

West Virginia State Fire Commission Administrative Policy

Series _____

Requirements for Fire Department Rescue Services

West Virginia State Fire Commission
1207 Quarrier St., 2nd Floor
Charleston, West Virginia 25301

Charles L. Eversole, Chairman

April 1, 2005
(Approved this date for implementation.)

§ 1. General.

1.1. Scope.-- These requirements are intended to insure adequate provision of fire department rescue services to the citizens of West Virginia; to meet the needs and goals set out in W.Va. Code § 29-3-2; and to provide clear direction to fire department rescue services in West Virginia. This document reflects what shall be considered minimal requirements for rescue services. Fire Departments should not only strive to meet these requirements, but also endeavor to surpass them.

1.2. Authority. -- West Virginia State Code: § 29-3-9(i).

1.3. West Virginia State Fire Commission Approval Date: April 01, 2005

1.4. Effective Date: Pending approval of Title 87, Series 6 Legislative Rule

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_____ Chairman, WV State Fire Commission

1.5. Applicability. – These requirements apply to all persons or entities recognized as fire departments by the West Virginia State Fire Commission. Nothing in these requirements shall require a fire department to provide rescue services as part of its mission. However, fire departments choosing to provide any or all forms of rescue identified in this document shall determine the level of service to be provided by their organization and shall report the operational training level of their personnel to the West Virginia State Fire Commission as prescribed section 7.

1.6. Enforcement. -- This document is enforced by the West Virginia State Fire Commission through the West Virginia State Fire Marshal.

§ 2. Definitions.

2.1. Emergency Medical Service (EMS). -- Means all services which are set forth in Public Law 93-154 "The Emergency Medical Services Systems Act of 1973" and those included in and made a part of the emergency medical services plan of the department of health and human resources inclusive of, but not limited to, responding to the medical needs of an individual to prevent the loss of life or aggravation of illness or injury.

2.2. Extrication. -- The removal of trapped victims from a vehicle or machinery.

2.3. Fire Department Rescue Service. -- The fire department rescue team designated to rescue victims from physical danger.

2.4. Incident Command System (ICS). -- The combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure with responsibility for the management of assigned resources to effectively accomplish stated objectives pertaining to an incident or training exercise.

2.5. Medical Surveillance. -- The regular and periodic taking and recording of rescue team members vital signs (temperature, pulse, blood pressure, respirations) prior to, during, and following a rescue activity.

2.6. Rapid Intervention Team. -- At least two members available for rescue of a member or a team if the need arises.

2.7. Recovery. -- Activities and programs designed to return the incident to an acceptable condition.

2.8. Recovery Mode. -- Level of operational urgency where there is no chance of rescuing a victim alive.

2.9. Rescue. -- Those activities directed at locating endangered persons at an emergency incident, removing those persons from danger, treating the injured, and providing for transport to an appropriate health care facility.

2.10 Rescue Incident. -- An emergency incident that primarily involves the rescue of persons subjected to physical danger and that may include the provision of emergency medical care.

2.11 Fire Department.-- A public fire protection organization, usually a department of municipal or county government that provides fire prevention, fire extinguishment and emergency rescue service to a given jurisdiction.

2.12 Member.-- A person having membership rights in an organization in accordance with the provisions of its certificate of incorporation or by-laws.

2.13 Personal Protection Equipment (PPE).-- The equipment provided to shield or isolate personnel from infectious, chemical, physical and thermal hazards.

2.14 Size-Up.-- A mental process of evaluating the influencing factors at an incident prior to committing resources to a course of action.

2.15. Shall.-- Indicates a mandatory requirement.

2.16. Should.-- Indicates a recommendation or that which is advised but not required.

§ 3 . Minimum Requirements for Fire Department Rescue Services.

3.1. Minimum requirements. -- All fire department rescue services shall meet the following minimum

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requirements:

3.1.a. Each member of the rescue service shall be provided with, and trained to use properly, the personal protective equipment and rescue equipment necessary for making rescues from positions of danger according to his or her designated level of competency;

3.1.b. Each member of the rescue service shall be trained to perform the assigned rescue duties corresponding to his or her designated level of competency;

3.1.c. Each member of the rescue service shall practice making rescues by means of simulated rescue operations in which they remove dummies, mannequins, or persons from actual or representative dangerous locations;

3.1.d. Each member of the rescue service shall be certified in basic first aid and cardiopulmonary resuscitation (CPR) .

3.1.e. The rescue service shall be capable of responding in a timely manner to a rescue summons;

3.1.f. Each member of the rescue service shall be properly equipped, trained, and capable of functioning appropriately to perform rescues within the area for which they are responsible at their designated level of competency; and

3.1.g. Each member of the rescue service shall be aware of the hazards he or she could confront when called on to perform rescue within the area for which he or she is responsible;

3.2. Responsibility. -- The fire department shall establish levels of operational capability needed to conduct operations at technical rescue incidents safely and effectively based on hazard analysis, risk assessment, the training level of personnel, and the availability of internal and external resources.

3.3. Operational Levels. -- The fire department shall establish operating procedures consistent with one of the following operational levels:

3.3.a. Awareness Level: This level represents the minimum capability of a responder who, in the course of his or her regular duties, may respond to or be the first person on the scene of, a rescue incident. This level can involve limited search, rescue, and recovery operations. Members of a team at this level are generally, but not always, considered rescuers unless supervised by operations level or technician level personnel; or

3.3.b. Operations Level: This level represents the capability of hazard recognition, equipment use, and techniques necessary to safely and effectively support and participate in a technical rescue incident. This level can involve search, rescue, and recovery operations. Generally, but not always, operations level personnel are under the supervision of technician level personnel; or

3.3.c. Technician Level: This level represents the capability of hazard recognition, equipment use, and techniques necessary to safely and effectively coordinate, perform, and supervise a technical rescue incident. This level can involve search, rescue, and recovery operations.

3.4. Operational Procedures. -- The fire department shall establish operational procedures to ensure that rescue operations are performed in a safe manner consistent with the department's level of operational capability and training level of personnel. Additionally, the same techniques used in a rescue operation shall be implemented

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during training , body recovery, evidence search, and other operations with a level of urgency commensurate with a risk/benefit analysis.

3.4.a. Operational Limitations. - - Operational procedures shall not exceed the identified level of capability established in subsection 3.3 of this section.

3.4.b. Medical Care. - - Medical care shall be provided for victims of rescue operations once removed from the hazard area and shall be, at a minimum, at the first aid/CPR level.

3.5. Minimum Training. - - The fire department shall provide for training in the responsibilities that are commensurate with the identified operational capability of each member. The minimum training for all rescue service members shall be at the awareness level. Members expected to perform at a higher operational level shall be trained to that level.

3.6. Continuing Education. - - The fire department shall provide for the necessary continuing education to maintain all requirements of the organization's identified level of capability.

3.7. Documentation. - - The fire department is responsible for the documentation of all required training. This documentation shall be maintained and available for inspection by the West Virginia State Fire Commission, the West Virginia State Fire Marshal, or their authorized representatives, individual team members and their authorized representatives.

3.8. Rescue Incident Requirements. - - Prior to operating at a rescue incident, the fire department shall meet the requirements of applicable subsections for the specific rescue incident.

3.9. Evacuation of Endangered Rescuers. - - The fire department shall ensure that there is a standard operating procedure to evacuate members from an area and account for their safety when an imminent danger to life hazard (IDLH) condition is discovered. This procedure shall include a method to notify all members in the affected area immediately by any effective means including audible warning devices, visual signals, and radio signals.

3.10. Equipment:

3.10.a. Operational Equipment. - - The fire department shall ensure that equipment commensurate with the respective operational capabilities for safe and effective emergency operations at rescue incidents and training activities is provided.

3.10.b. Training. - - Training shall be provided to ensure that all equipment is used and maintained in accordance with the manufacturer's instructions.

3.10.c. Personal Protective Equipment (PPE). - - The fire department shall provide the appropriate protective clothing and equipment to provide protection from those hazards to which personnel are exposed or could be exposed. The protective equipment shall be appropriate to the tasks that are expected to be performed during technical rescue incidents and training exercises.

3.10.c.1. Personnel shall be trained in the care, use, inspection, maintenance, and limitations of the protective clothing and equipment assigned or available for their use.

3.10.c.2. The fire department shall ensure that all personnel wear and use appropriate personal protective equipment while working in known or suspected hazardous areas during technical rescue incidents and training exercises.

3.10.c.3. The fire department shall make available fresh-air breathing apparatus in the form of supplied

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air respirators or self-contained breathing apparatus (SCBA) when required for technical rescue operations. All apparatus shall be worn in accordance with the manufacturer's recommendations. An adequate supply source providing a minimum of Grade D breathing air shall be provided for all fresh-air breathing apparatus. Supplied air respirators shall be used in conjunction with a self-contained breathing air supply capable of providing enough air for egress in the event of a primary air supply failure.

3.11. Safety:

3.11.a. All personnel shall receive training related to the hazards and risks associated with technical rescue operations.

3.11.b. All personnel shall receive training for conducting rescue operations in a safe and effective manner while using appropriate personal protective equipment.

3.11.c. Where members are operating in positions or performing functions at an incident or training exercise that pose a high potential risk for injury, members qualified at a minimum level of first aid/CPR shall be standing by.

3.11.d. Safety Officer. -- At technical rescue training exercises and in actual operations, the incident commander shall assign a safety officer with the specific knowledge and responsibility for the identification, evaluation, and, when possible, the correction of hazardous conditions and unsafe practices. The safety officer shall be readily identifiable at all incidents.

3.12. Incident Management System:

3.12.a. The fire department shall use an incident management system when involved in emergency operations. All members involved in emergency operations shall be familiar with the system.

3.12.b. The fire department shall use an incident personnel accountability system.

§ 4 . Rescue Categories and Operational Levels.

4.1. Structural Collapse Rescue. -- Fire Departments operating at structural collapse incidents shall meet all the requirements specified in section 3 of this document.

4.1.a. Awareness Level. -- Awareness level functions at structural collapse incidents. Functions at this level include the following:

4.1.a.1. Size-up of existing and potential conditions at structural collapse incidents;

4.1.a.2. Identification of the resources necessary to conduct safe and effective structural collapse search and rescue operations;

4.1.a.3. Development and implementation of procedures for carrying out the emergency response system for structural collapse incidents;

4.1.a.4. Development and implementation of procedures for carrying out site control and scene management;

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4.1.a.5. Recognition of general hazards associated with structural collapse incidents including the recognition of applicable construction types and categories and the expected behaviors of components and materials in a structural collapse;

4.1.a.6. Identification of five types of collapse patterns and potential victim locations;

4.1.a.7. Recognition of the potential for secondary collapse;

4.1.a.8. Development and implementation of procedures for conducting visual and verbal searches at structural collapse incidents, while using appropriate methods for the specific type of collapse;

4.1.a.9. Development and implementation of procedures for the recognition and implementation of the Federal Emergency Management Agency Task Force Search and Rescue Marking System, Building Marking System (structure/hazard evaluation), and Structure Marking System (structure identification within a geographic area); and

4.1.a.10. Development and implementation of procedures for the removal of readily accessible victims from structural collapse incidents;

4.1.b. Operations Level. -- Organizations operating at the operations level shall meet all awareness-level requirements specified in subdivision 4.1.a of this document. Additionally, members shall be capable of hazard recognition, equipment use, and techniques necessary to operate safely and effectively at structural collapse incidents involving the collapse or failure of light-frame ordinary construction and un-reinforced and reinforced masonry construction.

4.1.b.1. Operations-level functions at structural collapse incidents for light-frame ordinary construction and reinforced and un-reinforced masonry construction include the development and implementation of the following:

4.1.b.1.a. Procedures for recognizing unique collapse or failure hazards;

4.1.b.1.b. Procedures for search operations intended to locate victims trapped inside and beneath collapse debris;

4.1.b.1.c. Procedures for accessing victims trapped inside and beneath collapse debris;

4.1.b.1.d. Procedures for performing extrication operations involving packaging, treating, and removing victims trapped within and beneath collapse debris; and

4.1.b.1.e. Procedures for stabilizing the structure.

4.1.c. Technician Level. -- Organizations operating at the technician level shall meet the requirements of subdivisions 4.1.a and 4.1.b of this document. Additionally, members shall be capable of hazard recognition, equipment use, and techniques necessary to operate safely and effectively at structural collapse incidents involving the collapse or failure of concrete tilt-up, reinforced concrete, and steel construction.

4.1.c.1. Technician-level functions at structural collapse incidents for concrete tilt-up, reinforced concrete, and steel construction include the development and implementation of the following:

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4.1.c.1.a. Procedures for recognizing unique collapse or failure hazards;

4.1.c.1.b. Procedures for search operations intended to locate victims trapped inside and beneath collapse debris;

4.1.c.1.c. Procedures for accessing victims trapped inside and beneath collapse debris;

4.1.c.1.d. Procedures for performing extrication operations involving packaging, treating, and removing victims trapped within and beneath collapse debris; and

4.1.c.1.e. Procedures for stabilizing the structure.

4.2. Rope Rescue. -- Fire Departments operating at rope rescue incidents shall meet all the requirements specified in section 3 of this document.

4.2.a. Awareness Level. -- Awareness-level functions include the following:

4.2.a.1. Size-up of existing and potential conditions where rope rescue operations will be performed;

4.2.a.2. Identification of the resources necessary to conduct safe and effective rope rescue operations;

4.2.a.3. Development and implementation of procedures for carrying out the emergency response system where rescue is required;

4.2.a.4. Development and implementation of procedures for carrying out site control and scene management;

4.2.a.5. Recognition of general hazards associated with rope rescue and the procedures necessary to mitigate these hazards within the general rescue area; and

4.2.a.6. Development and implementation of procedures for the identification and utilization of personal protective equipment assigned for use at a rope rescue incident.

4.2.b. Operations Level. -- Fire Departments operating at the operations level shall meet all requirements specified in subdivision 4.2.a of this document.

4.2.b.1. Operations-level functions include the development and implementation of the following:

4.2.b.1.a. Procedures for the selection, construction, and use of rope-based mechanical advantage systems;

4.2.b.1.b. Procedures for establishing the need for selecting the proper equipment, and placing edge protection;

4.2.b.1.c. Procedures for the safe construction and use of single-point and multipoint anchor systems within the scope of the organization's training;

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4.2.b.1.d. Procedures for the safe selection, construction, and use of an appropriate belay system;

4.2.b.1.e. Procedures for selection, construction, and use of a lowering system within the scope of the organization's training;

4.2.b.1.f. Procedures for properly tying any knots used by the rope rescue team;

4.2.b.1.g. Procedures for assuring safety in rope rescue operations;

4.2.b.1.h. Procedures for appropriately packaging a patient in a litter;

4.2.b.1.i. Procedures for the selection, use, and maintenance of proper rope rescue equipment and rope rescue systems;

4.2.b.1.j. Procedures for selection, construction, and use of a raising system in the low-angle environment;

4.2.b.1.k. Procedures for safely ascending and descending a fixed rope within the scope of the organization's training; and

4.2.b.1.l. Procedures for using litter attendants in the low-angle environment.

4.2.c. Technician Level. -- Fire Departments operating at the technician level shall meet all requirements specified in subdivisions 4.2.a and 4.2.b of this document. Technician-level functions shall include the development and implementation of the following:

4.2.c.1. Procedures for the safe construction and use of load distributing anchor systems;

4.2.c.2. Procedures for the selection, construction, and use of a high-line rope system within the scope of the organization's training;

4.2.c.3. Procedures for the selection, construction, and use of a rope-based raising system in a high-angle environment within the scope of the organization's training;

4.2.c.4. Procedures for passing knots through a rope rescue system; and

4.2.c.5. Procedures for using litter attendants in the high-angle environment.

4.3. Confined Space Rescue. -- Fire Departments operating at confined space incidents shall meet all the requirements specified in section 3 of this document.

4.3.a. Awareness Level. -- Fire Departments operating at the awareness level are responsible for performing certain non-entry rescue (retrieval) operations. Awareness-level functions for confined space rescue incidents include the following:

4.3.a.1. Size-up of existing and potential conditions;

4.3.a.2. Initiation of contact and establishment of communications with victims where possible;

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emergencies; 4.3.a.3. Recognition and identification of the hazards associated with non-entry confined space

4.3.a.4. Recognition of confined spaces;

4.3.a.5. Procedures to perform a non-entry retrieval;

emergencies; and 4.3.a.6. Procedures for implementing the emergency response system for confined space

4.3.a.7. Procedures for implementing site control and scene management.

4.3.b. Operations Level. – Fire Departments operating at the operations level shall meet the requirements of subdivision 4.3.a of this document. The organization at this level is responsible for the development and training of a confined space rescue team consistent with the requirements of this section. Operations-level functions for confined space rescue operations include the following:

4.3.b.1. Procedures for protecting personnel from hazards within the confined space;

4.3.b.2. Continued size-up of existing and potential conditions;

4.3.b.3. Procedures for assuring that personnel are capable of appropriately managing the physical and psychological challenges that effect rescuers entering confined spaces;

4.3.b.4. Identification of the duties of the rescue entrant(s) and back-up rescue entrant(s), rescue attendant, and rescue team leader;

4.3.b.5. Procedures to monitor continuously, or at frequent intervals, the atmosphere in all parts of the space to be entered and to monitor for, in the following order, oxygen content, flammability (LEL/ LFL), and toxicity;

4.3.b.6. Procedures for entry-type rescues into confined spaces meeting all of the following specific qualifying characteristics:

4.3.b.6.a. The internal configuration of the space is clear and unobstructed so retrieval systems can be used for rescuers without the possibility of entanglement;

4.3.b.6.b. The victim can be easily seen from the outside of the space's primary access opening;

4.3.b.6.c. Rescuers can pass easily through the access/egress openings with room to spare when PPE is worn in the manner recommended by the manufacturer;

4.3.b.6.d. The space can accommodate two or more rescuers in addition to the victim; and;

4.3.b.6.e. All hazards in and around the confined space have been identified, isolated, and controlled;

4.3.b.7. Procedures for the safe and effective use of victim packaging devices that could be

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employed in confined space rescue;

4.3.b.8. Procedures for the transfer of victim information including his or her location, surroundings, condition when found, present condition, and other information pertinent to emergency medical services ;

4.3.b.9. Procedures for planning and implementing an appropriate confined space rescue operation; and

4.3.b.10. Procedures for selection, construction, and use of a rope lowering and raising system in the high-angle environment.

4.3.c. Technician Level. Fire Departments operating at the technician level shall meet the requirements of subdivisions 4.3.a and 4.3.b of this document. The organization at this level is responsible for the development and training of a confined space rescue team consistent with the requirements of this section. Technician-level functions for confined space rescue operations include the following:

4.3.c.1. Continued size-up of existing and potential conditions;

4.3.c.2. Procedures to assure that rescue team members take part in a medical surveillance program;

4.3.c.3. Planning response for entry-type confined space rescues in hazardous environments; and

4.3.c.4. Implementation of the planned response.

4.4. Vehicle and Machinery Rescue. -- Fire Departments operating at vehicle and machinery rescue incidents shall meet all the requirements specified in section 3 of this document.

4.4.a. Awareness Level. -- Awareness-level functions at vehicle and machinery rescue incidents include the development and implementation of the following:

4.4.a.1. Procedures to conduct a size-up of existing and potential conditions;

4.4.a.2. Procedures for the identification of the resources necessary to conduct safe and effective operations;

4.4.a.3. Procedures for implementing the emergency response system for vehicle or machinery rescue incidents;

4.4.a.4. Procedures for implementing site control and scene management;

4.4.a.5. Recognition of general hazards associated with vehicle or machinery rescue incidents; and

4.4.a.6. Procedures for the initiation of traffic control.

4.4.b. Operations Level. -- Fire Departments operating at the operations level shall meet all the requirements specified in subdivision 4.4.a of this document. Additionally, members shall be capable of hazard recognition, equipment use, and techniques necessary to operate safely and effectively at incidents involving persons

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injured or entrapped in a vehicle or machinery. Operations-level functions at vehicle or machinery rescue incidents include the development and implementation of the following:

- 4.4.b.1. Procedures to identify probable victim locations and survivability;
- 4.4.b.2. Procedures for making the rescue area safe, including the stabilization and isolation (e.g., lock-out or tag-out) of all vehicles or machinery;
- 4.4.b.3. Procedures to identify, contain, and stop fuel release;
- 4.4.b.4. Procedures for the protection of a victim during extrication and disentanglement;
- 4.4.b.5. Procedures for the packaging of a victim prior to extrication or disentanglement;
- 4.4.b.6. Procedures for accessing victims trapped in a vehicle or machinery;
- 4.4.b.7. Procedures for performing extrication and disentanglement operations involving packaging, treating, and removing victims trapped in vehicles or machinery through the use of hand tools;
- 4.4.b.8. Procedures for the mitigation and management of general and specific hazards (i.e., fires and explosions) associated with vehicle or machinery rescue incidents;
- 4.4.b.9. Procedures for the procurement and use of the resources necessary to conduct safe and effective vehicle or machinery rescue operations; and
- 4.4.b.10. Procedures for maintaining control of traffic at the scene of vehicle or machinery rescue incidents.

4.4.c. Technician Level. -- Fire Departments operating at the technician level shall meet all the requirements specified in subdivisions 4.4.a and 4.4.b of this document. Additionally, members shall be capable of hazard recognition, equipment use, and techniques necessary to operate and effectively supervise at vehicle or machinery rescue incidents. Technician-level functions at vehicle and/or machinery rescue incidents include the development and implementation of the following:

- 4.4.c.1. Procedures for performing extrication and disentanglement operations involving packaging, treating, and removing victims injured or trapped in large or heavy vehicles or machinery;
- 4.4.c.2. Procedures for the advanced stabilization of unusual vehicle and machinery rescue situations; and
- 4.4.c.3. Procedures for the use of all specialized rescue equipment immediately available and in use by the organization.

4.5. Water Rescue. -- Fire Departments operating at water incidents shall meet all the requirements specified in section 3 of this document.

4.5.a. Awareness Level. -- Awareness-level functions at water incidents include the development and implementation of the following:

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- 4.5.a.1. Procedures for implementing the assessment phase;
- 4.5.a.2. Procedures for size-up of existing and potential conditions;
- 4.5.a.3. Procedures for the identification of the resources necessary to conduct safe and effective water operations;
- 4.5.a.4. Procedures for implementing the emergency response system for water incidents;
- 4.5.a.5. Procedures for implementing site control and scene management;
- 4.5.a.6. Procedures for recognition of general hazards associated with water incidents and the procedures necessary to mitigate these hazards within the general rescue area; and
- 4.5.a.7. Procedures to determine rescue versus body recovery.

4.5.b. Operations Level. – Fire Departments operating at the operations level shall meet all the requirements specified in subdivision 4.5.a of this document. For the purposes of this document, there are three separate water-related disciplines for the operations level: dive, ice, and swift water. Organizations operating at the operations level of one or more specific disciplines shall meet the appropriate requirements of this rule as they relate to the specific discipline as well as the specific requirements of that discipline.

4.5.b.1. For personnel operating in the hazard zone, the minimum personal protective equipment (PPE) provided shall include the following:

- 4.5.b.1.a. A personal flotation device (PFD);
- 4.5.b.1.b. Thermal protection;
- 4.5.b.1.c. A helmet appropriate for water rescue;
- 4.5.b.1.d. A cutting device;
- 4.5.b.1.e. A whistle; and
- 4.5.b.1.f. Contamination protection (as needed).

4.5.b.2. Operations-level functions at all water incidents include the development and implementation of the following:

- 4.5.b.2.a. Procedures to insure personal safety at water operations;
- 4.5.b.2.b. Procedures to assess water conditions in terms of hazards to the victim and rescuer;
- 4.5.b.2.c. Procedures to separate, isolate, secure, and interview witnesses;
- 4.5.b.2.d. Procedures to determine the method of victim entrapment;

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4.5.b.2.e. Procedures to evaluate the progress of the planned response to ensure the objectives are being met safely, effectively, and efficiently;

4.5.b.2.f. Procedures to safely and effectively conduct shore-based rescue operations;

4.5.b.2.g. Procedures using throw bags;

4.5.b.2.h. Procedures to supply assistance with rigging and mechanical advantage systems to technician-level personnel;

4.5.b.2.i. Procedures to deploy, operate, and recover any watercraft used by the organization;

4.5.b.2.j. Procedures for survival swimming and self-rescue;

4.5.b.2.k. Procedures for identifying and managing heat and cold stress to the rescuer while using Personal Protection Equipment;

4.5.b.2.l. Procedures for the safe and effective use of victim packaging devices that could be employed by the organization for water rescue;

4.5.b.2.m. Procedures for the transfer of victim information including his or her location, surroundings, condition when found, present condition, and other information pertinent to emergency medical services;

4.5.b.2.n. Procedures for boat-assisted and boat-based operations if boats are used by the organization;

4.5.b.2.o. A plan to meet operational objectives;

4.5.b.2.p. Procedures for rapid extrication of accessible victims; and

4.5.b.2.q. Procedures for surface water-based search operations.

4.5.b.3. Dive Rescue. Operations-level functions at dive incidents include the development and implementation of the following:

4.5.b.3.a. Procedures for the recognition of the unique hazards associated with dive operations;

4.5.b.3.b. Procedures for serving as surface support personnel;

4.5.b.3.c. Procedures for the identification of water characteristics;

4.5.b.3.d. Procedures for the operation of surface support equipment used in water operations;

4.5.b.3.e. Procedures for procuring the necessary equipment to perform dive operations;

4.5.b.3.f. Procedures for the safe entry and recovery of divers from the water; and

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4.5.b.3.g. Procedures for participating in safe dive operations in any climate the organization may encounter.

4.5.b.4. Ice Rescue. Operations-level requirements currently exempted pending future training course development.

4.5.b.5. Swift Water Rescue. Fire Departments operating at the operations level shall meet all the requirements specified in section 3 of this document. Operations-level functions at swift water rescue incidents include the development and implementation of the following:

4.5.b.5.a. Procedures to assess moving water conditions, characteristics, and features in terms of hazards to the victim and rescuer;

4.5.b.5.b. Procedures to determine the method of victim entrapment;

4.5.b.5.c. Procedures for using tag lines and tension diagonals (zip lines); and

4.5.b.5.d. Procedures for self-rescue and survival swimming in swift water.

4.5.c. Technician Level. - - Fire Departments operating at the technician level shall meet all the requirements specified in subdivisions 4.5.a and 4.5.b of this document. Organizations operating at the technician level of one or more specific disciplines shall meet the requirements as they relate to the specific discipline as well as the specific requirements of that discipline.

4.5.c.1. Personnel operating within an organization at the technician level shall possess a level of skill and comfort appropriate to the required task.

4.5.c.2. Technician-level functions at all water rescues include the development and implementation of the following:

4.5.c.2.a. Procedures required to plan a response within the capabilities of available resources;

4.5.c.2.b. Procedures to implement a planned response consistent with the organization's capabilities;

4.5.c.2.c. Procedures for conducting both boat-assisted and boat-based rescues; and

4.5.c.2.d. Procedures for conducting a "go-rescue".

4.5.c.3. Technician Level Dive rescue. At the entry level and for any specialties used by an organization at the technician level, the department shall ensure provision of certification by a nationally recognized dive training agency. The curriculum for the certification shall be oriented toward the needs and operational requirements of public safety diving.

4.5.c.3.a. Annual fundamental Self Contained Underwater Breathing Apparatus skill reviews shall be conducted to maintain public safety diver capability.

4.5.c.3.b. Technician-level functions at dive incidents include the development and implementation of the following:

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- 4.5.c.3.b.1. Procedures for skin and SCUBA diving, including the use of any associated equipment;
- 4.5.c.3.b.2. Procedures for the application of physics and physiology as they relate to the underwater environment;
- 4.5.c.3.b.3. Procedures for the safe use of dive tables;
- 4.5.c.3.b.4. Procedures for dealing with the various underwater environments with which the rescue diver could come into contact;
- 4.5.c.3.b.5. Procedures for avoiding and dealing with underwater plants and animals;
- 4.5.c.3.b.6. Procedures for the safe conduct and supervision of dive operations;
- 4.5.c.3.b.7. Procedures for the use of relevant search theory and techniques;
- 4.5.c.3.b.8. Procedures for the identification and management of dive-related maladies including air embolism and decompression sickness;
- 4.5.c.3.b.9. Procedures for recognizing and managing the impact of near-drowning in cold water; and
- 4.5.c.3.b.10. Procedures for effective underwater communication.

4.5.c.4. Technician Level Ice Rescue. Technician- level requirements currently exempted pending future training course development.

4.5.c.5. Technician Level Swift Water Rescue. Technician-level functions at swift water rescues include the development and implementation of procedures for the application of rope rescue techniques in the swift water environment.

4.5.c.5.a. Procedures for the use of watercraft, specialty craft, and specialty equipment unique to swift water rescue.

4.6. Wilderness Search and Rescue. Fire Departments operating at wilderness search and rescue incidents shall meet all the requirements specified in section 3 of this document. Fire departments involved in a wilderness search and rescue shall evaluate the effects of severe weather, extreme heights, difficult terrain, high-altitude operations, and other difficult conditions to determine whether their present training program has prepared the organization to operate safely.

4.6.a. Awareness Level. Members of organizations at the awareness level may assist in support functions on a wilderness search and rescue operation but shall not be deployed into the wilderness unless under the direct supervision of operations or technician level personnel.

4.6.a.1. Awareness-level functions at a wilderness search and rescue incident include the following:

- 4.6.a.1.a. Conducting a size-up of existing and potential conditions;

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4.6.a.1.b Developing and implementing procedures for implementing the emergency response system for search and rescue;

4.6.a.1.c. Implementing site control and scene management;

4.6.a.1.d. Recognizing the general hazards associated with wilderness search and rescue incidents;

4.6.a.1.e. Recognizing the type of terrain involved in wilderness search and rescue incidents;

4.6.a.1.f. Recognizing the limitations of conventional emergency response skills and equipment in various wilderness environments;

4.6.a.1.g. Initiating the collection and recording of information necessary to assist operational personnel in a wilderness search and rescue; and

4.6.a.1.h. Identifying and isolating the reporting parties and witnesses.

4.6.b. Operations Level. Fire Departments operating at the operations level shall meet the requirements of subdivision 4.6.a. of this document. Additionally, organizations operating at the operations level shall meet all the requirements specified in section 3 of this rule.

4.6.b.1. The fire department shall establish standard operating procedures that identify the specific environments in which operations-level personnel can safely operate. Outside of these specific environments, personnel from technician-level organizations or special resources shall be used.

4.6.b.2. Operations-level functions at a wilderness search and rescue incident include the following:

4.6.b.2.a. Request of and interface with wilderness search and rescue resources;

4.6.b.2.b. Provision of the specialized medical care that is unique to the wilderness environment;

4.6.b.2.c. Personal survival, body management, and preparedness for the specific wilderness environments in which the rescuer could become involved;

4.6.b.2.d. Recognition of the need for, and procedures and equipment for the provision of, environmental protection through clothing systems appropriate for the specific wilderness environments in which the rescuer could become involved;

4.6.b.2.e. Selection, care, and use of appropriately packed and carried personal medical and support equipment;

4.6.b.2.f. The ability to travel safely through various lost person environments in which the rescuer could become involved;

4.6.b.2.g. Land navigation techniques using map and compass as well as any methods of navigation and position reporting used by the responding organizations with which the rescuer could

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become involved;

4.6.b.2.h. Procurement of any necessary maps and navigational and topographical information;

4.6.b.2.i. Modification of actions and urgency appropriately for a rescue versus a body recovery;

4.6.b.2.j. Acquisition of information on current and forecast weather including temperature, precipitation, and winds;

4.6.b.2.k. Participation in and support of wilderness search operations intended to locate victims whose exact location is unknown;

4.6.b.2.l. Access to, as well as extrication of, victims in any specific wilderness environments and terrain encountered in the response area;

4.6.b.2.m. Use, recognition, and identification of all rescue hardware and software used by the responding organizations with which the rescuer could become involved;

4.6.b.2.n. Ability to work safely in and around any aircraft, watercraft, and special vehicles used for search and rescue operations; and

4.6.b.2.o. Recognition of the team's limitations regarding accessing and evacuating a victim.

4.6.c. Technician Level. Fire Departments operating at the technician level shall meet the requirements of subdivisions 4.6.a. and 4.6.b of this document. Additionally, organizations operating at the technician level shall meet the requirements of section 3 of this rule.

4.6.c.1. Organizations operating at the technician level shall be capable of performing and supervising wilderness technical rescue incidents that involve both search and rescue operations.

4.6.c.2. Fire department wilderness search and rescue teams at the technician level shall not be required to specialize in all aspects of search and rescue. The ability of the team to respond at the technician level in one aspect shall not imply the ability to respond at the technician level in all aspects of search and rescue.

4.6.c.3. Technician-level functions at a wilderness search and rescue incident include the following:

4.6.c.3.a. Acquisition, use, and coordination of search and rescue resources with which the rescuer could become involved;

4.6.c.3.b. Development of or provision of input to necessary standard operating procedures for anticipated wilderness search and rescue responses;

4.6.c.3.c. Performance of search and rescue operations in all wilderness search and rescue environments; and

4.6.c.3.d. Development of, and implementation of an operational plan for search

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and rescue.

4.7. Trench and Excavation Rescue. Fire Departments operating at trench and excavation incidents shall meet all the requirements specified in section 3 of this document. The fire department shall evaluate the effects of severe weather, extremely hazardous trench or excavation situations, and other difficult conditions to determine whether its present training program has prepared the organization to operate safely.

4.7.a. Awareness Level. Awareness-level functions at trench and excavation emergencies include the following:

4.7.a.1. Size-up of existing and potential conditions;

4.7.a.2. Identification of the resources necessary to conduct safe and effective trench and excavation emergency operations;

4.7.a.3. Development and implementation of procedures for carrying out the emergency response system for trench and excavation emergency incidents;

4.7.a.4. Development and implementation of procedures for carrying out site control and scene management;

4.7.a.5. Recognition of general hazards associated with trench and excavation emergency incidents and the procedures necessary to mitigate these hazards within the general rescue area;

4.7.a.6. Recognition of typical trench and excavation collapse patterns, the reasons trenches and excavations collapse, and the potential for secondary collapse;

4.7.a.7. Development and implementation of procedures for making a rapid, non-entry extrication of non-injured or minimally injured victims; and

4.7.a.8. Recognition of the unique hazards associated with the weight of soil and its associated entrapping characteristics.

4.7.b. Operations Level. Fire Departments operating at the operations level shall meet all requirements specified in subdivision 4.7.a. of this document. Additionally, members shall be capable of hazard recognition, equipment use, and techniques necessary to operate safely and effectively at trench and excavation emergencies, including the collapse or failure of individual, nonintersecting trenches with an initial depth of 8 ft (2.44 m) or less where no severe environmental conditions exist, digging operations do not involve supplemental sheeting and shoring, and only traditional sheeting and shoring are used. Operations-level functions at trench and excavation emergencies include the following:

4.7.b.1. Development and implementation of procedures to make an entry into a trench or excavation rescue area;

4.7.b.2. Recognition of unstable areas associated with trench and excavation emergencies and adjacent structures;

4.7.b.3. Development and implementation of procedures to identify probable victim locations and

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survivability;

4.7.b.4. Development and implementation of procedures for making the rescue area safe, including the identification, construction, application, limitations, and removal of traditional sheeting and shoring using tabulated data and approved engineering practices;

4.7.b.5. Development and implementation of procedures for initiating a one-call utility location service;

4.7.b.6. Identification of soil types using accepted visual or manual tests;

4.7.b.7. Development and implementation of procedures to ventilate the trench or excavation space;

4.7.b.8. Identification and recognition of a bell-bottom excavation (pier hole) and its associated unique hazards;

4.7.b.9. Development and implementation of procedures for placing ground pads and protecting the lip of a trench or excavation;

4.7.b.10. Development and implementation of procedures to provide entry and egress paths for entry personnel;

4.7.b.11. Development and implementation of procedures for conducting a pre-entry briefing;

4.7.b.12. Development and implementation of procedures for record keeping and documentation during entry operations;

4.7.b.13. Development and implementation of procedures for implementing and using a rapid intervention team (RIT);

4.7.b.14. Development and implementation of procedures for the selection, use, and application of shield systems;

4.7.b.15. Development and implementation of procedures for the selection, use, and application of sloping and benching systems;

4.7.b.16. Identification of the duties of panel teams, entry teams, and shoring teams;

4.7.b.17. Development and implementation of procedures for assessing the mechanism of entrapment and the method of victim removal; and

4.7.b.18. Development and implementation of procedures for performing extrication.

4.7.c. Technician Level. Fire Departments operating at the technician level shall meet all requirements specified in subdivisions 4.7.a. and 4.7.b. of this document. Additionally, members shall be capable of hazard recognition, equipment use, and techniques necessary to operate safely and effectively at trench and excavation emergencies, including the collapse or failure of individual or intersecting trenches with an initial depth of more than 8 ft (2.4 m) or where severe environmental conditions exist, digging operations involve supplemental sheeting and shoring, or manufactured trench boxes or isolation devices would be used. Technician-level functions at trench and excavation emergencies include the development and implementation of the following:

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4.7.c.1. Procedures for the identification, construction, application, limitations, and removal of manufactured protective systems using tabulated data and approved engineering practices;

4.7.c.2. Procedures to continuously, or at frequent intervals, monitor the atmosphere in all parts of the trench to be entered. This monitoring shall be done, in the following order, for oxygen content, flammability (LEL/LFL), and toxicity;

4.7.c.3. Procedures for the identification, construction, application, limitations, and removal of supplemental sheeting and shoring systems designed to create approved protective systems;

4.7.c.4. Procedures for the adjustment of protective systems based on digging operations and environmental conditions; and

4.7.c.5. Procedures for rigging and placement of isolation systems.

4.8. Cave Rescue. Fire Departments operating at cave rescue incidents shall meet all the requirements specified in section 3 of this document. Fire departments involved in a cave rescue shall evaluate the effects of severe weather, extreme heights, difficult terrain, high-altitude operations and other difficult conditions to determine whether their present training program has prepared the organization to operate safely.

4.8.a. Awareness Level. Fire Department personnel operating at the awareness level may assist in support functions on a cave rescue but shall not be deployed into the cave. Minimal training for members of organizations at the awareness level shall be the National Cave Rescue Commission Orientation to Cave Rescue Class or its equivalent. Awareness-level functions at cave rescue emergencies include the following:

4.8.a.1 Size-up of existing and potential conditions;

4.8.a.2 Identification of the resources necessary to conduct safe and effective cave rescue emergency operations;

4.8.a.3. Development and implementation of procedures for carrying out the emergency response system for cave rescue emergency incidents;

4.8.a.4. Development and implementation of procedures for carrying out site control and scene management;

4.8.a.5. Recognition of general hazards associated with cave rescue emergency incidents and the procedures necessary to mitigate these hazards within the general rescue area;

4.8.a.6. Establishment of command and staging areas; and

4.8.a.7. Recognition of the type of cave and of the unique hazards associated with caves so as to identify the resources that may be required to perform a cave rescue.

4.8.b. Operations Level. Operations-level requirements currently exempted pending future training course development.

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4.8.c. Technician Level. Technician-level requirements currently exempted pending future training course development.

4.9. Mine Rescue. Fire Departments operating at mine rescue incidents shall meet all the requirements specified in section 3 of this document. All mine rescue training shall meet the approval of the U.S. Department of Labor, Mine Safety and Health Administration. Fire departments involved in a mine rescue shall evaluate the effects of severe weather, extreme heights, difficult terrain, high-altitude operations, and other difficult conditions to determine whether their present training program has prepared the organization to operate safely.

4.9.a. Awareness Level. Awareness-level functions at mine rescue emergencies include the following:

4.9.a.1. Size-up of existing and potential conditions;

4.9.a.2. Identification of the resources necessary to conduct safe and effective mine rescue emergency operations in conjunction with appropriate mining industry and state and federal regulatory agencies;

4.9.a.3. Development and implementation of procedures for carrying out the emergency response system for mine rescue emergency incidents;

4.9.a.4. Development and implementation of procedures for carrying out site control and scene management;

4.9.a.5. Recognition of general hazards associated with mine rescue emergency incidents and the procedures necessary to mitigate these hazards within the general rescue area;

4.9.a.6. Procedures to perform a non-entry retrieval; and

4.9.a.7. Recognition of the unique hazards associated with mines.

4.9.b. Operations and Technician-level functions are those in which a fire department mine rescue team would be expected to conduct any operations beyond the mine opening. Only departments trained in accordance with rules and regulations of and certified by the West Virginia department of miner health and safety and the United States mine safety and health administration may conduct interior mine rescue operations. All departments operating at these levels at mine rescue incidents may only do so after obtaining the applicable certifications issued by the appropriate agency or agencies.

§ 5. Required Training for Rescue Activities. -- The West Virginia State Fire Commission is the authority having jurisdiction (WVSC 29-3-9 i) for the approval and recognition of all Fire Department rescue training and services.

5.1. Fire departments may perform rescue services as stipulated in this rule ONLY if their training has been approved by the State Fire Commission or it's designee.

5.2. All previous and accumulated training shall be evaluated for equivalent recognition and approval by the State Fire Commission or it's designee.

5.3. Instructors providing training for fire department rescue services shall be approved by the West Virginia State Fire Commission or it's designee.

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5.4. All rescue training offered by an organization not currently recognized and approved to do so shall be evaluated by the West Virginia State Fire Commission or its designee for possible recognition and approval.

§ 6. Implementation. The different levels of rescue operations identified by this rule become effective as follows:

6.1. Fire Departments performing rescue at Awareness level have two years from the effective date of this rule to fully meet the requirements of that level of operation.

6.2. Fire Departments performing rescue at Operations level have four years from the effective date of this rule to fully meet the requirements of that level of operation.

6.3. Fire Departments performing rescue at Technician level have five years from the effective date of this rule to fully meet the requirements of that level of operation.

§ 7. Notification of Services Provided. -- Not more often than annually, but at an interval to be determined by the West Virginia State Fire Commission, fire departments shall report to the West Virginia State Fire Marshal, on forms to be prescribed by the West Virginia State Fire Commission, the type of rescue services they provide, the training level of personnel, and if the personnel participate in a county or regional response team. The information shall be used to develop a statewide resource listing of special rescue resources available in times of statewide or multi-jurisdictional emergencies.