

Water Rescue Awareness and Operations

(NFPA 1006: Surface Water Rescue, Swiftwater Rescue, and Floodwater Rescue Awareness/Operations/Technician)

Instructor Task Book (2021)



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

Overview

Authority

This instructor task book includes the training standards set forth in:

- NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)

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Cover photo courtesy of Sean Norman, Division Chief, CAL FIRE.

Purpose

The State Fire Training instructor task book is a performance-based document. It lists the minimum requirements a candidate must meet to teach a specific State Fire Training course or course series.

Assumptions

Except for 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 initiates the task book.

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 if the candidate meets the initiation requirements for 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 three years of its initiation date. Otherwise, a candidate must initiate a new task book using the curriculum's current published version.

Roles and Responsibilities

Candidate

The candidate is the individual pursuing instructor registration.

Initiation

The candidate shall:

1. Complete the Initiation Requirements section.
 - Please print.
2. Complete a block on the Signature Verification page with a handwritten signature.

Completion

The candidate shall:

1. Complete all Job Performance Requirements.
 - Ensure that an evaluator initials, signs, and dates each task to verify completion.
2. Complete the Completion Requirements section.
3. Sign and date the Candidate verification section on the Review and Approval page with a handwritten signature.
4. Obtain their fire chief's handwritten (not stamped) signature on the Fire Chief verification section on the Review and Approval page.
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).

A qualified evaluator is a Registered Water Rescue Awareness and Operations Instructor designated by the candidate's fire chief (or authorized designee). For instructor task books that do not require fire chief initiation, academy instructors serve as or designate evaluators.

All evaluators shall:

1. Complete a block on the Signature Verification page with a handwritten signature.
2. Review and understand the candidate's instructor task book requirements and responsibilities.
3. Verify the candidate's successful completion of one or more job performance requirements through observation.
 - Do not evaluate any job performance requirement (JPR) until after the candidate initiates the task book.
 - Sign all appropriate lines in the instructor task book with a handwritten signature or approved digital signature (e.g., DocuSign or Adobe Sign; a scanned copy of a signature is not acceptable) to record demonstrated performance of tasks.

Fire Chief

The fire chief is the individual who initiates (when applicable) and then reviews and confirms the completion of a candidate's instructor 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 instructor task book requirements and responsibilities.
2. Complete a block on the Signature Verification page with a handwritten signature.
3. 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:

1. A copy of the completed task book (candidate may retain the original)
2. All supporting documentation
3. Payment

State Fire Training
Attn: Instructor Registration
PO Box 944246
Sacramento, CA 94244-2460

State Fire Training reviews all submitted task books.

- If the task book is complete, State Fire Training will authorize the task book and retain a digital copy of the authorized task book in the candidate's career file.
- If the task book is incomplete, State Fire Training will return the task book with a notification indicating what needs to be completed prior to resubmission.

Completion of this instructor task book is one step in the instructor registration process. Please refer to the *State Fire Training Procedures Manual* for the complete list of qualifications required to teach Water Rescue Awareness and Operations (2021).

Initiation Requirements

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

Candidate Information

Name: _____

SFT ID Number: _____

Fire Agency: _____

Initiation Date: _____

Prerequisites

The candidate meets one of the following prerequisites.

1. OSFM Instructor 1, Training Instructor I, or Fire Instructor I certification
2. OSFM Registered Instructor

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

Education

The candidate has completed one of the following courses.

1. River and Flood Rescue Technician (2017)
2. Water Rescue Awareness and Operations (2021)
3. Water Rescue Technician (2021)

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

Fire Chief Approval

State Fire Training confirms that a fire chief's approval is not required to initiate this task book.

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: _____
Job Title: _____
Organization: _____
Signature: _____
Initials: _____
Course #: _____

Name: _____
Job Title: _____
Organization: _____
Signature: _____
Initials: _____
Course #: _____

Name: _____
Job Title: _____
Organization: _____
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Course #: _____

Name: _____
Job Title: _____
Organization: _____
Signature: _____
Initials: _____
Course #: _____

Name: _____
Job Title: _____
Organization: _____
Signature: _____
Initials: _____
Course #: _____

Job Performance Requirements

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 Programs (ARTP).

Each JPR shall be evaluated after the candidate initiates the task book.

Each task must be performed twice.

- The two instances must occur during two different courses.
- The same evaluator cannot sign off on the same task twice.
- In the tables, E1 represents the candidate's first evaluation and E2 represents their second evaluation.

Examples of correct and incorrect evaluation:

Correct: Task completed during two separate courses and evaluated by two separate individuals.

1. Assemble a comprehensive burn plan ("burn book") that contains all documentation necessary to conduct a live fire training evolution in accordance with NFPA standards and the policies and procedures of State Fire Training (SFT) and the authority having jurisdiction (AHJ).	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe purpose of a live fire burn plan	AAA123	2/8/18	JAS	BBB123	5/15/18	CWJ
b. Identify components of a live fire burn plan ("burn book")	AAA123	2/8/18	JAS	BBB123	5/15/18	CWJ
c. Identify records-retention requirements for burn plans	AAA123	2/8/18	JAS	BBB123	5/15/18	CWJ

Incorrect: Task completed twice during one course but evaluated by two separate individuals.

1. Assemble a comprehensive burn plan ("burn book") that contains all documentation necessary to conduct a live fire training evolution in accordance with NFPA standards and the policies and procedures of State Fire Training (SFT) and the authority having jurisdiction (AHJ).	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe purpose of a live fire burn plan	AAA123	2/8/18	JAS	AAA123	2/8/18	CWJ
b. Identify components of a live fire burn plan ("burn book")	AAA123	2/8/18	JAS	AAA123	2/8/18	CWJ
c. Identify records-retention requirements for burn plans	AAA123	2/8/18	JAS	AAA123	2/8/18	CWJ

Incorrect: Task completed during two separate courses but evaluated by the same individual.

1. Assemble a comprehensive burn plan ("burn book") that contains all documentation necessary to conduct a live fire training evolution in accordance with NFPA standards and the policies and procedures of State Fire Training (SFT) and the authority having jurisdiction (AHJ).	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe purpose of a live fire burn plan	AAA123	2/8/18	JAS	BBB123	5/15/18	JAS
b. Identify components of a live fire burn plan ("burn book")	AAA123	2/8/18	JAS	BBB123	5/15/18	JAS
c. Identify records-retention requirements for burn plans	AAA123	2/8/18	JAS	BBB123	5/15/18	JAS

Water Rescue Awareness and Operations Instructor

Course Administration and Application

1. Course administration and orientation	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Complete and submit course scheduling request						
b. Order student textbooks (if applicable)						
c. Identify facility requirements						
d. Confirm facilities set up and safety						
e. Identify classroom requirements						
f. Confirm equipment (based on number of students)						
g. Complete instructor assignments						
h. Organize skill stations (location, equipment, timing, complexity)						
i. Confirm prop set up and safety						
j. Complete class rosters						
k. Review course syllabus						

Water Rescue Concepts and Skills

2. Manage a water rescue incident (Topic 2-1)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe water rescue scope of practice and standards						
b. Describe policies/procedures for rescue team activation						
c. Describe legal considerations and practices						
d. Describe the discipline-specific components of the Incident Command System						
e. Describe rescue priorities						
f. Describe how to recognize the need for technical rescue resources						
3. Describe dynamic hydrology (Topic 2-2)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe the forces of dynamic water						
b. Describe how to calculate current speed						
c. Describe how to calculate water volume (cubic feet of water per second) in a river/channel						
d. Describe river orientation and where to place personnel						
e. Describe features created by moving water and how they impact water rescue operations						
f. Describe the effects of hydrodynamic forces on rescuers and victims						
g. Describe criteria for selecting victim retrieval locations based on water environment and conditions						

h. Identify river classifications						
4. Recognize hazards and initiate isolation procedures (Topic 2-3)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe hazards created by or associated with surface or dynamic water						
b. Describe types and natures of water rescue incident hazards						
c. Describe types of mitigation and isolation equipment and their use						
d. Describe resource capabilities and limitations						
e. Describe operational requirement concerns						
f. Describe common types of rescuer and victim risks						
g. Describe methods for controlling access to the scene						
h. Initiate mitigation and isolation procedures						
5. Assess hazards to rescuers and victims (Topic 2-4)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe how to interpret information sources and identify their impact on operational decision making						
b. Identify current vectors for safe navigation						
c. Identify areas and features that are safe zones in dynamic water environments						
d. Determine flow and environmental factors and their effects on victims and rescuers						
e. Acquire and interpret weather forecasts and local terrain data and evaluate their impact on victims and rescuers						
f. Interpret maps or charts						

6. Develop a site survey for an existing water hazard (Topic 2-5)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe requisite contents of a site survey						
b. Describe types, sources, and information provided by reference materials						
c. Describe hydrology and the influence of hydrology on rescues						
d. Describe types of hazards associated with water rescue practices scenarios, inspections practices, and considerations techniques						
e. Describe risk/benefit analysis						
f. Describe identification of hazard-specific PPE						
g. Describe factors influencing access and egress routes						
h. Describe behavioral patterns of victims						
i. Describe environmental conditions that influence victim location						
j. Interpret reference materials						
k. Perform a scene assessment						
l. Evaluate site conditions						
m. Complete risk/benefit analysis						
n. Select and use necessary PPE						
7. Size up a water rescue incident (Topic 2-6)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe how to conduct a size up						

b. Describe types of reference materials and their uses						
c. Describe how to conduct a risk/benefit assessment						
d. Describe information-gathering techniques and how that information is used in the size-up process						
e. Describe elements of an incident action plan and related information						
f. Describe how size up relates to the incident management system						
g. Read technical rescue reference materials						
h. Evaluate site conditions						
i. Relay information						
j. Manage witnesses						
k. Use information-gathering sources						
8. Communicate in a water environment (Topic 2-7)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe communication challenges in a water rescue environment						
b. Describe ways to communicate in a water rescue environment (verbal, hand signals, whistle blasts, radio)						
c. Demonstrate forms of communication						
9. Develop and implement an Incident Action Plan to use watercraft (Topic 2-8)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe the components of an IAP						
b. Describe how to combine multiple actions and information sources into a cohesive plan						

c. Use a tactical worksheet						
10. Implement an Incident Action Plan to use air assets (Topic 2-9)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe means of contacting and accessing agencies with air assets						
b. Describe the role of aircraft in the support of water events						
c. Describe the limitations of the available aircraft in the conditions associated with the rescue environment						
d. Describe the role of the rescuer as part of an aviation team						
e. Describe basic safety considerations for working around aircraft						
f. Describe how to establish and control landing zones						
g. Describe how to rig aircraft for anticipated rescue procedures						
h. Implement a notification plan to request air assets						
i. Develop a list of tactical objectives to be achieved by the aircraft						
j. Communicate mission priorities with the aircrew or operator of the aircraft						
11. Select and use personal protective equipment (Topic 2-10)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe the types and uses of and selection criteria for PPE						
b. Identify manufacturer's recommendations for PPE						
c. Describe how to don and doff PPE						

d. Describe personal escape techniques						
e. Describe how to care for and maintain PPE						
f. Inspect PPE						
g. Use pre-operation checklists						
h. Select personal flotation devices, water rescue helmets, and personal protective clothing and equipment						
i. Don and doff PPE						
j. Communicate distress signals						
k. Use emergency escape procedures						
12. Operate water rescue equipment (Topic 2-11)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe the use, limitations, and safety considerations of water rescue equipment						
b. Describe how to maintain and store water rescue equipment						
c. Operate equipment						
d. Maintain and store equipment						
13. Describe flood hazards and evacuation procedures (Topic 2-12)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe types of floods						
b. Describe the evolution of a flood						
c. Describe flood environment hazards						

d. Describe how to manage and navigate terrain and environment hazards covered with floodwater or subject to differential pressures						
e. Describe hazardous material exposure, protection, and decontamination						
f. Describe basic flood search, rescue, and evacuation procedures						
g. Describe considerations for pets and livestock						
14. Limit exposure to potentially contaminated flood water (Topic 2-13)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Identify contamination sources						
b. Identify routes of exposure						
c. Identify indicators of the presence of contaminants						
d. Describe methods to limit exposure to contaminated water						
e. Describe decontamination methods for specific contaminants						
f. Use engineering controls and personal protective equipment (PPE)						
g. Use practices that limit exposure to contaminants						
h. Remove of potential contaminants or render them inert						
15. Support an operations- or technician-level incident (Topic 2-14)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe AHJ operational protocols						
b. Describe scene support requirements						

c. Describe support procedures						
d. Identify how to avoid becoming a hazard or victim						
e. Execute basic support skills						
16. Perform a victim search (Topic 2-15)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe search fundamentals						
b. Describe how to manage witnesses						
c. Identify different tools used for searches						
d. Describe reconnaissance, hasty (rapid), primary, and secondary (low and high) search types						
e. Identify high-probability victim locations						
f. Describe how to mark victim locations						
g. Describe how to communicate victim locations						
h. Describe how to incorporate spotters						
i. Define search parameters						
17. Manage a victim (Topic 2-16)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe typical victim behaviors						
b. Describe how to manage family and bystanders						
c. Describe victim medical considerations						
d. Describe how to approach a victim						

e. Describe c-spine application techniques in a water environment						
18. Demonstrate boat rigging (Topic 2-17)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe common types of rescue watercraft						
b. Describe watercraft terminology						
c. Rig a watercraft						
19. Perform a non-entry rescue from shore (Topic 2-18)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Identify potential non-entry rescue scenarios						
b. Identify scenarios when non-entry rescue may not be appropriate						
c. Identify considerations for non-entry rescue						
d. Identify PPE and tools used for non-entry rescue						
e. Describe hazards and limitations of shore-based rescue						
f. Select and use task-specific PPE						
g. Identify water hazards (i.e., upstream or downstream, current or tide)						
h. Identify hazards directly related to the specific rescue						
i. Demonstrate appropriate shore-based victim removal techniques						
20. Construct and use technical rope rescue systems and skills (Topic 2-19)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe how to work with ropes, knots, and anchors						

b. Describe the capabilities, limitations, and uses for rope systems specific to the water rescue environment						
c. Describe how to build and use a mechanical advantage system for water rescue						
d. Describe how to build and use a raising and lowering system for water rescue						
e. Describe how to build and use a tension diagonal horizontal transport system for water rescue						
f. Describe how to use line throwing and crossing equipment and techniques						
g. Describe methods to increase the efficiency of load movement						
h. Describe interference concerns and obstacle negation when using rope systems						
i. Describe system safety check protocols						
j. Describe how to evaluate system components for compromised integrity						
k. Describe common personnel assignments and duties						
l. Describe common and critical operational commands						
m. Determine incident needs						
n. Complete a system safety check						
o. Evaluate system components for compromised integrity						
p. Select personnel						
q. Communicate with personnel						
r. Evaluate for potential problems						

21. Swim in dynamic water (Topic 2-20)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe the difference between offensive and safety (defensive) swimming postures						
b. Describe dynamic water swimming techniques (basic swim, ferry angle, eddy hopping, surfing)						
c. Describe how to avoid hydrology and hazards specific to swimmers						
d. Describe how to select water rescue PPE based on water conditions and hazards						
e. Describe personnel accountability methods						
22. Direct a rescue team during non-entry rescue operations (Topic 2-21)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe supervisory practices						
b. Describe emergency procedures						
c. Describe communications procedures						
d. Describe local protocols						
e. Describe safety checks						
f. Describe personnel accountability techniques						
g. Implement emergency procedures, communications procedures, incident management, personnel accountability, and resource management						
23. Terminate an incident (Topic 2-22)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe PPE characteristics						

b. Identify hazard and risk identification						
c. Describe equipment/vessel removal procedures						
d. Describe isolation techniques						
e. Identify statutory requirements						
f. Identify responsible parties						
g. Describe accountability system use						
h. Describe documentation and reporting methods						
i. Describe post-incident analysis techniques						
j. Select and use hazard-specific PPE						
k. Decontaminate PPE						
l. Use barrier protection techniques						
m. Implement data collection and record-keeping/reporting protocols						
n. Conduct post-incident analysis activities						

Application

24. Set up, demonstrate, and oversee drill ground operations and/or demonstrations	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Conduct an incident hazards assessment and isolate hazards						
b. Assess hazards to rescuers and victim(s)						
c. Size up a water rescue incident						

d. Support an operations- or technician-level incident						
e. Communicate using verbal commands						
f. Communicate using hand signals						
g. Communicate using whistle blasts						
h. Communicate using radios						
i. Inspect PPE						
j. Don, doff, and use PPE						
k. Use water rescue equipment						
l. Operate a PFD quick release buckle system						
m. Rig a watercraft						
n. Terminate an incident						

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 three years' full-time or six years' volunteer or part-time paid suppression/rescue experience in a recognized fire agency in California

Agency	Experience	Start Date	End Date

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

Position

State Fire Training confirms that there are no position requirements for instructor registration.

Updates

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

Number of enclosed updates: _____

Completion Timeframe

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

Initiation Date (see Initiation Date under Initiation Requirements): _____

Review and Approval

Candidate

Candidate (please print): _____

I, the undersigned, am the person applying to teach Water Rescue Awareness and Operations. 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 documents 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 to teach Water Rescue Awareness and Operations. 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 documents may be cause for rejection.

Signature: _____ Date: _____