

INSTRUCTOR GUIDE

RINGS OF FIRE

Tire Fire Prevention and Suppression

Lesson Plan 01

Introduction

<u>TOPIC:</u>	The Tire Problem
<u>LEVEL:</u>	I
<u>TIME:</u>	30 Minutes
<u>BEHAVIORIAL OBJECTIVE:</u>	
Condition:	Complete evaluation with 70% accuracy
Behavior:	The student will . . . 1. Define the outdoor tire storage problem.
Standard:	According to the referenced text
<u>REFERENCES:</u>	Slaughter, Rodney, "RINGS OF FIRE: Tire Fire Prevention and Suppression" California State Fire Marshal, June 2004.
<u>MATERIALS NEEDED:</u>	PC projector, projection screen, VCR, multimedia slide show on CD-ROM, speakers.
<u>PREPARATION:</u>	Welcome to the "Rings of Fire" training program. The program you are in today is an update of a training program that was developed ten years ago by the State Fire Marshal's Office for California Integrated Management Board. With two of California's largest tire piles going up in smoke in the mid 1990's we have had the opportunity to collect a lot of data, and in doing so have reconsidered our recommendations for both fire prevention and fire suppression. You will benefit from this program by getting the latest information from a wide range of subject matters experts. So let's get started!

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PRESENTATION	APPLICATION
<p>I. Introduction</p> <p>A. Funding for this program provided by the California Integrated Waste Management Board</p> <p>B. Produced by the Office of the State Fire Marshal</p> <p>C. Coordinated by the California Tire Fire Council</p> <p>D. Published by CSU, Chico Instructional Media Center</p> <p>E. California Tire Fire Council wants you to know that, “it’s not a question of if, but rather a question of when and how much?”</p> <ol style="list-style-type: none">1. The tire council was composed of training Officers, Prevention Officers, and Hazmat specialists2. Every State in the country has had a tire fire3. Tire fires are a convenient way of dodging enforcement <p>F. Program Goal: To provide fire professionals and enforcement officers, along with waste tire owners and operators, up-to-date information so that you can make informed decisions regarding scrap tire piles</p>	<p>Left mouse click on title slide (Rings of Fire Slide 01) to begin slide show</p> <p>Rings of Fire Slide 02 Funding Slide</p> <p>Rings of Fire Slide 03 Calif. Tire Fire Council</p> <p>Rings of Fire Slide 04 Program Goal Slide</p>

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<p>G. This short 5 minute video clip will remind of us of the scope of tire fire problem that we are here to address</p> <p>II. Problem Statement</p> <ul style="list-style-type: none"> • Tire Volume • Tire Geometry • Environmental Impact <p>A. Tire Volume, Tire Geometry and Environmental Impact-- tires collecting on the side of the road are the beginnings of a huge storage problem</p> <p>B. Tire Volume</p> <ul style="list-style-type: none"> • 33.3 million tires generated by California • Nationally 300 million generated annually • 280 million in known stockpiles 	<p>Rings of Fire Slide 05 Video Clip Slide</p> <p>Instructor Note: Have students write down reasons tire storage is a problem.</p> <p>Rings of Fire 06 Problem Statement</p> <p>Overhead Question: What is the problem with outdoor tire storage?</p> <p>Rings of Fire 07 Tire Volume</p> <p>Rings of Fire 08 Tire Volume 1</p>

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<p>C. Tire Geometry- The hollow doughnut shape traps oxygen and shields the fire from fire fighting agents</p> <ol style="list-style-type: none">1. This makes fighting tire fires a problem2. Suppression strategy could make the environmental impact worse <p>D. Environmental Impact</p> <ol style="list-style-type: none">1. Air Pollution2. Soil Contamination3. Water Quality <p>4. Tires provide great habitat!</p> <ol style="list-style-type: none">a. Tires are a perfect breeding ground for mosquito's protecting the larvae from natural predatorsb. Mosquito's bring a wide range of diseases to human populations including the spread of West Nile Virusc. Tire casings provide shelter for rodents and other burrowing animalsd. Rattlesnakes are attracted by the rodents and are a threat to unaware firefighters	<p>Rings of Fire Slide 09 Tire Geometry</p> <p>Rings of Fire Slide 10 Environmental Slide</p> <p>Rings of Fire Slide 11 Environmental Slide</p>

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SUMMARY:

As we go through this training program, we will be able to add to this problem statement “outdoor tire Storage.” From “Tire History” to “Hazmat Response” you will be surprised to learn how just one simple product can be such a complicated subject.

EVALUATION:

1. How many scrap tires are generated in California?

Answer: 33.3 million as of 2003

2. Approximately how many tires are in known stock piles across the country?

Answer: Approximately 280 Million

3. Why are tire fires hard to fight with conventional suppression techniques?

Answer: Tires geometry traps oxygen and the material repels water.

4. What happens if you attempt to put out a large tire pile with water?

Answer: You will slow down the combustion process allowing for more pyrolytic oil to generate.

5. What are the most dangerous animals living in a tire pile?

Answer: Rattlesnakes and mosquito's.

ASSIGNMENT:

Read the first section of the text “Tire History.”