



**DEPARTMENT OF FORESTRY AND FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL
STATE FIRE TRAINING**

P.O. Box 944246
SACRAMENTO, CA 94244-2460
(916) 902-9738
Website: www.fire.ca.gov



Date: December 2, 2022

To: Statewide Training and Education Advisory Committee
State Board of Fire Services

From: Brandon Erickson, National Accreditation & Certification Exam Manager

SUBJECT/AGENDA ACTION ITEM:
Fire Fighter 1B Cognitive Exam

Recommended Actions:
Information Only

Background Information:

State Fire Training (SFT) implemented the Fire Fighter 1 (2019) HazMat Exams in 2020. The Fire Fighter 1B: HazMat First Responder Awareness exam is composed of ten (10) questions, and the Fire Fighter 1B: HazMat First Responder Operations exam is composed of fifteen (15) questions with a total test time of 30 minutes.

Analysis/Summary of Issue:

SFT has consulted test development and validation specialists from California State University Sacramento (CSUS). These consultants have evaluated the Fire Fighter 1 and Fire Fighter 2 (2019) Certification Exams and provided recommendations on how to improve the performance and reliability. The primary recommendation for the Fire Fighter 1B cognitive exams was to improve the reliability of these exams by increasing the number of questions to 25 questions each to allow candidates to sufficiently demonstrate knowledge of the subject.

Beginning August 1, 2021, SFT initiated an optional pilot program for Fire Fighter 1B: HazMat First Responder Awareness and the Fire Fighter 1B: HazMat First Responder Operations Certification Exams with an increased number of questions and time for completion to determine whether the test reliability of these exams has improved.

Collecting data to evaluate the pilot program has been slow, but the results are positive. The average test score and overall reliability have improved, most notably with the HazMat FRA

exam where the reliability of the exam doubled. However, the most noticeable change has been the reduction of retest attempts. Most students are passing both exams on the 1st attempt. To date, nineteen academies have elected to utilize the optional pilot program over the last year and a half. After polling several of these participating academies, the feedback has been very positive, and the results regarding test scores and reduced retest attempts have mirrored SFT's findings.

SFT will be transitioning to a 25-question FF1B: HazMat FRA cognitive exam and a 25-question FF1B: HazMat FRO cognitive exam beginning July 1, 2023. This change will increase the total test items for FF1B from 25 to 50 and will require an additional thirty minutes of exam time.

Potential Agency Impacts:

Accredited Regional Training Programs (ARTP) and Accredited Local Academies (ALA) will need to plan on scheduling 60 minutes for Fire Fighter 1B cognitive exams.