

# Fire Apparatus Driver/Operator – Water Tender

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## Certification Training Standards Guide August 2015



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

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This CTS guide utilizes NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications (2014) to provide the qualifications for State Fire Training's Fire Apparatus Driver/Operator – Water Tender certification.

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  
1131 S Street, Sacramento, CA 95811  
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Cover photo courtesy of Karen Wilson, Mariposa County Fire Department

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# State Fire Training

## Mission

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

## The California Fire Service 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 the Training Division of the California State Fire Marshal's Office 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 a certification task book for each certified level in 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

**Ken Pimlott**

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## Acknowledgments

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## Acknowledgments

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**Boyd Clegg**

*Assistant Chief, Vacaville Fire Protection District  
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**Jim Colston**

*Captain, San Marcos Fire Department  
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**DeWayne Felkins**

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**Tanisha Tucker**

*Engineer, Oakland Fire Department  
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## 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.

## 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. CTS guides are appropriate for fire service personnel and individuals in related occupations pursuing State Fire Training certification.

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 departments or jurisdictions.

### Format

Each certification training standard included in the CTS guide includes the following:

#### Section Heading

The section heading describes a general category for a group of training standards. For example, the Fire Marshal CTS includes the following sections: Administration, Risk Management, Community Relations, Professional Development, Regulatory Programs, Fire and Life Safety, and Investigation. Each section contains one or more individual training standards.

#### Training Standard Title

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

#### Authority

The CTS guide references each 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*.

### **Given**

This section lists the objects, equipment, materials, or facilities an individual needs in order to acquire the requisite knowledge and skills or to accomplish the job performance requirement(s) within a training standard.

### **Requisite Knowledge and Skills**

This section lists the knowledge and skills that an individual must acquire in order to accomplish the job performance requirement(s) within a training standard.

This section does not include NFPA requisite knowledge or skills that are too general to teach or that individuals should develop through life experiences. For example, a training standard would not list “communicate orally and in writing” or “ability to relate interpersonally” unless they specifically apply to a job performance requirement about acquiring communication skills or developing interpersonal relationships.

### **Job Performance Requirements**

This section includes one or more written statements that describe a specific job-related task and define measurable or observable outcomes. After an individual completes all coursework and requisite requirements, the certification task book process verifies completion of job performance requirements.

## **Content**

In addition to the individual certification training standards, the CTS guide also includes State Fire Training Revisions and Errata pages.

### **State Fire Training Content**

Located at the back of the CTS guide, this table documents any significant revisions made by State Fire Training to the NFPA standards in the development of this CTS guide. This table is used to justify content additions and advise the course plan development team.

### **Errata**

Located at the back of the CTS guide, this page documents any changes made to the CTS guide outside of the five-year NFPA revision cycle.

# Fire Apparatus Driver/Operator – Water Tender

## Section 1: Preventive Maintenance

### 1-1: Perform and Document Routine Tests, Inspections, and Servicing Functions Unique to Water Tenders

#### Authority

NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications (2014)

- Paragraph 10.1.1

Office of the State Fire Marshal

#### Given

1. *Water tender*
2. *Tools and equipment*
3. *Manufacturer's specifications and requirements*
4. *Maintenance and inspection forms*
5. Policies and procedures of the jurisdiction

#### Requisite Knowledge and Skills

1. *Recognize manufacturer specifications and requirements*
2. *Review policies and procedures of the jurisdiction, including documentation requirements*
3. *Use tools and equipment*
4. *Recognize system problems and out-of-service criteria*
5. *Correct any deficiency noted according to policies and procedures and/or manufacturer specifications and requirements*

#### Job Performance Requirements

Perform and document routine tests, inspections, and servicing functions on the systems and components unique to a water tender, in addition to those in NFPA 1002 Paragraph 4.2.1, to verify their operational status.

## Section 2: Operations

### 2-1: Operate a Water Tender

#### Authority

Office of the State Fire Marshal

#### Given

1. *Water tender*
2. *Applicable laws and regulations*
3. *Policies and procedures of the jurisdiction*
4. *Predetermined route off of a public way that incorporates the maneuvers and features that the driver/operator is expected to encounter during normal operations*

#### Requisite Knowledge and Skills

1. *Recognize water tender resource typing*
2. *Explain the effects on vehicle control of braking reaction time and load factors*
3. *Explain the effects of high center of gravity on roll-over potential, general steering reactions, speed, and centrifugal force*
4. *Review policies and procedures of the jurisdiction*
5. *Describe the principles of skid avoidance, night driving, shifting, and gear patterns*
6. *Discuss negotiating intersections, railroad crossings, soft shoulders, grade, and bridges*
7. *Describe weight and height limitations for both roads and bridges*
8. *Explain operational limits*
9. *Discuss off-pavement water tender emergencies*
10. *Operate passenger restraint devices*
11. *Maintain safe following distances*
12. *Maintain control of the water tender while accelerating, decelerating, and turning, given road, weather, and traffic conditions*
13. *Operate the tender under adverse environmental or driving surface conditions*
14. *Use automotive gauges and controls*

#### Job Performance Requirements

*Operate a water tender in compliance with all applicable jurisdictional rules and regulations and operational limitations of the apparatus.*

## 2-2: Maneuver and Position a Water Tender at a Water Shuttle Fill Site

### Authority

NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications (2014)

- Paragraph 10.2.1

Office of the State Fire Marshal

### Given

1. *Water tender*
2. Fill site location
3. One or more supply hose

### Requisite Knowledge and Skills

1. *Describe* local procedures for establishing a water shuttle fill site
2. *Discuss the correct positioning of a water tender at a water shuttle fill site*
3. *Identify* locations of the water tank intakes on the *water tender*
4. Determine a correct position for the *water tender*
5. Maneuver *the water tender* into *the correct* position
6. Avoid obstacles to operations

### Job Performance Requirements

Maneuver and position a water tender at a water shuttle fill site, without striking any objects or stretching additional hose, and attach supply hose to the intake connections.

## **2-3: Maneuver and Position a Water Tender at an Established Water Shuttle Dumpsite**

### **Authority**

NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications (2014)

- Paragraph 10.2.2

### **Given**

1. *Water tender*
2. Established water dumpsite
3. Portable water tank

### **Requisite Knowledge and Skills**

1. *Describe* local procedures for operating a water tender at a water shuttle dumpsite
2. *Identify* locations of the water tank discharges on the *water tender*
3. Determine a correct position for the *water tender*
4. Maneuver the *water tender* into *the correct* position
5. Avoid obstacles to operations
6. Operate the fire pump or rapid water dump system

### **Job Performance Requirements**

Maneuver and position a water tender at a water shuttle dumpsite and discharge all of the water from the water tender into the portable tank without striking any object at the dumpsite.

## **2-4: Establish a Water Shuttle Dumpsite**

### **Authority**

NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications (2014)

- Paragraph 10.2.3

### **Given**

1. *One or more water tenders*
2. Two or more portable water tanks
3. Low-level strainers
4. *Hard suction hose*
5. Fire hose
6. Pumping apparatus

### **Requisite Knowledge and Skills**

1. *Describe* local procedures for establishing a water shuttle dumpsite
2. *Describe* the principles of water transfer between multiple portable water tanks
3. Deploy portable water tanks
4. Connect and operate water transfer equipment
5. Connect a strainer and suction hose to the fire pump

### **Job Performance Requirements**

Establish a water shuttle dumpsite by keeping the draft tank full at all times, emptying the dump tank, and transferring the water from one tank to the next.

## State Fire Training Content

### Code Key

**Blocks**

- G = Given
- RKS = Requisite Knowledge and Skills
- JPR = Job Performance Requirements
- NCTS = New certification training standard

**Source**

- CAL FIRE = California Department of Forestry and Fire Protection

### Certification: Fire Apparatus Driver/Operator – Water Tender

CTS	Block	Addition	Justification	Source/ Reference
1-1	G	Water tender	Needed to perform the JPR	N/A
1-1	G	Tools and equipment	Needed to perform the JPR	N/A
1-1	G	Manufacturer’s specifications and requirements	Needed to perform the JPR	N/A
1-1	G	Maintenance and inspection forms	Needed to perform the JPR	N/A
2-1	NCTS	Operate a Water Tender	Tactical water tenders are required to go off-road, this new CTS was added to address that issue	CAL FIRE
2-2	G	Water tender	Needed to perform the JPR	N/A
2-3	G	Water tender	Needed to perform the JPR	N/A
2-4	G	One or more water tenders	Needed to perform the JPR	N/A
2-4	G	Hard suction hose	Needed to perform the JPR	N/A