

2024 Firefighting

Program Standards

CONTENT STANDARD 1.0: PROFESSIONAL ORGANIZATIONS AND LEADERSHIP

Performance Standard 1.1: Effective Leadership and Participation in Career Technical Student Organizations (CTSO) and Professional Associations

- 1.1.1 Explore the role of professional organizations and/or associations in the firefighting industry.
- 1.1.2 Participate in a content-aligned CTSO.
- 1.1.3 Participate in a CTSO event at the local level or above.
- 1.1.4 Engage in career exploration and development through CTSO participation.

CONTENT STANDARD 2.0: ORGANIZATIONAL SYSTEMS

Performance Standard 2.1: Scope of Departmental Organization

- 2.1.1 Describe the history of the fire service.
- 2.1.2 Describe types of fire service organizations (e.g., volunteer, career, combination departments, wildland).
- 2.1.3 Describe the fire service mission and organizational structure, including the chain of command.
- 2.1.4 Describe the types of fire service crews and the duties of each.
- 2.1.5 Describe types of apparatus and the duties and functions of each.
- 2.1.6 Identify career tracks within the fire service industry, including related educational and certification requirements.
- 2.1.7 Describe strategies and tactics related to the ICS organization.

Performance Standard 2.2: Communication

- 2.2.1 Describe emergency and nonemergency communications systems and equipment used to process calls.
- 2.2.2 Describe radio communication principles and procedures (e.g., interpersonal guidelines).
- 2.2.3 Compare routine communication versus emergency communication.
- 2.2.4 Complete training for the Incident Command System (ICS) and the National Incident Management System (NIMS) 100, 200, 700, and 800, including for wildland firefighting, according to the emergency response guidebook.

CONTENT STANDARD 3.0: BUILDING CONSTRUCTION AND FIRE

Performance Standard 3.1: Effects of Construction on Firefighting Tactics

- 3.1.1 Identify types of building construction and roof types (e.g., Type I-V).
- 3.1.2 Classify the building code's occupancy designations (e.g., residential, assembly, business).
- 3.1.3 Describe building construction related to firefighter safety, fire prevention, code inspection, firefighting strategy, and tactics.
- 3.1.4 Identify the hazards and tactical considerations associated with the various types of building construction.
- 3.1.5 Describe the different loads and stresses in building construction and how they relate to firefighter situation awareness.
- 3.1.6 Identify the indicators of potential structural failure as they relate to firefighter safety.

CONTENT STANDARD 4.0: HEALTH AND SAFETY

Performance Standard 4.1: Workplace Safety

- 4.1.1 Identify industry health and fitness qualifications and standards.
- 4.1.2 Describe signs of stress and stress management techniques.

- 4.1.3 Describe resources available for counseling and psychological support for emergency services personnel and their families.
- 4.1.4 Describe cultural and behavioral change within emergency services relating to health and safety.
- 4.1.5 Describe the concept of empowering all emergency services personnel to stop unsafe acts.
- 4.1.6 Define risk management concepts (e.g., freelancing, accountability) and how they affect strategic and tactical decision-making.
- 4.1.7 Describe technological trends affecting safety and survival.
- 4.1.8 Describe NIOSH reviews regarding near-misses, injuries, and fatalities.
- 4.1.9 Describe the increase in violent incidents (e.g., terrorism, ASHER) and the way it impacts safety for emergency services personnel when responding to emergency scenes.
- 4.1.10 Complete CPR training.

CONTENT STANDARD 5.0: PERSONAL EQUIPMENT AND TOOLS

Performance Standard 5.1: PPE and SCBA

- 5.1.1 Identify the components of personal protective equipment (PPE).
- 5.1.2 Maintain PPE.
- 5.1.3 Identify the components of a self-contained breathing apparatus (SCBA).
- 5.1.4 Maintain the SCBA.
- 5.1.5 Define an immediately dangerous to life or health (IDLH) atmosphere.
- 5.1.6 Describe respiratory hazards that require SCBA to be used.
- 5.1.7 Describe principles of air management consistent with NFPA 1404.
- 5.1.8 Don and doff SCBA within an instructor-specified time.
- 5.1.9 Demonstrate replacement of SCBA air cylinders.

Performance Standard 5.2: Firefighter Tools

- 5.2.1 Describe the importance of safety in the design of apparatus and equipment.
- 5.2.2 Describe firefighter forced-entry tools (e.g., irons, axe, knife, window punch, flashlight, headlamp) and their functions.
- 5.2.3 Describe firefighter hand and power (e.g., hydraulic, electric) extrication tools (e.g., spreaders, cutters, rams, cribbing, harness, struts, airbags) and their functions.
- 5.2.4 Describe firefighter electrical safety tools (e.g., lineman gloves, hot sticks, wire tester) and their functions.
- 5.2.5 Describe knots and hoisting tools (e.g., ropes, webbing) and their functions.
- 5.2.6 Describe information and awareness tools (e.g., radio, drones, sensors, imaging, signaling devices) and their functions.

CONTENT STANDARD 6.0: ETHICS AND LEGAL RESPONSIBILITIES

Performance Standard 6.1: Professional Conduct

- 6.1.1 Compare law and ethics.
- 6.1.2 Define values, beliefs, and attitudes.
- 6.1.3 Describe concepts of accountability, obligation, and responsibility.
- 6.1.4 Define policies and procedures.
- 6.1.5 Describe legal responsibilities and employer policies, rules, and regulations regarding ethical conduct (e.g., discrimination, EAP, harassment) within the fire service.
- 6.1.6 Identify personal and professional consequences for unethical behaviors.
- 6.1.7 Describe governing bodies designed to promote safety and health (e.g., National Fire Protection Association [NFPA], Occupational Safety and Health Administration [OSHA], American National Standards Institute [ANSI], Underwriters Laboratories [UL], National Institute for Occupational Safety and Health [NIOSH]).
- 6.1.8 Describe standard operating procedures (SOPs) and standard operating guidelines (SOGs) used in the fire service.

CONTENT STANDARD 7.0: FIRE BEHAVIOR AND COMBUSTION

Performance Standard 7.1: Fire Science

- 7.1.1 Identify the physical properties of the three states of matter.
- 7.1.2 Describe the fire tetrahedron.
- 7.1.3 Describe the physical and chemical properties of fire.
- 7.1.4 Describe the stages of fire development.
- 7.1.5 Define terms and concepts associated with the chemistry and dynamics of fire (e.g., thermal layering, neutral plane, rollover, flashover, backdraft, fuel-limited fires, ventilation-limited fires, flow path, entrainment, smoke explosion).
- 7.1.6 Describe the effects and dangers of air movement on the combustion process.
- 7.1.7 Describe various materials fires use as fuel (e.g., solid-fuel, liquid-fuel, gas-fuel).
- 7.1.8 Identify other suppression agents and strategies.
- 7.1.9 Describe the transmission of heat.
- 7.1.10 Describe the classification of fire (i.e., A, B, C, D, and K).
- 7.1.11 Describe the way the flow path influences the growth of a building fire.

CONTENT STANDARD 8.0: FIRE SUPPRESSION TACTICS AND EQUIPMENT

Performance Standard 8.1: Water Supply Theory

- 8.1.1 Identify sources for water supplies.
- 8.1.2 Demonstrate knowledge of the characteristics of water as a fire suppression agent.
- 8.1.3 Demonstrate the operation of hose lines (e.g., friction loss), appliances, and tools.
- 8.1.4 Describe fire stream tactics (e.g., straight stream, fog nozzle patterns, angle application).
- 8.1.5 Describe fire hose damage.
- 8.1.6 Perform general fire hose maintenance and care.

Performance Standard 8.2: Extinguishers

- 8.1.1 Describe fire extinguisher rating systems.
- 8.1.2 Demonstrate the use of a portable fire extinguisher (e.g., pull, aim, squeeze, sweep [PASS] application method).
- 8.1.3 Describe inspection requirements for portable fire extinguishers.

Performance Standard 8.3: Company Operations

- 8.3.1 Define incident priorities.
- 8.3.2 Describe tactical priorities (e.g., rescue, exposures, containment, extinguish, overhaul - ventilation, and salvage [RECEO-VS], size up, locate the fire, identify and control flow path, cool the space from the safest location, extinguish the fire, rescue, and salvage [SLICERS]).
- 8.3.3 Describe engine, ladder, and rescue company functions during fires.
- 8.3.4 Describe reasons and techniques for fire ground ventilation.
- 8.3.5 Describe search and rescue operations and procedures.
- 8.3.6 Describe the types and uses of ladders.
- 8.3.7 Maintain and care for fire service ground ladders.
- 8.3.8 Perform inspection and maintenance of ropes.
- 8.3.9 Describe types of forcible entry and the situations that determine their use.
- 8.3.10 Describe the reasons for and types of salvage operations.
- 8.3.11 Describe the reasons for and types of overhaul operations.
- 8.3.12 Describe reasons and procedures for vehicle extrication.
- 8.3.13 Apply concepts of live fire training (NFPA 1403).
- 8.3.14 Describe hazardous material operations.

Performance Standard 8.4: Methods of Fire Prevention

- 8.4.1 Describe the fire inspection process.
- 8.4.2 Describe scientific methods used in fire investigation through NFPA 921.
- 8.4.3 Describe the concepts of an origin and cause investigation.
- 8.4.4 Describe the importance of public education as a critical component of life safety programs.

- 8.4.5 Describe the importance of fire sprinklers and code enforcement.
- 8.4.6 Describe the primary responsibilities of fire prevention personnel, including code enforcement, public information, and public and private protection systems.

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