

# Fire Fighter 2

## (NFPA Fire Fighter II)

---

### Certification Training Standards Guide (2019)

Published **Month Year**



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

# Fire Fighter 2

## Certification Training Standards Guide (2019)

**Publication Date:** Month Year

This CTS guide utilizes the following NFPA standards to provide the qualifications for State Fire Training's Fire Fighter 1 (2019) 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).

Cover photo courtesy of Craig Allyn Rose Photography.

Published by State Fire Training.

## Table of Contents

Acknowledgements.....	1
How to Read a CTS Guide .....	2
Section 1: NFPA Requirements .....	4
1-1: Identifying NFPA Requirements .....	4
Section 2: Fire Department Communications .....	5
2-1: Completing a Basic Incident Report .....	5
2-2: Communicating the Need for Team Assistance .....	6
Section 3: Fireground Operations.....	7
3-1: Extinguishing an Ignitable Liquid Fire .....	7
3-2: Controlling a Flammable Gas Cylinder Fire .....	9
3-3: Coordinating an Interior Attack Line .....	10
3-4: Protecting Evidence of Fire Cause and Origin .....	12
Section 4: Rescue Operations .....	13
4-1: Extricating a Victim Entrapped in a Motor Vehicle .....	13
4-2: Assisting Rescue Operation Teams.....	14
Section 5: Fire and Life Safety Initiatives, Preparedness, and Maintenance.....	15
5-1: Performing a Fire Safety Survey in an Occupied Structure .....	15
5-2: Presenting Fire Safety Information to Station Visitors or Small Groups.....	16
5-3: Preparing a Preincident Survey .....	17
5-4: Maintaining Power Plants, Power Tools, and Lighting Equipment .....	18
5-5: Performing an Annual Service Test on Fire Hose .....	19

## Acknowledgements

State Fire Training appreciates the hard work and accomplishments of those who build 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
- Mike Richwine, Acting State Fire Marshal
- Andrew Henning, Chief of State Fire Training
- Ron Coleman, Chair, Statewide Training and Education Advisory Committee (STEAC)

### Cadre – 2019 Development Cadre

#### Leadership

- Jim Eastman, Cadre Lead, Training Specialist III (RA), CAL FIRE; Deputy Chief (ret.), Sacramento Metro Fire Department
- Allison L. Shaw, Editor, California State University, Sacramento

#### Members

- 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
- Donovan 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

## How to Read a CTS Guide

### Overview

A certification training standard (CTS) guide lists the requisite knowledge, skills, and job performance requirements an individual must complete in order to become certified in a specific job function.

It also documents and justifies the OSFM-approved revisions to the certification's NFPA standard, and identifies where each certification training standard is taught (course plan), tested (skill sheets), and validated (task book).

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 agency or jurisdiction.

### Format

Each certification training standard is comprised of eight sections.

#### 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 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).

## 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 for 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

Course Plan	Skill Sheet(s)	Task Book
Fire Fighter 2A, Topic 1-3: Fire Fighter 2 Roles and Responsibilities	1-1: Organize an Incident Management System	N/A

## 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 Sheet(s)	Task Book
Fire Fighter 2A, Topic 2-1: Completing a Basic Incident Report	2-1: Complete a Basic Incident Report	(CTS 2-1)



## 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 Sheet(s)	Task Book
Fire Fighter 2A, Topic 2-2: Communicating the Need for Team Assistance	2-2: Communicate the Need for Team Assistance	(CTS 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.

### 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 Sheet(s)	Task Book
Fire Fighter 2A, Topic 3-1: Extinguishing an Ignitable Liquid Fire	3-1: Extinguish an Ignitable Liquid Fire	(CTS 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

Block	Modification	Justification

### Cross Reference

Course Plan	Skill Sheet(s)	Task Book
Fire Fighter 2A, Topic 3-2: Controlling a Flammable Gas Cylinder Fire	3-2: Control a Flammable Gas Cylinder Fire	(CTS 3-2)

### 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

#### Content Modification

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

**Cross Reference**

Course Plan	Skill Sheet(s)	Task Book
Fire Fighter 2A, Topic 3-3: Coordinating an Interior Attack Line	3-3: Coordinate an Interior Fire Attack Line	(CTS 3-3)

### 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 Sheet(s)	Task Book
Fire Fighter 2A, Topic 3-4: Protecting Evidence of Fire Cause and Origin	3-4: Protect Evidence of Fire Cause and Origin	(CTS 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 may also need to be removed to extricate a victim.

#### Cross Reference

Course Plan	Skill Sheet(s)	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	(CTS 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

Block	Modification	Justification

### Cross Reference

Course Plan	Skill Sheet(s)	Task Book
Fire Fighter 2A, Topic 4-2: Assisting Rescue Operation Teams	4-2: Assist a Rescue Operations Team	(CTS 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 Sheet(s)	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	(CTS 5-1)

## 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 Sheet(s)	Task Book
Fire Fighter 2A, Topic 5-2: Presenting Fire Safety Information to Station Visitors or Small Groups	5-2: Present Fire Safety Information	(CTS 5-2)

### 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 Sheet(s)	Task Book
Fire Fighter 2A, Topic 5-3: Preparing a Preincident Survey	5-3: Prepare a Preincident Survey	(CTS 5-3)

## 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 Sheet(s)	Task Book
Fire Fighter 2A, Topic 5-4: Maintaining Power Plants, Power Tools, and Lighting Equipment	5-4: Maintain Power Plants, Tools, and Equipment	(CTS 5-4)

**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

**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 Sheet(s)	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	(CTS 5-5)