Wildland Fire Apparatus Operations

Course Plan

Course Details

Certification: Wildland Fire Apparatus Driver/Operator (2017)

CTS Guide: Fire Apparatus Driver/Operator (2017)

Description: This course provides the knowledge and skills needed to operate and perform preventive maintenance on a wildland fire apparatus. Topics include routine tests, inspections, and servicing functions on the systems and components unique to wildland fire apparatus; operating a wildland fire apparatus; and producing an effective fire stream.

Designed For: Personnel who drive and operate a wildland fire apparatus

Course Prerequisites: OSFM certified Fire Fighter 1 or certified Fire Fighter 2 tenured path (Appointment to the rank of Officer (Lieutenant or higher) waives this prerequisite. Appointment to the CAL FIRE rank of Fire Apparatus Engineer is equivalent to Officer level. Performing in an "acting" capacity does not fulfill this requirement.)

One of the following driver's licenses: Class C fire fighter endorsed, Commercial A, or Commercial B

Standard: Complete all activities, skills, and tests

Complete the summative test with a minimum score of 80%

Hours (Total): 24 hours (4.5 lecture / 19.5 application)

Maximum Class Size: 30

Instructor Level: One primary instructor and sufficient assistant instructors to meet skills ratio requirements

Instructor/Student Ratio: 1:30 (lecture) / 1:10 (application)

Restrictions: Sufficient fire apparatus and space to accommodate classroom and skills training

SFT Designation: CFSTES

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Required Resources

Instructor Resources

To teach this course, instructors need:

- *Fire Apparatus Driver/Operator: Pump, Aerial, Tiller, and Mobile Water Supply* (Jones & Bartlett, current edition)
  or
  Pumping and Aerial Apparatus Driver/Operator Handbook (IFSTA, current edition)
- Maintenance and inspection forms
- Manufacturer's specifications and requirements

Online Instructor Resources

The following instructor resources are available online at https://osfm.fire.ca.gov/divisions/state-fire-training/cfstes-professional-certification/:

- Wildland Fire Apparatus Operations required activities
  - Activity 3-1: Operate a Wildland Fire Apparatus Off Road
  - Activity 3-2(a): Produce an Effective Fire Stream from a Water Tank
  - Activity 3-2(b): Produce an Effective Fire Stream from a Pressurized Water Source
  - Activity 3-2(c): Produce an Effective Fire Stream from a Static Water Source

Student Resources

To participate in this course, students need:

- *Fire Apparatus Driver/Operator: Pump, Aerial, Tiller, and Mobile Water Supply* (Jones & Bartlett, current edition)
  or
  Pumping and Aerial Apparatus Driver/Operator Handbook (IFSTA, current edition)
- Personal protective equipment

Facilities, Equipment, and Personnel

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

- Standard learning environment or facility
- Writing board or paper conference pads
- Markers, erasers
- Computer or tablet with presentation or other viewing software
- Amplification devices
- Projector and screen
- Sufficient wildland fire apparatus to accommodate the students in the class
  - Recommend at least 30 minutes of drive time per student across Topics 3-1 and 3-2
- Tools and equipment for inspection and testing
- Water tank

- Pressurized water source (hydrant or supply line from another pumping apparatus)
- Static water source (drafting pit, portable tank, or natural water source)
- Hard suction hose
- Foam portioning system
- Foam or foam substitute
- Tools and equipment
- Personal protective equipment (students)
- Adequate space and terrain for required activities

Time Table

Segment	Lecture	Application	Unit Total
Unit 1: Introduction			
Topic 1-1: Orientation and Administration	0.5	0.0	
Topic 1-2: Wildland Fire Apparatus Driver/Operator Certification	0.5	0.0	
Unit 1 Totals	**1.0**	**0.0**	**1.0**
Unit 2: Preventive Maintenance			
Topic 2-1: Performing and Documenting Visual and Operational Checks	2.0	1.0	
Unit 2 Totals	**2.0**	**1.0**	**3.0**
Unit 3: Operations			
Topic 3-1: Operating a Wildland Fire Apparatus	2.5	*	
Topic 3-2: Producing an Effective Fire Stream	1.5	*	
Unit 3 Totals	**4.0**	**17.0**	**21.0**
Summative Assessment			
Determined by AHJ or educational institution	**TBD**	**2.0**	**TBD**
Skills Practice (Lab / Sets and Reps)			
Determined by AHJ or educational institution	**TBD**	**TBD**	**TBD**
Course Totals	**7.0**	**20.0**	**27.0**

* Individual application time determined by instructor for a total of 17 hours for Unit 3. Recommend at least 30 minutes of drive time per student across Topics 3-1 and 3-2.

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

Topic 1-2: Wildland Fire Apparatus Driver/Operator Certification

Terminal Learning Objective

At the end of this topic a student will be able to identify the requirements for Wildland Fire Apparatus Driver/Operator certification and be able to describe the certification task book and testing process.

Enabling Learning Objectives

1. Identify the prerequisites for certification
   - OSFM certified Fire Fighter 1
     or
   - Appointment to the rank of Officer (Lieutenant or higher) or CAL FIRE rank of Fire Apparatus Engineer waives this certification prerequisite. (*Performing in an "acting" capacity does not fulfill this requirement.*)
     and
   - Valid Class C Firefighter Endorsed **or** Commercial A **or** Commercial B driver's license (per California Vehicle Code, Section 12804.11)
2. Identify the course work required for certification
   - 1A: Fire Apparatus Driver/Operator (2008 or newer)
   - 1B: Pumping Apparatus Operations (2008 or newer)
   - 1E: Wildland Fire Apparatus Operations (2008 or newer)
3. Identify the exams required for certification
   - No exams outside of class testing
4. Identify the task book requirements for certification
   - Wildland Fire Apparatus Driver/Operator Certification Task Book (2017)
5. Identify the experience requirements for certification
   - A minimum of one year full-time paid experience in a California fire department with the primary responsibility of operating a tillered apparatus
   - A minimum of two years volunteer of part-time paid experience in a California fire department with the primary responsibility of operating a tillered apparatus
6. Identify the position requirements for certification
   - Appointed to the rank or position of Fire Apparatus Driver/Operator (performing in an acting capacity does not qualify)
7. Describe the certification task book process
8. Describe the certification testing process
   - Not applicable

Discussion Questions

1. Determined by instructor

Application

1. Determined by instructor

Instructor Notes

1. None

Unit 2: Preventive Maintenance

Topic 2-1: Performing and Documenting Visual and Operational Checks

Terminal Learning Objective

At the end of this topic a student, given a wildland fire apparatus, tools and equipment, manufacturer's specifications, inspection forms, and AHJ policies and procedures, will be able to perform and document the visual and operational checks on the systems and components unique to wildland fire apparatus (water tank and/or other extinguishing agent levels (if applicable), pumping systems, foam systems, four-wheel drive system), in addition to those in NFPA 1002 4.2.1, to verify their operational status.

Enabling Learning Objectives

1. Describe wildland fire apparatus systems and components
   - Foam systems
   - Pumping systems
   - Water tank and/or other extinguishing agent levels (if applicable)
   - Four-wheel drive system
2. Describe manufacturer's specifications and requirements
3. Describe policies and procedures of the jurisdiction, including documentation requirements
4. Describe inspection requirements when transitioning from off-road to on-road operations
5. Inspect wildland fire apparatus
6. Use tools and equipment
7. Recognize system problems and out-of-service criteria
8. Correct any deficiency noted according to policies and procedures and/or manufacturer's specifications and requirements

Discussion Questions

1. What equipment is unique to a wildland fire apparatus?
2. Why is it important to do a pre-trip and post-trip inspection?
3. What should be inspected when transitioning from off-road to on-road driving?
4. How do you maintain the four-wheel drive during the off-season?
5. How can off-road driving affect the air filters?

Application

1. Given a wildland fire apparatus, inspection forms, and tools and equipment, divide students into groups and have each group perform a wildland fire apparatus inspection and present their findings.

Instructor Notes

1. None

CTS Guide Reference: CTS 10-1

Unit 3: Operations

Topic 3-1: Operating a Wildland Fire Apparatus

Terminal Learning Objective

At the end of this topic a student, given a wildland fire apparatus, predetermined route off of a public way that incorporates the maneuvers and features that the driver/operator is expected to encounter during normal operations, applicable laws and regulations, and AHJ policies and procedures, will be able to operate a wildland fire apparatus in compliance with all applicable jurisdictional rules and regulations and operational limitations of the apparatus.

Enabling Learning Objectives

1. Recognize wildland fire apparatus resource typing
2. Explain the effects of braking reaction time and load factors on vehicle control
3. Explain the effects of high center of gravity on:
   - Roll-over potential
   - General steering reactions
   - Speed
   - Centrifugal force
4. Identify applicable laws and regulations
5. Identify policies and procedures of the jurisdiction
6. Describe the principles of:
   - Skid avoidance
   - Night driving
   - Shifting
   - Gear patterns
7. Describe how to negotiate:
   - Intersections
   - Railroad crossings
   - Bridges
   - Transition from on-road to off-road
   - Dozer trails (non-developed roadways)
   - Hillside/incline driving, braking, and turning
8. Identify weight and height limitations for both roads and bridges
9. Describe how to identify and operate automotive gauges (if applicable)
10. Explain operational limits
    - 2-wheel vs. 4-wheel drive
    - 4-wheel drive high vs. 4-wheel drive low
11. Discuss off-road wildland fire apparatus emergencies
12. Identify communication needs between wildland fire apparatus driver/operator and crew
13. Operate passenger restraint devices
14. Maintain safe following distances

15. Maintain control of the wildland fire apparatus while accelerating, decelerating, and turning, given road, weather, and traffic conditions
16. Operate the wildland fire apparatus under:
    - Adverse environmental conditions
    - Adverse driving surface conditions
    - Nonemergency conditions
17. Use automotive gauges and controls (if applicable)

Discussion Questions

1. How do you determine if a bridge is safe to cross?
2. What are some ways to estimate slope in the field?
3. When should you inhibit exhaust regeneration?
4. When should you engage the front axle?
5. How does the use of the auxiliary brake differ between on- and off-road driving?
6. What tactics can you use to maintain control when encountering uneven road surfaces?
7. What is the safest following distance on a mid-slope road?
8. In what situations might you use a spotter?

Application

1. Given pictures of wildland driving environments, have students identify and discuss hazards and mitigation techniques.
2. Activity 3-1: Operate a Wildland Fire Apparatus Off Road

Instructor Notes

1. None

CTS Guide Reference: CTS 11-1

Topic 3-2: Producing an Effective Fire Stream

Terminal Learning Objective

At the end of this topic a student, given a wildland fire apparatus, water tank, pressurized water source, and static water source, will be able to produce an effective fire stream by engaging the pump, setting all pressure-control and vehicle safety devices, and achieving the rated flow of the nozzle while monitoring the apparatus for potential problems.

Enabling Learning Objectives

1. Describe hydraulic calculations for friction loss and flow using both written formulas and estimation methods
2. Describe safe operation of the pump
3. Describe correct apparatus placement
4. Describe personal safety considerations
5. Identify the reliability of static water sources
6. Describe mobile attack operations
   - Hoseline selection
   - Pump engagement
   - Vegetation and terrain considerations
   - Communications
   - Tactics
   - Pressure relief (valve operations)
7. Identify problems related to:
   - Small diameter or dead-end mains
   - Low-pressure systems
   - Private water supply systems
8. Position a wildland fire apparatus to obtain water from:
   - A fire hydrant
   - At a static water source
   - Another apparatus
9. Position apparatus for fire attack
10. Transfer power from vehicle engine to pump
11. Draft
12. Operate pumper pressure control systems
13. Operate the volume/pressure transfer valve (multistage pumps only)
14. Operate auxiliary cooling systems
15. Make the transition between internal and external water sources
16. Assemble hose lines, nozzles, valves, and appliances

Discussion Questions

1. What is the importance of water conservation and how do you achieve it?
2. What are the dangers of mobile attack with personnel in front of the engine on a hose line?
3. What needs to be considered when spotting an apparatus at a static water source?
4. How do you determine the pump discharge pressure when you can no longer see the nozzle?

5. How does slope affect discharge pressure?

Application

1. Activity 3-2(a): Produce an Effective Fire Stream from a Water Tank
2. Activity 3-2(b): Produce an Effective Fire Stream from a Pressurized Water Source
3. Activity 3-2(c): Produce an Effective Fire Stream from a Static Water Source

Instructor Notes

1. Candidates need to complete all three activities.

CTS Guide Reference: CTS 11-2

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 deliver 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.

Operate a Wildland Fire Apparatus Off Road

Activity 3-1

Format: Individual

Time Frame: Open (based on a total of 17 hours for skills practice and completion)

Description
This activity provides students with an opportunity to operate a wildland fire apparatus off road in compliance with all applicable AHJ rules and regulations and the operational limitations of the apparatus.

Standard of Completion
Operate a wildland fire apparatus, given a *wildland fire apparatus*, a predetermined route off of a public way that incorporates the maneuvers and features that the driver/operator is expected to encounter during normal operations, *applicable laws and regulations, and AHJ policies and procedures,* so that the vehicle is operated in compliance with all applicable *jurisdictional* rules and regulations and *operational* limitations of the vehicle. (NFPA 1002 (2017) / Paragraph 8.1.2)

Materials
- Wildland fire apparatus
- Designated area for off-road driving (driving course requirements are listed below)
- Spotter
- Tools and equipment
- PPE (including gloves and helmet)

Instructor Notes
1. The off-road driving course shall include the following driving situations essential to driver/operator skills:
    - Loose or wet soil
    - Steep grades (40%; not to exceed manufacturer's recommendation fore and aft)
    - Limited sight distance
    - Blind curve and mid-slope in-turns
    - Vehicle clearance obstacles (height, width, undercarriage (break-over), angle of approach, angle of departure, gates, and fences)
    - Limited space for turnaround
    - Side slopes (15% side to side; not to exceed manufacturer's recommendation fore and aft)
    - Varying types of road surface (washboard, heavy silt, gravel, transitioning from gravel to pavement, and water crossing)
2. Demonstrate the skill for the students before they practice and complete each skill.

Produce an Effective Fire Stream from a Water Tank

Activity 3-2(a)

Format: Individual

Time Frame: Open (based on a total of 17 hours for skills practice and completion)

Description
This activity provides students with an opportunity to produce an effective fire stream from a water tank during a mobile attack.

Standard of Completion
Produce effective fire streams, given *a wildfire apparatus and* a water tank, so that the pump is engaged, all pressure-control and vehicle safety devices are set, the rated flow of the nozzle is achieved, and the apparatus is continuously monitored for potential problems. (NFPA 1002 (2017) / Paragraphs 8.2.1)

Materials
- Wildland fire apparatus
- Water tank
- Designated area for off-road driving
- Nozzle person
- Tools and equipment
- PPE (including gloves and helmet)

Instructor Notes
1. Demonstrate for the students before they practice and complete each skill.

Produce an Effective Fire Stream from a Pressurized Water Source

Activity 3-2(b)

Format: Individual

Time Frame: Open (based on a total of 17 hours for skills practice and completion)

Description
This activity provides students with an opportunity to produce an effective fire stream from a pressurized water source during a mobile attack.

Standard of Completion
Produce effective fire streams, given *a wildfire apparatus and* a pressurized water source, so that the pump is engaged, all pressure-control and vehicle safety devices are set, the rated flow of the nozzle is achieved, and the apparatus is continuously monitored for potential problems. (NFPA 1002 (2017) / Paragraphs 8.2.1)

Materials
- Wildland fire apparatus
- Pressurized water source
- Designated area for off-road driving
- Nozzle person
- Tools and equipment
- PPE (including gloves and helmet)

Instructor Notes
1. Demonstrate for the students before they practice and complete each skill.

Produce an Effective Fire Stream from a Static Water Source

Activity 3-2(c)

Format: Individual

Time Frame: Open (based on a total of 17 hours for skills practice and completion)

Description
This activity provides students with an opportunity to produce an effective fire stream from a static water source during a mobile attack.

Standard of Completion
Produce effective fire streams, given *a wildfire apparatus and* a static water source, so that the pump is engaged, all pressure-control and vehicle safety devices are set, the rated flow of the nozzle is achieved, and the apparatus is continuously monitored for potential problems. (NFPA 1002 (2017) / Paragraphs 8.2.1)

Materials
- Wildland fire apparatus
- Static water source
- Designated area for off-road driving
- Nozzle person
- Tools and equipment
- PPE (including gloves and helmet)

Instructor Notes
1. Demonstrate for the students before they practice and complete each skill.

Wildland Fire Apparatus Driver/Operator Certification Application Instructions

Overview

The California Office of the State Fire Marshal (OSFM) Wildland Fire Apparatus Driver/Operator Certification is based on NFPA 1002: Standard for Fire Apparatus Driver/Operator Professional Qualifications set by the National Fire Protection Association.

The Wildland Fire Apparatus Driver/Operator Certification Application is for applicants who have completed the Wildland Fire Apparatus Driver/Operator academic training and all other certification requirements.

Certification Requirements

Prerequisites

- Valid Class C Firefighter Endorsed **or** Commercial A **or** Commercial B driver's license (per California Vehicle Code, Section 12804.11)

Certifications

- OSFM Fire Fighter 1 certification
  or
- Appointment to the rank of Officer (Lieutenant or higher) or CAL FIRE rank of Fire Apparatus Engineer waives this certification prerequisite. (*Performing in an "acting" capacity does not fulfill this requirement.*)

Education

- 1A: Maintenance and Operations (2008 or newer)
- 1B: Pumping Apparatus Operations (2008 or newer)
- 1E: Wildland Fire Apparatus Operations (2008 or newer)

Certification Task Book

- Wildland Fire Apparatus Driver/Operator Certification Task Book (2017)
  or
- Fire Apparatus Driver/Operator – Wildland Fire Apparatus (2014) with required updates (if applicable)

Experience

- Have a minimum of one year full-time or two years' volunteer or part-time paid experience in a recognized fire agency in California with the primary responsibility as a Pumping Apparatus Driver/Operator

Position

- Be appointed to the rank or position of Fire Apparatus Driver/Operator (*Performing in an acting capacity does not qualify*.)

Application Process

1. Applicant mails the Wildland Fire Apparatus Driver/Operator Certification Application, supporting documentation, and fee(s) to:

   State Fire Training
   Wildland Fire Apparatus Driver/Operator Certification
   2251 Harvard Street, Suite 400
   Sacramento, CA 95815

2. State Fire Training conducts an application review.
   - If the applicant does not meet the eligibility requirements, SFT issues a denial.
   - If the applicant meets the eligibility requirements, SFT issues the digital certification(s) through the applicant's SFT User Portal.

STATE OF CALIFORNIA, NATURAL RESOURCES AGENCY
DEPARTMENT OF FORESTRY AND FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL – STATE FIRE TRAINING

Wildland Fire Apparatus Driver/Operator Certification Application

(REV. ##/##)

Identification

Full Name: _____

SFT ID Number: _____

Phone (Mobile): _____

Mailing Address: _____

City, State Zip Code: _____

Email: _____

Submission Requirements

Submit documentation to verify completion of the following requirements. You do not need to submit verification for anything issued by State Fire Training (SFT) already documented in your SFT User Portal.

Prerequisites

- Valid Class C Firefighter Endorsed **or** Commercial A **or** Commercial B driver's license (per California Vehicle Code, Section 12804.11)

Certifications

- OSFM Fire Fighter 1 certification
  or
- Appointment to the rank of Officer (Lieutenant or higher) or CAL FIRE rank of Fire Apparatus Engineer waives this certification prerequisite. (*Performing in an "acting" capacity does not fulfill this requirement.*)

Certification Task Book

- Wildland Fire Apparatus Driver/Operator Certification Task Book (2017)
  or
- Fire Apparatus Driver/Operator – Wildland Fire Apparatus (2014) with required updates (if applicable)

Experience

- Have a minimum of one year full-time or two years' volunteer or part-time paid experience in a recognized fire agency in California with the primary responsibility as an Aerial Apparatus Driver/Operator

Position

- Appointed to the rank or position of Fire Apparatus Driver/Operator (*Performing in an acting capacity does not qualify*.)

Fee

☐ $100 (non-refundable)

Wildland Fire Apparatus Driver/Operator Certification Application

(REV. ##/##)

Authority

I, the undersigned, am the person applying for certification. I hereby certify under penalty of perjury under the laws of the State of California, that all information contained in this application is true in every respect. I understand that misstatements, omissions of material facts, or falsification of information or documents may be cause for rejection. If SFT rejects my application due to falsification of information or documents, I understand that SFT will place a two-year restriction on my ability to reapply for certification.

Applicant Signature: _____ Date: _____

(CAL FIRE Account Code: 0198-####-4143500-4143500014-35405902-59210)

Wildland Fire Apparatus Driver/Operator

(NFPA Fire Apparatus Driver/Operator)

Certification Task Book (2017)

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

Overview

Authority

This certification task book includes the certification training standards set forth in the Fire Apparatus Driver/Operator Certification Training Standards Guide (2017) which is based on NFPA 1002: Standard for Fire Apparatus Driver/Operator Professional Qualifications (2017).

Published: Month Year
Published by: State Fire Training, 2251 Harvard Street, Suite 400, Sacramento, CA 95815

Cover photo courtesy of Garrett Huff, Santa Barbara County Fire Department.

Purpose

The State Fire Training certification task book is a performance-based document that identifies the minimum requirements necessary to perform the duties of that certification. Completion of a certification task book verifies that the candidate has the required experience, holds the required position, and has demonstrated the job performance requirements to obtain that certification.

Assumptions

With the exception of the Fire Fighter and Emergency Vehicle Technician (EVT) certifications, a candidate may begin the task book initiation process upon completion of all required education components (courses).

Each job performance requirement (JPR) shall be evaluated after the candidate's fire chief initiates the task book.

An evaluator may verify satisfactory execution of a job performance requirement (JPR) through the following methods:

- First-hand observation
- Review of documentation that verifies prior satisfactory execution

State Fire Training task books do not count towards the NWCG task book limit. There is no limit to the number of State Fire Training task books a candidate may pursue at one time as long as the candidate meets the initiation requirements of each.

It is the candidate's responsibility to routinely check the State Fire Training website for updates to an initiated task book. All State Fire Training issued updates to an initiated task book are required for task book completion.

A candidate must complete a task book within five years its initiation date. Otherwise, a candidate must initiate a new task books using the certification's current published version.

Roles and Responsibilities

Candidate

The candidate is the individual pursuing certification.

Initiation

The candidate shall:

1. Complete all Initiation Requirements.
   - Please print or type.
2. Obtain their fire chief's signature as approval to open the task book.
   - A candidate may not obtain evaluation signatures prior to the fire chief's initiation approval date.

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 **Completion Requirements**.
3. Sign and date the candidate verification statement under **Review and Approval** with a handwritten signature.
4. Obtain their fire chief's handwritten (not stamped) signature on the fire chief verification section.
5. Create and retain a physical or high-resolution digital copy of the completed task book.

Submission

The candidate shall:

1. Submit a copy (physical or digital) of the completed task book and any supporting documentation to State Fire Training.
   - See Submission and Review below.

A candidate should not submit a task book until they have completed all requirements and obtained all signatures. State Fire Training will reject and return an incomplete task book.

Evaluator

An evaluator is any individual who verifies that the candidate can satisfactorily execute a job performance requirement (JPR).

An evaluator may verify satisfactory execution through the following methods:

- First-hand observation
- Review of documentation that verifies prior satisfactory execution

A qualified evaluator is designated by the candidate's fire chief* and holds an equivalent or higher-level certification. If no such evaluator is present, the fire chief shall designate an individual with more experience than the candidate and a demonstrated ability to execute the job performance requirements.

A task book evaluator may be, but is not required to be, a registered skills evaluator who oversees a State Fire Training certification exam.

A certification task book may have more than one evaluator.

All evaluators shall:

1. Complete a block on the **Signature Verification** page with a handwritten 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.
    - Do not evaluate any job performance requirement (JPR) until after the candidate's fire chief initiates the task book.
    - Sign all appropriate lines in the certification task book with a handwritten signature or approved digital signature (e.g. Docusign or Adobe Sign) to record demonstrated performance of tasks.

* For certification task books that do not require fire chief initiation, academy instructors serve as or designate evaluators.

Fire Chief

The fire chief is the individual who initiates (when applicable) and then reviews and confirms the completion of a candidate's certification task book.

A fire chief may identify an authorized designee already on file with State Fire Training to fulfill any task book responsibilities assigned to the fire chief. (See *State Fire Training Procedures Manual*, 4.2.2: Authorized Signatories.)

Initiation

The fire chief shall:

1. Review and understand the candidate's certification task book requirements and responsibilities.

2. Verify that the candidate has met all **Initiation Requirements** prior to initiating the candidate's task book.
3. Open the candidate's task book by signing the **Fire Chief Approval** verification statement with a handwritten (not stamped) signature.
4. Designate qualified evaluators.

Completion

The fire chief shall:

1. Confirm that the candidate has obtained the appropriate signatures to verify successful completion of each job performance requirement.
   - Ensure that all **Job Performance Requirements** were evaluated after the initiation date.
2. Confirm that the candidate meets the **Completion Requirements**.
3. Sign and date the Fire Chief verification statement under **Review and Approval** with a handwritten signature.
   - If signing as an authorized designee, verify that your signature is on file with State Fire Training.

Submission and Review

A candidate should not submit a task book until they have completed all requirements and obtained all signatures. State Fire Training will reject and return an incomplete task book.

To submit a completed task book, please send the following items to the address below:

- A copy of the completed task book (candidate may retain the original)
- All supporting documentation
- Payment

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 State Fire Training 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.

Initiation Requirements

The following requirements must be completed prior to initiating this task book.

Candidate Information

Name: _____

SFT ID Number: _____

Fire Agency: _____

Prerequisites

The candidate meets the following prerequisites.

- OSFM Fire Fighter 1 certification
  or
- Appointment to the rank of Officer (Lieutenant or higher) **or** CAL FIRE rank of Fire Apparatus Engineer waives this certification prerequisite. (*Performing in an acting capacity does not fulfill this requirement.*)

Rank	Appointment Date

- Valid Class C Firefighter Endorsed **or** Commercial A **or** Commercial B driver's license (per California Vehicle Code, Section 12804.11)

License or Permit	Granting Agency/Institution	License/Permit #	Expiration Date

Include documentation to verify prerequisite requirements when you submit your task book unless verification is already documented in your SFT User Portal.

Education

The candidate has completed the following course(s).

- 1A: Fire Apparatus Driver/Operator (2008 or newer)
- 1B: Pumping Apparatus Operations (2008 or newer)
- 1E: Wildland Fire Apparatus Operations (2008 or newer)

Include documentation to verify course completion requirements when you submit your task book unless verification is already documented in your SFT User Portal.

Fire Chief Approval

Candidate's Fire Chief (please print): _____

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 documentation may be cause for rejection.

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 where a handwritten signature is required.
Add additional signature pages as needed.

Name: ____________________ **Name:** ____________________
Job Title: ____________________ Job Title: ____________________
Organization: ____________________ Organization: ____________________
Signature: ____________________ Signature: ____________________

Name: ____________________ **Name:** ____________________
Job Title: ____________________ Job Title: ____________________
Organization: ____________________ Organization: ____________________
Signature: ____________________ Signature: ____________________

Name: ____________________ **Name:** ____________________
Job Title: ____________________ Job Title: ____________________
Organization: ____________________ Organization: ____________________
Signature: ____________________ Signature: ____________________

Name: ____________________ **Name:** ____________________
Job Title: ____________________ Job Title: ____________________
Organization: ____________________ Organization: ____________________
Signature: ____________________ Signature: ____________________

Name: ____________________ **Name:** ____________________
Job Title: ____________________ Job Title: ____________________
Organization: ____________________ Organization: ____________________
Signature: ____________________ Signature: ____________________

Job Performance Requirements

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.

When California requirements exceed or require revision to the NFPA standard, the corresponding Office of the State Fire Marshal-approved (OSFM) additions or revisions appear in *italics*.

All JPRs must be completed within a California fire agency or State Fire Training Accredited Regional Training Program (ARTP).

For JPRs that are not part of a candidate's regular work assignment or are a rare event, the evaluator may develop a scenario or interview that supports the required task and evaluate the candidate to the stated standard.

Each JPR shall be evaluated after the candidate's fire chief initiates the task book.

Fire Apparatus

Preventative Maintenance

1. Perform visual and operational checks on the systems and components specified in the following list (battery(ies), braking system, coolant system, electrical system, fuel, hydraulic fluids, oil, tires, steering system, belts, tools, appliances, equipment, built-in safety features), given a fire *apparatus*, its manufacturer's specifications, *tools and equipment*, and policies and procedures of the jurisdiction, so that the operational status of the vehicle is verified. (NFPA 4.2.1) (CTS 1-1)

   Evaluator Signature: _____ Date Verified: _____

2. Document visual and operational checks, given maintenance and inspection forms, so that all items are checked for operation and deficiencies are reported. (NFPA 4.2.2) (CTS 1-2)

   Evaluator Signature: _____ Date Verified: _____

Operations

3. Operate a fire apparatus *during emergency and non-emergency responses* using defensive driving techniques, given *an apparatus, an assignment,* a predetermined route on a public way that incorporates the maneuvers and features that the driver/operator is expected to encounter during normal operations, and *AHJ policies and procedures*, so that control of the apparatus is maintained and the *apparatus* is operated in compliance with all applicable state and local laws and *AHJ* rules and regulations. (NFPA 4.3.1 & 4.3.6) (CTS 2-1)

   Evaluator Signature: _____ Date Verified: _____

4. Back a *fire apparatus* from a roadway into restricted spaces on both the right and left sides of the *apparatus*, given a fire apparatus, a spotter where the spotter assists the driver in performing the maneuver, and restricted spaces 12 ft (3.7 m) in width, requiring 90-degree right-hand and left-hand turns from the roadway, so that the vehicle is parked within the restricted areas without have to stop and pull forward and without striking obstructions. (NFPA 4.3.2) (CTS 2-2)

   Evaluator Signature: _____ Date Verified: _____

5. Maneuver a *fire apparatus* around obstructions on a roadway while moving forward and in reverse, given a fire apparatus, a spotter where the spotter assists the driver in performing the maneuver, and a roadway with obstructions, so that the vehicle is maneuvered through the obstructions without stopping to change the direction of travel and without striking any obstructions. (NFPA 4.3.3) (CTS 2-3)

   Evaluator Signature: _____ Date Verified: _____

6. Turn a fire apparatus 180 degrees within a confined space, given a fire apparatus, a spotter for backing up, and an area in which the *apparatus* cannot perform a U-turn without stopping and backing up, so that the *apparatus* is turned 180 degrees without striking obstructions within the given space. (NFPA 4.3.4) (CTS 2-4)

   Evaluator Signature: _____ Date Verified: _____

7. Maneuver a fire apparatus in areas with restricted horizontal and vertical clearances, given a fire apparatus and a course that requires the operator to move through areas of restricted horizontal and vertical clearances, so that the operator judges the ability of the *apparatus* to pass through the openings, *using continual motion*, and so that no obstructions are struck. (NFPA 4.3.5) (CTS 2-5)

   Evaluator Signature: _____ Date Verified: _____

8. Operate all fixed systems and equipment on a *fire apparatus* not addressed elsewhere in this standard, given *fixed* systems and equipment, manufacturer's specifications *and requirements*, *and AHJ* policies and procedures for the systems and equipment, so that each system or piece of equipment is operated in accordance with the applicable instructions and policies. (NFPA 4.3.7) (CTS 2-6)

Evaluator Signature: _____ Date Verified: _____

Wildland Fire Apparatus

Preventative Maintenance

9. Perform *and document* the visual and operational checks on the systems and components specified in the following list (water tank and/or other extinguishing agent levels (if applicable), pumping systems, foam systems, *four-wheel drive system*), in addition to those in *NFPA 1002* 4.2.1, given a wildland fire apparatus, *tools and equipment*, manufacturer specifications, and policies and procedures of the jurisdiction, so that the operational status is verified. (NFPA 8.1.1) (CTS 10-1)

Evaluator Signature: _____ Date Verified: _____

Operations

10. Operate a wildland fire apparatus, given *a wildland fire apparatus*, a predetermined route off of a public way that incorporates the maneuvers and features that the driver/operator is expected to encounter during normal operations, *applicable laws and regulations*, *and AHJ policies and procedures*, so that the vehicle is operated in compliance with all applicable *jurisdictional* rules and regulations and *operational* limitations of the apparatus. (NFPA 8.1.2) (CTS 11-1)

OSFM recommended maneuvers and features:

- *Loose or wet soil*
- *Steep grades (40% fore and aft)*
- *Limited sight distance*
- *Blind curve and mid-slope in-turns*
- *Vehicle clearance obstacles (height, width, undercarriage (break-over), angle of approach, angle of departure, gates, fences)*
- *Limited space turnaround*
- *Side slopes (15% side to side)*
- *Varying types of road surfaces (washboard, heavy silt, gravel, transitioning from gravel to pavement, water crossing)*

Evaluator Signature: _____ Date Verified: _____

11. Produce effective fire streams, given *a wildland fire apparatus and* a water tank, so that the pump is engaged, all pressure control and vehicle safety devices are set, the rated flow of the nozzle is achieved, and the apparatus is monitored for potential problems. (NFPA 8.2.1) (CTS 11-2)

    Evaluator Signature: _____ Date Verified: _____

12. Produce effective fire streams, given *a wildland fire apparatus and* a pressurized *water* source, so that the pump is engaged, all pressure control and vehicle safety devices are set, the rated flow of the nozzle is achieved, and the apparatus is monitored for potential problems. (NFPA 8.2.1) (CTS 11-2)

    Evaluator Signature: _____ Date Verified: _____

13. Produce effective fire streams, given *a wildland fire apparatus and* a static *water* source, so that the pump is engaged, all pressure control and vehicle safety devices are set, the rated flow of the nozzle is achieved, and the apparatus is monitored for potential problems. (NFPA 8.2.1) (CTS 11-2)

    Evaluator Signature: _____ Date Verified: _____

14. Pump a supply line, given *a wildland fire apparatus and* a relay pumping evolution the length and size of the line and pumping flow and desired intake pressure, so that correct intake pressures and flow are provided to the next *pumping apparatus* in the relay. (NFPA 8.2.2) (CTS 11-3)

    Evaluator Signature: _____ Date Verified: _____

15. Produce a foam stream, given foam-producing equipment, so that the correct proportion of foam is provided. (NFPA 8.2.3) (CTS 11-4)

    Evaluator Signature: _____ Date Verified: _____

Completion Requirements

The following requirements must be completed prior to submitting this task book.

Experience

The candidate meets the following experience requirements.

- Have a minimum of one year full-time paid or two years' volunteer or part-time paid experience in a recognized fire agency in California with the primary responsibility as a Wildland Fire Apparatus Driver/Operator

Agency	Experience	Start Date	End Date

Position

The candidate meets the position qualifications for this level of certification. The position requirement is met when the applicant fulfills the role of the specific duties as defined by the fire chief.

Updates

The candidate has completed and enclosed all updates to this certification task book released by State Fire Training since its initial publication.

Number of enclosed updates: _____

Completion Timeframe

The candidate has completed all requirements documented in this certification task book within five years of its initiation date.

Initiation Date (see Fire Chief signature under **Initiation Requirements**): _____

Review and Approval

Candidate

Candidate (please print): _____

I, the undersigned, am the person applying for certification. I hereby certify under penalty of perjury under the laws of the State of California, that the completion of all requirements documented herein is true in every respect. I understand that misstatements, omissions of material facts, or falsification of information or documentation may be cause for rejection or revocation.

Signature: _____ Date: _____

Fire Chief

Candidate's Fire Chief (please print): _____

I, the undersigned, am the person authorized to verify the candidate's qualifications for certification. I hereby certify under penalty of perjury under the laws of the State of California, that the completion of all requirements documented herein are true in every respect. I understand that misstatements, omissions of material facts, or falsification of information or documentation may be cause for rejection.

Signature: _____ Date: _____

Update 21-1

Justification

In 2021, State Fire Training updated the Fire Apparatus Driver/Operator certification series to align with NFPA 1002: Standard for Fire Apparatus Driver/Operator Professional Qualifications (2017).

Revision/Update

1. NFPA made minor language revisions to the text that does not impact job performance requirement (JPR) intent.
    - No updates required.

2. OSFM has determined that candidates must complete the JPRs from NFPA 1002 (2017); chapter 4 as part of Wildland Fire Apparatus Driver/Operator certification.
    - If you have already completed and validated these JPRs through a previous task book, show that task book to your evaluator and have them sign off on the appropriate JPRs below.
    - If you have not completed and validated these JPRs through a previous task book, complete and validate them through this update.

Additional Requirements

Fire Apparatus Preventative Maintenance

1. Perform visual and operational checks on the systems and components specified in the following list (battery(ies), braking system, coolant system, electrical system, fuel, hydraulic fluids, oil, tires, steering system, belts, tools, appliances, equipment, built-in safety features), given a fire *apparatus*, its manufacturer's specifications, *tools and equipment*, and policies and procedures of the jurisdiction, so that the operational status of the vehicle is verified. (NFPA 1002 (2017); 4.2.1) (CTS 1-1)

   Evaluator Signature: _____ Date Verified: _____

2. Document visual and operational checks, given maintenance and inspection forms, so that all items are checked for operation and deficiencies are reported. (NFPA 1002 (2017); 4.2.2) (CTS 1-2)

   Evaluator Signature: _____ Date Verified: _____

Fire Apparatus Operations

3. Operate a fire apparatus *during emergency and non-emergency responses* using defensive driving techniques, given *an apparatus, an assignment,* a predetermined route on a public way that incorporates the maneuvers and features that the driver/operator is expected to encounter during normal operations, and *AHJ policies and procedures*, so that control of the apparatus is maintained and the *apparatus* is operated in compliance with all applicable state and local laws and *AHJ* rules and regulations. (NFPA 1002 (2017); 4.3.1 & 4.3.6) (CTS 2-1)

   Evaluator Signature: _____ Date Verified: _____

4. Back a *fire apparatus* from a roadway into restricted spaces on both the right and left sides of the *apparatus*, given a fire apparatus, a spotter where the spotter assists the driver in performing the maneuver, and restricted spaces 12 ft (3.7 m) in width, requiring 90-degree right-hand and left-hand turns from the roadway, so that the vehicle is parked within the restricted areas without have to stop and pull forward and without striking obstructions. (NFPA 1002 (2017); 4.3.2) (CTS 2-2)

   Evaluator Signature: _____ Date Verified: _____

5. Maneuver a *fire apparatus* around obstructions on a roadway while moving forward and in reverse, given a fire apparatus, a spotter where the spotter assists the driver in performing the maneuver, and a roadway with obstructions, so that the vehicle is maneuvered through the obstructions without stopping to change the direction of travel and without striking any obstructions. (NFPA 1002 (2017); 4.3.3) (CTS 2-3)

   Evaluator Signature: _____ Date Verified: _____

6. Turn a fire apparatus 180 degrees within a confined space, given a fire apparatus, a spotter for backing up, and an area in which the *apparatus* cannot perform a U-turn without stopping and backing up, so that the *apparatus* is turned 180 degrees without striking obstructions within the given space. (NFPA 1002 (2017); 4.3.4) (CTS 2-4)

   Evaluator Signature: _____ Date Verified: _____

7. Maneuver a fire apparatus in areas with restricted horizontal and vertical clearances, given a fire apparatus and a course that requires the operator to move through areas of restricted horizontal and vertical clearances, so that the operator judges the ability of the *apparatus* to pass through the openings, *using continual motion*, and so that no obstructions are struck. (NFPA 1002 (2017); 4.3.5) (CTS 2-5)

   Evaluator Signature: _____ Date Verified: _____

8. Operate all fixed systems and equipment on a *fire apparatus* not addressed elsewhere in this standard, given *fixed* systems and equipment, manufacturer's specifications *and requirements*, *and AHJ* policies and procedures for the systems and equipment, so that each system or piece of equipment is operated in accordance with the applicable instructions and policies. (NFPA 1002 (2017); 4.3.7) (CTS 2-6)

   Evaluator Signature: _____ Date Verified: _____