



**DEPARTMENT OF FORESTRY AND FIRE PROTECTION**  
**OFFICE OF THE STATE FIRE MARSHAL**  
**State Fire Training Division**  
P.O. Box 944246  
SACRAMENTO, CA 94244-2460  
(916) 568-2911  
Website: [www.fire.ca.gov](http://www.fire.ca.gov)



## Attachment 13

**Date:** August 22, 2019

**To:** State Board of Fire Services

**From:** Chris Fowler, Deputy State Fire Marshal III, Supervisor

**SUBJECT/AGENDA ACTION ITEM:**

Fire Fighter 1 & Fire Fighter 2 (2019) Certification & Curriculum Implementation Plan

**Recommended Actions:**

Information Only

**Background Information:**

The FF1 and FF2 (2019) Curriculum has been developed from national professional standards and meets the needs of the California Fire Service for training content and delivery for entry level personnel. FF1 and FF2 facilities should follow NFPA 1402, Standard on Facilities for Fire Training and Associated Props. NFPA 1402 provides guidance for the planning of fire service training centers, focusing on the main components necessary to accomplish general fire fighter training effectively, efficiently, and safely.

Certification Testing: In response to Blueprint 2020 stakeholder comments, certification testing will continue to be a standardized process statewide. All candidates seeking Fire Fighter 1 (2019) and Fire Fighter 2 (2019) certification will be required to complete certification testing. Candidates seeking Fire Fighter 2 certification who do not want to complete the Fire Fighter 2 certification testing, should seek the Fire Fighter 2 (2013) certification prior to its retirement.

**Analysis/Summary of Issue:**

1) The FF1 (2019) Curriculum and FF2 (2019) Curriculum will be the new standard recognized by SFT. SFT certification testing procedures will continue to fully satisfy IFSAC and Pro Board requirements and meets the needs of the California Fire Service for content and delivery.

2) The Fire Fighter 1 (2019) and Fire Fighter 2 (2019) curriculum and certification requirements will be phased in for the California Fire Service Training and Education System. New Certification Training Standards (CTS) along with four (4) Course Plans have been developed based on current National Fire Protection Association (NFPA) Standards. Reference the Implementation Plan Overview for a detailed description of the four (4) Course Plans.

3) Course Prerequisite.....Effective January 1, 2020

Public Safety First-Aid and BLS Healthcare Provider/AED CPR (minimum) as defined by California Health and Safety Code, Section 1797.182 is a prerequisite since Fire Fighter I (2013).

4) The Confined Space Rescue Awareness must be delivered by an approved registered SFT instructor to confirm the mandates of California Law (Cal-OSHA CCR Title 8, Article 108 §5157).

5) Fire Fighter Survival may be delivered by either an approved Fire Fighter Instructor or approved SFT Registered Instructor based on AHJ preferences. Reference the Implementation Plan for a detailed description of the delivery options.

6) The Fire Fighter 1 (2019) Task Book completion has been adjusted to the Fire Fighter 2 (2019) certification. This will include all job performance requirements (JPRs) for Fire Fighter 1 (2019) and Fire Fighter 2 (2019).

A Fire Fighter 1 Training Record will be required to be completed by AHJs, which will provide a complete and thorough record of JPRs or Skills being delivered by the AHJ. Copies of the Fire Fighter 1 Training Records must be provided to the candidate for their personal file. The Fire Fighter 1 Training Record shall be maintained in accordance with the SFT Procedures Manual.

7) The Fire Fighter 1 (2019) experience requirement has been adjusted to the Fire Fighter 2 (2019) certification. This adjustment allows for more employment opportunities and supports the firefighter as s/he completes the six months full-time or one year part-time/volunteer requirement for certification.

8) Instructor Requirements.....Effective January 1, 2020

Instructor requirements for new FF1 and FF2 (2019) continue to be Approved Instructors as defined in the SFT Procedures Manual.

## 9) Potential Agency Impacts

Fire agencies or educational delivery programs desiring to implement the Fire Fighter 1 (2019) and Fire Fighter 2 (2019) curriculum need to review the new Fire Fighter 1 (2019) and Fire Fighter 2 (2019) Curriculum and certification requirements to be sure that all agency training needs are being met. After review, Fire Agencies and educational delivery programs should update their job specifications, recruitment documentation, and any associated course materials to reflect these new courses and certification requirements.

10) The proposed Transition Period, Timelines and Course Phase Out will be further detailed in the Implementation Plan.

### **Fire Fighter 1 and Fire Fighter 2 (2019) Course Curriculum**

Testing hours are not reflected in this table.

Fire Fighter 1A	Structure	260	Hours
Fire Fighter 1B	Hazardous Materials/WMD	24	Hours
Fire Fighter 1C	Wildland	56	Hours
CSRA	Confined-Space Rescue Awareness	8	Hours
Fire Fighter 2A	Structure	48	Hours

Note: Time is crucial for the success of candidates and can only be estimated for the application phase that is associated with sets and reps to adult learners. AHJs can exceed the minimum standards identified in the SFT curriculum.

# Fire Fighter

(NFPA Fire Fighter I and II, HazMat/WMD FRA and FRO, and Wildland Fire Fighter 1)

---

## Certification Training Standards Guide (Month Year)



California Department of Forestry and Fire Protection  
Office of the State Fire Marshal  
State Fire Training

# Fire Fighter

## Certification Training Standards Guide (Month Year)

This CTS guide utilizes the following NFPA standards to provide the qualifications for State Fire Training's Fire Fighter 1 certification:

- NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
- NFPA 1051: Standard for Wildland Firefighting Personnel Professional Qualifications (2016)
- NFPA 1072: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications (2017)

State Fire Training coordinated the development of this CTS guide. Before its publication, the Statewide Training and Education Advisory Committee (STEAC) and the State Board of Fire Services (SBFS) recommended this CTS guide for adoption by the Office of the State Fire Marshal (OSFM).



Published by State Fire Training  
2251 Harvard Street, Suite 400  
Sacramento, CA 95815  
(916) 568-3800

Cover photo courtesy of Craig Allyn Rose Photography.

# Table of Contents

State Fire Training .....	1
Acknowledgments.....	2
How to Read a CTS Guide.....	5
Fire Fighter 1 - Structure .....	7
Section 1: Description of Structural Fire Fighter Duties .....	7
1-1: Role of the Fire Fighter 1 .....	7
1-2: Inspecting and Maintaining Personal Protective Equipment .....	9
1-3: Inspecting and Maintaining Self-Contained Breathing Apparatus .....	10
1-4: Donning Structural Personal Protective Equipment.....	11
1-5: Donning Self-Contained Breathing Apparatus.....	12
1-6: Doffing Self-Contained Breathing Apparatus .....	13
1-7: Doffing Personal Protective Equipment.....	14
1-8: Doffing Self-Contained Breathing Apparatus and Personal Protective Equipment for Gross Decontamination .....	15
1-9: Identifying Confined Spaces .....	16
1-10: Operating within the Incident Command System .....	18
1-11: Fire Fighter Physical Health and Safety.....	19
<b>1-12: Fire Fighter Behavioral Health and Safety .....</b>	<b>20</b>
Section 2: Fire Department Communications.....	21
2-1: Initiating the Response to a Reported Emergency .....	21
2-2: Receiving a Telephone Call .....	22
2-3: Transmitting and Receiving Messages via Radio .....	23
2-4: Activating an Emergency Call of Assistance.....	25
Section 3: Fireground Operations .....	26
3-1: Using Self-contained Breathing Apparatus During Emergency Operations .....	26
3-2: Responding on an Apparatus to an Emergency Scene .....	28
3-3: Establishing and Operating in Work Areas at Emergency Scenes .....	29
3-4: Forcing Entry into a Structure.....	31
3-5: Exiting a Hazardous Area .....	32

3-6: Setting Up, Mounting, Ascending, Dismounting, and Descending Ground Ladders.....	33
3-7: Attacking a Passenger Vehicle Fire .....	35
3-8: Extinguishing Fires in Exterior Class A Materials .....	37
3-9: Conducting a Search and Rescue in a Structure .....	39
3-10: Attacking an Interior Structure Fire .....	41
3-11: Performing Horizontal Ventilation on a Structure.....	44
3-12: Performing Vertical Ventilation on a Structure .....	45
3-13: Overhauling a Fire Scene .....	47
3-14: Conserving Property .....	49
3-15: Connecting a Fire Department Pumper to a Water Supply.....	51
3-16: Extinguishing Incipient Class A, Class B, and Class C Fires.....	53
3-17: Operating Emergency Scene Lighting.....	54
3-18: Turning Off Building Utilities.....	55
3-19: Combatting a Ground Cover Fire .....	56
3-20: Tying Knots Appropriate for Hoisting Tools .....	57
3-21: Operating Hand and Power Tools .....	58
3-22: Operating an Air-Monitoring Instrument .....	59
Section 4: Preparedness and Maintenance .....	60
4-1: Cleaning and Checking Ladders, Ventilation Equipment, SCBA, Ropes, Salvage Equipment, and Hand Tools .....	60
4-2: Cleaning, Inspecting, and Returning Fire Hose to Service.....	62
Fire Fighter 1 - Hazardous Materials/WMD .....	64
Section 5: Awareness .....	64
5-1: Description of Duties (Awareness) .....	64
5-2: Recognizing and Identifying Hazardous Materials/WMD and Associated Hazards .....	65
5-3: Isolating the Hazard Area and Denying Entry .....	67
5-4: Initiating Required Notifications.....	68
Section 6: Operations.....	69
6-1: Description of Duties (Operations).....	69
6-2: Identifying the Scope of a Hazardous Materials/WMD Incident.....	70
6-3: Identifying Action Options for a Hazardous Materials/WMD Incident .....	72
6-4: Performing Assigned Tasks at a Hazardous Materials/WMD Incident .....	74

6-5: Performing Emergency Decontamination at a Hazardous Materials/ WMD Incident ..	76
6-6: Evaluating and Reporting Progress for a Hazardous Materials/WMD Incident .....	78
Section 7: Operations – Mission Specific .....	79
7-1: Selecting, Donning, Working In, and Doffing Approved PPE at a Hazardous Materials/WMD Incident .....	79
7-2: Performing Product Control Techniques at a Hazardous Materials/WMD Incident .....	81
Fire Fighter 1 - Wildland.....	83
Section 8: Description of Wildland Fire Fighter Duties.....	83
8-1: Describe the Role of the Wildland Fire Fighter.....	83
8-2: Donning Wildland Personal Protective Equipment .....	85
8-3: Deploying a Fire Shelter .....	86
8-4: Doffing Wildland Personal Protective Equipment .....	87
Section 9: Preparedness.....	88
9-1: Maintaining Assigned Personal Protective Equipment.....	88
9-2: Maintaining Assigned Suppression Hand Tools and Equipment .....	89
Section 10: Suppression .....	90
10-1: Assembling and Preparing for Response .....	90
10-2: Recognizing Hazards and Unsafe Situations .....	92
10-3: Constructing a Fireline .....	94
10-4: Securing the Fireline .....	96
10-5: Reducing the Threat of Fire Exposure to Improved Properties .....	97
10-6: Mopping Up a Fire Area.....	99
10-7: Patrolling the Fire Area .....	100
Fire Fighter 2 - Structure .....	101
Section 11: NFPA Requirements .....	101
11-1: Identifying NFPA Requirements.....	101
Section 12: Fire Department Communications.....	103
12-1: Completing a Basic Incident Report.....	103
12-2: Communicating the Need for Team Assistance .....	104
Section 13: Fireground Operations .....	105
13-1: Extinguishing an Ignitable Liquid Fire .....	105
13-2: Controlling a Flammable Gas Cylinder Fire.....	107

13-3: Coordinating an Interior Attack Line.....	109
13-4: Protecting Evidence of Fire Cause and Origin .....	111
Section 14: Rescue Operations .....	112
14-1: Extricating a Victim Entrapped in a Motor Vehicle.....	112
14-2: Assisting Rescue Operation Teams .....	113
Section 15: Fire and Life Safety Initiatives, Preparedness, and Maintenance .....	114
15-1: Performing a Fire Safety Survey in an Occupied Structure.....	114
15-2: Presenting Fire Safety Information to Station Visitors or Small Groups.....	115
15-3: Preparing a Preincident Survey .....	116
15-4: Maintaining Power Plants, Power Tools, and Lighting Equipment .....	117
15-5: Performing an Annual Service Test on Fire Hose.....	118

Draft

# State Fire Training

## Mission

To enable the California Fire Service to safely protect life and property through education, training, and certification.

## The California Fire Services Training and Education System

The California Fire Service Training and Education System (CFSTES) was established to provide a single statewide focus for fire service training in California. CFSTES is a composite of all the elements that contribute to the development, delivery, and administration of training for the California fire service. The authority for the central coordination of this effort is vested in State Fire Training within the Office of the State Fire Marshall with oversight provided by the State Board of Fire Services.

CFSTES facilitates, coordinates, and assists in the development and implementation of standards and certification for the California fire service.

CFSTES:

1. Administers the California Fire Academy System
2. Provides accredited courses leading to certification and approved standardized training programs for local and regional delivery
3. Administers the national accreditation process in California
4. Publishes certification training standards, course plans, and certification task books for each certified job function within the California fire service

CFSTES is a fire service system developed by the fire service, for the fire service. It is only as successful and effective as the people involved in it.

## Acknowledgments

State Fire Training appreciates the hard work and accomplishments of those who built the solid foundation on which this program continues to grow.

State Fire Training gratefully acknowledges the following individuals and organizations for their diligent efforts and contributions that made the development and publication of this document possible.

### CAL FIRE

**Thom Porter**  
*Director, CAL FIRE*

**Mike Richwine**  
*Acting State Fire Marshal*

**Mike Richwine**  
*Assistant State Fire Marshal*

**Andrew Henning**  
*Chief, State Fire Training*

**Ron Coleman**  
*Chair, STEAC*

### Cadre - 2019 Update

#### Leadership

**Jim Eastman**  
*Cadre Lead*  
*Training Specialist III (RA), CAL FIRE*  
*Deputy Chief (ret.), Sacramento Metro Fire Department*

**Chris Fowler**  
*Cadre Lead*  
*Deputy State Fire Marshal III, Supervisor,*  
*CAL FIRE – Office of the State Fire Marshal, State Fire Training*

## Acknowledgments

---

**Allison L. Shaw**

*Cadre Editor  
California State University, Sacramento*

## Development Cadre

**Greg Belk**

*Division Chief, CAL FIRE San Diego*

**Paul Gonzalez**

*Fire Engineer, San Jose Fire Department  
Coordinator, South Bay Regional Fire Academy*

**Garrett Huff**

*Battalion Chief, Santa Barbara County Fire Department  
Secretary, South Division, CalChiefs Training Officers*

**Donavan Lacy**

*Battalion Chief, Anderson Fire Protection District  
Director of Fire Technology/EMS, Shasta Community College  
Area 2 Director, CalChiefs Training Officers*

**Andrew Murtagh**

*Lieutenant, San Francisco Fire Department  
Adjunct Faculty, Fire Technology Program, College of San Mateo*

**Michael Massone**

*Fire Captain, San Diego Federal Fire  
Vice President, California Professional Fire Fighters  
Representative, California Joint Apprenticeship Committee*

**German Sierra**

*Fire Fighter/Paramedic (ret.), Oakland Fire Department  
Faculty – Program Coordinator, Las Positas College  
Representative, California Fire Technology Directors' Association (CFTDA)*

**Shawn Tukua**

*Captain, Los Angeles Fire Department  
State Fire Training Coordinator  
Area 15 Director, CalChiefs Training Officers*

## Acknowledgments

---

**Rob Wheatley**

*Division Chief, Director of Fire Training, CAL FIRE Training Center*

## Partners

State Fire Training also extends special acknowledgement and appreciation to the Conference and Training Services Unit with the College of Continuing Education at California State University, Sacramento, for its ongoing meeting logistics and curriculum development support, innovative ideas, and forward-thinking services. This collaboration is made possible through an interagency agreement between CAL FIRE and Sacramento State.

The development and publication of the 2013 Fire Fighter I CTS guide was funded in part by the Assistance to Firefighters Grant Program from the U.S. Department of Homeland Security. State Fire Training is grateful to the U.S. Department of Homeland Security for its financial contribution toward the completion of this project.

DRAFT

## How to Read a CTS Guide

State Fire Training develops a Certification Training Standards (CTS) Guide for a variety of job functions in the fire service such as firefighter, driver/operator, fire instructor, and company officer. The CTS guide lists the requisite knowledge and skills and the job performance requirements a person is expected to complete in order to become certified in a specific function.

Each CTS guide serves as a foundation for the certification programs recommended for adoption by the Office of the State Fire Marshal. Any certification program must be based on job-related knowledge and measurable performance standards. To master the knowledge and skills needed for specialized operations, individuals will require additional training to augment the performance standards included in the CTS guide.

Within the CTS guide, it is impossible to capture the different policies and procedures of each organization in the California fire service. Individuals aspiring to meet State Fire Training's certification training standards must do so in accordance with the codes, standards, regulations, policies, and standard operating procedures applicable within their own department or jurisdiction.

### Format

#### Section Heading

Training standards are grouped by section headings that describe a general category. For example, the Fire Fighter 1 CTS guide includes the following section headings: NFPA Requirements, Fire Department Communications, Fireground Operations, and Preparedness and Maintenance.

#### Training Standard Title

The training standard title provides a general description of the performance requirement contained within the individual standard.

#### Authority

The CTS guide references each individual standard with one or more paragraphs of the corresponding National Fire Protection Association (NFPA) Professional Qualifications. This ensures that each fire service function within California's certification system meets or exceeds NFPA standards.

When California requirements exceed the NFPA standard, the CTS guide cites the Office of the State Fire Marshal as the authority and prints the corresponding information in *italics*.

### **Job Performance Requirements**

This segment includes a written statement that describes a specific job-related task, the items an individual needs to complete the task, and measurable or observable outcomes.

### **Requisite Knowledge**

This segment lists the knowledge that an individual must acquire in order to accomplish the job performance requirement.

### **Requisite Skills**

This segment lists the skills that an individual must acquire in order to accomplish the job performance requirement.

### **Content Modification**

This table documents and justifies any significant revisions to the NFPA standard that the development or validation cadres make during the development of a CTS guide.

### **Cross Reference**

This table documents where each training standard is taught (course plan), tested (skill sheets), and validated (task book).

# **Fire Fighter 1 - Structure**

## **Section 1: Description of Structural Fire Fighter Duties**

### **1-1: Role of the Fire Fighter 1**

#### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.1.1, 4.1.2

#### **Job Performance Requirement**

There is no job performance requirement identified for this training standard.

#### **Requisite Knowledge**

1. *Describe* the organization of the fire department
2. *Describe* the role of the Fire Fighter 1 in the organization
3. *Describe* the mission of fire service
4. *Describe* the fire department's standard operating procedures (SOPs) and rules and regulations as they apply to the Fire Fighter 1
5. *Describe* the value of fire and life safety initiatives in support of the fire department mission and to reduce fire fighter line-of-duty injuries and fatalities
6. *Identify* the role of other agencies as they relate to the fire department
7. *Identify* the signs and symptoms of behavioral and emotional distress
8. *Identify* aspects of the fire departments' member assistance program
9. *Describe* the importance of physical fitness and a healthy lifestyle to the performance of the duties of a fire fighter
10. *Define* the critical aspects of NFPA 1500

#### **Requisite Skills**

1. Don personal protective clothing, doff personal protective clothing, perform field reduction of contaminants, and prepare for reuse
2. Hoist tools and equipment using ropes and the correct knot
3. Locate information in departmental documents and standards or code materials

#### **Content Modification**

<b>Block</b>	<b>Modification</b>	<b>Justification</b>

## Fire Fighter 1 - Structure

### Section 1: Description of Structural Fire Fighter Duties

---

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 1-3: Fire Fighter 1 Roles and Responsibilities <ul style="list-style-type: none"><li>• RK 1, 2, 3, 4, 5, 6 and RS 3</li></ul> Fire Fighter 1A, Topic 2-2: Health and Safety Awareness <ul style="list-style-type: none"><li>• RK 9, 10</li></ul> Fire Fighter 1A, Topic 2-3: Behavioral Health and Cancer Awareness <ul style="list-style-type: none"><li>• RK 7, 8</li></ul> Fire Fighter 1A, Topic 2-4: Personal Protective Ensemble <ul style="list-style-type: none"><li>• RS 1</li></ul> Fire Fighter 1A, Topic 4-1: Utilizing Ropes and Knots <ul style="list-style-type: none"><li>• RS 2</li></ul>	N/A	N/A

## Fire Fighter 1 - Structure

### Section 1: Description of Structural Fire Fighter Duties

---

## 1-2: Inspecting and Maintaining Personal Protective Equipment

### Authority

1. Office of the State Fire Marshal

### Job Performance Requirement

*Inspect and maintain structural personal protective equipment (PPE), given PPE, so that PPE is inspected, maintained, and returned to a ready state.*

### Requisite Knowledge

1. *Identify the components of structural PPE*
2. *Explain the importance of standards for structural PPE*
3. *Describe how improper usage or maintenance can compromise PPE effectiveness*
4. *Describe proper method for inspecting, cleaning, and maintaining structural PPE*
5. *Identify when to remove PPE from service*
6. *Describe how to remove PPE from service*

### Requisite Skills

1. *Inspect structural PPE*
2. *Clean structural PPE*
3. *Maintain structural PPE*

### Content Modification

Block	Modification	Justification
CTS	Added a certification training standard.	NFPA 1001 does not include a designated JPR for inspecting and maintaining PPE but it is a Cal/OSHA requirement: 8 CCR § 3401(b)(4).

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 2-4: Structural Personal Protective Ensemble	1-7: Doff, Inspect, and Prepare Structural PPE for Reuse	JPR 1-2

## Fire Fighter 1 - Structure

### Section 1: Description of Structural Fire Fighter Duties

---

## 1-3: Inspecting and Maintaining Self-Contained Breathing Apparatus

### Authority

1. Office of the State Fire Marshal

### Job Performance Requirement

*Inspect and maintain self-contained breathing apparatus (SCBA), given SCBA, so that SCBA is inspected, maintained, and returned to a ready state.*

### Requisite Knowledge

1. Identify the components of SCBA
2. Explain the importance of standards for SCBA
3. Describe how improper fit, usage, or maintenance can compromise SCBA effectiveness
4. Identify the proper method for inspecting, cleaning, and maintaining SCBA
5. Identify when to remove SCBA from service
6. Describe how to remove SCBA from service

### Requisite Skills

1. Inspect SCBA
2. Clean SCBA
3. Maintain SCBA

### Content Modification

Block	Modification	Justification
CTS	Added a certification training standard.	NFPA 1001 does not include a designated JPR for inspecting and maintaining SCBA but it is a Cal/OSHA requirement: 8 CCR § 5144(k).

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 2-5: Self-Contained Breathing Apparatus	1-3: Inspect SCBA	JPR 1-3

## Fire Fighter 1 - Structure

### Section 1: Description of Structural Fire Fighter Duties

---

#### 1-4: Donning Structural Personal Protective Equipment

##### Authority

1. Office of the State Fire Marshal

##### Job Performance Requirement

*Don structural personal protective equipment (PPE), given PPE, so the PPE is donned in 60 seconds or less and all elements of the PPE ensemble are worn in accordance with manufacturer guidelines.*

##### Requisite Knowledge

1. Describe the protection provided by structural PPE
2. Describe the limitations of structural PPE
3. Identify manufacturer guidelines for correct PPE use

##### Requisite Skills

1. Don PPE

##### Content Modification

Block	Modification	Justification
CTS	Added a certification training standard.	NFPA 1001 does not include a designated JPR for donning PPE. OSFM uses 60 seconds as the industry standard.

##### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 2-4: Structural Personal Protective Ensemble	1-4: Don Structural PPE	JPR 1-4

## Fire Fighter 1 - Structure

### Section 1: Description of Structural Fire Fighter Duties

---

#### 1-5: Donning Self-Contained Breathing Apparatus

##### Authority

1. Office of the State Fire Marshal

##### Job Performance Requirement

*Don self-contained breathing apparatus (SCBA), given SCBA, so that the SCBA is donned in 60 seconds or less and all elements of the SCBA are worn and operated in accordance with manufacturer guidelines.*

##### Requisite Knowledge

1. *Identify conditions that require respiratory protection*
2. *Describe the protection provided by SCBA*
3. *Describe the uses and limitations of SCBA*
4. *Describe potential long-term consequences of exposure to products of combustion*
5. *Identify manufacturer guidelines for correct SCBA use*
6. *Describe operational inspection procedures for SCBA*

##### Requisite Skills

1. *Don SCBA*
2. *Perform operational inspection of SCBA*

##### Content Modification

Block	Modification	Justification
CTS	Added a certification standard.	NFPA 1001 does not include a designated JPR for donning SCBA. OSFM uses 60 seconds as the industry standard.

##### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 2-5: Self-Contained Breathing Apparatus	1-5: Don SCBA	JPR 1-5

## Fire Fighter 1 - Structure

### Section 1: Description of Structural Fire Fighter Duties

---

#### 1-6: Doffing Self-Contained Breathing Apparatus

##### Authority

1. Office of the State Fire Marshal

##### Job Performance Requirement

*Doff self-contained breathing apparatus (SCBA), given SCBA, so that SCBA is removed in accordance with manufacturer guidelines and returned to a ready state.*

##### Requisite Knowledge

1. *Identify when it is safe to doff respiratory protection*
2. *Identify manufacturer guidelines for doffing SCBA*
3. *Identify AHJ policies and procedures for doffing SCBA*

##### Requisite Skills

1. *Doff SCBA*
2. *Return SCBA to a ready state*

##### Content Modification

Block	Modification	Justification
CTS	Added a certification training standard.	NFPA 1001 does not include a designated JPR for doffing SCBA but it is a California requirement: 8 CCR § 5144(k).

##### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 2-5: Self-Contained Breathing Apparatus	1-6: Doff SCBA	JPR 1-6

## Fire Fighter 1 - Structure

### Section 1: Description of Structural Fire Fighter Duties

---

#### 1-7: Doffing Personal Protective Equipment

##### Authority

1. Office of the State Fire Marshal

##### Job Performance Requirement

*Doff structural personal protective equipment (PPE), given PPE, so that PPE is removed in accordance with manufacturer guidelines and returned to a ready state.*

##### Requisite Knowledge

1. Identify when it is safe to doff PPE
2. Identify manufacturer guidelines for doffing PPE
3. Identify AHJ policies and procedures for doffing PPE

##### Requisite Skills

1. Doff PPE
2. Return PPE to a ready state

##### Content Modification

Block	Modification	Justification
CTS	Added a certification training standard.	NFPA 1001 does not include a designated JPR for doffing PPE.

##### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 2-4: Structural Personal Protective Ensemble	1-7: Doff, Inspect, and Prepare Structural PPE for Reuse	JPR 1-7

## **1-8: Doffing Self-Contained Breathing Apparatus and Personal Protective Equipment for Gross Decontamination**

### **Authority**

1. Office of the State Fire Marshal

### **Job Performance Requirement**

*Doff self-contained breathing apparatus (SCBA) and structural personal protective equipment (PPE), given SCBA and PPE, so that SCBA and PPE are removed to reduce contaminant exposure; SCBA and PPE undergo gross decontamination and are tagged and transported; and fire fighter conducts physical decontamination as soon as possible, in order to reduce exposure to field contaminants.*

### **Requisite Knowledge**

1. *Identify the purpose and benefits of gross decontamination*
2. *Identify parts of the body most susceptible to contaminate exposure*
3. *Identify common routes of exposure*
4. *Describe how to conduct onsite gross decontamination*
5. *Describe how to doff SCBA and PPE to reduce exposure to field contaminants*
6. *Describe how to tag and transport contaminated SCBA and PPE*
7. *Identify personal decontamination processes*

### **Requisite Skills**

1. *Don and doff SCBA and PPE*

### **Content Modification**

<b>Block</b>	<b>Modification</b>	<b>Justification</b>
CTS	Added a certification training standard.	NFPA 1001 does not include a designated JPR for PPE gross decontamination. Added to incorporate IAFF Cancer Awareness and Prevention Initiative to increase awareness and promote cultural change.

### **Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1A, Topic 2-7: Doffing SCBA and PPE for Gross Decontamination	1-8: Doff SCBA and PPE for Gross Decontamination	JPR 1-8

## **1-9: Identifying Confined Spaces**

### **Authority**

1. Office of the State Fire Marshal

### **Job Performance Requirement**

*Identify a permit-required and non-permit-required confined space, given an incident and a confined space, so that hazards associated with confined spaces are identified, equipment is secured, and incident management operations and communications are followed, in accordance with state regulations and industry standards.*

### **Requisite Knowledge**

1. *Identify regulations and standards applicable to confined space incidents*
2. *Describe the history and dangers of confined space incidents*
3. *Describe how to identify a confined space*
4. *Describe how to identify a permit-required confined space*
5. *Describe how to recognize hazards*
6. *Describe how to isolate hazards and minimize risks*
7. *Describe how to recognize the need for and manage support resources*
8. *Describe how to ensure that resource application fits the operational requirements*
9. *Describe how to recognize the need for technical rescue resources*
10. *Describe how to search areas immediately adjacent to the space*
11. *Describe how to establish victim communication*
12. *Describe how to determine a victim survivability profile*
13. *Describe how to evaluate a non-entry rescue*
14. *Describe how to perform a non-entry rescue*
15. *Describe the positions and components of a permit-required confined space entry*
16. *Describe Cal/OSHA confined space operational positions and responsibilities*

### **Requisite Skills**

1. None required

### **Content Modification**

<b>Block</b>	<b>Modification</b>	<b>Justification</b>
CTS	Added a certification training standard.	This is a California state law is not captured by NFPA 1001: 8 CCR § 5157-5158.

## Fire Fighter 1 - Structure

### Section 1: Description of Structural Fire Fighter Duties

---

#### Cross Reference

Course Plan	Skill Sheets	Task Book
CSRA: Confined-Space Rescue Awareness (2018)	N/A	JPR 1-9

The training for this standard can be met through the completion of State Fire Training's Confined Space Rescue Awareness course.

Draft

## Fire Fighter 1 - Structure

### Section 1: Description of Structural Fire Fighter Duties

---

## 1-10: Operating within the Incident Command System

### Authority

1. Office of the State Fire Marshal

### Job Performance Requirement

*Operate within the Incident Command System (ICS), given an incident and an incident action plan, so that organizational elements are recognized, positions and responsibilities are identified, facility needs are met, and the incident is managed, in accordance with state and federal regulations.*

### Requisite Knowledge

1. Explain the principles and basic structure of the Incident Command System (ICS)
2. Describe the NIMS management characteristics that are the foundation of the ICS
3. Describe the ICS functional areas and the roles of the Incident Commander and Command Staff
4. Describe the General Staff roles within ICS
5. Identify how NIMS management characteristics apply to ICS for a variety of roles and discipline areas

### Requisite Skills

1. None required

### Content Modification

Block	Modification	Justification
CTS	Added a certification training standard.	This California state law is not captured by NFPA 1001: 19 CCR § 2403. See also: Homeland Security Presidential Directive, HSPD-5, Section 502, of the Homeland Security Act, 6 U.S.C. §§ 101 et. seq.

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 2-1: Operating within the Incident Command System	N/A	JPR 2-1

The training for this standard can be met through the completion of FEMA's IS-100: Introduction to the Incident Command System and IS-700: An Introduction to the National Incident Management System.

## Fire Fighter 1 - Structure

### Section 1: Description of Structural Fire Fighter Duties

---

## 1-11: Fire Fighter Physical Health and Safety

### Authority

1. Office of the State Fire Marshal

### Job Performance Requirement

*Identify common fire fighter health and safety issues, given an assignment, in order to avoid or mitigate common accidents and injuries, maintain a healthy and physically fit lifestyle, and conduct life safety initiatives in the line of duty.*

### Requisite Knowledge

1. *List common types of accidents and injuries and identify their causes*
2. *Describe how physical fitness and a healthy lifestyle correspond to fire fighter performance*
3. *Define critical aspects of NFPA 1500: Standard on Fire Department Occupational Safety and Health Program (current edition)*
4. *Describe how fire and life safety initiatives support a fire department's mission to reduce fire fighter line-of-duty injuries and deaths*

### Requisite Skills

1. None required

### Content Modification

Block	Modification	Justification
CTS	Added a certification training standard.	Application of this behavior reduces fire fighter injury, illness, and fatalities.

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 2-2: Health and Safety Awareness	N/A	JPR 1-11

## Fire Fighter 1 - Structure

### Section 1: Description of Structural Fire Fighter Duties

---

#### 1-12: Fire Fighter Behavioral Health and Safety

##### Authority

1. Office of the State Fire Marshal

##### Job Performance Requirement

Text

##### Requisite Knowledge

1. Text

##### Requisite Skills

1. Text

##### Content Modification

Block	Modification	Justification
CTS	Added a certification training standard.	Text

##### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic [#-#]	[#-#: Title] [#-#: Title]	JPR [#-#]

## Section 2: Fire Department Communications

### 2-1: Initiating the Response to a Reported Emergency

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.2.1
2. Office of the State Fire Marshal

#### Job Performance Requirement

Initiate the response to a reported emergency, given the report of an emergency, fire department SOPs, and communications equipment, so that all necessary information is obtained, communications equipment is operated correctly, and the information is relayed promptly and accurately to the dispatch center.

#### Requisite Knowledge

1. *Explain* the procedures for reporting an emergency
2. *Identify* departmental SOPs for taking and receiving alarms, radio codes, or procedures
3. *List* information needs of dispatch center
4. *Identify different types of fire department communications equipment*

#### Requisite Skills

1. Operate fire department communications equipment
2. Relay information
3. Record information

#### Content Modification

Block	Modification	Justification
RK 4	Added knowledge component.	The JPR requires the candidate to have equipment and use it correctly, but doesn't include any knowledge of it.

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 3-2: Initiating a Response to a Reported Emergency	2-1: Initiate a Response to an Emergency	JPR 2-1

## **2-2: Receiving a Telephone Call**

### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.2.2

### **Job Performance Requirement**

Receive a telephone call, given a fire department phone, so that procedures for answering the phone are used and the caller's information is relayed.

### **Requisite Knowledge**

1. *Describe* fire department procedures for answering non-emergency telephone calls

### **Requisite Skills**

1. Operate fire station telephone and intercom equipment

### **Content Modification**

<b>Block</b>	<b>Modification</b>	<b>Justification</b>

### **Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1A, Topic 3-1: Receiving a Non-emergency Telephone Call	N/A	JPR 2-2

## 2-3: Transmitting and Receiving Messages via Radio

### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.2.3
2. Office of the State Fire Marshal

### Job Performance Requirement

Transmit and receive messages via the fire department radio, given a fire department radio and *standard* operating procedures, so that the information is accurate, complete, clear, and relayed within the time established by the AHJ.

### Requisite Knowledge

1. *Describe* departmental radio procedures and etiquette for routine *radio* traffic, emergency *radio* traffic, and emergency *radio* evacuation signals
2. *Identify types and operations of fire department radios*

### Requisite Skills

1. Operate radio equipment
2. *Identify the differences* between routine and emergency *radio* traffic

### Content Modification

Block	Modification	Justification
JPR	Added “standard”.	Added for consistency with other instances within NFPA 1001.
RK 1	Added “radio” three times.	Added to clarify that this only covers the radio aspects of these items.
RK 2	Added knowledge component.	The JPR requires the candidate to have a radio and use it correctly, but doesn’t include any knowledge of types and use.
RS 2	Changed “discriminate” to “identify the difference”. Added “radio”.	SFT uses neutral language whenever possible without changing content or context. Added “radio” to clarify that this only covers the radio aspect of emergency traffic.

**Fire Fighter 1 – Structure**

Section 2: Fire Department Communications

---

**Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1A, Topic 3-3: Transmitting and Receiving Messages Via Radio	2-3: Operate a Fire Department Radio	JPR 2-3

Draft

## **2-4: Activating an Emergency Call of Assistance**

### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.2.4

### **Job Performance Requirement**

Activate an emergency call for assistance, given vision-obscured conditions, PPE, and department SOPs, so that the fire fighter can be located and rescued.

### **Requisite Knowledge**

1. *Describe different* personnel accountability systems
2. *Describe* emergency communication procedures
3. *Describe* emergency evacuation methods

### **Requisite Skills**

1. Initiate an emergency call for assistance in accordance with the AHJ's procedures
2. Use other methods of emergency calls for assistance

### **Content Modification**

<b>Block</b>	<b>Modification</b>	<b>Justification</b>

### **Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1A, Topic 6-1: Structural Fire Fighter Survival	3-5: Activate an Emergency Call and Exit a Hazardous Area	JPR 2-4

## Section 3: Fireground Operations

### 3-1: Using Self-contained Breathing Apparatus During Emergency Operations

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.1
2. Office of the State Fire Marshal

#### Job Performance Requirement

Use self-contained breathing apparatus (SCBA) during emergency operations, given SCBA and other PPE, so that the SCBA is correctly donned, the SCBA is correctly worn, controlled breathing techniques are used, emergency procedures are enacted if the SCBA fails, all low-air warnings are recognized, respiratory protection is not intentionally compromised, and hazardous areas are exited prior to air depletion.

#### Requisite Knowledge

1. *Identify* conditions that require respiratory protection
2. *Describe* the uses and limitations of SCBA
3. *Identify* the components of SCBA
4. *Describe different* donning procedures
5. *Describe different* breathing techniques
6. *Describe how to monitor and manage air consumption*
7. *Describe* indications for and emergency procedures used with SCBA
8. *Identify* physical requirements of the SCBA wearer

#### Requisite Skills

1. *Demonstrate different* controlled breathing techniques
2. Replace SCBA air cylinders
3. Use SCBA to exit through restricted passages
4. *Monitor and manage air consumption*
5. Initiate and complete emergency procedures in the event of SCBA failure or air depletion
6. Complete donning procedures

#### Content Modification

Block	Modification	Justification
RK 6	Added knowledge component.	Added to comply with NFPA 1404.
RS 4	Added skills component.	Added to comply with NFPA 1404.

**Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1A, Topic 2-5: Self-Contained Breathing Apparatus <ul style="list-style-type: none"><li>• RK 1, 2, 3, 4 and RS 6</li></ul> Fire Fighter 1A, Topic 2-6: Using SCBA During Emergency Operations <ul style="list-style-type: none"><li>• RK 5, 6, 7, 8 and RS 1, 2, 3, 4, 5</li></ul>	3-1a: Replace an SCBA Air Cylinder 3-1b: Use SCBA During Emergency Operations	JPR 3-1

Draft

### 3-2: Responding on an Apparatus to an Emergency Scene

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.2

#### Job Performance Requirement

Respond on apparatus to an emergency scene, given *an apparatus*, personal protective clothing and other necessary PPE, so that the apparatus is correctly mounted and dismounted, seat belts are used while the vehicle is in motion, and other personal protective equipment is correctly used.

#### Requisite Knowledge

1. *Describe* mounting and dismounting procedures for riding fire apparatus
2. *Identify* hazards and ways to avoid hazards associated with riding apparatus
3. *Describe* prohibited practices
4. *Identify different* types of department PPE and *their* means for usage

#### Requisite Skills

1. Use each piece of provided safety equipment

#### Content Modification

Block	Modification	Justification
JPR	Added "an apparatus".	Not included in the given but required to complete the task.

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 2-8: Responding on an Apparatus to an Emergency Scene	3-2: Respond to an Emergency Scene on an Apparatus	JPR 3-2

### 3-3: Establishing and Operating in Work Areas at Emergency Scenes

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.3

#### Job Performance Requirement

Establish and operate in work areas at emergency scenes, given *an apparatus, personal* protective equipment, traffic and scene control devices, structure fire and roadway emergency scenes, traffic hazards and downed electrical wires, photovoltaic power systems, battery storage systems, an assignment, and SOPs, so that procedures are followed, protective equipment is worn, protected work areas are established as directed using traffic and scene control devices, and the fire fighter performs assigned tasks only in established, protected work areas.

#### Requisite Knowledge

1. *Identify* potential hazards involved in operating on emergency scenes including vehicle traffic, utilities, and environmental conditions
2. *Describe* proper procedures for *mounting and* dismounting apparatus in traffic
3. *Describe* procedures for safe operation at emergency scenes
4. *Identify* the protective equipment available for members' safety on emergency scenes and work zone designations

#### Requisite Skills

1. Use personal protective clothing
2. Deploy traffic and scene control devices
3. Dismount apparatus
4. Operate in the protected work areas as directed

#### Content Modification

Block	Modification	Justification
JPR	Added "an apparatus".	Not included in the given but required to complete the task.
JPR	Added "personal".	Added for consistency with other references to PPE.
RK 2	Added "mounting and".	Added for consistency with other standards. Mounting is equally as important as dismounting.

**Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1A, Topic 2-9: Establishing and Operating in Work Areas at Emergency Scenes	3-3: Operate at an Emergency Scene	JPR 3-3

Draft

### 3-4: Forcing Entry into a Structure

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.4

#### Job Performance Requirement

Force entry into a structure, given PPE, tools, *a prop or structure with doors, walls, and windows*, and an assignment, so that the tools are used as designed, the barrier is removed, and the opening is in a safe condition and ready for entry.

#### Requisite Knowledge

1. *Describe* basic construction of typical doors, windows, and walls within the department's community or service area
2. *Describe types and uses of hand and power tools used for forcible entry*
3. *Describe* the operation of doors, windows, and locks
4. *Identify* the dangers associated with forcing entry through doors, windows, and walls

#### Requisite Skills

1. Transport and operate hand and power tools
2. Force entry through doors, windows, and walls using assorted methods and tools

#### Content Modification

Block	Modification	Justification
JPR	Added "a prop or structure with doors, walls, and windows"	Required to complete the JPR but not included in the given.
RK 2	Added knowledge component.	Not included in NFPA 1001 but required to complete RS 1.

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 5-1: Building Construction <ul style="list-style-type: none"> <li>• RK 1</li> </ul> Fire Fighter 1A, Topic 5-11: Forcing Entry into a Structure <ul style="list-style-type: none"> <li>• RK 1, 2, 3, 4 and RS 1, 2</li> </ul>	3-4: Force Entry into a Structure	JPR 3-4

## Fire Fighter 1 - Structure

### Section 3: Fireground Operations

---

#### 3-5: Exiting a Hazardous Area

##### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.5
2. Office of the State Fire Marshal

##### Job Performance Requirement

Exit a hazardous area as a team, given vision-obscured conditions *and PPE*, so that a safe haven is found before exhausting the air supply, others are not endangered, and the team integrity is maintained.

##### Requisite Knowledge

1. *Describe* personnel accountability systems
2. *Describe* communication procedures
3. *Describe* emergency evacuation methods
4. *Define* what constitutes a safe haven
5. *Identify* elements that create or indicate a hazard
6. *Identify* emergency procedures for loss of air supply

##### Requisite Skills

1. Operate as a team member in vision-obscured conditions
2. Locate and follow a guide line
3. Conserve air supply
4. Evaluate areas for hazards
5. Identify a safe haven

##### Content Modification

Block	Modification	Justification
JPR	Added "and PPE".	Not included in NFPA 1001 but required for fire fighter survival.
RS 2	Changed "guideline" to "guide line".	Changed to clarify meaning. NFPA 1001 used the wrong word.

##### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 6-1: Structural Fire Fighter Survival	3-5: Activate an Emergency Call and Exit a Hazardous Area	JPR 3-5

### **3-6: Setting Up, Mounting, Ascending, Dismounting, and Descending Ground Ladders**

#### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.6
2. Office of the State Fire Marshal

#### **Job Performance Requirement**

Set up, mount, ascend, dismount, and descend ground ladders, given single and extension ladders, an assignment, *PPE*, and team members if needed, so that hazards are assessed, the ladder is stable, the angle is correct for climbing, extension ladders are extended to the necessary height with the fly locked, the top is placed against a reliable structural component, and the assignment is accomplished.

#### **Requisite Knowledge**

1. *Identify the uses of ground ladders*
2. *Identify the types, parts, and construction features of a ground ladder*
3. *Identify types of lifts, carries, and raises*
4. *Describe how to secure ground ladders*
5. *Describe how to operate from ground ladders*
6. *Describe hazards associated with setting up ladders*
7. *Define what constitutes a stable foundation for ladder placement*
8. *Identify different angles for various tasks*
9. *Describe climbing techniques*
10. *Describe safety limits to the degree of angulation*
11. *Describe what constitutes a reliable structural component for top placement*

#### **Requisite Skills**

1. *Lift and carry ladders*
2. *Raise and move ladders*
3. *Extend ladders*
4. *Lock flies*
5. *Secure ground ladders*
6. *Determine that a wall and roof will support the ladder*
7. *Judge extension ladder height requirements*
8. *Place the ladder to avoid obvious hazards*
9. *Mount, ascend, dismount, and descend the ladder*
10. *Demonstrate proper climbing techniques*
11. *Operate from ground ladders*

## Fire Fighter 1 - Structure

### Section 3: Fireground Operations

---

#### Content Modification

Block	Modification	Justification
JPR	Added "PPE".	Not included in NFPA 1001 but required for fire fighter survival.
RK 1	Added knowledge component.	Not included in NFPA 1001 but needed for proper ladder use.
RK 2	Added to a knowledge component	Not included in NFPA 1001 but needed for proper ladder use.
RK 3	Added knowledge component.	Not included in NFPA 1001 but needed for proper ladder use.
RK 4	Added knowledge component.	Not included in NFPA 1001 but needed for proper ladder use.
RK 5	Added knowledge component.	Not included in NFPA 1001 but needed for proper ladder use.
RS 1	Added "Lift and".	Changed to match RK 3.
RS 2	Added "and move".	Not included in NFPA 1001 but needed for proper ladder use.
RS 5	Added skills component.	Added to correspond with RK 4.
RS 10	Added skills component.	This is a CalOSHA requirement.
RS 11	Added skills component.	Added to correspond with RK 6.

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 5-9: Cleaning, Inspecting, and Maintaining Fire Service Ladders <ul style="list-style-type: none"><li>• RK 1, 2</li></ul> Fire Fighter 1A, Topic 5-10: Ground Ladder Operations <ul style="list-style-type: none"><li>• RK 3, 4, 5, 6, 7, 8, 9, 10, 11</li><li>• RS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11</li></ul>	3-6: Lift, Carry, and Raise a Ground Ladder	JPR 3-6

### **3-7: Attacking a Passenger Vehicle Fire**

#### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.7
2. Office of the State Fire Marshal

#### **Job Performance Requirement**

Attack a passenger vehicle fire operating as a member of a team, given personal protective equipment (PPE), *self-contained breathing apparatus (SCBA)*, an attack line (*1½ inch or larger*), hand tools, and *a passenger vehicle or prop*, so that hazards are avoided, leaking flammable liquids are identified and controlled, protection from flash fires is maintained, all vehicle compartments are overhauled, and the fire is extinguished.

#### **Requisite Knowledge**

1. *Describe* principles of fire streams as they relate to fighting automobile fires
2. *Identify* precautions to be followed when advancing hose lines toward an automobile
3. *List* observable results that a fire stream has been properly applied
4. Identifying alternative fuels and the hazards associated with them
5. *Describe* dangerous conditions created during an automobile fire
6. *Describe* common types of accidents or injuries related to fighting automobile fires and how to avoid them
7. *Describe* how to access locked passenger, trunk, and engine compartments
8. Identify methods for overhauling an automobile

#### **Requisite Skills**

1. Identify automobile fuel types
2. Assess and control fuel leaks
3. Open, close, and adjust the flow and pattern on nozzles
4. Apply water for maximum effectiveness while maintaining flash fire protection
5. Advance 1½ in. (38 mm) or larger diameter attack lines
6. Expose hidden fires by opening all automobile compartments

#### **Content Modification**

<b>Block</b>	<b>Modification</b>	<b>Justification</b>
JPR	Added “self-contained breathing apparatus (SCBA)”.	CalOSHA requirement for IDLH environments.
JPR	Added “(1½ inch or larger)”.	Specified by RS 5.
JPR	Added “a passenger vehicle or prop”.	Not included in the given but required to complete the JPR.

**Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1A, Topic 7-2: Attacking a Passenger Vehicle Fire	3-7: Attack a Passenger Vehicle Fire	JPR 3-7

Draft

### **3-8: Extinguishing Fires in Exterior Class A Materials**

#### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.8
2. Office of a State Fire Marshal

#### **Job Performance Requirement**

Extinguish fires in exterior Class A materials, given fires in stacked or piled *materials*, small unattached structures, or storage containers that can be fought from the exterior, attack lines, hand tools and master stream devices, *PPE*, and an assignment, so that exposures are protected, the spread of fire is stopped, collapse hazards are avoided, water application is effective, the fire is extinguished, and signs of the origin area(s) and arson are preserved.

#### **Requisite Knowledge**

1. *Describe* types of attack lines and water streams appropriate for attacking stacked, piled materials, and outdoor fires
2. *Identify* dangers — such as collapse — associated with stacked and piled materials
3. *Describe* various extinguishing agents and their effect on different material configurations
4. *Identify* tools and methods to use in breaking up various types of materials
5. *Describe* difficulties related to complete extinguishment of stacked and piled materials
6. *Identify* water application methods for exposure protection and fire extinguishment
7. *Describe* dangers such as exposure to toxic or hazardous materials associated with storage building and container fires
8. *Identify* obvious signs of origin and cause
9. *List* techniques for the preservation of fire cause evidence

#### **Requisite Skills**

1. Recognize inherent hazards related to the material's configuration
2. Operate handlines or master streams
3. Break up material using hand tools and water streams
4. Operate hoselines and other water application devices
5. Evaluate and modify water application for maximum penetration
6. Search for and expose hidden fires
7. Assess patterns for origin determination
8. Evaluate for complete extinguishment

## Fire Fighter 1 - Structure

### Section 3: Fireground Operations

---

#### Content Modification

Block	Modification	Justification
JPR	Added "PPE".	Not included in NFPA 1001 but required for fire fighter survival.
JPR	Added "materials" and commas.	As originally written "stacked or piled" modified "unattached structure or storage container". Revised to clarify meaning.

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 7-1: Extinguishing Fires in Exterior Class A Materials	3-8a: Operate a Portable Master Stream 3-8b: Extinguish an Exterior Fire	JPR 3-8

### **3-9: Conducting a Search and Rescue in a Structure**

#### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.9
2. Office of the State Fire Marshal

#### **Job Performance Requirement**

Conduct a search and rescue in a structure operating as a member of a team, given an assignment, obscured vision conditions, personal protective equipment (PPE), *self-contained breathing apparatus (SCBA)*, a flashlight, forcible entry tools, hose lines or *guide lines*, a *thermal imaging device*, and ladders when necessary, so that ladders are correctly placed when used, all assigned areas are searched, all victims are located and removed, team integrity is maintained, and team members' safety — including respiratory protection — is not compromised.

#### **Requisite Knowledge**

1. *Describe how to use forcible entry tools during rescue operations*
2. *Describe how to use thermal imaging devices and other search tools*
3. *Describe how to use ladder operations for rescue*
4. Identify the psychological effects of operating in obscured conditions and ways to manage them
5. *Describe methods to determine if an area is tenable*
6. *Describe primary and secondary search techniques*
7. *Identify team members' roles and goals*
8. *Describe methods and indicators used to locate victims*
9. *Describe victim removal methods (including various carries)*
10. *Identify considerations related to respiratory protection*

#### **Requisite Skills**

1. Use SCBA to exit through restricted passages
2. Set up and use different types of ladders for various types of rescue operations
3. Rescue a fire fighter with functioning respiratory protection
4. Rescue a fire fighter whose respiratory protection is not functioning
5. Rescue a person who has no respiratory protection
6. Assess areas to determine tenability

#### **Content Modification**

<b>Block</b>	<b>Modification</b>	<b>Justification</b>
JPR	Added "self-contained breathing apparatus (SCBA)".	Required for RK 1 but not included in the given.
JPR	Added "or guide lines".	This is an additional option for orientation.

## Fire Fighter 1 - Structure

### Section 3: Fireground Operations

---

JPR	Added "a thermal imaging device".	This is a recognized industry standard not included in NFPA 1001.
RK 2	Added knowledge component.	This is a recognized industry standard not included in NFPA 1001.
RK 8	Revised without changing intent.	Revised for clarification.

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 5-12: Conducting a Search and Rescue Operation in a Structure	3-9a: Search for and Rescue a Victim with no Respiratory Protection 3-9b: Rescue a Fire Fighter 3-9c: Use a Ladder for Rescue	JPR 3-9

### **3-10: Attacking an Interior Structure Fire**

#### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.10
2. Office of the State Fire Marshal

#### **Job Performance Requirement**

Attack an interior structure fire operating as a member of a team, given an attack line (*1½ inch or larger*), *pumping apparatus, established water supply*, ladders when needed, personal protective equipment, *self-contained breathing apparatus (SCBA)*, tools, and an assignment, so that team integrity is maintained, the attack line is deployed for advancement, ladders are correctly placed when used, access is gained into the fire area, effective water application practices are used, the fire is approached correctly, attack techniques facilitate suppression given the level of the fire, hidden fires are located and controlled, the correct body posture is maintained, hazards are recognized and managed, and the fire is brought under control.

#### **Requisite Knowledge**

1. *Identify types, designs, and uses of fire hoses*
2. *Identify fittings, tools, and appliances*
3. *Describe common building materials and construction types*
4. *Identify the principles of fire streams*
5. *Describe types, design, operation, nozzle pressure effects, and flow capabilities of nozzles*
6. *Identify precautions to be followed when advancing hoselines to a fire*
7. *Describe observable results that a fire stream has been properly applied*
8. *Identify dangerous building conditions created by fire*
9. *Identify principles of exposure protection*
10. *Describe potential long-term consequences of exposure to products of combustion*
11. *List physical states of matter in which fuels are found*
12. *List common types of accidents or injuries and their causes*
13. *Describe how to apply each size and type of attack line*
14. *Define the role of the backup team in fire attack situations*
15. *Describe attack and control techniques for grade level and above and below grade level fires*
16. *Identify methods for locating and exposing hidden fires*

#### **Requisite Skills**

1. Prevent water hammers when shutting down nozzles
2. Open, close, and adjust nozzle flow and patterns
3. Apply water using direct, indirect, and combination attacks
4. Advance charged and uncharged 1½ in. (38 mm) diameter or larger hose lines up ladders and up and down interior and exterior stairways
5. Extend hose lines

## Fire Fighter 1 - Structure

### Section 3: Fireground Operations

---

6. Replace burst hose sections
7. Operate charged hose lines of 1½ in. (38 mm) diameter or larger while secured to a ground ladder
8. Couple and uncouple various *hose line* connections
9. Carry hose
10. Attack fires at grade level and above and below grade levels
11. Locate and suppress interior wall and subfloor fires

### Content Modification

Block	Modification	Justification
JPR	Added "(1½ inch or larger)".	Specified by RS 4, and RS 7.
JPR	Added "pumping apparatus, established water supply".	You cannot do live fire training evolutions without a water supply.
JPR	Added "self-contained breathing apparatus (SCBA)".	Required for IDLH environments.
RK 1	Added knowledge component.	Not included in NFPA 1001 but needed for proper hose use.
RK 2	Added knowledge component.	Not included in NFPA 1001 but needed for proper hose use.
RK 3	Added knowledge component.	Not included in NFPA 1001 but needed for proper hose selection and attack.
RK 16	Added "methods for locating".	Not included in NFPA 1001 but this is a two-step process.
RS 8	Changed "handline" to "hose line".	Not all hose lines are handlines.

## Fire Fighter 1 - Structure

### Section 3: Fireground Operations

---

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 2-5: Self-Contained Breathing Apparatus <ul style="list-style-type: none"><li>• RK 10</li></ul> Fire Fighter 1A, Topic 5-1: Building Construction <ul style="list-style-type: none"><li>• RK 3, 8</li></ul> Fire Fighter 1A, Topic 5-2: Fire Behavior <ul style="list-style-type: none"><li>• RK 11</li></ul> Fire Fighter 1A, Topic 5-5: Cleaning, Inspecting, and Returning Fire Hose to Service <ul style="list-style-type: none"><li>• RK 1, 2, 5, 13</li></ul> Fire Fighter 1A, Topic 5-7: Deploy and Connect Fire Hose <ul style="list-style-type: none"><li>• RK 4, 6, 7 and RS 1, 2, 5, 6, 8, 9</li></ul> Fire Fighter 1A, Topic 5-13: Attacking an Interior Structure Fire <ul style="list-style-type: none"><li>• RK 6, 7, 9, 12, 14, 15, 16 and RS 3, 4, 7, 10, 11</li></ul>	3-10a: Operate a Charged Attack Hoseline from a Ground Ladder 3-10b: Attack a Live Interior Structure Fire 3-10c: Attack a Simulated Interior Structure Fire 3-10d: Extend a Hoseline 3-10e: Load, Deploy, and Advance an Attack Line 3-10f: Load Supply Hose	JPR 3-10

The training for this standard can be met through the completion of State Fire Training's Fire Control 3: Structural Fire Fighting (2018) course.

### **3-11: Performing Horizontal Ventilation on a Structure**

#### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.11

#### **Job Performance Requirement**

Perform horizontal ventilation on a structure operating as part of a team, given an assignment, PPE, ventilation tools, equipment, and ladders, so that the ventilation openings are free of obstructions, tools are used as designed, ladders are correctly placed, ventilation devices are correctly placed, and the structure is cleared of smoke.

#### **Requisite Knowledge**

1. *Describe* the principles, advantages, limitations, and effects of horizontal, mechanical, and hydraulic ventilation
2. *Describe* safety considerations when venting a structure
3. *Describe* fire behavior in a structure
4. *List* the products of combustion found in a structure fire
5. *Identify* the signs, causes, effects, and prevention of backdrafts
6. *Describe* the relationship of oxygen concentration to life safety and fire growth

#### **Requisite Skills**

1. Transport and operate ventilation tools and equipment and ladders
2. Use safe procedures for breaking window and door glass and removing obstructions

#### **Content Modification**

<b>Block</b>	<b>Modification</b>	<b>Justification</b>

#### **Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1A, Topic 5-15: Horizontal Ventilation Operations <ul style="list-style-type: none"><li>• RK 1, 2 and RS 1, 2, 3</li></ul> Fire Fighter 1A, Topic 5-2: Fire Behavior <ul style="list-style-type: none"><li>• RK 3, 4, 5, 6</li></ul>	3-11: Perform Horizontal Ventilation	JPR 3-11

### **3-12: Performing Vertical Ventilation on a Structure**

#### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.12
2. Office of the State Fire Marshal

#### **Job Performance Requirement**

Perform vertical ventilation on a structure as part of a team, given an assignment, PPE, ground and roof ladders, and tools, so that ladders are positioned for ventilation, a specified opening is created, all ventilation barriers are removed, structural integrity is not compromised, products of combustion are released from the structure, and the team retreats from the area when ventilation is accomplished.

#### **Requisite Knowledge**

1. *Describe vertical (top-side) ventilation*
2. *Describe methods of heat transfer*
3. *Describe the principles of thermal layering within a structure on fire*
4. *List the techniques and safety precautions for venting flat roofs, pitched roofs, and basements*
5. *Describe basic indicators of potential collapse or roof failure*
6. *Identify the effects of construction type and elapsed time under fire conditions on structural integrity*
7. *Describe the advantages and disadvantages of vertical and trench/strip ventilation*

#### **Requisite Skills**

1. Transport and operate ventilation tools and equipment
2. Hoist ventilation tools to a roof
3. Cut roofing and flooring materials to vent flat roofs, pitched roofs, and basements
4. Sound a roof for integrity
5. Clear an opening with hand tools
6. Select, carry, deploy, and secure ground ladders for ventilation activities
7. Deploy roof ladders on pitched roofs while secured to a ground ladder
8. Carry ventilation-related tools and equipment while ascending and descending ladders

#### **Content Modification**

<b>Block</b>	<b>Modification</b>	<b>Justification</b>
RK 1	Added knowledge component.	Needed a basic level introduction to the topic. Mirrors foundational information in the Horizontal Ventilation JPR.

**Cross Reference**

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 5-1: Building Construction <ul style="list-style-type: none"><li>• RK 6</li></ul> Fire Fighter 1A: Topic 5-2: Fire Behavior <ul style="list-style-type: none"><li>• RK 2-3</li></ul> Fire Fighter 1A, Topic 5-16: Vertical Ventilation Operations <ul style="list-style-type: none"><li>• RK 1, 4-7 and RS 1-8</li></ul>	3-12: Perform Vertical Ventilation	JPR 3-12

Draft

### 3-13: Overhauling a Fire Scene

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.13
2. Office of the State Fire Marshal

#### Job Performance Requirement

Overhaul a fire scene, given PPE, an attack line, hand tools, a flashlight, and an assignment, so that structural integrity is not compromised, all hidden fires are discovered, fire cause evidence is preserved, and the fire is extinguished.

#### Requisite Knowledge

1. *Describe the purpose of and methods for overhaul*
2. *Describe types of fire attack lines and water application devices most effective for overhaul*
3. *Describe water application methods for extinguishment that limit water damage*
4. *Identify types of tools and methods used to expose hidden fire*
5. *Describe dangers associated with overhaul*
6. *Describe obvious signs of area of origin or signs of arson*
7. *Identify reasons for protection of fire scene*

#### Requisite Skills

1. Deploy and operate an attack line *for overhaul*
2. Remove flooring, ceiling, and wall components to expose void spaces without compromising structural integrity
3. Apply water for maximum effectiveness
4. Expose and extinguish hidden fires in walls, ceilings, and subfloor spaces
5. Recognize and preserve obvious signs of area of origin and arson
6. Separate, remove, and relocate charred material to a safe location while protecting the area of origin for cause determination
7. Evaluate for complete extinguishment

#### Content Modification

Block	Modification	Justification
RK 1	Added a knowledge component.	Foundational knowledge not included in NFPA.
RS 1	Added "for overhaul".	Adding "for overhaul" dictates hose line selection.
RS 6	Added skills component.	This is a skill from NFPA 1001 paragraph 4.3.14. It aligns more closely with the JPR for paragraph 4.3.13.

**Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1A, Topic 5-18: Overhauling a Fire Scene	3-13a: Overhaul a Fire Scene 3-13b: Remove Charred Materials	JPR 3-13

Draft

### 3-14: Conserving Property

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.14
2. Office of the State Fire Marshal

#### Job Performance Requirement

Conserve property as a member of a team, given salvage tools and equipment, *PPE*, and an assignment, so that the building and its contents are protected from further damage.

#### Requisite Knowledge

1. *Describe* the purpose of property conservation and its value to the public
2. *Describe* methods used to protect property
3. *List* types of and uses for salvage covers
4. *Describe* operations at properties protected with automatic sprinklers
5. *Describe* how to stop the flow of water from an automatic sprinkler head
6. *Identify* the main control valve on an automatic sprinkler system
7. *Describe* forcible entry issues related to salvage
8. *Describe* procedures for protecting possible areas of origin and potential evidence

#### Requisite Skills

1. Cluster furniture
2. Deploy covering materials
3. Roll and fold salvage covers for reuse
4. Construct water chutes and catch-alls
5. Remove water
6. Cover building openings, including doors, windows, floor openings, and roof openings
7. Stop the flow of water from a sprinkler with sprinkler wedges or stoppers
8. Operate a main control valve on an automatic sprinkler system

#### Content Modification

Block	Modification	Justification
JPR	Added "PPE".	Not included in NFPA 1001 but required for fire fighter safety.
RS	Removed "Separate, remove, and relocate charred material to a safe location while protecting the area of origin for cause determination".	This skill aligns more closely with the JPR for NFPA 1001 paragraph 43.13. It was relocated to 3-13: Overhauling a Fire Scene.

**Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1A, Topic 5-17: Conserving Property	3-14a: Control Water Flow from a Sprinkler System 3-14b: Remove Water from the Interior of a Structure 3-14c: Salvage a Room and its Contents 3-15d: Cover Building Openings	JPR 3-14

Draft

### 3-15: Connecting a Fire Department Pumper to a Water Supply

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.15
2. Office of the State Fire Marshal

#### Job Performance Requirement

Connect a fire department pumper to a water supply as a member of a team, given supply or intake hose, hose tools, a fire hydrant or static water source, *an apparatus*, and *PPE*, so that connections are tight and water flow is unobstructed.

#### Requisite Knowledge

1. *Describe types and components of municipal and rural water systems*
2. *Describe loading and off-loading procedures for mobile water supply apparatus*
3. *Describe fire hydrant operation*
4. *Identify suitable static water supply sources*
5. *Describe procedures and protocol for connecting to various water sources*

#### Requisite Skills

1. Hand lay a supply hose
2. Connect and place hard suction hose for drafting operations
3. Deploy portable water tanks as well as the equipment necessary to transfer water between and draft from them
4. Make hydrant-to-pumper hose connections for forward and reverse lays
5. Connect supply hose to a hydrant
6. Fully open and close the hydrant

#### Content Modification

Block	Modification	Justification
JPR	Added "and PPE".	Not included in NFPA 1001 but required for fire fighter safety.
JPR	Added "an apparatus"	Required to complete the JPR but not listed as a given.
RK 1	Added a knowledge component.	NFPA 1001 assumes that the candidate is using a pressurized hydrant but there are other types of water supply.

**Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1A, Topic 5-4: Water Supply Systems <ul style="list-style-type: none"><li>• RK 1, 2, 3, 4, 5</li></ul> Fire Fighter 1A, Topic 5-7: Deploy and Connect Fire Hose <ul style="list-style-type: none"><li>• RS 1, 2, 3, 4, 5, 6</li></ul>	3-15a: Deploy Portable Tank and Prepare for Drafting Operations 3-15b: Forward Hose Lay	JPR 3-15

Draft

### 3-16: Extinguishing Incipient Class A, Class B, and Class C Fires

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.16
2. Office of the State Fire Marshal

#### Job Performance Requirement

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

#### Requisite Knowledge

1. *Describe* the classifications of fire
2. *Identify* the types of, rating systems for, and risks associated with each class of fire
3. *Describe* operating methods and limitations of portable extinguishers

#### Requisite Skills

1. Operate portable fire extinguishers
2. Approach fire with portable fire extinguishers
3. Select an appropriate extinguisher based on the size and type of fire
4. Safely carry portable fire extinguishers

#### Content Modification

Block	Modification	Justification
JPR	Added " <i>and PPE</i> ".	Not included in NFPA 1001 but required for fire fighter safety.

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 5-2: Fire Behavior <ul style="list-style-type: none"><li>• RK 1</li></ul> Fire Fighter 1A, Topic 5-3: Extinguishing Fire with Fire Extinguishers <ul style="list-style-type: none"><li>• RK 2, 3 and RS 1, 2, 3, 4</li></ul>	3-16: Select, Carry, and Operate a Portable Fire Extinguisher	JPR 3-16

### 3-17: Operating Emergency Scene Lighting

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.17
2. Office of the State Fire Marshal

#### Job Performance Requirement

Operate emergency scene lighting, given fire service lighting equipment, a power supply, and an assignment, so that emergency scene lighting equipment is operated within the manufacturer's listed safety precautions.

#### Requisite Knowledge

1. *Describe* safety principles and practices for portable electrical equipment
2. *Identify* power supply capacity and limitations
3. *Describe* light deployment methods

#### Requisite Skills

1. Operate department power supply and lighting equipment
2. Deploy cords and connectors
3. Reset ground-fault interrupter (GFI) devices
4. Locate lights for best effect

#### Content Modification

Block	Modification	Justification
RK 1	Added "for portable electrical equipment".	This was added to narrow the scope of discussion.

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 4-3: Operating Emergency Scene Lighting	3-17: Light a Scene	JPR 3-17

### 3-18: Turning Off Building Utilities

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.18
2. Office of the State Fire Marshal

#### Job Performance Requirement

Turn off building utilities, given tools, *PPE*, and an assignment, so that the assignment is safely completed.

#### Requisite Knowledge

1. *Describe* properties, principles, and safety concerns for *electrical*, gas, and water systems
2. *Identify* utility disconnect methods and associated dangers
3. *Describe how to* use required safety equipment

#### Requisite Skills

1. Identify utility control devices
2. Operate control valves or switches
3. Assess for related hazards

#### Content Modification

Block	Modification	Justification
JPR	Added "PPE".	Not included in NFPA 1001 but required for fire fighter safety.
RK 1	Replaced "electricity" with "electrical".	"Electrical" is the proper use of "electricity" as an adjective.

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 5-8: Utility Control at Emergencies	3-18: Turn Off Building Utilities	JPR 3-18

### 3-19: Combatting a Ground Cover Fire

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.19
2. Office of the State Fire Marshal

#### Job Performance Requirement

Combat a ground cover fire operating as a member of a team, given *personal protective equipment (PPE)*, SCBA (if needed), hose lines, extinguishers or hand tools, and an assignment, so that threats to property are reported, threats to personal safety are recognized, retreat is quickly accomplished when warranted, and the assignment is completed.

#### Requisite Knowledge

1. *Describe* types of ground cover fires
2. *Describe* parts of ground cover fires
3. *Describe* methods to contain or suppress
4. *Describe* safety principles and practices

#### Requisite Skills

1. Determine exposure threats based on fire spread potential
2. Protect exposures
3. Construct a fire line or extinguish with hand tools,
4. Maintain integrity of established fire lines
5. Suppress ground cover fires using water

#### Content Modification

Block	Modification	Justification
JPR	Replaced “protective clothing” with “personal protective equipment (PPE)”.	Protective clothing isn’t comprehensive enough to meet JPR requirements.

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 7-3: Combatting a Ground Cover Fire	N/A	JPR 3-19

### 3-20: Tying Knots Appropriate for Hoisting Tools

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.20
2. Office of the State Fire Marshal

#### Job Performance Requirement

Tie a knot appropriate for hoisting tools, given PPE, tools, ropes, *webbing*, and an assignment, so that the knots used are appropriate for hoisting tools securely and as directed.

#### Requisite Knowledge

1. *Identify rope types and usage*
2. *Identify knot types and usage*
3. *Describe the difference between life safety and utility rope*
4. *Identify reasons for placing rope out of service*
5. *Identify types of knots to use for given tools, ropes, or situations*
6. *Describe hoisting methods for tools and equipment*
7. *Describe how to use rope to support response activities*

#### Requisite Skills

1. *Tie knots specific to hoisting different types of tools*
2. Hoist tools using specific knots based on the type of tool

#### Content Modification

Block	Modification	Justification
JPR	Added “webbing”.	Not included in NFPA 1001 but is commonly used for this task.
RK 1	Added knowledge component.	Not included in NFPA 1001 but it’s a basic knowledge component required to complete the JPR.
RS 1	Added skill component.	Not included in NFPA 1001 but required to complete the JPR.

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 4-1: Utilizing Ropes and Knots	3-20a: Tie Knots 3-20b: Hoist Tools Aloft	JPR 3-20

### 3-21: Operating Hand and Power Tools

#### Authority

1. Office of the State Fire Marshal

#### Job Performance Requirement

*Operate hand and power tools, given hand and power tools and an assignment, so that tools are properly operated, maintained, and transported in accordance with manufacturer specifications and AHJ policies and procedures.*

#### Requisite Knowledge

1. Describe types of hand and power tools
2. Describe uses of hand and power tools

#### Requisite Skills

1. Transport hand and power tools
2. Operate hand and power tools
3. Maintain hand and power tools

#### Content Modification

Block	Modification	Justification
CTS	Added a certification training standard.	Many NFPA paragraphs require knowledge and skills regarding hand tools. Created one standard to cover foundational knowledge.

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 4-2: Utilizing Hand and Power Tools	N/A	JPR 3-21

### **3-22: Operating an Air-Monitoring Instrument**

#### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.3.21

#### **Job Performance Requirement**

Operate an air-monitoring instrument, given an air monitor and an assignment or task, so that the device is operated and the fire fighter recognizes the high- or low-level alarms of the air monitor and takes action to mitigate the hazard.

#### **Requisite Knowledge**

1. *Identify* the various uses for an air monitor
2. *Describe* basic operation of an air monitor
3. Describe air monitoring procedures
4. *Identify how to recognize* high- or low-level alarms of the air monitor
5. *Describe* emergency actions to be taken upon the activation of the high- or low-level alarms of the air monitor

#### **Requisite Skills**

1. Operate the air monitor
2. Recognize the alarms
3. React to the alarms of the air monitor

#### **Content Modification**

<b>Block</b>	<b>Modification</b>	<b>Justification</b>
RS 3	Added a knowledge component.	NFPA does not cover the step-by-step process.
RK 1	Removed "knowledge of"	This content is already in the knowledge section; we don't need knowledge of knowledge.
RK 3	Split one knowledge component into two.	Clarifying a poorly written knowledge component.
RK 4	Split one knowledge component into two.	Clarifying a poorly written knowledge component.

#### **Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1A, Topic 4-4: Operating an Air-Monitoring Instrument	N/A	JPR 3-22

## Section 4: Preparedness and Maintenance

### 4-1: Cleaning and Checking Ladders, Ventilation Equipment, SCBA, Ropes, Salvage Equipment, and Hand Tools

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.5.1
2. Office of the State Fire Marshal

#### Job Performance Requirement

Clean and check ladders, ventilation equipment, SCBA, ropes, salvage equipment, and hand tools, given cleaning tools, cleaning supplies, and an assignment, so that equipment is clean and maintained according to manufacturer's or departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise.

#### Requisite Knowledge

1. *Describe* types of cleaning methods for various tools and equipment
2. *Describe* the correct use of cleaning solvents
3. *Identify* manufacturer or departmental guidelines for cleaning equipment and tools
4. *Identify* manufacturer or departmental guidelines for removing tools and equipment from service

#### Requisite Skills

1. Select correct tools *to maintain* various parts and pieces of equipment
2. Follow guidelines
3. Complete recording and reporting procedures

#### Content Modification

Block	Modification	Justification
RK 4	Added knowledge component.	Added to support the JPR.
RS 1	Added "to maintain".	Added to clarify the purpose for tool selection.

## Fire Fighter 1 - Structure

### Section 4: Preparedness and Maintenance

---

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 2-5: Self-Contained Breathing Apparatus <ul style="list-style-type: none"><li>• RK 1, 2, 3, 4 and RS 1, 2, 3 (as it pertains to SCBA)</li></ul> Fire Fighter 1A, Topic 4-1: Utilizing Ropes and Knots <ul style="list-style-type: none"><li>• RK 1, 2, 3, 4 and RS 1, 2, 3 (as it pertains to rope)</li></ul> Fire Fighter 1A, Topic 4-2: Utilizing Hand and Power Tools <ul style="list-style-type: none"><li>• RK 1, 2, 3, 4 and RS 1, 2, 3 (as it pertains to tools)</li></ul> Fire Fighter 1A, Topic 5-9: Cleaning, Inspecting, and Maintaining Fire Service Ladders <ul style="list-style-type: none"><li>• RK 1, 2, 3, 4 and RS 1, 2, 3 (as it pertains to ladders)</li></ul> Fire Fighter 1A, Topic 5-15: Horizontal Ventilation Operations <ul style="list-style-type: none"><li>• RK 1, 2, 3, 4 and RS 1, 2, 3 (as it pertains to horizontal ventilation equipment)</li></ul> Fire Fighter 1A, Topic 5-16: Vertical Ventilation Operations <ul style="list-style-type: none"><li>• RK 1, 2, 3, 4 and RS 1, 2, 3 (as it pertains to vertical ventilation equipment)</li></ul> Fire Fighter 1A, Topic 5-17: Conserving Property <ul style="list-style-type: none"><li>• RK 1, 2, 3, 4 and RS 1, 2, 3 (as it pertains to salvage equipment)</li></ul>	4-1: Clean and Check Equipment	JPR 4-1

## **4-2: Cleaning, Inspecting, and Returning Fire Hose to Service**

### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 4.5.2
2. Office of the State Fire Marshal

### **Job Performance Requirement**

Clean, inspect, and return fire hose to service, given washing equipment, water, detergent, tools, and replacement gaskets, so that damage is noted and corrected, the hose is clean, and the equipment is placed in a ready state for service.

### **Requisite Knowledge**

1. *Describe* departmental procedures for *inspecting a hose according to manufacturer guidelines*, noting a defective hose, and removing it from service
2. *Describe* *cleaning and maintenance* methods
3. *Describe* *types of* hose rolls and loads

### **Requisite Skills**

1. Clean different types of hose
2. Operate hose washing and drying equipment
3. Mark defective hose
4. Replace coupling gaskets
5. Roll hose
6. Reload hose

### **Content Modification**

<b>Block</b>	<b>Modification</b>	<b>Justification</b>
RK 1	Added “inspecting a hose according to manufacturer guidelines”.	This strengthens the knowledge component with a standard.
RK 2	Added “and maintenance”.	There are steps beyond cleaning required before returning hose to a ready state.
RK 3	Added “types of”.	Added for clarification.

## Fire Fighter 1 - Structure

### Section 4: Preparedness and Maintenance

---

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 5-5: Cleaning, Inspecting, and Returning Fire Hose to Service <ul style="list-style-type: none"><li>• RK 1, 2, 3 and RS 1, 2, 3, 4</li></ul> Fire Fighter 1A, Topic 5-7: Deploy and Connect Fire Hose <ul style="list-style-type: none"><li>• RS 5, 6</li></ul>	4-2a: Replace a Burst Section of Hose 4-2b: Build Hose Rolls 4-2c: Clean and Maintain Hose and Mark Defective Hose	JPR 4-2

# Fire Fighter 1 - Hazardous Materials/WMD

## Section 5: Awareness

### 5-1: Description of Duties (Awareness)

#### Authority

1. NFPA 1072: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications (2017)
  - Paragraph 4.1.3

#### Job Performance Requirement

There is no job performance requirement identified for this training standard.

#### Requisite Knowledge

1. *Identify the* role of awareness personnel at a hazardous materials/WMD incident
2. *Identify the* location and contents of the AHJ emergency response plan
3. *Describe* standard operating procedures for awareness personnel

#### Requisite Skills

1. None specified

#### Content Modification

Block	Modification	Justification

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1B, Topic 2-1: Description of Duties (Awareness)	N/A	N/A

## 5-2: Recognizing and Identifying Hazardous Materials/WMD and Associated Hazards

### Authority

1. NFPA 1072: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications (2017)
  - Paragraph 4.2.1

### Job Performance Requirement

Recognize and identify the hazardous materials/WMD and hazards involved in a hazardous materials/WMD incident, given a hazardous materials/WMD incident and approved reference sources, so that the presence of hazardous materials/WMD is recognized and the materials and their hazards are identified.

### Requisite Knowledge

1. *Describe how to recognize* hazardous materials and WMD
2. *List* basic hazards associated with classes and divisions
3. *Identify* indicators to the presence of hazardous materials including container shapes, NFPA 704 markings, globally harmonized system (GHS) markings, placards, labels, pipeline markings, other transportation markings, shipping papers with emergency response information, and other indicators
4. *Describe how to access* information from the *Emergency Response Guidebook* (ERG) (current edition) using name of the material, UN/NA identification number, placard applied, or container identification charts
5. *List* types of hazard information available from the ERG, safety data sheets (SDS), shipping papers with emergency response information, and other approved reference sources

### Requisite Skills

1. Recognize indicators to the presence of hazardous materials/WMD
2. Identify hazardous materials/WMD by name, UN/NA identification number, placard applied, or container identification charts
3. Use the ERG, SDS, shipping papers with emergency response information, and other approved reference sources to identify hazardous materials/WMD and their potential fire, explosion, and health hazards

### Content Modification

Block	Modification	Justification

**Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1B, Topic 2-2: Recognizing and Identifying Hazardous Materials/WMD and Associated Hazards	5-2a: Recognize, Identify, and Isolate Hazardous Materials/WMD 5-2b: Identify Markings	JPR 5-2

Draft

### 5-3: Isolating the Hazard Area and Denying Entry

#### Authority

1. NFPA 1072: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications (2017)
  - Paragraph 4.3.1
2. Office of the State Fire Marshal

#### Job Performance Requirement

Isolate the hazard area and deny entry at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, policies and procedures, and approved reference sources, so that the hazard area is isolated and secured, personal safety procedures are followed, hazards are avoided or minimized, and additional people are not exposed to further harm.

#### Requisite Knowledge

1. *Describe how to* use the ERG, SDS, shipping papers with emergency response information, and other approved reference sources to identify precautions to be taken to protect responders and the public
2. *Describe* policies and procedures for isolating the hazard area and denying entry
3. *Identify* the purpose of and methods for isolating the hazard area and denying entry

#### Requisite Skills

1. Recognize precautions for protecting responders and the public
2. Identifying isolation areas
3. Denying entry
4. Avoiding *or* minimizing hazards

#### Content Modification

Block	Modification	Justification
RS 4	Added "or".	Accidental NFPA omission. Without it, RS 4 contradicts the JPR requirement.

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1B, Topic 2-3: Isolating the Hazard Area and Denying Entry	5-2a: Recognize, Identify, and Isolate Hazardous Materials/WMD	JPR 5-3

## 5-4: Initiating Required Notifications

### Authority

1. NFPA 1072: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications (2017)
  - Paragraph 4.4.1

### Job Performance Requirement

Initiate required notifications at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, policies and procedures, and approved communications equipment, so that the notification process is initiated and the necessary information is communicated.

### Requisite Knowledge

1. *Identify* policies and procedures for notification, reporting, and communications
2. *List* types of approved communications equipment
3. *Describe how to* operate equipment

### Requisite Skills

1. Operate approved communications equipment
2. Communicate in accordance with policies and procedures

### Content Modification

Block	Modification	Justification

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1B, Topic 2-4: Initiating Required Notifications	N/A	JPR 5-4

## Section 6: Operations

### 6-1: Description of Duties (Operations)

#### Authority

1. NFPA 1072: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications (2017)
  - Paragraph 5.1.5

#### Job Performance Requirement

There is no job performance requirement identified for this training standard.

#### Requisite Knowledge

1. *Identify the* role of operations level responders at a hazardous materials/WMD incident
2. *Identify the* location and contents of AHJ emergency response plan and standard operating procedures for operations level responders, including those response operations for hazardous materials/WMD incidents

#### Requisite Skills

1. None specified

#### Content Modification

Block	Modification	Justification

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1B, Topic 3-1: Description of Duties (Operations)	N/A	N/A

## 6-2: Identifying the Scope of a Hazardous Materials/WMD Incident

### Authority

1. NFPA 1072: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications (2017)
  - Paragraph 5.2.1

### Job Performance Requirement

Identify the scope of the problem at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment, policies and procedures, and approved reference sources, so that container types, materials, location of any release, and surrounding conditions are identified, hazard information is collected, the potential behavior of a material and its container is identified, and the potential hazards, harm, and outcomes associated with that behavior are identified.

### Requisite Knowledge

1. *Define* hazard classes and divisions
2. *Identify* types of containers
3. *Identify* container identification markings, including piping and pipeline markings and contacting information
4. *Identify* types of information to be collected during the hazardous materials/WMD incident survey
5. *Identify the availability and location* of shipping papers in transportation and of safety data sheets (SDS) at facilities
6. *Describe* types of hazard information available from and how to contact CHEMTREC, CANUTEC, and SETIQ, governmental authorities, and manufacturers, shippers, and carriers
7. *Describe* how to communicate with carrier representatives to reduce impact of a release
8. *Identify* basic physical and chemical properties, including boiling point, chemical reactivity, corrosivity (pH), flammable (explosive) range [LFL (LEL) and UFL (UEL)], flash point, ignition (autoignition) temperature, particle size, persistence, physical state (solid, liquid, gas), radiation (ionizing and nonionizing), specific gravity, toxic products of combustion, vapor density, vapor pressure, and water solubility
9. *Identify* the behavior of a material and its container based on the material's physical and chemical properties and the hazards associated with the identified behavior
10. *List* examples of potential criminal and terrorist targets
11. *Identify* indicators of possible criminal or terrorist activity for each of the following: chemical agents, biological agents, radiological agents, illicit laboratories (i.e., clandestine laboratories, weapons labs, ricin labs), and explosives
12. *Describe* additional hazards associated with terrorist or criminal activities, such as secondary devices
13. *Determine* the likely harm and outcomes associated with the identified behavior and the surrounding conditions

**Requisite Skills**

1. Identify container types, materials, location of release, and surrounding conditions at a hazardous materials/WMD incident
2. Collect hazard information
3. Communicate with pipeline operators or carrier representatives
4. Describe the likely behavior of the hazardous materials or WMD and its container
5. Describe the potential hazards, harm, and outcomes associated with that behavior and the surrounding conditions

**Content Modification**

<b>Block</b>	<b>Modification</b>	<b>Justification</b>
RK 5	Added “and location”.	The documents should always be available; the real knowledge is in knowing where they are located.
RS 2	Removed “ing”.	Removed to for consistency with verb tenses of other NFPA standards.

**Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1B, Topic 3-2: Identifying the Scope of a Hazardous Materials/WMD Incident	N/A	JPR 6-2

### **6-3: Identifying Action Options for a Hazardous Materials/WMD Incident**

#### **Authority**

1. NFPA 1072: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications (2017)
  - Paragraph 5.3.1

#### **Job Performance Requirement**

Identify the action options for a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment, policies and procedures, approved reference sources, and the scope of the problem, so that response objectives, action options, safety precautions, suitability of approved personal protective equipment (PPE) available, and emergency decontamination needs are identified.

#### **Requisite Knowledge**

1. *Identify* policies and procedures for hazardous materials/WMD incident operations
2. *List the* basic components of an incident action plan (IAP)
3. *Describe* modes of operation (offensive, defensive, and nonintervention)
4. *Describe* types of response objectives
5. *Describe* types of action options
6. *Identify* types of response information available from the Emergency Response Guidebook (ERG), safety data sheets (SDS), shipping papers with emergency response information, and other resources
7. *Identify* types of information available from and how to contact CHEMTREC, CANUTEC, and SETIQ, governmental authorities, and manufacturers, shippers, and carriers (highway, rail, water, air, pipeline)
8. *Describe* safety procedures
9. *Describe* risk analysis concepts
10. *Identify the* purpose, advantages, limitations, and uses of approved PPE to determine if PPE is suitable for the incident conditions
11. *Explain the* difference between exposure and contamination
12. *Identify* contamination types, including sources and hazards of carcinogens at incident scenes
13. *List* routes of exposure
14. *Describe* types of decontamination (emergency, mass, and technical)
15. *Describe the* purpose, advantages, and limitations of emergency decontamination
16. *Describe* procedures, tools, and equipment for performing emergency decontamination

#### **Requisite Skills**

1. Identify response objectives and action options based on the scope of the problem and available resources
2. Identify whether approved PPE is suitable for the incident conditions

## Fire Fighter 1 - Hazardous Materials/WMD

### Section 6: Operations

---

3. Identify emergency decontamination needs based on the scope of the problem

### Content Modification

Block	Modification	Justification

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1B, Topic 3-2: Identifying the Scope of a Hazardous Materials/WMD Incident <ul style="list-style-type: none"><li>• RK 7</li></ul> Fire Fighter 1B, Topic 3-4: Performing Emergency Decontamination at a Hazardous Materials/WMD Incident <ul style="list-style-type: none"><li>• RK 14, 15, 16</li></ul> Fire Fighter 1B, Topic 3-5: Identifying Action Options for a Hazardous Materials/WMD Incident <ul style="list-style-type: none"><li>• RK 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12 and RS 1, 2, 3</li></ul>	N/A	JPR 6-3

## 6-4: Performing Assigned Tasks at a Hazardous Materials/WMD Incident

### Authority

1. NFPA 1072: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications (2017)
  - Paragraph 5.4.1
2. Office of the State Fire Marshal

### Job Performance Requirement

Perform assigned tasks at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; an assignment with limited potential of contact with hazardous materials/WMD, policies and procedures, the scope of the problem, approved tools, equipment, and PPE, so that protective actions and scene control are established and maintained, on-scene incident command is described, evidence is preserved, approved PPE is selected and used in the proper manner; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; assignments are completed; and gross decontamination of personnel, tools, equipment, and PPE is conducted in the field.

### Requisite Knowledge

1. *Describe* scene control procedures
2. *Describe* procedures for protective actions, including evacuation and sheltering-in-place
3. *Describe* procedures for ensuring coordinated communications between responders and to the public
4. *List* evidence recognition and preservation procedures
5. *Identify hazardous materials/WMD incident command roles and responsibilities within the incident command system (ICS)*
6. *Identify the purpose, importance, benefits, and organization of incident command at hazardous materials/WMD incidents*
7. *Describe* policies and procedures for implementing incident command at hazardous materials/WMD incidents
8. *Describe the capabilities, limitations, inspection, donning, working in, going through decontamination while wearing, doffing approved PPE*
9. *Describe how to recognize signs and symptoms of thermal stress*
10. *Identify safety precautions when working at hazardous materials/WMD incidents*
11. *Describe purpose, advantages, and limitations of gross decontamination*
12. *Identify the need for gross decontamination in the field based on the task(s) performed and contamination received, including sources and hazards of carcinogens at incident scenes*
13. *Describe gross decontamination procedures for personnel, tools, equipment, and PPE*
14. *Describe how to clean, disinfect, and inspect tools, equipment, and PPE*

### Requisite Skills

1. Establish and maintaining scene control

## Fire Fighter 1 - Hazardous Materials/WMD

### Section 6: Operations

---

2. Recognize and preserve evidence
3. Inspect, don, work in, go through decontamination while wearing, and doff approved PPE
4. Isolate contaminated tools, equipment, and PPE
5. Conduct gross decontamination of contaminated personnel, tools, equipment, and PPE in the field
6. Clean, disinfect, and inspect approved tools, equipment, and PPE

### Content Modification

Block	Modification	Justification
RK 5	Changed “Describe incident command organization” to “Identify hazardous materials/WMD incident command roles and responsibilities within the incident command system (ICS)”.	Expanded to identify that there are roles and responsibilities specific to HazMat/WMD within the ICS.
RK 14	Removed “ing” from “cleaning, disinfecting, and inspecting”.	Removed for consistency with other RK language.

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1B, Topic 3-3: Selecting, Donning, Working In, and Doffing Approved PPE at a Hazardous Materials/WMD Incident <ul style="list-style-type: none"><li>• RK 8, 14</li></ul> Fire Fighter 1B, Topic 3-4: Performing Decontamination at a Hazardous Materials/WMD Incident <ul style="list-style-type: none"><li>• RK 11, 13</li></ul> Fire Fighter 1B, Topic 3-6: Performing Assigned Tasks at a Hazardous Materials/WMD Incident <ul style="list-style-type: none"><li>• RK 1, 2, 3, 4, 5, 6, 7, 9, 10, 12 and RS 1, 2, 3, 4, 5, 6</li></ul>	N/A	JPR 6-4

## 6-5: Performing Emergency Decontamination at a Hazardous Materials/ WMD Incident

### Authority

1. NFPA 1072: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications (2017)
  - Paragraph 5.5.1

### Job Performance Requirement

Perform emergency decontamination at a hazardous materials/WMD incident, given a hazardous materials/WMD incident that requires emergency decontamination; an assignment; scope of the problem; policies and procedures; and approved tools, equipment, and PPE for emergency decontamination, so that emergency decontamination needs are identified, approved PPE is selected and used, exposures and personnel are protected, safety procedures are followed, hazards are avoided or minimized, emergency decontamination is set up and implemented, and victims and responders are decontaminated.

### Requisite Knowledge

1. *Define* contamination, cross contamination, and exposure
2. *Describe* contamination types
3. *List* routes of exposure
4. *Identify* types of decontamination (emergency, mass, and technical)
5. *Describe the* purpose, advantages, and limitations of emergency decontamination
6. *Describe* policies and procedures for performing emergency decontamination
7. *Identify* approved tools and equipment for emergency decontamination
8. *Describe* hazard avoidance for emergency decontamination

### Requisite Skills

1. Select an emergency decontamination method
2. Set up emergency decontamination in a safe area
3. Use PPE in the proper manner
4. Implement emergency decontamination
5. Prevent spread of contamination
6. Avoid hazards during emergency decontamination

### Content Modification

Block	Modification	Justification

**Content Modification**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1B, Topic 3-4: Performing Emergency Decontamination at a Hazardous Materials/WMD Incident	6-5: Perform Emergency Decontamination	JPR 6-5

Draft

## 6-6: Evaluating and Reporting Progress for a Hazardous Materials/WMD Incident

### Authority

1. NFPA 1072: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications (2017)
  - Paragraph 5.6.1

### Job Performance Requirement

Evaluate and report the progress of the assigned tasks for a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment, policies and procedures, status of assigned tasks, and approved communication tools and equipment, so that the effectiveness of the assigned tasks is evaluated and communicated to the supervisor, who can adjust the IAP as needed.

### Requisite Knowledge

1. *List* components of progress reports
2. *Describe* policies and procedures for evaluating and reporting progress
3. *Describe how to* use approved communication tools and equipment
4. *Identify* signs indicating improving, static, or deteriorating conditions based on the objectives of the action plan
5. *Describe how to recognize* circumstances under which it would be prudent to withdraw from a hazardous materials/ WMD incident

### Requisite Skills

1. Determine incident status
2. Determining whether the response objectives are being accomplished
3. Use approved communications tools and equipment
4. Communicate the status of assigned tasks

### Content Modification

Block	Modification	Justification

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1B, Topic 3-8: Evaluating and Reporting Progress for a Hazardous Materials/WMD Incident	N/A	JPR 6-6

## Section 7: Operations – Mission Specific

### 7-1: Selecting, Donning, Working In, and Doffing Approved PPE at a Hazardous Materials/WMD Incident

#### Authority

1. NFPA 1072: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications (2017)
  - Paragraph 6.2.1

#### Job Performance Requirement

Select, don, work in, and doff approved PPE at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; a mission-specific assignment in an IAP that requires use of PPE; the scope of the problem; response objectives and options for the incident; access to a hazardous materials technician, an allied professional, an emergency response plan, or standard operating procedures; approved PPE; and policies and procedures, so that under the guidance of a hazardous materials technician, an allied professional, an emergency response plan, or standard operating procedures, approved PPE is selected, inspected, donned, worked in, decontaminated, and doffed; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; and all reports and documentation pertaining to PPE use are completed.

#### Requisite Knowledge

1. *Describe* policies and procedures for PPE selection and use
2. *Describe the* importance of working under the guidance of a hazardous materials technician, an allied professional, an emergency response plan, or standard operating procedures when selecting and using PPE
3. *Identify* the capabilities and limitations of and specialized donning, doffing, and usage procedures for approved PPE
4. *List* components of an incident action plan (IAP)
5. *Describe* procedures for decontamination, inspection, maintenance, and storage of approved PPE
6. *Describe the* process for being decontaminated while wearing PPE
7. *Describe* procedures for reporting and documenting the use of PPE

#### Requisite Skills

1. Select PPE for the assignment
2. Inspect, maintain, store, don, work in, and doff PPE
3. Go through decontamination (emergency and technical) while wearing the PPE
4. Report and document the use of PPE

## Fire Fighter 1 - Hazardous Materials/WMD

### Section 7: Operations – Mission Specific

---

#### Content Modification

Block	Modification	Justification

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1B, Topic 3-3: Selecting, Donning, Working In and Doffing Approved PPE at a Hazardous Materials/WMD Incident <ul style="list-style-type: none"><li>RK 1, 2, 3, 5, 6, 7 and RS 1, 2, 3, 4</li></ul> Fire Fighter 1B, Topic 3-5: Identifying Action Options for a Hazardous Materials/WMD Incident <ul style="list-style-type: none"><li>RK 4</li></ul>	7-1: Don, Work In, and Doff Chemical Protective Clothing	JPR 7-1

## **7-2: Performing Product Control Techniques at a Hazardous Materials/WMD Incident**

### **Authority**

1. NFPA 1072: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications (2017)
  - Paragraph 6.6.1

### **Job Performance Requirement**

Perform product control techniques with a limited risk of personal exposure at a hazardous materials/WMD incident, given a hazardous materials/WMD incident with release of product; an assignment in an IAP; scope of the problem; policies and procedures; approved tools, equipment, control agents, and PPE; and access to a hazardous materials technician, an allied professional, an emergency response plan, or standard operating procedures, so that under the guidance of a hazardous materials technician, an allied professional, an emergency response plan, or standard operating procedures, approved PPE is selected and used; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; a product control technique is selected and implemented; the product is controlled; victims, personnel, tools, and equipment are decontaminated; and product control operations are reported and documented.

### **Requisite Knowledge**

1. *Describe* types of PPE and the hazards for which they are used
2. *Describe the* importance of working under the guidance of a hazardous materials technician, an allied professional, an emergency response plan, or standard operating procedures
3. Define of control, confinement, containment, and extinguishment
4. *Describe* policies and procedures *for product control*
5. *Identify* product control methods for controlling a release with limited risk of personal exposure
6. *Describe* safety precautions associated with each product control method
7. *Identify the* location and *describe how to* operation of remote/emergency shutoff devices in cargo tanks and intermodal tanks in transportation and containers at facilities, that contain flammable liquids and flammable gases
8. *List* characteristics and applicability of approved product control agents
9. *Describe how to* use approved tools and equipment
10. *Identify* requirements for reporting and documenting product control operations

### **Requisite Skills**

1. Select and use PPE
2. Select and perform product control techniques to confine/contain the release with limited risk of personal exposure

## Fire Fighter 1 - Hazardous Materials/WMD

### Section 7: Operations – Mission Specific

---

3. Use approved control agents and equipment on a release involving hazardous materials/WMD
4. Use remote control valves and emergency shutoff devices on cargo tanks and intermodal tanks in transportation and containers at fixed facilities
5. Perform product control techniques

### Content Modification

Block	Modification	Justification
RK 4	Added “for product control”.	Added to narrow the scope of discussion of policies and procedures.

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1B, Topic 3-7: Performing Product Control Techniques at a Hazardous Materials/WMD Incident <ul style="list-style-type: none"><li>• RK 2, 3, 4, 5, 6, 7, 8, 9, 10 and RS 1, 2, 3, 4, 5</li></ul> Fire Fighter 1B, Topic 3-3: Selecting, Donning, Working In, and Doffing Approved PPE at a Hazardous Materials/WMD Incident <ul style="list-style-type: none"><li>• RK 1</li></ul>	7-2: Perform Product Control	JPR 7-2

## Fire Fighter 1 - Wildland

### Section 8: Description of Wildland Fire Fighter Duties

#### 8-1: Describe the Role of the Wildland Fire Fighter

##### Authority

1. NFPA 1051: Standard for Wildland Firefighting Personnel Professional Qualifications (2016)
  - Paragraph 4.1.1, 4.1.2
2. Office of the State Fire Marshal

##### Job Performance Requirement

There is no job performance requirement identified for this training standard.

##### Requisite Knowledge

1. *Describe* fireline safety, use, and limitations of personal protective equipment
2. *Describe the use, limitations, inspection, and care of a fire shelter*
3. *Describe* agency policy on fire shelter use
4. *Describe* basic wildland fire behavior
5. *Identify* fire suppression techniques
6. *Identify* basic wildland fire tactics
7. *Describe* the fire fighter's role within the local incident management system
8. *Describe* first aid as referenced in NFES 1077 (*Incident Response Pocket Guide (IRPG)*) and NFES 2943 (*Wildland Fire Incident Management Field Guide*)

##### Requisite Skills

1. Use basic verbal communication
2. Use required personal protective equipment
3. *Deploy a fire shelter*

##### Content Modification

Block	Modification	Justification
RK 2	Added knowledge component.	Added to call attention to a unique element of PPE that isn't physically worn.
RK 8	Added "(Incident Response Pocket Guide (IRPG))" and "(Wildland Fire Incident Management Field Guide)".	These are proper titles for the referenced documents. People may not know how to reference them by code numbers.

## Fire Fighter 1 - Wildland

### Section 8: Description of Wildland Fire Fighter Duties

RS 3	Added skills component.	Not covered by NFPA 1051 but critical for wildland fire fighter survival.
------	-------------------------	---

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1C, Topic 1-3: Wildland Fire Fighter Roles and Responsibilities <ul style="list-style-type: none"><li>• RK 4, 5, 6, 7, 8</li></ul> Fire Fighter 1C, Topic 2-1: Wildland Fire Behavior <ul style="list-style-type: none"><li>• RK 4</li></ul> Fire Fighter 1C, Topic 2-3: Human Factors on the Fireline <ul style="list-style-type: none"><li>• RS 1</li></ul> Fire Fighter 1C, Topic 2-4: Donning, Doffing, and Maintaining Wildland Personal Protective Equipment <ul style="list-style-type: none"><li>• RK 1 and RS 2</li></ul> Fire Fighter 1C, Topic 2-5: Deploying a Fire Shelter <ul style="list-style-type: none"><li>• RK 2, 3 and RK 3</li></ul> Fire Fighter 1C, Topic 3-2: Constructing a Fireline <ul style="list-style-type: none"><li>• RK 5, 6</li></ul> Fire Fighter 1C, Topic 3-4: Reducing the Threat of Fire Exposure to Improved Properties (WUI) <ul style="list-style-type: none"><li>• RK 4</li></ul>	N/A	N/A

## 8-2: Donning Wildland Personal Protective Equipment

### Authority

1. Office of the State Fire Marshal

### Job Performance Requirement

*Don wildland personal protective equipment (PPE), given PPE, so the PPE is donned in 60 seconds or less and all elements of the PPE ensemble are worn in accordance with manufacturer guidelines.*

### Requisite Knowledge

1. Identify the components of wildland PPE
2. Explain the importance of standards for wildland PPE
3. Describe the protection provided by wildland PPE
4. Describe the limitations of wildland PPE
5. Identify manufacturer guidelines for correct PPE use

### Requisite Skills

1. Don PPE

### Content Modification

Block	Modification	Justification
CTS	Added a certification training standard.	NFPA 1051 does not include a designated JPR for donning wildland PPE. OSFM uses 60 seconds as the industry standard.

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1C, Topic 2-4: Donning, Doffing, and Maintaining Wildland Personal Protective Equipment	8-2: Don Wildland Personal Protective Equipment	JPR 8-2

### 8-3: Deploying a Fire Shelter

#### Authority

1. Office of the State Fire Marshal

#### Job Performance Requirement

*Deploy a fire shelter, given PPE, a hand tool, a live or simulated incident, and a fire shelter, so that the fire shelter is deployed within 30 seconds and used in accordance with manufacturer and AHJ procedures.*

#### Requisite Knowledge

1. Describe the protection provided by and limitations of fire shelters
2. Describe how to inspect and evaluate a fire shelter
3. Describe how to select and prepare a shelter deployment site
4. Identify items to take into and leave outside a fire shelter
5. Describe methods for deploying a fire shelter
6. Identify when to deploy and exit a fire shelter during an incident

#### Requisite Skills

1. Deploy a fire shelter within 30 seconds

#### Content Modification

Block	Modification	Justification
CTS	Added a certification training standard.	NFPA 1051 does not include a designated JPR for deploying a fire shelter. OSFM uses 30 seconds as the industry standard.

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1C, Topic 2-5: Deploying a Fire Shelter	8-3: Deploy a Fire Shelter	JPR 8-3

## Fire Fighter 1 - Wildland

### Section 8: Description of Wildland Fire Fighter Duties

---

#### 8-4: Doffing Wildland Personal Protective Equipment

##### Authority

1. Office of the State Fire Marshal

##### Job Performance Requirement

*Doff wildland personal protective equipment (PPE), given PPE, so that PPE is removed in accordance with manufacturer guidelines and returned to a ready state.*

##### Requisite Knowledge

1. Identify when it is safe to doff PPE
2. Identify AHJ policies and procedures for doffing PPE

##### Requisite Skills

1. Doff PPE
2. Return PPE to a ready state

##### Content Modification

Block	Modification	Justification
CTS	Added a certification training standard.	NFPA 1051 does not include a designed JPR for doffing PPE.

##### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1C, Topic 2-4: Donning, Doffing, and Maintaining Wildland Personal Protective Equipment	N/A	JPR 8-4

## Section 9: Preparedness

### 9-1: Maintaining Assigned Personal Protective Equipment

#### Authority

1. NFPA 1051: Standard for Wildland Firefighting Personnel Professional Qualifications (2016)
  - Paragraph 4.3.2

#### Job Performance Requirement

Maintain assigned personal protective equipment, given the standard equipment issue, so that the equipment is serviceable and available for use on the fireline and defects are recognized and reported to the supervisor.

#### Requisite Knowledge

1. *Describe how to* maintain personal protective equipment, including inspection, the recognition of unserviceable items, and proper cleaning procedures

#### Requisite Skills

1. None specified

#### Content Modification

Block	Modification	Justification

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1C, Topic 2-4: Donning, Doffing, and Maintaining Wildland Personal Protective Equipment	N/A	JPR 9-1

## 9-2: Maintaining Assigned Suppression Hand Tools and Equipment

### Authority

1. NFPA 1051: Standard for Wildland Firefighting Personnel Professional Qualifications (2016)
  - Paragraph 4.3.3

### Job Performance Requirement

Maintain assigned suppression hand tools and equipment, given tools and equipment and agency maintenance specifications, so that assigned equipment is maintained and serviceable and defects are recognized and reported to the supervisor.

### Requisite Knowledge

1. *Describe how to* inspect tools and assigned suppression equipment
2. *Describe how to* recognize unserviceable items
3. *Describe* required maintenance techniques

### Requisite Skills

1. Sharpen assigned suppression equipment
2. Maintenance techniques for assigned suppression equipment
3. Use required maintenance equipment

### Content Modification

Block	Modification	Justification

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1C, Topic 2-6: Maintaining Assigned Suppression Hand Tools and Equipment	9-2: Maintain Hand Tools and Equipment	JPR 9-2

## Section 10: Suppression

### 10-1: Assembling and Preparing for Response

#### Authority

1. NFPA 1051: Standard for Wildland Firefighting Personnel Professional Qualifications (2016)
  - Paragraph 4.5.2
2. Office of the State Fire Marshal

#### Job Performance Requirement

Assemble and prepare for response, given an assembly location, an assignment, incident location, mode of transportation, and time requirements, so that arrival at the incident with the required personnel and equipment meets agency guidelines.

#### Requisite Knowledge

1. *Identify* equipment required for response
2. *Describe* agency time standards and special transportation considerations
3. *Describe* agency safety response guidelines
4. *Describe* operational procedures for various response modes

#### Requisite Skills

1. None specified

#### Content Modification

Block	Modification	Justification
RK 1	Changed “requirements” to “required for response”.	Clarification. The student isn’t identifying the requirements of the equipment, they are identifying what equipment is required based on what the incident requires.
RK 2	Removed “(weight considerations)”.	Weight is not the only special transportation consideration.
RK 3	Added “response guidelines”.	Narrowing the scope of “agency safety” to pertain to the JPR.
RK 4	Changed “transportation” to “response”.	Transportation implies the type of vehicle in which the responders are traveling to the incident, not the response level. Revised for clarification.

**Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1C, Topic 3-1: Assembling and Preparing for Response	10-1: Assemble and Prepare for Response	JPR 10-1

Draft

## 10-2: Recognizing Hazards and Unsafe Situations

### Authority

1. NFPA 1051: Standard for Wildland Firefighting Personnel Professional Qualifications (2016)
  - Paragraph 4.5.3
2. Office of the State Fire Marshal

### Job Performance Requirement

Recognize hazards and unsafe situations, given a wildland or wildland/urban interface fire *or simulated scenario* and the standard safety policies and procedures of the agency, so that the hazard(s) and unsafe condition(s) are communicated to the supervisor and appropriate action is taken.

### Requisite Knowledge

1. *Describe basic wildland fire safety*
2. *Describe basic wildland fire behavior*
3. *Identify basic wildland suppression methods*
4. *Describe the Standard Fire Fighting Orders*
5. *Describe the Situations that Shout “Watch Out”*
6. *Describe the principles of LCES (Lookouts, Communications, Escape Routes, Safety Zones)*
7. *Describe downhill checklist guideline*
8. *Describe Common Denominators of Fire Behavior on Tragedy Fires*
9. *Describe human factors that impact wildland fire suppression*

### Requisite Skills

1. *Demonstrate knowledge of the Standard Fire Orders, the Situations that Shout “Watch Out”, and LCES*

### Content Modification

Block	Modification	Justification
JPR	Added “or simulated scenario”.	Allows option to complete testing outside of a live wildland fire.
RK 2	Added “basic wildland”.	Added to narrow the scope of “fire behavior”.
RK 3	Added “basic wildland”.	Added to narrow the scope of “suppression methods”.
RK 4	Added knowledge component.	Added to align with NWCG S-130 fire fighter training.
RK 5	Added knowledge component.	Added to align with NWCG S-130 fire fighter training.
RK 6	Added knowledge component.	Added to align with NWCG S-130 fire fighter training.

## Fire Fighter 1 - Wildland

### Section 10: Suppression

RK 7	Added knowledge component.	Not covered by NFPA 1051 but it is an IRPG industry standard.
RK 8	Added knowledge component.	Not covered by NFPA 1051 but it is an IRPG industry standard.
RK 9	Added knowledge component.	NFPA does include human factors.
RS 1	Added skills component.	Added to align with NWCG S-130 fire fighter training

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1C, Topic 2-1: Wildland Fire Behavior <ul style="list-style-type: none"><li>• RK 2</li></ul> Fire Fighter 1C, Topic 2-2: Recognizing Hazards and Unsafe Situations <ul style="list-style-type: none"><li>• RK 1, 4, 5, 6, 7, 8 and RS 1</li></ul> Fire Fighter 1C, Topic 2-3: Human Factors on the Fireline <ul style="list-style-type: none"><li>• RK 9</li></ul> Fire Fighter 1C, Topic 3-2: Constructing a Fireline <ul style="list-style-type: none"><li>• RK 3</li></ul>	10-2a: Use Incident Response Pocket Guide 10-3b: Assume Safety Position for Retardant Drop	JPR 10-2

### 10-3: Constructing a Fireline

#### Authority

1. NFPA 1051: Standard for Wildland Firefighting Personnel Professional Qualifications (2016)
  - Paragraph 4.5.4
2. Office of the State Fire Marshal

#### Job Performance Requirement

Construct a fireline, given a wildland fire *or simulated scenario*, agency line construction standards, suppression tools, water or other suppression agents, and equipment, so that the fireline conforms to the construction standard.

#### Requisite Knowledge

1. Describe basic wildland suppression strategy
2. Identify basic wildland suppression tactics
3. Describe fireline construction principles, techniques, and standards
4. Describe safety considerations related to fireline construction
5. Describe how to construct a handline
6. Describe how to perform mobile attack
7. Describe how to perform a simple hose lay
8. Describe how to perform a progressive hose lay
9. Describe how to retrieve hose

#### Requisite Skills

1. Use hand tools correctly
2. Apply fire streams
3. Apply *extinguishing* agents

#### Content Modification

Block	Modification	Justification
JPR	Added "or simulated scenario".	Allows option to complete testing outside of a live wildland fire.
RK 1	Added knowledge component.	Statewide operational activities require more detail than provided by NFPA.
RK 2	Added knowledge component.	Statewide operational activities require more detail than provided by NFPA.
RK 3	Changed the word order.	Revised to simplify and clarify language.
RK 4	Added knowledge component.	Not covered by NFPA 1051 but it is an IRPG industry standard.

## Fire Fighter 1 - Wildland

### Section 10: Suppression

Rk 5	Added knowledge component.	Statewide operational activities require more detail than provided by NFPA.
RK 6	Added knowledge component.	Statewide operational activities require more detail than provided by NFPA.
RK 7	Added knowledge component.	Statewide operational activities require more detail than provided by NFPA.
RK 8	Added knowledge component.	Statewide operational activities require more detail than provided by NFPA.
RK 9	Added knowledge component.	Statewide operational activities require more detail than provided by NFPA.
RS 1-3	Revised to put verb first.	Consistency with all other RS text.
RS 3	Added "extinguishing".	Added to clarify agent type.

### Cross Modification

Course Plan	Skill Sheets	Task Book
Fire Fighter 1C, Topic 3-2: Constructing a Fireline	10-3a: Assemble, Use, and Maintain a Back Pump 10-3b: Perform a Progressive Hose Lay 10-3c: Construct a Fireline Using Hand Tools 10-3d: Perform Mobile Pumping	JPR 10-3

## 10-4: Securing the Fireline

### Authority

1. NFPA 1051: Standard for Wildland Firefighting Personnel Professional Qualifications (2016)
  - Paragraph 4.5.5
2. Office of the State Fire Marshal

### Job Performance Requirement

Secure the fireline, given a wildland fire *or simulated scenario*, suppression tools, water or other suppression agents, and equipment, so that *fireline* burning materials and unburned fuels *are physically separated*.

### Requisite Knowledge

1. *Describe* line improvement techniques
2. *Identify* safety considerations
3. *Describe how to use basic ignition devices*

### Requisite Skills

1. Use of basic ignition devices only under direct supervision

### Content Modification

Block	Modification	Justification
JPR	Added “or simulated scenario”.	Allows option to complete testing outside of a live wildland fire.
JPR	Adjusted language.	NFPA standard for JPR was unclear and abatement is not always possible.
RK 3	Added a knowledge component.	Not included in NFPA 1051 but required by Cal OES. All type III engines must carry a drip torch.

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1C, Topic 3-3: Securing a Fireline	10-4a: Ignite and Extinguish Road Flares and Fusees 10-4b: Assemble, Ignite, Extinguish, and Disassemble a Drip Torch	JPR 10-4

## 10-5: Reducing the Threat of Fire Exposure to Improved Properties

### Authority

1. NFPA 1051: Standard for Wildland Firefighting Personnel Professional Qualifications (2016)
  - Paragraph 4.5.6
2. Office of the State Fire Marshal

### Job Performance Requirement

Describe the methods to reduce the threat of fire exposure to improved properties, given a wildland/urban interface fire *or simulated scenario*, suppression tools, and equipment, so that improvements are protected.

### Requisite Knowledge

1. *Describe* wildland fire behavior *within the wildland/urban interface*
2. *Describe* wildland fuel removal *for structure defense preparation*
3. *Describe* structure *defense* methods
4. *Identify* equipment and personnel capabilities *within the wildland/urban interface*
5. *Identify the difference between a safety zone and a temporary refuge area (TRA)*

### Requisite Skills

1. Apply requisite knowledge to *defend* structures

### Content Modification

Block	Modification	Justification
JPR	Added “or simulated scenario”.	Allows option to complete testing outside of a live wildland fire.
RK 1	Added “within the wildland/urban interface”.	Expanding wildland fire behavior (covered in CTS 10-2) to include wildland/urban interface.
RK 2	Added “for structure defense preparation”.	Added to clarify the purpose and location of removal.
RK 3	Replaced “protection” with “defense”.	“Defend” is California terminology.
RK 4	Added “within the wildland/urban interface”.	Expanding wildland fire behavior (covered in CTS 10-2) to include wildland/urban interface.
RK 5	Added knowledge component.	NFPA does not adequately address safety.
RS 2	Replace “protect” with “defend”.	“Defend” is California terminology.

**Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1C, Topic 3-4: Reducing the Threat of Fire Exposure to Improved Properties (WUI)	10-5: Prep and Defend a Structure	JPR 10-5

Draft

## 10-6: Mopping Up a Fire Area

### Authority

1. NFPA 1051: Standard for Wildland Firefighting Personnel Professional Qualifications (2016)
  - Paragraph 4.5.7
2. Office of the State Fire Marshal

### Job Performance Requirement

Mop up fire area, given a wildland fire *or simulated scenario*, suppression tools, and water or other suppression agents and equipment, so that burning fuels that threaten escape are located and extinguished.

### Requisite Knowledge

1. *Describe* mop up principles, techniques, and standards

### Requisite Skills

1. Use basic tools and techniques to perform mop-up operations

### Content Modification

Block	Modification	Justification
JPR	Added "or simulated scenario".	Allows option to complete testing outside of a live wildland fire.

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1C, Topic 3-5: Mopping Up in a Fire Area	10-6: Perform Mop Up Operations	JPR 10-6

## 10-7: Patrolling the Fire Area

### Authority

1. NFPA 1051: Standard for Wildland Firefighting Personnel Professional Qualifications (2016)
  - Paragraph 4.5.8
2. Office of the State Fire Marshal

### Job Performance Requirement

Patrol the fire area, given a wildland fire *or simulated scenario*, suppression tools, and equipment, so that control of the fire area is maintained.

### Requisite Knowledge

1. *Describe* patrol principles, techniques, and standards

### Requisite Skills

1. Apply requisite knowledge *to patrolling fire areas*

### Content Modification

Block	Modification	Justification
JPR	Added "or simulated scenario".	Allows option to complete testing outside of a live wildland fire.
RS 1	Changed "Application of" to "Apply" and added "to patrolling fire areas".	Revised to narrow scope of requisite knowledge application.

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1C, Topic 3-6: Patrolling the Fire Area	10-7: Patrol the Fire Area	JPR 10-7

## Fire Fighter 2 - Structure

### Section 11: NFPA Requirements

#### 11-1: Identifying NFPA Requirements

##### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.1, 5.1.1, 5.1.2
2. Office of the State Fire Marshal

##### Job Performance Requirement

There is no job performance requirement identified in this training standard.

##### Requisite Knowledge

1. *Describe the* responsibilities of the Fire Fighter II in assuming and transferring command within an incident *command* system
2. *Describe how to* perform assigned duties in conformance with applicable NFPA *standards* and other safety regulations and AHJ procedures
3. *Identify the* role of a Fire Fighter II within the organization

##### Requisite Skills

1. Determine the need for command
2. Organize and coordinate an incident *command* system until command is transferred
3. Function within an assigned role in an incident management system

##### Content Modification

Block	Modification	Justification
RK 1	Changed “management” to “command”.	California uses “command” and not “management”.
RK 2	Added “standards”.	Added for language consistency. NFPA is the organization but was being used to reference a document.
RS 2	Changed “management” to “command”.	California uses “command” and not “management”.

**Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1A, Topic 1-4: Fire Fighter 2 Roles and Responsibilities	11-1: Organize an Incident Management System	N/A

Draft

## Section 12: Fire Department Communications

### 12-1: Completing a Basic Incident Report

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.2.1

#### Job Performance Requirement

Complete a basic incident report, given the report forms, guidelines, and information, so that all pertinent information is recorded, the information is accurate, and the report is complete.

#### Requisite Knowledge

1. *Identify* content requirements for basic incident reports
2. *Identify* the purpose and usefulness of accurate reports
3. *Identify* the consequences of inaccurate reports
4. *Describe* how to obtain necessary information
5. *Identify* required coding procedures

#### Requisite Skills

1. Determine necessary codes
2. Proof reports
3. Operate fire department computers or other equipment necessary to complete reports

#### Content Modification

Block	Modification	Justification

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 3-4: Completing a Basic Incident Report	12-1: Complete a Basic Incident Report	JPR 12-1

## **12-2: Communicating the Need for Team Assistance**

### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.2.2

### **Job Performance Requirement**

Communicate the need for team assistance, given fire department communications equipment, SOPs, and a team, so that the supervisor is consistently informed of team needs, departmental SOPs are followed, and the assignment is accomplished safely.

### **Requisite Knowledge**

1. *Describe* SOPs for alarm assignments
2. *Describe* fire department radio communication procedures

### **Requisite Skills**

1. Operate fire department communications equipment

### **Content Modification**

<b>Block</b>	<b>Modification</b>	<b>Justification</b>

### **Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1A, Topic 3-5: Communicating the Need for Team Assistance	N/A	JPR 12-2

## Section 13: Fireground Operations

### 13-1: Extinguishing an Ignitable Liquid Fire

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.3.1
2. Office of the State Fire Marshal

#### Job Performance Requirement

Extinguish an ignitable liquid fire, operating as a member of a team, given an assignment, an attack line, PPE, a foam proportioning device, a nozzle, foam concentrates (*or suitable substitute*), and a water supply, so that the correct type of foam concentrate is selected for the given fuel and conditions, a properly proportioned foam stream is applied to the surface of the fuel to create and maintain a foam blanket, fire is extinguished, reignition is prevented, team protection is maintained with a foam stream, and the hazard is faced until retreat to safe haven is reached.

#### Requisite Knowledge

1. *Describe* methods by which foam prevents or controls a hazard
2. *List* principles by which foam is generated
3. *Identify* causes for poor foam generation and corrective measures
4. *Describe the* difference between hydrocarbon and polar solvent fuels and the concentrates that work on each
5. *Identify* the characteristics, uses, and limitations of fire-fighting foams
6. *Describe the* advantages and disadvantages of using fog nozzles versus foam nozzles for foam application
7. *Describe* foam stream application techniques
8. *List* hazards associated with foam usage
9. *Describe* methods to reduce or avoid hazards

#### Requisite Skills

1. Prepare a foam concentrate supply for use
2. Assemble foam stream components
3. Master various foam application techniques
4. Approach and retreat from spills as part of a coordinated team.

### Content Modification

Block	Modification	Justification
JPR	Added “(or suitable substitute)”.	Each California county has different rules dictated by CalEPA. Many counties are unable to use foam during training exercises.

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 7-4: Extinguishing an Ignitable Liquid Fire	13-1: Extinguish an Ignitable Liquid Fire	JPR 13-1

## **13-2: Controlling a Flammable Gas Cylinder Fire**

### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.3.3

### **Job Performance Requirement**

Control a flammable gas cylinder fire, operating as a member of a team, given an assignment, a cylinder outside of a structure, an attack line, PPE, and tools, so that crew integrity is maintained, contents are identified, safe havens are identified prior to advancing, open valves are closed, flames are not extinguished unless the leaking gas is eliminated, the cylinder is cooled, cylinder integrity is evaluated, hazardous conditions are recognized and acted upon, and the cylinder is faced during approach and retreat.

### **Requisite Knowledge**

1. *Identify* characteristics of pressurized flammable gases
2. *List* elements of a gas cylinder
3. *Describe* effects of heat and pressure on closed cylinders
4. *Describe* boiling liquid expanding vapor explosion (BLEVE) signs and effects
5. *Describe* methods for identifying contents
6. *Describe* how to identify safe havens before approaching flammable gas cylinder fires
7. *Describe* water stream usage and demands for pressurized cylinder fires
8. *Describe* what to do if the fire is prematurely extinguished
9. *Identify* valve types and their operation
10. *Describe* alternative actions related to various hazards and when to retreat

### **Requisite Skills**

1. Execute effective advances and retreats
2. Apply various techniques for water application
3. Assess cylinder integrity and changing cylinder conditions
4. Operate control valves
5. Choose effective procedures when conditions change

### **Content Modification**

<b>Block</b>	<b>Modification</b>	<b>Justification</b>

**Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1A, Topic 7-5: Controlling a Flammable Gas Cylinder Fire	13-2: Control a Flammable Gas Cylinder Fire	JPR 13-2

Draft

### **13-3: Coordinating an Interior Attack Line**

#### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.3.2
2. Office of the State Fire Marshal

#### **Job Performance Requirement**

Coordinate an interior attack line for a team's accomplishment of an assignment in a structure fire, given attack lines, personnel, PPE, and tools, so that crew integrity is established; attack techniques are selected for the given level of the fire (e.g., attic, grade level, upper levels, or basement); attack techniques are communicated to the attack teams; constant team coordination is maintained; fire growth and development is continuously evaluated; search, rescue, and ventilation requirements are communicated or managed; hazards are reported to the attack teams; and incident command is apprised of changing conditions.

#### **Requisite Knowledge**

1. *Describe how to* select the nozzle and hose for fire attack, given different fire situations
2. *Describe how to* select adapters and appliances to be used for specific fireground situations
3. *Identify* dangerous building conditions created by fire and fire suppression activities
4. *Describe* indicators of building collapse
5. *Describe* the effects of fire and fire suppression activities on wood, masonry (brick, block, stone), cast iron, steel, reinforced concrete, gypsum wallboard, glass, and plaster on lath
6. *Describe coordinated* search and rescue and ventilation procedures
7. *List* indicators of structural instability
8. *Describe* suppression approaches and practices for various types of structural fires
9. *Describe* the association between specific tools and special forcible entry needs

#### **Requisite Skills**

1. Assemble a team
2. Choose attack techniques for various levels of a fire (e.g., attic, grade level, upper levels, or basement)
3. Evaluate and forecast a fire's growth and development
4. Select tools for forcible entry
5. Incorporate search and rescue procedures and ventilation procedures in the completion of the attack team efforts
6. Determine developing hazardous building or fire conditions

### Content Modification

<b>Block</b>	<b>Modification</b>	<b>Justification</b>
RK 6	Added “coordinated”.	Added to clarify the relationship between very different activities.

### Cross Reference

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1A, Topic 5-14: Coordinating an Interior Attack Line	13-3: Coordinate an Interior Fire Attack Line	JPR 13-3

### 13-4: Protecting Evidence of Fire Cause and Origin

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.3.4
2. Office of the State Fire Marshal

#### Job Performance Requirement

Protect evidence of fire cause and origin, given a flashlight, *PPE*, and overhaul tools, so that the evidence is noted and protected from further disturbance until investigators can arrive on the scene.

#### Requisite Knowledge

1. *Identify* methods to assess origin and cause
2. *List* types of evidence
3. *Describe* means to protect various types of evidence
4. *Identify* the role and relationship of Fire Fighter IIs, criminal investigators, and insurance investigators in fire investigations
5. *Describe* the effects and problems associated with removing property or evidence from the scene

#### Requisite Skills

1. Locate the fire’s origin area
2. Recognize possible causes
3. Protect the evidence

#### Content Modification

Block	Modification	Justification
JPR	Added “PPE”.	Omitted by NFPA but required for JPR.

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 5-19: Protecting Evidence of Fire Cause and Origin	13-4: Protect Evidence of Fire Cause and Origin	JPR 13-4

## Section 14: Rescue Operations

### 14-1: Extricating a Victim Entrapped in a Motor Vehicle

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.4.1
2. Office of the State Fire Marshal

#### Job Performance Requirement

Extricate a victim entrapped in a motor vehicle as part of a team, given stabilization and extrication tools, *a vehicle, and PPE*, so that the vehicle is stabilized, the victim is disentangled without further injury, and hazards are managed.

#### Requisite Knowledge

1. *Describe* the fire department's role at a vehicle accident
2. *Describe* points of strength and weakness in auto body construction
3. *Describe* the dangers associated with vehicle components and systems
4. *Describe* the uses and limitations of hand and power extrication equipment
5. *Describe* safety procedures when using various types of extrication equipment

#### Requisite Skills

1. Operate hand and power tools used for forcible entry and rescue as designed
2. Use cribbing and shoring material
3. Use *stabilization tools and equipment*
4. Choose and apply appropriate techniques for moving or removing vehicle roofs, doors, *seats*, windshields, windows, steering wheels or columns, and the dashboard

#### Content Modification

Block	Modification	Justification
JPR	Added "a vehicle, and PPE".	Omitted by NFPA but required to complete JPR.
RS 4	Added "seats".	Seats my also need to be removed to extricate a victim.

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 8-1: Extricating a Victim Trapped in a Motor Vehicle	14-1: Extricate a Victim Entrapped in a Vehicle Fire	JPR 14-1

## 14-2: Assisting Rescue Operation Teams

### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.4.2

### Job Performance Requirement

Assist rescue operation teams, given standard operating procedures, necessary rescue equipment, and an assignment, so that procedures are followed, rescue items are recognized and retrieved in the time as prescribed by the AHJ, and the assignment is completed.

### Requisite Knowledge

1. *Describe* the fire fighter's role at a technical rescue operation
2. *Identify* hazards associated with technical rescue operations
3. *Describe* types and uses for rescue tools
4. *Identify* rescue practices and goals

### Requisite Skills

1. Identify and retrieve various types of rescue tools
2. Establish public barriers
3. Assist rescue teams as a member of the team when assigned

### Content Modification

Block	Modification	Justification

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 8-2: Assisting Rescue Operation Teams	14-2: Assist a Rescue Operations Team	JPR 14-2

## Section 15: Fire and Life Safety Initiatives, Preparedness, and Maintenance

### 15-1: Performing a Fire Safety Survey in an Occupied Structure

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.5.1

#### Job Performance Requirement

Perform a fire safety survey in an occupied structure, given survey forms and procedures, so that fire and life safety hazards are identified, recommendations for their correction are made to the occupant, and unresolved issues are referred to the proper authority.

#### Requisite Knowledge

1. *Describe* organizational policy and procedures
2. *List* common causes of fire and their prevention
3. *Describe* the importance of a fire safety survey and public fire education programs to fire department public relations and the community
4. *Identify* referral procedures

#### Requisite Skills

1. Complete forms
2. Recognize hazards
3. Match findings to preapproved recommendations
4. Effectively communicate findings to occupants or referrals

#### Content Modification

Block	Modification	Justification

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 1A, Topic 9-1: Performing a Fire and Life Safety Survey in an Occupied Structure	15-1: Perform a Fire Safety Survey in an Occupied Structure	JPR 15-1

## **15-2: Presenting Fire Safety Information to Station Visitors or Small Groups**

### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.5.2

### **Job Performance Requirement**

Present fire safety information to station visitors or small groups, given prepared materials, so that all information is presented, the information is accurate, and questions are answered or referred.

### **Requisite Knowledge**

1. *Describe* parts of informational materials and how to use them
2. *Identify* basic presentation skills
3. *Describe* departmental standard operating procedures for giving fire station tours

### **Requisite Skills**

1. Document presentations
2. Use prepared materials

### **Content Modification**

<b>Block</b>	<b>Modification</b>	<b>Justification</b>

### **Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1A, Topic 9-2: Presenting Fire Safety Information to Station Visitors or Small Groups	15-2: Present Fire Safety Information	JPR 15-2

### **15-3: Preparing a Preincident Survey**

#### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.5.3

#### **Job Performance Requirement**

Prepare a preincident survey, given forms, necessary tools, and an assignment, so that all required occupancy information is recorded, items of concern are noted, and accurate sketches or diagrams are prepared.

#### **Requisite Knowledge**

1. *Identify* sources of water supply for fire protection
2. *Describe* the fundamentals of fire suppression and detection systems
3. *Identify* common symbols used in diagramming construction features, utilities, hazards, and fire protection systems
4. *Describe* departmental requirements for a preincident survey and form completion
5. *Identify* the importance of accurate diagrams

#### **Requisite Skills**

1. Identify the components of fire suppression and detection systems
2. Sketch the site, buildings, and special features
3. Detect hazards and special considerations to include in the preincident sketch
4. Complete all related departmental forms

#### **Content Modification**

<b>Block</b>	<b>Modification</b>	<b>Justification</b>

#### **Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1A, Topic 9-3: Preparing a Preincident Survey	15-3: Prepare a Preincident Survey	JPR 15-3

## **15-4: Maintaining Power Plants, Power Tools, and Lighting Equipment**

### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.5.4

### **Job Performance Requirement**

Maintain power plants, power tools, and lighting equipment, given tools and manufacturers' instructions, so that equipment is clean and maintained according to manufacturer and departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise.

### **Requisite Knowledge**

1. *Identify* types of cleaning methods
2. *Describe* correct use of cleaning solvents
3. *Describe* manufacturer and departmental guidelines for maintaining equipment and its documentation
4. *Identify* problem-reporting practices

### **Requisite Skills**

1. Select correct tools
2. Follow guidelines
3. Complete recording and reporting procedures
4. Operate power plants, power tools, and lighting equipment

### **Content Modification**

<b>Block</b>	<b>Modification</b>	<b>Justification</b>

### **Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1A, Topic 4-5: Maintaining Power Plants, Power Tools, and Lighting Equipment	15-4: Maintain Power Plants, Tools, and Equipment	JPR 15-4

## **15-5: Performing an Annual Service Test on Fire Hose**

### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.5.5
2. Office of the State Fire Marshal

### **Job Performance Requirement**

Perform an annual service test on fire hose, given *an apparatus or hose testing device*, a marking device, pressure gauges, a timer, record sheets, and related equipment, so that procedures are followed, the condition of the hose is evaluated, any damaged hose is removed from service, and the results are recorded.

### **Requisite Knowledge**

1. *Describe* procedures for safely conducting hose service testing
2. Identify indicators that dictate any hose be removed from service
3. *Describe* recording procedures for hose test results

### **Requisite Skills**

1. Operate hose testing equipment and nozzles
2. Record results

### **Content Modification**

<b>Block</b>	<b>Modification</b>	<b>Justification</b>
JPR	Changed “a pump” to “an apparatus or hose testing device”.	This is the generic term used in the field and provides more options for testing.

### **Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 1A, Topic 5-6: Performing an Annual Service Test on a Fire Hose	15-5: Perform an Annual Service Test on a Fire Hose	JPR 15-5



# Structure (2019)

## Course Plan

### Course Details

- Certification:** Fire Fighter 1 and Fire Fighter 2
- CTS Guide:** Fire Fighter Certification Training Standards Guide (Month Year)
- Description:** This course provides the skills and knowledge needed for the entry-level fire fighter to perform structural suppression activities. Key learning concepts include: fire fighter safety; communications; cleaning, maintaining, and utilizing equipment and tools; building construction and fire behavior; water supply; ladder operations; forcing entry into a structure; conducting search and rescue operations; attacking an interior structure fire; horizontal and vertical ventilation; property conservation; fire scene overhaul; fire fighter survival; fire suppression with Class A materials, vehicles, and ground cover; and fire and life safety initiatives, preparedness, and maintenance.
- Designed For:** Entry level fire fighters
- Prerequisites:** Prerequisites must be completed prior to enrollment in this course.
- Public Safety First Aid or higher qualification (See *SFT Procedures Manual* (January 2019) section 7.12.3 for requirements.)
  - CPR healthcare provider certification or equivalent (See *SFT Procedures Manual* (January 2019) section 7.12.3 for requirements.)
- Corequisites:** Students must complete the FEMA independent study courses IS-100, IS-200, IS-700, and IS-800 prior to the teaching of Topic 2-1: Operating within the Incident Command System.
- Standard:** Complete all activities, skills, and formative tests.  
Complete all summative tests with a minimum score of 80%.
- Hours (Total):** 308 hours  
(95 lecture / 213 application / AHJ determines practice and assessment times)
- Maximum Class Size:** 50
- Instructor Level:** Fire Fighter Instructor (See *SFT Procedures Manual* (January 2019) section 6.6 for requirements.)\*

**Instructor/Student Ratio:** 1:50 (Lecture) / 1:10 (Application)\*

**Restrictions:** None

**SFT Designation:** CFSTES

\* If any portion of this course curriculum is taught using another course plan, the instructor level and ratio of that course plan supersedes this requirement.

Draft

## Table of Contents

Required Resources.....	5
Instructor Resources .....	5
Online Instructor Resources.....	6
Student Resources .....	7
Facilities, Equipment, and Personnel .....	7
Time Table .....	9
Time Table Key .....	11
Unit 1: Introduction .....	12
Topic 1-1: Orientation and Administration .....	12
Topic 1-2: Fire Fighter 1 and 2 Certification Process.....	13
Topic 1-3: Fire Fighter 1 Roles and Responsibilities.....	14
Topic 1-4: Fire Fighter 2 Roles and Responsibilities.....	14
Unit 2: Fire Fighter Safety .....	16
Topic 2-1: Operating within the Incident Command System.....	16
Topic 2-2: Health and Safety Awareness.....	16
Topic 2-3: Behavioral Health and Cancer Awareness.....	17
Topic 2-4: Structural Personal Protective Ensemble.....	18
Topic 2-5: Self-Contained Breathing Apparatus.....	19
Topic 2-6: Using SCBA During Emergency Operations.....	20
Topic 2-7: Doffing SCBA and PPE for Gross Decontamination.....	21
Topic 2-8: Responding on an Apparatus to an Emergency Scene.....	22
Topic 2-9: Establishing and Operating in Work Areas at Emergency Scenes.....	23
Unit 3: Communications .....	25
Topic 3-1: Receiving a Non-Emergency Telephone Call .....	25
Topic 3-2: Initiating a Response to a Reported Emergency .....	25
Topic 3-3: Transmitting and Receiving Messages Via Radio .....	26
Topic 3-4: Completing a Basic Incident Report .....	27
Topic 3-5: Communicating the Need for Team Assistance.....	28
Unit 4: Fire Tools and Equipment.....	30
Topic 4-1: Utilizing Ropes and Knots.....	30
Topic 4-2: Utilizing Hand and Power Tools.....	31
Topic 4-3: Operating Emergency Scene Lighting.....	33
Topic 4-4: Operating an Air-Monitoring Instrument.....	33
Topic 4-5: Maintaining Power Plants, Power Tools, and Lighting Equipment.....	34
Unit 5: Structural Fire Suppression .....	35
Topic 5-1: Building Construction .....	35
Topic 5-2: Fire Behavior.....	35
Topic 5-3: Extinguishing Fire with Fire Extinguishers.....	36

Topic 5-4: Water Supply Systems .....	37
Topic 5-5: Cleaning, Inspecting, and Returning Fire Hose.....	38
Topic 5-6: Performing an Annual Service Test on Fire Hose .....	39
Topic 5-7: Deploy and Connect Fire Hose .....	40
Topic 5-8: Utility Control at Emergencies.....	42
Topic 5-9: Cleaning, Inspecting, and Maintaining Fire Service Ladders.....	42
Topic 5-10: Ground Ladder Operations.....	43
Topic 5-11: Forcing Entry into a Structure .....	45
Topic 5-12: Conducting a Search and Rescue Operation in a Structure .....	45
Topic 5-13: Attacking an Interior Structure Fire.....	47
Topic 5-14: Coordinating an Interior Attack Line .....	48
Topic 5-15: Horizontal Ventilation Operations.....	50
Topic 5-16: Vertical Ventilation Operations .....	51
Topic 5-17: Conserving Property.....	53
Topic 5-18: Overhauling a Fire Scene.....	54
Topic 5-19: Protecting Evidence of Fire Cause and Origin .....	55
Unit 6: Fire Fighter Survival.....	57
Topic 6-1: Structural Fire Fighter Survival .....	57
Unit 7: Suppression of Fires Outside of a Structure .....	59
Topic 7-1: Extinguishing Fires in Exterior Class A Materials.....	59
Topic 7-2: Attacking a Passenger Vehicle Fire .....	60
Topic 7-3: Combatting a Ground Cover Fire.....	61
Topic 7-4: Extinguishing an Ignitable Liquid Fire.....	62
Topic 7-5: Controlling a Flammable Gas Cylinder Fire .....	63
Unit 8: Rescue Operations .....	65
Topic 8-1: Extricating a Victim Entrapped in a Motor Vehicle .....	65
Topic 8-2: Assisting Rescue Operation Teams.....	65
Unit 9: Fire and Life Safety .....	67
Topic 9-1: Performing a Fire Safety Survey in an Occupied Structure .....	67
Topic 9-2: Presenting Fire Safety Information to Station Visitors or Small Groups .....	67
Topic 9-3: Preparing a Preincident Survey .....	69
How to Read a Course Plan .....	70

## Required Resources

### Instructor Resources

To teach this course, instructors need:

- *Fundamentals of Fire Fighter Skills and Hazardous Materials Response* (Jones and Bartlett Learning, 4<sup>th</sup> edition, ISBN: 978-1-284-15133-6)
- **or**
- *Essentials of Fire Fighting* (IFSTA, 7<sup>th</sup> edition, ISBN: 978-087939657-2)
- IS-100: An Introduction to the Incident Command System (instructor guide, current edition) (<https://training.fema.gov>)
- IS-200: ICS for Single Resources and Initial Action Incidents (instructor guide, current edition) (<https://training.fema.gov>)
- IS-700: An Introduction to the National Incident Management System (instructor guide, current edition) (<https://training.fema.gov>)
- IS-800: National Response Framework, an Introduction (instructor guide, current edition) (<https://training.fema.gov>)
- NFPA 704: Standard System for the Identification of the Hazards of Materials for Emergency Response (current edition)
- NFPA 901: Standard Classifications for Incident Reporting and Fire Protection Data (current edition)
- NFPA 1001: Standard for Fire Fighter Professional Qualifications (current edition)
- NFPA 1403: Standard on Live Fire Training Evolutions (current edition)
- NFPA 1404: Standard for Fire Service Respiratory Protection Training (current edition)
- NFPA 1500: Standard on Fire Department Occupational Safety and Health Program (current edition)
- NFPA 1851: Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting (current edition)
- NFPA 1962: Standard for the Care, Use, Inspection, Service Testing, and Replacement of Fire Hose, Couplings, Nozzles, and Fire Hose Appliances (current edition)
- NFPA 1971: Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting (current edition)
- NFPA 1981: Standard on Self-Contained Breathing Apparatus (SCBA) for Emergency Services (current edition)
- Full structural PPE and SCBA that meets AHJ requirements
  - PPE and SCBA used during live burns must be compliant with NFPA 1971 (current edition)

### Online Instructor Resources

The following instructor resources are available online at

<http://osfm.fire.ca.gov/training/firefighter1>

- Fire Fighter 1 Skill Sheets
  - 1-3: Inspect SCBA
  - 1-4: Don Structural PPE
  - 1-5: Don SCBA
  - 1-6: Doff SCBA
  - 1-7: Doff, Inspect, and Prepare Structural PPE for Reuse
  - 1-8: Doff SCBA and PPE for Gross Decontamination
  - 2-1: Initiate a Response to an Emergency
  - 2-3: Operate a Fire Department Radio
  - 3-1a: Replace an SCBA Air Cylinder
  - 3-1b: Use SCBA During Emergency Operations
  - 3-2: Respond to an Emergency Scene on an Apparatus
  - 3-3: Operate at an Emergency Scene
  - 3-4: Force Entry into a Structure
  - 3-5: Activate an Emergency Call and Exit a Hazardous Area
  - 3-6: Lift, Carry, and Raise a Ground Ladder
  - 3-7: Attack a Passenger Vehicle Fire
  - 3-8a: Operate a Portable Master Stream
  - 3-8b: Extinguish an Exterior Fire
  - 3-9a: Search for and Rescue a Victim with no Respiratory Protection
  - 3-9b: Rescue a Fire Fighter
  - 3-9c: Use a Ladder for Rescue
  - 3-10a: Operate a Charged Attack Hoseline from a Ground Ladder
  - 3-10b: Attack a Live Interior Structure Fire
  - 3-10c: Attack a Simulated Interior Structure Fire
  - 3-10d: Extend a Hoseline
  - 3-10e: Load, Deploy, and Advance an Attack Line
  - 3-10f: Load Supply Hose
  - 3-11: Perform Horizontal Ventilation
  - 3-12: Perform Vertical Ventilation
  - 3-13a: Overhaul a Fire Scene
  - 3-13b - Remove Charred Materials
  - 3-14a: Control Water Flow from a Sprinkler System
  - 3-14b: Remove Water from the Interior of a Structure
  - 3-14c: Salvage a Room and its Contents
  - 3-14d: Cover Building Openings
  - 3-15a: Deploy Portable Tank and Prepare for Drafting Operations
  - 3-15b: Forward Hose Lay
  - 3-16: Select, Carry, and Operate a Portable Fire Extinguisher

- 3-17: Light a Scene
- 3-18: Turn Off Building Utilities
- 3-20a: Tie Knots
- 3-20b: Hoist Tools Aloft
- 4-1: Clean and Check Equipment
- 4-2a: Replace a Burst Section of Hose
- 4-2b: Build Hose Rolls
- 4-2c: Clean and Maintain Hose and Mark Defective Hose
- Fire Fighter 2 Skill Sheets
  - 11-1: Organize an Incident Management System
  - 12-1: Complete a Basic Incident Report
  - 13-1: Extinguish an Ignitable Liquid Fire
  - 13-2: Control a Flammable Gas Cylinder Fire
  - 13-3: Coordinate an Interior Fire Attack Line
  - 13-4: Protect Evidence of Fire Cause and Origin
  - 14-1: Extricate a Victim Entrapped in a Motor Vehicle
  - 14-2: Assist a Rescue Operations Team
  - 15-1: Perform a Fire Safety Survey in an Occupied Structure
  - 15-2: Present Fire Safety Information
  - 15-3: Prepare a Preincident Survey
  - 15-4: Maintain Power Plants, Tools, and Equipment
  - 15-5: Perform an Annual Service Test on a Fire Hose

### Student Resources

To participate in this course, students need:

- *Fundamentals of Fire Fighter Skills and Hazardous Materials Response* (Jones and Bartlett Learning, 4<sup>th</sup> edition, ISBN: 978-1-284-15133-6)  
**or**  
*Essentials of Fire Fighting* (IFSTA, 7<sup>th</sup> edition, ISBN: 978-087939657-2)
- Full structural personal protective equipment that meets AHJ requirements
  - PPE and SCBA used during live burns must be compliant with NFPA 1971 (current edition)

### Facilities, Equipment, and Personnel

The following facilities, equipment, or personnel\* are required to deliver this course:

- **Appliances and tools:** 1 ½-inch fog nozzle, 2 ½ - 1 1/8-inch straight tip nozzle, wildland nozzles and appliances, cap, double female fittings, double male fittings, hose clamps, hose jacket, hose roller, hose strap, rope, or chain, nozzle selection as determined by AHJ, plug, master stream device, traffic and scene control devices, reducer or increaser (fittings), Siamese, spanner wrenches, and gated wye

- **Extinguishers and supplies:** Dry chemical extinguisher, (ordinary base or multi-purpose) 20 pounds, CO<sub>2</sub> extinguisher, pump tank water extinguisher, Class A fuel for live burns, Class B fuel for live burns, and metal pan – minimum 16 square feet
- **Hose:** 1-, 1 ½- or 1 ¾-inch fire hose (300-foot minimum), 2 ½- or 3-inch fire hose (500-foot minimum), large diameter hose (LDH) (300-foot minimum), handline with fog nozzle, hard suction (intake) hose and strainer, hose and nozzles capable of flowing a minimum of 95 GPM, and soft suction hose
- **Hand tools:** Bolt cutters, crowbar/pry bar, flat head axe, halligan tool, hand saw, hydrant wrench, K-tool, pick-head axe, pike pole (8 feet), sledgehammer, flashlight, and wildland hand tools and equipment
- **Ladders:** 10-foot folding ladder, 14-foot roof ladder, 24-foot extension ladder, 35-foot extension ladder, and two straight ladders
- **Power tools:** Electric and gasoline powered fan, chain saw, gasoline powered circular saw, and a generator
- **Protective equipment/clothing:** Full set of protective clothing for structural fire fighting for each trainee, including bunker pants, bunker coat, bunker boots, gloves, helmet, hood, and face piece, self-contained breathing apparatus with charged air cylinder, (one extra fully charged air cylinder), personal alert safety system (P.A.S.S.), safety harness, manufacturer approved cleaning agent (for SCBA), manufacturer approved cleaning equipment (for SCBA), and manufacturer approved sanitizing agent (for SCBA)
- **Rope:** ½-inch rope, safety line, webbing, various lengths and diameters of utility rope, various lengths and diameters of synthetic rope, and various lengths of 1-person or 2-person life safety rope
- **Salvage equipment/materials:** Brooms, buckets, tubs, mops, objects to cover, salvage covers, squeegees, sprinkler stop, and water vacuums
- **Simulation equipment/materials:** Burn building as recommended in NFPA 1403: Standard on Live Fire Training (current edition), wood roof prop, smoke-generating equipment, training tower, minimum of two stories in height, gas, water, and electric service cut-off, vehicle fire prop, and a simulated breaching/restricted passageway prop
- **Other supplies/equipment needed:** Fire hydrant, pitot tube and gauge, portable radio, thermal imaging device, atmospheric monitor, standard above ground fall protection, minimum of two apparatuses equipped with pump and two separate water supplies, fuel and supplies for power equipment, cleaning supplies and equipment, portable lighting equipment, two portable tanks with water transfer equipment and appliances

\* See NFPA 1403 (2018 or current edition) for additional facilities, equipment, and personnel requirements needed for NFPA 1403-compliant live fire training evolutions.

**Time Table**

Segment	Lecture	Application	Unit Total
<b>Unit 1: Introduction</b>			
Topic 1-1: Orientation and Administration	0.5	0.0	
Topic 1-2: Fire Fighter 1 and 2 Certification Process	0.5	0.0	
Topic 1-3: Fire Fighter 1 Roles and Responsibilities	1.0	0.0	
Topic 1-4: Fire Fighter 2 Roles and Responsibilities	1.0	0.0	
<b>Unit 1 Totals</b>	<b>3.0</b>	<b>0.0</b>	<b>3.0</b>
<b>Unit 2: Fire Fighter Safety</b>			
Topic 2-1: Operating within the Incident Command System	2.0	2.0	
Topic 2-2: Health and Safety Awareness	2.0	0.0	
Topic 2-3: Behavioral Health and Cancer Awareness	4.5	3.5	
Topic 2-4: Structural Personal Protective Ensemble	2.0	3.0	
Topic 2-5: Self-Contained Breathing Apparatus	3.0	8.0	
Topic 2-6: Using SCBA During Emergency Operations	0.5	1.0	
Topic 2-7: Doffing SCBA and PPE for Gross Decontamination	0.5	1.0	
Topic 2-8: Responding on an Apparatus to an Emergency Scene	0.5	0.5	
Topic 2-9: Establishing and Operating in Work Areas at Emergency Scenes	0.5	0.5	
<b>Unit 2 Totals</b>	<b>15.5</b>	<b>19.5</b>	<b>35.0</b>
<b>Unit 3: Communications</b>			
Topic 3-1: Receiving a Non-Emergency Telephone Call	0.25	0.0	
Topic 3-2: Initiating a Response to a Reported Emergency	0.75	0.0	
Topic 3-3: Transmitting and Receiving Messages Via Radio	0.5	0.5	
Topic 3-4: Completing a Basic Incident Report	1.0	0.5	
Topic 3-5: Communicating the Need for Team Assistance	0.5	0.5	
<b>Unit 3 Totals</b>	<b>3.0</b>	<b>1.5</b>	<b>4.5</b>
<b>Unit 4: Fire Tools and Equipment</b>			
Topic 4-1: Utilizing Ropes and Knots	2.0	4.0	
Topic 4-2: Utilizing Hand and Power Tools	2.0	2.0	
Topic 4-3: Operating Emergency Scene Lighting	1.0	0.5	
Topic 4-4: Operating an Air-Monitoring Instrument	0.5	0.0	
Topic 4-5: Maintaining Power Plants, Power Tools, and Lighting Equipment	1.0	1.0	
<b>Unit 4 Totals</b>	<b>6.5</b>	<b>7.5</b>	<b>14.0</b>
<b>Unit 5: Structural Fire Suppression</b>			
Topic 5-1: Building Construction	3.0	1.0	
Topic 5-2: Fire Behavior	4.0	0.0	

## Fire Fighter 1A

Segment	Lecture	Application	Unit Total
Topic 5-3: Extinguishing Fire with Fire Extinguishers	1.0	2.0	
Topic 5-4: Water Supply Systems	2.0	6.0	
Topic 5-5: Cleaning, Inspecting, and Returning Fire Hose to Service	2.0	2.0	
Topic 5-6: Performing an Annual Service Test on Fire House	1.0	1.0	
Topic 5-7: Deploy and Connect Fire Hose	4.0	38.0	
Topic 5-8: Utility Control at Emergencies	1.5	0.5	
Topic 5-9: Cleaning, Inspecting, and Maintaining Fire Service Ladders	2.0	2.0	
Topic 5-10: Ground Ladder Operations	4.0	38.0	
Topic 5-11: Forcing Entry into a Structure	2.0	6.0	
Topic 5-12: Conducting a Search and Rescue Operation in a Structure	2.0	12.0	
Topic 5-13: Attacking an Interior Structure Fire	4.0	8.0	
Topic 5-14: Coordinating an Interior Attack Line	2.0	6.5	
Topic 5-15: Horizontal Ventilation Operations	1.5	4.0	
Topic 5-16: Vertical Ventilation Operations	4.0	12.0	
Topic 5-17: Conserving Property	2.0	4.0	
Topic 5-18: Overhauling a Fire Scene	2.0	2.0	
Topic 5-19: Protecting Evidence of Fire Cause and Origin	1.5	0.5	
<b>Unit 5 Totals</b>	<b>45.5</b>	<b>145.5</b>	
<b>Unit 6: Fire Fighter Survival</b>			
Topic 6-1: Structural Fire Fighter Survival	4.0	12.0	
<b>Unit 6 Totals</b>	<b>4.0</b>	<b>12.0</b>	<b>16.0</b>
<b>Unit 7: Suppression of Fires Outside of a Structure</b>			
Topic 7-1: Extinguishing Fires in Exterior Class A Materials	2.0	4.0	
Topic 7-2: Attacking a Passenger Vehicle Fire	3.0	5.0	
Topic 7-3: Combatting a Ground Cover Fire	0.5	0.0	
Topic 7-4: Extinguishing an Ignitable Liquid Fire	2.0	4.0	
Topic 7-5: Controlling a Flammable Gas Cylinder Fire	2.0	4.0	
<b>Unit 7 Totals</b>	<b>9.5</b>	<b>17.0</b>	<b>26.5</b>
<b>Unit 8: Rescue Operations</b>			
Topic 8-1: Extricating a Victim Entrapped in a Motor Vehicle	2.0	6.0	
Topic 8-2: Assisting Rescue Operation Teams	2.0	0.0	
<b>Unit 8 Totals</b>	<b>4.0</b>	<b>6.0</b>	<b>10.0</b>
<b>Unit 9: Fire and Life Safety</b>			
Topic 9-1: Performing a Fire Safety Survey in an Occupied Structure	1.0	1.0	

Segment	Lecture	Application	Unit Total
Topic 9-2: Presenting Fire Safety Information to Station Visitors or Small Groups	1.0	1.0	
Topic 9-3: Preparing a Preincident Survey	1.0	2.0	
<b>Unit 9 Totals</b>	<b>3.0</b>	<b>4.0</b>	<b>7.0</b>
<b>Summative Assessment</b>			
Determined by AHJ or educational institution	TBD	TBD	TBD
<b>Skills Practice (Lab / Sets and Reps)</b>			
Determined by AHJ or educational institution	TBD	TBD	TBD
<b>Course Totals</b>	<b>95.0</b>	<b>213.0</b>	<b>308.0</b>

**Time Table Key**

1. The Time Table documents the amount of time required to deliver the content included in the course plan.
2. Time is documented using the quarter system: 15 min. = .25 / 30 min. = .50 / 45 min. = .75 / 60 min. = 1.0.
3. The Course Totals do not reflect time for lunch (1 hour) or breaks (10 minutes per each 50 minutes of instruction or assessment). It is the instructor’s responsibility to add this time based on the course delivery schedule.
4. Application (activities, skills exercises, and formative testing) time will vary depending on the number of students enrolled. The Application time documented is based on the maximum class size identified in the Course Details section.

The following is a breakdown of what a program might look like if there were fewer students. These estimates may need to be adjusted based on student abilities.

- 40 – 50 Students = 260 hours
- 30 – 40 Students = 180 hours
- 20 – 30 Students = 120 hours
- 1 – 20 Students = 60 hours

5. Summative Assessments are determined and scheduled by the authority having jurisdiction. These are not the written or psychomotor State Fire Training certification exams. These are in-class assessments to evaluate student progress and calculate course grades.

## Unit 1: Introduction

### Topic 1-1: Orientation and Administration

#### Terminal Learning Objective

At the end of this topic a student will be able to identify facility and classroom requirements and identify course objectives, events, requirements, assignments, activities, skills exercises, resources, evaluation methods, and participation requirements in the course syllabus.

#### Enabling Learning Objectives

1. Identify facility requirements
  - Restroom locations
  - Food locations
  - Smoking locations
  - Emergency procedures
2. Identify classroom requirements
  - Start and end times
  - Breaks
  - Electronic device policies
  - Special needs and accommodations
  - Other requirements as applicable
3. Review course syllabus
  - Course objectives
  - Calendar of events
  - Course requirements
  - Student evaluation process
  - Assignments
  - Activities and skills exercises
  - Required student resources
  - Class participation requirements

#### Discussion Questions

1. Determined by instructor

#### Application

1. Determined by instructor

#### Instructor Notes

1. When teaching Fire Fighter 1A, 1B, and 1C in a consecutive format, it is not necessary to repeat this topic for each course. At a minimum, cover it once on the first day of the first course.

## Topic 1-2: Fire Fighter 1 and 2 Certification Process

### Terminal Learning Objective

At the end of this topic a student will be able to identify the requirements for Fire Fighter 1 and 2 certification and be able to describe the certification task book and examination process.

### Enabling Learning Objectives

1. Identify the different levels of certification in the Fire Fighter certification track
  - Fire Fighter 1
  - Fire Fighter 2
2. Identify the prerequisites for certification
  - Fire Fighter 1
  - Fire Fighter 2
3. Identify the course work required for certification
  - Fire Fighter 1
  - Fire Fighter 2
4. Identify the exams required for certification
  - Fire Fighter 1
  - Fire Fighter 2
5. Identify the task book requirements for certification
  - Fire Fighter 1
  - Fire Fighter 2
6. Identify the experience requirements for certification
  - Fire Fighter 1
  - Fire Fighter 2
7. Identify the position requirements for certification
  - Fire Fighter 1
  - Fire Fighter 2
8. Describe the certification task book process
9. Describe the certification examination process

### Discussion Questions

1. Determined by instructor

### Application

1. Determined by instructor

### Instructor Notes

1. When teaching Fire Fighter 1A, 1B, and 1C in a consecutive format, it is not necessary to repeat this topic for each course. At a minimum, cover it once on the first day of the first course.
2. Use the *SFT Procedures Manual (2019)* 7.12.1 Fire Fighter 1 (2019) and 7.12.3 Fire Fighter 2 (2019) content for ELOs 2 through 7.
3. Use a copy of the Fire Fighter 2 Certification Task Book to walk students through the task book process and expectations for ELO 8.

4. Use the *SFT Procedures Manual (2019)* (Chapter 11: Fire Fighter Certification Exams) content for ELO 9.

### Topic 1-3: Fire Fighter 1 Roles and Responsibilities

#### Terminal Learning Objective

At the end of this topic a student, given AHJ policies and procedures, will be able to define the role of Fire Fighter 1 in the fire department, identify the mission of the fire service, and follow standard operating procedures and rules and regulations of the fire department.

#### Enabling Learning Objectives

1. Describe the organization of the fire department
2. Define the role of Fire Fighter 1 in the organization
3. Describe the mission of the fire service
4. Describe fire department standard operating procedures
5. Describe fire department rules and regulations as they apply to the Fire Fighter 1
  - Equal Employment Opportunity
  - Harassment
  - Diversity
  - Illness and injury prevention
  - Firefighter Bill of Rights
6. Describe the value of fire and life safety initiatives in support of the fire department mission and to reduce fire fighter line-of-duty injuries and fatalities
  - 16 Firefighter Life Safety Initiatives (National Fallen Firefighters Foundation)
7. Identify the role of other agencies as they relate to the fire department
8. Locate information in departmental documents and standard or code materials

#### Discussion Questions

1. How would you define the role of a fire fighter in today's fire service?

#### Application

1. Determined by instructor

#### Instructor Notes

1. None

**CTS Guide Reference:** 1-1

**Skill Sheet:** None

### Topic 1-4: Fire Fighter 2 Roles and Responsibilities

#### Terminal Learning Objective

At the end of this topic a student will be able to describe the role of the Fire Fighter 2 as identified by NFPA 1001: Standard for Fire Fighter Professional Qualifications (current edition) and the Office of the State Fire Marshal.

#### Enabling Learning Objectives

1. Describe the responsibilities of the Fire Fighter 2 in assuming and transferring command within an incident command system (ICS)

2. Describe how to perform assigned duties in conformance with applicable NFPA standards, other safety regulations, and AHJ procedures
3. Identify the role of a Fire Fighter 2 within the organization
4. Determine the need for command
5. Organize and coordinate an incident command system until command is transferred
6. Function within an assigned role in an incident management system

### Discussion Questions

1. How do the roles and responsibilities of a Fire Fighter 2 differ from those of a Fire Fighter 1?

### Application

1. Determined by instructor

### Instructor Notes:

1. None

**CTS Guide Reference:** 11-1

**Skill Sheet:** 11-1: Organize an Incident Management System

## Unit 2: Fire Fighter Safety

### Topic 2-1: Operating within the Incident Command System

#### Terminal Learning Objective

At the end of this topic a student, given an incident and an incident action plan, will be able to operate within the Incident Command System (ICS) so that organizational elements are recognized, positions and responsibilities are identified, facility needs are met, and the incident is managed, in accordance with state and federal regulations.

#### Enabling Learning Objectives

1. Explain the principles and basic structure of the Incident Command System (ICS)
2. Describe the National Incident Management System (NIMS) management characteristics that are the foundation of the ICS
3. Describe the ICS functional areas and the roles of the Incident Commander and Command Staff
4. Describe the General Staff roles within ICS
5. Identify how NIMS management characteristics apply to ICS for a variety of roles and discipline areas

#### Discussion Questions

1. What are the five major sections of the ICS?
2. What are the benefits of the ICS?
3. Which incidents can the ICS be applied to?
4. What is the presidential directive that established NIMS?
5. What are the differences between groups and divisions (i.e. roof division and ventilation group)?

#### Application

1. Given a simulated incident, have students assign roles and work through the incident while operating within the Incident Command System.

#### Instructor Notes

1. Confirm that the students have completed FEMA co-requisites: IS-100, IS-200, IS-700, and IS-800 prior to teaching this topic.
2. The content in this topic can be fulfilled through completion of State Fire Training's ICS-200 (FSTEP) course or an established equivalency.

**CTS Guide Reference:** 1-10

**Skill Sheet:** None

### Topic 2-2: Health and Safety Awareness

#### Terminal Learning Objective

At the end of this topic a student, given an assignment, will be able to identify common fire fighter health and safety issues in order to avoid or mitigate accidents and injuries, maintain a healthy and physically fit lifestyle, and conduct life safety initiatives in the line of duty.

**Enabling Learning Objectives**

1. List common types of accidents and injuries and identify their causes
  - On duty (station life)
  - Responding to an incident
  - At an incident
  - Training
  - Off duty (personal life)
2. Describe how physical fitness and a healthy lifestyle correspond to fire fighter performance
3. Define the critical aspects of NFPA 1500: Standard on Fire Department Occupational Safety and Health Program (current edition)
4. Describe how fire and life safety initiatives support a fire department’s mission to reduce fire fighter line-of-duty injuries and deaths

**Discussion Questions**

1. What components of a healthy lifestyle pertain to the job of a fire fighter?
2. What proactive steps can a fire fighter take to prevent common accidents and injuries?
3. What does it mean to be “fit for duty”?
4. How do off-duty activities impact on-duty performance?

**Application**

1. Determined by instructor

**Instructor Notes**

1. Recommend that students utilize a book like *Firefighter Functional Fitness* (Dan Kerrigan and Jim Moss) to develop a personal fitness plan.

**CTS Guide Reference:** 1-11

**Skill Sheet:** None

**Topic 2-3: Behavioral Health and Cancer Awareness**

**Terminal Learning Objective**

At the end of this topic a student, given xxx, will be able to xxx.

**Enabling Learning Objectives**

1. Text

**Discussion Questions**

1. Text
2. Text
3. Text

**Application**

1. Text

**Instructor Notes**

1. Text

**CTS Guide Reference:** 1-12

**Skill Sheet:** None

## Topic 2-4: Structural Personal Protective Ensemble

### Terminal Learning Objective

At the end of this topic a student, given a structural personal protective ensemble (PPE), will be able to inspect and maintain, and don and doff a structural personal protective ensemble so that PPE is donned within 60 seconds, all elements of the ensemble are worn and removed according to manufacturer guidelines, and PPE is inspected, maintained, and returned to a ready state.

### Enabling Learning Objectives

1. Explain the importance of standards for structural personal protective ensemble
2. Identify the components of structural PPE
3. Describe the protection provided by structural PPE
4. Describe the limitations of structural PPE
5. Identify manufacturer guidelines for correct PPE use
6. Identify when and how to doff PPE
  - When it is safe
  - Manufacturer guidelines
  - AHJ policies and procedures
7. Describe how improper usage or maintenance can compromise PPE effectiveness
8. Describe proper method for inspecting, cleaning, and maintaining structural PPE
9. Identify when and describe how to remove PPE from service
10. Don structural PPE
11. Doff structural PPE
12. Return PPE to a ready state
13. Inspect structural PPE
14. Clean structural PPE
15. Maintain structural PPE

### Discussion Questions

1. What are the different components of structural PPE?
2. What are the safety features of structural PPE?
3. Why is it important to know your PPE equipment?
4. What are the limitations of structural PPE?
5. What are the benefits of inspecting, cleaning, and maintaining structural PPE?

### Application

1. Given structural PPE, have students practice donning, doffing, inspecting, cleaning, maintaining, and returning PPE to a ready state.

### Instructor Notes

1. Use NFPA 1851: Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting (current edition) as a resource for this topic.
2. Students must have access to full PPE for application and practice.

**CTS Guide Reference:** 1-2, 1-4, 1-7

**Skill Sheet:**

- 1-4: Don Structural PPE
- 1-7: Doff, Inspect, and Prepare Structural PPE for Resuse

### **Topic 2-5: Self-Contained Breathing Apparatus**

**Terminal Learning Objective**

At the end of this topic a student, given self-contained breathing apparatus (SCBA) and structural personal protective ensemble (PPE), will be able to don SCBA within 60 seconds or less; wear, operate, and doff SCBA in accordance with manufacturer guidelines; and inspect, maintain, and return SCBA to a ready state in a non-emergency setting.

**Enabling Learning Objectives**

1. Define "IDLH"
2. Identify conditions requiring respiratory protection
  - NFPA 1500: Standard on Fire Department Occupational Safety, Health, and Wellness Program (current edition)
  - Code of Federal Regulations 29, 1910.134
  - California Code of Regulations Title 8, 5144K
3. Explain the importance of standards for SCBA
4. Describe the protection provided by, uses of, and limitations of SCBA
5. Describe potential long-term consequences of exposure to products of combustion
6. Identify the components of SCBA
  - NFPA 1852: Standard on Selection, Care, and Maintenance of Open-Circuit Self-Contained Breathing Apparatus (SCBA) (current edition)
7. Describe operational inspection procedures for SCBA
8. Describe different donning procedures
  - Coat
  - Over the head
  - Seat mounted
9. Identify manufacturer guidelines for correct SCBA use
10. Describe how improper fit, usage, or maintenance can compromise SCBA effectiveness
11. Identify when to doff respiratory protection
  - Outside IDLH
  - Dependent on contaminate exposure levels
12. Identify how to doff respiratory protection
  - Manufacturer guidelines
  - AHJ policies and procedures
13. Identify proper methods for inspecting, cleaning, and maintaining SCBA
14. Identify when and describe how to remove SCBA from service
  - NFPA 1852
15. Perform operational inspection for a self-contained breathing apparatus
16. Don SCBA using the following methods:

- Coat
- Over-the-head
- Seat mounted

17. Doff SCBA

18. Return SCBA to a ready state

19. Inspect, clean, and maintain SCBA

### Discussion Questions

1. What are the major components of SCBA and their functions?
2. What conditions require respiratory protection?
3. What are the limitations of SCBA?

### Application

1. Given structural PPE and SCBA, have students practice donning, doffing, inspecting, cleaning, maintaining, and returning SCBA to a ready state.

### Instructor Notes

1. Use NFPA 1500: Standard on Fire Department Occupational Safety, Health, and Wellness Program (current edition) as a resource for this topic.
2. Students must have access to full PPE and SCBA for application and practice.

**CTS Guide Reference:** 1-3, 1-5, 1-6

### Skill Sheet:

- 1-3: Inspect SCBA
- 1-5: Don SCBA
- 1-6 - Doff SCBA

## Topic 2-6: Using SCBA During Emergency Operations

### Terminal Learning Objective

At the end of this topic a student, given a self-contained breathing apparatus (SCBA) and other personal protective equipment (PPE), will be able to use an SCBA during emergency operations so that SCBA is donned within 60 seconds and worn correctly, controlled breathing techniques are used, emergency procedures are enacted if the SCBA fails, all low-air warnings are recognized, respiratory protection is not intentionally compromised, and hazardous areas are exited prior to air depletion.

### Enabling Learning Objectives

1. Describe different breathing techniques
2. Describe how to monitor and manage air consumption
3. Describe emergency indicators and emergency procedures for SCBA
4. Identify physical requirements of the SCBA wearer
5. Identify and troubleshoot problems associated with SCBA use
  - Human error or behavior
  - Equipment damage or failure
6. Demonstrate controlled breathing techniques
7. Replace SCBA air cylinders
8. Use an SCBA to exit through restricted passages

9. Monitor and manage air consumption
10. Initiate and complete emergency procedures in the event of SCBA failure or air depletion

### Discussion Questions

1. What are some possible human errors associated with SCBA use?
2. What are some possible equipment failures associated with SCBA use?

### Application

1. Given PPE and SCBA have students don PPE and SCBA and troubleshoot different SCBA emergency or failure scenarios initiated by the instructor.

### Instructor Notes

1. Reference NFPA 1404: Standard for Fire Service Respiratory Protection Training (current edition) and NFPA 1981: Standard on Self-Contained Breathing Apparatus (SCBA) for Emergency Services (current edition) for current SCBA air-management standards.
2. This topic is intended to be an overview. The content and application will be covered again in context in Topic 6-1: Structural Fire Fighter Survival.

### CTS Guide Reference: 3-1

#### Skill Sheet:

- 3-1a: Replace an SCBA Air Cylinder
- 3-1b: Use SCBA During Emergency Operations

## Topic 2-7: Doffing SCBA and PPE for Gross Decontamination

### Terminal Learning Objective

At the end of this topic a student, given self-contained breathing apparatus (SCBA) and structural personal protective equipment (PPE), will be able to doff SCBA and PPE so that SCBA and PPE are removed to reduce contaminant exposure; SCBA and PPE undergo gross decontamination and are tagged and transported; and fire fighter conducts physical decontamination as soon as possible, in order to reduce exposure to field contaminants.

### Enabling Learning Objectives

1. Identify the purpose and benefits of gross decontamination
  - Reduce contaminant exposure
  - Promote best/safe practices
  - Cancer prevention
2. Identify parts of the body most susceptible to contaminate exposure
3. Identify common routes of exposure
  - Inhalation
  - Ingestion
  - Absorption
  - Penetration/injection
4. Describe how to conduct on-site gross decontamination
5. Describe how to doff SCBA and PPE to reduce exposure to field contaminants
6. Describe how to tag and transport contaminated SCBA and PPE
7. Identify personal decontamination processes
8. Don and doff SCBA and PPE

### Discussion Questions

1. What are the benefits of gross decontamination?
2. What parts of the body are most susceptible to contaminate exposure?
3. What are the common routes of exposure?

### Application

1. Determined by instructor

### Instructor Notes

1. Recommend referencing:
  - Fire Smoke Coalition (<https://firesmoke.org>)
  - IAFF Cancer Prevention and Awareness Resource (<http://client.prod.iaff.org/#contentid=40435>)
2. Reference exposure-tracking systems like PER and encourage students to participate:
  - Personal Exposure Reporting (PER) (<https://www.peronline.org/>)
3. Recommend bringing in guest speakers from professional associations to discuss prevention or cancer survivors to discuss personal impact.
4. This topic is intended to be an overview. The content and application will be covered again in context in Topic 6-1: Structural Fire Fighter Survival.

**CTS Guide Reference:** 1-8

**Skill Sheet:** 1-8: Doff SCBA and PPE for Gross Decontamination

## Topic 2-8: Responding on an Apparatus to an Emergency Scene

### Terminal Learning Objective

At the end of this topic a student, given personal protective clothing, other necessary personal protective equipment (PPE), and an apparatus, will be able to respond on an apparatus to an emergency scene, correctly mount and dismount the apparatus, use seat belts while the vehicle is in motion, and correctly use other personal protective equipment.

### Enabling Learning Objectives

1. Describe mounting and dismounting procedures for riding an apparatus
2. Identify hazards and ways to avoid hazards associated with riding an apparatus
3. Describe prohibited practices
4. Identify different types of department PPE and their use(s)
  - Hearing protection
  - Seat belts
  - Safety gates
5. Use each piece of provided safety equipment

### Discussion Questions

1. What safety equipment is used when riding on an apparatus?
2. What is the importance of using safety equipment to protect against hearing and vision loss?
3. What are some outcomes when safety equipment is not used?
4. How do personnel riding in an apparatus contribute to situational awareness?

### Application

1. Given an apparatus, have students practice correct mounting and dismounting techniques.

### Instructor Notes

1. None

**CTS Guide Reference:** 3-2

**Skill Sheet:** 3-2: Respond to an Emergency Scene on an Apparatus

## Topic 2-9: Establishing and Operating in Work Areas at Emergency Scenes

### Terminal Learning Objective

At the end of this topic a student, given personal protective equipment (PPE), traffic and scene control devices, structure fire and roadway emergency scenes, traffic hazards, downed electrical wires, photovoltaic power systems, battery storage systems, an assignment, standard operating procedures, and an apparatus, will be able to establish and operate in work areas at emergency scenes, follow procedures, wear protective equipment, establish protected work areas as directed using traffic and scene control devices, and perform assigned tasks in established protected work areas.

### Enabling Learning Objectives

1. Describe proper procedures for mounting and dismounting an apparatus in traffic
2. Identify potential hazards involved in operating on emergency scenes
  - Vehicle traffic
  - Utilities
  - Environmental conditions
3. Describe procedures for safe operation at emergency scenes
4. Identify the PPE available for members' safety on emergency scenes and work zone designations
5. Describe how to work with electrical hazards at an emergency scene
  - Identify hazard
  - Communicate to Incident Command
  - Establish physical barrier for protection
6. Use PPE
7. Deploy traffic and scene control devices
8. Dismount an apparatus
9. Operate in protected work areas as directed

### Discussion Questions

1. What are some potential hazards to fire fighters while operating at an emergency incident?
  - How can fire fighters limit exposure and injury?
  - What methods are used to communicate hazards?
2. What hazards are associated with mounting and dismounting a fire apparatus in traffic?
3. What different types of personal protective equipment do fire fighters use on the scene of an emergency?

- What are their uses?

### **Application**

1. Given a simulated incident, have students work in small groups to develop an emergency scene work zone.

### **Instructor Notes**

1. FIRECOPE ICS 910 (Firefighter Incident Safety and Accountability Guidelines) is the industry standard for this topic.

**CTS Guide Reference:** 3-3

**Skill Sheet:** 3-3: Operate at an Emergency Scene

Draft

## Unit 3: Communications

### Topic 3-1: Receiving a Non-Emergency Telephone Call

#### Terminal Learning Objective

At the end of this topic a student, given a fire department phone, will be able to receive a non-emergency telephone call using correct procedures for answering the phone and relaying information.

#### Enabling Learning Objectives

1. Describe fire department procedures for answering non-emergency phone calls
2. Operate fire station telephone and intercom equipment
3. Identify documentation requirements

#### Discussion Questions

1. What are different types of fire station telephone and intercom equipment?
2. What are some proper ways of answering a business phone at the fire station?
3. What is the minimum information that someone should record?

#### Application

1. Determined by instructor

#### Instructor Notes

1. None

CTS Guide Reference: 2-2

Skill Sheet: None

### Topic 3-2: Initiating a Response to a Reported Emergency

#### Terminal Learning Objective

At the end of this topic a student, given the report of an emergency, fire department standard operating procedures (SOPs), and communications equipment, will be able to initiate the response to a reported emergency, obtain all necessary information, correctly operate all communications equipment, and promptly and accurately relay information to the dispatch center.

#### Enabling Learning Objectives

1. Explain the procedures for reporting an emergency
2. Identify department SOPs for taking and receiving:
  - Alarms
  - Radio codes
  - Procedures
  - Clear text for communications
3. List information needs of dispatch center
  - Incident type
  - Caller name
  - Phone number
  - Incident location or description

- Other notifications (911, police, etc.)
- 4. Identify different types of fire department communications equipment
- 5. Operate fire department communications equipment
- 6. Relay information
- 7. Record information

**Discussion Questions**

1. How do you differentiate between emergency and non-emergency calls?
2. What information is needed to dispatch a call?
  - Why is it needed?

**Application**

1. Determined by instructor

**Instructor Notes**

1. None

**CTS Guide Reference:** 2-1

**Skill Sheet:** 2-1: Initiate a Response to an Emergency

**Topic 3-3: Transmitting and Receiving Messages Via Radio**

**Terminal Learning Objective**

At the end of this topic a student, given a fire department radio and fire department standard operating procedures (SOPs), will be able to transmit and receive messages via the fire department radio and relay accurate, clear information within the time established by the AHJ.

**Enabling Learning Objectives**

1. Identify components of a fire department radio
2. Describe fire department procedures and etiquette for:
  - Routine radio traffic
  - Emergency radio traffic
  - Emergency radio evacuation signals
3. Identify basic types of fire department radios
  - Department radios
  - Mutual aid systems
  - Specialty use systems (transit, airport, law enforcement, marine, etc.)
4. Identify operations of fire department radios
5. Describe how to activate radio emergency distress button/signal
6. Operate fire department radios and equipment
7. Identify the difference between routine and emergency radio traffic

**Discussion Questions**

1. What are the different components of a fire department radio?
2. What are the proper procedures and etiquette for:
  - Routine radio traffic?
  - Emergency radio traffic?
  - Specialty use systems?

3. What are emergency evacuation signals and when are they used?

**Application**

1. Given simulated situations, have students identify the proper channel for communication on a fire department radio.

**Instructor Notes**

1. None

**CTS Guide Reference:** 2-3

**Skill Sheet:** 2-3: Operate a Fire Department Radio

**Topic 3-4: Completing a Basic Incident Report**

**Terminal Learning Objective**

At the end of this topic a student, given report forms, guidelines, and information, will be able to complete a basic incident report so that all pertinent information is recorded, the information is accurate, and the report is complete.

**Enabling Learning Objectives**

1. Identify content requirements for basic incident reports
  - Program reporting systems
    - Software must be compliant with National Fire Incident Reporting System (NFIRS) or NFPA 901: Standard Classifications for Incident Reporting and Fire Protection Data (current edition)
    - California Fire Incident Reporting System (CalFIRS), Firehouse, Image Trend, etc.
    - Other electronic collection programs
  - Information collected
    - Incident type
    - Incident origin and growth
    - Fire department intervention
    - Personnel and parties involved
  - Writing style
    - Clear and concise language
    - Proper grammar and spelling
    - Appropriate use of abbreviations/acronyms
    - Legible handwriting (if not electronic)
    - Proof reading
2. Identify the purpose and usefulness of accurate reports
  - Data, statistics, and trends
  - Fire activity analysis
  - Community risk reduction
  - Insurance claims
  - Liability reduction
3. Identify consequences of inaccurate reports
  - False data analysis

- Possible legal consequences
- 4. Describe how to obtain necessary information
  - Personal observation
  - Interviews
- 5. Identify required coding procedures
- 6. Determine necessary codes
- 7. Proof reports
- 8. Demonstrate fire department computers or other equipment necessary to complete reports

### Discussion Questions

1. What is National Fire Incident Reporting System (NFIRS)?
2. Why are fire reports important the AHJ? Why are they important to the public?
3. What are the potential consequences of incomplete or inaccurate reports?

### Application

1. Given an event scenario and an AHJ report form or template, have students prepare and code a basic incident report.

### Instructor Notes:

1. ELO 1: See U.S. Fire Administration course [National Fire Incident Reporting System 5.0 Self-Study \(Q0494\)](#) as a recommended resource.
2. Provide students with sample AHJ reports as examples.

**CTS Guide Reference:** 12-1

**Skill Sheet:** 12-1: Complete a Basic Incident Report

## Topic 3-5: Communicating the Need for Team Assistance

### Terminal Learning Objective

At the end of this topic a student, given fire department communications equipment, SOPs, and a team, will be able to communicate the need for team assistance so that the supervisor is consistently informed of team needs, departmental SOPs are followed, and the assignment is accomplished safely.

### Enabling Learning Objectives

1. Describe standard operating procedures (SOPs) for alarm assignments
  - Alarm assignments are a predetermined allocation of resources specific to AHJs
  - SOPs are predetermined operations to mitigate incident objectives depending on nature and complexity
  - Emergency scene operations rely on consistent SOPs and methods
  - Risk assessment may influence incident goals and priorities
2. Describe fire department radio communication procedures
3. Demonstrate proper operation of fire department communications equipment

### Discussion Questions

1. What methods of communication do personnel use on an emergency scene?
2. What is the importance of radio discipline?

**Application**

1. Given simulated situations, have students identify the proper channel for communication on a fire department radio.

**Instructor Notes:**

1. Describe interoperability of radios and equipment between different fire agencies.

**CTS Guide Reference:** 12-2

**Skill Sheet:** None

Draft

## Unit 4: Fire Tools and Equipment

### Topic 4-1: Utilizing Ropes and Knots

#### Terminal Learning Objective

At the end of this topic a student, given personal protective equipment (PPE), tools, ropes, webbing, and an assignment, will be able to tie a knot appropriate for hoisting tools securely and as directed.

#### Enabling Learning Objectives

1. Identify rope terminology
  - Standing
  - Running
  - Working
2. Identify rope types, differences, and uses
  - Life safety
  - Utility
  - Escape
  - Search
  - Water rescue throw line
  - Static vs. dynamic
3. Describe how to use rope(s) to support response activities
4. Identify guidelines for cleaning, inspecting, and maintaining rope
  - Manufacturer guidelines
  - AHJ guidelines
  - Documentation and reporting requirements
5. Describe methods for cleaning ropes
  - Equipment/tools to use
  - Solvents or solutions to use
6. Identify when and how to remove rope from service
  - Manufacturer guidelines
  - AHJ guidelines
  - Documentation and reporting requirements
7. Describe types of knots to use for different ropes and webbing
8. Describe types of knots to use for different situations
9. Identify knot types and uses
  - Overhand
  - Half hitch
  - Clove hitch
  - Beckett bend
  - Bowline
  - Figure 8
  - Figure 8 on a bight

- Figure 8 follow through
  - Water
  - Handcuff
10. Describe hoisting methods for tools and equipment
  11. Identify types of knots used to hoist tools
    - Axe
    - Pike pole
    - Chainsaw (or other power saw)
    - Ground ladder
    - Charged hose line
    - Uncharged hose line
  12. Tie knots
  13. Hoist tools using specific knots based on the type of tool

### Discussion Questions

1. What are the three parts of a rope?
2. What are three situations when ropes are applicable for use on the fire ground?
3. What is the difference between static and dynamic rope?
  - Which is preferred in the fire service?
4. What knots are commonly used in the fire service?

### Application

1. Given different types of ropes and tools, have students:
  - Inspect and clean ropes
  - Identify ropes that should be removed from service
  - Tie knots appropriate for hoisting tools
  - Use ropes for life safety, search, or escape activities

### Instructor Notes

1. None

**CTS Guide Reference:** 3-20

### Skill Sheet:

- 3-20a - Tie Knots
- 3-20b - Hoist Tools Aloft - (6.5.19)

## Topic 4-2: Utilizing Hand and Power Tools

### Terminal Learning Objective

At the end of this topic a student, given various hand and power tools, will be able to safely transport, operate, and maintain them in accordance with manufacturer specifications and AHJ policies and procedures.

### Enabling Learning Objectives

1. Identify basic construction tools and equipment (hammers, saws, pliers, etc.)
2. Identify basic mechanic tools and equipment (screwdrivers, wrenches, socket sets, etc.)
3. Describe types and uses of hand tools

- Prying
  - Striking
  - Pushing/pulling
  - Cutting
4. Describe types and uses of power tools
    - Gas
    - Battery
    - Electric
    - Pneumatic
    - Hydraulic
  5. Identify safety considerations for storing and transporting hand and power tools
  6. Identify guidelines for cleaning, inspecting, and maintaining hand and power tools
    - Manufacturer guidelines
    - AHJ guidelines
    - Documentation and reporting requirements
  7. Describe methods for cleaning hand and power tools
    - Equipment/tools to use
    - Solvents or solutions to use
  8. Identify when and how to remove hand and power tools from service
    - Manufacturer guidelines
    - AHJ guidelines
    - Documentation and reporting requirements
  9. Transport, operate, and maintain hand and power tools

### Discussion Questions

1. How are two-stroke and four-stroke engines different?
  - How is each identified?
2. What are the advantages of different power sources?
  - What are the disadvantages?
3. What are some examples of hand tools?
  - How would you use them?

### Application

1. Given various tools contained within an apparatus, have students identify each tool and its potential uses.

### Instructor Notes

1. None

**CTS Guide Reference:** 3-5

**Skill Sheet:** 3-5: Activate an Emergency Call and Exit a Hazardous Area

### Topic 4-3: Operating Emergency Scene Lighting

#### Terminal Learning Objective

At the end of this topic a student, given fire service electrical equipment, a power supply, and an assignment, will be able to operate emergency scene lighting, illuminating designated areas of the emergency scene, within the manufacturer's listed safety precautions.

#### Enabling Learning Objectives

1. Describe safety principles and practices for portable electrical equipment
2. Identify power supply capacity and limitations
3. Describe light deployment methods
4. Operate department power supply and lighting equipment
5. Deploy cords and connectors
6. Reset ground-fault interrupter (GFI) devices
7. Locate lights for best effect

#### Discussion Questions

1. What is the purpose of portable lighting at an emergency scene?
2. What are some limitations of portable lighting?
3. What are some safety concerns when using portable lighting at an emergency scene?

#### Application

1. Given lighting equipment, a power supply, and an assignment, have students practice operating emergency scene lighting.

#### Instructor Notes

1. None

**CTS Guide Reference:** 3-17

**Skill Sheet:** 3-17: Light a Scene

### Topic 4-4: Operating an Air-Monitoring Instrument

#### Terminal Learning Objective

At the end of this topic a student, given an air monitor and an assignment or task, will be able to operate an air-monitoring instrument so that the device is operated and the fire fighter recognizes the high- or low-level alarms of the air monitor and takes action to mitigate the hazard.

#### Enabling Learning Objectives

1. Identify the various uses for an air monitor
2. Describe basic operation of an air monitor
3. Describe air monitoring procedures
4. Identify how to recognize high- or low-level alarms of the air monitor
5. Describe emergency actions to be taken upon the activation of the high- or low-level alarms of the air monitor
6. Operate the air monitor
7. Recognize the alarms
8. React to the alarms of the air monitor

**Discussion Questions**

1. When monitoring and recording atmosphere, which reading should be noted first, second and third?
2. What are the benefits of air monitoring?
3. What are the procedures of air monitoring?

**Application**

1. Determined by instructor

**Instructor Notes**

1. Recommend teaching this in combination with the SFT Confined-Space Rescue Awareness course.

**CTS Guide Reference:** 3-22

**Skill Sheet:** None

**Topic 4-5: Maintaining Power Plants, Power Tools, and Lighting Equipment**

**Terminal Learning Objective**

At the end of this topic a student, given tools and manufacturers' instructions, will be able to maintain power plants, power tools, and lighting equipment so that equipment is clean and maintained according to manufacturer and departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise.

**Enabling Learning Objectives**

1. Identify types of cleaning methods
2. Describe correct use of cleaning solvents
3. Describe manufacturer and AHJ guidelines for maintaining equipment and its documentation
4. Identify problem-reporting practices
5. Select correct tools
6. Follow guidelines
7. Complete recording and reporting procedures
8. Operate power plants, power tools, and lighting equipment

**Discussion Questions**

1. What types of cleaning methods are used for power plants, power tools, and lighting equipment?
2. What is the process for removing tools or equipment from service within your AHJ?

**Application**

1. Given tools, cleaning materials, and manufacturers specifications, have students clean and maintain designated tools.

**Instructor Notes:**

1. Bring referenced tools and equipment for display and demonstration.

**CTS Guide Reference:** 15-4

**Skill Sheet:** 15-4: Maintain Power Plants, Tools, and Equipment

## Unit 5: Structural Fire Suppression

### Topic 5-1: Building Construction

#### Terminal Learning Objective

At the end of this topic a student, given personal protective equipment, tools, ladders (when needed), and an assignment, will be able to describe common building materials and construction types, and identify dangerous building conditions created by fire.

#### Enabling Learning Objectives

1. Describe common construction types
2. Describe basic construction of typical doors, windows, walls, floors, and roofs within the department's community or service area
3. Describe common building materials
4. Identify the effects of each construction type and elapsed time under fire conditions on structural integrity
5. Identify dangerous building conditions created by fire

#### Discussion Questions

1. Why is it important for fire fighters to understand building construction?
2. What are some indicators of potential building collapse?
3. How do legacy (conventional) and modern (lightweight) construction perform differently under fire conditions?

#### Application

1. Given a building under construction, have students complete a walk through, identifying different components of building construction.
2. Given examples of building sections, have students identify different structural components.

#### Instructor Notes

1. The foundational cognitive information in this topic will be applied in Topics 5-8 (Forcing Entry into a Structure), 5-11 (Horizontal Ventilation Operations), and 5-12 (Vertical Ventilation Operations).

**CTS Guide Reference:** 3-4, 3-10, 3-12

**Skill Sheet:** None

### Topic 5-2: Fire Behavior

#### Terminal Learning Objective

At the end of this topic a student, given a fire within a structure, will be able to identify and mitigate dangerous fire behavior conditions while ensuring fire fighter safety.

#### Enabling Learning Objectives

1. List physical states of matter in which fuels are found
2. Describe the stages of fire
3. Describe the classifications of fire
4. Describe the methods of heat transfer

5. Describe the relationship of oxygen concentration to life safety and fire growth
6. Describe fire behavior in a structure
  - Energy efficient buildings
  - High rise structures
  - Below-grade structures
  - Wind-driven environments
7. Describe the principles of thermal layering within a structure fire
8. List the products of combustion found in a structure fire
9. Identify the signs, causes, effects, and prevention of backdraft/smoke explosion
10. Identify the signs, causes, effects, and prevention of flashover

### Discussion Questions

1. What are the components of the fire tetrahedron?
2. What are the stages of fire growth?
  - What are some indicators of each stage?
3. What are signs of flashover, backdraft, and smoke explosion?
4. How do building contents contribute to fire development?
5. How does wind affect fire in a structure?

### Application

1. Determined by instructor

### Instructor Notes

1. Recommend using videos or burn boxes/dollhouses to demonstrate aspects of fire behavior.

**CTS Guide Reference:** 3-10, 3-11, 3-12, 3-17

**Skill Sheet:** None

## Topic 5-3: Extinguishing Fire with Fire Extinguishers

### Terminal Learning Objective

At the end of this topic a student, given a selection of portable fire extinguishers and personal protective equipment (PPE), will be able to extinguish incipient Class A, Class B, and Class C fires so that the correct extinguisher is chosen, correct handling techniques are followed, and the fire is completely extinguished.

### Enabling Learning Objectives

1. Identify types of fire extinguishers
2. Identify rating systems for different types of fire extinguishers
3. Identify risks associated with different types of fire extinguishers
4. Describe the operating methods and limitations of portable extinguishers
  - Stored water pressure (Class A)
  - Dry chemical (Class B)
  - CO<sub>2</sub> (Class C)
  - Combination
5. Select an appropriate extinguisher based on the size and type of fire
6. Safely carry portable fire extinguishers

7. Approach fire with portable fire extinguishers
8. Operate portable fire extinguishers

### Discussion Questions

1. Why does the fire service use different types of fire extinguishers?
2. What does "P.A.S.S." stand for?
3. What does the rating "2A/10BC" represent?

### Application

1. Given PPE and fire extinguishers, have students practice fire extinguisher procedures, applications, and techniques.

### Instructor Notes

1. NFPA 1001 (2019) covers Class A, B, and C extinguishers. Cover additional types (D and K) if appropriate to the AHJ.

**CTS Guide Reference:** 3-16

**Skill Sheet:** 3-16: Select, Carry, and Operate a Portable Fire Extinguisher

## Topic 5-4: Water Supply Systems

### Terminal Learning Objective

At the end of this topic a student, given supply or intake hose, hose tools, a fire hydrant, portable water tank, or static water source, an apparatus, and personal protective equipment, will be able to connect a fire department engine to a water supply as a member of a team, ensuring tight connections and an unobstructed water flow.

### Enabling Learning Objectives

1. Describe types of water supply systems
  - Pump
  - Gravity
  - Combination
2. Describe components of municipal and rural water systems
3. Describe loading and off-loading procedures for a mobile water supply apparatus
4. Describe fire hydrant operations
5. Identify suitable static water supply sources
6. Describe procedures and protocols for connecting to various water sources
  - Hand lay a supply hose
  - Connect and place hard suction hose for drafting operations
  - Deploy portable water tanks and the equipment necessary to transfer between and draft from them
  - Make hydrant-to-pumper hose connects for forward and reverse lays
  - Connect supply hose to a hydrant
  - Fully open hydrant when hose is connected
  - Fully close hydrant when operation ends

### Discussion Questions

1. What types of water sources are available to fire departments?
2. What are the components of a water supply system?

### Application

1. Given a water supply, an apparatus, hoses, hydrants, and tools, have students connect supply hose to hydrant or water sources and provide an unobstructed water flow.

### Instructor Notes

1. ELO 10: Some AHJs have appliances that connect hose to water supplies. Note this if it's appropriate to the AHJ.
2. For all water supplies, only flush the system until the water runs clear.

### CTS Guide Reference: 3-15

### Skill Sheet:

- 3-15a - Deploy Portable Tank and Prepare for Drafting Operations
- 3-15b - Forward Hose Lay

## Topic 5-5: Cleaning, Inspecting, and Returning Fire Hose to Service

### Terminal Learning Objective

At the end of this topic a student, given washing equipment, water, detergent, tools, and replacement gaskets, will be able to clean, inspect, and return fire hose to service so that damage is noted and corrected, the hose is clean, and the equipment is placed in a ready state for service.

### Enabling Learning Objectives

1. Describe fire hoses
  - Types
  - Design
  - Uses
    - Attack line
    - Supply line
2. Describe departmental procedures for inspecting a hose according to manufacturer guidelines, noting any defects, and removing it from service
3. Describe nozzles
  - Types
  - Design
  - Operation
  - Pressure effects
  - Flow capabilities
4. Identify fittings, tools, and appliances
5. Describe how to apply each size and type of attack line
6. Describe cleaning and maintenance methods
  - Hose
  - Nozzles
  - Appliances
7. Describe types of hose rolls
  - Single roll
  - Donut roll

- Twin donut roll
  - Self-locking twin donut roll
8. Describe types of hose loads
    - Flat load
    - Minute-man load
    - Triple fold
    - Accordion
    - Horse shoe
    - Hose bundles (AHJ specific)
  9. Clean different types of hose
  10. Operate hose washing and drying equipment
  11. Replace coupling gaskets
  12. Mark defective hose

### Discussion Questions

1. What different types of hose does a fire department use?
2. How are attack lines and supply lines different?
3. Why is it important to clean, inspect, load, roll, and store fire hose?

### Application

1. Given PPE and hoses, have students practice different hose roles
2. Given PPE and cleaning supplies and equipment, have students inspect, clean, and store hoses

### Instructor Notes

1. ELO 8: Teach the hose loads most applicable to the AHJ

**CTS Guide Reference:** 3-10, 4-2

### Skill Sheet:

- 4-2a: Replace a Burst Section of Hose
- 4-2b: Build Hose Rolls

## Topic 5-6: Performing an Annual Service Test on Fire Hose

### Terminal Learning Objective

At the end of this topic a student, given an apparatus or a hose testing device, a marking device, pressure gauges, a timer, record sheets, and related equipment, will be able to perform an annual service test on fire hose, so that procedures are followed, the condition of the hose is evaluated, any damaged hose is removed from service, and the results are recorded.

### Enabling Learning Objectives

1. Describe procedures for safely conducting hose service testing
  - Use host testing equipment or tools that regulate water flow in case of equipment or hose failure
  - Keep area clear of personnel during test
  - Use proper helmets and PPE
  - Operate testing equipment using manufacturer guidelines

- Maintain focus and avoid complacency
  - Comply with NFPA 1962
2. Identify indicators that dictate when hose should be removed from service
  3. Describe AHJ procedures for documenting hose test results
  4. Operate hose testing equipment and nozzles
  5. Record results

### Discussion Questions

1. What is the proper PPE for hose testing?
2. How often is hose testing conducted?
3. What equipment is used in conjunction with hose testing?
4. What type of injuries might occur during hose testing? How can they be prevented?

### Application

1. Given an apparatus or hose testing device, hose, related equipment, and PPE, have students set up a hose service test, describe how they would execute the test and mark the hose, and identify the indicators they would look for to determine whether or not the hose should be removed from service.

### Instructor Notes

1. None

**CTS Guide Reference:** 15-5

**Skill Sheet:** 15-5: Perform an Annual Service Test on a Fire Hose

## Topic 5-7: Deploy and Connect Fire Hose

### Terminal Learning Objective

At the end of this topic a student, given a water supply, tools and equipment, hose, nozzles, appliances, personal protective equipment (PPE), and an apparatus, will be able to place hose into service on an assigned apparatus so that nozzles and appliances are connected in accordance with manufacturer specification and attack lines are placed into position.

### Enabling Learning Objectives

1. Identify the principles of fire streams
2. Describe types of supply line hose deployments (carries and drags)
3. Describe types of attack line hose deployments (carries and drags)
  - Minute-man load
  - Triple fold
  - Pre-connected flat load
  - Working line drag method
  - Shoulder load method
  - Hose bundle (AHJ specific)
  - Wyed lines
4. Identify precautions to be followed when advancing hose lines to the objective
5. Open, close, and adjust nozzle flow and patterns
6. Describe observable results that a fire stream has been properly applied
7. Prevent water hammer when shutting down nozzles

8. Couple and uncouple various hose line connections
  - Coupling hose – One fire fighter foot tilt method
  - Coupling hose – Two fire fighters
  - Uncoupling hose knee press
  - Uncoupling hose – Two fire fighter stiff-arm
9. Roll hose
10. Carry hose
11. Reload hose
12. Replace burst hose sections
13. Hand lay a supply hose
14. Connect and place hard suction hose for drafting operations
15. Deploy portable water tanks and the equipment necessary to transfer between and draft from them
16. Make hydrant-to-engine hose connections for forward and reverse lays
17. Connect a supply hose to a hydrant
18. Fully open hydrant when hose is connected
19. Fully close hydrant when operation ends

### Discussion Questions

1. What are the pros and cons associated with different hose deployments?
2. What factors determine nozzle selection?
3. What is water hammer?

### Application

1. Given a water supply, tools and equipment, hose, nozzles, appliances, personal protective equipment (PPE), and an apparatus, have students:
  - Deploy and load attack lines
  - Deploy and load supply lines
  - Connect and operate nozzles and appliances
  - Flow water

### Instructor Notes

1. ELOs 13-19 are covered in Topic 5-4 from a cognitive perspective. In this topic they should be approached as a psychomotor objective.

**CTS Guide Reference:** 3-10, 3-15, 4-2

### Skill Sheet:

- 3-10d: Extend a Hose Line
- 3-10e: Load, Deploy, and Advance an Attack Line
- 3-10f: Load Supply Hose
- 3-15a: Deploy Portable Tank and Prepare for Drafting Operations
- 3-15b: Forward Hose Lay
- 4-2a: Replace a Burst Section of Hose
- 4-2b: Build Hose Rolls - (6.11.19)

## Topic 5-8: Utility Control at Emergencies

### Terminal Learning Objective

At the end of this topic a student, given tools and personal protective equipment (PPE), will be able to turn off building utilities in order to safely complete an assignment.

### Enabling Learning Objectives

1. Describe properties and principles of and safety concerns for electrical systems
  - Primary electrical service
  - Secondary electrical service
  - Alternative energy services
2. Describe properties and principles of and safety concerns for gas systems
3. Describe properties and principles of and safety concerns for water systems
4. Identify utility disconnect methods
5. Identify dangers associated with different utility disconnect methods
6. Describe how to use required safety equipment
7. Identify utility control devices
8. Operate control valves or switches
9. Assess for related hazards

### Discussion Questions

1. What types of utility systems might a fire fighter encounter at a structure fire?
2. What hazards do electrical, gas, and water systems present during a structure fire?
3. What safety precautions should a fire fighter take when securing electrical systems at a structure fire?

### Application

1. Given a geographic area, have students identify gas, propane, electrical, and photovoltaic utilities and determine control techniques for different structures.

### Instructor Notes

1. State Fire Training has an FSTEP course called Fire Operations for Photovoltaic Emergencies (2010). Consider using the content for reference materials.

**CTS Guide Reference:** 3-18

**Skill Sheet:** 3-18: Turn Off Building Utilities

## Topic 5-9: Cleaning, Inspecting, and Maintaining Fire Service Ladders

### Terminal Learning Objective

At the end of this topic a student, given single and/or extension ladders, personal protective equipment (PPE), and cleaning equipment and supplies, will be able to clean and inspect fire service ladders so that ladders are cleaned, inspected, maintained, and ready for or removed from service.

### Enabling Learning Objectives

1. Identify types of fire service ladders
  - Ground
  - Aerial

2. Describe ladders
  - Types
  - Parts
  - Construction features
3. Identify the uses of ladders
4. Identify guidelines for cleaning, inspecting, and maintaining ladders
  - Manufacturer guidelines
  - AHJ guidelines
  - Documentation and reporting requirements
5. Describe methods for cleaning ladders
  - Equipment/tools to use
  - Solvents or solutions to use
6. Identify when and how to remove ladders from service
  - Manufacturer guidelines
  - AHJ guidelines
  - Documentation and reporting requirements

### Discussion Questions

1. What are some of the general uses of ground ladders?
2. What type of damage or defects would cause a fire fighter to remove a ladder from service?

### Application

1. Given single and/or extension ladders, personal protective equipment (PPE), and cleaning equipment and supplies, have students clean, inspect, and maintain ladders.
2. Given damaged or defective ladders (or images), have students identify the damaged or defective portions.

### Instructor Notes

1. None

**CTS Guide Reference:** 3-6

**Skill Sheet:** 3-6: Lift, Carry, and Raise a Ground Ladder

## Topic 5-10: Ground Ladder Operations

### Terminal Learning Objective

At the end of this topic a student, given single and/or extension ladders, an assignment, team members (if needed), and personal protective equipment (PPE), will be able to set up, mount, ascend, dismount, and descend ground ladders, so that hazards are assessed, ground ladders are stable and their angles are correct for climbing, extension ladders are extended to the necessary height with the fly locked, the top of the ladder is placed against a reliable structural component, and the assignment is accomplished.

### Enabling Learning Objectives

1. Identify types of lifts and carries
  - High shoulder – Single/two fire fighter
  - Low shoulder – Single/two/three fire fighter

- Flat shoulder method – Three/four fire fighter
  - Suitcase or arm's length carry – Single/two fire fighter
2. Identify types of raises
    - Flat raise (single/two/three/four fire fighter)
    - Beam raise (single/two/three fire fighter)
    - AHJ-specific raises
  3. Describe methods used to secure ground ladders
  4. Describe safety limits to the degree of angulation
  5. Identify different angles for various tasks
    - Access
    - Search
    - Ventilation
  6. Describe the hazards associated with setting up ladders
  7. Define what constitutes a stable foundation for ladder placement
  8. Describe what constitutes a reliable structural component for top placement
  9. Describe proper climbing techniques
  10. Describe how to operate from ground ladders
    - Belts
    - Leg locks
    - AHJ-specific techniques
  11. Determine that a wall and roof will support the ladder
  12. Judge extension ladder height requirements
  13. Lift and carry ladders
  14. Move and place ladder to avoid obvious hazards
  15. Raise and extend ladders and lock flies
  16. Secure ground ladders
  17. Demonstrate proper climbing techniques
  18. Operate from ground ladders
  19. Demonstrate leg lock method
  20. Mount, ascend, dismount, and descend ladders

### Discussion Questions

1. How would you place a ladder for:
  - Access?
  - Rescue?
  - Ventilation?
2. What are the pros and cons of different ladder raises?

### Application

1. Given single and/or extension ladders, sample scenarios, team members (if needed), and personal protective equipment (PPE), have students work in groups to mount, ascend, dismount, and descend ground ladders to meet different incident objectives.

### Instructor Notes

1. ELO 3: Can be “fly in” or “fly out” based on the AHJ requirements.

**CTS Guide Reference:** 3-6

**Skill Sheet:** 3-6: Lift, Carry, and Raise a Ground Ladder

### **Topic 5-11: Forcing Entry into a Structure**

#### **Terminal Learning Objective**

At the end of this topic a student, given personal protective equipment (PPE), tools, an assignment, and a prop or structure with doors, windows, and walls, will be able to force entry into a structure so that tools are used as designed, the barrier is removed, and the opening is in a safe condition and ready for entry.

#### **Enabling Learning Objectives**

1. Describe basic construction of typical doors, windows, and walls within the department's community or service area
  - Residential
  - Commercial
2. Describe types and uses of hand and power tools used in forcible entry
3. Describe operation of doors, windows, and locks
4. Identify the dangers associated with forcing entry through doors, windows, and walls
5. Transport and operate hand and power tools used in forcible entry
6. Force entry through doors, locks, windows, and walls using assorted methods and tools

#### **Discussion Questions**

1. How would you size up a door for forcible entry purposes?
2. What are indicators of an inward versus an outward swinging door?
3. What tools would you use to force entry through:
  - A residential door?
  - A roll-up door at a commercial structure?
4. What are some safety considerations during forcible entry operations?

#### **Application**

1. Given personal protective equipment (PPE), tools, an assignment, and a prop or structure with doors, windows, and walls, have students practice forcible entry techniques.

#### **Instructor Notes**

1. Recommend discussing the need for forcible exit in survival scenarios.

**CTS Guide Reference:** 3-4

**Skill Sheet:** 3-4: Force Entry into a Structure

### **Topic 5-12: Conducting a Search and Rescue Operation in a Structure**

#### **Terminal Learning Objective**

At the end of this topic a student, given an assignment, obscured vision conditions, personal protective equipment (PPE), self-contained breathing apparatus (SCBA), a flashlight, forcible entry tools, hose lines or guide lines, a thermal imaging device, and ladders (when necessary), will be able to conduct a search and rescue operation in a structure so that

ladders are correctly placed when used, all assigned areas are searched, all victims are located and removed, team integrity is maintained, and team members' safety, including respiratory protection, is not compromised.

### Enabling Learning Objectives

1. Define primary and secondary search techniques
  - Team-based
  - Orientator method
  - VEIS (vent, enter, isolate, search)
  - Point-to-point with TIC/TID
2. Describe how to use tools, and equipment for search and rescue operations
  - Thermal imaging devices
  - Hand tools
  - Lights
  - Ladders
  - Search rope
  - Hose line
3. Identify team members' roles and goals in search and rescue operations within a structure
4. Identify considerations related to respiratory protection
5. Describe methods to determine if an area is tenable
6. Describe methods and indicators used to locate victims
7. Identify psychological effects of operating in obscured conditions and ways to manage them
8. Describe victim removal methods (including various lifts, carries, and drags)
9. Assess areas to determine tenability
10. Demonstrate a primary and secondary search
11. Demonstrate victim removal methods
12. Set up and use different types of ladders for various types of rescue operations
  - Balcony
  - Fire escape
  - Roof
  - Window
13. Remove the victim down a ladder
  - Conscious
  - Unconscious
14. Rescue a fire fighter with functioning respiratory protection
15. Rescue a fire fighter whose respiratory protection is not functioning
16. Rescue a person who has no respiratory protection
17. Use SCBA to exit through restricted passages

### Discussion Questions

1. When conducting a search in a residential structure, which areas should be searched first, second, third, etc.?

2. What tools and equipment will make room/area searches more efficient?
3. What is the difference between a primary search and a secondary search?

### Application

1. Given an assignment, obscured vision conditions, personal protective equipment (PPE), self-contained breathing apparatus (SCBA), a flashlight, forcible entry tools, hose lines or guide lines, a thermal imaging device, and ladders (when necessary), have students practice search and rescue operations.

### Instructor Notes

2. Make sure to cover proper lifting techniques for victim removal.

### CTS Guide Reference: 3-9

### Skill Sheet:

- 3-9a - Search for and Rescue a Victim with no Respiratory Protection
- 3-9b - Rescue a Fire Fighter
- 3-9c - Use a Ladder for Rescue

## Topic 5-13: Attacking an Interior Structure Fire

### Terminal Learning Objective

At the end of this topic a student, given personal protective equipment (PPE), an attack line (1<sup>1</sup>/<sub>2</sub>-inch or larger), pumping apparatus, established water supply, ladders (when needed), self-contained breathing apparatus (SCBA), tools, and an assignment, will be able to attack an interior structure fire operating as a member of a team so that team integrity is maintained, the attack line is deployed for advancement, ladders are correctly placed when used, access into the fire area is gained, effective water application practices are used, the fire is correctly approached, attack techniques facilitate suppression given the level of the fire, hidden fires are located and controlled, correct body posture is maintained, hazards are recognized and managed, and the fire is brought under control.

### Enabling Learning Objectives

1. Identify precautions to be followed when advancing hose lines to a fire
2. Identify principles of exposure protection
  - Exterior
  - Interior
3. Describe attack and control techniques for below, at, and above grade level *fires*
4. Identify methods for locating and exposing hidden fires
5. List common types of accidents or injuries and their causes
6. Apply water using direct, indirect, and combination attacks
7. Describe observable results that a fire stream has been properly applied
8. Advance charged and uncharged hand lines of 1½-inch diameter or larger up ladders and up and down interior and exterior stairways
9. Operate charged hand lines of 1½-inch diameter or larger while secured to a ground ladder
10. Demonstrate how to attack fires below grade, at grade, and above grade
11. Locate and suppress interior wall and subfloor fires

12. Define the role of the backup team in fire attack situations

### Discussion Questions

1. What are critical fireground factors to consider prior to and during fire suppression operations?
2. What is the difference between a second line and a backup line?
3. What are indicators of a below grade fire?
4. What hazards are associated with below grade fires?

### Application

1. Determined by instructor

### Instructor Notes

1. There are two ways to deliver the live fire training included in Topic 5-10:
  - Option 1: Use one of State Fire Training's three Fire Control courses: Fire Control 3A: Structural Fire Fighting in Acquired Structures (2009), Fire Control 3B: Structural Fire Fighting in Live-Fire Simulators (2009), or **Course Title (year)**.
    - May use simulated live fire training evolutions during Fire Fighter 1 – Structure certification exam testing.
  - Option 2: Use the TLO and ELOs listed in Topic 5-10
    - Must use live fire training evolutions compliant with NFPA 1403 (current edition) during Fire Fighter 1 – Structure certification exam testing.
    - Skills Evaluator for certification exam must be a registered Fire Control 3 primary instructor.
2. Students are required to know how to attack and control below grade, at grade, and above grade fires (ELO 2) but only have to apply that knowledge to one of those three options (ELO 9) during a live fire evolution.
3. Any training or practice for this topic that involves live fire requires PPE compliant with NFPA 1971 (current edition) and SCBA compliant with NFPA 1981 (current edition).

### CTS Guide Reference: 3-10

### Skill Sheet:

- 3-10a: Operate a Charged Attack Hoseline from a Ground Ladder
- 3-10b: Attack a Live Interior Structure Fire
- 3-10c: Attack a Simulated Interior Structure Fire
- 3-10d: Extend a Hoseline
- 3-10e: Load, Deploy, and Advance an Attack Line
- 3-10f: Load Supply Hose

## Topic 5-14: Coordinating an Interior Attack Line

### Terminal Learning Objective

At the end of this topic a student, given attack lines, personnel, PPE, and tools, will be able to coordinate an interior attack line for a team's accomplishment of an assignment in a structure fire so that crew integrity is established; attack techniques are selected for the given level of the fire (e.g., attic, grade level, upper levels, or basement); attack techniques are communicated to the attack teams; constant team coordination is maintained; fire

growth and development is continuously evaluated; search, rescue, and ventilation requirements are communicated or managed; hazards are reported to the attack teams; and incident command is apprised of changing conditions.

### Enabling Learning Objectives

1. Describe how to select the nozzle and hose for fire attack
2. Describe how to select adapters and appliances to be used for specific fireground situations
3. Identify dangerous building conditions created by fire and fire suppression activities
  - Collapse
  - Increased water weight
  - Building construction
  - Improper ventilation
  - Flow path
  - Flashover
  - Rapid fire development
  - Smoke (volume, velocity, density, and color)
4. Describe indicators of building collapse
5. List indicators of structural instability
6. Describe the effects of fire and fire suppression activities on wood, masonry (brick, block, stone), cast iron, steel, reinforced concrete, gypsum wallboard, glass, and plaster on lath
7. Describe coordinated search and rescue and ventilation procedures
8. Describe suppression approaches and practices for various types of structural fires
  - Offensive vs. defensive
  - Traditional vs. transitional
  - Direct vs. indirect
9. Describe the association between specific tools and special forcible entry needs
10. Assemble a team
11. Choose attack techniques for various levels of a fire (e.g., attic, grade level, upper levels, or basement)
12. Evaluate and forecast a fire's growth and development
13. Select tools for forcible entry
14. Incorporate search and rescue procedures and ventilation procedures in the completion of the attack team efforts
15. Determine developing hazardous building or fire conditions

### Discussion Questions

1. What are some considerations for line selection and placement?
2. Why is reading smoke essential for fire fighter safety?
3. What are some indicators of a below grade or basement fire?

### Application

1. Given a simulated scenario, attack lines, personnel, PPE, and tools, have students work in teams to coordinate an interior attack line.

### Instructor Notes

1. None

**CTS Guide Reference:** 13-3

**Skill Sheet:** 13-3: Coordinate an Interior Fire Attack Line

### Topic 5-15: Horizontal Ventilation Operations

#### Terminal Learning Objective

At the end of this topic a student, given an assignment, personal protective equipment (PPE), ventilation tools, equipment, and ladders, will be able to perform horizontal ventilation on a structure operating as part of a team so that ventilation openings are free of obstructions, tools are used as designed, ladders and ventilation devices are placed correctly, and the structure is cleared of smoke.

#### Enabling Learning Objectives

1. Describe horizontal ventilation
  - Principles
  - Methods
    - Natural
    - Mechanical
    - Hydraulic
  - Techniques
    - Positive pressure
    - Negative pressure
  - Advantages
  - Limitations
  - Effects
2. Describe how to ventilate a structure using different ventilation methods
3. Describe safety considerations when venting a structure
4. Describe the importance of communication and coordination between fire attack and ventilation teams
5. Identify guidelines for cleaning, inspecting, and maintaining horizontal ventilation tools
  - Manufacturer guidelines
  - AHJ guidelines
  - Documentation and reporting requirements
6. Describe methods for cleaning horizontal ventilation tools
  - Equipment/tools to use
  - Solvents or solutions to use
7. Identify when and how to remove horizontal ventilation tools from service
  - Manufacturer guidelines
  - AHJ guidelines
  - Documentation and reporting requirements
8. Transport and operate ventilation tools and equipment and ladders
9. Use safe procedures for breaking window and door glass and removing obstructions

10. Horizontally ventilate a structure

**Discussion Questions**

1. What situations call for horizontal ventilation?
2. What are different ways to complete horizontal ventilation?
3. What are some safety considerations when using horizontal ventilation?
4. What are the ramifications of opening windows and doors without coordinating with attack crews?

**Application**

1. Given an assignment, personal protective equipment (PPE), ventilation tools, equipment, and ladders, have students practice horizontal ventilation techniques.

**Instructor Notes**

1. Recommend using case studies or videos of effective and ineffective horizontal ventilation.

**CTS Guide Reference:** 3-11

**Skill Sheet:** 3-11: Perform Horizontal Ventilation

**Topic 5-16: Vertical Ventilation Operations**

**Terminal Learning Objective**

At the end of this topic a student, given an assignment, personal protective equipment (PPE), ground and roof ladders, and ventilation tools, will be able to perform vertical ventilation on a structure as part of a team so that position ladders are positioned for ventilation, a specified opening is created, all ventilation barriers are removed, structural integrity is not compromised, products of combustion are released from the structure, and the team retreats from the area when ventilation is accomplished.

**Enabling Learning Objectives**

1. Describe vertical (top-side) ventilation
  - Principles
  - Tactics
    - Offensive (exhaust opening/hot or heat hole)
    - Defensive (trench/strip)
  - Advantages
  - Limitations
  - Effects
2. Describe how to ventilate a structure using different ventilation methods
  - Cut hole
  - Communicate with crew
  - Remove or tilt decking material
  - Plunge through interior ceiling using hand tools
  - Evaluate effectiveness
3. List the techniques and safety precautions for venting flat roofs, pitched roofs, and basements

4. Identify the effects of construction type and elapsed time under fire conditions on structural integrity
5. Describe basic indicators of potential collapse or roof failure
6. Describe the importance of communication and coordination between fire attack and ventilation teams
7. Identify guidelines for cleaning, inspecting, and maintaining vertical ventilation tools
  - Manufacturer guidelines
  - AHJ guidelines
  - Documentation and reporting requirements
8. Describe methods for cleaning vertical ventilation tools
  - Equipment/tools to use
  - Solvents or solutions to use
9. Identify when and how to remove vertical ventilation tools from service
  - Manufacturer guidelines
  - AHJ guidelines
  - Documentation and reporting requirements
10. Transport and operate ventilation tools and equipment and ladders
11. Select, carry, deploy, and secure ground ladders for ventilation activities
12. Deploy roof ladders on pitched roofs while secured to a ground ladder for vertical ventilation
13. Carry ventilation-related tools and equipment while ascending and descending ladders
14. Hoist ventilation tools to a roof
15. Sound the surface for integrity
16. Cut roofing or flooring materials to vent flat roofs, pitched roofs, or basements
17. Clear an opening with hand tools
18. Retreat from the area when ventilation is accomplished

### Discussion Questions

1. When is vertical ventilation performed versus horizontal ventilation?
2. What safety factors should be considered when performing vertical/top-side ventilation?
3. What types of cuts can be performed to achieve vertical ventilation?
4. What are some indicators that a roof is not safe for operations?

### Application

1. Given an assignment, personal protective equipment (PPE), ventilation tools, equipment, and ladders, have students practice vertical ventilation techniques.

### Instructor Notes

1. Recommend using case studies or videos of effective and ineffective vertical ventilation.

**CTS Guide Reference:** 3-12

**Skill Sheet:** 3-12: Perform Vertical Ventilation

## Topic 5-17: Conserving Property

### Terminal Learning Objective

At the end of this topic a student, given an assignment, salvage tools and equipment, and personal protective equipment (PPE), will be able to conserve property as a member of that team so that the building and its contents are protected from further damage.

### Enabling Learning Objectives

1. Describe the purpose of property conservation and its value to the public
2. Identify salvage tools and equipment
  - Salvage tarps
  - Water evacuation pumps
  - Squeegees
  - Brooms
  - Shovels
  - Hose
  - Board-up equipment
3. Identify guidelines for cleaning, inspecting, and maintaining salvage tools and equipment
  - Manufacturer guidelines
  - AHJ guidelines
  - Documentation and reporting requirements
4. Describe methods for cleaning salvage tools and equipment
  - Equipment/tools to use
  - Solvents or solutions to use
5. Identify when and how to remove salvage tools and equipment from service
  - Manufacturer guidelines
  - AHJ guidelines
  - Documentation and reporting requirements
6. Describe methods used to protect property
7. List types of and uses for salvage covers
8. Describe operations at properties protected with automatic sprinklers
9. Describe how to stop the flow of water from an automatic sprinkler head
10. Identify the main control valve on an automatic sprinkler system
11. Describe procedures for protecting possible areas of origin and potential evidence
12. Describe forcible entry issues related to salvage
13. Cluster furniture
14. Deploy covering materials
15. Roll and fold salvage covers for reuse
16. Construct water chutes and catch-alls
17. Remove water
18. Cover building openings, including doors, windows, floor openings, and roof openings
19. Stop the flow of water from a sprinkler with sprinkler wedges or stoppers
20. Operate a main control valve on an automatic sprinkler system

### Discussion Questions

1. Why is property conservation important?
2. When does property conservation take place?
3. What are some effective ways to conserve property?
4. What is the difference between primary and secondary damage?

### Application

1. Given the contents of a room and tarps, have students practice arranging contents and throwing tarps to protect against water and smoke damage.
2. Given tools and salvage equipment, have students practice removing water from inside a structure.
3. Given tools and salvage equipment, have students practice stopping or diverting water from a sprinkler system.
4. Given a prop, materials, and tools, have students practice boarding up openings.

### Instructor Notes

1. None

### CTS Guide Reference: 3-14

### Skill Sheet:

- 3-14a: Control Water Flow from a Sprinkler System
- 3-14b: Remove Water from the Interior of a Structure
- 3-14c: Salvage a Room and its Contents
- 3-14d: Cover Building Openings

## Topic 5-18: Overhauling a Fire Scene

### Terminal Learning Objective

At the end of this topic a student, given personal protective equipment (PPE), an attack line, hand tools, a flashlight, and an assignment, will be able to overhaul a fire scene so that structural integrity is not compromised, all hidden fires are discovered, fire cause evidence is preserved, and the fire is extinguished.

### Enabling Learning Objectives

1. Describe the purposes and methods of overhaul
2. Describe the types of fire attack lines and water application devices most effective for overhaul
3. Describe water application methods for extinguishment that limit water damage
4. Identify types of tools and methods used to expose hidden fire
  - Senses
  - Hand and power tools
  - Thermal imaging devices
5. Describe hazard mitigation associated with overhaul
  - Atmosphere quality
    - Air monitoring
    - Respiratory protection
  - Structural integrity

- Hidden fires
  - Fire fighter complacency
  - Construction damage (nails, insulation, etc.)
6. Identify reasons for protecting a fire scene
  7. Describe obvious signs of arson, area of origin, or cause
  8. List techniques for the preservation of fire cause evidence
  9. Deploy and operate an attack line for overhaul
  10. Apply water for maximum effectiveness
  11. Expose and extinguish hidden fires in walls, ceilings, and subfloor spaces
  12. Remove floor, ceiling, and wall components to expose void spaces without compromising structural integrity
  13. Recognize and preserve obvious signs of arson, area of origin, and cause
  14. Separate, remove, and relocate charred material to a safe location while protecting the area of origin for cause determination
  15. Evaluate for complete extinguishment

### Discussion Questions

1. What safety factors should be considered when performing overhaul operations?
2. What tools and equipment are used to perform overhaul operations?
3. What are ways to preserve an area for a proper fire investigation prior to and during overhaul operations?

### Application

1. Given personal protective equipment (PPE), an attack line, hand tools, a flashlight, and an assignment, have students practice overhaul activities.

### Instructor Notes

1. None

### CTS Guide Reference: 3-13

### Skill Sheet:

- 3-13a - Overhaul a Fire Scene
- 3-13b - Remove Charred Materials

## Topic 5-19: Protecting Evidence of Fire Cause and Origin

### Terminal Learning Objective

At the end of this topic a student, given a flashlight, *PPE*, and overhaul tools, will be able to protect evidence of fire cause and origin so that the evidence is noted and protected from further disturbance until investigators can arrive on the scene.

### Enabling Learning Objectives

2. Identify methods to assess fire origin and cause
3. List types of evidence
4. Describe means to protect various types of evidence
5. Identify the role and relationship a Fire Fighter 2 during fire investigations with:
  - Criminal investigators
  - Insurance investigators

6. Describe the effects and problems associated with removing property or evidence from the scene
7. Locate the fire's origin area
8. Recognize possible causes
9. Protect the evidence

**Discussion Questions**

10. What is the difference between fire cause and fire origin?
11. Why is it important to determine the area of origin prior to initiating overhaul operations?
12. What are some ways to protect potential evidence?

**Application**

13. Given a simulated scenario, video, or photographs, have students determine the fire's area of origin and possible causes and describe how they would protect potential evidence.

**Instructor Notes**

14. None

**CTS Guide Reference:** 13-4

**Skill Sheet:** 13-4: Protect Evidence of Fire Cause and Origin

## Unit 6: Fire Fighter Survival

### Topic 6-1: Structural Fire Fighter Survival

#### Terminal Learning Objective

At the end of this topic a student, given vision-obscured conditions, personal protective equipment (PPE), and departmental standard operating procedures (SOPs), will be able to activate an emergency call for assistance so that a fire fighter can be located and rescued, and exit a hazardous area as a team so that a safe haven is found before exhausting the air supply, others are not endangered, and team integrity is maintained.

#### Enabling Learning Objectives

1. Describe recommendations for developing a fire fighter survival attitude
  - Need to develop a fire fighter survival attitude
  - Changes needed to reduce the potential for serious injury and death
  - Studies performed to increase fire fighter situational awareness and enhance fireground knowledge
  - Empower and enhance fire fighter training to handle their own emergencies
  - Define what constitutes a safe haven
2. Describe how to recognize and evaluate a potentially hazardous situation
  - Key elements of conducting a thorough size-up
  - Importance of a concise size-up
  - Proper procedures for pre-incident planning
3. Describe how to prevent, recognize, call, and deal with a fire fighter emergency
  - Prevent a fire fighter emergency incident
  - Situations that create or may create a fire fighter emergency
  - Proper procedures for calling a fire fighter emergency
    - L.U.N.A.R. (location, unit, name, assignment, resources)
    - N.U.C.A.N. (name, unit, conditions, actions, needs)
4. Describe how to resolve obstacles and SCBA emergencies faced during a fire fighter survival emergency
  - Determine air consumption rates
  - Perform emergency check procedures
  - Demonstrate techniques utilized by fire fighters when running out of air
  - Demonstrate techniques utilized for escaping from restrictive areas
5. Demonstrate how to overcome a variety of obstacles and SCBA emergencies faced during a fire fighter survival emergency.
  - Read couplings techniques
  - Escape an entanglement emergency using the swim/sweep and SCBA removal methods
  - Escape an emergency using the hose slide
  - Escape an emergency using the emergency ladder escape hook-two/slide-to-four method

- Call “Mayday”
- Change SCBA profile using the non-removal, low or reduced profile (partial-removal), and zero or no profile (full-removal) methods
- Escape an emergency using the window hang
- Escape an emergency using the wall breach
- Perform an SCBA emergency procedure check

### Discussion Questions

1. What are best practices for enhancing fire fighter safety and survival during fire suppression activities?
2. What are common factors that place fire fighters in need of rescue assistance in hazardous conditions?
3. What should a fire fighter do when trapped, disoriented, or out of direct contact with the crew?
4. What do “L.U.N.A.R.” and “N.U.C.A.N.” stand for?

### Application

1. Given a simulated hazardous atmosphere in which their vision is obscured leading to disorientation, have students make an emergency call and then exit the simulated hazardous atmosphere to a safe haven and exit the building/area before their air supply is exhausted.

### Instructor Notes

1. The content in this topic can be fulfilled through completion of State Fire Training’s Fire Fighter Survival (FSTEP) course or IAFF’s Fire Ground Survival program.

**CTS Guide Reference:** 2-4, 3-5

**Skill Sheet:** 3-5: Activate an Emergency Call and Exit a Hazardous Area

## Unit 7: Suppression of Fires Outside of a Structure

### Topic 7-1: Extinguishing Fires in Exterior Class A Materials

#### Terminal Learning Objective

At the end of this topic a student, given attack lines, hand tools, master stream devices, an assignment, personal protective equipment (PPE), and fires in stacked or piled materials, small unattached structures, or storage containers that can be fought from the exterior, will be able to extinguish fires in exterior Class A materials so that exposures are protected, the spread of fire is stopped, collapse hazards are avoided, water application is effective, the fire is extinguished, signs of the origin area(s) and arson are preserved.

#### Enabling Learning Objectives

1. Describe types of exterior fires
2. Describe the types of attack lines and water streams appropriate for attacking stacked or piled materials and outdoor fires
3. Identify water application methods for exposure protection and fire extinguishment
4. Describe hazards associated with stacked and piled materials
  - Contents
  - Configuration
  - Proximity to adjacent structures
5. Describe hazards associated with storage building and container fires
  - Toxic or hazardous materials
6. Describe various extinguishing agents and their effect on different material configurations
7. Identify tools and methods used in breaking up various types of materials
8. Describe the difficulties related to complete extinguishment of stacked and piled materials
9. Identify obvious signs of origin and cause
10. List techniques for the preservation of fire cause evidence
11. Operate hose lines and other water application devices
12. Operate handlines or master streams
  - One fire fighter method (operating a large hand line)
  - Two fire fighter method (operating a large hand line)
  - Master stream
    - Fixed
    - Portable
13. Break up material using hand tools and water streams
14. Evaluate and modify water application for maximum penetration
15. Search for and expose hidden fires
16. Assess patterns for origin determination
17. Evaluate for extension
18. Evaluate for complete extinguishment

### Discussion Questions

1. What life hazards might fire fighters encounter during:
  - Exterior fires?
  - Outbuildings and dumpster fires?
2. What steps can be taken to ensure fire fighter safety?

### Application

1. Given a scenario or location, have students list possible materials found in exterior and outbuilding fires and design a fire attack plan.

### Instructor Notes

1. None

### CTS Guide Reference: 3-8

### Skill Sheet:

- 3-8a - Operate a Portable Master Stream
- 3-8b - Extinguish an Exterior Fire

## Topic 7-2: Attacking a Passenger Vehicle Fire

### Terminal Learning Objective

At the end of this topic a student, given personal protective equipment (PPE), self-contained breathing apparatus (SCBA), an attack line (1½-inch or larger), hand tools, and a passenger vehicle or prop, will be able to attack a passenger vehicle fire operating as a member of a team so that hazards are avoided, leaking flammable liquids are identified and controlled, protection from flash fires is maintained, all vehicle compartments are overhauled, and the fire is extinguished.

### Enabling Learning Objectives

1. Describe hazardous conditions created during a passenger vehicle fire
2. Identify passenger vehicle fuel types
3. Identify alternative fuels and their associated hazards
4. Identify precautions to be followed when advancing hose lines toward a passenger vehicle
5. Describe principles of fire streams as they relate to fighting passenger vehicle fires
6. List observable results that a fire stream has been properly applied
7. Describe common types of accidents or injuries related to fighting passenger vehicle fires and how to avoid them
8. Describe how to access locked passenger, trunk, and engine compartments
9. Identify methods for overhauling a passenger vehicle
10. Assess and control fuel leaks
11. Open, close, and adjust the flow and pattern on nozzles
12. Advance 1½-inch or larger diameter attack lines on a passenger vehicle fire
13. Apply water for maximum effectiveness while maintaining flash fire protection
14. Expose hidden fires by opening all passenger vehicle compartments

### Discussion Questions

1. What safety concerns are associated with passenger vehicle fires?

2. What personal protective equipment should a fire fighter wear while fighting passenger vehicle fires?
3. What hazards do hybrid and alternative fuel passenger vehicle fires present?

### Application

1. Given PPE, SCBA, an attack line (1½-inch or larger), hand tools, and a passenger vehicle or prop, have students practice:
  - Avoiding or mitigating hazards
  - Identifying and controlling flammable liquids
  - Extinguishing fire
  - Overhauling vehicle compartments

### Instructor Notes

1. NFPA has an Alternative Fuel Vehicles Safety Training Program that can be used to support this topic (<https://catalog.nfpa.org/Alternative-Fuel-Vehicles-Training-Program-for-Emergency-Responders-Online-Training-P15552.aspx>).

**CTS Guide Reference:** 3-7

**Skill Sheet:** 3-7: Attack a Passenger Vehicle Fire

## Topic 7-3: Combatting a Ground Cover Fire

### Terminal Learning Objective

At the end of this topic a student, given personal protective equipment (PPE), SCBA (if needed), hose lines, extinguishers or hand tools, and an assignment, will be able to combat a ground cover fire operating as a member of a team so that threats to property are reported, threats to personal safety are recognized, retreat is quickly accomplished when warranted and the assignment is completed.

### Enabling Learning Objectives

1. Describe types of ground cover fires
2. Describe parts of ground cover fires
3. Describe methods to contain or suppress
4. Describe safety principles and practices
5. Determine exposure threats based on fire spread potential
6. Protect exposures
7. Construct a fire line or extinguish with hand tools
8. Maintain integrity of established fire lines
9. Suppress ground cover fires using water

### Discussion Questions

1. What constitutes a ground fire?

### Application

1. Determined by instructor

### Instructor Notes

1. This topic does not address wildland fires. It includes bark, grass, freeway easements, playground cover, etc.

CTS Guide Reference: 3-19

Skill Sheet: None

## Topic 7-4: Extinguishing an Ignitable Liquid Fire

### Terminal Learning Objective

At the end of this topic a student, given an assignment, an attack line, PPE, a foam proportioning device, a nozzle, foam concentrates (or suitable substitute), and a water supply, will be able to extinguish an ignitable liquid fire, operating as a member of a team, so that the correct type of foam concentrate is selected for the given fuel and conditions, a properly proportioned foam stream is applied to the surface of the fuel to create and maintain a foam blanket, fire is extinguished, reignition is prevented, team protection is maintained with a foam stream, and the hazard is faced until retreat to safe haven is reached.

### Enabling Learning Objectives

1. Describe how foam prevents or controls a hazard
  - Separating
  - Cooling
  - Smothering
2. List principles by which foam is generated
  - Foam proportioner
  - Aeration
3. Identify causes of and corrective measures for poor foam generation
  - Incorrect ratios of water, concentrate, and air
4. Describe the difference between hydrocarbon and polar solvent fuels and the concentrates that work on each
  - Hydrocarbon fuels
    - Petroleum based
    - Combustible or flammable
    - Float on water
  - Polar solvent fuels
    - Flammable liquids
    - Mix readily with water
  - Class B foam is utilized for both
5. Identify the characteristics, uses, and limitations of fire-fighting foams
  - Class A
  - Class B
6. Describe the advantages and disadvantages of using fog nozzles versus foam nozzles for foam application
  - Fog nozzle
    - Advantage: Produces low expansion short lasting foam, widely available on most apparatus
    - Disadvantage: May not create the same quality of foam as foam nozzles

- Foam nozzle
  - Advantage: Most effective for generation of low, medium, or high expansion foam
  - Disadvantage: Not as versatile as a fog nozzle and generally does not have the same reach
- 7. Describe foam stream application techniques
  - Rain down
  - Roll in/on
  - Bounce off/Bank down
- 8. List hazards associated with foam usage
  - Can degrade PPE
  - Most are mildly corrosive
  - Environmental impacts
  - Health impacts
- 9. Describe methods to reduce or avoid hazards
  - Maintain foam blanket to reduce risk of reignition
  - Avoid standing in pools of fuel or run-off water
- 10. Prepare a foam concentrate (or suitable substitute) for use
- 11. Assemble foam stream components
- 12. Master various foam application techniques
- 13. Approach and retreat from spills as part of a coordinated team

### Discussion Questions

1. What types of foam are used during fire fighting operations?
2. What are some limitations of foam use?
3. What are some hazards of foam use?

### Application

1. Given an assignment, an attack line, PPE, a foam proportioning device, a nozzle, foam concentrates (or suitable substitute), and a water supply, have students extinguish a simulated or ignitable liquid fire as a member of a team.

### Instructor Notes:

1. The content in this topic can be fulfilled through completion of State Fire Training's Fire Control 4: Controlling Ignitable Liquids and Gases (FSTEP) course.
2. If unable to demonstrate foam application due to cost or environmental restrictions:
  - Use digital sources to review foam application.
  - Demonstrate using dish soap, bucket, and eductor.

**CTS Guide Reference:** 13-1

**Skill Sheet:** 13-1: Extinguish an Ignitable Liquid Fire

## Topic 7-5: Controlling a Flammable Gas Cylinder Fire

### Terminal Learning Objective

At the end of this topic a student, given an assignment, a cylinder outside of a structure, an attack line, PPE, and tools, will be able to control a flammable gas cylinder fire, operating as

a member of a team, so that crew integrity is maintained, contents are identified, safe havens are identified prior to advancing, open valves are closed, flames are not extinguished unless the leaking gas is eliminated, the cylinder is cooled, cylinder integrity is evaluated, hazardous conditions are recognized and acted upon, and the cylinder is faced during approach and retreat.

### Enabling Learning Objectives

1. Identify characteristics of pressurized flammable gases
2. List elements of a gas cylinder
3. Describe effects of heat and pressure on closed cylinders
4. Describe boiling liquid expanding vapor explosion (BLEVE) signs and effects
5. Describe methods for identifying contents
6. Describe how to identify safe havens before approaching flammable gas cylinder fires
7. Describe water stream usage and demands for pressurized cylinder fires
8. Describe what to do if the fire is prematurely extinguished
9. Identify valve types and their operation
10. Describe alternative actions related to various hazards and when to retreat
11. Execute effective advances and retreats
12. Apply various techniques for water application
13. Assess cylinder integrity and changing cylinder conditions
14. Operate control valves
15. Choose effective procedures when conditions change

### Discussion Questions

1. What happens to a gas cylinder when exposed to fire conditions?
2. What safety precautions should be taken in anticipation of a BLEVE?
3. Why is it a problem if a venting tank fire is extinguished prematurely?

### Application

1. Given a cylinder outside of a structure, an attack line, PPE, and tools, have students control a simulated flammable gas cylinder fire as a member of a team.

### Instructor Notes

1. The content in this topic can be fulfilled through completion of State Fire Training's Fire Control 4: Controlling Ignitable Liquids and Gases (FSTEP) course.

**CTS Guide Reference:** 13-2

**Skill Sheet:** 13-2: Control a Flammable Gas Cylinder Fire

## Unit 8: Rescue Operations

### Topic 8-1: Extricating a Victim Entrapped in a Motor Vehicle

#### Terminal Learning Objective

At the end of this topic a student, given stabilization and extrication tools, *a vehicle, and PPE*, will be able to extricate a victim entrapped in a motor vehicle as part of a team so that the vehicle is stabilized, the victim is disentangled without further injury, and hazards are managed.

#### Enabling Learning Objectives

1. Describe the fire department's role at a vehicle accident
2. Describe points of strength and weakness in auto body construction
3. Describe dangers associated with vehicle components and systems
4. Describe the uses and limitations of hand and power extrication equipment
5. Describe safety procedures when using various types of extrication equipment
  - Hazards and dangers associated with emergency scene requiring extrication
  - Basic fire protection with charged hose line and/or fire extinguisher
6. Operate hand and power tools used for forcible entry and rescue as designed
7. Use cribbing and shoring material
8. Use stabilization tools and equipment
9. Choose and apply appropriate techniques for moving or removing vehicle roofs, doors, seats, windshields, windows, steering wheels or columns, and the dashboard

#### Discussion Questions

1. What safety concerns are associated with alternative fuel vehicle extrication?
2. What safety precautions should a fire fighter take when working on modern vehicles?
3. What level of personal protective equipment should a fire fighter use during vehicle extrication?

#### Application

1. Given a stimulated scenario, stabilization and extrication tools, a vehicle or prop, and PPE, have students work in teams to extricate a victim entrapped in a motor vehicle.

#### Instructor Notes

1. The content in this topic can be fulfilled through completion of State Fire Training's Auto Extrication (FSTEP) course.

**CTS Guide Reference:** 14-1

**Skill Sheet:** 14-1: Extricate a Victim Entrapped in a Motor Vehicle

### Topic 8-2: Assisting Rescue Operation Teams

#### Terminal Learning Objective

At the end of this topic a student, given standard operating procedures, necessary rescue equipment, and an assignment, will be able to assist rescue operation teams so that procedures are followed, rescue items are recognized and retrieved in the time as prescribed by the AHJ, and the assignment is completed.

**Enabling Learning Objectives**

1. Identify types of rescue operations
  - Structural collapse
  - Trench collapse
  - Cave and/or tunnel emergencies
  - Confined space emergencies
  - Water and/or ice emergencies
  - Elevator emergencies
  - Escalator emergencies
  - Energized electrical line emergencies
  - Industrial accidents
  - Wilderness search and rescue
2. Describe the fire fighter's role at technical rescue operations
3. Identify hazards associated with technical rescue operations
4. Describe types and uses of rescue tools
5. Identify rescue practices and goals
6. Identify and retrieve various types of rescue tools
7. Establish public barriers
8. Assist rescue teams as a member of the team when assigned

**Discussion Questions**

1. What level of personal protective equipment is appropriate for a [choose one type] rescue?
2. What hazards are associated with a [choose one type] rescue?
3. Why is operational discipline important during technical rescue incidents?

**Application**

1. Determined by instructor

**Instructor Notes**

1. None

**CTS Guide Reference:** 14-2

**Skill Sheet:** 14-2: Assist a Rescue Operations Team

## Unit 9: Fire and Life Safety

### Topic 9-1: Performing a Fire Safety Survey in an Occupied Structure

#### Terminal Learning Objective

At the end of this topic a student, given survey forms and procedures, will be able to perform a fire safety survey in an occupied structure so that fire and life safety hazards are identified, recommendations for their correction are made to the occupant, and unresolved issues are referred to the proper authority.

#### Enabling Learning Objectives

1. Describe AHJ policy and procedures
2. List common causes of fire and their prevention
3. Describe the importance of a fire safety survey and public fire education programs to fire department public relations and the community
4. Identify referral procedures utilized by the AHJ
5. Complete forms
6. Recognize hazards
7. Match findings to preapproved recommendations
8. Effectively communicate findings to occupants or referrals

#### Discussion Questions

1. What is it important to conduct fire safety surveys at occupied structures?
2. What are some essential items to inspect during fire safety surveys?
3. What are common causes of fire in occupied structures?

#### Application

1. Given a survey form or checklist and a location, have students demonstrate the proper method to perform a fire safety survey and communicate results to the occupant or referral entity.

#### Instructor Notes

1. None

**CTS Guide Reference:** 15-1

**Skill Sheet:** 15-1: Perform a Fire Safety Survey in an Occupied Structure

### Topic 9-2: Presenting Fire Safety Information to Station Visitors or Small Groups

#### Terminal Learning Objective

At the end of this topic a student, given prepared materials, will be able to present fire safety information to station visitors or small groups so that all information is presented, the information is accurate, and questions are answered or referred.

#### Enabling Learning Objectives

1. Describe parts of informational materials and how to use them
  - Example programs include:
    - Stop, drop, and roll when clothes are on fire
    - Crawl low under smoke

- Plan and practice a home escape plan with two ways out of each room (especially sleeping rooms), a meeting place, and how to call the fire department (from the neighbor's house)
  - Alert others to an emergency
  - Call the fire department
  - Test and maintain residential smoke alarms according to manufacturer's instructions
2. Identify basic presentation skills
    - Select materials and activities appropriate to age and audience
      - Learning level
      - Physical capabilities
    - Three step delivery
      - Introduce what you are going to tell them
      - Tell them the information
      - Summarize what you told them
    - Consistent messaging
  3. Describe departmental standard operating procedures for giving fire station tours
  4. Describe how to complete a "public contact report"
    - Information for public outreach program analytics
    - Replacement/restock of educational materials
  5. Document presentations
  6. Use prepared materials

### Discussion Questions

1. What types of presentations might a fire fighter deliver?
2. Why is it important to give age appropriate presentations?
3. Why is it important to deliver a consistent message?

### Application

1. Given AHJ talking points and an identified audience, have students work in groups to create and deliver a five-minutes presentation with peer review and feedback.

### Instructor Notes:

1. Recommended resources for additional student learning:
  - NFPA: "Learn Not to Burn" Preschool Program
  - (<https://www.nfpa.org/Public-Education/Resources/Education-Programs/Learn-not-to-burn/Learn-Not-to-Burn-Preschool-Program>)
  - FEMA: Fire Prevention and Public Education
  - (<https://www.usfa.fema.gov/prevention/>)

**CTS Guide Reference:** 15-2

**Skill Sheet:** 15-2: Present Fire Safety Information

## Topic 9-3: Preparing a Preincident Survey

### Terminal Learning Objective

At the end of this topic a student, given forms, necessary tools, and an assignment, will be able to prepare a preincident survey so that all required occupancy information is recorded, items of concern are noted, and accurate sketches or diagrams are prepared.

### Enabling Learning Objectives

1. Describe AHJ requirements for a preincident survey and documentation
2. Describe how fire involvement impacts strategy and tactics
  - 25% vs. 50% vs. 75% vs. 100% involvement
3. Identify water supply sources for fire protection
4. Identify basic components of fire suppression and detection systems
  - Identify general system locations
5. Identify common symbols used to diagram:
  - Construction features
  - Utilities
  - Hazards
  - Fire protection systems
  - NFPA 704 placarding program
6. Identify the importance of accurate diagrams
7. Sketch the site, buildings, and special features
8. Detect hazards and special considerations to include in the preincident sketch
9. Complete all related AHJ documentation

### Discussion Questions

1. What are the essential components of a preincident plan?
2. When should you update a preincident plan?

### Application

1. Given a location and level of fire involvement, have students work in small groups to prepare a preincident survey that records tactical and strategic options.

### Instructor Notes:

1. Recommended resources for additional student learning:
  - Frequently Asked Questions on NFPA 704 (pdf)  
([www.nfpa.org/Assets/files/AboutTheCodes/704/704\\_FAQs.pdf](http://www.nfpa.org/Assets/files/AboutTheCodes/704/704_FAQs.pdf))

**CTS Guide Reference:** 15-3

**Skill Sheet:** 15-3: Prepare a Preincident Survey

## How to Read a Course Plan

A course plan identifies the details, logistics, resources, and training and education content for an individual course. Whenever possible, course content is directly tied to a national or state standard. SFT uses the course plan as the training and education standard for an individual course. Individuals at fire agencies, academies, and community colleges use course plans to obtain their institution's consent to offer course and provide credit for their completion. Instructors use course plans to develop syllabi and lesson plans for course delivery.

### Course Details

The Course Details segment identifies the logistical information required for planning, scheduling, and delivering a course.

### Required Resources

The Required Resources segment identifies the resources, equipment, facilities, and personnel required to delivery the course.

### Unit

Each Unit represents a collection of aligned topics. Unit 1 is the same for all SFT courses. An instructor is not required to repeat Unit 1 when teaching multiple courses within a single instructional period or academy.

### Topics

Each Topic documents a single Terminal Learning Objective and the instructional activities that support it.

### Terminal Learning Objective

A Terminal Learning Objective (TLO) states the instructor's expectations of student performance at the end of a specific lesson or unit. Each TLO includes a task (what the student must be able to do), a condition (the setting and supplies needed), and a standard (how well or to whose specifications the task must be performed). TLOs target the performance required when students are evaluated, not what they will do as part of the course.

### Enabling Learning Objectives

The Enabling Learning Objectives (ELO) specify a detailed sequence of student activities that make up the instructional content of a lesson plan. ELOs cover the cognitive, affective, and psychomotor skills students must master in order to complete the TLO.

### Discussion Questions

The Discussion Questions are designed to guide students into a topic or to enhance their understanding of a topic. Instructors may add to or adjust the questions to suit their students.

### **Application**

The Application segment documents experiences that enable students to apply lecture content through cognitive and psychomotor activities, skills exercises, and formative testing. Application experiences included in the course plan are required. Instructors may add additional application experiences to suit their student population if time permits.

### **Instructor Notes**

The Instructor Notes segment documents suggestions and resources to enhance an instructor's ability to teach a specific topic.

### **CTS Guide Reference**

The CTS Guide Reference segment documents the standard(s) from the corresponding Certification Training Standard Guide upon which each topic within the course is based. This segment is eliminated if the course is not based on a standard.

### **Skill Sheet**

The Skill Sheet segment documents the skill sheet that tests the content contained within the topic. This segment is eliminated if the course does not have skill sheets.



# Hazardous Materials/WMD (2017) Course Plan

## Course Details

- Certification:** Fire Fighter 1
- CTS Guide:** Fire Fighter Certification Training Standards Guide (Month Year)
- Description:** This course provides the awareness skills and knowledge needed for the entry-level fire fighter to recognize and identify hazardous materials and weapons of mass destruction (WMD), isolate hazards and deny entry, and initiate required notification. At the operations level, this course provides the skills and knowledge needed to identify incident scope; select, use, and inspect PPE; perform emergency decontamination; perform assigned tasks at a hazardous materials/WMD incident including product control techniques; and evaluate and report incident progress.
- Designed For:** Entry level fire fighters
- Prerequisites:** None
- Corequisites:** None
- Standard:** Complete all activities, skills, and formative tests.  
Complete all summative tests with a minimum score of 80%.
- Hours (Total):** 24.0 hours  
(15.5 hours lecture / 5.5 hours application / AHJ determines practice and assessment times)
- Maximum Class Size:** 50
- Instructor Level:** Fire Fighter Instructor (See *SFT Procedures Manual* (January 2019) section 6.6 for requirements.)\*
- Instructor/Student Ratio:** 1:50 (Lecture) / 1:50 (Application)
- Restrictions:** None
- SFT Designation:** CFSTES

\* If any portion of this course curriculum is taught using another course plan, the instructor level and ratio of that course plan supersedes this requirement.

## Table of Contents

Required Resources.....	3
Instructor Resources .....	3
Online Instructor Resources.....	3
Student Resources .....	3
Facilities, Equipment, and Personnel .....	3
Time Table .....	4
Time Table Key .....	5
Unit 1: Introduction .....	6
Topic 1-1: Orientation and Administration .....	6
Topic 1-2: Fire Fighter 1 and 2 Certification Process.....	7
Unit 2: Hazardous Materials/WMD Awareness .....	9
Topic 2-1: Description of Duties (Awareness).....	9
Topic 2-2: Recognizing and Identifying Hazardous Materials/WMD and Associated Hazards .	10
Topic 2-3: Isolating the Hazard Area and Denying Entry.....	11
Topic 2-4: Initiating Required Notifications .....	12
Unit 3: Hazardous Materials/WMD Operations.....	14
Topic 3-1: Description of Duties (Operations).....	14
Topic 3-2: Identifying the Scope of a Hazardous Materials/WMD Incident .....	15
Topic 3-3: Selecting, Donning, Working In, and Doffing Approved PPE at a Hazardous Materials/WMD Incident .....	17
Topic 3-4: Performing Emergency Decontamination at a Hazardous Materials/WMD Incident .....	18
Topic 3-5: Identifying Action Options for a Hazardous Materials/WMD Incident.....	19
Topic 3-6: Performing Assigned Tasks at a Hazardous Materials/WMD Incident.....	20
Topic 3-7: Performing Product Control Techniques at a Hazardous Materials/WMD Incident	22
Topic 3-8: Evaluating and Reporting Progress for a Hazardous Materials/WMD Incident .....	24
How to Read a Course Plan.....	25

## Required Resources

### Instructor Resources

To teach this course, instructors need:

- *Fundamentals of Fire Fighter Skills and Hazardous Materials Response* (Jones and Bartlett Learning, 4<sup>th</sup> edition, ISBN: 978-1-284-15133-6)  
or  
*Essentials of Fire Fighting* (IFSTA, 7<sup>th</sup> edition, ISBN: 978-087939657-2)
- *Emergency Response Guidebook* ([U.S. Department of Transportation](http://www.transportation.gov), current edition)
  - This is also available in App format (ERG 2016)
- Full PPE and SCBA that meets AHJ requirements

### Online Instructor Resources

The following instructor resources are available online at

<http://osfm.fire.ca.gov/training/firefighter1>

- Hazardous Materials WMD Skill Sheets
  - 5-2a: Recognize, Identify, and Isolate Hazardous Materials WMD
  - 5-2b: Identify Markings
  - 6-5: Perform Emergency Decontamination
  - 7-1: Don, Work In, and Doff Chemical Protective Clothing
  - 7-2: Perform Product Control

### Student Resources

To participate in this course, students need:

- *Fundamentals of Fire Fighter Skills and Hazardous Materials Response* (Jones and Bartlett Learning, 4<sup>th</sup> edition, ISBN: 978-1-284-15133-6)  
or  
*Essentials of Fire Fighting* (IFSTA, 7<sup>th</sup> edition, ISBN: 978-087939657-2)
- Full PPE and SCBA that meets AHJ requirements

### Facilities, Equipment, and Personnel

The following facilities, equipment, or personnel are required to deliver this course:

- Emergency Response Guidebook
- Samples of: placard, UN number, shipping papers or Safety Data Sheet (SDS)
- Descriptions and pictures of a hazardous materials/WMD incident involving containers that have released a chemical
  - Safety Data Sheet of chemical
- PPE and SCBA
- Decontamination equipment

**Time Table**

Segment	Lecture	Application	Unit Total
<b>Unit 1: Introduction</b>			
Topic 1-1: Orientation and Administration	0.5	0.0	
Topic 1-2: Fire Fighter 1 Certification Process	0.5	0.0	
<b>Unit 1 Totals</b>	<b>1.0</b>	<b>0.0</b>	<b>1.0</b>
<b>Unit 2: Hazardous Materials/WMD Awareness</b>			
Topic 2-1: Description of Duties (Awareness)	1.0	0.0	
Topic 2-2: Recognizing and Identifying Hazardous Materials/WMD and Associated Hazards	2.0	1.0	
Topic 2-3: Isolating the Hazard Area and Denying Entry	0.5	1.0	
Topic 2-4: Initiating Required Notifications	0.5	1.0	
<b>Unit 2 Totals</b>	<b>4.0</b>	<b>3.0</b>	<b>7.0</b>
<b>Unit 3: Hazardous Materials/WMD Operations</b>			
Topic 3-1: Description of Duties (Operations)	1.5	0.5	
Topic 3-2: Identifying the Scope of a Hazardous Materials/WMD Incident	1.5	0.5	
Topic 3-3: Selecting, Donning, Working In, and Doffing Approved PPE at a Hazardous Materials/WMD Incident	1.0	0.5	
Topic 3-4: Performing Emergency Decontamination at a Hazardous Materials/WMD Incident	1.0	1.0	
Topic 3-5: Identifying Action Options for a Hazardous Materials/WMD Incident	3.0	0.0	
Topic 3-6: Performing Assigned Tasks at a Hazardous Materials/WMD Incident	0.5	1.0	
Topic 3-7: Performing Product Control Techniques at a Hazardous Materials/WMD Incident	1.0	1.5	
Topic 3-8: Evaluating and Reporting Progress for a Hazardous Materials/WMD Incident	1.0	0.5	
<b>Unit 3 Totals</b>	<b>10.5</b>	<b>5.5</b>	<b>16.0</b>
<b>Summative Assessment</b>			
Determined by AHJ or educational institution	TBD	TBD	TBD
<b>Skills Practice (Lab / Sets and Reps)</b>			
Determined by AHJ or educational institution	TBD	TBD	TBD
<b>Course Totals</b>	<b>15.5</b>	<b>8.5</b>	<b>24.0</b>

### **Time Table Key**

1. The Time Table documents the amount of time required to deliver the content included in the course plan.
2. Time is documented using the quarter system: 15 min. = .25 / 30 min. = .50 / 45 min. = .75 / 60 min. = 1.0.
3. The Course Totals do not reflect time for lunch (1 hour) or breaks (10 minutes per each 50 minutes of instruction or assessment). It is the instructor's responsibility to add this time based on the course delivery schedule.
4. Application (activities, skills exercises, and formative testing) time will vary depending on the number of students enrolled. The Application time documented is based on the maximum class size identified in the Course Details section.
5. Summative Assessments are determined and scheduled by the authority having jurisdiction. These are not the written or psychomotor State Fire Training certification exams. These are in-class assessments to evaluate student progress and calculate course grades.

## Unit 1: Introduction

### Topic 1-1: Orientation and Administration

#### Terminal Learning Objective

At the end of this topic a student will be able to identify facility and classroom requirements and identify course objectives, events, requirements, assignments, activities, skills exercises, resources, evaluation methods, and participation requirements in the course syllabus.

#### Enabling Learning Objectives

1. Identify facility requirements
  - Restroom locations
  - Food locations
  - Smoking locations
  - Emergency procedures
2. Identify classroom requirements
  - Start and end times
  - Breaks
  - Electronic device policies
  - Special needs and accommodations
  - Other requirements as applicable
3. Review course syllabus
  - Course objectives
  - Calendar of events
  - Course requirements
  - Student evaluation process
  - Assignments
  - Activities and skills exercises
  - Required student resources
  - Class participation requirements

#### Discussion Questions

1. Determined by instructor

#### Application

1. Determined by instructor

#### Instructor Notes

1. When teaching Fire Fighter 1A, 1B, and 1C in a consecutive format, it is not necessary to repeat this topic for each course. At a minimum, cover it once on the first day of the first course.

## Topic 1-2: Fire Fighter 1 and 2 Certification Process

### Terminal Learning Objective

At the end of this topic a student will be able to identify the requirements for Fire Fighter 1 and 2 certification and be able to describe the certification task book and examination process.

### Enabling Learning Objectives

1. Identify the different levels of certification in the Fire Fighter certification track
  - Fire Fighter 1
  - Fire Fighter 2
2. Identify the prerequisites for certification
  - Fire Fighter 1
  - Fire Fighter 2
3. Identify the course work required for certification
  - Fire Fighter 1
  - Fire Fighter 2
4. Identify the exams required for certification
  - Fire Fighter 1
  - Fire Fighter 2
5. Identify the task book requirements for certification
  - Fire Fighter 1
  - Fire Fighter 2
6. Identify the experience requirements for certification
  - Fire Fighter 1
  - Fire Fighter 2
7. Identify the position requirements for certification
  - Fire Fighter 1
  - Fire Fighter 2
8. Describe the certification task book process
9. Describe the certification examination process

### Discussion Questions

1. Determined by instructor

### Application

1. Determined by instructor

### Instructor Notes

1. When teaching Fire Fighter 1A, 1B, and 1C in a consecutive format, it is not necessary to repeat this topic for each course. At a minimum, cover it once on the first day of the first course.
2. Use the *SFT Procedures Manual (2019)* 7.12.1 Fire Fighter 1 (2019) and 7.12.3 Fire Fighter 2 (2019) content for ELOs 2 through 7.
3. Use a copy of the Fire Fighter 2 Certification Task Book to walk students through the task book process and expectations for ELO 8.

4. Use the *SFT Procedures Manual (2019)* (Chapter 11: Fire Fighter Certification Exams) content for ELO 9.

Draft

## Unit 2: Hazardous Materials/WMD Awareness

### Topic 2-1: Description of Duties (Awareness)

#### Terminal Learning Objective

At the end of this topic a student will be able to identify the awareness roles and responsibilities of a Fire Fighter who encounters an emergency involving hazardous materials/weapons of mass destruction (WMD).

#### Enabling Learning Objectives

1. Identify the role of awareness personnel at a hazardous materials/WMD incident per CCR Title 8, §5192(q)(6)(A), First Responder, Awareness Level (FRA):
  - First responders at the awareness level are individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release. They would take no further action beyond notifying the authorities of the release. First responders at the awareness level shall have sufficient training or have had sufficient experience to objectively demonstrate competency in the following areas:
    - An understanding of what hazardous substances are and the risks associated with them in an incident
    - An understanding of the potential outcomes associated with an emergency created when hazardous substances are present
    - The ability to recognize the presence of hazardous substances in an emergency
    - The ability to identify the hazardous substances, if possible
    - An understanding of the role of the first responder awareness individual in the employer's emergency response plan (including site security and control), and the U.S. Department of Transportation's Emergency Response Guidebook
    - The ability to realize the need for additional resources, and to make appropriate notifications to the communication center
2. Identify the location and contents of the AHJ emergency response plan
3. Describe standard operating procedures for awareness personnel

#### Discussion Questions

1. How do you recognize a hazardous material?
2. Where would you locate information on the event?
3. What clues indicate the presence of hazardous materials?
4. What clues indicate the presence of weapons of mass destruction?
5. What actions should you take to protect yourself (awareness level)?
6. What primary notifications should you make?

#### Application

1. Determined by instructor

#### Instructor Notes

1. None

CTS Reference: 5-1

Skill Sheet: None

## Topic 2-2: Recognizing and Identifying Hazardous Materials/WMD and Associated Hazards

### Terminal Learning Objective

At the end of this topic a student, given a hazardous materials/WMD incident and approved reference sources, will be able to recognize and identify the hazardous materials/WMD and hazards involved in a hazardous materials/WMD incident so that the presence of hazardous materials/WMD is recognized and the materials and their hazards are identified.

### Enabling Learning Objectives

1. Describe how to recognize hazardous materials and WMD
2. List basic hazards associated with classes and divisions
3. Identify indicators to the presence of hazardous materials including:
  - Container shapes
  - NFPA 704 markings
  - Globally harmonized system (GHS) markings
  - Placards
  - Labels
  - Pipeline markings
  - Other transportation markings
  - Shipping papers with emergency response information
  - Other indicators
4. Describe how to access information from the *Emergency Response Guidebook* (ERG) (current edition) using name of the material, UN/NA identification number, placard applied, or container identification charts
5. List types of hazard information available from:
  - The ERG
  - Safety data sheets (SDS)
  - Shipping papers with emergency response information
  - Other approved reference sources
6. Recognize indicators to the presence of hazardous materials/WMD
7. Identify hazardous materials/WMD by name, UN/NA identification number, placard applied, or container identification charts
  - Department of Transportation placarding and labeling system
8. Use the ERG, SDS, shipping papers with emergency response information, and other approved reference sources to identify hazardous materials/WMD and their potential fire, explosion, and health hazards

### Discussion Questions

1. How does the GHS marking system assist responders with identifying hazards present?
2. What are the four types of hazard information found on a NFPA 704 marking system?

3. What is the difference between NFPA marking system and a UN/NA placard?

### Application

1. Given a scenario and an ERG, have students work in small groups to identify potential hazards, fire and health considerations, public safety needs, protective clothing requirements, evacuation considerations, and emergency response options including fire, spill or leak, and first aid.
  - Use both daytime and nighttime scenarios.

### Instructor Notes

1. Bring the ERG (and have students download the App version) and samples of safety data sheets (SDS), shipping papers with emergency response information, and other approved reference sources to show students including any additional AHJ-specific sources or references.

**CTS Reference:** 5-2

### Skill Sheet:

- 5-2a: Recognize, Identify, and Isolate Hazardous Materials/WMD
- 5-2b: Identify Markings

## Topic 2-3: Isolating the Hazard Area and Denying Entry

### Terminal Learning Objective

At the end of this topic a student, given a hazardous materials/WMD incident, policies and procedures, and approved reference sources, will be able to isolate the hazard area and deny entry at a hazardous materials/WMD incident so that the hazard area is isolated and secured, personal safety procedures are followed, hazards are avoided and/or minimized, and additional people are not exposed to further harm.

### Enabling Learning Objectives

1. Describe how to use the ERG, SDS, shipping papers with emergency response information, and other approved reference sources to identify precautions to be taken to protect responders and the public
2. Describe policies and procedures for isolating the hazard area and denying entry
3. Identify the purpose of and methods for isolating the hazard area and denying entry
  - Evacuation
  - In-place protection/sheltering in place
4. Recognize precautions for protecting responders and the public
5. Identify isolation areas
6. Deny entry
7. Avoid or minimize hazards

### Discussion Questions

1. What is the difference between scene isolation and protective actions for threatened areas?
2. What are the limitations of the different references used by hazardous materials responders (ERG, SDS, shipping papers)?

**Application**

1. Given a simulated scenario and references have students establish isolation for protecting responders and the public and identify how they would deny entry.

**Instructor Notes**

1. ELO 1: Include any additional AHJ-specific sources or references.

**CTS Reference:** 5-3

**Skill Sheet:** 5-2a: Recognize, Identify, and Isolate Hazardous Materials/WMD

**Topic 2-4: Initiating Required Notifications**

**Terminal Learning Objective**

At the end of this topic a student, given a hazardous materials/WMD incident, policies and procedures, and approved communications equipment, will be able to initiate required notifications at a hazardous materials/WMD incident so that the notification process is initiated and the necessary information is communicated.

**Enabling Learning Objectives**

1. Identify policies and procedures for notification, reporting, and communications
  - Local 911
  - Administrating agency (CUPA - local)
  - State Warning Center (state)
  - National Response Center (federal)
2. Identify six general information items needed for mandatory notifications
  - Name/agency of person reporting
  - Location of hazardous materials released
  - Hazardous materials involved
  - Nature of problem (e.g. fire, spill)
  - Quantity released
  - Potential hazards
3. List types of approved communications equipment
  - Standard communications equipment including cell phones versus intrinsically safe equipment or devices
4. Describe how to operate equipment
5. Operate approved communications equipment
6. Communicate in accordance with policies and procedures

**Discussion Questions**

1. What is CUPA?
2. What is the procedure to reporting and notifying other organizations?
3. Who is responsible for making the mandatory notifications?

**Application**

1. Given a scenario and communications equipment, have students identify which equipment to use and whom to call for technical or logistical assistance based on AHJ target hazards. Use both daytime and nighttime scenarios.

**Instructor Notes**

1. Bring industry standard communication equipment for hazardous material incidents.
2. Utilize local agencies for equipment demonstrations.
3. Provide a sample checklist for notifications.
4. Consider visiting local hazardous materials response team.

**CTS Reference:** 5-4

**Skill Sheet:** None

Draft

## Unit 3: Hazardous Materials/WMD Operations

### Topic 3-1: Description of Duties (Operations)

#### Terminal Learning Objective

At the end of this topic a student will be able to identify the operations roles and responsibilities of a Fire Fighter who responds to an emergency involving hazardous materials/weapons of mass destruction (WMD).

#### Enabling Learning Objectives

1. Identify the role of operations level responders at a hazardous materials/WMD incident per CCR Title 8, §5192(q)(6)(B), First Responder, Operations Level (FRO):
  - First responders at the operations level are individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release. They are trained to respond in a defensive fashion without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading, and prevent exposures. First responders at the operational level shall have received at least eight hours of training or have had sufficient experience to objectively demonstrate competency in the following areas in addition to those listed for the awareness level; and the employer shall so certify:
    - Knowledge of the basic hazard and risk assessment techniques
    - Know how to select and use proper PPE provided to the first responder operational level
    - An understanding of basic hazardous materials terms
    - Know how to perform basic control, containment, and/or confinement operations and rescue injured or contaminated persons within the capabilities of the resources and PPE available with their unit
    - Know how to implement basic equipment, victim, and rescue personnel decontamination procedures
    - Understand the relevant standard operating procedures and termination procedures
2. Identify the location and contents of AHJ emergency response plan and standard operating procedures for operations level responders, including those response operations for hazardous materials/WMD incidents

#### Discussion Questions

1. What are the responsibilities of a fire fighter responding to a hazardous materials incident?

#### Application

1. Determined by instructor

#### Instructor Notes

1. None

CTS Reference: 6-1

Skill Sheet: None

### Topic 3-2: Identifying the Scope of a Hazardous Materials/WMD Incident

#### Terminal Learning Objective

At the end of this topic a student, given a hazardous materials/WMD incident, an assignment, policies and procedures, and approved reference sources, will be able to identify the scope of the problem at a hazardous materials/WMD incident so that container types, materials, location of any release, and surrounding conditions are identified; hazard information is collected; the potential behavior of a material and its container is identified; and the potential hazards, harm, and outcomes associated with that behavior are identified.

#### Enabling Learning Objectives

1. Define hazard classes and divisions
2. Identify types of containers
3. Identify container identification markings, including piping and pipeline markings and contacting information
4. Identify types of information to collect during the hazardous materials/WMD incident survey
5. Identify the availability and location of transportation shipping papers and safety data sheets (SDS) at facilities
6. Describe types of hazard information available from and how to contact:
  - CHEMTREC, CANUTEC, and SETIQ
  - Government authorities
  - Manufacturers
  - Shippers
  - Carriers
7. Describe how to communicate with carrier representatives to reduce impact of a release
8. Identify basic physical and chemical properties, including:
  - Boiling point
  - Chemical reactivity
  - Corrosivity (pH)
  - Flammable (explosive) range [LFL (LEL) and UFL (UEL)]
  - Flash point
  - Ignition (autoignition) temperature
  - Particle size
  - Persistence
  - Physical state (solid, liquid, gas)
  - Radiation (ionizing and nonionizing)
  - Specific gravity
  - Toxic products of combustion

- Vapor density
  - Vapor pressure
  - Water solubility
9. Identify the behavior and hazards of a material and its container based on the material's physical and chemical properties and the surrounding conditions
    - BLEVE (boiling liquid expanding liquid explosion)
    - Leaks
    - Punctures
    - Container failure
  10. List examples of potential criminal and terrorist targets
  11. Identify indicators of possible criminal or terrorist activity for each of the following:
    - Chemical agents
    - Biological agents
    - Radiological agents
    - Illicit laboratories (i.e., clandestine laboratories, weapons labs, ricin labs)
    - Explosives
  12. Describe additional hazards associated with terrorist or criminal activities, such as secondary devices
  13. Determine the likely harm and outcomes associated with the identified behavior and the surrounding conditions
  14. Collect hazard information
  15. Communicate with pipeline operators or carrier representatives

### Discussion Questions

1. What types of containers are used to hold hazardous materials/WMD?
  - Typical characteristics?
  - Typical commodities within AHJ?
2. What information do you need to provide to operators or carrier representatives?
3. What differentiates a hazardous material incident from a WMD incident?
4. What target hazards within your jurisdiction might be potential points of interest for WMD?

### Application

1. Given the description of a container and its contents, have students discuss the behavior of the material and its associated container, predict behavior based on the material's physical and chemical properties, and identify potential outcomes.
2. Given a local area target hazard, have students identify potential locations for a secondary device at a suspected WMD incident.

### Instructor Notes

1. None

**CTS Reference:** 6-2

**Skill Sheet:** None

### Topic 3-3: Selecting, Donning, Working In, and Doffing Approved PPE at a Hazardous Materials/WMD Incident

#### Terminal Learning Objective

At the end of this topic a student, given a hazardous materials/WMD incident; a mission-specific assignment in an IAP that requires use of PPE; the scope of the problem; response objectives and options for the incident; access to a hazardous materials technician, an allied professional, an emergency response plan, or standard operating procedures; approved PPE; and policies and procedures, will be able to select, don, work in, and doff approved PPE at a hazardous materials/WMD incident so that under the guidance of a hazardous materials technician, an allied professional, an emergency response plan, or standard operating procedures, approved PPE is selected, inspected, donned, worked in, decontaminated, and doffed; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; and all reports and documentation pertaining to PPE use are completed.

#### Enabling Learning Objectives

1. Describe types of PPE and the hazards for which they are used
2. Describe policies and procedures for PPE selection and use
3. Describe the importance of working under the guidance of a hazardous materials technician, an allied professional, an emergency response plan, or standard operating procedures when selecting and using PPE
4. Identify the capabilities and limitations of and specialized donning, doffing, and usage procedures for approved PPE
5. Describe procedures for approved PPE
  - Decontamination
  - Inspection
  - Maintenance
  - Storage
6. Describe procedures for reporting and documenting the use of PPE
7. Describe how to clean, disinfect, and inspect tools, equipment, and PPE
8. Select PPE for the assignment
9. Inspect, maintain, store, don, work in, and doff PPE
10. Go through decontamination (emergency and technical) while wearing the PPE
11. Report and document the use of PPE

#### Discussion Questions

1. What are the limitations of structural PPE when working with:
  - A biological agent?
  - A chemical agent?
  - A WMD agent?
2. What is the difference between emergency decontamination and technical decontamination?

**Application**

1. Given a hazardous materials scenario, have students select the proper PPE for the incident, don PPE, go through technical decontamination, doff PPE, and then inspect and prepare PPE to return to service.

**Instructor Notes**

1. None

**CTS Reference:** 7-1

**Skill Sheet:** 7-1: Don, Work In, and Doff Chemical Protective Clothing

**Topic 3-4: Performing Emergency Decontamination at a Hazardous Materials/WMD Incident**

**Terminal Learning Objective**

At the end of this topic a student, given a hazardous materials/WMD incident that requires emergency decontamination, an assignment, the scope of the problem, policies and procedures, and approved tools, equipment, and PPE for emergency decontamination, will be able to perform emergency decontamination at a hazardous materials/WMD incident so that emergency decontamination needs are identified, approved PPE is selected and used, exposures and personnel are protected, safety procedures are followed, hazards are avoided or minimized, emergency decontamination is set up and implemented, and victims and responders are decontaminated.

**Enabling Learning Objectives**

1. Define contamination, cross contamination, and exposure
2. Describe contamination types
3. List routes of exposure
4. Identify types of decontamination
  - Emergency
  - Mass (including modesty concerns)
  - Technical
5. Describe the purpose, advantages, and limitations of emergency decontamination
6. Describe policies and procedures for performing emergency decontamination
  - Personnel
  - Tools
  - Equipment
  - PPE
7. Identify approved tools and equipment for emergency decontamination
8. Describe hazard avoidance for emergency decontamination
9. Select an emergency decontamination method
10. Set up emergency decontamination in a safe area
11. Use PPE in the proper manner
12. Implement emergency decontamination
13. Prevent spread of contamination
14. Avoid hazards during emergency decontamination

**Discussion Questions**

1. What is the difference between exposure and contamination for individuals involved in a hazardous material incident?
2. How can modesty concerns be addressed during a mass decontamination operation?
3. In which situations would a fire fighter perform emergency decontamination rather than technical decontamination?
4. How does skin protection and respiratory protection differ with each level of chemical protective clothing?

**Application**

1. Given a hazardous materials incident scenario that requires emergency decontamination, have students select an emergency decontamination method, set up a decontamination safe area, and go through the emergency decontamination process while wearing proper PPE.

**Instructor Notes**

1. None

**CTS Reference:** 6-5

**Skill Sheet:** 6-5: Perform Emergency Decontamination

**Topic 3-5: Identifying Action Options for a Hazardous Materials/WMD Incident**

**Terminal Learning Objective**

At the end of this topic a student, given a hazardous materials/WMD incident, an assignment, policies and procedures, approved reference sources, and the scope of the problem, will be able to identify the action options for a hazardous materials/WMD incident, so that response objectives, action options, safety precautions, suitability of approved personal protective equipment (PPE) available, and emergency decontamination needs are identified.

**Enabling Learning Objectives**

1. Identify policies and procedures for hazardous materials/WMD incident operations
2. List the basic components of an incident action plan (IAP)
  - Response objectives
  - Action options
  - Safety precautions
  - Suitable personal protective equipment (PPE) based on advantages and limitations of each option
  - Emergency decontamination needs
3. Describe modes of operation
  - Offensive
  - Defensive
  - Nonintervention
4. Describe types of response objectives
5. Describe types of action options
6. Identify types of response information available from:

- The *Emergency Response Guidebook* (ERG)
  - Safety data sheets (SDS)
  - Shipping papers with emergency response information
  - Other resources
7. Describe safety procedures
  8. Describe risk analysis concepts
  9. Identify the purpose, advantages, limitations, and uses of approved PPE to determine if PPE is suitable for the incident conditions
  10. Explain the difference between exposure and contamination
  11. Identify contamination types including sources and hazards of carcinogens at incident scenes
  12. List routes of exposure
  13. Identify response objectives and action options based on the scope of the problem and available resources
  14. Identify emergency decontamination needs based on the scope of the problem

### Discussion Questions

1. What information from the identification and hazard assessment process needs to be included into the incident action plan?
2. What is a nonintervention mode? Why would you consider this mode?
3. How does risk analysis influence response objectives and safety procedures?
4. What considerations determine structural PPE use at incidents involving hazardous materials?

### Application

1. Given a hazardous materials or WMD scenario, have students work in groups to identify response objectives and action options based on the incident's scope and the available resources.

### Instructor Notes

1. None

**CTS Reference:** 6-3

**Skill Sheet:** None

## Topic 3-6: Performing Assigned Tasks at a Hazardous Materials/WMD Incident

### Terminal Learning Objective

At the end of this topic a student, given a hazardous materials/WMD incident, an assignment with limited potential of contact with hazardous materials/WMD, policies and procedures, the scope of the problem, approved tools, equipment, and PPE, will be able to perform assigned tasks at a hazardous materials/WMD incident so that protective actions and scene control are established and maintained, on-scene incident command is described, evidence is preserved, approved PPE is selected and used in the proper manner, exposures and personnel are protected, safety procedures are followed, hazards are avoided or minimized, assignments are completed, and gross decontamination of personnel, tools, equipment, and PPE is conducted in the field.

**Enabling Learning Objectives**

1. Describe scene control procedures
2. Explain the differences between these control zones:
  - Exclusion zone (hot zone)
  - Contamination reduction zone (warm zone)
  - Support zone (cold zone)
3. Describe procedures for protective actions, including evacuation and sheltering-in-place
4. Describe procedures for ensuring coordinated communications between responders and to the public
5. List evidence recognition and preservation procedures
6. Identify incident command system factors at hazardous materials/WMD incidents
  - Purpose
  - Importance
  - Benefits
  - Organization
  - Roles
  - Responsibilities
  - Policies and procedures for implementation
7. Describe how to recognize signs and symptoms of thermal stress
8. Identify safety precautions when working at hazardous materials/WMD incidents
9. Identify the need for gross decontamination in the field based on the task(s) performed and contamination received, including sources and hazards of carcinogens at incident scenes
10. Establish and maintaining scene control
11. Recognize and preserve evidence
12. Inspect, don, work in, go through decontamination while wearing, and doff approved PPE
13. Isolate contaminated tools, equipment, and PPE
14. Conduct gross decontamination of contaminated personnel, tools, equipment, and PPE in the field
15. Clean, disinfect, and inspect approved tools, equipment, and PPE

**Discussion Questions**

1. What activities take place with the following zones?
  - Exclusion zone (hot zone)
  - Contamination reduction zone (warm zone)
  - Support zone (cold zone)
2. What are some indicators that a WMD was involved at a hazardous materials incident?
3. What safety precautions should a fire fighter take when working at hazardous materials/WMD incidents?

### Application

1. Given a hazardous materials/WMD scenario, have students work in groups to identify and set up control zones, determine protective actions, coordinate communications between responders and with outside entities, and recognize and preserve evidence (if applicable).

### Instructor Notes

1. ELOs 12 through 15 are included here because they are assigned tasks at a hazardous materials/WMD incident, but the actual training and application for these ELOs should be completed in Topic 3-3 and Topic 3-4.

**CTS Reference:** 6-4

**Skill Sheet:** None

## Topic 3-7: Performing Product Control Techniques at a Hazardous Materials/WMD Incident

### Terminal Learning Objective

At the end of this topic a student, given a hazardous materials/WMD incident with release of product; an assignment in an IAP; scope of the problem; policies and procedures; approved tools, equipment, control agents, and PPE; and access to a hazardous materials technician, an allied professional, an emergency response plan, or standard operating procedures, will be able to perform product control techniques with a limited risk of personal exposure at a hazardous materials/WMD incident so that under the guidance of a hazardous materials technician, an allied professional, an emergency response plan, or standard operating procedures, approved PPE is selected and used; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; a product control technique is selected and implemented; the product is controlled; victims, personnel, tools, and equipment are decontaminated; and product control operations are reported and documented.

### Enabling Learning Objectives

1. Describe the importance of working under the guidance of a hazardous materials technician, an allied professional, an emergency response plan, or standard operating procedures
2. Define offensive control, confinement, containment, and extinguishment techniques
  - Plug and patch
  - Absorb/adsorb
  - Transfer
  - Containerize
  - Stop
3. Define defensive control, confinement, containment, and extinguishment techniques
  - Dike
  - Dam
  - Divert
  - Disperse

- Dilute
  - Cover
  - Foam
4. Define nonintervention control, confinement, containment, and extinguishment techniques
    - Isolate and deny entry
    - Retention area
  5. Describe policies and procedures for product control
  6. Identify product control methods for controlling a release with limited risk of personal exposure
  7. Describe safety precautions associated with each product control method
  8. Identify the location and describe how to operate remote/emergency shutoff devices in cargo tanks and intermodal tanks in transportation and containers at facilities that contain flammable liquids and flammable gases
  9. List characteristics and applicability of approved product control agents
  10. Describe how to use approved tools and equipment
  11. Identify requirements for reporting and documenting product control operations
  12. Select and use PPE
  13. Select and perform product control techniques to confine/contain the release with limited risk of personal exposure
  14. Use approved control agents and equipment on a release involving hazardous materials/WMD
  15. Use remote control valves and emergency shutoff devices on cargo tanks and intermodal tanks in transportation and containers at fixed facilities
  16. Perform product control techniques

### Discussion Questions

1. What control techniques can a fire fighter use at a hazardous materials/WMD incident?
2. What is the difference between offensive actions and defensive actions?

### Application

1. Given a hazardous materials/WMD scenario, have students select and perform offensive product control techniques to confine/contain the release with limited risk of personal exposure.
2. Given a hazardous materials/WMD scenario, have students select and perform defensive product control techniques to confine/contain the release with limited risk of personal exposure.

### Instructor Notes

1. Design the application scenarios so that students are exposed to hazards that require offensive and defensive control techniques.

**CTS Reference:** 7-2

**Skill Sheet:** 7-2: Perform Product Control

## Topic 3-8: Evaluating and Reporting Progress for a Hazardous Materials/WMD Incident

### Terminal Learning Objective

At the end of this topic a student, given a hazardous materials/WMD incident, an assignment, policies and procedures, status of assigned tasks, and approved communication tools and equipment, will be able to evaluate and report the progress of the assigned tasks for a hazardous materials/WMD incident so that the effectiveness of the assigned tasks is evaluated and communicated to the supervisor, who can adjust the IAP as needed.

### Enabling Learning Objectives

1. List components of progress reports
  - Conditions
  - Actions
  - Needs
2. Describe policies and procedures for evaluating and reporting progress
3. Describe how to use approved communication tools and equipment
4. Identify signs indicating improving, static, or deteriorating conditions based on IAP objectives
5. Describe how to recognize circumstances under which it would be prudent to withdraw from a hazardous materials/ WMD incident
6. Determine incident status
7. Determine whether the response objectives are being accomplished
8. Use approved communications tools and equipment
9. Communicate the status of assigned tasks

### Discussion Questions

1. When should a fire fighter send a progress report during a hazardous materials/WMD incident?
2. What information should a fire fighter include in a progress report?
3. What are the challenges of using communication equipment while wearing chemical protective clothing?

### Application

1. Given a hazardous materials/WMD scenario and timeline, have students identify when they would send a progress update and what the information that communication would include.

### Instructor Notes

1. None

**CTS Reference:** 6-6

**Skill Sheet:** None

## How to Read a Course Plan

A course plan identifies the details, logistics, resources, and training and education content for an individual course. Whenever possible, course content is directly tied to a national or state standard. SFT uses the course plan as the training and education standard for an individual course. Individuals at fire agencies, academies, and community colleges use course plans to obtain their institution's consent to offer course and provide credit for their completion. Instructors use course plans to develop syllabi and lesson plans for course delivery.

### Course Details

The Course Details segment identifies the logistical information required for planning, scheduling, and delivering a course.

### Required Resources

The Required Resources segment identifies the resources, equipment, facilities, and personnel required to delivery the course.

### Unit

Each Unit represents a collection of aligned topics. Unit 1 is the same for all SFT courses. An instructor is not required to repeat Unit 1 when teaching multiple courses within a single instructional period or academy.

### Topics

Each Topic documents a single Terminal Learning Objective and the instructional activities that support it.

### Terminal Learning Objective

A Terminal Learning Objective (TLO) states the instructor's expectations of student performance at the end of a specific lesson or unit. Each TLO includes a task (what the student must be able to do), a condition (the setting and supplies needed), and a standard (how well or to whose specifications the task must be performed). TLOs target the performance required when students are evaluated, not what they will do as part of the course.

### Enabling Learning Objectives

The Enabling Learning Objectives (ELO) specify a detailed sequence of student activities that make up the instructional content of a lesson plan. ELOs cover the cognitive, affective, and psychomotor skills students must master in order to complete the TLO.

### Discussion Questions

The Discussion Questions are designed to guide students into a topic or to enhance their understanding of a topic. Instructors may add to or adjust the questions to suit their students.

### **Application**

The Application segment documents experiences that enable students to apply lecture content through cognitive and psychomotor activities, skills exercises, and formative testing. Application experiences included in the course plan are required. Instructors may add additional application experiences to suit their student population if time permits.

### **Instructor Notes**

The Instructor Notes segment documents suggestions and resources to enhance an instructor's ability to teach a specific topic.

### **CTS Guide Reference**

The CTS Guide Reference segment documents the standard(s) from the corresponding Certification Training Standard Guide upon which each topic within the course is based. This segment is eliminated if the course is not based on a standard.

### **Skill Sheet**

The Skill Sheet segment documents the skill sheet that tests the content contained within the topic. This segment is eliminated if the course does not have skill sheets.



# Wildland (2016)

## Course Plan

### Course Details

<b>Certification:</b>	Fire Fighter 1
<b>CTS Guide:</b>	Fire Fighter Certification Training Standards Guide (Month Year)
<b>Description:</b>	This course provides the skills and knowledge needed for the entry-level fire fighter to recognize hazards and unsafe situations; don, doff, and maintain wildland personal protective equipment; deploy a fire shelter; maintain suppression hand tools and equipment; assemble and prepare for response; construct and secure a fireline; reduce the threat of fire exposure to improved properties; and mop up and patrol a fire area when working with wildland fires.
<b>Designed For:</b>	Entry level fire fighters
<b>Prerequisites:</b>	Fire Fighter 1A – Structure (2019) (SFT course or equivalent) <ul style="list-style-type: none"><li>• If a student takes Fire Fighter 1C – Wildland (2016) as a stand-alone course</li></ul>
<b>Corequisites:</b>	Fire Fighter 1A – Structure (2019) (SFT course or equivalent) <ul style="list-style-type: none"><li>• If a student takes Fire Fighter 1C – Wildland within an academy program</li></ul>
<b>Standard:</b>	Complete all activities, skills, and formative tests. Complete all summative tests with a minimum score of 80%.
<b>Hours (Total):</b>	56 hours (30 lecture / 26 application / AHJ determines practice and assessment times)
<b>Maximum Class Size:</b>	50
<b>Instructor Level:</b>	Fire Fighter Instructor (See <i>SFT Procedures Manual</i> (January 2019) section 6.6 for requirements.)*
<b>Instructor/Student Ratio:</b>	1:50 (Lecture) / 1:10 (Application)*
<b>Restrictions:</b>	None
<b>SFT Designation:</b>	CFSTES

\* If any portion of this course curriculum is taught using another course plan, the instructor level and ratio of that course plan supersedes this requirement.

Draft

## Table of Contents

Required Resources.....	4
Instructor Resources .....	4
Online Instructor Resources.....	4
Student Resources .....	4
Facilities, Equipment, and Personnel .....	5
Time Table .....	6
Time Table Key .....	7
Unit 1: Introduction .....	9
Topic 1-1: Orientation and Administration .....	9
Topic 1-2: Fire Fighter 1 and 2 Certification Process.....	10
Topic 1-3: Wildland Fire Fighter Roles and Responsibilities .....	11
Unit 2: Preparation.....	12
Topic 2-1: Wildland Fire Behavior .....	12
Topic 2-2: Recognizing Hazards and Unsafe Situations.....	12
Topic 2-3: Human Factors on the Fireline .....	13
Topic 2-4: Donning, Doffing, and Maintaining Wildland Personal Protective Equipment.....	14
Topic 2-5: Deploying a Fire Shelter .....	15
Topic 2-6: Maintaining Assigned Suppression Hand Tools and Equipment .....	16
Unit 3: Suppression .....	18
Topic 3-1: Assembling and Preparing for Response.....	18
Topic 3-2: Constructing a Fireline.....	18
Topic 3-3: Securing a Fireline .....	20
Topic 3-4: Reducing the Threat of Fire Exposure to Improved Properties (WUI) .....	21
Topic 3-5: Mopping Up in a Fire Area.....	22
Topic 3-6: Patrolling the Fire Area.....	23
How to Read a Course Plan.....	24

## Required Resources

### Instructor Resources

To teach this course, instructors need:

- *Fundamentals of Fire Fighter Skills and Hazardous Materials Response* (Jones and Bartlett Learning, 4<sup>th</sup> edition, ISBN: 978-1-284-15133-6)
- **or**
- *Essentials of Fire Fighting* (IFSTA, 7<sup>th</sup> edition, ISBN: 978-087939657-2)
- *Firefighter's Handbook On Wildland Firefighting: Strategy, Tactics and Safety* (Fire Protection Publications, Oklahoma State University, 4<sup>th</sup> edition, ISBN: 978-087939676-3)
- [The New Generation Fire Shelter](#) (NWCG, March 2003 edition)
- [Incident Response Pocket Guide](#) (NWCG, current edition)
- NFPA 1051: Wildland Firefighting Personnel Professional Qualifications (current edition)
- Full wildland PPE that meets AHJ requirements

### Online Instructor Resources

The following instructor resources are available online at

<http://osfm.fire.ca.gov/training/firefighter1>

- Wildland Skill Sheets
  - 8-2: Don Wildland Personal Protective Equipment
  - 8-3: Deploy a Fire Shelter
  - 9-2: Maintain Hand Tools and Equipment
  - 10-1: Assemble and Prepare for Response
  - 10-2a: Use Incident Response Pocket Guide
  - 10-2b: Assume Safety Position for Retardant Drop
  - 10-3a: Assemble, Use, and Maintain a Back Pump
  - 10-3b: Perform a Progressive Hose Lay
  - 10-3c: Construct a Fireline Using Hand Tools
  - 10-3d: Perform Mobile Pumping
  - 10-4a: Ignite and Extinguish Road Flares and Fusees
  - 10-4b: Assemble, Ignite, Extinguish, and Disassemble a Drip Torch
  - 10-5: Prep and Defend a Structure
  - 10-6: Perform Mop Up Operations
  - 10-7: Patrol the Fire Area

### Student Resources

To participate in this course, students need:

- *Fundamentals of Fire Fighter Skills and Hazardous Materials Response* (Jones and Bartlett Learning, 4<sup>th</sup> edition, ISBN: 978-1-284-151336)
- **or**
- *Essentials of Fire Fighting* (IFSTA, 7<sup>th</sup> edition, ISBN: 978-087939657-2)

- *Firefighter's Handbook On Wildland Firefighting: Strategy, Tactics and Safety* (Fire Protection Publications, Oklahoma State University, 4th edition, ISBN: 978-087939676-3)
- *Incident Response Pocket Guide* (NWCG, current edition)
- Full wildland PPE that meets AHJ requirements

### Facilities, Equipment, and Personnel

The following facilities, equipment, or personnel are required to deliver this course:

- **Appliances and tools:** 1½-inch fog nozzles, 1-inch fog nozzles, 1½-inch bales, 1-inch bales, 1½-inch smooth bore tips, 1-inch smooth bore tips, forestry tees, double female fittings, double male fittings, hose clamps, hose roller, nozzle selection determined by AHJ, reducer or increaser (fittings), spanner wrenches, gated wye, rubber mallet
- **Hose:** 1-inch fire hose and 1 ½-inch fire hose (1,000-foot minimum), 2½-inch or 3-inch fire hose (500-foot minimum), handline with fog nozzle, hard suction (intake) hose and strainer, soft suction hose
- **Hand tools:** hydrant wrench, drip torches, back pumps, shovel (short handle, round point), Pulaski, McLeod, brush hook, single bit axe, double bit axe, wire broom, rhino tools, combi tool, flagging
- **Power tools:** Chain saw, pole saw, portable pump
- **Protective equipment/clothing:** Gloves, helmet, wildland shroud, goggles, hearing protection, wildland PPE, practice fire shelter, fire shelter, wildland web gear with water system(s)
- **Other supplies/equipment needed:** Fire hydrant, portable radio, minimum of two apparatuses equipped with pump and two separate water supplies, fuel and supplies for power equipment, cleaning supplies and equipment, two portable tanks with water transfer equipment and appliances, traffic and scene control devices

**Time Table**

Segment	Lecture	Application	Unit Total
<b>Unit 1: Introduction</b>			
Topic 1-1: Orientation and Administration	0.5	0.0	
Topic 1-2: Fire Fighter 1 Certification Process	0.5	0.0	
Topic 1-3: Wildland Fire Fighter Roles and Responsibilities	0.5	0.0	
<b>Unit 1 Totals</b>	<b>1.5</b>	<b>0.0</b>	<b>1.5</b>
<b>Unit 2: Preparation</b>			
Topic 2-1: Wildland Fire Behavior	7.5	0.5	
Topic 2-2: Recognizing Hazards and Unsafe Situations	4.0	2.0	
Topic 2-3: Human Factors on the Fireline	4.0	0.0	
Topic 2-4: Donning, Doffing, and Maintaining Wildland Personal Protective Equipment	0.5	1.5	
Topic 2-5: Deploying a Fire Shelter	0.5	1.5	
Topic 2-6: Maintaining Assigned Suppression Hand Tools and Equipment	1.5	1.75	
<b>Unit 2 Totals</b>	<b>18.0</b>	<b>7.25</b>	<b>25.25</b>
<b>Unit 3: Suppression</b>			
Topic 3-1: Assembling and Preparing for Response	0.5	0.25	

## Fire Fighter 1C

---

Segment	Lecture	Application	Unit Total
Topic 3-2: Constructing a Fireline	4.0	16.0	
Topic 3-3: Securing a Fireline	2.0	1.0	
Topic 3-4: Reducing the Threat of Fire Exposure to Improved Properties (WUI)	3.0	1.0	
Topic 3-5: Mopping Up in a Fire Area	0.5	0.5	
Topic 3-6: Patrolling the Fire Area	0.5	0.0	
<b>Unit 3 Totals</b>	<b>10.5</b>	<b>18.75</b>	<b>29.25</b>
<b>Summative Assessment</b>			
Determined by AHJ or educational institution	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>
<b>Skills Practice (Lab / Sets and Reps)</b>			
Determined by AHJ or educational institution	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>
<b>Course Totals</b>	<b>30.0</b>	<b>26.0</b>	<b>56.0</b>

### Time Table Key

1. The Time Table documents the amount of time required to deliver the content included in the course plan.
2. Time is documented using the quarter system: 15 min. = .25 / 30 min. = .50 / 45 min. = .75 / 60 min. = 1.0.
3. The Course Totals do not reflect time for lunch (1 hour) or breaks (10 minutes per each 50 minutes of instruction or assessment). It is the instructor's responsibility to add this time based on the course delivery schedule.

4. Application (activities, skills exercises, and formative testing) time will vary depending on the number of students enrolled. The Application time documented is based on the maximum class size identified in the Course Details section.
5. Summative Assessments are determined and scheduled by the authority having jurisdiction. These are not the written or psychomotor State Fire Training certification exams. These are in-class assessments to evaluate student progress and calculate course grades.

Draft

## Unit 1: Introduction

### Topic 1-1: Orientation and Administration

#### Terminal Learning Objective

At the end of this topic a student will be able to identify facility and classroom requirements and identify course objectives, events, requirements, assignments, activities, skills exercises, resources, evaluation methods, and participation requirements in the course syllabus.

#### Enabling Learning Objectives

1. Identify facility requirements
  - Restroom locations
  - Food locations
  - Smoking locations
  - Emergency procedures
2. Identify classroom requirements
  - Start and end times
  - Breaks
  - Electronic device policies
  - Special needs and accommodations
  - Other requirements as applicable
3. Review course syllabus
  - Course objectives
  - Calendar of events
  - Course requirements
  - Student evaluation process
  - Assignments
  - Activities and skills exercises
  - Required student resources
  - Class participation requirements

#### Discussion Questions

1. Determined by instructor

#### Application

1. Determined by instructor

#### Instructor Notes

1. When teaching Fire Fighter 1A, 1B, and 1C in a consecutive format, it is not necessary to repeat this topic for each course. At a minimum, cover it once on the first day of the first course.

## Topic 1-2: Fire Fighter 1 and 2 Certification Process

### Terminal Learning Objective

At the end of this topic a student will be able to identify the requirements for Fire Fighter 1 and 2 certification and be able to describe the certification task book and examination process.

### Enabling Learning Objectives

1. Identify the different levels of certification in the Fire Fighter certification track
  - Fire Fighter 1
  - Fire Fighter 2
2. Identify the prerequisites for certification
  - Fire Fighter 1
  - Fire Fighter 2
3. Identify the course work required for certification
  - Fire Fighter 1
  - Fire Fighter 2
4. Identify the exams required for certification
  - Fire Fighter 1
  - Fire Fighter 2
5. Identify the task book requirements for certification
  - Fire Fighter 1
  - Fire Fighter 2
6. Identify the experience requirements for certification
  - Fire Fighter 1
  - Fire Fighter 2
7. Identify the position requirements for certification
  - Fire Fighter 1
  - Fire Fighter 2
8. Describe the certification task book process
9. Describe the certification examination process

### Discussion Questions

1. Determined by instructor

### Application

1. Determined by instructor

### Instructor Notes

1. When teaching Fire Fighter 1A, 1B, and 1C in a consecutive format, it is not necessary to repeat this topic for each course. At a minimum, cover it once on the first day of the first course.
2. Use the *SFT Procedures Manual (2019)* 7.12.1 Fire Fighter 1 (2019) and 7.12.3 Fire Fighter 2 (2019) content for ELOs 2 through 7.
3. Use a copy of the Fire Fighter 2 Certification Task Book to walk students through the task book process and expectations for ELO 8.

4. Use the *SFT Procedures Manual (2019)* (Chapter 11: Fire Fighter Certification Exams) content for ELO 9.

### Topic 1-3: Wildland Fire Fighter Roles and Responsibilities

#### Terminal Learning Objective

At the end of this topic a student will be able to describe the role of the wildland fire fighter as identified by NFPA 1051: Wildland Firefighting Personnel Professional Qualifications (current edition) and the Office of the State Fire Marshal.

#### Enabling Learning Objectives

1. Describe types of wildland fires
  - Wildland Urban Interface (intermix)
  - Forest
  - Desert
  - Grass
  - Brush
  - Timber
2. Describe the fire fighter's role within the local incident management system
3. Describe basic safety roles and responsibilities of the wildland fire fighter
  - Fireline safety, use, and limitations of personal protective equipment (PPE)
  - Use, limitations, inspection, and care of a fire shelter
  - First aid as referenced in NFES 1077 (*Incident Response Pocket Guide (IRPG)*)
4. Describe basic wildland fire behavior
5. Identify wildland fire suppression techniques and tactics

#### Discussion Questions

1. How do wildland fires differ from structure fires?

#### Application

1. Determined by instructor

#### Instructor Notes:

1. This topic is an introduction to everything covered in units 2 and 3. Cover this material at a very high level.

**CTS Guide Reference:** 8-1

**Skill Sheet:** None

## Unit 2: Preparation

### Topic 2-1: Wildland Fire Behavior

#### Terminal Learning Objective

At the end of this topic a student, given a wildland or wildland/urban interface fire and the standard safety policies and procedures of the AHJ, will be able to describe basic wildland fire behavior.

#### Enabling Learning Objectives

1. Describe basic wildland fire behavior
2. Identify the three sides of the fire triangle
3. Identify environmental factors that affect the start and spread of wildland fire
  - Weather
  - Fuel
  - Topography
4. Describe contributing factors that indicate potential for increased fire behavior that may compromise safety

#### Discussion Questions

1. What sources can you use to gather weather data?
2. How does weather influence fire behavior?
3. How does fuel influence fire behavior?
4. How does topography influence fire behavior?

#### Application

1. Given a scenario that includes weather, fuel, and topography, have students work in small groups to predict potential fire behavior and present their findings to the class.

#### Instructor Notes:

1. Recommend using NWCG S-190 course curriculum for additional content.

#### CTS Guide Reference: 10-2

#### Skill Sheet:

- 10-2a: Use Incident Response Pocket Guide
- 10-2b: Assume Safety Position for Retardant Drop

### Topic 2-2: Recognizing Hazards and Unsafe Situations

#### Terminal Learning Objective

At the end of this topic a student, given a wildland or wildland/urban interface fire and the standard safety policies and procedures of the AHJ, will be able to recognize hazards and unsafe situations, communicate hazard(s) and unsafe condition(s) to a supervisor, and take appropriate action.

#### Enabling Learning Objectives

1. Describe basic wildland fire safety
  - 10 Standard Fire Orders
  - 18 Watch-out Situations

- LCES
  - Common Denominators of Fire Behavior on Tragedy Fires
  - Downhill line construction
  - Avoiding fire entrapment
  - Using a vehicle or a structure as refuge
2. Describe hazards associated with working around aircraft
  3. Describe hazards associated with working around heavy equipment
  4. Assume safe position for an air tanker drop
  5. Use fireline flagging
  6. Use the *Incident Response Pocket Guide (IRPG)*

### Discussion Questions

1. How do LCES, the 10 Standard Fire Orders, and the 18 Watch-out Situations relate to one another?
  - How are they connected?
  - How are they different?
2. What are some of the Common Denominators of Fire Behavior on Tragedy?
  - How are these common denominators related to fire behavior?

### Application

1. Given several fatal fire incidents, have students work in small groups to identify violations of the 10 Standard Fire Orders and 18 Watch-out Situations and report their findings to the class.

### Instructor Notes:

1. Recommend using portions of NWCG S-131 course curriculum for additional content.

### CTS Guide Reference: 10-2

### Skill Sheet:

- 10-2a: Use Incident Response Pocket Guide
- 10-2b: Assume Safety Position for Retardant Drop

## Topic 2-3: Human Factors on the Fireline

### Terminal Learning Objective

At the end of this topic a student, given a wildland or wildland/urban interface fire and the standard safety policies and procedures of the AHJ, will be able to identify and communicate human performance factors to the appropriate personnel.

### Enabling Learning Objectives

1. Identify human performance factors in high-risk work environments
  - Attitude
  - Physical conditioning
  - Training levels
  - Experience
  - Fatigue
  - Local knowledge

- Crew dynamics
  - Chain of command
  - Span of control
  - Effective communication
2. Describe basic verbal communications
  3. Identify common barriers to good listening
    - Perceived opinions
    - Distractions
    - Filtering information
    - Not listening
    - Attitude
  4. Identify basic communication responsibilities
    - Briefings
    - Debriefing
    - Warnings
    - Acknowledge messages
    - Ask questions

### Discussion Questions

1. How do human factors impact fireline safety?
2. How do human factors impact crew cohesion?

### Application

1. Determined by instructor

### Instructor Notes:

1. Recommend using portions of NWCG L-180 course curriculum for additional content.

### CTS Guide Reference: 10-2

### Skill Sheet:

- 10-2a: Use Incident Response Pocket Guide
- 10-2b: Assume Safety Position for Retardant Drop

## Topic 2-4: Donning, Doffing, and Maintaining Wildland Personal Protective Equipment

### Terminal Learning Objective

At the end of this topic a student, given wildland personal protective equipment including web gear with shelter, will be able to don, doff, and maintain PPE so that PPE is donned in 60 seconds or less, all elements of the PPE ensemble are worn and doffed in accordance with manufacturer guidelines and returned to a ready state, PPE ensemble is serviceable and available for use on the fireline, and defects are recognized and reported to the supervisor.

### Enabling Learning Objectives

1. Identify the components of wildland PPE
2. Explain the importance of standards for wildland PPE

3. Describe the protection provided by and limitations of wildland PPE
4. Describe fireline safety and use of PPE
5. Identify manufacturer guidelines for correct PPE use
6. Identify when it is safe to doff wildland PPE
7. Identify AHJ policies and procedures for doffing wildland PPE
8. Describe how to inspect wildland PPE
9. Describe how to recognize when PPE should be removed from service
10. Describe proper cleaning procedures for wildland PPE
11. Describe how to maintain wildland PPE
12. Describe AHJ policy on fire shelter use
13. Don wildland PPE
14. Doff wildland PPE
15. Return PPE to a ready state

### Discussion Questions

1. How is wildland PPE different from structural PPE?
2. Why is it important to always wear PPE, including the fire shelter?

### Application

1. Given a recent wildland incident scenario, have students identify how improper PPE use contributed to injury or fatality.
2. Given wildland PPE have students practice donning and doffing PPE. Working in pairs, have students determine if each person's PPE is correctly worn per manufacturer standards.

### Instructor Note:

1. Green sheets and scenarios are available at [www.wildfirelessons.net](http://www.wildfirelessons.net).

### CTS Guide Reference: 8-2, 8-3, 9-1

### Skill Sheet:

- 8-2: Don Wildland Personal Protective Equipment

## Topic 2-5: Deploying a Fire Shelter

### Terminal Learning Objective

At the end of this topic a student, given PPE, a hand tool, a live or simulated incident, and a fire shelter, will be able to deploy a fire shelter so that the fire shelter is deployed within 30 seconds and used in accordance with manufacturer and AHJ procedures.

### Enabling Learning Objectives

1. Describe the protection provided by and limitations of fire shelters
2. Describe how to inspect and evaluate a fire shelter
3. Describe how to select and prepare a shelter deployment site
4. Describe AHJ policy of fire shelter use
5. Identify items to take into and leave outside a fire shelter
  - Take in
    - Water
    - Radio

- Leave out
  - Combustibles (fuel, fusees, etc.)
  - Hand tool
- 6. Describe methods for deploying a fire shelter
  - Standing-to-sitting method
  - Standing drop-down method
  - Lying down method
- 7. Identify when to deploy and exit a fire shelter during an incident
- 8. Deploy a fire shelter within 30 seconds

### Discussion Questions

1. Why is it important to know and select the correct size fire shelter?
1. What factors should be considered when selecting a deployment site?
2. Why is it important to regularly inspect a fire shelter?
3. When should you exit a fire shelter?

### Application

1. Given a recent fire entrapment or shelter deployment, have students identify how the fire shelter worked to prevent more serious injuries or fatalities.
2. Given wildland PPE, a hand tool, and a practice fire shelter, have students practice deploying the fire shelter using different deployment methods.

### Instructor Notes

1. Recommend showing online NWCG video: New Generation Fire Shelter.

**CTS Guide Reference:** 8-3

**Skill Sheet:** 8-3: Deploy a Fire Shelter

## Topic 2-6: Maintaining Assigned Suppression Hand Tools and Equipment

### Terminal Learning Objective

At the end of this topic a student, given tools, equipment, and AHJ maintenance specifications, will be able to recognize defects and report them to a supervisor and maintain assigned suppression hand tools and equipment so that assigned equipment is serviceable.

### Enabling Learning Objectives

1. Identify wildland fire fighting tools and equipment
  - Fusees
  - Drip torches
  - Back pumps
  - Round point shovel
  - Pulaski
  - Mcleod
  - Brush hook
  - Single and double bit axe
  - Wire broom
  - Rhino tool

- Combi tool
  - Power equipment
    - Chain saw
    - Pump
    - Pole saw
  - Fireline flagging
2. Describe how to use wildland fire fighting tools and equipment
  3. Describe how to inspect tools and equipment
  4. Describe how to maintain and care for tools and equipment
  5. Describe how to recognize when tools and equipment should be removed from service
  6. Perform required maintenance techniques
  7. Sharpen assigned suppression equipment
  8. Perform other maintenance techniques for assigned suppression equipment
  9. Use required maintenance equipment

### Discussion Questions

1. Why is it important to properly maintain wildland tools and equipment?
2. What are some common tools used to cut line?
3. What are some common tools used to scrape fire line?

### Application

1. Given wildland tools/equipment that have been removed from service, have students inspect the tools/equipment to identify the deficiencies and safety concerns, and share their findings with the class.

**CTS Guide Reference:** 9-2

**Skill Sheet:** 9-2: Maintain Hand Tools and Equipment

## Unit 3: Suppression

### Topic 3-1: Assembling and Preparing for Response

#### Terminal Learning Objective

At the end of this topic a student, given an assembly location, an assignment, an incident location, a mode of transportation, and time requirements, will be able to assemble and prepare for response so that arrival at the incident with the required personnel and equipment meets AHJ guidelines.

#### Enabling Learning Objectives

1. Identify personnel and equipment requirements for response
  - Based on ICS type and capability
2. Identify AHJ time standards
3. Identify special transportation considerations
4. Describe operational procedures for various response modes
5. Describe AHJ safety response guidelines

#### Discussion Questions

1. What personnel and equipment are required for wildland incident response?
2. What steps should a fire fighter complete at the fire station before responding to a wildland incident?

#### Application

1. Have students create a list of items to carry in their personal out-of-county bag.

**CTS Guide Reference:** 10-1

**Skill Sheet:** 10-1: Assemble and Prepare for Response

### Topic 3-2: Constructing a Fireline

#### Terminal Learning Objective

At the end of this topic a student, given a wildland or wildland/urban interface fire, AHJ line construction standards, suppression tools, water or other suppression agents, and equipment, will be able to construct a fireline that conforms to the AHJ's construction standard.

#### Enabling Learning Objectives

1. Describe basic wildland suppression strategy
  - Direct
  - Indirect
  - Combination
2. Identify basic wildland suppression tactics
  - Hose lays
  - Mobile attack
  - Hand line
  - Dozer line
  - Retardant line

3. Describe the principles, techniques, and standards of fireline construction
  - Hose lays
  - Mobile attack
  - Hand line
  - Dozer line
4. Describe how to construct a handline
  - Build a control line using the bump up or one lick method
  - Build a cup or trench while constructing handline
  - Procedures for passing hand tools
  - Tool line up and spacing
5. Describe how to perform mobile attack
6. Describe how to perform a simple hose lay
  - No appliances
7. Describe how to perform a progressive hose lay
  - With appliances
  - Two-person method
8. Describe how to retrieve hose
  - Single-section drain and carry
  - Figure 8 drain and carry
  - Other AHJ-specific methods
9. Use wildland tools correctly
  - Fusees
  - Drip torches
  - Back pumps
  - Round point shovel
  - Pulaski
  - Mcleod
  - Brush hook
  - Single and double bit axe
  - Wire broom
  - Rhino tool
  - Combi tool
  - Power equipment
    - Chain saw
    - Pump
    - Pole saw
10. Construct a handline
11. Perform mobile attack
12. Perform a simple hose lay
13. Perform progressive hose lay
14. Retrieve hose
15. Apply fire streams

16. Apply extinguishing agents

### Discussion Questions

1. How does a simple hose lay differ from a progressive hose lay?
2. How wide should a fireline be?
3. What safety concerns should be considered:
  - When building a fireline?
  - For downhill line construction?
  - When working near heavy equipment?
  - When working with aircraft?

### Application

1. Given an assignment, PPE, an apparatus or pressurized water supply with ability to do mobile pumping, hand tools, wildland hose and packs, nozzles, and appliances, have students practice constructing a handline, performing mobile attack, performing a simple and progressive hose lays, and retrieving hose.

**CTS Guide Reference:** 10-2, 10-3

### Skill Sheet:

- 10-2a: Use Incident Response Pocket Guide
- 10-2b: Assume Safety Position for Retardant Drop
- 10-3a: Assemble, Use, and Maintain a Back Pump
- 10-3b: Perform a Progressive Hose Lay
- 10-3c: Construct a Fireline Using Hand Tools
- 10-3d: Perform Mobile Pumping

## Topic 3-3: Securing a Fireline

### Terminal Learning Objective

At the end of this topic a student, given a wildland fire or simulated event, suppression tools, water or other suppression agents, and equipment, will be able to secure the fireline so that fireline burning materials and unburned fuels are physically separated.

### Enabling Learning Objectives

1. Describe fireline improvement techniques
  - Wet lines
  - Handline
  - Dozer lines
  - Retardant lines
  - Natural fuel breaks
  - Manmade fuel breaks
2. Describe safety considerations
3. Describe how to use basic ignition devices
  - Only under direct supervision
  - Ignite and extinguish fusees
  - Assemble and use a drip torch

4. Use basic ignition devices

**Discussion Questions**

1. How does a finished fireline differ from an initial fireline?
2. What is anchor point? What is it used for?
3. What ignition devices can be used to burn out a fireline?
4. What factors must be considered before initiating burn out?

**Application**

1. Given PPE and ignition devices, have students practice using ignition devices.

**CTS Guide Reference: 10-4**

**Skill Sheet:**

- 10-4a: Ignite and Extinguish Road Flares and Fusees
- 10-4b: Assemble, Ignite, Extinguish, and Disassemble a Drip Torch

**Topic 3-4: Reducing the Threat of Fire Exposure to Improved Properties (WUI)**

**Terminal Learning Objective**

At the end of this topic a student, given a wildland or wildland/urban interface fire, suppression tools, and equipment, will be able to describe methods to reduce the threat of fire exposure to improved properties in order to protect them.

**Enabling Learning Objectives**

1. Describe wildland fire behavior within the wildland/urban interface
2. Describe how to reduce fuel for structure defense
3. Identify structure defense tactical actions
  - Check and go
  - Prep and go
  - Prep and defend
  - Fire front following
  - Bump and run
  - Anchor and hold
  - Tactical patrol
4. Identify structure triage categories
  - Non-threatened
  - Threatened defensible
  - Threatened non-defensible
5. Identify the difference between a safety zone and a temporary refuge area (TRA)
6. Identify equipment and personnel capabilities within the wildland/urban interface
7. Prepare a structure for structure defense
8. Conduct structure defense within the wildland/urban interface

**Discussion Questions**

1. How does a fire fighter determine which tactical action to pursue?
2. When is it acceptable to leave a structure threatened by a wildland fire?
3. How is a temporary refuge area (TRA) different from a safety zone?

### Application

1. Given a wildland/urban interface incident or simulated scenario and fire behavior factors, have students assess the structures, determine a triage category for each structure, and identify appropriate tactics to protect them.
2. Given a simulated scenario and an ICS 231 wildland placard, have students to fill out an ICS 231 wildland placard.

### Instructor Notes:

1. Recommend using the FIRESCOPE Wildland Urban Interface (WUI) Structure Defense document for additional content.
2. Recommend using the CAL FIRE Wildland Urban Interface Operations Handbook for additional content.

**CTS Guide Reference:** 10-5

**Skill Sheet:** 10-5: Prep and Defend a Structure

## Topic 3-5: Mopping Up in a Fire Area

### Terminal Learning Objective

At the end of this topic a student, given a wildland fire or simulated scenario, suppression tools, water or other suppression agents, and equipment, will be able to mop up a fire area so that burning fuels that threaten escape are located and extinguished.

### Enabling Learning Objectives

1. Describe principles, techniques, and standards for mop up
  - Dry mop up
  - Wet mop up
2. Use basic tools to perform mop-up operations
3. Use basic techniques to perform mop-up operations
4. Identify hazards associated with mop-up operations
  - Human hazards
  - Environmental hazards
5. Assemble and operate a back pump

### Discussion Questions

1. What are some critical elements of mop-up operations?
2. How will different fuels influence mop-up operations?
3. What are some human factors hazards associated with mop-up operations?

### Application

1. Given a wildland fire or simulated scenario, suppression tools, water or other suppression agents, and equipment, have students practice mopping up a fire area.

### Instructor Notes:

1. None

**CTS Guide Reference:** 10-6

**Skill Sheet:** 10-5: Perform Mop Up Operations

### Topic 3-6: Patrolling the Fire Area

#### Terminal Learning Objective

At the end of this topic a student, given a wildland fire or simulated scenario, suppression tools, and equipment, will be able to patrol and maintain control of the fire area.

#### Enabling Learning Objectives

1. Describe the principles, techniques, and standards of patrol

#### Discussion Questions

1. What should a fire fighter look for during patrol operations?
2. What is the importance of conducting patrol operations?

#### Application

1. Determined by instructor

#### Instructor Notes:

1. None

**CTS Guide Reference:** 10-7

**Skill Sheet:** 10-7: Patrol the Fire Area

Draft

## How to Read a Course Plan

A course plan identifies the details, logistics, resources, and training and education content for an individual course. Whenever possible, course content is directly tied to a national or state standard. SFT uses the course plan as the training and education standard for an individual course. Individuals at fire agencies, academies, and community colleges use course plans to obtain their institution's consent to offer course and provide credit for their completion. Instructors use course plans to develop syllabi and lesson plans for course delivery.

### Course Details

The Course Details segment identifies the logistical information required for planning, scheduling, and delivering a course.

### Required Resources

The Required Resources segment identifies the resources, equipment, facilities, and personnel required to delivery the course.

### Unit

Each Unit represents a collection of aligned topics. Unit 1 is the same for all SFT courses. An instructor is not required to repeat Unit 1 when teaching multiple courses within a single instructional period or academy.

### Topics

Each Topic documents a single Terminal Learning Objective and the instructional activities that support it.

### Terminal Learning Objective

A Terminal Learning Objective (TLO) states the instructor's expectations of student performance at the end of a specific lesson or unit. Each TLO includes a task (what the student must be able to do), a condition (the setting and supplies needed), and a standard (how well or to whose specifications the task must be performed). TLOs target the performance required when students are evaluated, not what they will do as part of the course.

### Enabling Learning Objectives

The Enabling Learning Objectives (ELO) specify a detailed sequence of student activities that make up the instructional content of a lesson plan. ELOs cover the cognitive, affective, and psychomotor skills students must master in order to complete the TLO.

### Discussion Questions

The Discussion Questions are designed to guide students into a topic or to enhance their understanding of a topic. Instructors may add to or adjust the questions to suit their students.

### **Application**

The Application segment documents experiences that enable students to apply lecture content through cognitive and psychomotor activities, skills exercises, and formative testing. Application experiences included in the course plan are required. Instructors may add additional application experiences to suit their student population if time permits.

### **Instructor Notes**

The Instructor Notes segment documents suggestions and resources to enhance an instructor's ability to teach a specific topic.

### **CTS Guide Reference**

The CTS Guide Reference segment documents the standard(s) from the corresponding Certification Training Standard Guide upon which each topic within the course is based. This segment is eliminated if the course is not based on a standard.

### **Skill Sheet**

The Skill Sheet segment documents the skill sheet that tests the content contained within the topic. This segment is eliminated if the course does not have skill sheets.

# Fire Fighter 2 (NFPA Fire Fighter II)

---

## Certification Training Standards Guide (Month Year)



California Department of Forestry and Fire Protection  
Office of the State Fire Marshal  
State Fire Training

# Fire Fighter 2 (NFPA Fire Fighter II)

## Certification Training Standards Guide (Month Year)

This CTS guide utilizes the following NFPA standards to provide the qualifications for State Fire Training's Fire Fighter 2 certification:

- NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)

State Fire Training coordinated the development of this CTS guide. Before its publication, the Statewide Training and Education Advisory Committee (STEAC) and the State Board of Fire Services (SBFS) recommended this CTS guide for adoption by the Office of the State Fire Marshal (OSFM).



Published by State Fire Training  
2251 Harvard Street, Suite 400  
Sacramento, CA 95815  
(916) 568-3800

Cover photo courtesy of Craig Allyn Rose Photography.

# Table of Contents

State Fire Training .....	1
Acknowledgments.....	2
How to Read a CTS Guide.....	5
Fire Fighter 2 .....	7
Section 1: NFPA Requirements.....	7
1-1: Identifying NFPA Requirements.....	7
Section 2: Fire Department Communications.....	9
2-1: Completing a Basic Incident Report.....	9
2-2: Communicating the Need for Team Assistance.....	10
Section 3: Fireground Operations.....	11
3-1: Extinguishing an Ignitable Liquid Fire.....	11
3-2: Controlling a Flammable Gas Cylinder Fire.....	13
3-3: Coordinating an Interior Attack Line.....	15
3-4: Protecting Evidence of Fire Cause and Origin.....	17
Section 4: Rescue Operations .....	18
4-1: Extricating a Victim Entrapped in a Motor Vehicle.....	18
4-2: Assisting Rescue Operation Teams .....	19
Section 5: Fire and Life Safety Initiatives, Preparedness, and Maintenance .....	20
5-1: Performing a Fire Safety Survey in an Occupied Structure.....	20
5-2: Presenting Fire Safety Information to Station Visitors or Small Groups.....	21
5-3: Preparing a Preincident Survey .....	22
5-4: Maintaining Power Plants, Power Tools, and Lighting Equipment .....	23
5-5: Performing an Annual Service Test on Fire Hose.....	24

# State Fire Training

## Mission

To enable the California Fire Service to safely protect life and property through education, training, and certification.

## The California Fire Services Training and Education System

The California Fire Service Training and Education System (CFSTES) was established to provide a single statewide focus for fire service training in California. CFSTES is a composite of all the elements that contribute to the development, delivery, and administration of training for the California fire service. The authority for the central coordination of this effort is vested in State Fire Training within the Office of the State Fire Marshall with oversight provided by the State Board of Fire Services.

CFSTES facilitates, coordinates, and assists in the development and implementation of standards and certification for the California fire service.

CFSTES:

1. Administers the California Fire Academy System
2. Provides accredited courses leading to certification and approved standardized training programs for local and regional delivery
3. Administers the national accreditation process in California
4. Publishes certification training standards, course plans, and certification task books for each certified job function within the California fire service

CFSTES is a fire service system developed by the fire service, for the fire service. It is only as successful and effective as the people involved in it.

## Acknowledgments

State Fire Training appreciates the hard work and accomplishments of those who built the solid foundation on which this program continues to grow.

State Fire Training gratefully acknowledges the following individuals and organizations for their diligent efforts and contributions that made the development and publication of this document possible.

### CAL FIRE

**Thom Porter**  
*Director, CAL FIRE*

**Mike Richwine**  
*Acting State Fire Marshal*

**Andrew Henning**  
*Chief, State Fire Training*

**Ron Coleman**  
*Chair, STEAC*

### Cadre - 2019 Update

#### Leadership

**Jim Eastman**  
*Cadre Lead*  
*Training Specialist III (RA), CAL FIRE*  
*Deputy Chief (ret.), Sacramento Metro Fire Department*

**Chris Fowler**  
*Cadre Lead*  
*Deputy State Fire Marshal III, Supervisor,*  
*CAL FIRE – Office of the State Fire Marshal, State Fire Training*

**Allison L. Shaw**  
*Cadre Editor*  
*California State University, Sacramento*

### Development Cadre

**Greg Belk**

*Division Chief, CAL FIRE San Diego*

**Paul Gonzalez**

*Fire Engineer, San Jose Fire Department  
Coordinator, South Bay Regional Fire Academy*

**Garrett Huff**

*Battalion Chief, Santa Barbara County Fire Department  
Secretary, South Division, CalChiefs Training Officers*

**Donavan Lacy**

*Battalion Chief, Anderson Fire Protection District  
Director of Fire Technology/EMS, Shasta Community College  
Area 2 Director, CalChiefs Training Officers*

**Andrew Murtagh**

*Lieutenant, San Francisco Fire Department  
Adjunct Faculty, Fire Technology Program, College of San Mateo*

**Michael Massone**

*Fire Captain, San Diego Federal Fire  
Vice President, California Professional Fire Fighters  
Representative, California Joint Apprenticeship Committee*

**German Sierra**

*Fire Fighter/Paramedic (ret.), Oakland Fire Department  
Faculty – Program Coordinator, Las Positas College  
Representative, California Fire Technology Directors' Association (CFTDA)*

**Shawn Tukua**

*Captain, Los Angeles Fire Department  
State Fire Training Coordinator  
Area 15 Director, CalChiefs Training Officers*

**Rob Wheatley**

*Division Chief, Director of Fire Training, CAL FIRE Training Center*

### Partners

State Fire Training also extends special acknowledgement and appreciation to the Conference and Training Services Unit with the College of Continuing Education at California State University, Sacramento, for its ongoing meeting logistics and curriculum development support, innovative ideas, and forward-thinking services. This collaboration is made possible through an interagency agreement between CAL FIRE and Sacramento State.

Draft

## How to Read a CTS Guide

State Fire Training develops a Certification Training Standards (CTS) Guide for a variety of job functions in the fire service such as firefighter, driver/operator, fire instructor, and company officer. The CTS guide lists the requisite knowledge and skills and the job performance requirements a person is expected to complete in order to become certified in a specific function.

Each CTS guide serves as a foundation for the certification programs recommended for adoption by the Office of the State Fire Marshal. Any certification program must be based on job-related knowledge and measurable performance standards. To master the knowledge and skills needed for specialized operations, individuals will require additional training to augment the performance standards included in the CTS guide.

Within the CTS guide, it is impossible to capture the different policies and procedures of each organization in the California fire service. Individuals aspiring to meet State Fire Training's certification training standards must do so in accordance with the codes, standards, regulations, policies, and standard operating procedures applicable within their own department or jurisdiction.

### Format

#### Section Heading

Training standards are grouped by section headings that describe a general category. For example, the Fire Fighter I CTS guide includes the following section headings: NFPA Requirements, Fire Department Communications, Fireground Operations, and Preparedness and Maintenance.

#### Training Standard Title

The training standard title provides a general description of the performance requirement contained within the individual standard.

#### Authority

The CTS guide references each individual standard with one or more paragraphs of the corresponding National Fire Protection Association (NFPA) Professional Qualifications. This ensures that each fire service function within California's certification system meets or exceeds NFPA standards.

When California requirements exceed the NFPA standard, the CTS guide cites the Office of the State Fire Marshal as the authority and prints the corresponding information in *italics*.

### **Job Performance Requirements**

This segment includes a written statement that describes a specific job-related task, the items an individual needs to complete the task, and measurable or observable outcomes.

### **Requisite Knowledge**

This segment lists the knowledge that an individual must acquire in order to accomplish the job performance requirement.

### **Requisite Skills**

This segment lists the skills that an individual must acquire in order to accomplish the job performance requirement.

### **Content Modification**

This table documents and justifies any significant revisions to the NFPA standard that the development or validation cadres make during the development of a CTS guide.

### **Cross Reference**

This table documents where each training standard is taught (course plan), tested (skill sheets), and validated (task book).

## Fire Fighter 2

### Section 1: NFPA Requirements

#### 1-1: Identifying NFPA Requirements

##### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.1, 5.1.1, 5.1.2
2. Office of the State Fire Marshal

##### Job Performance Requirement

There is no job performance requirement identified in this training standard.

##### Requisite Knowledge

1. *Describe the* responsibilities of the Fire Fighter II in assuming and transferring command within an incident *command* system
2. *Describe how to* perform assigned duties in conformance with applicable NFPA *standards* and other safety regulations and AHJ procedures
3. *Identify the* role of a Fire Fighter II within the organization

##### Requisite Skills

1. Determine the need for command
2. Organize and coordinate an incident *command* system until command is transferred
3. Function within an assigned role in an incident management system

##### Content Modification

Block	Modification	Justification
RK 1	Changed “management” to “command”.	California uses “command” and not “management”.
RK 2	Added “standards”.	Added for language consistency. NFPA is the organization but was being used to reference a document.
RS 2	Changed “management” to “command”.	California uses “command” and not “management”.

## Fire Fighter 2

### Section 1: NFPA Requirements

---

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 2A, Topic 1-3: Fire Fighter 2 Roles and Responsibilities	1-1: Organize an Incident Management System	N/A

Draft

## Section 2: Fire Department Communications

### 2-1: Completing a Basic Incident Report

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.2.1

#### Job Performance Requirement

Complete a basic incident report, given the report forms, guidelines, and information, so that all pertinent information is recorded, the information is accurate, and the report is complete.

#### Requisite Knowledge

1. *Identify* content requirements for basic incident reports
2. *Identify* the purpose and usefulness of accurate reports
3. *Identify* the consequences of inaccurate reports
4. *Describe* how to obtain necessary information
5. *Identify* required coding procedures

#### Requisite Skills

1. Determine necessary codes
2. Proof reports
3. Operate fire department computers or other equipment necessary to complete reports

#### Content Modification

Block	Modification	Justification

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 2A, Topic 2-1: Completing a Basic Incident Report	2-1: Complete a Basic Incident Report	JPR 2-1

## Fire Fighter 2

### Section 2: Fire Department Communications

---

## 2-2: Communicating the Need for Team Assistance

### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.2.2

### Job Performance Requirement

Communicate the need for team assistance, given fire department communications equipment, SOPs, and a team, so that the supervisor is consistently informed of team needs, departmental SOPs are followed, and the assignment is accomplished safely.

### Requisite Knowledge

1. *Describe* SOPs for alarm assignments
2. *Describe* fire department radio communication procedures

### Requisite Skills

1. Operate fire department communications equipment

### Content Modification

Block	Modification	Justification

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 2A, Topic 2-2: Communicating the Need for Team Assistance	N/A	JPR 2-2

## Section 3: Fireground Operations

### 3-1: Extinguishing an Ignitable Liquid Fire

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.3.1
2. Office of the State Fire Marshal

#### Job Performance Requirement

Extinguish an ignitable liquid fire, operating as a member of a team, given an assignment, an attack line, PPE, a foam proportioning device, a nozzle, foam concentrates (*or suitable substitute*), and a water supply, so that the correct type of foam concentrate is selected for the given fuel and conditions, a properly proportioned foam stream is applied to the surface of the fuel to create and maintain a foam blanket, fire is extinguished, reignition is prevented, team protection is maintained with a foam stream, and the hazard is faced until retreat to safe haven is reached.

#### Requisite Knowledge

1. *Describe* methods by which foam prevents or controls a hazard
2. *List* principles by which foam is generated
3. *Identify* causes for poor foam generation and corrective measures
4. *Describe the* difference between hydrocarbon and polar solvent fuels and the concentrates that work on each
5. *Identify* the characteristics, uses, and limitations of fire-fighting foams
6. *Describe the* advantages and disadvantages of using fog nozzles versus foam nozzles for foam application
7. *Describe* foam stream application techniques
8. *List* hazards associated with foam usage
9. *Describe* methods to reduce or avoid hazards

#### Requisite Skills

1. Prepare a foam concentrate supply for use
2. Assemble foam stream components
3. Master various foam application techniques
4. Approach and retreat from spills as part of a coordinated team.

## Fire Fighter 2

### Section 3: Fireground Operations

---

#### Content Modification

Block	Modification	Justification
JPR	Added "(or suitable substitute)".	Each California county has different rules dictated by CalEPA. Many counties are unable to use foam during training exercises.

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 2A, Topic 3-1: Extinguishing an Ignitable Liquid Fire	3-1: Extinguish an Ignitable Liquid Fire	JPR 3-1

### **3-2: Controlling a Flammable Gas Cylinder Fire**

#### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.3.3

#### **Job Performance Requirement**

Control a flammable gas cylinder fire, operating as a member of a team, given an assignment, a cylinder outside of a structure, an attack line, PPE, and tools, so that crew integrity is maintained, contents are identified, safe havens are identified prior to advancing, open valves are closed, flames are not extinguished unless the leaking gas is eliminated, the cylinder is cooled, cylinder integrity is evaluated, hazardous conditions are recognized and acted upon, and the cylinder is faced during approach and retreat.

#### **Requisite Knowledge**

1. *Identify* characteristics of pressurized flammable gases
2. *List* elements of a gas cylinder
3. *Describe* effects of heat and pressure on closed cylinders
4. *Describe* boiling liquid expanding vapor explosion (BLEVE) signs and effects
5. *Describe* methods for identifying contents
6. *Describe* how to identify safe havens before approaching flammable gas cylinder fires
7. *Describe* water stream usage and demands for pressurized cylinder fires
8. *Describe* what to do if the fire is prematurely extinguished
9. *Identify* valve types and their operation
10. *Describe* alternative actions related to various hazards and when to retreat

#### **Requisite Skills**

1. Execute effective advances and retreats
2. Apply various techniques for water application
3. Assess cylinder integrity and changing cylinder conditions
4. Operate control valves
5. Choose effective procedures when conditions change

#### **Content Modification**

<b>Block</b>	<b>Modification</b>	<b>Justification</b>

## Fire Fighter 2

### Section 3: Fireground Operations

---

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 2A, Topic 3-2: Controlling a Flammable Gas Cylinder Fire	3-2: Control a Flammable Gas Cylinder Fire	JPR 3-2

Draft

### **3-3: Coordinating an Interior Attack Line**

#### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.3.2
2. Office of the State Fire Marshal

#### **Job Performance Requirement**

Coordinate an interior attack line for a team's accomplishment of an assignment in a structure fire, given attack lines, personnel, PPE, and tools, so that crew integrity is established; attack techniques are selected for the given level of the fire (e.g., attic, grade level, upper levels, or basement); attack techniques are communicated to the attack teams; constant team coordination is maintained; fire growth and development is continuously evaluated; search, rescue, and ventilation requirements are communicated or managed; hazards are reported to the attack teams; and incident command is apprised of changing conditions.

#### **Requisite Knowledge**

1. *Describe how to* select the nozzle and hose for fire attack, given different fire situations
2. *Describe how to* select adapters and appliances to be used for specific fireground situations
3. *Identify* dangerous building conditions created by fire and fire suppression activities
4. *Describe* indicators of building collapse
5. *Describe* the effects of fire and fire suppression activities on wood, masonry (brick, block, stone), cast iron, steel, reinforced concrete, gypsum wallboard, glass, and plaster on lath
6. *Describe coordinated* search and rescue and ventilation procedures
7. *List* indicators of structural instability
8. *Describe* suppression approaches and practices for various types of structural fires
9. *Describe* the association between specific tools and special forcible entry needs

#### **Requisite Skills**

1. Assemble a team
2. Choose attack techniques for various levels of a fire (e.g., attic, grade level, upper levels, or basement)
3. Evaluate and forecast a fire's growth and development
4. Select tools for forcible entry
5. Incorporate search and rescue procedures and ventilation procedures in the completion of the attack team efforts
6. Determine developing hazardous building or fire conditions

## Fire Fighter 2

### Section 3: Fireground Operations

---

#### Content Modification

Block	Modification	Justification
RK 6	Added "coordinated".	Added to clarify the relationship between very different activities.

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 2A, Topic 3-3: Coordinating an Interior Attack Line	3-3: Coordinate an Interior Fire Attack Line	JPR 3-3

## Fire Fighter 2

### Section 3: Fireground Operations

---

## 3-4: Protecting Evidence of Fire Cause and Origin

### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.3.4
2. Office of the State Fire Marshal

### Job Performance Requirement

Protect evidence of fire cause and origin, given a flashlight, *PPE*, and overhaul tools, so that the evidence is noted and protected from further disturbance until investigators can arrive on the scene.

### Requisite Knowledge

1. *Identify* methods to assess origin and cause
2. *List* types of evidence
3. *Describe* means to protect various types of evidence
4. *Identify* the role and relationship of Fire Fighter IIs, criminal investigators, and insurance investigators in fire investigations
5. *Describe* the effects and problems associated with removing property or evidence from the scene

### Requisite Skills

1. Locate the fire's origin area
2. Recognize possible causes
3. Protect the evidence

### Content Modification

Block	Modification	Justification
JPR	Added "PPE".	Omitted by NFPA but required for JPR.

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 2A, Topic 3-4: Protecting Evidence of Fire Cause and Origin	3-4: Protect Evidence of Fire Cause and Origin	JPR 3-4

## Section 4: Rescue Operations

### 4-1: Extricating a Victim Entrapped in a Motor Vehicle

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.4.1
2. Office of the State Fire Marshal

#### Job Performance Requirement

Extricate a victim entrapped in a motor vehicle as part of a team, given stabilization and extrication tools, *a vehicle, and PPE*, so that the vehicle is stabilized, the victim is disentangled without further injury, and hazards are managed.

#### Requisite Knowledge

1. *Describe* the fire department’s role at a vehicle accident
2. *Describe* points of strength and weakness in auto body construction
3. *Describe* the dangers associated with vehicle components and systems
4. *Describe* the uses and limitations of hand and power extrication equipment
5. *Describe* safety procedures when using various types of extrication equipment

#### Requisite Skills

1. Operate hand and power tools used for forcible entry and rescue as designed
2. Use cribbing and shoring material
3. Use *stabilization tools and equipment*
4. Choose and apply appropriate techniques for moving or removing vehicle roofs, doors, *seats*, windshields, windows, steering wheels or columns, and the dashboard

#### Content Modification

Block	Modification	Justification
JPR	Added “a vehicle, and PPE”.	Omitted by NFPA but required to complete JPR.
RS 4	Added “seats”.	Seats my also need to be removed to extricate a victim.

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 2A, Topic 4-1: Extricating a Victim Trapped in a Motor Vehicle	4-1: Extricate a Victim Entrapped in a Vehicle Fire	JPR 4-1

## **4-2: Assisting Rescue Operation Teams**

### **Authority**

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.4.2

### **Job Performance Requirement**

Assist rescue operation teams, given standard operating procedures, necessary rescue equipment, and an assignment, so that procedures are followed, rescue items are recognized and retrieved in the time as prescribed by the AHJ, and the assignment is completed.

### **Requisite Knowledge**

1. *Describes* the fire fighter's role at a technical rescue operation
2. *Identify* hazards associated with technical rescue operations
3. *Describe* types and uses for rescue tools
4. *Identify* rescue practices and goals

### **Requisite Skills**

1. Identify and retrieve various types of rescue tools
2. Establish public barriers
3. Assist rescue teams as a member of the team when assigned

### **Content Modification**

<b>Block</b>	<b>Modification</b>	<b>Justification</b>

### **Cross Reference**

<b>Course Plan</b>	<b>Skill Sheets</b>	<b>Task Book</b>
Fire Fighter 2A, Topic 4-2: Assisting Rescue Operation Teams	4-2: Assist a Rescue Operations Team	JPR 4-2

## Section 5: Fire and Life Safety Initiatives, Preparedness, and Maintenance

### 5-1: Performing a Fire Safety Survey in an Occupied Structure

#### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.5.1

#### Job Performance Requirement

Perform a fire safety survey in an occupied structure, given survey forms and procedures, so that fire and life safety hazards are identified, recommendations for their correction are made to the occupant, and unresolved issues are referred to the proper authority.

#### Requisite Knowledge

1. *Describe* organizational policy and procedures
2. *List* common causes of fire and their prevention
3. *Describe* the importance of a fire safety survey and public fire education programs to fire department public relations and the community
4. *Identify* referral procedures

#### Requisite Skills

1. Complete forms
2. Recognize hazards
3. Match findings to preapproved recommendations
4. Effectively communicate findings to occupants or referrals

#### Content Modification

Block	Modification	Justification

#### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 2A, Topic 5-1: Performing a Fire and Life Safety Survey in an Occupied Structure	5-1: Perform a Fire Safety Survey in an Occupied Structure	JPR 5-1

## Fire Fighter 2

### Section 5: Fire and Life Safety Initiatives, Preparedness, and Maintenance

---

## 5-2: Presenting Fire Safety Information to Station Visitors or Small Groups

### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.5.2

### Job Performance Requirement

Present fire safety information to station visitors or small groups, given prepared materials, so that all information is presented, the information is accurate, and questions are answered or referred.

### Requisite Knowledge

1. *Describe* parts of informational materials and how to use them
2. *Identify* basic presentation skills
3. *Describe* departmental standard operating procedures for giving fire station tours

### Requisite Skills

1. Document presentations
2. Use prepared materials

### Content Modification

Block	Modification	Justification

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 2A, Topic 5-2: Presenting Fire Safety Information to Station Visitors or Small Groups	5-2: Present Fire Safety Information	JPR 5-2

## Fire Fighter 2

### Section 5: Fire and Life Safety Initiatives, Preparedness, and Maintenance

---

## 5-3: Preparing a Preincident Survey

### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.5.3

### Job Performance Requirement

Prepare a preincident survey, given forms, necessary tools, and an assignment, so that all required occupancy information is recorded, items of concern are noted, and accurate sketches or diagrams are prepared.

### Requisite Knowledge

1. *Identify* sources of water supply for fire protection
2. *Describe* the fundamentals of fire suppression and detection systems
3. *Identify* common symbols used in diagramming construction features, utilities, hazards, and fire protection systems
4. *Describe* departmental requirements for a preincident survey and form completion
5. *Identify* the importance of accurate diagrams

### Requisite Skills

1. Identify the components of fire suppression and detection systems
2. Sketch the site, buildings, and special features
3. Detect hazards and special considerations to include in the preincident sketch
4. Complete all related departmental forms

### Content Modification

Block	Modification	Justification

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 2A, Topic 5-3: Preparing a Preincident Survey	5-3: Prepare a Preincident Survey	JPR 5-3

## Fire Fighter 2

### Section 5: Fire and Life Safety Initiatives, Preparedness, and Maintenance

---

## 5-4: Maintaining Power Plants, Power Tools, and Lighting Equipment

### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.5.4

### Job Performance Requirement

Maintain power plants, power tools, and lighting equipment, given tools and manufacturers' instructions, so that equipment is clean and maintained according to manufacturer and departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise.

### Requisite Knowledge

1. *Identify* types of cleaning methods
2. *Describe* correct use of cleaning solvents
3. *Describe* manufacturer and departmental guidelines for maintaining equipment and its documentation
4. *Identify* problem-reporting practices

### Requisite Skills

1. Select correct tools
2. Follow guidelines
3. Complete recording and reporting procedures
4. Operate power plants, power tools, and lighting equipment

### Content Modification

Block	Modification	Justification

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 2A, Topic 5-4: Maintaining Power Plants, Power Tools, and Lighting Equipment	5-4: Maintain Power Plants, Tools, and Equipment	JPR 5-4

## Fire Fighter 2

### Section 5: Fire and Life Safety Initiatives, Preparedness, and Maintenance

---

## 5-5: Performing an Annual Service Test on Fire Hose

### Authority

1. NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019)
  - Paragraph 5.5.5
2. Office of the State Fire Marshal

### Job Performance Requirement

Perform an annual service test on fire hose, given *an apparatus or hose testing device*, a marking device, pressure gauges, a timer, record sheets, and related equipment, so that procedures are followed, the condition of the hose is evaluated, any damaged hose is removed from service, and the results are recorded.

### Requisite Knowledge

1. *Describe* procedures for safely conducting hose service testing
2. Identify indicators that dictate any hose be removed from service
3. *Describe* recording procedures for hose test results

### Requisite Skills

1. Operate hose testing equipment and nozzles
2. Record results

### Content Modification

Block	Modification	Justification
JPR	Changed “a pump” to “an apparatus or hose testing device”.	This is the generic term used in the field and provides more options for testing.

### Cross Reference

Course Plan	Skill Sheets	Task Book
Fire Fighter 2A, Topic 5-5: Performing an Annual Service Test on a Fire Hose	5-5: Perform an Annual Service Test on a Fire Hose	JPR 5-5



# Structure (2019)

## Course Plan

### Course Details

<b>Certification:</b>	Fire Fighter 2
<b>CTS Guide:</b>	Fire Fighter 2 Certification Training Standards Guide (Month Year)
<b>Description:</b>	This course provides the skills and knowledge needed for the fire fighter to take on increased leadership roles and responsibilities pertaining to fire department communications, fireground operations, rescue operations, and fire and life safety initiatives, preparedness, and maintenance.
<b>Designed For:</b>	Fire fighters
<b>Prerequisites:</b>	Prerequisites must be completed prior to enrollment in this course. <ul style="list-style-type: none"><li>• State Fire Training's Fire Fighter 1 – Structure training or an established equivalent</li><li>• Public Safety First Aid or higher qualification (<i>See SFT Procedures Manual</i> (January 2019) section 7.12.3 for requirements.)</li><li>• CPR healthcare provider certification or equivalent (<i>See SFT Procedures Manual</i> (January 2019) section 7.12.3 for requirements.)</li></ul>
<b>Corequisites:</b>	None
<b>Standard:</b>	Complete all activities, skills, and formative tests. Complete all summative tests with a minimum score of 80%.
<b>Hours (Total):</b>	48 hours (20 lecture / 28 application / AHJ determines practice and assessment times)
<b>Maximum Class Size:</b>	50
<b>Instructor Level:</b>	Fire Fighter Instructor ( <i>See SFT Procedures Manual</i> (January 2019) section 6.6 for requirements.)*
<b>Instructor/Student Ratio:</b>	1:50 (Lecture) / 1:10 (Application)*
<b>Restrictions:</b>	None
<b>SFT Designation:</b>	CFSTES

\* If any portion of this course curriculum is taught using another course plan, the instructor level and ratio of that course plan supersedes this requirement.

## Table of Contents

Required Resources.....	4
Instructor Resources.....	4
Online Instructor Resources .....	4
Student Resources.....	5
Facilities, Equipment, and Personnel .....	5
Time Table.....	7
Time Table Key.....	8
Unit 1: Introduction .....	9
Topic 1-1: Orientation and Administration .....	9
Topic 1-2: Fire Fighter 2 Certification Process.....	9
Topic 1-3: Fire Fighter 2 Roles and Responsibilities .....	10
Unit 2: Fire Department Communications.....	12
Topic 2-1: Completing a Basic Incident Report.....	12
Topic 2-2: Communicating the Need for Team Assistance.....	13
Unit 3: Fireground Operations .....	14
Topic 3-1: Extinguishing an Ignitable Liquid Fire .....	14
Topic 3-2: Controlling a Flammable Gas Cylinder Fire.....	15
Topic 3-3: Coordinating an Interior Attack Line .....	16
Topic 3-4: Protecting Evidence of Fire Cause and Origin.....	18
Unit 4: Rescue Operations .....	19
Topic 4-1: Extricating a Victim Entrapped in a Motor Vehicle.....	19
Topic 4-2: Assisting Rescue Operation Teams.....	19
Unit 5: Fire and Life Safety .....	21
Topic 5-1: Performing a Fire Safety Survey in an Occupied Structure .....	21
Topic 5-2: Presenting Fire Safety Information to Station Visitors or Small Groups .....	21
Topic 5-3: Preparing a Preincident Survey .....	23
Topic 5-4: Maintaining Power Plants, Power Tools, and Lighting Equipment.....	23
Topic 5-5: Performing an Annual Service Test on Fire Hose .....	24
How to Read a Course Plan.....	26

## Required Resources

### Instructor Resources

To teach this course, instructors need:

- *Fundamentals of Fire Fighter Skills and Hazardous Materials Response* (Jones and Bartlett Learning, 4<sup>th</sup> edition, ISBN: 978-1-284-15133-6)  
**or**  
*Essentials of Fire Fighting* (IFSTA, 7<sup>th</sup> edition, ISBN: 978-087939657-2)
- NFPA 704: Standard System for the Identification of the Hazards of Materials for Emergency Response (current edition)
- NFPA 901: Standard Classifications for Incident Reporting and Fire Protection Data (current edition)
- NFPA 1001: Standard for Fire Fighter Professional Qualifications (current edition)
- NFPA 1962: Standard for the Care, Use, Inspection, Service Testing, and Replacement of Fire Hose, Couplings, Nozzles, and Fire Hose Appliances (current edition)
- NFPA 1971: Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting (current edition)
- Full structural PPE and SCBA that meets AHJ requirements
  - PPE and SCBA used during live burns must be compliant with NFPA 1971 (current edition)

### Online Instructor Resources

The following instructor resources are available online at

<http://osfm.fire.ca.gov/training/firefighter2:>

- Fire Fighter 2 Skill Sheets
  - 1-1: Organize an Incident Management System
  - 2-1: Complete a Basic Incident Report
  - 3-1: Extinguish an Ignitable Liquid Fire
  - 3-2: Control a Flammable Gas Cylinder Fire
  - 3-3: Coordinate an Interior Fire Attack Line
  - 3-4: Protect Evidence of Fire Cause and Origin
  - 4-1: Extricate a Victim Entrapped in a Motor Vehicle
  - 4-2: Assist a Rescue Operations Team
  - 5-1: Perform a Fire Safety Survey in an Occupied Structure
  - 5-2: Present Fire Safety Information
  - 5-3: Prepare a Preincident Survey
  - 5-4: Maintain Power Plants, Tools, and Equipment
  - 5-5: Perform an Annual Service Test on a Fire Hose

### Student Resources

To participate in this course, students need:

- *Fundamentals of Fire Fighter Skills and Hazardous Materials Response* (Jones and Bartlett Learning, 4<sup>th</sup> edition, ISBN: 978-1-284-15133-6)  
or  
*Essentials of Fire Fighting* (IFSTA, 7<sup>th</sup> edition, ISBN: 978-087939657-2)
- Full structural PPE and SCBA that meets AHJ requirements
  - PPE and SCBA used during live burns must be compliant with NFPA 1971 (current edition)

### Facilities, Equipment, and Personnel

The following facilities, equipment, or personnel\* are required to deliver this course:

- **Appliances and tools:** 1 ½-inch fog nozzle, 2 ½ - 1 1/8-inch straight tip nozzle, wildland nozzles and appliances, cap, double female fittings, double male fittings, hose clamps, hose jacket, hose roller, hose strap, rope, or chain, nozzle selection as determined by AHJ, plug, master stream device, traffic and scene control devices, reducer or increaser (fittings), Siamese, spanner wrenches, and gated wye
- **Extinguishers and supplies:** Dry chemical extinguisher, (ordinary base or multi-purpose) 20 pounds, CO<sub>2</sub> extinguisher, pump tank water extinguisher, Class A fuel for live burns, Class B fuel for live burns, and metal pan – minimum 16 square feet
- **Hose:** 1-, 1 ½- or 1 ¾-inch fire hose (300-foot minimum), 2 ½- or 3-inch fire hose (500-foot minimum), large diameter hose (LDH) (300-foot minimum), handline with fog nozzle, hard suction (intake) hose and strainer, hose and nozzles capable of flowing a minimum of 95 GPM, and soft suction hose
- **Hand tools:** Bolt cutters, crowbar/pry bar, flat head axe, halligan tool, hand saw, hydrant wrench, K-tool, pick-head axe, pike pole (8 feet), sledgehammer, flashlight, and wildland hand tools and equipment
- **Ladders:** 10-foot folding ladder, 14-foot roof ladder, 24-foot extension ladder, 35-foot extension ladder, and two straight ladders
- **Power tools:** Electric and gasoline powered fan, chain saw, gasoline powered circular saw, and a generator
- **Protective equipment/clothing:** Full set of protective clothing for structural fire fighting for each trainee, including bunker pants, bunker coat, bunker boots, gloves, helmet, hood, and face piece, self-contained breathing apparatus with charged air cylinder, (one extra fully charged air cylinder), personal alert safety system (P.A.S.S.), safety harness, manufacturer approved cleaning agent (for SCBA), manufacturer approved cleaning equipment (for SCBA), and manufacturer approved sanitizing agent (for SCBA)
- **Rope:** ½-inch rope, safety line, webbing, various lengths and diameters of utility rope, various lengths and diameters of synthetic rope, and various lengths of 1-person or 2-person life safety rope

- **Salvage equipment/materials:** Brooms, buckets, tubs, mops, objects to cover, salvage covers, squeegees, sprinkler stop, and water vacuums
- **Simulation equipment/materials:** Burn building as recommended in NFPA 1403: Standard on Live Fire Training (current edition), wood roof prop, smoke-generating equipment, training tower, minimum of two stories in height, gas, water, and electric service cut-off, vehicle fire prop, and a simulated breaching/restricted passageway prop
- **Other supplies/equipment needed:** Fire hydrant, pitot tube and gauge, portable radio, thermal imaging device, atmospheric monitor, standard above ground fall protection, minimum of two apparatuses equipped with pump and two separate water supplies, fuel and supplies for power equipment, cleaning supplies and equipment, portable lighting equipment, two portable tanks with water transfer equipment and appliances

\* See NFPA 1403 (2018 or current edition) for additional facilities, equipment, and personnel requirements needed for NFPA 1403-compliant live fire training evolutions.

**Time Table**

Segment	Lecture	Application	Unit Total
<b>Unit 1: Introduction</b>			
Topic 1-1: Orientation and Administration	0.5	0.0	
Topic 1-2: Fire Fighter 2 Certification Process	0.5	0.0	
Topic 1-3: Fire Fighter 2 Roles and Responsibilities	1	0.0	
<b>Unit 1 Totals</b>	<b>2.0</b>	<b>0.0</b>	<b>2.0</b>
<b>Unit 2: Fire Department Communications</b>			
Topic 2-1: Completing a Basic Incident Report	1.0	0.5	
Topic 2-2: Communicating the Need for Team Assistance	0.5	0.5	
<b>Unit 2 Totals</b>	<b>1.5</b>	<b>1.0</b>	<b>2.5</b>
<b>Unit 3: Fireground Operations</b>			
Topic 3-1: Extinguishing an Ignitable Liquid Fire	2.0	4.0	
Topic 3-2: Controlling a Flammable Gas Cylinder Fire	2.0	4.0	
Topic 3-3: Coordinating an Interior Attack Line	2.0	6.5	
Topic 3-4: Protecting Evidence of Fire Cause and Origin	1.5	0.5	
<b>Unit 3 Totals</b>	<b>7.5</b>	<b>15.0</b>	<b>22.5</b>
<b>Unit 4: Rescue Operations</b>			
Topic 4-1: Extricating a Victim Entrapped in a Motor Vehicle	2.0	6.0	
Topic 4-2: Assisting Rescue Operation Teams	2.0	0.0	
<b>Unit 4 Totals</b>	<b>4.0</b>	<b>6.0</b>	<b>10.0</b>
<b>Unit 5: Fire and Life Safety</b>			
Topic 5-1: Performing a Fire Safety Survey in an Occupied Structure	1.0	1.0	
Topic 5-2: Presenting Fire Safety Information to Station Visitors or Small Groups	1.0	1.0	
Topic 5-3: Preparing a Preincident Survey	1.0	2.0	
Topic 5-4: Maintaining Power Plants, Power Tools, and Lighting Equipment	1.0	1.0	
Topic 5-5: Performing an Annual Service Test on Fire Hose	1.0	1.0	
<b>Unit 5 Totals</b>	<b>5.0</b>	<b>6.0</b>	<b>11.0</b>
<b>Summative Assessment</b>			
Determined by AHJ or educational institution	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>
<b>Skills Practice (Lab / Sets and Reps)</b>			
Determined by AHJ or educational institution	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>
<b>Course Totals</b>	<b>20.0</b>	<b>28.0</b>	<b>48.0</b>

### Time Table Key

1. The Time Table documents the amount of time required to deliver the content included in the course plan.
2. Time is documented using the quarter system: 15 min. = .25 / 30 min. = .50 / 45 min. = .75 / 60 min. = 1.0.
3. The Course Totals do not reflect time for lunch (1 hour) or breaks (10 minutes per each 50 minutes of instruction or assessment). It is the instructor's responsibility to add this time based on the course delivery schedule.
4. Application (activities, skills exercises, and formative testing) time will vary depending on the number of students enrolled. The Application time documented is based on the maximum class size identified in the Course Details section.
5. Summative Assessments are determined and scheduled by the authority having jurisdiction. These are not the written or psychomotor State Fire Training certification exams. These are in-class assessments to evaluate student progress and calculate course grades.

## Unit 1: Introduction

### Topic 1-1: Orientation and Administration

#### Terminal Learning Objective

At the end of this topic a student will be able to identify facility and classroom requirements and identify course objectives, events, requirements, assignments, activities, skills exercises, resources, evaluation methods, and participation requirements in the course syllabus.

#### Enabling Learning Objectives

1. Identify facility requirements
  - Restroom locations
  - Food locations
  - Smoking locations
  - Emergency procedures
2. Identify classroom requirements
  - Start and end times
  - Breaks
  - Electronic device policies
  - Special needs and accommodations
  - Other requirements as applicable
3. Review course syllabus
  - Course objectives
  - Calendar of events
  - Course requirements
  - Student evaluation process
  - Assignments
  - Activities and skills exercises
  - Required student resources
  - Class participation requirements

#### Discussion Questions

1. Determined by instructor

#### Application

1. Determined by instructor

#### Instructor Notes

1. None

**CTS Guide Reference:** None

**Skill Sheet:** None

### Topic 1-2: Fire Fighter 2 Certification Process

#### Terminal Learning Objective

At the end of this topic a student will be able to identify the requirements for Fire Fighter 2 certification and be able to describe the certification task book and examination process.

### Enabling Learning Objectives

1. Identify the different levels of certification in the Fire Fighter certification track
  - Fire Fighter 1
  - Fire Fighter 2
2. Identify the prerequisites for Fire Fighter 2 certification
3. Identify the course work required for Fire Fighter 2 certification
4. Identify the certification exams required for Fire Fighter 2 certification
5. Identify the task book requirements for Fire Fighter 2 certification
6. Identify the experience requirements for Fire Fighter 2 certification
7. Identify the position requirements for Fire Fighter 2 certification
8. Describe the certification task book process
9. Describe the certification examination process

### Discussion Questions

1. Determined by instructor

### Application

1. Determined by instructor

### Instructor Notes

1. Use the *SFT Procedures Manual (2019)* (7.12.2 Fire Fighter 2) content for ELOs 2 through 7.
2. Use a copy of the Fire Fighter 2 Certification Task Book to walk students through the task book process and expectations for ELO 8.
3. Use the *SFT Procedures Manual (2019)* (Chapter 11: Fire Fighter Certification Exams) content for ELO 9.

**CTS Guide Reference:** None

**Skill Sheet:** None

## Topic 1-3: Fire Fighter 2 Roles and Responsibilities

### Terminal Learning Objective

At the end of this topic a student will be able to describe the role of the Fire Fighter 2 as identified by NFPA 1001: Standard for Fire Fighter Professional Qualifications (current edition) and the Office of the State Fire Marshal.

### Enabling Learning Objectives

1. Describe the responsibilities of the Fire Fighter 2 in assuming and transferring command within an incident command system (ICS)
2. Describe how to perform assigned duties in conformance with applicable NFPA standards, other safety regulations, and AHJ procedures
3. Identify the role of a Fire Fighter 2 within the organization
4. Determine the need for command
5. Organize and coordinate an incident command system until command is transferred
6. Function within an assigned role in an incident management system

### Discussion Questions

1. How do the roles and responsibilities of a Fire Fighter 2 differ from those of a Fire Fighter 1?

### Application

1. Determined by instructor

### Instructor Notes:

1. None

**CTS Guide Reference:** 1-1

**Skill Sheet:** 1-1: Organize an Incident Management System

## Unit 2: Fire Department Communications

### Topic 2-1: Completing a Basic Incident Report

#### Terminal Learning Objective

At the end of this topic a student, given report forms, guidelines, and information, will be able to complete a basic incident report so that all pertinent information is recorded, the information is accurate, and the report is complete.

#### Enabling Learning Objectives

1. Identify content requirements for basic incident reports
  - Program reporting systems
    - Software must be compliant with National Fire Incident Reporting System (NFIRS) or NFPA 901: Standard Classifications for Incident Reporting and Fire Protection Data (current edition)
    - California Fire Incident Reporting System (CalFIRS), Firehouse, Image Trend, etc.
    - Other electronic collection programs
  - Information collected
    - Incident type
    - Incident origin and growth
    - Fire department intervention
    - Personnel and parties involved
  - Writing style
    - Clear and concise language
    - Proper grammar and spelling
    - Appropriate use of abbreviations/acronyms
    - Legible handwriting (if not electronic)
    - Proof reading
2. Identify the purpose and usefulness of accurate reports
  - Data, statistics, and trends
  - Fire activity analysis
  - Community risk reduction
  - Insurance claims
  - Liability reduction
3. Identify consequences of inaccurate reports
  - False data analysis
  - Possible legal consequences
4. Describe how to obtain necessary information
  - Personal observation
  - Interviews
5. Identify required coding procedures
6. Determine necessary codes
7. Proof reports

8. Demonstrate fire department computers or other equipment necessary to complete reports

### Discussion Questions

1. What is National Fire Incident Reporting System (NFIRS)?
2. Why are fire reports important the AHJ? Why are they important to the public?
3. What are the potential consequences or incomplete or inaccurate reports?

### Application

1. Given an event scenario and an AHJ report form or template, have students prepare and code a basic incident report.

### Instructor Notes:

1. ELO 1: See U.S. Fire Administration course [National Fire Incident Reporting System 5.0 Self-Study \(Q0494\)](#) as a recommended resource.
2. Provide students with sample AHJ reports as examples.

**CTS Guide Reference:** 2-1

**Skill Sheet:** 2-1: Complete a Basic Incident Report

## Topic 2-2: Communicating the Need for Team Assistance

### Terminal Learning Objective

At the end of this topic a student, given fire department communications equipment, SOPs, and a team, will be able to communicate the need for team assistance so that the supervisor is consistently informed of team needs, departmental SOPs are followed, and the assignment is accomplished safely.

### Enabling Learning Objectives

1. Describe standard operating procedures (SOPs) for alarm assignments
  - Alarm assignments are a predetermined allocation of resources specific to AHJs
  - SOPs are predetermined operations to mitigate incident objectives depending on nature and complexity
  - Emergency scene operations rely on consistent SOPs and methods
  - Risk assessment may influence incident goals and priorities
2. Describe fire department radio communication procedures
3. Demonstrate proper operation of fire department communications equipment

### Discussion Questions

1. What methods of communication do personnel use on an emergency scene?
2. What is the importance of radio discipline?

### Application

1. Given simulated situations, have students identify the proper channel for communication on a fire department radio.

### Instructor Notes:

1. Describe interoperability of radios and equipment between different fire agencies.

**CTS Guide Reference:** 2-2

**Skill Sheet:** None

## Unit 3: Fireground Operations

### Topic 3-1: Extinguishing an Ignitable Liquid Fire

#### Terminal Learning Objective

At the end of this topic a student, given an assignment, an attack line, PPE, a foam proportioning device, a nozzle, foam concentrates (or suitable substitute), and a water supply, will be able to extinguish an ignitable liquid fire, operating as a member of a team, so that the correct type of foam concentrate is selected for the given fuel and conditions, a properly proportioned foam stream is applied to the surface of the fuel to create and maintain a foam blanket, fire is extinguished, reignition is prevented, team protection is maintained with a foam stream, and the hazard is faced until retreat to safe haven is reached.

#### Enabling Learning Objectives

1. Describe how foam prevents or controls a hazard
  - Separating
  - Cooling
  - Smothering
2. List principles by which foam is generated
  - Foam proportioner
  - Aeration
3. Identify causes of and corrective measures for poor foam generation
  - Incorrect ratios of water, concentrate, and air
4. Describe the difference between hydrocarbon and polar solvent fuels and the concentrates that work on each
  - Hydrocarbon fuels
    - Petroleum based
    - Combustible or flammable
    - Float on water
  - Polar solvent fuels
    - Flammable liquids
    - Mix readily with water
  - Class B foam is utilized for both
5. Identify the characteristics, uses, and limitations of fire-fighting foams
  - Class A
  - Class B
6. Describe the advantages and disadvantages of using fog nozzles versus foam nozzles for foam application
  - Fog nozzle
    - Advantage: Produces low expansion short lasting foam, widely available on most apparatus
    - Disadvantage: May not create the same quality of foam as foam nozzles

- Foam nozzle
  - Advantage: Most effective for generation of low, medium, or high expansion foam
  - Disadvantage: Not as versatile as a fog nozzle and generally does not have the same reach
- 7. Describe foam stream application techniques
  - Rain down
  - Roll in/on
  - Bounce off/Bank down
- 8. List hazards associated with foam usage
  - Can degrade PPE
  - Most are mildly corrosive
  - Environmental impacts
  - Health impacts
- 9. Describe methods to reduce or avoid hazards
  - Maintain foam blanket to reduce risk of reignition
  - Avoid standing in pools of fuel or run-off water
- 10. Prepare a foam concentrate (or suitable substitute) for use
- 11. Assemble foam stream components
- 12. Master various foam application techniques
- 13. Approach and retreat from spills as part of a coordinated team.

### Discussion Questions

1. What types of foam are used during fire fighting operations?
2. What are some limitations of foam use?
3. What are some hazards of foam use?

### Application

1. Given an assignment, an attack line, PPE, a foam proportioning device, a nozzle, foam concentrates (or suitable substitute), and a water supply, have students extinguish a simulated or ignitable liquid fire as a member of a team.

### Instructor Notes:

1. The content in this topic can be fulfilled through completion of State Fire Training's Fire Control 4: Controlling Ignitable Liquids and Gases (FSTEP) course.
2. If unable to demonstrate foam application due to cost or environmental restrictions:
  - Use digital sources to review foam application.
  - Demonstrate using dish soap, bucket, and eductor.

**CTS Guide Reference:** 3-1

**Skill Sheet:** 3-1: Extinguish an Ignitable Liquid Fire

## Topic 3-2: Controlling a Flammable Gas Cylinder Fire

### Terminal Learning Objective

At the end of this topic a student, given an assignment, a cylinder outside of a structure, an attack line, PPE, and tools, will be able to control a flammable gas cylinder fire, operating as

a member of a team, so that crew integrity is maintained, contents are identified, safe havens are identified prior to advancing, open valves are closed, flames are not extinguished unless the leaking gas is eliminated, the cylinder is cooled, cylinder integrity is evaluated, hazardous conditions are recognized and acted upon, and the cylinder is faced during approach and retreat.

### Enabling Learning Objectives

1. Identify characteristics of pressurized flammable gases
2. List elements of a gas cylinder
3. Describe effects of heat and pressure on closed cylinders
4. Describe boiling liquid expanding vapor explosion (BLEVE) signs and effects
5. Describe methods for identifying contents
6. Describe how to identify safe havens before approaching flammable gas cylinder fires
7. Describe water stream usage and demands for pressurized cylinder fires
8. Describe what to do if the fire is prematurely extinguished
9. Identify valve types and their operation
10. Describe alternative actions related to various hazards and when to retreat
11. Execute effective advances and retreats
12. Apply various techniques for water application
13. Assess cylinder integrity and changing cylinder conditions
14. Operate control valves
15. Choose effective procedures when conditions change

### Discussion Questions

1. What happens to a gas cylinder when exposed to fire conditions?
2. What safety precautions should be taken in anticipation of a BLEVE?
3. Why is it a problem if a venting tank fire is extinguished prematurely?

### Application

1. Given a cylinder outside of a structure, an attack line, PPE, and tools, have students control a simulated flammable gas cylinder fire as a member of a team.

### Instructor Notes

1. The content in this topic can be fulfilled through completion of State Fire Training's Fire Control 4: Controlling Ignitable Liquids and Gases (FSTEP) course.

**CTS Guide Reference:** 3-2

**Skill Sheet:** 3-2: Control a Flammable Gas Cylinder Fire

## Topic 3-3: Coordinating an Interior Attack Line

### Terminal Learning Objective

At the end of this topic a student, given attack lines, personnel, PPE, and tools, will be able to coordinate an interior attack line for a team's accomplishment of an assignment in a structure fire so that crew integrity is established; attack techniques are selected for the given level of the fire (e.g., attic, grade level, upper levels, or basement); attack techniques are communicated to the attack teams; constant team coordination is maintained; fire growth and development is continuously evaluated; search, rescue, and ventilation

requirements are communicated or managed; hazards are reported to the attack teams; and incident command is apprised of changing conditions.

### **Enabling Learning Objectives**

1. Describe how to select the nozzle and hose for fire attack
2. Describe how to select adapters and appliances to be used for specific fireground situations
3. Identify dangerous building conditions created by fire and fire suppression activities
  - Collapse
  - Increased water weight
  - Building construction
  - Improper ventilation
  - Flow path
  - Flashover
  - Rapid fire development
  - Smoke (volume, velocity, density, and color)
4. Describe indicators of building collapse
5. List indicators of structural instability
6. Describe the effects of fire and fire suppression activities on wood, masonry (brick, block, stone), cast iron, steel, reinforced concrete, gypsum wallboard, glass, and plaster on lath
7. Describe coordinated search and rescue and ventilation procedures
8. Describe suppression approaches and practices for various types of structural fires
  - Offensive vs. defensive
  - Traditional vs. transitional
  - Direct vs. indirect
9. Describe the association between specific tools and special forcible entry needs
10. Assemble a team
11. Choose attack techniques for various levels of a fire (e.g., attic, grade level, upper levels, or basement)
12. Evaluate and forecast a fire's growth and development
13. Select tools for forcible entry
14. Incorporate search and rescue procedures and ventilation procedures in the completion of the attack team efforts
15. Determine developing hazardous building or fire conditions

### **Discussion Questions**

1. What are some considerations for line selection and placement?
2. Why is reading smoke essential for fire fighter safety?
3. What are some indicators of a below grade or basement fire?

### **Application**

1. Given a simulated scenario, attack lines, personnel, PPE, and tools, have students work in teams to coordinate an interior attack line.

### Instructor Notes

1. None

**CTS Guide Reference:** 3-3

**Skill Sheet:** 3-3: Coordinate an Interior Fire Attack Line

### Topic 3-4: Protecting Evidence of Fire Cause and Origin

#### Terminal Learning Objective

At the end of this topic a student, given a flashlight, *PPE*, and overhaul tools, will be able to protect evidence of fire cause and origin so that the evidence is noted and protected from further disturbance until investigators can arrive on the scene.

#### Enabling Learning Objectives

1. Identify methods to assess fire origin and cause
2. List types of evidence
3. Describe means to protect various types of evidence
4. Identify the role and relationship a Fire Fighter 2 during fire investigations with:
  - Criminal investigators
  - Insurance investigators
5. Describe the effects and problems associated with removing property or evidence from the scene
6. Locate the fire's origin area
7. Recognize possible causes
8. Protect the evidence

#### Discussion Questions

1. What is the difference between fire cause and fire origin?
2. Why is it important to determine the area of origin prior to initiating overhaul operations?
3. What are some ways to protect potential evidence?

#### Application

1. Given a simulated scenario, video, or photographs, have students determine the fire's area of origin and possible causes and describe how they would protect potential evidence.

### Instructor Notes

1. None

**CTS Guide Reference:** 3-4

**Skill Sheet:** 3-4: Protect Evidence of Fire Cause and Origin

## Unit 4: Rescue Operations

### Topic 4-1: Extricating a Victim Entrapped in a Motor Vehicle

#### Terminal Learning Objective

At the end of this topic a student, given stabilization and extrication tools, *a vehicle, and PPE*, will be able to extricate a victim entrapped in a motor vehicle as part of a team so that the vehicle is stabilized, the victim is disentangled without further injury, and hazards are managed.

#### Enabling Learning Objectives

1. Describe the fire department's role at a vehicle accident
2. Describe points of strength and weakness in auto body construction
3. Describe dangers associated with vehicle components and systems
4. Describe the uses and limitations of hand and power extrication equipment
5. Describe safety procedures when using various types of extrication equipment
  - Hazards and dangers associated with emergency scene requiring extrication
  - Basic fire protection with charged hose line and/or fire extinguisher
6. Operate hand and power tools used for forcible entry and rescue as designed
7. Use cribbing and shoring material
8. Use stabilization tools and equipment
9. Choose and apply appropriate techniques for moving or removing vehicle roofs, doors, seats, windshields, windows, steering wheels or columns, and the dashboard

#### Discussion Questions

1. What safety concerns are associated with alternative fuel vehicle extrication?
2. What safety precautions should a fire fighter take when working on modern vehicles?
3. What level of personal protective equipment should a fire fighter use during vehicle extrication?

#### Application

1. Given a stimulated scenario, stabilization and extrication tools, a vehicle or prop, and PPE, have students work in teams to extricate a victim entrapped in a motor vehicle.

#### Instructor Notes

1. The content in this topic can be fulfilled through completion of State Fire Training's Auto Extrication (FSTEP) course.

#### CTS Guide Reference: 4-1

#### Skill Sheet: 4-1: Extricate a Victim Entrapped in a Motor Vehicle

### Topic 4-2: Assisting Rescue Operation Teams

#### Terminal Learning Objective

At the end of this topic a student, given standard operating procedures, necessary rescue equipment, and an assignment, will be able to assist rescue operation teams so that procedures are followed, rescue items are recognized and retrieved in the time as prescribed by the AHJ, and the assignment is completed.

### Enabling Learning Objectives

1. Identify types of rescue operations
  - Structural collapse
  - Trench collapse
  - Cave and/or tunnel emergencies
  - Confined space emergencies
  - Water and/or ice emergencies
  - Elevator emergencies
  - Escalator emergencies
  - Energized electrical line emergencies
  - Industrial accidents
  - Wilderness search and rescue
2. Describe the fire fighter's role at technical rescue operations
3. Identify hazards associated with technical rescue operations
4. Describe types and uses of rescue tools
5. Identify rescue practices and goals
6. Identify and retrieve various types of rescue tools
7. Establish public barriers
8. Assist rescue teams as a member of the team when assigned

### Discussion Questions

1. What level of personal protective equipment is appropriate for a [choose one type] rescue?
2. What hazards are associated with a [choose one type] rescue?
3. Why is operational discipline important during technical rescue incidents?

### Application

1. Determined by instructor

### Instructor Notes

1. None

**CTS Guide Reference:** 4-2

**Skill Sheet:** 4-2: Assist a Rescue Operations Team

## Unit 5: Fire and Life Safety

### Topic 5-1: Performing a Fire Safety Survey in an Occupied Structure

#### Terminal Learning Objective

At the end of this topic a student, given survey forms and procedures, will be able to perform a fire safety survey in an occupied structure so that fire and life safety hazards are identified, recommendations for their correction are made to the occupant, and unresolved issues are referred to the proper authority.

#### Enabling Learning Objectives

1. Describe AHJ policy and procedures
2. List common causes of fire and their prevention
3. Describe the importance of a fire safety survey and public fire education programs to fire department public relations and the community
4. Identify referral procedures utilized by the AHJ
5. Complete forms
6. Recognize hazards
7. Match findings to preapproved recommendations
8. Effectively communicate findings to occupants or referrals

#### Discussion Questions

1. What is it important to conduct fire safety surveys at occupied structures?
2. What are some essential items to inspect during fire safety surveys?
3. What are common causes of fire in occupied structures?

#### Application

1. Given a survey form or checklist and a location, have students demonstrate the proper method to perform a fire safety survey and communicate results to the occupant or referral entity.

#### Instructor Notes

1. None

**CTS Guide Reference:** 5-1

**Skill Sheet:** 5-1: Perform a Fire Safety Survey in an Occupied Structure

### Topic 5-2: Presenting Fire Safety Information to Station Visitors or Small Groups

#### Terminal Learning Objective

At the end of this topic a student, given prepared materials, will be able to present fire safety information to station visitors or small groups so that all information is presented, the information is accurate, and questions are answered or referred.

#### Enabling Learning Objectives

1. Describe parts of informational materials and how to use them
  - Example programs include:
    - Stop, drop, and roll when clothes are on fire
    - Crawl low under smoke

- Plan and practice a home escape plan with two ways out of each room (especially sleeping rooms), a meeting place, and how to call the fire department (from the neighbor's house)
  - Alert others to an emergency
  - Call the fire department
  - Test and maintain residential smoke alarms according to manufacturer's instructions
2. Identify basic presentation skills
    - Select materials and activities appropriate to age and audience
      - Learning level
      - Physical capabilities
    - Three step delivery
      - Introduce what you are going to tell them
      - Tell them the information
      - Summarize what you told them
    - Consistent messaging
  3. Describe departmental standard operating procedures for giving fire station tours
  4. Describe how to complete a "public contact report"
    - Information for public outreach program analytics
    - Replacement/restock of educational materials
  5. Document presentations
  6. Use prepared materials

### Discussion Questions

1. What types of presentations might a fire fighter deliver?
2. Why is it important to give age appropriate presentations?
3. Why is it important to deliver a consistent message?

### Application

1. Given AHJ talking points and an identified audience, have students work in groups to create and deliver a five-minutes presentation with peer review and feedback.

### Instructor Notes:

1. Recommended resources for additional student learning:
  - NFPA: "Learn Not to Burn" Preschool Program  
(<https://www.nfpa.org/Public-Education/Resources/Education-Programs/Learn-not-to-burn/Learn-Not-to-Burn-Preschool-Program>)
  - FEMA: Fire Prevention and Public Education  
(<https://www.usfa.fema.gov/prevention/>)

**CTS Guide Reference:** 5-2

**Skill Sheet:** 5-2: Present Fire Safety Information

## Topic 5-3: Preparing a Preincident Survey

### Terminal Learning Objective

At the end of this topic a student, given forms, necessary tools, and an assignment, will be able to prepare a preincident survey so that all required occupancy information is recorded, items of concern are noted, and accurate sketches or diagrams are prepared.

### Enabling Learning Objectives

1. Describe AHJ requirements for a preincident survey and documentation
2. Describe how fire involvement impacts strategy and tactics
  - 25% vs. 50% vs. 75% vs. 100% involvement
3. Identify water supply sources for fire protection
4. Identify basic components of fire suppression and detection systems
  - Identify general system locations
5. Identify common symbols used to diagram:
  - Construction features
  - Utilities
  - Hazards
  - Fire protection systems
  - NFPA 704 placarding program
6. Identify the importance of accurate diagrams
7. Sketch the site, buildings, and special features
8. Detect hazards and special considerations to include in the preincident sketch
9. Complete all related AHJ documentation

### Discussion Questions

1. What are the essential components of a preincident plan?
2. When should you update a preincident plan?

### Application

1. Given a location and level of fire involvement, have students work in small groups to prepare a preincident survey that records tactical and strategic options.

### Instructor Notes:

1. Recommended resources for additional student learning:
  - Frequently Asked Questions on NFPA 704 (pdf)  
([www.nfpa.org/Assets/files/AboutTheCodes/704/704\\_FAQs.pdf](http://www.nfpa.org/Assets/files/AboutTheCodes/704/704_FAQs.pdf))

**CTS Guide Reference:** 5-3

**Skill Sheet:** 5-3: Prepare a Preincident Survey

## Topic 5-4: Maintaining Power Plants, Power Tools, and Lighting Equipment

### Terminal Learning Objective

At the end of this topic a student, given tools and manufacturers' instructions, will be able to maintain power plants, power tools, and lighting equipment so that equipment is clean and maintained according to manufacturer and departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise.

### Enabling Learning Objectives

1. Identify types of cleaning methods
2. Describe correct use of cleaning solvents
3. Describe manufacturer and AHJ guidelines for maintaining equipment and its documentation
4. Identify problem-reporting practices
5. Select correct tools
6. Follow guidelines
7. Complete recording and reporting procedures
8. Operate power plants, power tools, and lighting equipment

### Discussion Questions

1. What types of cleaning methods are used for power plants, power tools, and lighting equipment?
2. What is the process for removing tools or equipment from service within your AHJ?

### Application

1. Given tools, cleaning materials, and manufacturers specifications, have students clean and maintain designated tools.

### Instructor Notes:

1. Bring referenced tools and equipment for display and demonstration.

### CTS Guide Reference: 5-4

### Skill Sheet: 5-4: Maintain Power Plants, Tools, and Equipment

## Topic 5-5: Performing an Annual Service Test on Fire Hose

### Terminal Learning Objective

At the end of this topic a student, given an apparatus or a hose testing device, a marking device, pressure gauges, a timer, record sheets, and related equipment, will be able to perform an annual service test on fire hose, so that procedures are followed, the condition of the hose is evaluated, any damaged hose is removed from service, and the results are recorded.

### Enabling Learning Objectives

1. Describe procedures for safely conducting hose service testing
  - Use host testing equipment or tools that regulate water flow in case of equipment or hose failure
  - Keep area clear of personnel during test
  - Use proper helmets and PPE
  - Operate testing equipment using manufacturer guidelines
  - Maintain focus and avoid complacency
  - Comply with NFPA 1962
2. Identify indicators that dictate when hose should be removed from service
3. Describe AHJ procedures for documenting hose test results
4. Operate hose testing equipment and nozzles
5. Record results

### Discussion Questions

1. What is the proper PPE for hose testing?
2. How often is hose testing conducted?
3. What equipment is used in conjunction with hose testing?
4. What type of injuries might occur during hose testing? How can they be prevented?

### Application

1. Given an apparatus or hose testing device, hose, related equipment, and PPE, have students set up a hose service test, describe how they would execute the test and mark the hose, and identify the indicators they would look for to determine whether or not the hose should be removed from service.

### Instructor Notes

1. None

**CTS Guide Reference:** 5-5

**Skill Sheet:** 5-5: Perform an Annual Service Test on a Fire Hose

### How to Read a Course Plan

A course plan identifies the details, logistics, resources, and training and education content for an individual course. Whenever possible, course content is directly tied to a national or state standard. SFT uses the course plan as the training and education standard for an individual course. Individuals at fire agencies, academies, and community colleges use course plans to obtain their institution's consent to offer course and provide credit for their completion. Instructors use course plans to develop syllabi and lesson plans for course delivery.

#### Course Details

The Course Details segment identifies the logistical information required for planning, scheduling, and delivering a course.

#### Required Resources

The Required Resources segment identifies the resources, equipment, facilities, and personnel required to delivery the course.

#### Unit

Each Unit represents a collection of aligned topics. Unit 1 is the same for all SFT courses. An instructor is not required to repeat Unit 1 when teaching multiple courses within a single instructional period or academy.

#### Topics

Each Topic documents a single Terminal Learning Objective and the instructional activities that support it.

#### Terminal Learning Objective

A Terminal Learning Objective (TLO) states the instructor's expectations of student performance at the end of a specific lesson or unit. Each TLO includes a task (what the student must be able to do), a condition (the setting and supplies needed), and a standard (how well or to whose specifications the task must be performed). TLOs target the performance required when students are evaluated, not what they will do as part of the course.

#### Enabling Learning Objectives

The Enabling Learning Objectives (ELO) specify a detailed sequence of student activities that make up the instructional content of a lesson plan. ELOs cover the cognitive, affective, and psychomotor skills students must master in order to complete the TLO.

#### Discussion Questions

The Discussion Questions are designed to guide students into a topic or to enhance their understanding of a topic. Instructors may add to or adjust the questions to suit their students.

### **Application**

The Application segment documents experiences that enable students to apply lecture content through cognitive and psychomotor activities, skills exercises, and formative testing. Application experiences included in the course plan are required. Instructors may add additional application experiences to suit their student population if time permits.

### **Instructor Notes**

The Instructor Notes segment documents suggestions and resources to enhance an instructor's ability to teach a specific topic.

### **CTS Guide Reference**

The CTS Guide Reference segment documents the standard(s) from the corresponding Certification Training Standard Guide upon which each topic within the course is based. This segment is eliminated if the course is not based on a standard.

### **Skill Sheet**

The Skill Sheet segment documents the skill sheet that tests the content contained within the topic. This segment is eliminated if the course does not have skill sheets.

# Fire Fighter 2 (NFPA Fire Fighter II)

---

## Certification Task Book [Month Year]



California Department of Forestry and Fire Protection  
Office of the State Fire Marshal  
State Fire Training

# Table of Contents

<b>Table of Contents</b> .....	<b>1</b>
<b>Purpose and Process</b> .....	<b>3</b>
<b>Purpose</b> .....	<b>3</b>
<b>Initiation and Completion Process</b> .....	<b>3</b>
Candidate Responsibilities .....	3
Evaluator Responsibilities .....	4
Fire Chief Responsibilities .....	5
<b>Submission and Review Process</b> .....	<b>5</b>
<b>Task Book Initiation</b> .....	<b>7</b>
<b>Candidate</b> .....	<b>7</b>
<b>Task Book Initiation Requirements</b> .....	<b>7</b>
<b>Task Book Initiation Approval</b> .....	<b>8</b>
<b>Signature Verification</b> .....	<b>9</b>
<b>Task Book Requirements</b> .....	<b>11</b>
<b>Job Performance Requirements</b> .....	<b>11</b>
Fire Department Communications.....	11
Fireground Operations.....	12
Rescue Operations .....	13
Fire and Life Safety Initiatives, Preparedness, and Maintenance .....	13
<b>Experience</b> .....	<b>14</b>
<b>Position</b> .....	<b>15</b>
<b>Review and Approval</b> .....	<b>16</b>
<b>Candidate</b> .....	<b>16</b>
<b>Candidate’s Fire Chief</b> .....	<b>16</b>

---

Published by: State Fire Training, 2251 Harvard Street, Suite 400, Sacramento, CA 95815  
(916) 568-3800

Cover photo courtesy of Craig Allyn Rose Photography.

## Purpose and Process

### Purpose

The State Fire Training certification task book is a performance-based document. It lists the minimum Certification or Position, Education, Rank or Professional Experience, and Job Performance Requirements a candidate must obtain in order to apply for a State Fire Training job function certification.

### Initiation and Completion Process

The certification book may be initiated at the beginning of Fire Fighter 2A: Structure (2019) training.

Each Job Performance Requirement shall be conducted, reviewed, and validated after the candidate initiates the task book.

State Fire Training holds the opinion that a candidate may obtain verification signatures for JPRs demonstrated during Fire Fighter 2 training. Each ALA/ARTP should consult with its fire technology advisory committee and local fire agencies to determine whether or not it supports this position and proceed accordingly. A fire chief has the option to require a candidate to repeat any JPR completed and signed off on during training and to document that performance with a second signature in the task book.

### Candidate Responsibilities

The candidate is the individual pursuing certification.

#### Initiation

The candidate shall:

1. Complete the Candidate and Task Book Initiation Requirements sections on the Task Book Initiation pages.
  - Please print.
2. Obtain his or her fire chief's signature as approval to open the task book using the Task Book Initiation Approval section on the Task Book Initiation pages.
  - A candidate may not obtain evaluation signatures for any job performance requirements completed prior to the fire chief's initiation approval date.
3. Complete a block on the Signature Verification page with an original wet-ink signature.

**Completion**

The candidate shall:

1. Complete all Job Performance Requirements.
  - Ensure that an evaluator initials, signs, and dates each task to verify completion.
2. Complete all Experience requirements.
3. Complete all Position requirements.
4. Sign and date the Candidate verification section on the Review and Approval page with an original wet-ink signature.
5. Obtain his or fire chief's original wet-ink signature on the Candidate's Fire Chief verification section on the Review and Approval page.
6. Create and retain a physical or scanned digital copy of the complete task book.

**Submission**

The candidate shall:

1. Submit the completed task book and any supporting documentation to State Fire Training.
  - See Submission and Review Process below.

It is the candidate's responsibility to routinely check the State Fire Training website for updates and addendums to open task books. Any State Fire Training issued update or addendum to an open task book is required for task book completion.

A candidate should not submit a task book until he or she has completed all requirements and obtained all signatures. State Fire Training will reject and return an incomplete task book.

**Evaluator Responsibilities**

An evaluator is any individual who verifies that the candidate can satisfactorily execute a job performance requirement.

A qualified evaluator is designated by the candidate's fire chief (or authorized designee) and shall possess the equivalent or higher-level certification. If no such evaluator is present within the organization, the fire chief (or authorized designee) shall designate an individual with more experience than the candidate and a demonstrated ability to execute the job performance requirements.

A certification task book may have more than one evaluator.

All evaluators shall:

1. Complete a block on the Signature Verification page with an original wet-ink signature.
2. Review and understand the candidate's certification task book requirements and responsibilities.

3. Verify the candidate's successful completion of one or more job performance requirements through observation or review.
  - A candidate may not obtain evaluation signatures for any job performance requirements completed prior to the fire chief's initiation approval date.
  - Sign all appropriate lines in the certification task book with an original wet-ink signature or approved digital signature (e.g. Docusign or Adobe Sign) to record demonstrated performance of tasks.
  - State Fire Training will not accept a scanned copy of an original wet-ink signature.

## Fire Chief Responsibilities

The fire chief (or authorized designee) is the individual who initiates and then reviews and confirms the completion of a candidate's certification task book.

The fire chief (or authorized designee) shall:

1. Review and understand the candidate's certification task book requirements and responsibilities.
2. Verify that the candidate has met all requirements and prerequisites prior to initiating the candidate's task book.
3. Open the candidate's task book by signing the Task Book Initiation Approval section on the Task Book Initiation page with a wet-ink signature.
  - A candidate may not obtain evaluation signatures for any job performance requirements completed prior to the fire chief's initiation approval date.
4. Designate qualified evaluators.
5. Verify that the candidate has obtained the appropriate signatures to verify successful completion of each job performance requirement.
6. Sign and date the Fire Chief verification section on the Review and Approval page with an original wet-ink signature.
  - If signing as an authorized designee, verify that your signature is on file with State Fire Training.

## Submission and Review Process

A candidate should not submit a task book until he or she has completed all requirements and obtained all signatures. State Fire Training will reject and return an incomplete task book.

Submit the completed task book and any supporting documentation to State Fire Training.

Office of the State Fire Marshal  
State Fire Training  
Attn: Certification  
2251 Harvard Street, Suite 400  
Sacramento, CA 95815

State Fire Training reviews all submitted task books.

- If the task book is complete, State Fire Training will authorize the task book and retain a digital copy of the authorized task book in the candidate's career file.
- If the task book is incomplete, State Fire Training will return the task book with a notification indicating what needs to be completed prior to resubmission.

Completion of this certification task book is one step in the certification process. Please refer to the *State Fire Training Procedures Manual* for the complete list of qualifications required for certification.

## Task Book Initiation

### Candidate

Name: \_\_\_\_\_

SFT ID Number: \_\_\_\_\_

Fire Agency: \_\_\_\_\_

### Task Book Initiation Requirements

The following requirements must be completed prior to initiating this task book.

<b>Prerequisites</b> Office of the State Fire Marshal (OSFM) certified Fire Fighter 1	<b>Complete</b> <input type="checkbox"/>
<b>Education</b> None	<b>Complete</b> <input type="checkbox"/>
<b>Position</b> Appointed to a position performing suppression duties in a recognized fire agency in California*	<b>Complete</b> <input type="checkbox"/>

\*The candidate's Fire Chief is responsible for verifying that the candidate fulfills the roles and responsibilities of this position.

## Task Book Initiation Approval

*Candidate's Fire Chief:* \_\_\_\_\_  
Fire Chief's (or Authorized Designee's) Printed Name

I, the undersigned, am the person authorized to verify the candidate's task book initiation requirements and to initiate State Fire Training task books. I hereby certify under penalty of perjury under the laws of the State of California, that the completion of all requirements to open the task book documented herein are true in every respect. I understand that misstatements, omissions of material facts, or falsification of information or documents may be cause for rejection.

\_\_\_\_\_  
Fire Chief's (or Authorized Representative's) Signature

\_\_\_\_\_  
Date

## Signature Verification

The following individuals have the authority to verify portions of this certification task book using the signature recorded below.

Please print except for the Signature line. Please add additional signature pages as needed.

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

**Name:** \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Signature: \_\_\_\_\_

# Task Book Requirements

## Job Performance Requirements

This certification task book includes the training objectives included in the Fire Fighter 2 Certification Training Guide (Month Year), which is based on NFPA 1001: Standard for Fire Fighter Professional Qualifications (2019).

The candidate must complete each job performance requirement (JPR) in accordance with the standards of the authority having jurisdiction (AHJ) or the National Fire Protection Association (NFPA), whichever is more restrictive.

All JPRs must be completed within a California fire agency or training center.

A candidate may not obtain evaluation signatures for any job performance requirements completed prior to the fire chief’s initiation approval date.

## Fire Department Communications

1. 2-1: Complete a basic incident report, given the report forms, guidelines, and information, so that all pertinent information is recorded, the information is accurate, and the report is complete. (5.2.1)

Date Completed	Evaluator Verification
----------------	------------------------

2. 2-2: Communicate the need for team assistance, given fire department communications equipment, SOPs, and a team, so that the supervisor is consistently informed of team needs, departmental SOPs are followed, and the assignment is accomplished safely. (5.2.2)

Date Completed	Evaluator Verification
----------------	------------------------

**Fireground Operations**

- 3. 3-1: Extinguish an ignitable liquid fire, operating as a member of a team, given an assignment, an attack line, PPE, a foam proportioning device, a nozzle, foam concentrates (*or suitable substitute*), and a water supply, so that the correct type of foam concentrate is selected for the given fuel and conditions, a properly proportioned foam stream is applied to the surface of the fuel to create and maintain a foam blanket, fire is extinguished, reignition is prevented, team protection is maintained with a foam stream, and the hazard is faced until retreat to safe haven is reached. (5.3.1)

\_\_\_\_\_  
Date Completed

\_\_\_\_\_  
Evaluator Verification

- 4. 3-2: Control a flammable gas cylinder fire, operating as a member of a team, given an assignment, a cylinder outside of a structure, an attack line, PPE, and tools, so that crew integrity is maintained, contents are identified, safe havens are identified prior to advancing, open valves are closed, flames are not extinguished unless the leaking gas is eliminated, the cylinder is cooled, cylinder integrity is evaluated, hazardous conditions are recognized and acted upon, and the cylinder is faced during approach and retreat. (5.3.3)

\_\_\_\_\_  
Date Completed

\_\_\_\_\_  
Evaluator Verification

- 5. 3-3: Coordinate an interior attack line for a team’s accomplishment of an assignment in a structure fire, given attack lines, personnel, PPE, and tools, so that crew integrity is established; attack techniques are selected for the given level of the fire (e.g., attic, grade level, upper levels, or basement); attack techniques are communicated to the attack teams; constant team coordination is maintained; fire growth and development is continuously evaluated; search, rescue, and ventilation requirements are communicated or managed; hazards are reported to the attack teams; and incident command is apprised of changing conditions. (5.3.2)

\_\_\_\_\_  
Date Completed

\_\_\_\_\_  
Evaluator Verification

- 6. 3-4: Protect evidence of fire cause and origin, given a flashlight, *PPE*, and overhaul tools, so that the evidence is noted and protected from further disturbance until investigators can arrive on the scene. (5.3.4)

\_\_\_\_\_  
Date Completed

\_\_\_\_\_  
Evaluator Verification

**Rescue Operations**

- 7. 4-1: Extricate a victim entrapped in a motor vehicle as part of a team, given stabilization and extrication tools, *a vehicle, and PPE*, so that the vehicle is stabilized, the victim is disentangled without further injury, and hazards are managed. (5.4.1)

\_\_\_\_\_  
Date Completed

\_\_\_\_\_  
Evaluator Verification

- 8. 4-2: Assist rescue operation teams, given standard operating procedures, necessary rescue equipment, and an assignment, so that procedures are followed, rescue items are recognized and retrieved in the time as prescribed by the AHJ, and the assignment is completed. (5.4.2)

\_\_\_\_\_  
Date Completed

\_\_\_\_\_  
Evaluator Verification

**Fire and Life Safety Initiatives, Preparedness, and Maintenance**

- 9. 5-1: Perform a fire safety survey in an occupied structure, given survey forms and procedures, so that fire and life safety hazards are identified, recommendations for their correction are made to the occupant, and unresolved issues are referred to the proper authority. (5.5.1)

\_\_\_\_\_  
Date Completed

\_\_\_\_\_  
Evaluator Verification

- 10. 5-2: Present fire safety information to station visitors or small groups, given prepared materials, so that all information is presented, the information is accurate, and questions are answered or referred. (5.5.2)

\_\_\_\_\_  
Date Completed

\_\_\_\_\_  
Evaluator Verification

- 11. 5-3: Prepare a preincident survey, given forms, necessary tools, and an assignment, so that all required occupancy information is recorded, items of concern are noted, and accurate sketches or diagrams are prepared. (5.5.3)

\_\_\_\_\_  
Date Completed

\_\_\_\_\_  
Evaluator Verification

12. 5-4: Maintain power plants, power tools, and lighting equipment, given tools and manufacturers’ instructions, so that equipment is clean and maintained according to manufacturer and departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise. (5.5.4)

\_\_\_\_\_  
Date Completed

\_\_\_\_\_  
Evaluator Verification

13. 5-5: Perform an annual service test on fire hose, given *an apparatus or hose testing device*, a marking device, pressure gauges, a timer, record sheets, and related equipment, so that procedures are followed, the condition of the hose is evaluated, any damaged hose is removed from service, and the results are recorded. (5.5.5)

\_\_\_\_\_  
Date Completed

\_\_\_\_\_  
Evaluator Verification

## Experience

One of the following four options:

- Have a minimum of six months’ full-time paid experience in a recognized fire agency in California as a Fire Fighter performing suppression duties
- Have a minimum of one year’s volunteer or part-time paid experience in a recognized fire agency in California as a Fire Fighter performing suppression duties
- Have a combination of full-time paid and volunteer or part-time paid experience equal to six months’ full-time paid experience in a recognized fire agency in California as a Fire Fighter performing suppression duties (volunteer or part-time paid to full-time paid ratio is 2:1 – for example, two months’ volunteer or part-time paid = one month full-time paid)
- Have a minimum of one year’s internship experience in a recognized fire agency in California as a Fire Fighter performing suppression duties (one year = three semesters or four quarters of an academic calendar)

Position	Agency	Employment Dates
Fire Fighter		Start:
		End:
Fire Fighter		Start:
		End:

Fire Fighter	Start:
	End:

**Position**

Appointed to a position performing suppression duties in a recognized fire agency in California

The candidate's Fire Chief is responsible for verifying that the candidate fulfills the roles and responsibilities of this position.

Job Title	Agency	Hiring Date





# FIRE FIGHTER 1 & FIRE FIGHTER 2 (2019) Certification & Curriculum Implementation Plan

Issued: June 21, 2019

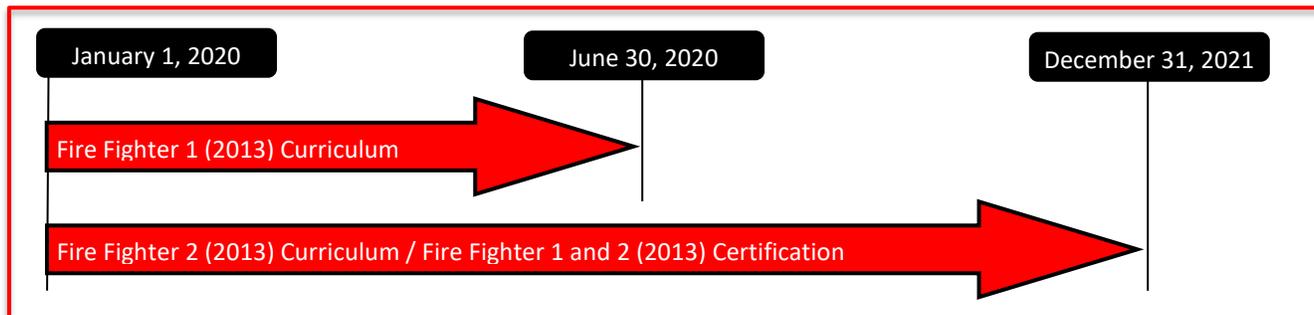
## OVERVIEW

This document is intended to provide information for all State Fire Training (SFT) stakeholders on the new Fire Fighter 1 (2019) and Fire Fighter 2 (2019) curriculum and certification requirements. Stakeholders are encouraged to study this information carefully and seek clarification from SFT if questions arise.

The Fire Fighter 1 (2019) and Fire Fighter 2 (2019) curriculum and certification requirements will be phased in for the California Fire Service Training and Education System. New Certification Training Standards (CTS) along with four (4) Course Plans have been developed based on current National Fire Protection Association (NFPA) Standards which includes NFPA 1001, Fire Fighter Professional Qualifications (2019); NFPA 1051, Wildland Fire Fighter Professional Qualifications (2016); NFPA 1072, Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications (2017). In addition, the mandates of California Law (Cal-OSHA CCR Title 8, Article 108 §5157) were incorporated in to the course curriculum. The CTS and Course Plans will be available on the SFT website.

## FIRE FIGHTER 1 (2013) AND FIRE FIGHTER 2 (2013) RETIREMENT

SFT recognizes that many candidates are vested in the Fire Fighter 1 (2013) and Fire Fighter 2 (2013) Certification track and, therefore, the existing Fire Fighter 1 (2013) and Fire Fighter 2 (2013) curriculum and certification requirements will be available for those candidates during the transition period. Candidates entering the certification system should enroll in the new Fire Fighter 1 (2019) and Fire Fighter 2 (2019) courses and comply with the new Fire Fighter (2019) certification requirements.



### Fire Fighter 1 (2013) Curriculum Retirement ..... June 30, 2020

Effective July 1, 2020, Fire Fighter 1 (2013) curriculum will be retired from the SFT course catalog and no longer available.



# FIRE FIGHTER 1 & FIRE FIGHTER 2 (2019) Certification & Curriculum Implementation Plan

---

**Fire Fighter 1 (2013) Certification Retirement ..... December 31, 2021**  
Effective January 1, 2022, Fire Fighter 1 (2013) certification will no longer be supported by SFT and will be retired. Candidates who do not apply before this date, will need to seek the Fire Fighter 1(2019) certification.

**Fire Fighter 1 (2013) Task Book and Experience Changes..... Available January 1, 2020**  
SFT is bringing the Fire Fighter 1 (2013) certification requirements in alignment with the Fire Fighter (2019). This is will allow candidates who are enrolled in a Fire Fighter 1 academy to become eligible for certification upon graduation.

- Fire Fighter 1 (2013) Task Book will no longer be required for Fire Fighter 1 (2013) Certification. A completed Fire Fighter 1 (2013) Task Book will be required to be on file with SFT for candidates to apply for Fire Fighter 2 (2013) certification.
  - Candidates applying for Fire Fighter 2 (2013) certification who have already submitted a Fire Fighter 1 Task Book for certification, will not have to resubmit their Fire Fighter 1 Task Book.
  - Candidates who applied for Fire Fighter 1 (2013) certification, and did not submit a Task Book to SFT, will be required to submit a Fire Fighter 1 (2013) Task Book and Fire Fighter 2 (2013) Task Book.
  - Candidates applying for Fire Fighter 2 (2013) certification who have a Fire Fighter 1 Task Book Issued to them prior to January 1, 2020 are not required to have the experience section completed in order to submit the task book.
- The in-service experience requirement associated with Fire Fighter 1 (2013) certification is now deferred to Fire Fighter 2 (2013). Fire Fighter 2 experience requires either on year full-time or two years part-time/volunteer work employment

**Fire Fighter 2 (2013) Curriculum Retirement ..... December 31, 2021**  
Effective January 1, 2022, Fire Fighter 2 (2013) curriculum will be retired from the SFT course catalog and no longer available.

**Fire Fighter 2 (2013) Certification Retirement ..... December 31, 2021**  
Effective January 1, 2022, Fire Fighter 2 (2013) certification will no longer be supported by SFT and will be retired. Candidates who do not apply before this date, will need to seek the Fire Fighter (2019) certification, which includes certification testing.

**Fire Fighter 2 Pro Board / IFSAC Upgrade ..... Available January 1, 2020**  
The Fire Fighter 2 upgrade program is intended for California certified Fire Fighters who have received Fire Fighter 2 certification under previous editions and are now looking to upgrade their state certification to a state and nationally recognized Pro Board/IFSAC certification. Candidates will be required to complete the Fire Fighter 2 (2019) certification testing.



# FIRE FIGHTER 1 & FIRE FIGHTER 2 (2019) Certification & Curriculum Implementation Plan

## **FIRE FIGHTER 1 (2019) AND FIRE FIGHTER 2 (2019) IMPLEMENTATION**

**New Fire Fighter 1 (2019) and Fire Fighter 2 (2019)..... Effective January 1, 2020**

New Certification Training Standard (CTS) and Course Plans has been developed based on current National Fire Protection Association (NFPA) Standards which includes NFPA 1001, Fire Fighter Professional Qualifications (2019), NFPA 1051, Wildland Fire Fighter Professional Qualifications (2016), NFPA 1072, Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications (2017). The CTS and Course Plans will be available on the SFT website.

**Fire Fighter 1 and 2 (2019) Curriculum..... Available January 1, 2020**

Fire Fighter 1A	Structure	(260 hours)
Fire Fighter 1B	Hazardous Materials/WMD	(24 hours)
Fire Fighter 1C	Wildland	(56 hours)
CSRA	Confined-Space Rescue Awareness	(8 hours)
Fire Fighter 2A	Structure	(48 hours)

Note: These hours identify the instructor-student contact hours (cognitive domain) and do not include the practice-drill hours (psychomotor). Testing hours are not included in this table. It is important to consider that safe and efficient skill delivery by fire fighter candidates can only be mastered with extensive practice (sets & reps) in the academy.

**Course Prerequisite..... Effective January 1, 2020**

Public Safety First-Aid and BLS Healthcare Provider/AED CPR (minimum) as defined by California Health and Safety Code, Section 1797.182 is a prerequisite since Fire Fighter I (2013).

**Course Corequisites ..... Effective January 1, 2020**

Course corequisites are now identified in the respective course plans.

### **Certification Testing:**

In response to Blueprint 2020 stakeholder comments, certification examinations will remain a standardized process statewide. All candidates seeking Fire Fighter 1 (2019) and Fire Fighter 2 (2019) certification will be required to complete certification testing. Candidates seeking Fire Fighter 2 certification who do not want to complete the Fire Fighter 2 certification testing, should seek the Fire Fighter 2 (2013) certification prior to its retirement.

### **Fire Fighter Task Books:**



# FIRE FIGHTER 1 & FIRE FIGHTER 2 (2019) Certification & Curriculum Implementation Plan

---

Fire Fighter 1 (2019) will not have a Task Book required for certification. The Fire Fighter 2 (2019) certification will have a Fire Fighter 2 task book that incorporates the job performance requirements (JPRs) for Fire Fighter 1 (2019) and Fire Fighter 2 (2019).

A Fire Fighter 1 Training Record will be required to be completed by AHJs in order to provide a complete and thorough record of JPRs or Skills being delivered by the AHJ. Copies of the Fire Fighter 1 Training Records must be provided to the candidate for their personal file. The Fire Fighter 1 Training Record shall be maintained in accordance with the SFT Procedures Manual.

### **Experience Requirement:**

Fire Fighter 1 (2019) certification does not have an experience requirement. The Fire Fighter 2 (2019) certification experience requirement is now requires either on six months full-time or one years part-time/volunteer work employment

### **INSTRUCTOR REQUIREMENTS**

Instructors for Fire Fighter 1 (2019) and Fire Fighter 2 (2019) courses must meet the SFT requirements for Fire Fighter Instructor (January 2019 State Fire Training Procedures Manual Section 6.6). Instructors must have appropriate education and practical experience relating to the specific course content. In addition, the following apply:

#### **Confined Space Rescue Awareness Course:**

The Confined Space Rescue Awareness must be delivered as an SFT registered course. The course must be delivered by an approved Registered SFT Primary Instructor for Confined Space Rescue Awareness. This is to meet California Law (Cal-OSHA CCR Title 8, Article 108 §5157).

#### **Fire Fighter Survival Course:**

The Fire Fighter Survival Course can be delivered as an SFT registered course utilizing a approved Registered SFT Primary Instructor for Fire Fighter Survival. Registered courses will have FSTEP course completion diplomas issued to students. Alternatively, the course can be delivered as an unregistered course utilizing an SFT Fire Fighter Instructor. These courses will not be issued FSTEP course completion diplomas. Students will not be eligible for course equivalency or instructor equivalency.

### **POTENTIAL AGENCY IMPACTS**

Fire agencies or educational delivery programs desiring to implement the Fire Fighter 1 (2019) and Fire Fighter 2 (2019) curriculum need to review the new Fire Fighter 1 (2019) and Fire Fighter 2 (2019) Curriculum and certification requirements to be sure that all agency training needs are being met. After review, Fire Agencies and educational delivery programs should update their job specifications, recruitment documentation, and any associated course materials to reflect these new courses and certification requirements.