

River and Flood Rescue Boat Technician

(NFPA 1670: Technical Search and Rescue Incidents
NFPA 1006: Technical Rescue Personnel)

Instructor Task Book (2019)



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 (2017)
- NFPA 1670: Standard on Operations and Training for Technical Search and Rescue Incidents (2017)

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Published by: State Fire Training, PO Box 944246, Sacramento, CA 94244-2460

Cover photo courtesy of State Fire Training.

Purpose

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

Assumptions

With the exception of 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 as long as 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 consistently work to complete all requirements documented in this instructor task book since its initiation date. Significant gaps between JPR sign offs may result in disqualification from teaching River and Flood Rescue Boat Technician as a registered instructor

or a candidate must initiate a new task book using State Fire Training'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 Instructor of River and Flood Rescue Boat Technician designated by the candidate's fire chief (or authorized designee). If no such evaluator is present within the organization, the fire chief (or authorized designee) shall designate an individual with more experience than the candidate and a demonstrated ability to execute the job performance requirements. For instructor task books that do not require fire chief initiation, academy instructors serve as or designate evaluators.

An instructor 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 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 River and Flood Rescue Boat Technician.

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 the following prerequisites.

1. Complete a National Association of State Boating Law Administrators (NASBLA) state-approved boater safety education examination approved by the California Department of Parks and Recreation Division of Boating and Waterways.

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

Education

That candidate has completed the following courses.

1. River and Flood Rescue Technician (SFT – current edition)
2. River and Flood Rescue Boat Technician (SFT – 2019 edition)

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 instructor 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: _____
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Organization: _____
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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.

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).	1 st Evaluation			2 nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
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).	1 st Evaluation			2 nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
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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).	1 st Evaluation			2 nd Evaluation		
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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

River and Flood Rescue Boat Technician Instructor

Managing a Water Rescue Incident

1. Describe the components of managing a water rescue incident.	1st Evaluation			2nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
a. Describe scope, practice and standards						
b. Describe rescue priorities						
c. Describe legal considerations and practices						
d. Describe relevant Incident Command System (ICS) components						
e. Describe FIRESCOPE ICS US&R 120-1 and 120-2 Operational System Description						
2. Describe dynamic hydrology as it relates to rivers, channels, and floods.	1st Evaluation			2nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
a. Describe the forces of dynamic water						
b. Describe how to determine current speed						
c. Describe how to determine cubic feet of water per second in a given river/channel						
d. Describe river orientation						
e. Identify river/channel features created by moving water speed						
f. Classify river speeds						

<p>g. Define the following terms as they relate to river hydrology speed:</p> <ul style="list-style-type: none"> Upstream, Downstream, River right, River left, Volume (cubic feet per second), Laminar flow, Helical flow, Eddies, Eddy line, Strainers, Sieves, Pillows, Low-head dam, Hole (smiling/closed), Hole (frowning/open), Hydraulic, Standing waves (haystacks), Aerated water, Current vector 						
<p>3. Evaluate hazards in moving water, identify safe current vectors for navigation, and locate safety zones.</p>	<p>1st Evaluation</p>			<p>2nd Evaluation</p>		
	<p>Course Code</p>	<p>Date</p>	<p>Initials</p>	<p>Course Code</p>	<p>Date</p>	<p>Initials</p>
<p>a. Identify and describe hazards associated with river and flood rescue</p>						
<p>b. Identify safe navigation current vectors</p>						
<p>c. Identify safe zones in dynamic water environments</p>						
<p>4. Identify navigation rules and regulations that govern rescue boat operation in navigable waters and their application to rescue boat operators in local waters.</p>	<p>1st Evaluation</p>			<p>2nd Evaluation</p>		
	<p>Course Code</p>	<p>Date</p>	<p>Initials</p>	<p>Course Code</p>	<p>Date</p>	<p>Initials</p>
<p>a. Describe navigation rules and regulations that govern rescue boat operation in navigable waters</p>						
<p>b. Determine rights of way for various types of rescue boats</p>						
<p>c. Describe directional aid requirements and their relation to rights of way</p>						

Rescue Boat Trailing

5. Demonstrate critical elements of trailering rescue boats.	1 st Evaluation			2 nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
a. Describe safety factors associated with trailering operations						
b. Describe safe backing of a trailered rescue boat						
c. Describe trailer positioning for launch/recovery						
d. Describe unimproved launches						
e. Identify trailer components						
f. Attach trailer to tow vehicle						
g. Identify proper water depth required to launch						
h. Land and trailer rescue boat post incident						

Rescue Boat Components and Nomenclature

6. Identify and describe components of a small rescue boat using appropriate nomenclature.	1 st Evaluation			2 nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
a. Identify type and construction of rescue boats						
b. Identify hull design						
c. Identify: bow, stern, starboard, port sides of rescue boat						
d. Identify rescue boat components						

e. Identify propulsion (motor) components						
f. Anchor and tie off						
g. Identify crew riding position (bowman/rescue swimmer) and responsibilities						
h. Identify boat operator riding position and responsibilities						
i. Explain GPS (operations level)						
7. Identify equipment carried on a rescue boat and describe its purpose.	1st Evaluation			2nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
a. Locate and identify paddles						
b. Identify AHJ rescue boat equipment						
c. Identify AHJ rescue equipment						
d. Locate, fill, and use hard and soft fuel bladders						
e. Locate, identify, and inspect scupper drains						

Rescue Boat Safety and Maintenance

8. Demonstrate awareness of basic safety considerations associated with rescue boat operations.	1st Evaluation			2nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
a. Identify different types of USCG-approved PFDs and their applications						
b. Describe self-survival considerations						
c. Describe agency-specific PPE and minimum PPE required to operate in a rescue boat						

d. Demonstrate and explain procedures for crew to self-rescue						
e. Demonstrate and explain procedures for rescuing a crew member						
f. Identify passenger positions						
9. Demonstrate critical pre- and post-operational checks.	1st Evaluation			2nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
a. Inspect a trailer						
b. Inspect a rescue boat						
c. Inspect fuel cell, fuel line, primer bulb, and connections						
d. Identify ignition and shut-off procedures, including dead man leash						
e. Identify proper gear/throttle position for starting cold/hot, including choke						
f. Locate, identify, and inspect spark plugs and wires						
g. Locate, identify, and inspect properly rigged bow and gunnel lines						
h. Demonstrate proper pre/post operation Inspection						
i. Mount outboard to center of transom						
j. Secure mounting screws to transom						
k. Tether outboard motor to transom						
l. Rig rescue boat for operation						
m. Identify properly stowed "Flip Lines"						

10. Identify motor maintenance requirements necessary for operational readiness.	1 st Evaluation			2 nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
a. Remove and replace outboard motor cowling						
b. Raise and lower outboard motor						
c. Locate and use outboard position locking mechanism						
d. Locate and use ignition, throttle, and gear controls						
e. Locate, identify, and inspect lower unit gear oil level						

Basic Rescue Boat Handling

11. Safely launch and recover a rescue boat.	1 st Evaluation			2 nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
a. Launch a rescue boat from a trailer						
b. Recover a rescue boat to a trailer						
c. Identify crew member responsibilities when launching in current						
d. Demonstrate correct position (attitude) for launching in current						
e. Safely land rescue boat on shore						
f. Safely land rescue boat in dynamic flow						
g. Safely land rescue boat on dock						
h. Safely land rescue boat on unimproved launch sites						

i. Describe anchoring in a dynamic water environment						
12. Operate a rescue boat.	1st Evaluation			2nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
a. Explain how to use “ferry angles” when paddling						
b. Recover a rescue boat using beaching technique						
c. Recover a rescue boat using flipping technique						
d. Explain crew procedures for getting onto capsized rescue boat and righting boat using flip lines						
e. Dewater and start a swamped motor						
f. Identify commands used for paddling: <ul style="list-style-type: none"> • Turn right • Turn left • Forward paddle • Back paddle • Pry stroke • Draw stroke • Stop 						
g. Explain procedure for starting engine after submersion						
13. Maneuver and dock a rescue boat.	1st Evaluation			2nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
a. Identify rescue boat docking safety considerations						
b. Properly manipulate motor when docking a rescue boat						

Advanced Rescue Boat Handling

14. Operate a rescue boat in dynamic water.	1 st Evaluation			2 nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
a. Move a stranded rescue boat to safety						
b. Define and demonstrate: <ul style="list-style-type: none"> • Planing • Plowing • Trolling • Proper attitude of boat in current 						
c. Make wide turns right and left						
d. Use “ferry angles” to move river right and left						
e. Hover in current						
f. Perform “peel turns” right and left						
g. Perform “J-turns” right and left						
h. Perform tight “figure 8 turns”						
15. Retrieve a person from dynamic water using a rescue boat.	1 st Evaluation			2 nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
a. Retrieve a person from the bowman position off the port side of rescue boat						
b. Retrieve a person from the bowman position off the starboard side of a rescue boat						
c. Retrieve a person from the boat operator position off the port side of a rescue boat						

d. Retrieve a person from the boat operator position off the starboard side of a rescue boat						
e. Retrieve a person from the rescue swimmer position off the port side of a rescue boat						
f. Retrieve a person from the rescue swimmer position off the starboard side of a rescue boat						
16. Retrieve a person from a fixed object using a rescue boat.	1st Evaluation			2nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
a. Retrieve a person from a fixed object from the bowman position						
b. Retrieve a person from a fixed object from the boat operator position						
c. Retrieve a person from a fixed object from the rescue swimmer position						
17. Retrieve a person using throw bag from a rescue boat.	1st Evaluation			2nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
a. Retrieve a person using throw bag from the bowman position						
b. Retrieve a person using throw bag from the boat operator position						
c. Retrieve a person using throw bag from the rescue swimmer position						
18. Deploy a rescue swimmer from a rescue boat	1st Evaluation			2nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
a. Deploy a tethered rescue swimmer from the bowman position						

b. Deploy a tethered rescue swimmer from the boat operator position						
c. Deploy a tethered rescue swimmer from the rescue swimmer position						
d. Deploy a free-swimming rescue swimmer from the bowman position						
e. Deploy a free-swimming rescue swimmer from the boat operator position						
f. Deploy a free-swimming rescue swimmer from the rescue swimmer position						
19. Tow rescue boats.	1st Evaluation			2nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
a. Describe safety considerations for towing other rescue boats						
b. Conduct a stern tow						
c. Conduct an alongside tow						
20. Describe how to manage and perform a victim search.	1st Evaluation			2nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
a. Identify required resources for performing a victim search						
b. Describe how GPS units and map applications can assist with victim searches						
c. Describe search fundamentals: <ul style="list-style-type: none"> • Time last seen (TLS) • Place last seen (PLS) • Probability of detection (POD) 						
d. Describe witness management						

e. Identify different tools used for searches						
f. Describe three general categories of water search operations: <ul style="list-style-type: none"> • Aquatic wide area search • River search • Flood basin search 						
g. Describe and perform a reconnaissance, hasty (rapid), primary, and secondary search						
h. Coordinate multi-boat rescue activities						
i. Communicate actions to a shore-based IC						
j. Describe victim transfer to shore-based responders						

Communications and Navigation

21. Communicate with other first responders and USCG.	1 st Evaluation			2 nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
a. Identify hand signals used for hazards and safe path of travel						
b. Identify various means of marine communication						
c. Describe applicable marine radio options						
d. Describe USCG-specific communication procedures (PAN-PAN, Sécurité, Mayday)						
22. Describe navigational aids and devices.	1 st Evaluation			2 nd Evaluation		
	Course Code	Date	Initials	Course Code	Date	Initials
a. Locate and use night running lights						

b. Identify various navigation devices						
c. Describe waterway navigation aids						

Completion Requirements

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

Experience

The candidate meets the following experience requirements.

1. One of the following:
 - Held the rank of fire fighter and/or performed rescue duties within a recognized fire agency in California for a minimum of three years
 - Worked in a volunteer position or paid call fire fighter within a recognized fire agency in California for a minimum of six years

Agency	Experience	Start Date	End Date

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

The candidate has consistently worked to complete all requirements documented in this instructor task book since its initiation date. The candidate acknowledges that significant gaps between JPR sign offs may result in disqualification from teaching River and Flood Rescue Boat Technician as a registered instructor or the candidate must initiate a new task book using State Fire Training'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 River and Flood Rescue Boat Technician. 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 River and Flood Rescue Boat Technician. 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: _____