.

Submitter Information Verification

Committee:

Submittal Date: Thu Aug 02 13:14:35 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper JPR development.

Response Message: FR-217-NFPA 1006-2018

First Revision No. 166-NFPA 1006-2018 [Section No. 21.2.18]

22.2.18*

Terminate an incident, given PPE specific to the incident, isolation barriers, and tool kit, so that rescuers and bystanders are protected and accounted for during termination operations; the party responsible is notified of any modification or damage created during the operational period; documentation of loss or material use is accounted for, scene documentation is performed~~;~~ , and scene control is transferred to a responsible party; potential or existing hazards are communicated to that responsible party; debriefing and postincident analysis and critique are considered~~,~~ ; and command is terminated.

A.22.2.18

The committee recognizes that technical rescue incidents pose unique challenges in terms of safely concluding or demobilizing an event. The sequence and manner in which resources are transitioned out of an event require careful analysis to ensure that scene and rescuer safety are not compromised. Risk management strategies can include both active and nonintervention strategies, such as not removing (i.e., abandoning in place) equipment, denying entry to a site, and so forth. A large number of catastrophic events have occurred during the end or termination stages of such events when personnel are fatigued and resources are in a state of transition from active event participation to a return to service.

(A) Requisite Knowledge.

PPE characteristics, hazard and risk identification, isolation techniques, statutory requirements identifying responsible parties, accountability system use, reporting methods, and postincident analysis techniques.

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(B) Requisite Skills.

~~Selection~~Ability to select and use of ~~task and~~ hazard-specific PPE~~,~~; decontamination~~,~~of PPE; use ~~of~~ barrier protection techniques, data collection, and recordkeeping/reporting protocols~~,~~; and postincident analysis activities.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 11:07:07 EDT 2018

Committee Statement

Committee Statement: These changes are editorial in nature.

Response Message: FR-166-NFPA 1006-2018

First Revision No. 163-NFPA 1006-2018 [Section No. 21.3 [Excluding any Sub-Sections]]

The job performance requirements defined in ~~Section~~ Sections 22.2 and ~~21.3.1 through 21.3.12~~ 22.3 shall be met prior to ~~technician level~~ technician-level qualification in watercraft rescue.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 09:51:06 EDT 2018

Committee Statement

Committee Statement: The committee has made this change in order to reduce confusion.

Response Message: FR-163-NFPA 1006-2018

First Revision No. 218-NFPA 1006-2018 [Section No. 21.3.12 [Excluding any Sub-Sections]]

Shut down ~~and secure~~ a watercraft, given a watercraft available to the agency, so that ~~post-shutdown~~ postshutdown checks are conducted, and the craft is secured and protected from damage and tampering.

Submitter Information Verification

Committee:

Submittal Date: Thu Aug 02 13:17:11 EDT 2018

Committee Statement

Committee Statement: This change was made in order to comply with proper JPR formatting.

Response Message: FR-218-NFPA 1006-2018

First Revision No. 167-NFPA 1006-2018 [Section No. 22.1]

23.1 Awareness Level.

~~The job performance requirements defined in 22.1.1 through 22.1.4 shall be met prior to awareness-level qualification in floodwater rescue.~~

23.1.1

Prior to qualification at the awareness level in floodwater rescue, the individual shall meet the requirements in 1.5 (1) as defined by the AHJ in addition to the job performance requirements defined in Section 23.1 .

~~**22.1.1**~~

~~Recognize the need for technical rescue resources at an incident, given AHJ guidelines, an operations- or technician-level incident, so that the need for additional resources is identified, the response system is initiated, the scene is secured and rendered safe until additional resources arrive, and awareness-level personnel are incorporated into the operational plan.~~

~~**(A)** Requisite Knowledge.~~

~~Operational protocols, specific planning forms, types of incidents common to the AHJ, hazards, incident support operations and resources, and safety measures.~~

~~**(B)** Requisite Skills.~~

~~The ability to apply operational protocols, select specific planning forms based on the types of incidents, identify and evaluate various types of hazards within the response area, request support and resources, and determine the required safety measures.~~

~~**22.1.2**~~

~~Establish scene safety zones, given an incident, scene security barriers, incident location, incident information, and personal protective equipment (PPE), so that safety zones are designated, zone perimeters are consistent with incident requirements, perimeter markings can be recognized and understood by others, zone boundaries are communicated to incident command, and only authorized personnel are allowed access to the scene.~~

~~**(A)** Requisite Knowledge.~~

~~Use and selection of PPE, zone or area control flow and concepts, types of control devices and tools, types of existing and potential hazards, methods of hazard mitigation, organizational standard operating procedure, and staffing requirements.~~

~~**(B)** Requisite Skills.~~

~~The ability to select and use PPE, apply crowd control concepts, position zone control devices, identify and mitigate existing or potential hazards, and personal safety techniques.~~

~~**22.1.3**~~

~~Identify and support an operations- or technician-level incident, given an incident, an assignment, incident action plan, and resources from the tool kit, so that the assignment is carried out, progress is reported to command, environmental concerns are managed, personnel rehabilitation is facilitated, and the incident action plan is supported.~~

~~**(A)** Requisite Knowledge.~~

~~AHJ operational protocols, hazard recognition, incident management, PPE selection, resource selection and use, scene support requirements including lighting, and monitoring hazards zones.~~

~~**(B)** Requisite Skills.~~

~~Application of operational protocols, function within an IMS, follow and implement an incident action plan, report task progress status to supervisor or Incident Command.~~

23.1.2

Size up an incident, given an incident, background information, and applicable reference materials, so that the operational mode is defined; resource availability, response times, and types of rescues are determined; the number of victims is identified; the last reported locations of all victims are established; witnesses and reporting parties are identified and interviewed; resource needs are assessed; search parameters are identified; and information required to develop an incident action plan is obtained.

(A) Requisite Knowledge.

Types of reference materials and their uses, risk/benefit assessment, availability and capability of the resources, elements of an action plan and related information, relationship of size-up to the incident management system, and information gathering techniques and how that information is used in the size-up process.

(B) Requisite Skills.

The ability to read specific rescue reference materials, interview people, gather information, relay information, manage witnesses, and use information sources.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 11:13:14 EDT 2018

Committee Statement

Committee Statement: The committee has made the changes and included new text in chapter one as they recognize that there is text in the awareness level of every discipline identified in this document that is the same or very similar. The committee has decided to add, what they believe to be, minimum awareness level actions that anyone who is qualified to the awareness level in any discipline shall be able to do. The text that has been added to chapter 1 is intended to be flexible enough to be applied to any discipline and they committee believes that what they have provided allows the AHJ to be able to apply it unique skills, disciplines, or incidents that the individual might experience within their own jurisdiction. Thus, by adding that new text, the committee is deleting the same or similar text that is found in the awareness level throughout the various disciplines since what is in chapter 1 is intended to be applied throughout the document and disciplines noted within the document.

Response Message: FR-167-NFPA 1006-2018

First Revision No. 168-NFPA 1006-2018 [Section No. 22.2 [Excluding any Sub-Sections]]

The job performance requirements defined in Sections 17.2, 18.2, ~~and~~ 23.1, and ~~22.2.1 through 22.2.11~~ 23.2 shall be met prior to operations-level qualification in floodwater rescue.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 11:15:21 EDT 2018

Committee Statement

Committee Statement: The committee has made this change in order to reduce confusion.

Response Message: FR-168-NFPA 1006-2018

First Revision No. 170-NFPA 1006-2018 [Section No. 22.2.4 [Excluding any Sub-Sections]]

~~Develop and implement~~ Implement an incident action plan, as a member of a team, for the use of watercraft to support floodwater search and rescue operations, given a watercraft, trained operator(s), policies, and procedures used by the AHJ, so that ~~floodwater-specific~~ floodwater-specific hazards are addressed~~,~~ ; watercraft predeployment checks are completed~~,~~ ; watercraft launch or recovery is achieved~~,~~ ; rescuers are deployed and recovered~~,~~ ; both onboard and rescue operations conform with watercraft operational protocols and capabilities~~,~~ ; communications are clear and concise~~,~~ ; and the candidate is familiar with watercraft nomenclature, operational protocols, design limitations, and launch/recovery site issues.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 11:17:05 EDT 2018

Committee Statement

Committee Statement: These changes were made in order to comply with the proper format of a JPR as well as to ensure this was being completed as a member of a team.

Response Message: FR-170-NFPA 1006-2018

First Revision No. 171-NFPA 1006-2018 [Section No. 22.2.8]

23.2.8*

~~Identify and manage~~ Manage the hazards unique to the terrain and environment when covered with floodwater or subject to differential pressures, given an incident consistent with a predicted floodwater environment and a floodwater search and rescue toolkit, so that all hazards are recognized and potential control measures are implemented .

(A) Requisite Knowledge.

Specific hazards that could be present in the floodwater environment that are hidden or covered by water and hazard mitigation measures .

(B) Requisite Skills.

Ability to survey the rescue environment for indicators of potential hazards and avoid, isolate, or control identified hazards .

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 11:19:30 EDT 2018

Committee Statement

Committee Statement: The committee has made these changes in order to comply with the proper format of a JPR.

Response Message: FR-171-NFPA 1006-2018

First Revision No. 172-NFPA 1006-2018 [Section No. 22.2.10]

23.2.10

Terminate an incident, given PPE specific to the incident~~, isolation barriers,~~ and the floodwater rescue tool kit, so that rescuers and bystanders are protected and accounted for during termination operations~~; the party responsible is notified of any modification or damage created during the operational period; documentation of loss or material use is accounted for~~ , scene documentation is performed, and scene control is transferred to a responsible party; potential or existing hazards are communicated to that responsible party; debriefing and postincident analysis and critique are considered~~,~~ ; and command is terminated.

(A) Requisite Knowledge.

PPE characteristics, hazard and risk identification, isolation techniques, statutory requirements identifying responsible parties, accountability system use, reporting methods, and postincident analysis techniques.

Global FR-70

(B) Requisite Skills.

~~Selection~~Ability to select and use of ~~task and~~ hazard-specific PPE~~,~~; decontamination~~,~~of PPE; use ~~of~~ barrier protection techniques, data collection, and recordkeeping/reporting protocols~~, postincide~~; conduct postincident analysis activities.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 11:22:44 EDT 2018

Committee Statement

Committee Statement: The committee has made these changes for editorial purposes, the proper format of JPR's and to include the floodwater rescue tool kit.

Response Message: FR-172-NFPA 1006-2018

First Revision No. 173-NFPA 1006-2018 [Section No. 22.3 [Excluding any Sub-Sections]]

The job performance requirements defined in Sections 17.3, 23.2, and ~~22.3.1~~ 23.3 shall be met prior to technician-level qualification in floodwater rescue.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 11:25:31 EDT 2018

Committee Statement

Committee Statement: This change was made in order to reduce confusion.

Response Message: FR-173-NFPA 1006-2018

First Revision No. 174-NFPA 1006-2018 [New Section after 22.3.1(B)]

23.3.2

Develop an incident action plan for the use of watercraft to support floodwater search and rescue operations, given a watercraft, trained operator(s), policies, and procedures used by the AHJ, so that floodwater-specific hazards are addressed; watercraft predeployment checks are completed; watercraft launch or recovery is achieved; rescuers are deployed and recovered; both onboard and rescue operations conform with watercraft operational protocols and capabilities; communications are clear and concise; and the candidate is familiar with watercraft nomenclature, operational protocols, design limitations, and launch/recovery site issues.

(A) Requisite Knowledge.

Entry/exit procedures, communications techniques, boat operation techniques, design limitations, climactic conditions, characteristics of floodwater events, and specific hazards presented by floodwater events in the potential rescue environment.

(B) Requisite Skills.

Ability to implement entry and exit procedures and communications with watercraft crew, use emergency/safety equipment, identify hazards, and operate within the rescue environment.

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 11:27:21 EDT 2018

Committee Statement

Committee Statement: The committee has added this new JPR to ensure that the individual qualified to the technician level was able to accomplish what this JPR is requiring, as this was not included in previous editions of the document.

Response Message: FR-174-NFPA 1006-2018

First Revision No. 43-NFPA 1006-2018 [Section No. A.6.3.6]

A.6.3.6

Emergency shoring operations for urban search and rescue incidents provide a safe and efficient atmosphere while conducting search and rescue operations for trapped victims. The intent is to provide a relatively safe and reduced-risk environment for both the victim and the trained rescue force. The process includes stabilizing adjacent structures or objects that might have been affected by the initial incident. Figure A.6.3.6(a) through Figure A.6.3.6(f) depict technician-level shores that rescuers working at the technician level should be able to construct and properly install. They include all operations-level shores as well as laced post shore, plywood laced post shore, sloped floor shores (Type 2 and Type 3), double and triple raker shores, flying shore, and combination shores designed by a structural engineer.

Figure A.6.3.6(a) Laced Post Shore.

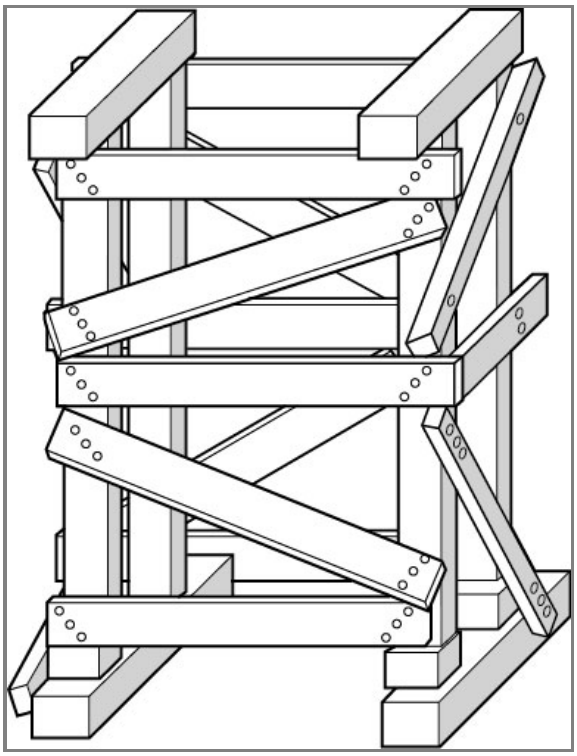


Figure A.6.3.6(b) Plywood Laced Post Shore.

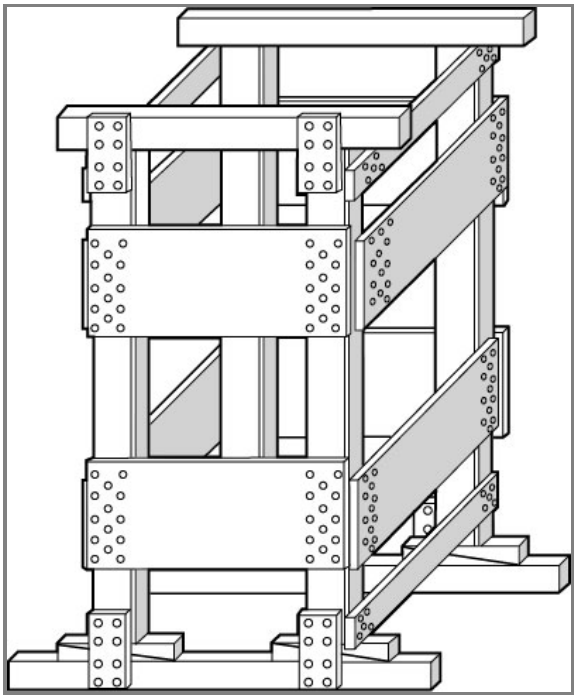


Figure A.6.3.6(c) Sloped Floor Shore Type 2.

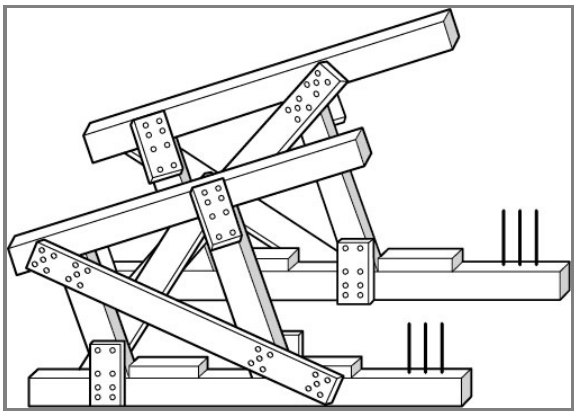


Figure A.6.3.6(d) Sloped Floor Shore Type 3.

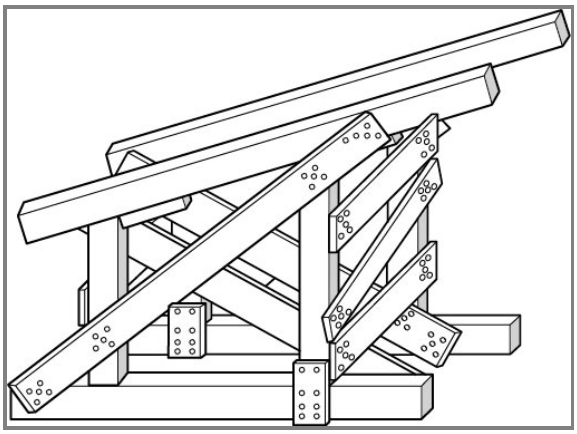


Figure A.6.3.6(e) Double Raker Shore.

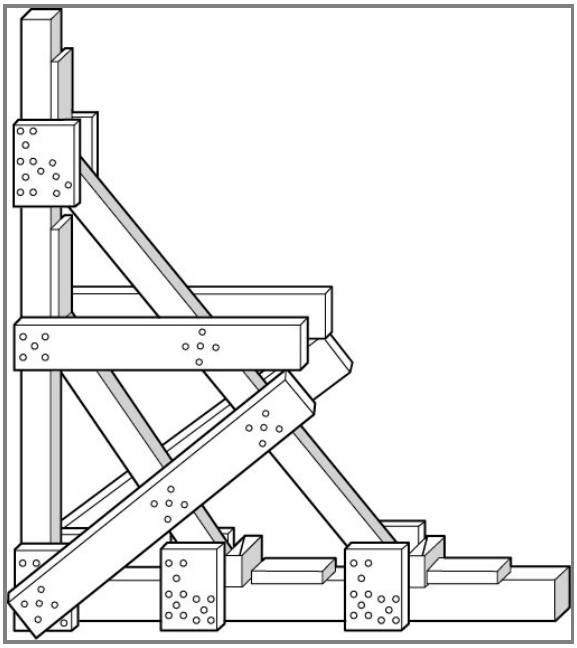
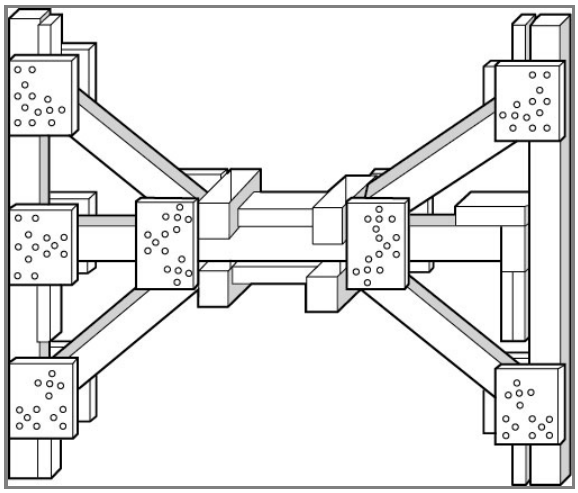


Figure A.6.3.6(f) Flying ~~Raker~~ Shore.



Submitter Information Verification

Committee:

Submittal Date: Tue Jul 24 10:57:44 EDT 2018

Committee Statement

Committee Statement: This change was made to correct an error in the label.

Response Message: FR-43-NFPA 1006-2018

First Revision No. 132-NFPA 1006-2018 [Section No. A.11.1.4]

See FR-72

A.12.2.1

Support operations can include, but are not limited to, the following functional sectors in the incident management system:

(1) *Ventilation Sector.* Monitors and ventilates personnel

(2) *Extrication Sector.* Prepares for extrication methods and tactics

(3) *EMS Sector.* Plans for ongoing patient care, transfer, and transport in coordination with the incident commander and receiving hospital

(4) *Support Sector.* Can handle lighting, power, and environmental management

(5) *Cut Station.* Handles construction and fabrication of shoring materials

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 09:44:03 EDT 2018

Committee Statement

Committee Statement: This is just being renumbered to align with the main body text.

Response Message: FR-132-NFPA 1006-2018

First Revision No. 82-NFPA 1006-2018 [Section No. A.12.2.4]

A.13.2.4

In this case, “stabilization” is meant to imply stabilization from unintended or unwanted movement; uncontrolled movement of machinery components can cause extremely hazardous and potentially fatal situations. Responding personnel should be familiar with, and trained in, techniques for stabilizing and removing the potential for movement of machinery components. The five directional movements to be considered during the stabilization process are defined as follows:

(1) *Horizontal Movement.* Machine moves forward or rearward on its longitudinal axis or moves horizontally along its lateral axis.

(2) *Vertical Movement.* Machine moves up and down in relation to the ground while moving along its vertical axis.

(3) *Roll Movement.* Machine rocks side to side while rotating about on its longitudinal axis and remaining horizontal in orientation.

(4) *Pitch Movement.* Machine moves up and down about its lateral axis, causing the object’s front and rear portions to move left or right in relation to their original position.

(5) *Yaw Movement.* Machine twists or turns about its vertical axis, causing the object’s front and rear portions to move left or right in relation to their original position.

For ~~Level I~~ operations level , stabilization would include basic techniques such as cribbing, blocking, and wedging components against unwanted movement.

Submitter Information Verification

Committee:

Submittal Date: Wed Jul 25 15:25:42 EDT 2018

Committee Statement

Committee Statement: This is being changed as it was missed during the last revision cycle.

Response Message: FR-82-NFPA 1006-2018

First Revision No. 224-NFPA 1006-2018 [Section No. A.14.1.3]

A.15.3.3

A prebriefing should include, but is not limited to, information regarding the following:

(1) Tactical assignments with explicit instructions
(2) General hazards and safety instructions
(3) Communications protocols, procedures, and details
(4) Anticipated environmental concerns
(5) Time frames for operations
(6) Emergency procedures
(7) Specific equipment needs
(8) Debriefing procedures
(9) Anticipated logistical needs

Documentation for entry operations, as a minimum, should include the following:

(1) Development of some type of representation of IMS command structure
(2) Time of incident
(3) Total time of operation
(4) Environmental conditions
(5) Location of victim
(6) Creation of a tactical checklist that includes entry times, exit times, personal accountability reports, atmospheric readings, rehabilitation information, injuries sustained, and incident number

Submitter Information Verification

Committee: PQU-RES
Submittal Date: Fri Aug 31 09:51:03 EDT 2018

Committee Statement

Committee Statement: The committee has made this change in order to ensure this annex material goes with the correct text that is in the main body of the document.
Response Message: FR-224-NFPA 1006-2018

First Revision No. 144-NFPA 1006-2018 [Section No. A.18.3]

A.19.3

The committee is of the opinion that ~~Advanced Open Water certification~~ specialty training courses provided by most nationally recognized certifying agencies ~~(agencies associated with the Recreational SCUBA Training Council)~~ can help build an acceptable ~~foundation for the basic SCUBA skills~~ foundation required for dive technical ~~rescuer.~~ rescuers. Examples of specialty diving include dry suit, full face mask, underwater communications, deep diving, night and limited visibility, current, polluted water, underwater lifting, cave, surface supplied air, and ice.

These courses do not, however, offer all of the skills required to meet these standards, and further training and experience in special hazards expected to be encountered in the AHJ's territory should be sought.

Candidates should ~~have experience diving in various environments by taking additional specialties. Examples of specialties include ice, current, hazardous materials, dry suit, and lifting operations. Annual confirmation of these skills should be performed to ensure continued competency.Candidates should demonstrate leadership~~ demonstrate leadership and dive management ~~Candidates should demonstrate leadership~~ skills similar to that of a ~~"Divemaster"~~ dive supervisor as defined by the World Recreational SCUBA Training Council. The dive technical rescuer should have documented substantial dive experience in varied environments and have the ability to supervise and lead others. These personnel should also be able to employ checklists to identify pre- and ~~post-dive~~ postdive needs.

~~Examples of specialty diving include dry suit, full face mask, underwater communications, deep diving, night and limited visibility, current, polluted water, leadership, lifting, cave, surface supplied, and ice.~~

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 11:12:49 EDT 2018

Committee Statement

Committee Statement: The committee has made these changes in order to provide further clarification as well as to stress that there are many other ways to accomplish this task.

Response Message: FR-144-NFPA 1006-2018

Public Input No. 58-NFPA 1006-2018 [Section No. A.18.3]

First Revision No. 149-NFPA 1006-2018 [Section No. A.18.3.3]

A.19.3.3

The committee recommends the diver perform these skills in a blacked-out mask to test ability to perform in a low-visibility environment. The reason this is being done in a pool or confined water environment is so that the student can be observed for problems prior to being exposed to the actual low-visibility environment. These skills involve locating and utilizing personal emergency equipment (not limited to cutting devices, secondary air system, communications equipment, ~~etc.~~ and so forth) positioned according to AHJ protocols. ~~PPE should include the use of dry suits.~~

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 11:37:02 EDT 2018

Committee Statement

Committee Statement: The committee has removed this as they believe it adds no value to this section of text.

Response Message: FR-149-NFPA 1006-2018

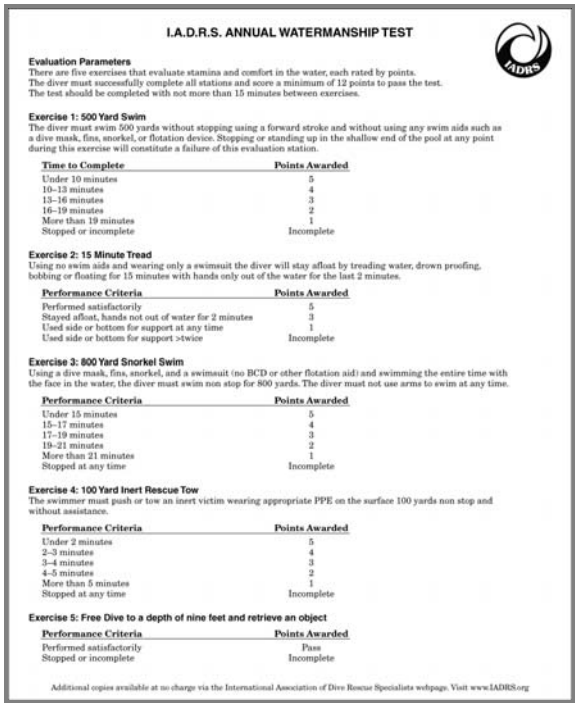
First Revision No. 146-NFPA 1006-2018 [Section No. A.18.3.4]

A.19.3.4

The understanding of the committee is that candidates for this specialty should have obtained prior SCUBA certification and, as a result, have met basic watermanship requirements. The committee's opinion is that candidates should have the ability to swim a designated watercourse similar to the conditions that will be encountered in the AHJ's territory ~~in order~~ to determine the candidate's ability to perform self-rescue. The committee recommends that the skills involved in this test be more strenuous than what is expected for civilians to perform for enrolling in an open water SCUBA course.

An example of a ~~Divemaster-level~~ dive supervisor watercourse for watermanship would be a concurrent 365.76 m (400 yard) swim, 15-minute water tread or "drownproofing," 731.52 m (800 yard) swim using mask, fins, and snorkel, and a 91.44 m (100 yard) inert diver tow. At no point should the diver utilize flotation aids to assist in the swim. The inert diver is not permitted to assist in propulsion, but the task is not to be a "rescue" skill. *(See Figure A.19.3.4.)*

Figure A.19.3.4 Sample ~~Divemaster-Level~~ Watermanship Test. *(Courtesy of Dive Rescue International)*



I.A.D.R.S. ANNUAL WATERMANSHIP TEST

Evaluation Parameters
There are five exercises that evaluate stamina and comfort in the water, each rated by points.
The diver must successfully complete all stations and score a minimum of 12 points to pass the test.
The test should be completed with not more than 15 minutes between exercises.

Exercise 1: 500 Yard Swim
The diver must swim 500 yards without stopping using a forward stroke and without using any swim aids such as a dive mask, fins, snorkel, or flotation device. Stopping or standing up in the shallow end of the pool at any point during this exercise will constitute a failure of this evaluation station.

Time to Complete	Points Awarded
Under 10 minutes	5
10–13 minutes	4
13–16 minutes	3
16–19 minutes	2
More than 19 minutes	1
Stopped or incomplete	Incomplete

Exercise 2: 15 Minute Tread
Using no swim aids and wearing only a swimsuit the diver will stay afloat by treading water, drown proofing, bobbing or floating for 15 minutes with hands only out of the water for the last 2 minutes.

Performance Criteria	Points Awarded
Performed satisfactorily	5
Stayed afloat, hands not out of water for 2 minutes	3
Used side or bottom for support at any time	1
Used side or bottom for support >twice	Incomplete

Exercise 3: 800 Yard Snorkel Swim
Using a dive mask, fins, snorkel, and a swimsuit (no BCD or other flotation aid) and swimming the entire time with the face in the water, the diver must swim non stop for 800 yards. The diver must not use arms to swim at any time.

Performance Criteria	Points Awarded
Under 15 minutes	5
15–17 minutes	4
17–19 minutes	3
19–21 minutes	2
More than 21 minutes	1
Stopped at any time	Incomplete

Exercise 4: 100 Yard Inert Rescue Tow
The swimmer must push or tow an inert victim wearing appropriate PPE on the surface 100 yards non stop and without assistance.

Performance Criteria	Points Awarded
Under 2 minutes	5
2–3 minutes	4
3–4 minutes	3
4–5 minutes	2
More than 5 minutes	1
Stopped at any time	Incomplete

Exercise 5: Free Dive to a depth of nine feet and retrieve an object

Performance Criteria	Points Awarded
Performed satisfactorily	Pass
Stopped or incomplete	Incomplete

Additional copies available at no charge via the International Association of Dive Rescue Specialists webpage. Visit www.IADRS.org

Submitter Information Verification

Committee:

Submittal Date: Fri Jul 27 11:22:23 EDT 2018

Committee Statement

Committee Statement: The committee has made this change for document consistency.

Response Message: FR-146-NFPA 1006-2018

First Revision No. 186-NFPA 1006-2018 [Section No. J.1]

K.1 Sample Tool Kit Contents.

Table K.1 contains a list of sample tool kits that can be used with the various rescue specialties. The table is not intended to imply a minimum or all-inclusive listing of equipment necessary to perform a rescue. These tool boxes are identified to provide guidance on equipment needed to evaluate candidates.

Table K.1 Tool Kit Contents

Discipline	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Air-monitoring equipment																			
Anemometer																			
Animal lifting bridle system																			
Animal mud adhesion reduction system																			
Animal packaging devices																			
Animal restraint devices																			
Assorted cribbing																			
Assorted wedges																			
Audiovisual signaling device																			
Axe																			
Binoculars																			
Buoyancy control devices																			
Camera																			
Carabiners, locking																			
Chain saw, electric or gas																			
Chain slings																			
Charged fire hose line																			
Chisels																			
Clamp, “Ellis”																			
Class B foam application supplies																			
Come-along																			
Communication devices																			
Community resource lists																			
Cutting torch																			
DECON equipment																			
Descent control/ascending devices																			
Dewatering pumps																			
Dive weights																			
Duct-type ventilation																			
Edge protection																			
Energy detection equipment (e.g., electromechanical radiation)																			
Energy isolation equipment (lockout/tagout)																			
Extension cords																			
Fall protection/restraint equipment																			
Fins, swim																			
Fire extinguisher																			
First aid and oxygen kits																			
Flexible ~~and/~~ or rigid litter devices																			
Flotation aid																			
Food, packable																			

Discipline	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Generator																			
Gloves																			
Halligan bar																			
Hammer, demolition																			
Hammer, rotary																			
Hand tools																			
Harness, animal																			
Harness, rescue																			
Harness, tunneller																			
Harness, victim																			
Heavy excavating equipment resources																			
Helmets																			
Hose inflator																			
Hydration systems (personnel)																			
Hydraulic cutters																			
Hydraulic rams																			
Hydraulic spreaders																			
Jacks																			
Junction box, electrical																			
Knife, rescue																			
Lanyards, climbing/fall arrest (100% tie-off)																			
Lanyards, work positioning																			
Lighting, flood																			
Lighting, hand ~~and/~~ or helmet (~~Factory~~ factory ~~Mutual~~ mutual approved)																			
Line gun																			
Lumber and timber (assorted)																			
Marking kit; paint, chalk, crayon, pencil																			
Navigational instruments — compass, GPS																			
Packs																			
Passports																			
Pens/pencils																			
Perimeter or scene-marking devices																			
Personal alarm device																			
Personal flotation devices (PFDs)																			
Personal toiletry items																			
Personnel accountability system																			
Pickets																			
Plastic bags																			
Pneumatic bags																			
Pneumatic soil knife																			
Pneumatic soil vacuum (hand and/or truck)																			
Portable anchor device																			

Discipline	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
PPE — boots																			
PPE — boots, climbing																			
PPE — boots, dive																			
PPE — gloves																			
PPE — HazMat, ~~Levels~~ levels B and C																			
PPE — helmet water rescue																			
PPE — knee ~~and/~~ or elbow pads																			
PPE — SCBA																			
PPE — SCUBA																			
PPE — suit, dry																			
PPE — suit, wet																			
PPE — supplied-air respirators with egress cylinder																			
PPE — turnout gear																			
PPE — respiratory escape packs																			
Preplans/maps																			
Pulleys																			
~~Quick release~~ Quick-release mechanism																			
Reach extension devices																			
Rope — life safety																			
Rope — utility																			
Rope — water rescue																			
Rope grab devices																			
Safety glasses and hearing protection																			
Saw, circular, carbide tip, metal cutting, and continuous rim diamond blades																			
Saw, reciprocating with wood and metal blades																			
Seismic/acoustic life detector system (e.g., DELSAR)																			
Sheeting																			
Shoring																			
Sleeping material/bag																			
Spinal immobilization devices, short and long																			
Spring-loaded center punch																			
Tactical worksheets																			
Tarps																			
Thermal imaging cameras (TICs)																			
Throw bags																			
Torpedo buoy, ring buoy, or equivalent																			
Traffic control devices																			
Trench box, shield																			
Victim protective coverings																			

Discipline	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Watercraft — manual or motorized																			
Webbing																			
Winches																			

Supplemental Information

File Name	Description	Approved
Annex_J-Tool_KitsTable_KH.docx	For staff use	

Submitter Information Verification

Committee:

Submittal Date: Mon Jul 30 16:06:27 EDT 2018

Committee Statement

Committee Statement: The current table is not correct and the committee is replacing it with the correct one as this was omitted during that last revision cycle.

Response Message: FR-186-NFPA 1006-2018

First Revision No. 190-NFPA 1006-2018 [Chapter L]

Annex D National Fallen Firefighters Foundation

Annex L is not a part of the requirements of this NFPA document but is included for informational purposes only. This annex contains explanatory material, numbered to correspond with the applicable text paragraphs.

D.1 16 Firefighter Life Safety Initiatives

The National Fallen Firefighters Foundation sponsored a symposium in 2004 in Tampa, FL. At this milestone event more than 200 fire service leaders assembled and discussed the nation's fire problem and how to drastically reduce the number of fire fighter line of duty deaths. This event was the birth of the 16 Firefighter Life Safety Initiatives which should be the catalyst for fire service training and education, and the foundation for strategic level policies and procedures.

(1) Define and advocate the need for a cultural change within the fire service relating to safety; incorporating leadership, management, supervision, accountability and personal responsibility.

(2) Enhance the personal and organizational accountability for health and safety throughout the fire service.

(3) Focus greater attention on the integration of risk management with incident management at all levels, including strategic, tactical, and planning responsibilities.

(4) All fire fighters must be empowered to stop unsafe practices.

(5) Develop and implement national standards for training, qualifications, and certification (including regular recertification) that are equally applicable to all fire fighters based on the duties they are expected to perform.

(6) Develop and implement national medical and physical fitness standards that are equally applicable to all fire fighters, based on the duties they are expected to perform.

(7) Create a national research agenda and data collection system that relates to the initiatives.

(8) Utilize available technology wherever it can produce higher levels of health and safety.

(9) Thoroughly investigate all fire fighter fatalities, injuries, and near misses.

(10) Grant programs should support the implementation of safe practices and/or mandate safe practices as an eligibility requirement.

(11) National standards for emergency response policies and procedures should be developed and championed.

(12) National protocols for response to violent incidents should be developed and championed.

(13) Fire fighters and their families must have access to counseling and psychological support.

(14) Public education must receive more resources and be championed as a critical fire and life safety program.

(15) Advocacy must be strengthened for the enforcement of codes and the installation of home fire sprinklers.

(16) Safety must be a primary consideration in the design of apparatus and equipment.

D.2

Specific Firefighter Life Safety Initiatives for Technical Rescue Personnel are as follows:

(1) Define and advocate the need for a cultural change within the fire service relating to safety; incorporating leadership, management, supervision, accountability and personal responsibility.

(2) Enhance the personal and organizational accountability for health and safety throughout the fire service.

(3) Focus greater attention on the integration of risk management with incident management at all levels, including strategic, tactical, and planning responsibilities.

(4) All fire fighters must be empowered to stop unsafe practices.

(5) Develop and implement national medical and physical fitness standards that are equally applicable to all fire fighters, based on the duties they are expected to perform.

(6) Utilize available technology wherever it can produce higher levels of health and safety.

(7) Thoroughly investigate all fire fighter fatalities, injuries, and near misses.

(8) National standards for emergency response policies and procedures should be developed and championed.

Submitter Information Verification

Committee:

Submittal Date: Wed Aug 01 11:29:57 EDT 2018

Committee Statement

Committee Statement: This is being re-lettered to Annex D for consistency within the Pro-Qual project.

Response Message: FR-190-NFPA 1006-2018

First Revision No. 225-NFPA 1006-2018 [Section No. M.3]

N.3 References for Extracts in Informational Sections.

NFPA 1670, *Standard on Operations and Training for Technical Search and Rescue Incidents*, 2017 edition.

NFPA 350 , *Guide for Safe Confined Space Entry and Work* , 2019 edition.

Submitter Information Verification

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Committee Statement: This has been added in order to comply with the NFPA MOS.

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