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Date: October 14, 2022

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

From: Chris Fowler, Deputy State Fire Marshal III, Supervisor

SUBJECT/AGENDA ACTION ITEM:

Home Ignition Zone / Defensible Space Inspector Curriculum

Recommended Actions:

Motion to Approve

Background Information:

This is the second reading of the curriculum, with recommended edits based on student and instructor feedback from pilot courses. Those classes were hosted in Truckee and Orinda Moraga. A summary of the changes is listed below.

AB38 established requirements for property transfer inspections in areas designated Very High and High Fire Hazard Severity Zones through Civil Code Section 1102.9. Further, catastrophic fire losses in recent years have increased the demand for Defensible Space and Home Ignition Zone inspections. This demand has been highlighted in numerous reports and publications, to include the 2021 Legislative Analyst's Office report <https://lao.ca.gov/Publications/Report/4457>.

To meet the demand, CAL FIRE and local government have increased the number of personnel assigned to HIZ/DS inspections and have created new positions dedicated to inspections.

Currently, inspectors are trained through on the job training and ad hoc courses which vary from agency to agency. It is of critical importance that inspections are repeatable and conducted in a standardized manner to increase their value and avoid inconsistency. In the State Responsibility Area (SRA) within a fire district, this is of even greater importance

as inspections may be conducted by CAL FIRE and the fire district at different times. Any ambiguity or conflicting direction often results in homeowner inaction.

Analysis/Summary of Issue:

Instructor and student curriculum recommendations were collected until August 31, 2022. The following edits have been made.

Prerequisites:

The ICS online training requirements have been removed, as they are not required for successful course completion. Defensible space inspectors are conducting pre-fire inspections, however that may not be employed by a fire department/agency. The ICS training requirements will be the responsibility of the employer.

Instructors:

New instructors must meet the requirements for SFT Registered Instructor and are required to either successfully complete the new course or apply through the PACE 2 process:

- SFT Registered Instructor **and**
- Successful course completion **or**
- PACE 2 **and**
- Provide a letter signed by their Fire Chief or authorized designee that verifies qualification with Home Ignition Zone / Defensible Space inspection responsibilities in one of the following positions:
 - Defensible Space Inspector with a minimum of three years' experience **or a**
 - Fire Inspector with a minimum of three years' experience **or a**
 - Fire Marshal with a minimum of three years' experience **or a**
 - Battalion Chief or higher



HOME IGNITION ZONE / DEFENSIBLE SPACE INSPECTOR (2022) Implementation Plan

Issued: **XXXX** 2022

OVERVIEW

AB38 established requirements for property transfer inspections in areas designated Very High and High Fire Hazard Severity Zones through Civil Code Section 1102.9. Further, catastrophic fire losses in recent years have increased the demand for Defensible Space and Home Ignition Zone inspections. This demand has been highlighted in numerous reports and publications, to include the 2021 Legislative Analyst’s Office report.

<https://lao.ca.gov/Publications/Report/4457>.

This course provides the skills and knowledge needed to perform in the role of a Home Ignition Zone / Defensible Space Inspector (HIZ/DSI) including roles and responsibilities, wildfire in the natural and built environment, codes and regulations, defensible space, home hardening, and the inspection process. SFT will post the course materials on the SFT website.

IMPLEMENTATION

New Curriculum	Hours
Home Ignition Zone / Defensible Space Inspector (2022)	4 Hours

Home Ignition Zone / Defensible Space Inspector (2022) Curriculum.....December 1, 2022

INSTRUCTOR REQUIREMENTS

Instructor Registration.....December 1, 2022

New Instructors

New instructors must meet the requirements for SFT Registered Instructor and are required to either successfully complete the new course or apply through the PACE 2 process:

- SFT Registered Instructor **and**
- Successful course completion **or**
- PACE 2 **and**
- Provide a letter signed by their Fire Chief or authorized designee that verifies qualification with Home Ignition Zone / Defensible Space inspection responsibilities in one of the following positions:
 - Defensible Space Inspector with a minimum of three years’ experience or a
 - Fire Inspector with a minimum of three years’ experience or a
 - Fire Marshal with a minimum of three years’ experience or a
 - Battalion Chief or higher.

POTENTIAL AGENCY IMPACTS

Fire agencies desiring to use the Home Ignition Zone / Defensible Space Inspector (2022) curriculum as a requirement for their recruitment/promotion activities need to review the curriculum requirements and ensure all agency training needs are met. After review, fire agencies should update job specifications and recruitment documentation to reflect the new course requirements.

Accredited Regional Training Programs (ARTP), Accredited Local Academies (ALA), community colleges, and all other local delivery venues should review the curriculum and seek approval from their curriculum committee/program sponsor, as appropriate. ARTPs should review the new Home Ignition Zone / Defensible Space Inspector (2022) curriculum and discuss potential impacts with their advisory committees.



Home Ignition Zone / Defensible Space Inspector

Course Plan

Course Details

Description: This course provides the skills and knowledge needed to perform in the role of a Home Ignition Zone / Defensible Space Inspector (HIZ/DSI) including roles and responsibilities, wildfire in the natural and built environment, codes and regulations, defensible space, home hardening, and the inspection process.

Designed For: Anyone preparing to become a Home Ignition Zone / Defensible Space Inspector (HIZ/DSI)

Authority: Public Resources Codes 714, 4119, and 4291, and 14 CCR § 1299

Prerequisites: None

Standard: Attend and participate in all course sections
Successful completion of all skills identified on the Training Record.

Hours (Total): 24 hours
(16 hrs. lecture / 8 hrs. application and testing)

Maximum Class Size: 50

Instructor Level: SFT Registered Instructor

Instructor/Student Ratio: 1:50 (lecture)
1:25 (field work/inspections)

Restrictions: None

SFT Designation: FSTEP

* Courses taught by outside agencies often change names and numbers. Students should enroll in the most current version of any course, even if the course name or number has change.

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Required Resources

Instructor Resources

To teach this course, instructors need:

- Access to all statutes, codes, and ordinances referenced in the course plan
- FIREScope ICS-420-1, Field Operations Guide (current edition)
 - <https://firescope.caloes.ca.gov/fog-manual>
- NWCG PMS-461 Incident Response Pocket Guide (current edition)
 - <https://www.nwcg.gov/sites/default/files/publications/pms461.pdf>

Online Instructor Resources

The following instructor resources are available online at

<https://osfm.fire.ca.gov/divisions/state-fire-training/fstep-curriculum>

- Wildfire Case Studies

Student Resources

To participate in this course, students need:

- FIREScope ICS-420-1, Field Operations Guide (current edition)
 - <https://firescope.caloes.ca.gov/fog-manual>
- NWCG PMS-461 Incident Response Pocket Guide (current edition)
 - <https://www.nwcg.gov/sites/default/files/publications/pms461.pdf>
- Smart phone or tablet
- Handheld portable radio
- Handheld GPS Unit
- Laptop computer (optional)

Facilities, Equipment, and Personnel

Facilities

The following facilities are required to deliver this course:

- Standard learning environment or facility, which may include:
 - Writing board or paper easel chart
 - Markers, erasers
 - Amplification devices
 - Projector and screen
 - Laptop or tablet with presentation or other viewing software
 - Internet access with appropriate broadband capabilities
- HIZ/DS inspection and home hardening assessment properties with the required facilities, structures, work areas, materials, props, tools, and equipment of adequate size, type, and quantity to fully and safely support the cognitive and psychomotor training required to deliver the HIZ/DS Inspection curriculum.

Time Table

Segment	Lecture	Application	Unit Total
Unit 1: Introduction			
Topic 1-1: Orientation and Administration	0.5	0.5	
Unit 1 Totals	0.5	0.5	1.0
Unit 2: Roles and Responsibilities			
Topic 2-1: Position Description	0.5	0.0	
Topic 2-2: Roles and Responsibilities	1.0	0.0	
Unit 2 Totals	1.5	0.0	1.5
Unit 3: Wildfire in the Natural and Built Environment			
Topic 3-1: Wildfire Development	1.0	0.0	
Topic 3-2: Fire Mechanics and Behavior	1.0	0.0	
Unit 3 Totals	2.0	0.0	2.0
Unit 4: Codes and Regulations			
Topic 4-1: Responsibility Areas	0.5	0.0	
Topic 4-2: Statutes, Regulations, and Ordinances	0.5	0.0	
Topic 4-3: Fire Hazard Severity Zones	0.5	0.0	
Unit 4 Totals	1.5	0.0	1.5
Unit 5: Research, Case Studies, and Data Analysis			
Topic 5-1: Research, Case Studies, and Data Analysis	2.5	0.0	
Unit 5 Totals	2.5	0.0	2.5
Unit 6: Defensible Space			
Topic 6-1: Defensible Space Standards	2.0	0.0	
Unit 6 Totals	2.0	0.0	2.0
Unit 7: Home Hardening			
Topic 7-1: Home Components and Vulnerabilities	0.5	0.5	
Topic 7-2: Ember Resistant Materials and Construction Methods	0.5	0.0	
Topic 7-3: Retrofitting Existing Homes	1.0	0.5	
Unit 7 Totals	2.0	1.0	3.0
Unit 8: Inspection Process			
Topic 8-1: Preparing for an Inspection	0.5	0.0	
Topic 8-2: Safety Considerations	0.75	0.0	
Topic 8-3: Radio Communications	0.75	0.25	
Topic 8-4: Data Collection Requirements	0.5	1.0	
Topic 8-5: Conducting an Inspection	0.5	4.0	
Topic 8-6: Other Prevention Measures	0.5	0.0	
Topic 8-7: Validating Inspection Data	0.5	0.25	
Unit 8 Totals	4.0	5.5	9.5

Formative Assessments			
Determined by AHJ or educational institution	0.0	0.0	0.0
Summative Assessment			
Determined by AHJ or educational institution	0.0	1.0	1.0
Course Totals	16.0	8.0	24.0

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.

The following is a breakdown of what a program might look like if there were fewer students. These estimates may need to be adjusted based on student abilities.

- 40 – 50 Students = 260 hours
- 30 – 40 Students = 180 hours
- 20 – 30 Students = 120 hours
- 1 – 20 Students = 60 hours

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
 - Understand what wildfire is and why it can be so destructive
 - Understand the roles and responsibilities of a HIZ/DS Inspector
 - Understand what HIZ is, why it is important, and how to maintain it
 - Understand what defensible space is, why it is important, and how to achieve it
 - Understand the purpose and process of an HIZ/DS inspection
 - Understand hazards inherent to HIZ/DS and ways to mitigate those hazards
 - Understand home hardening/retrofitting, why it is important, and how to achieve it
 - Understand how to work and communicate effectively with the public to achieve HIZ/DS objectives
 - Calendar of events
 - Course requirements
 - Student evaluation process
 - Assignments
 - Activities
 - Required student resources
 - Class participation requirements
 - Sign course roster each day
 - Attend all hours of instruction
 - Participate in all activities

- Complete a class evaluation
- Complete summative test with 80%

Discussion Questions

1. Determined by instructor

Application

1. Have students complete all required registration forms.
2. Pair students in teams of two for student introduction including name, agency, and experience with defensible space, home hardening, and wildfire prevention.

Instructor Notes

1. Introduce yourself including your name, agency, and experience with defensible space, home hardening, and wildfire prevention.

Unit 2: Roles and Responsibilities

Topic 2-1: Position Description

Terminal Learning Objective

At the end of this topic a student will be able to describe the purpose of an HIZ/DS inspection and home hardening assessment.

Enabling Learning Objectives

1. Describe the purpose of an HIZ/DS inspection
 - Inspect the 100-foot area immediately surrounding a building or structure for compliance with defensible space statutes, regulations, and local ordinances
 - Educate property owners and tenants
 - What defensible space is
 - Its importance in home survivability during a wildfire
 - The need to adopt a coupled approach, addressing vegetation management and home vulnerability issue
2. Describe the purpose of a home hardening assessment
 - Confirm presence of home hardening measures
 - Provide guidance on home hardening/retrofitting best practices to reduce loss from wildfire

Discussion Questions

1. What is the purpose of an HIZ/DS inspection?
2. What is the purpose of a home hardening assessment?
3. Why is an HIZ/DS inspection and home hardening assessment important?

Application

1. Determined by instructor

Instructor Note

1. None

Topic 2-2: Roles and Responsibilities

Terminal Learning Objective

At the end of this topic a student will be able to identify the roles and responsibilities of an HIZ/DS Inspector.

Enabling Learning Objectives

1. Describe the roles and responsibilities of an HIZ/DS Inspector
 - Work as member of an HIZ/DS inspection team
 - Maintain communication with supervisor and HIZ/DS inspection team member(s)
 - Inspect area around structures for proper defensible space clearance
 - Inspect structures for proper home hardening measures
 - Complete required forms and documentation according to specifications
 - Communicate with property owner or tenant including
 - How to harden a building or structure from exposure to a wildfire
 - How to reduce wildfire hazards and risks on the property
 - Other fire prevention subjects as requested and appropriate
 - Report information to supervisor using established procedures
 - Resupply expended materials prior to the next day's inspection work
 - Operate within agency policies, procedures, and expectations
2. Describe how to effectively work with stakeholders and the public
 - Respect private property and tribal land
 - Provide good customer service
 - Maintain professional appearance and conduct
 - Assume the public is always watching
 - Speak to property owner / tenant using plain language that is easy to understand
 - Do not use fire jargon or technical terms
 - Answer questions on site if possible or follow up with an answer as soon as possible
3. Describe the inspector's job when working with stakeholders and the public
 - To demonstrate the benefits and value of creating defensible space and home hardening/retrofitting even though it takes time, effort, and money

Discussion Questions

1. What are some of the responsibilities of an HIZ/DS Inspector?
2. What are some ways to provide good customer service?

Application

1. Determined by instructor

Instructor Note

1. Consider an activity where the students role play handling different challenging customers and situations.

Unit 3: Wildfire in the Natural and Built Environment

Topic 3-1: Wildfire Development

Terminal Learning Objective

At the end of this topic a student will be able to describe conditions and historical decisions that led to wildfire disasters.

Enabling Learning Objectives

1. Describe wildfire and the traditional use of fire
 - A natural occurrence
 - A human occurrence
 - Native American tribal/cultural use
 - Wildfire disasters are not unique to one geographic area and occur statewide
2. Describe wildfire exclusion in California
 - Federal government policy
 - CAL FIRE policy
 - Led to significant changes in fuel continuity, density, and composition
3. Describe the development of wildland areas
 - Increasing number of structures in rural areas
 - Increasing Wildland Urban Interface vs. Intermix
 - Cohen's Disaster Sequence
 - Severe wildfire conditions
 - Extreme fire behavior
 - Residential fires
 - Fire protection resources
 - Fire protection effectiveness
 - WUI fire disaster
 - Fuel-to-structure ignition
 - Structure-to-structure ignition
4. Identify and discuss historical California wildfire disasters

Discussion Questions

1. What is wildfire?
2. What is the significance of wildfire exclusion?
3. What is the difference between the Wildland Urban Interface and Intermix?
4. What are some historically significant California WUI wildfire disasters and why are they significant?

Application

1. Determined by instructor

Instructor Note

1. ELO3: Use [The Wildland-Urban Interface Fire Problem](#) by Jack Cohen for content.

Topic 3-2: Fire Mechanics and Behavior

Terminal Learning Objective

At the end of this topic a student will be able to describe fire behavior to mitigate its effects on structures.

Enabling Learning Objectives

1. Describe factors which contribute to the spread of wildfire
 - Topography
 - Weather
 - Fuel
2. Describe heat transfer methods
 - Radiation
 - Conduction
 - Convection
3. Describe how structures ignite from exposure to wildfire
 - Embers (fire brands)
 - Direct flame contact
 - Radiant heat

Discussion Questions

1. What factors contribute to the spread of wildfire?
2. How do structures ignite from exposure to a wildfire?

Application

1. Determined by instructor

Instructor Note

1. None

Unit 4: Codes and Regulations

Topic 4-1: Responsibility Areas

Terminal Learning Objective

At the end of this topic a student will be able to describe a responsibility area and its importance.

Enabling Learning Objectives

1. Describe “responsibility area”
 - Public Resources Code (PRC) 4125-4137
 - Federal Responsibility Area (FRA)
 - State Responsibility Area (SRA) – PRC 4102
 - Local Responsibility Area (LRA)
2. Describe why SRA and LRA are important
 - Statutes/regulations/ordinance requirements for defensible space, building standards and hazard disclosure (PRC 4136)
3. Describe Fire Districts’ authority with SRA land
 - Structure fires
 - Vegetation fires

Discussion Questions

1. What is the SRA?
2. Why is the difference between SRA and LRA important?

Application

1. Determined by instructor

Instructor Notes

1. None

Topic 4-2: Statutes, Regulations, and Ordinances

Terminal Learning Objective

At the end of this topic a student will be able to understand the state and local statutes, regulations, and ordinances that impact HIZ/DS inspections and home hardening standards.

Enabling Learning Objectives

1. Describe state statutes and regulations
 - Public Resource Code (PRC) for SRA
 - Government Code (GC) for LRA
 - Health and Safety Code
 - California Code of Regulations (CCR) Title 14, Natural Resources
 - CCR Title 24, Building Standards Code (California Building and Fire Code)
2. Describe local agency having jurisdiction (AHJ) ordinances
 - Local amendments to the California Fire Code
 - Local HIZ/DS ordinances

Discussion Questions

1. Where do local amendments and ordinances apply?

Application

1. Determined by instructor

Instructor Note

1. Acknowledge that codes and regulations are dynamic and updated on regular cycles or through legislation.

Topic 4-3: Fire Hazard Severity Zones

Terminal Learning Objective

At the end of this topic a student will be able to describe a fire hazard severity zone (FHSZ) and its importance.

Enabling Learning Objectives

1. Describe a fire hazard severity zone
 - Public Resource Code (PRC) 4201-4204
 - Government Code (GC) 51175-51189
2. Describe how to determine a fire hazard severity zone
3. Describe the importance of fire hazard safety zone
 - FHSZs in the State Responsibility Area (SRA)
 - FHSZs in the Local Responsibility Area (LRA)
4. Describe the difference between hazard and risk
 - A hazard is something that has the potential to cause harm
 - A risk is the likelihood of harm taking place, based on exposure to a hazard

Discussion Questions

1. What is a fire hazard severity zone?
2. How many fire hazard severity zone classifications are there in the SRA?
3. What are the names of the fire hazard severity zones?
4. How many fire hazard severity zones are there in the LRA?
5. What are the names of the fire hazard severity zones in the LRA?

Application

1. Determined by instructor

Instructor Note

1. None

Unit 5: Research, Case Studies, and Data Analysis

Topic 5-1: Research, Case Studies, and Data Analysis

Terminal Learning Objective

At the end of this topic a student will be able to discuss relevant wildfire and structure loss research and case studies.

Enabling Learning Objectives

1. Identify key components of US Forest Service wildfire research
2. Identify key components of National Institute of Standards and Technology (NIST) research
3. Identify key components of Insurance Institute for Business and Home Safety (IBHS) research
4. Identify factors common to wildfire loss in the Camp, Tubbs, and Thomas fires
5. Identify strategies that reduce wildfire loss
 - Circle Oaks neighborhood in Napa during the Atlas Fire

Discussion Questions

1. Why is housing density important?
2. What significant research has been conducted by IBHS and NIST?
3. Why are the Camp and Tubbs fires significant?

Application

1. Determined by instructor

Instructor Note

1. None

Unit 6: Defensible Space

Topic 6-1: Defensible Space Standards

Terminal Learning Objective

At the end of this topic a student will be able to apply HIZ/DS standards.

Enabling Learning Objectives

1. Describe best practices
 - Placement of combustible mulch (e.g., wood, bark, recycled rubber)
2. Describe vegetations and landscaping standards
 - Locally adopted plant lists
 - Placement of plants
 - Horizontal and vertical spacing
 - Irrigated vs. non-irrigated plants
 - Maintenance of vegetation
 - Decadent/dead material

Discussion Questions

1. Is there a “fire safe” plant?
2. Why are HIZ/DS standards important?

Application

1. Determined by instructor

Instructor Note

1. None

Unit 7: Home Hardening

Topic 7-1: Home Components and Vulnerabilities

Terminal Learning Objective

At the end of this topic a student will be able to identify exterior construction features and how they contribute to wildfire loss.

Enabling Learning Objectives

1. Identify exterior home components (anticipated/possible exposures), their function, and their vulnerability to wildfire
 - Roof
 - Skylights
 - Gutters
 - Eaves
 - Vents
 - Siding
 - Windows
 - Doors
 - Decks
2. Identify combustible features of:
 - Fences
 - Wood piles
 - Propane tanks
 - Out buildings
 - Adjacent structures
 - Boats, RVs, vehicles
 - Other

Discussion Questions

1. What construction features of a home contribute to wildfire loss?
2. What items near a home can expose it to fire?

Application

1. Determined by instructor

Instructor Notes

1. None

Topic 7-2: Ember Resistant Materials and Construction Methods

Terminal Learning Objective

At the end of this topic a student, given California Building Code (CBC) Chapter 7A, will be able to apply Chapter 7A (Materials and Construction Methods for Exterior Wildfire Exposure) of the California Building Code (CBC) to home hardening assessments.

Enabling Learning Objectives

1. Identify the purpose of CBC Chapter 7A?
 - To establish minimum standards for the protection of life and property by increasing the ability of a building located in any FHSZ within SRA or Wildland-Urban Interface Fire Area to resist the intrusion of flames or burning embers projected by a vegetation fire and combustibles to a systematic reduction in conflagration losses
2. Identify the Chapter 7A standing committee
 - OSFM Wildfire Protection Building Construction standing committee
 - Created in 2007
 - Evaluates current wildfire protection building construction provisions within the California Building Standards Code
 - Comprised of representatives from state and local code enforcement agencies, academia, industry, fire testing laboratories, and other subject matter experts
3. Identify structures, areas, and zones covered by Chapter 7A
 - Structures built after July 1, 2008
 - All FHSZs in the SRA
 - Very High (VH) FHSZs in the LRA
 - Land designated as Wildland Urban Interface-Fire Area by cities and other local agencies
4. Identify structures, areas, and zones covered by Chapter 7A
 - Structures built before July 1, 2008
 - Structures built after July 1, 2008, outside the SRA, VHFHSZs in the LRA, or land designated as Wildland Interface Fire Areas
 - Exceptions – local ordinances that include significant remodel language
6. Identify purpose of and how to access the OSFM Building Materials Listing (BML) Program

Discussion Questions

1. Why is California Building Code Chapter 7A significant?
2. What zones and structures are covered by Chapter 7A?
3. What zones and structures are not covered by Chapter 7A?

Application

1. Determined by instructor

Instructor Notes

1. None

Topic 7-3: Retrofitting Existing Homes

Terminal Learning Objective

At the end of this topic a student will be able to recommend home hardening/retrofitting strategies to a property owner or tenant to reduce a structure's wildfire risk.

Enabling Learning Objectives

1. Identify retrofitting priorities
 - Amount of defensible space
 - Proximity to other structures
 - Surrounding fuel type and vegetation
 - Topography
2. Describe hardening/retrofitting strategies
 - Ember resistant vents
 - Class A roof assembly
 - Double-paned tempered windows
 - Boxed eaves
 - Non-combustive siding
3. Understand cost impacts of hardening and retrofitting strategies

Discussion Questions

1. Why is hardening/retrofitting a home important?
2. What are some things a property owner or tenant can do to harden/retrofit a home?

Application

1. Determined by instructor

Instructor Notes

1. ELO3: The Inspector isn't providing estimates but should be sensitive to financial impact when making recommendations.

Unit 8: Inspection Process

Topic 8-1: Preparing for an Inspection

Terminal Learning Objective

At the end of this topic a student will be able to describe how to prepare for an HIZ/DS inspection.

Enabling Learning Objectives

1. Describe how to prepare for an HIZ/DS inspection
 - Know agency policies and procedures
 - Know applicable regulations and local ordinances
 - Be familiar with the inspection area
 - Be familiar with the inspection timing cycle
 - Know how to use data collection systems
 - Hard copy
 - Electronic
 - Ensure electronic data collection system is set up and working on mobile device
 - Gather LE100a (or applicable AHJ) forms and other educational materials
 - Gather all necessary equipment and supplies

Discussion Questions

1. What items does an HIZ/DS Inspector need to prepare for an HIZ/DS inspection?
2. Why is it important to be familiar with the area you will be inspecting?

Application

1. Determined by instructor

Instructor Notes

1. None

Topic 8-2: Safety Considerations

Terminal Learning Objective

At the end of this topic a student will be able to describe preventative measures to increase inspector safety during an HIZ/DS inspection.

Enabling Learning Objectives

1. Describe inspector safety considerations
 - Wear AHJ-approved PPE
 - Ensure adequate rest
 - Maintain personal fitness
 - Always maintain situational awareness
 - Work in pairs whenever possible
 - Make sure someone knows where you are working
 - Always maintain communication with supervisor, team, dispatch, etc.
 - Know your location
 - Know hazards of the inspection area
 - Acclimate to hot and moderate conditions before assignment
 - Stay hydrated – 2 to 3 bottles of water to 1 sports drink

Discussion Questions

1. Why is it important for an HIZ/DS Inspector to acclimate to the environment prior to a work assignment?
2. Why is it important to always know your location?

Application

1. Determined by instructor

Instructor Notes

1. None

Topic 8-3: Radio Communications

Terminal Learning Objective

At the end of this topic a student, given a radio, operational procedures, and guidelines, will be able to maintain communications through a variety of methods for accountability and inspector safety.

Enabling Learning Objectives

1. Describe importance of radio operations and communications
 - Radio communications are a critical safety component
 - Ensure you have a properly functioning and programmed radio
 - Ensure you know how to use the radio assigned to you
 - Use radio etiquette (radio 101, clear text)
2. Identify different ways to communicate
 - Mobile or portable radio
 - Cell phone
 - Land line
3. Describe causes of radio interference and signal loss
 - Terrain and environmental factors
 - Mechanical and electrical interference
 - Weather impacts
 - Line-of-site and out-of-range transmissions

Discussion Questions

1. Why is communication important?
2. Why is it important for an HIZ/DS Inspector to have a properly functioning and programmed radio?
3. What factors can affect radio operations?

Application

1. Determined by instructor

Instructor Notes

1. Consider a hands-on activity to increase student familiarity with using radios.

Topic 8-4: Data Collection Requirements

Terminal Learning Objective

At the end of this topic a student will be able to describe how to collect complete and comprehensive data during an HIZ/DS inspection.

Enabling Learning Objectives

1. Identify the authority that outlines data collection requirements
 - PRC 4137 in SRA and contract counties
2. Identify required data to document during an HIZ/DS inspection
 - Inspector name and position
 - Inspection date
 - Location
 - Type of structure
 - Inspection status
 - In compliance
 - Violations observed
 - Reinspection dates
 - Citations issued
 - Materials or recommendations provided
 - Picture(s)
3. Identify other information to document during a HIZ/DS inspection
 - Information
 - Exterior construction components and materials
 - Emergency response information
 - Water sources
 - Hazards
 - Propane tanks
 - Access/egress
 - Signage
 - Other nearby structures
 - Other (no structure, points of interest, etc.)
 - Purpose
 - To help inform and improve statutes and regulations
 - To make available for emergency response
4. Identify how to document data
 - Determined by AHJ

Discussion Questions

1. How does your agency collect and document inspection data?
2. What type of data should an HIZ/DS Inspector collect during an inspection?

Application

1. Determined by instructor

Instructor Notes

1. None

Topic 8-5: Conducting an Inspection

Terminal Learning Objective

At the end of this topic a student will be able to describe how to conduct an HIZ/DS inspection.

Enabling Learning Objectives

1. Describe the field inspection process
 - Arrive at assigned inspection area and check in with supervisor
 - HIZ/DS Inspectors routinely work in pairs for safety
 - Contact property owner/tenant
 - Introduce yourself
 - Identify reason you are there
 - Communicate using plain language that is easy to understand without fire jargon or technical terms
 - Always maintain professional behavior
 - Inspect all properties with a building or structure
 - Conduct a systematic inspection
 - To confirm defensible space compliance and/or violations
 - To assess presence of home hardening or retrofitting needs
 - Discuss defensible space violations with property owner/tenant and identify how to bring property into compliance
 - Discuss home hardening/retrofitting best management practices with property owner/tenant to reduce risk to the home
 - Document HIZ/DS inspection, home assessment, and other items as needed
 - Immediately report any condition that may cause danger and/or be a safety hazard to personnel
 - Immediately document and report any accident, injury, or illness through the chain of command
 - Report progress and accountability as required by supervisor
 - Stay within assigned inspection area unless otherwise instructed (no freelancing)
 - Check in with supervisor upon completing inspections for the day

Discussion Questions

1. How do you conduct an HIZ/DS inspection?
2. Who does the HIZ/DS Inspector check in and out with when deployed to the field?

Application

1. Given properties with HIZ/DS or home hardening needs, have students assess structures for HIZ/DS compliance and home hardening best management practices.
2. Given access to a field data collection app, have students download and practice using the app.

Instructor Notes

1. Student can work individually or in pairs or small groups to complete the inspection assignment.
2. Arrange fieldwork properties when scheduling the course.

Topic 8-6: Other Prevention Measures

Terminal Learning Objective

At the end of this topic a student will be able to describe fire prevention mitigation measures to property owners or tenants.

Enabling Learning Objectives

1. Describe the components of a “Plan, Know Act” mindset
 - Plan
 - Defensible space
 - Home hardening
 - Fire-resistant landscaping
 - Water sources
 - Know
 - Wildfire action plan
 - Communication plan
 - Prepare your family
 - Go bag
 - Insurance
 - Act
 - Evacuation
 - What to do when trapped
 - What does a safe zone look like?
 - Animal evacuation
2. Identify additional prevention measures
 - Human activity causes more than 95% of all wildfires in California
 - Gender reveal parties
 - Fireworks
 - PG&E
 - Mowing safety
 - Debris burning safety

Discussion Questions

1. What is the “Plan” component of the Plan, Know, Act campaign?
2. What are some items to include in a Go Bag?
3. What are some things a person can do if trapped by a wildfire?

Application

1. Determined by instructor

Instructor Notes

1. ELO1: Use www.readyforwildfire.org as a resource.

Topic 8-7: Validating Inspection Data

Terminal Learning Objective

At the end of this topic a student will be able to describe how to validate field collected data, verify accuracy, and correct any discrepancies.

Enabling Learning Objectives

1. Describe methods to validate field collected data
2. Describe methods to correct discrepancies and verify accuracy
3. Describe methods to produce reports

Discussion Questions

1. What are some ways to validate field collected data?
2. Why is validating field collected data important?

Application

1. Given sample field collected data, have students download appropriate tools and practice validating the data.
2. Given a sample report, have students identify inaccurate data.

Instructor Notes

1. For the Application portion, use AHJ-specific tools and prepare sample reports with errors for students to identify.

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 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.