

INSTRUCTOR GUIDE

RINGS OF FIRE

Tire Fire Prevention and Suppression

Lesson Plan 06

CODES AND REGULATIONS

TOPIC: National and State Regulations

LEVEL: I

TIME: 1 Hour

BEHAVIORIAL OBJECTIVE:

Condition: Complete evaluation with 70% accuracy

Behavior: The student will . . .

1. Recognize the benefit of a unified enforcement plan.
2. Apply state regulations and national standards to outdoor tire piles.

Standard: According to the referenced text

REFERENCES: Slaughter, Rodney. "RINGS OF FIRE: Tire Fire Prevention and Suppression" California State Fire Marshal, June 2004.

MATERIALS NEEDED: PC projector, projection screen, VCR, multimedia slide show on CD-ROM, speakers.

PREPARATION: Prevention of tire fires is paramount because of the potential size, environmental impact, duration, and cost of a major fire. A successful fire prevention program begins with the development of a rapport between the fire prevention officer and the waste tire owners or operators. Additionally developing a working relationship with other agencies including the local County Health Departments and local planning commission for Air and Water Quality Control Boards are all key to a successful fire prevention program.

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PRESENTATION	APPLICATION
<p>I. Objective</p> <ol style="list-style-type: none">1. Recognize the benefit of a unified enforcement plan.2. Apply state regulations and national standards to outdoor waste tire piles. <p>II. Enforcement</p> <p>A. The single best deterrent for waste tire pile fires is an active enforcement program</p> <p>B. Primary code enforcement and development falls to the CIWMB, local fire service and local health departments</p> <ol style="list-style-type: none">1. The authority and framework for enforcement is set forth in the California Public Resources Code2. CIWMB regulations require the local fire department to approve fire safety plans for all waste tire storage facilities and local health departments to implement vector controls <p>C. The CIWMB regulations, including fire prevention regulations are in Title 14 of the California Code of Regulations</p> <p>D. Local fire service can not enforce these regulations unless they are adopted locally by ordinance</p>	<p>From the Main Menu click on Fire Prevention. At the Fire Prevention Menu click on Codes and Regs button</p> <p>Codes & Regs Slide 01 Objective</p> <p>Codes & Regs Slide 02 Enforcement Authority</p>

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<p>E. SFM is working collaboratively with CIWMB on a statute that would give the SFM authority for fire prevention in Title 19 CCR</p> <p>F. Local fire departments can use (if locally adopted) several national standards Uniform Fire Code and/or NFPA</p> <p>G. Other enforcement authority is granted to local health departments for vector control</p>	
<p>H. Unified enforcement can be accomplished through an environmental crimes task force or an association of local agencies all trying to ward off potential problems</p>	<p>Codes & Regs Slide 03 Unified Enforcement</p>
<p>I. The agencies involved in a unified enforcement program can vary but can include, hazardous materials investigators, building officials, fire officials, law enforcement, Integrated Waste Management Board, Department of Health, District Attorneys office, and elected officials</p>	<p>Codes & Regs Slide 04 Front Range tire</p>
<p>J. When faced with impossibly large tire piles many people find it hard to imagine that a facility can be brought into compliance</p>	<p>Codes & Regs Slide 05 Front Range tire 1</p>
<p>K. But as this before and after picture shows, tire piles can be broken down into smaller much more manageable piles</p>	

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<p>L. There are no Federal regulations pertaining to storage and disposal of waste tires</p> <p>M. At the State level, 48 states currently have some law or regulation regarding disposal and management of waste tires</p> <p>N. While each state has its own program, some common features</p> <ol style="list-style-type: none">1. Licensing or registration requirements for waste tire haulers, processors and some end users2. Manifests for waste tire shipments3. Limitations on who may handle waste tires4. Financial assurance requirements for waste tire handlers5. Market development activities <p>O. The legislative responsibility lies with each individual state</p> <p>P. The Environmental Protection Agency (EPA) does, however, have a number of programs and initiatives to help reduce the millions of waste tires across the nation</p> <p>Q. National Standards include:</p> <ol style="list-style-type: none">1. 2002 NFPA 230, Annex F “Guidelines for the outdoor storage of tires2. 2000 Uniform Fire Code Sections 1103.3.6 “Outside Storage of Tires”3. 2000 International Code Council, International Fire Code, Chapter 25 “Tire Rebuilding and Tire Storage”	<p>Codes & Regs Slide 06 National Standards</p>

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<p>O. State Regulations</p> <ol style="list-style-type: none"> 1. California Integrated Waste Management Board Title 14 Public Resource Code 2. Pending Legislative Approval California State Fire Marshal Title 19 Public Safety Code <p>P. California regulations integrate the more restrictive requirements of UFC and NFPA</p> <p>Q. This table shows the radical differences between tire pile size in the two codes</p> <p>R. This is an aerial shot of Tire Mountain in Colorado, which national standard do they subscribe to?</p> <p>Answer: NFPA</p>	<p>Codes & Regs Slide 07 State Regs</p> <p>Codes & Regs Slide 08 Storage Comparison</p> <p>Codes & Regs Slide 09 Storage Comparison 1</p> <p>Codes & Regs Slide 10 Tire Mountain</p> <p>Codes & Regs Slide 11 Permitted-unpermitted</p>
<p>III. Unpermitted vs. Permitted Waste Tire Pile Sites</p> <p>A. Unpermitted sites are tire piles that have been dumped on a property with or without the knowledge of the property owner</p> <ol style="list-style-type: none"> 1. Generally hidden and unknown to enforcing agencies 2. Tire piles can often be hidden as brush and shrubs grow up around and through the tires thus adding an additional fuel source to this potentially dangerous condition 	

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<p>3. No control of indigenous wildlife in the vicinity of the tire piles adding to the threat of disease</p> <p>4. Access to these sites is often very limited, thus enhancing fire-fighting challenges</p> <p>5. The most critical issue associated with unpermitted sites is the absence of knowledge that these sites exist and where they are located</p> <p>B. Permitted sites on the other hand, have a known location and operation</p> <p>1. In many cases the owner operator has applied for a business license locally along with a permit from the CIWMB</p> <p>2. The fire department becomes involved when asked to sign-off on a fire protection plan required by CIWMB before a site permit can be issued</p> <p>3. Tire piles under 500 tires do not need a permit</p> <p>4. Tire piles from 500 to 4,999 need a minor waste tire pile permit</p> <p>5. Tire piles over 5,000 need a major tire pile permit</p> <p>IV. State Regulations</p> <p>A. Emergency Response Plan</p> <p>1. The operator of the waste tire facility shall maintain a copy of the “Emergency Response Plan” at the facility</p> <p>2. At the time of permit issuance the approved Emergency Response Plan shall be forwarded to the local fire authority by the permittee</p>	<p>Codes & Regs Slide 12 Emergency Response Plan</p>

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<p>3. The plan shall be revised as necessary to reflect changes in operations of the waste tire facility or with additional requirements of the local fire authority</p> <p>4. The local fire authority and the CIWMB shall be notified in any changes to the Emergency Response Plan within 30 days of the revision</p> <p>B. Fire Control Measures</p> <p>1. This section mandates that certain measures are taken at each qualifying facility to minimize the risk of fire</p> <p>2. Communication equipment shall be maintained at all facilities, if they are staffed by an attendant, to ensure that the site operator can contact local fire protection authorities in the event of a fire</p> <p>3. Adequate equipment to aid in the control of fires must be provided and maintained at the facility at all times.</p> <p>4. At a minimum the following items shall be maintained on site and in working order:</p> <ul style="list-style-type: none">a) One dry chemical fire extinguisher,b) One 2.5-gallon water extinguisher,c) One 10-foot long pike pole,d) One round point shovel, ande) One square point shovel.f) One dry chemical fire extinguisher with a minimum rating of 4A:40BC shall be carried on each piece of fuel-powered equipment used to handle waste tires. <p>5. This equipment is to be used by on-site personnel.</p> <p>6. On-site personnel have the best opportunity to keep a small fire from becoming a catastrophe.</p>	<p>Codes & Regs Slide 13 Fire Control Measures</p>

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<p>D. Facility Access and Security</p> <ol style="list-style-type: none"> 1. No storage within 10" of property line 2. Separated from vegetation and combustibles by 40' 3. Fire Lanes between piles 4. Controlled Ignition Sources 5. No smoking, welding etc. <p>E. Storage of Waste Tires</p> <ol style="list-style-type: none"> 1. Waste tires shall be restricted to individual piles, which include stacks and racks of tires that do not: <ol style="list-style-type: none"> a) Exceed 5,000 square feet. b) Exceed a volume of 50,000 square feet. c) Exceed a height of 10 feet. d) Exceed a height of 6 feet when a tire storage unit is located within 20 feet of the property boundary. e) Waste tires shall not be located within 10 feet of any property line or perimeter fencing. 2. The minimum distance between waste tire piles and between waste tire piles and structures that are located either on-site or off-site shall be as specified in the Separation Table 	<p>Codes & Regs Slide 16 Separation Distances</p> <p>Codes & Regs Slide 17 Storage Limits</p>

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<table border="1"> <thead> <tr> <th rowspan="2">TIRE PILE SEPARATION DISTANCES</th> <th colspan="3">Tire Storage Pile Height (Ft.)</th> </tr> <tr> <th>6</th> <th>8</th> <th>10</th> </tr> </thead> <tbody> <tr> <th>Length of Exposed Face (Ft.)</th> <td></td> <td></td> <td></td> </tr> <tr> <th>25</th> <td>50</td> <td>56</td> <td>62</td> </tr> <tr> <th>100</th> <td>84</td> <td>100</td> <td>116</td> </tr> <tr> <th>150</th> <td>99</td> <td>117</td> <td>135</td> </tr> <tr> <th>200</th> <td>111</td> <td>130</td> <td>149</td> </tr> <tr> <th>250</th> <td>118</td> <td>140</td> <td>162</td> </tr> </tbody> </table>				TIRE PILE SEPARATION DISTANCES	Tire Storage Pile Height (Ft.)			6	8	10	Length of Exposed Face (Ft.)				25	50	56	62	100	84	100	116	150	99	117	135	200	111	130	149	250	118	140	162	Codes & Regs Slide 18 Separation Table
TIRE PILE SEPARATION DISTANCES	Tire Storage Pile Height (Ft.)																																		
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<p>F. New Waste Tire Facilities</p> <ol style="list-style-type: none"> 1. Shall not be sited in any area where they may be subject to immersion in water during a 100 year storm unless the operator demonstrates to the board that the facility will be designed and operated so as to prevent waste tires from migrating off-site. 2. Shall not be located on sites with grades or other physical features that will interfere with firefighting equipment or personnel. 3. Tires must be removed from rims immediately upon arrival at the facility. 4. The site shall be designed and constructed to provide protection to bodies of water from run-off of pyrolytic oil resulting from a potential tire fire. 				Codes & Regs Slide 19 Remove from Rims 1																															
				<p>Instructors Note: Compare state regulations with class developed regulations to see how closely they match</p>																															

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<p>V. Site Visits</p> <p>A. After viewing each of these slides identify code violations</p> <p>B. San Louis Obispo County- trees in the middle of pile, underground storage tank, 55 gallon drum, fencing</p> <p>C. American Canyon- pile consists of tires and other material like compressed cylinders, 55 gallon drum, tires stored on rim, and weeds and upholstery stuffing</p> <p>D. Rio Linda- tires stored to close to access road, in a drainage ditch, under power lines</p> <p>E. Shasta County- tires stored in wildland areas, no water supply, lots of dry vegetation in the summer in an area known for fires</p> <p>F. Redding- Inner tubes made from butyl rubber are easier to ignite than tires, should be separated from tire pile as well ass increased separation from building</p>	<p>Instructor Note: This series of slides provides students a chance to apply specific regulations to a variety of site problems</p> <p>Codes & Regs Slide 20 Site Visit</p> <p>Codes & Regs Slide 21 Site Visit 1</p> <p>Codes & Regs Slide 22 Site Visit 2</p> <p>Codes & Regs Slide 23 Site Visit 3</p> <p>Codes & Regs Slide 24 Site Visit 4</p> <p>Codes & Regs Slide 25 Site Visit 5</p>

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<p>G. Perfect storage- container storage keeps water from collecting in tires, maintains a smaller number of tires, is protected from arsonist</p> <p>H. Indoor Storage</p> <ol style="list-style-type: none">1. Though not in the scope of this program, it is important to note that some waste tire dealers have attempted to avoid out door storage regulations by filling warehouses with waste tires2. Waste tires stored indoors should meet conditions set forth in “The Standard for Storage of Rubber Tires,” National Fire Protection Association, NFPA 231D-1989 edition, unless the local fire authority determines that different requirements are necessary to meet the intent of the above referenced fire control standard	<p>Codes & Regs Slide 26 Site Visit 6</p> <p>Codes & Regs Slide 27 Indoor Storage</p> <p>Video - Slide 28: Show second of four sections of the “Rings of Fire” video</p> <p>Instructors Note: Give summary and then read evaluation questions</p> <p>Codes & Regs Slide 29 Code Questions</p>

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SUMMARY:

An aggressive and consistent unified code enforcement program will help your department avoid potential tire fires. With your understanding of industry storage and processing practices along with code specific information you can work out a site specific pre-plan, so that problems can be headed off before they develop.

EVALUATION:

1. Can the local fire authority enforce the CWIMB regulation?

Answer: Only if adopted as a local ordinance

2. Which national standard is more restrictive for tire storage?

Answer: Uniform Fire Code

3. Why shouldn't tires be stored on a grade or a slope?

Answer: Hinders firefighting operations, allows for the pyrolytic oil to escape

ASSIGNMENT:

None