



## OREGON STATE FIRE MARSHAL FIRE AND LIFE SAFETY AWARENESS TRAINING LESSON PLAN

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### **Audience:**

The following lesson plan is for volunteer and career fire service personnel and is based on 2005 Oregon Revised Statute (ORS), 2007 Oregon Administrative Rules, 2007 Oregon Fire Code (OFC), and 2001 National Fire Protection Association (NFPA).

### **Subjects:**

Scope of Authority – provides a foundational training about ORS(s) and Oregon’s Attorney General (OAG) Opinions related to: powers and duties of the State Fire Marshal (SFM) and assistants to SFM, inspection procedures, due process and investigation of fires.

Assembly Group A Occupancies - fire history and assemblies, assemblies defined and fire and life safety concerns in assembly occupancies.

Fire Department Access – provides a foundational training about general provisions of fire department access as established in the 2004 OFC including: parameters for permits, construction documents and timing of installation, fire department access road specifications, fire department access into buildings and fire hydrant systems.

Water Supplies and Fire Flows – provides a foundational training about various sources of water supplies, state and national regulations pertaining to water supply and fire flows, how to calculate water supply per NFPA 1142 and fire flows per OFC appendix B, and determine the required number and distribution of fire hydrants per OFC Appendix C.

### **Objectives:**

Participants will be better equipped to protect Oregon communities from fire safety issues by:

- Understanding their scope of authority and where that authority is derived from and successfully identifying fire and life safety hazards associated with Group A occupancies.
  - Understanding the general provisions of fire department access as established by the 2004 Oregon Fire Code including: parameters for permits, construction documents and timing of installation, fire department access road specifications, fire department access into buildings and fire hydrant systems.
  - Understand the various sources of water supplies, state and national regulations pertaining to water supply and fire flows, successfully calculate water supply per NFPA 1142 and fire flows per OFC appendix B, successfully determine the required number and distribution of fire hydrants per OFC Appendix C.
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## **Training Materials/Equipment:**

Classroom, PowerPoint, computer, and projector

## **References:**

2004 Oregon Fire Code (OFC), 2001 National Fire Protection Association (NFPA), 2003 Oregon Revised Statutes (ORS), and Oregon Attorney General (OAG) Opinions

- Scope of Authority
  - 1968 OAG Opinion: 6491, 6512
  - 1989 OAG Opinion: 6311
  - 2005 ORS: 476.030, 476.060, 476.070, 476.150, 476.210, 479.170, 479.180, 479.190, 480.210, 480.215, 480.244, 480.265, 480.280, 480.290
  - 2007 OFC: Chapter 2 – Definitions
  - 2007 OAR: 837-040-0001, 837-040-0010, 837-040-0020, 837-040-0140
  - 2005 OSFM Dispute Resolution Process
- Fire Department Access
  - 2004 OFC: Chapter 5 – Fire Service Features
  - 2004 OFC: Appendix D – Fire Apparatus Access Roads
- Water Supplies and Fire Flows
  - 2001 NFPA: 1142 – Water Supplies for Suburban and Rural Fire Fighting
  - 2003 ORS: 479.200
  - 2004 OFC: Chapter 5 – Fire Service Features
  - 2004 OFC: Appendix B – Fire-flow Requirements for Buildings
  - 2004 OFC: Appendix C – Fire Hydrant Locations and Distributions

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## **INSTRUCTOR TASKS:**

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- Review lesson plan outline to ensure understanding of contents and procedures.
- Review references for lesson.
- Use additional references and your knowledge to enrich the lesson outline.
- Select and prepare any additional audio-visual aids that may assist in the presentation.
- Ensure that all equipment needed, any audio-visual equipment, is available.
- Review lesson at end to ensure student understanding.
- Ensure that topics and objectives have been adequately covered.

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## **INTRODUCTION AND OBJECTIVES:**

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- I. Greet class/ Introductions
- II. State purpose of lesson.
- III. Review objectives for this lesson
- IV. Review additional training materials

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## PRESENTATION:

### MODULE 1 A LESSON OUTLINE

### REFERENCE

#### Module I A – Scope of Authority

#### Module I A:

##### I. Introduction to Oregon Law

- A. Introduction to Oregon Law
  - 1. Oregon Revised Statutes
  - 2. Oregon Administrative Rules
  - 3. Oregon Attorney General Opinions

##### II. State Fire Marshal's Authority

- A. General powers & duties of SFM & deputies
  - 1. Enforce laws and make rules
    - a. Prevention of fires
      - (i) Make rules to protect life and property from fire  
OAR Div 40 adoption of OFC and OFC mini-code  
Authority to approve fire code modifications OAR  
39
      - (ii) Enforcement
      - (iii) Authority to adopt sprinkler standards
    - b. Storage and use of combustibles and explosives
    - c. Constructions, maintenance, and regulations of fire  
escapes
    - d. Fire Protections equipment standards
  - 2. Investigate fires
  - 3. Grant exempt status
  - 4. Adult foster homes

#### OAR 837.39

#### II.A.1 ORS 476.030

II.A.1.i. ORS 476.030

II.A.1.i. **OAR 837-040-0020**

II.A.1.b. OAR 837-039-0015

II.a.ii. **ORS 476 & ORS 455**

II.A.1.iii. **AG 6311**, Oct. 89

II.A.2. ORS 476.030

II.A.3. ORS 476.030

II.A.4. ORS 476.030

II.B. ORS 479.170

II.A.2 **ORS 476.030**

III.A.3 **ORS 476.030 & OAR  
837.39**

III.A.4. ORS 476.030

III.B. ORS 476.060

##### III. Assistants to the state fire marshal (ASFM)

- A. Who is an assistant to the State Fire Marshal
  - 1. Subject to direction of State Fire Marshal
- B. Explosives
  - 1. Defined

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- |  |                             |
|--|-----------------------------|
| C. Fire Inspections                            |                             |
| 1. Entry and inspection of premises            | III.C.1. <b>ORS 476.150</b> |
| 2. Responsibilities of local fire officers     | III.C.2. AG OP 6491, May 68 |
| 3. Responsibilities of volunteer fire officers | III.C.3. OP 6512, June 68   |
| D. Fire Investigations                         |                             |
| 1. Investigation of fires                      | III.D.1. ORS 476.210(1)     |
| 2. Right of entry                              | III.D.2. ORS 476.070        |
| E. Records of Fires                            |                             |
| 1. Reporting of fires generally                | III.E.1. ORS 476.210(2)     |
| 2. Reporting Fire Fatalities                   |                             |
| 3. OSFM fire reporting forms                   | III.E.3. ORS 476.210(2)     |

## **IV. Protecting Buildings from Fire**

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|------------------------------------|---|
| A. Protecting Buildings            | IV.A ORS 479.170                          |
| 1. Interfering or preventing entry | IV.A.1 ORS 476.150                        |
| 2. Ordering repair of a building   | IV.A.2 ORS 479.170                        |
| 3. Ordering removal of material    | IV.A.3 ORS 479.170                        |
| 4. Imminent Threat                 | IV.A.4 ORS 470.170 & OAR<br>137.039.0070  |
| B. Dispute Resolution Process      |   |
| 1. Informal                        | IV.B.1 OSFM Dispute<br>Resolution Process |
| 2. Formal                          | IV.B.2 ORS 479.180                        |
| 3. Court                           |   |

## **Module I B – Assembly Occupancies**

### **I. Fire history and Assemblies**

- |   |  |
|---|--|
| A. Assemblies Fire and Life Safety                      |  |
| 1. Coconut Grove nightclub fire                         |  |
| 2. Rhythm nightclub fire                                |  |
| 3. Beverly Hills Supper Club fire                       |  |
| 4. Station nightclub fire                               |  |
| 5. Laws enacted due to Coconut Grove and Rhythm fires   |  |
| 6. Could the Beverly Hills Supper Club and Station fire |  |

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been avoided?

### B. Definition Assembly Group A Occupancies

1. Assembly Group A Defined
2. Types of assembly occupancies
3. A-1 Assembly
  - a. Characteristics Group A-1
  - b. Specific hazards Group A-1
4. A-2 Assembly
  - a. Characteristics Group A-2
  - b. Specific hazards Group A-2
5. A-3 Assembly
  - a. Hazards Group A-3
6. A-4 Assembly
  - a. Characteristics Group A-4
7. A-5 Assembly
  - a. Characteristics Group A-5
  - b. Hazards Group A-5

### C. Fire and Life Safety Concerns in Assembly Occupancies

1. Areas of concern in assemblies
2. Design requirements Group A
3. Risk in Assembly Occupancies
4. Reduce Risk through Partnerships
5. Risk Mitigation Techniques
6. Code compliance Requirements

I.B. OFC 202

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## MODULE 2 A LESSON OUTLINE

## REFERENCE

### Module II A – Fire Department Access

### Module II A:

#### I. General

I. OFC 501

- A. Permits
- B. Construction documents
- C. Timing of installation

#### II. Fire Apparatus Access Roads

II. OFC 503

- A. Required access
  - Example of approved route with one access road
  - Access road exceptions
  - Additional access
- B. Commercial and industrial development access
  - Buildings exceeding three stories or 30 ft high
  - Gross building area exceeding 62,000 ft<sup>2</sup>
  - Example of approved route with two access roads
  - Example of approved route with four access roads
- C. Aerial fire apparatus
  - Where required
  - Width
  - Proximity to building
- D. Multiple family residential
  - Projects with more than 100 dwelling units
  - Projects with more than 200 dwelling units
- E. One or two family residential
  - Developments exceeding 30 dwelling units

II.B. OFC D104

II.C. OFC D105

II.D. OFC D106

II.E. OFC D107

#### III. Fire Apparatus Access Road Specifications

III. OFC 503

- A. Dimensions
  - Access road without hydrants
  - Access road with hydrants
- B. Surface
  - Designed and maintained to support live loads
  - Road surface all-weather

III.A.2. OFC D103

III.B. OFC 503 and D102

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## MODULE 2 LESSON OUTLINE

## REFERENCE

C. Turning radius	III.C. OFC 503 and D103
D. Dead-ends and turnarounds <ul style="list-style-type: none"><li>- Example of dead-ends and turnarounds</li></ul>	III.D. OFC 503 and D103
E. Approved grades and bridges <ul style="list-style-type: none"><li>- Bridges and elevated surfaces</li><li>- Approved grade determined by fire code official</li></ul>	III.D. OFC 503 and D103
F. Markings and signs <ul style="list-style-type: none"><li>- Markings</li><li>- Sign requirements<ul style="list-style-type: none"><li>▪ Access roads 20 ft to 26 ft</li><li>▪ Access roads more than 26 ft</li></ul></li></ul>	III.F. OFC 503 and D103
G. Obstructions and gates <ul style="list-style-type: none"><li>- Cannot be obstructed in any manner</li><li>- When required</li><li>- Private security gates</li></ul>	III.G. OFC 503
H. Apparatus access road gates <ul style="list-style-type: none"><li>- Suggested guidelines</li><li>- Access and locking devices</li></ul>	III.H. OFC D103
<b>IV. Access to Buildings</b>	
A. Openings <ul style="list-style-type: none"><li>- Required access</li><li>- Maintenance of exterior doors and openings</li></ul>	IV.A. OFC 504
B. Premises identification <ul style="list-style-type: none"><li>- Address numbers</li><li>- Temporary street or road signs</li></ul>	IV.B. OFC 505
C. Key boxes	IV.C. OFC 506
D. Hazards to fire fighters <ul style="list-style-type: none"><li>- Trapdoors and scuttle covers</li><li>- Shaftways Pitfalls</li></ul>	D.4. OFC 507

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## MODULE 2 LESSON OUTLINE

## REFERENCE

### V. Fire Hydrant Systems

#### A. Required

- Example of hydrant layout
- Example of exception of hydrant layout

V.A. OFC 508

#### B. Obstructions

- Clear space around hydrants
- Physical protection from impact
- Example of hydrant clear space and impact protection

V.B. OFC 510

#### C. Identification and markings

V.C. OFC 510

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<b>MODULE 2 B LESSON OUTLINE</b>	<b>REFERENCE</b>
<b>Module II B – Water Supplies and Fire Flows</b>	<b>Module II B</b>
<b>I. Water Supplies</b>	
A. In-ground	
B. Fixed systems	
C. Mobile supplies	
<b>II. Determining Water Supply and Fire Flow Regulations</b>	
A. Water supply and fire flow regulations	
B. Which one do I use?	
– ORS 479.200 “public buildings” statewide	II.B.1. ORS 479.200
– OFC buildings in protected area with adequate and reliable water systems	
– NFPA 1142 buildings in protected area without adequate and reliable water systems	
C. Things to consider	
<b>III. Water Supplies for Public Buildings</b>	
A. Public buildings	
– Types of public buildings	
<b>IV. Water Supplies for Rural and Suburban Fire Fighting</b>	IV. NFPA 1142
A. Structure surveys	IV.A. Chapter 4
B. Occupancy hazard	IV.B. Chapter 5
C. Classification of construction	IV.C. Chapter 6
D. Exposure hazard	IV.D. Chapter 7
E. Calculating water supply	IV.E. Chapter 7
– NFPA scenario I	
– NFPA scenario II	
– NFPA scenario III	
F. Automatic sprinkler systems	IV.G.. Chapter 7
<b>V. Fire Flow Requirements for Buildings</b>	
A. Water supply	V.A. OFC 508
B. Water supply test	V.B. OFC 508

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<b>MODULE 2 B LESSON OUTLINE</b>	<b>REFERENCE</b>
C. Fire flow calculation	V.C. OFC B104
– Example of fire barrier wall and fire wall	
1. Modifications to fire-flow requirements	V.2.1 OFC B103
2. Basic fire-flow requirements	V.C.2. OFC B105
3. Determining fire-flow based on OFC Table B105.1	V.C.3. OFC Table B105.1
4. Minimum fire-flow and flow duration	V.C.4. OFC Table B105.1
▪ OFC scenario I	
▪ OFC scenario II	
▪ OFC scenario III	
<b>VI. Fire Hydrant Location and Distribution</b>	VI. OFC C105.1
A. Fire hydrants number and distribution	
B. Average hydrant spacing	
C. Maximum travel distance to hydrants	
D. Minimum number of hydrants	

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### **REVIEW:**

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- I. Discuss key lesson points.
- II. Ask questions on the material covered.
- III. Review material that may be unclear.
- IV. Administer quiz.
- V. Grade quiz
- VI. Administer course evaluation
- VII. Send rosters, evaluations, and quizzes to OSFM – FLS .

## FIRE AND LIFE SAFETY AWARENESS LESSON PLAN

### EXPECTATIONS AND OBJECTIVES:

The following is a detailed list of learning objectives and desired outcomes. These learning objectives were developed in concert with the lesson plan. The learning objective numbers correspond to the numbering system found in the lesson plan.

### MODULE I A– SCOPE OF AUTHORITY

MODULE 1 A LEARNING OBJECTIVE	LEARNING OUTCOME
I.A.1 Recognize the role that Oregon’s Revised Statutes (ORS) play in defining the scope of authority of the State Fire Marshal (SFM) and assistants to SFM (ASFM).	<ol style="list-style-type: none"> <li>1. Realize that ORS’s is the official law of Oregon. Debated and approved by Oregon Legislative Assembly and signed by the governor</li> <li>2. Realize that ORS’s define the parameters of the roles and responsibilities of the Office of State Fire Marshal and Oregon’s fire service.</li> </ol>
I.A.2 Recognize the role that Oregon Administrative Rules (OAR) play in defining the scope of authority for Oregon State Fire Marshal (OSFM) and assistants to State Fire Marshal (ASFM).	<ol style="list-style-type: none"> <li>1. Realize that OAR’s provide the details on how the law will be implemented.</li> <li>2. Realize the Oregon legislature empowers the OSFM to develop rules by granting OSFM rulemaking authority through ORS.</li> <li>3. Realize that this enables the OSFM to adopt rules pursuant to state statute.</li> </ol>
I.A.3 Recognize the role that Oregon Attorney General (AG) Opinions play in defining the scope of authority for Oregon State Fire Marshal (OSFM) and assistants to State Fire Marshal (ASFM).	<ol style="list-style-type: none"> <li>1. Realize that a written AG opinion is an interpretation clarifying the meaning of law.</li> <li>2. Realize that are opinions are written at request of the governor, state agency official or legislative member.</li> <li>3. Realize that AG opinions interpret legal issues that are ambiguous, obscure, or unclear.</li> <li>4. Realize that AG Opinions carry the weight and force of law.</li> </ol>
II.A. Recognize the general powers and duties of State Fire Marshal and deputies.	<ol style="list-style-type: none"> <li>1. Realize the State Fire Marshal and DSFM are responsible for enforcing law and making rules; investigation of fires, granting exempt status to local fire authority; and adult foster homes.</li> </ol>
II.A.1.a Recognize that the SFM and DSFM are required to enforce laws and make rules.	<ol style="list-style-type: none"> <li>1. Realize that the State Fire Marshal or deputies enforce laws and make rules related to prevention of fires, storage of combustibles and explosives, construction, maintenance and regulations of fire escapes, and fire protection equipment standards.</li> </ol>

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<b>MODULE 1 A LEARNING OBJECTIVE</b>	<b>LEARNING OUTCOME</b>
<p>II.A.1.a. Recognize that the SFM and DSFM's are responsible for rules to protect life and property from fire.</p>	<ol style="list-style-type: none"> <li>1. Realize that this law is what enables the OSFM to create the rule which adopts the Oregon Fire Code.</li> <li>2. Realize that the Oregon Fire Code represents the total scope of fire life safety regulations in Oregon.</li> <li>3. Realize that generally construction and design provisions only apply to buildings or structures built after the adoption of the code.</li> </ol>
<p>II.A.1.a.i. Recognize that the Oregon Fire Code is a mini-code.</p>	<ol style="list-style-type: none"> <li>1. Realize that modifications to the Oregon Fire Code by local jurisdictions must meet or exceed the minimum requirements.</li> <li>2. Realize that any modifications must be submitted to the OSFM for pre-adoption evaluation.</li> <li>3. Realize that modifications cannot conflict with the Oregon Structural Specialty Code.</li> </ol>
<p>II.A.1. Recognize the authority of the OSFM and Building Codes division.</p>	<ol style="list-style-type: none"> <li>1. Realize that the OSFM has the authority to adopt minimum standards for fire apparatus access roads, water supply and fire flow, installation and spacing of fire hydrants, storage and use of flammable liquids, and maintenance of existing buildings.</li> <li>2. Realize that the Building Codes Division has the authority to adopt minimum and maximum standards for construction, reconstruction, alteration, and repair of buildings.</li> </ol>
<p>II.A.1.b Recognize the fire departments role in access and water supply for new construction according to AG Opinion 6311.</p>	<ol style="list-style-type: none"> <li>1. Realize that State Fire Marshal or local fire jurisdiction CANNOT require sprinklers to be installed when they are not required in the Oregon Structural Specialty Code.</li> <li>2. Realize that HB 2912 allows sprinklers as an acceptable alternative to access; required during planning department phase of project.</li> </ol>
<p>II.A.2. Recognize the general power and duties of the SFM and DSFM as it relates to fire investigations.</p>	<ol style="list-style-type: none"> <li>1. Realize the State Fire Marshal or deputies may choose to investigate or request an investigation of fires. Investigation of fires is discretionary.</li> <li>2. Realize the State Fire Marshal or Deputies may investigate a fire or cause an investigation to determine probable cause, origin and circumstances of any fire, and classify such findings.</li> </ol>

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<b>MODULE 1 A LEARNING OBJECTIVE</b>	<b>LEARNING OUTCOME</b>
<p>II.A.3. Recognize the general power and duties of the SFM as it relates to granting exempt status.</p>	<ol style="list-style-type: none"> <li>1. Realize the State Fire Marshal may choose to grant a partial or full exemption status to local fire authorities for a two year renewable time frame.</li> <li>2. Realize in order to be granted exempt status the SFM must be of the opinion that the jurisdiction has enacted adequate regulations for fire prevention, fire safety measures, and can provide enforcement of its regulations.</li> <li>3. Realize the State Fire Marshal can cancel that status at anytime.</li> <li>4. Realize that there are nine exempt jurisdictions in Oregon.</li> </ol>
<p>II.A.4. Recognize the general powers and duties of the SFM as it relates to adult foster care homes.</p>	<ol style="list-style-type: none"> <li>1. Realize the State Fire Marshal's role in adult foster homes includes providing fire safety inspection training for Department of Human Services (DHS) staff.</li> <li>2. Realize the State Fire Marshal conducts fire safety inspections upon request from DHS.</li> </ol>
<p>II. Recognize the SFM and DSFM has the authority to order the repair of and removal of materials from structures that are especially liable to fire and endangers human life and/or property.</p>	<ol style="list-style-type: none"> <li>1. Realize the State Fire Marshal and DSFM have the authority to order repair of or removal of materials from buildings when the building or structure is especially liable to fire and endangers human life, other buildings, or property.</li> <li>2. Realize the order to the owner, lessee, or occupant must be served personally or by registered mail. The order must be complied with in the allocated time, and the building can be closed until compliance is met.</li> </ol>
<p>II. Recognize the difference between a basic code enforcement issue to a condition that is dangerous to human life or the safety of the building.</p>	<ol style="list-style-type: none"> <li>1. Realize that each situation is unique that contributing factors include the construction of the building, the type of occupants served, and the severity of the fire code violation or accumulation of violations.</li> <li>2. Realize that different solutions can resolve the situation from removing a fire hazard (propane space heater), requiring a fire watch (smoke detection system not working) to closing the business (smoke detection system, pull stations, audio and visual notifications not working).</li> </ol>

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<b>MODULE 1 A LEARNING OBJECTIVE</b>	<b>LEARNING OUTCOME</b>
<p>III.A. Recognize the role and responsibilities of being an assistant to the State Fire Marshal.</p>	<ol style="list-style-type: none"> <li>1. Realize Assistants to the State Fire Marshal (ASFM) can include fire marshals, fire chiefs, chief of police, and constables.</li> <li>2. Realize ASFM cannot receive additional compensation, are subject to the duties and obligations imposed by law, and are subject to the direction of the State Fire Marshal.</li> </ol>
<p>III.A.1. Recognize that assistants to the State Fire Marshal are subject to the direction of State Fire Marshal in the execution of certain provisions.</p>	<ol style="list-style-type: none"> <li>1. Realize ASFM are subject to the direction of the State Fire Marshal in the execution of the following provisions explosives, fire inspections, fire investigation, and records of fires.</li> </ol>
<p>III.B.1. Recognize the definition of explosives as defined in ORS.</p>	<ol style="list-style-type: none"> <li>1. Realize that explosives are a chemical compound, mixture, or device, with the primary or common purpose of which is to function by explosion.</li> <li>2. Realize that explosives do not include fireworks, fertilizers, black powder, smokeless powder, and small arms ammunition and primers.</li> </ol>
<p>III.C.1. Recognize the legal parameters for entering and inspecting premises.</p>	<ol style="list-style-type: none"> <li>1. Realize that an ASFM can enter and inspect premises (excludes private residences) during all reasonable hours if just cause exists to determine if fire hazard exists.</li> </ol>
<p>III.C.2. Recognize the legal parameters of recourse when people interfere with or prevent entry.</p>	<ol style="list-style-type: none"> <li>2. Realize that no person can interfere with or prevent inspection. When someone attempts to prevent a fire marshal from entering premises, he or she can request an inspection or investigation warrant. Penalties for can include prosecution.</li> <li>3.</li> </ol>
<p>IV.B. Recognize that disputes should be resolved at the lowest possible level using the OSFM Dispute Resolution Process.</p>	<ol style="list-style-type: none"> <li>1. Realize that disputes should be resolved at the lowest possible level using the OSFM Dispute Resolution Process. The first step in resolving a dispute is the aggrieved party should contact the local fire marshal. The local fire marshal should then solicit feedback from their assigned district Deputy State Fire Marshal.</li> <li>2. Realize that if the aggrieved party is still not satisfied they can request a “second opinion” from the OSFM. The OSFM will then arrange a conference call with the panel of experts, local</li> </ol>

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	<p>deputy and aggrieved party.</p> <p>3. Realize that if the aggrieved party is still not satisfied they can request a formal appeal from the OSFM.</p>
<p>IV.B.2. Recognize that customers have the right to appeal any decision.</p>	<ol style="list-style-type: none"> <li>1. Realize by law that a customer has the right to appeal any decisions made. The complaints must be submitted in writing within ten days from service of order.</li> <li>2. Realize that OSFM can conduct the appeal or refer to regional appeal board and customer will be notified within ten days of hearing date.</li> <li>3. Realize that within ten days of the hearing OSFM will notify customer of decision. The decision made by OSFM can affirm, modify, revoke or vacate the order complained or the appeal form.</li> </ol>
<p>IV.A.4. Recognize that an ASFM is empowered and required to respond to an imminent threat within their jurisdictions.</p>	<ol style="list-style-type: none"> <li>1. Realize the Oregon Administrative Rule empowers and requires an ASFM to respond to imminent threats to life or property by taking measures to stabilize the situation up to and including closing the building.</li> <li>2. Realize when an ASFM is required to respond to an imminent threat that they need to report the action taken to the OSFM.</li> <li>3. Realize when an ASFM is responding to an imminent threat any enforcement action is considered an act of the State Fire Marshal.</li> </ol>
<p>I11.C.2. Recognize the responsibilities of local fire officials according to Attorney General Opinion 6491.</p>	<ol style="list-style-type: none"> <li>1. Realize that local fire officials are responsible for taking corrective action when aware of a violation of state fire protection statutes.</li> <li>2. Realize failure to take corrective action could result in personal liability.</li> </ol>

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<b>MODULE 1 A LEARNING OBJECTIVE</b>	<b>LEARNING OUTCOME</b>
<p>III.C.3. Recognize the responsibilities of volunteer fire officials according to Attorney General Opinion 6491.</p>	<ol style="list-style-type: none"> <li>1. Realize volunteer fire officials are responsible for taking corrective action when aware of a violation of state fire protection statute.</li> <li>2. Realize volunteer fire officials are expected to actively search for violations and take immediate action if a violation presents an immediate danger to public health and safety.</li> <li>3. Realize when an immediate danger does not exist and fire official is unsure of appropriate action they should contact the appropriate Deputy State Fire Marshal and ask for direction.</li> </ol>
<p>IV.A.1. Recognize that assistants to the State Fire Marshal are required to investigate fires within their jurisdiction</p>	<ol style="list-style-type: none"> <li>1. Realize assistants to the State Fire Marshal are required to immediately investigate all fires when property is destroyed or damaged within their jurisdiction to determine the cause, origin and circumstance of the fire.</li> <li>2. Realize the OSFM has the option of overseeing and directing the fire investigation.</li> </ol>
<p>IV.A.1. Recognize the legal parameters for right of entry related to conducting fire investigations.</p>	<ol style="list-style-type: none"> <li>1. Realize when investigating a fire by law ASFM can enter the building or premises where the fire occurred and adjoining buildings or premises during all reasonable hours.</li> </ol>
<p>III.E.1 Recognize reporting of fires for cities with populations under 200,000 people.</p>	<ol style="list-style-type: none"> <li>1. Realize that when cities with populations under 200,000 have a fire that is undetermined, of suspicious origin, or involves death or serious injury, the fire department is to notify a deputy or State Fire Marshal immediately.</li> <li>2. Realize that when fires are incendiary in origin that the fire department is required to immediately notify the appropriate police agency.</li> </ol>

## FIRE AND LIFE SAFETY AWARENESS LESSON PLAN

MODULE 1 A LEARNING OBJECTIVE	LEARNING OUTCOME
<p>III.E.2 Recognize the responsibilities of reporting fire fatalities.</p>	<ol style="list-style-type: none"> <li>1. Realize when a fire fatality occurs within an ASFM's jurisdiction, the Fire Chief is required to immediately notify the medical examiner, Oregon State Police, and the district attorney.</li> <li>2. Realize the OSFM needs to be identified within 24 hours by completing a Fire Fatality Report and faxing it to the OSFM.</li> <li>3. Realize an ASFM can request help from the OSFM by contacting Oregon Emergency Response System.</li> </ol>
<p>III.E.1. Recognize the requirements for reporting fires within Oregon</p>	<ol style="list-style-type: none"> <li>1. Realize fire departments and rural fire districts have a legal responsibility to provide the OSFM with a full report of every fire occurring within their jurisdiction.</li> <li>2. Realize that reporting of fires can be conducted by using OSFM forms or approved computer software reporting systems.</li> <li>3. Realize that fire departments must be in compliance with state reporting to receive Fire Act Grants.</li> </ol>
<p>III.E.3. Recognize the different types of OSFM fire reporting forms.</p>	<ol style="list-style-type: none"> <li>1. Realize that when a fire leads to property being destroyed or damaged that reports (Form 10, Form 10J, Civilian and Fire Fighter Casualty, as applicable) are required to be submitted to the OSFM.</li> </ol>

## FIRE AND LIFE SAFETY AWARENESS LESSON PLAN

<b>MODULE 1 B LEARNING OBJECTIVE</b>	<b>MODULE 1 B LEARNING OUTCOME</b>
<p>I.A. Recognize in U.S. history the largest loss-of-life fires have occurred within assembly occupancies and the four deadliest nightclub fires.</p>	<ol style="list-style-type: none"> <li>1. Realize that Assembly Group A occupancies have the potential for multiple fatalities and injuries due to the arrangement and density of the occupant load.</li> <li>2. Realize that in sudden emergencies, the congestion caused by people rushing to the exits can cause panic.</li> <li>3. Identify the four deadliest nightclub fires in U.S. history.</li> </ol>
<p>I.A.1. Recognize the fire and life safety characteristics of the Coconut Grove nightclub fire.</p>	<ol style="list-style-type: none"> <li>1. Realize that the deadliest nightclub fire in U.S. history occurred on November 28, 1942, at 10:15 PM the nightclub burned, killing 492 people.</li> <li>2. Realize the club had flammable decorations and was overcrowded with more than twice its official capacity.</li> <li>3. Realize that the panicked patrons attempted to exit through the revolving door, which was immediately rendered useless.</li> <li>4. Realize that other avenues of escape were also useless: side doors were welded shut, plate glass windows boarded up, and unlocked doors opened inward.</li> </ol>
<p>I.A.2. Recognize the fire and life safety characteristics of the Rhythm nightclub fire.</p>	<ol style="list-style-type: none"> <li>1. Realize the second deadliest nightclub fire occurred on April, 23 1940, at 11:30 PM the nightclub burned, killing 209 people</li> <li>2. Realize the fire engulfed the structure due to dry conditions and flammable methane gas generated from the Spanish moss draped over the rafters.</li> <li>3. Realize that when the panicked patrons were attempting to escape the fire the majority of people attempted to leave through the back door.</li> <li>4. Realize other avenues of escape were not accessible, windows had been boarded shut.</li> <li>5. Realize that thick smoke made exiting difficult; many of the dead perished from smoke inhalation or were crushed by other people.</li> </ol>

## FIRE AND LIFE SAFETY AWARENESS LESSON PLAN

MODULE 1 B LEARNING OBJECTIVE	LEARNING OUTCOME
<p>I.A.3. Recognize the fire and life safety characteristics of the Beverly Hills Supper Club fire.</p>	<ol style="list-style-type: none"> <li>1. Realize the third deadliest nightclub fire occurred on April, 28 1977, at 8:56 PM the nightclub burned, killing 165 people</li> <li>2. Realize the club was packed with approximately 3,182 patrons that evening.</li> <li>3. Realize that the structure had no sprinklers or audible automatic fire alarms, although both of these were required by the code. Additionally the building lights failed.</li> <li>4. Realize that the smoke from the fire filled the ventilation system. Full scale panic ensued and many people became entangled at blocked exits.</li> </ol>
<p>I.A.4. Recognize the fire and life safety characteristics of the Station nightclub fire.</p>	<ol style="list-style-type: none"> <li>1. Realize the fourth deadliest nightclub fire occurred on February 20, 2003, at 11:08 PM the nightclub burned, killing 100 people</li> <li>2. Realize the club had installed “sound proofing” foam behind the stage. The pyrotechnics lit the flammable soundproofing foam.</li> <li>3. Realize most people attempted to exit through the main door, eventually blocking it completely.</li> <li>4. Realize many of the victims died of smoke inhalation, burns or being crushed by other people.</li> </ol>
<p>I.A.5. Recognize that the tragic loss of life in the Coconut Grove and Rhythm fires resulted in states enacting laws for public establishments.</p>	<ol style="list-style-type: none"> <li>1. Realize that the Coconut Grove and Rhythm fires resulted in many states enacting laws in public establishments banning: Flammable decorations, inward-swinging exit doors, required exit signs be visible at all times, and requirements for revolving doors used for egress.</li> </ol>

## FIRE AND LIFE SAFETY AWARENESS LESSON PLAN

<b>MODULE 1 B LEARNING OBJECTIVE</b>	<b>LEARNING OUTCOME</b>
I.A.6. Recognize that the tragic loss of life in the Beverly Hills Supper Club and Station nightclub fires could have been avoided if rules of safety and common sense had been followed.	<ol style="list-style-type: none"> <li>2. Realize that the Beverly Hills Supper Club and Station Fires have been avoided if basic rules of safety and common sense had been followed.</li> <li>3. Realize that each tragedy demonstrated failure to follow practices specifically required in the fire code.</li> <li>4. Realize that the system that's supposed to protect life safety broke down in each incident with tragic consequences.</li> </ol>
I.B.1. Recognize what is considered an Assembly Occupancy by the Oregon Fire Code and Oregon Structural Specialty Code (OSSC).	<ol style="list-style-type: none"> <li>1. Realize that Assembly Group A occupancies occur when fifty or more people gather together for such purposes as civic, social or religious functions, recreation, food and drink consumption, and awaiting transportation.</li> <li>2. Realize that if there are 49 or less people it is considered Business Group B occupancy.</li> <li>3. Realize that if the room or space is less than 750 ft<sup>2</sup> and is accessible to another occupancy it is classified as a Business Group B or as part of that occupancy.</li> </ol>
I.B.2. Recognize that the OSSC identifies five types of assembly occupancies.	<ol style="list-style-type: none"> <li>1. Realize that the OSSC identifies five types of Assembly Group A occupancies based on their use: A-1, A-2, A-3, A-4, and A-5.</li> </ol>
I.B.3. Recognize the characteristics of a A-1 assembly occupancy.	<ol style="list-style-type: none"> <li>1. Realize that A-1 occupancies are designed for production and viewing of performance arts or motion pictures usually with fixed seating. Examples include: motion picture theaters, symphony and concert halls, television and radio studios admitting an audience, and theaters</li> </ol>
I.B.3.a. Recognize that Group A-1 occupancies are characterized by two types of activities viewing motion pictures and production and viewing of theatrical and operatic performances.	<ol style="list-style-type: none"> <li>1. Realize that Group A-1 are characterized by two basic types of activities viewing of motion pictures and production/viewing of theatrical/operatic performances.</li> <li>2. Realize that viewing of motion pictures generally have fixed seating and viewing screen, no stage, motion projection booth(s) and equipment.</li> <li>3. Realize that production/viewing of theatrical/operatic performances generally have fixed seating,</li> </ol>

## FIRE AND LIFE SAFETY AWARENESS LESSON PLAN

	permanent raised stage, proscenium wall and curtain, and fixed or portable scenery.
I.B.3.b. Recognize why Group A-1 occupancies have a significant potential for life safety hazards.	1. Realize that Group A-1 occupancies pose a significant potential life safety hazard due to large occupant loads, high concentration of people in confined spaces, low lighting levels, above normal sound levels, and moderate fuel load.
I.B.4. Recognize the characteristics of a A-2 assembly occupancy.	1. A-2 occupancies are designed for food and drink consumption. Examples include: banquet halls, night clubs, restaurants, and taverns and bars
I.B.4.a. Recognize the unique characteristics of Group A-2 occupancies.	1. Realize that the unique characteristics of an A-2 Group includes no theatrical stage accessories, specific area designated for dancing, later-than-average operating hours, tables and seating arranged or positioned to create ill-defined aisles, service facilities for alcoholic beverages and foods, and live entertainment (e.g. bands).
I.B.4.b. Recognize the unique fire and life safety hazards associated with Group A-2 occupancies.	<p>1. Realize that Group A-2 occupancies have a significant potential life safety hazard due to low lighting levels, music generating above normal sound levels, high occupant load density and psychological impairment (alcohol).</p> <p>2. Realize that historically this group has the potential for extensive life and property losses due to delayed awareness of a fire situation confuses the appropriate response often resulting in increased egress time and at times panic</p>
I.B.5. Recognize the characteristics of a A-3 assembly occupancy.	1. Realize that A-3 occupancies are designed for worship, recreation or amusement, or as not classified elsewhere. Examples can include indoor swimming pool (no spectator seating), lecture halls, art galleries, amusement arcades, community halls, bowling alleys, libraries, pool and billiard parlors, and places of worship.
I.B.5.a. Recognize the unique fire and life safety hazards associated with Group A-3 occupancies varies widely depending upon the fuel loads.	<p>1. Realize the fire hazard in terms of combustible content (fuel load) is expected to be moderate to low in Group A-3 occupancies.</p> <p>2. Realize that since structures classified as Group A-3 vary widely as to purpose of use the fuel load varies widely. For example: The fuel load in a library is greater than that normally found in a gymnasium.</p>

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<b>MODULE 1 B LEARNING OBJECTIVE</b>	<b>LEARNING OTUCOME</b>
I.B.6. Recognize the characteristics of a Group A-4 assembly occupancy.	1. Realize that A-4 occupancies are designed for viewing indoor sporting events and activities with spectator seating. Examples include: arenas, skating rinks, swimming pools, and tennis courts.
I.B.6.a. Recognize the unique defining characteristics of an A-4 in comparison to an A-3.	1. Realize Group A-4 is limited to indoor structures. 2. Realize the Distinguishing factor between Assembly Group A-3 and A-4 is that an A-3 indoor facility, has no fixed seating to view event in contrast a Group A-4 is also an indoor facility, but has fixed seating.
I.B.7. Recognize the characteristics of a Group A-5 assembly occupancy.	1. Realize a Group A-5 occupancies are designed for participation or viewing of outdoor activities. Examples include: amusement park structures, bleachers, grandstands, and stadiums.
I.B.7.a. Recognize the unique defining characteristics of an A-5 in comparison with A-3 and A-4 occupancies.	1. Realize that Group A-5 occupancy is limited to outdoor structures where the products of combustion are freely and rapidly vented to the outside. 2. Realize that any recreation facility that has exterior walls enclosing the facility and a roof covering the area is NOT a Group A-5. It would either be a Group A-3, if no fixed seating, or a Group A-4, if there is fixed seating. 3. Realize that structures with retractable roofs, the more stringent occupancy class A-4 is required
I.B.7.b. Recognize the unique fire and life safety hazards associated with Group A-5 occupancies.	1. Realize Group A-5 occupancies have a relatively low fire hazard. The fuel load is low (structure itself and seats) and the expectation is that the smoke will quickly evacuate from the structure 2. Realize that an important design consideration with Group A-5 is the ability of a large crowd to exit the structure in an emergency quickly and orderly. A critical life safety hazard with this type of occupancy is panic.
I.C.1. Recognize Fire & Life safety concern of Assembly Group A occupancies	1. Realize assembly occupancies are a part of your everyday life whether you are at a church, school play, football game, nightclub, or restaurant.

## FIRE AND LIFE SAFETY AWARENESS LESSON PLAN

<b>MODULE 1 B LEARNING OBJECTIVE</b>	<b>LEARNING OUTCOME</b>
<p>I.C.2. Recognize that Assembly Group A occupancies are designed to meet the code requirements of when the building was constructed.</p>	<ol style="list-style-type: none"> <li>1. Realize assembly occupancies are designed to meet the code requirements of when the building was constructed.</li> <li>2. Realize although a building might not meet current code requirements, it is compliant if it meets the requirements of when the building was constructed</li> <li>3. Realize that if you come across a facility that constitutes a distinct hazard to life or property, an ASFM can require the structure be brought to current code standards.</li> <li>4. Realize if a structure is thought to be a distinct hazard to life or property, the ASFM should contact their local DSFM for assistance.</li> </ol>
<p>I.C.3. Recognize the general risk associated with Assembly Group A Occupancies.</p>	<ol style="list-style-type: none"> <li>1. Realize assembly occupancies have a potential for multiple fatalities and injuries due to occupants not familiar with building or exit locations, crowded occupancy conditions, noise, dim lighting, blocked or obstructed exits, and alcohol consumption by patrons.</li> </ol>
<p>I.C.4. Recognize ways to reduce risk associated with assembly occupancies through developing partnerships with local businesses.</p>	<ol style="list-style-type: none"> <li>1. Realize fire officials must work with local business owners to assess the unique risks associated with the business, and reduce or eliminate the risk.</li> <li>2. Realize that risk mitigation can include evacuation plans, staff training, occupant load requirements, and periodic inspections.</li> </ol>

## FIRE AND LIFE SAFETY AWARENESS LESSON PLAN

<b>MODULE 1 B LEARNING OBJECTIVE</b>	<b>LEARNING OUTCOME</b>
<p>I.C.3. Recognize risk mitigation techniques in assembly occupancies.</p>	<ol style="list-style-type: none"> <li>1. Realize the importance of working with business partners to ensure there are evacuation plans in place in case of an emergency. This includes: a posted written emergency response and evacuation plan clearly indicating paths of egress and emergency exits, and ensuring all employees are trained on these plans and their associated responsibility.</li> <li>2. Realize the importance of proper training of wait staff and bartenders on monitoring alcohol consumption of patrons.</li> <li>3. Realize the importance of having the occupant load sign posted in a conspicuous place; and providing training to employees on the requirement not to exceed occupant load conditions.</li> <li>4. Realize that business owners need to be aware and ensure sufficient staffing to help with crowd control and prevent panic in an emergency situation.</li> <li>5. Realize the importance of periodic inspections by fire department to familiarize firefighters with the building incase they have to respond to an emergency.</li> </ol>
<p>I.C.4. Recognize the importance of working with business owners to ensure code compliance with assembly occupancies.</p>	<ol style="list-style-type: none"> <li>1. Realize the importance of working with business owner to ensure code compliance with occupant load sign requirements, egress paths are unobstructed, and exits are not locked or blocked.</li> <li>2. Realize the importance of working with business owners to ensure visual and audio alarm, exit signs, emergency lighting, fire alarm notifications s are operational.</li> <li>3. 3. Realize the importance of working with business owners to ensure that code required maintenance is conducted related to fire extinguishers, sprinklers, fire alarms, and hood systems.</li> </ol>

## FIRE AND LIFE SAFETY AWARENESS LESSON PLAN

### MODULE II – FIRE DEPARTMENT ACCESS:

MODULE 2 A LEARNING OBJECTIVE	LEARNING OUTCOME
I.A. Recognize when permits are required.	<ol style="list-style-type: none"> <li>1. Realize that an operational permit is required to operate fire hydrants or valves intended for fire protection.</li> <li>2. Realize that a construction permit is required to install or modify private fire hydrants.</li> </ol>
I.B. Recognize the required time frames for submitting construction documentation to fire department for review and approval.	<ol style="list-style-type: none"> <li>1. Realize that construction documentation for fire apparatus access, location of fire lanes, and fire hydrant systems, will be submitted to fire department for review and approval prior to construction.</li> </ol>
I.C. Recognize the required time frames for installation of fire protection during construction.	<ol style="list-style-type: none"> <li>1. Realize that fire protection, when required to be installed, will be installed and serviceable prior to and during construction.</li> </ol>
II.A. Recognize the general parameters for access roads when access is required.	<ol style="list-style-type: none"> <li>1. Realize that access roads will be within 150 feet of all portions of the first story exterior walls of the building, as measured by an approved route around the exterior of the building.</li> <li>2. Realize that this can be decreased by a fire code official when the building has an approved automatic sprinkler system, not more than two Group R-3 or U's, or if an access road cannot be installed because of terrain.</li> <li>3. Realize that the fire code official can require more than one access road due to factors that could limit access, during construction, alterations, demolition, or when high piled combustibles are present.</li> </ol>
II.B. Recognize the specific parameters of access roads for commercial and industrial buildings.	<ol style="list-style-type: none"> <li>1. Realize that commercial and industrial buildings exceeding three stories or 30 feet high will have at least three apparatus access roads for each structure.</li> <li>2. Realize that commercial and industrial buildings exceeding 62,000 ft<sup>2</sup> will have at least two separate and approved apparatus access roads.</li> <li>3. Realize that commercial and industrial building(s) that have an approved sprinkler system and the total building(s) area is up to 124,000 ft<sup>2</sup> then one apparatus road is allowed.</li> </ol>

## FIRE AND LIFE SAFETY AWARENESS LESSON PLAN

<b>MODULE 2 A LEARNING OBJECTIVE</b>	<b>LEARNING OUTCOME</b>
<p>II.C. Recognize when access roads are required to support aerial fire apparatus and the required parameters of the access road.</p>	<ol style="list-style-type: none"> <li>1. Realize that buildings or portions of buildings that exceed 30 feet high are required to provide apparatus access roads that can accommodate aerial apparatus.</li> <li>2. Realize that aerial apparatus access roads must not be located within overhead utility and power lines; the road width will be at least 26 feet and be unobstructed and in the immediate vicinity of the building; and at least one access road will be located within a minimum of 15 feet and a maximum of thirty feet from the building.</li> </ol>
<p>II.D. Recognize the specific parameters of apparatus access roads for multi-family residential projects.</p>	<ol style="list-style-type: none"> <li>1. Realize that multi-family residential projects with 100 to 200 dwelling units must have at least two separate access roads.</li> <li>2. Realize that multi-family residential projects with 100 to 200 dwelling units that have an approved sprinkler system in all buildings can have one apparatus access road.</li> <li>3. Realize that multi-family residential projects with 201 or more dwelling units must have at least two access roads regardless of whether the buildings have an approved sprinkler system.</li> </ol>
<p>II.E. Recognize the specific parameters of apparatus access roads for one or two family residential developments exceeding 30 dwellings.</p>	<ol style="list-style-type: none"> <li>1. Realize that one and two family residential developments exceeding 30 dwellings will have at least two separate access roads.</li> <li>2. Realize that one and two family residential developments with 30 or fewer dwelling units that have an approved sprinkler system in all buildings can have one apparatus access road.</li> <li>3. Realize that the number of dwelling units on a single fire apparatus road cannot be increased unless the access road connects with the future development.</li> </ol>
<p>III.A. Recognize the specification for apparatus access road dimensions.</p>	<ol style="list-style-type: none"> <li>1. Realize that fire apparatus access roads without fire hydrants must have an unobstructed width (not less than 20 feet) and vertical clearance (13 feet, 6 inches).</li> <li>2. Realize that fire apparatus access roads with fire hydrants must have an unobstructed width (not less than 26 feet) and a vertical clearance (13 feet, 6 inches).</li> </ol>

## FIRE AND LIFE SAFETY AWARENESS LESSON PLAN

<b>MODULE 2 A LEARNING OBJECTIVE</b>	<b>LEARNING OUTCOME</b>
III.A. Continued.	<p>3. Realize that fire apparatus access roads with fire hydrants can be modified by the fire code official when:</p> <ul style="list-style-type: none"> <li>▪ All buildings have an automatic sprinkler system,</li> <li>▪ Provisions are made for emergency use of sidewalks,</li> <li>▪ Streets or roadways are identified for one-way circulating traffic,</li> <li>▪ Pullouts provided every 150 feet on streets or roadways identified for two-way traffic, or</li> <li>▪ Grid system for traffic flow is provided and streets in grid do not exceed 300 feet long and are accessible at each end.</li> </ul>
III.B. Recognize the specifications for apparatus access road surface requirements.	<p>1. Realize that fire apparatus access roads must be of all weather surfaces and be capable of supporting live loads weighing 60,000 lbs.</p>
III.C. Recognize the specifications required for access road turning radius.	<p>1. Realize the approved turning radius is determined by the fire code official.</p> <p>2. Realize that the turning radius should take into account the angles of approach and departure for any means of egress and should be designed with the fire department's apparatus limitations.</p> <p>3. Realize that if there is a potential for water run-off damage, the fire code official may require approved drainage.</p>
III.D. Recognize the specifications required for apparatus access roads when there are dead-end roads in excess of 150 feet.	<p>1. Realize that dead-end fire apparatus roads in excess of 150 feet are required to have turnarounds.</p> <p>2. Realize that the required apparatus road turnarounds including road width are determined by length of dead end apparatus road.</p> <p>3. Realize the required dimensions of hammerhead and Y turnarounds and cul-de-sac on dead-end fire apparatus access roads.</p>
III.E. Recognize the specifications required for apparatus access roads when there are grades and elevated surfaces.	<p>1. Realize that fire code official can require fire apparatus access roads that have bridges to have the live load limits posted at the entrance.</p>

## FIRE AND LIFE SAFETY AWARENESS LESSON PLAN

<b>MODULE 2 A LEARNING OBJECTIVE</b>	<b>LEARNING OUTCOME</b>
III.E. Continued.	<ol style="list-style-type: none"> <li>2. Realize that the fire code official can require fire apparatus access roads adjacent to roads not designed for fire apparatus to have approved barriers, signs or both installed.</li> <li>3. Realize that the fire code official must approve all grades that exceed 10 percent.</li> </ol>
III.F. Recognize the specifications for apparatus access road markings and sign requirements.	<ol style="list-style-type: none"> <li>1. Realize that fire apparatus access roads or lanes will be clearly identified with approved signs. These markings will be maintained, replaced or repaired in the event there is any damage.</li> <li>2. Realize the appropriate size and markings of signs.</li> <li>3. Realize that access roads 20 to 26 feet in width will have “no parking” signs on both sides of the fire lane.</li> <li>4. Realize that apparatus access roads greater than 26 feet and up to 32 feet will have “no parking” signs on one side of the lane.</li> </ol>
III.G. Recognize the specifications for apparatus access road obstructions and gates.	<ol style="list-style-type: none"> <li>1. Realize that apparatus access roads cannot be obstructed in any manner and that the required minimum width and clearance must be maintained.</li> <li>2. Realize that the fire code official can require gates and barricades across fire apparatus access roads.</li> <li>3. Realize that private security gates blocking an apparatus access road must be approved.</li> </ol>
III.H. Recognize the specifications for apparatus access road gates.	<ol style="list-style-type: none"> <li>1. Realize the suggested guidelines for gates include a minimum width of 20 feet, be of a swinging or sliding type, and can be manually operated by one person.</li> <li>2. Realize the fire code official must approve locking devices on gates. When a gate is electrical there should be an emergency opening device. When the gate has a padlock or chains it should be able to be accessible with forcible entry tools or an approved key box containing key(s) to the lock is installed at the gate location.</li> </ol>
IV.A. Recognize the required parameters of access into a building.	<ol style="list-style-type: none"> <li>1. Realize required exterior doors and openings must be maintained and accessible for emergency access.</li> <li>2. Realize that walkways can be required from fire apparatus access ways to exterior openings.</li> </ol>

## FIRE AND LIFE SAFETY AWARENESS LESSON PLAN

<b>MODULE 2 A LEARNING OBJECTIVE</b>	<b>LEARNING OUTCOME</b>
IV.A. Continued.	<ol style="list-style-type: none"> <li>1. Realize that stairway access to the roof is required for new building greater than four stories. Unless the roof slope is greater than 33.3 percent.</li> <li>2. Realize that exterior doors and openings to a building cannot be eliminated without approval from the fire code official.</li> <li>3. Realize that doors and openings rendered nonfunctional will have an approved sign on the outside of the door stating “this door blocked.”</li> </ol>
IV.B. Recognize the requirements for premises identification.	<ol style="list-style-type: none"> <li>1. Realize that premises address numbers must be plainly legible and visible from the street, and contain Arabic numerals or alphabet letters.</li> <li>2. Realize that temporary street or road signs are required at intersections when construction allows passage of vehicles.</li> <li>3. Realize that temporary identification signs must later be replaced with an approved permanent sign.</li> </ol>
IV.C. Recognize the necessary parameters of installing key boxes and key box requirements.	<ol style="list-style-type: none"> <li>1. Realize that the fire code official can require key boxes to be installed when access to a structure is unduly difficult (secured openings, life saving, or firefighting purposes).</li> <li>2. Realize that the key box must be of an approved type and contain keys to gain necessary access.</li> </ol>
IV.D. Recognize hazards to firefighters.	<ol style="list-style-type: none"> <li>1. Realize trapdoors and scuttle covers are hazards to firefighters and must be closed unless it is a dwelling unit or automatically operated.</li> <li>2. Realize exterior widows and interior doors and windows that open directly on a shaftway, or used for vertical means of communication between two or more floors are hazards to firefighters and must be clearly marked “shaftway.”</li> <li>3. Realize that pitfalls to firefighters like “booby-traps” are prohibited.</li> </ol>
V.A. Recognize the required parameters of hydrants on apparatus access roads and hydrant location in comparison with the building or facility.	<ol style="list-style-type: none"> <li>1. Realize that when a portion of a facility or building (new construction or moved within jurisdiction) is more than 400 feet from a hydrant the fire code official can require an on-site hydrant.</li> </ol>

## FIRE AND LIFE SAFETY AWARENESS LESSON PLAN

<b>MODULE 2 A LEARNING OBJECTIVE</b>	<b>LEARNING OUTCOME</b>
V.A. Continued.	2. Realize that the distance can be extended up to 600 feet for buildings with an approved sprinkler system, Group R-3, or Group U occupancies.
V.B. Recognize fire hydrant system requirements for obstruction, clear space and physical protection.	<ol style="list-style-type: none"> <li>1. Realize that nothing is allowed to deter or hinder fire department personnel from gaining immediate access to a fire hydrant.</li> <li>2. Realize that fire hydrants must have a three foot circumference of clear space around the hydrant.</li> <li>3. Realize that if a fire hydrant is susceptible to vehicle damage it must have guard posts or other approved means of physical protection.</li> </ol>
V.C. Recognize requirements for access to equipment.	<ol style="list-style-type: none"> <li>1. Realize that fire protection equipment will be clearly identified including rooms containing controls for air conditioning systems, sprinkler risers and valves, etcetera, will be clearly identified.</li> <li>2. Realize signs for fire protection equipment and location will be permanently installed and be readily visible.</li> </ol>

## FIRE AND LIFE SAFETY AWARENESS LESSON PLAN

### MODULE 2 B – WATER SUPPLIES AND FIRE FLOWS:

MODULE 2 B LEARNING OBJECTIVE	LEARNING OUTCOME
I. Recognize some common types of water supplies used for fire protection.	1. Realize water supplies can consist of in ground static or dynamic sources, fixed sources like gravity fed and direct pumped systems, and mobile water supplies.
II.A. Recognize water supply and fire flow regulations.	1. Recognize the three ways of determining water supply and fire flow based on ORS 479.200, NFPA 1142 and OFC 508 and Appendix B.
II.B. Recognize how to apply water supply and fire flow regulations based on OSFM recommendation.	<ol style="list-style-type: none"> <li>1. Realize that water supply for public buildings applies statewide and supersedes any code.</li> <li>2. Realize OFC applies to all buildings and facilities in a protected area. Use OFC Appendix B statewide when there is adequate and reliable water system.</li> <li>3. Realize OFC requires NFPA 1142 to be used statewide when there is no adequate and reliable water system.</li> </ol>
II.C. Recognize the necessary considerations when determining water supply or fire flow.	1. Realize that considerations include: Whether or not the facility is a public building? Is the building or facility protected by a structural fire protection agency? Is the building and facility located in an area that has an adequate and reliable water system?
III.A. Recognize the types of public buildings described in ORS 479.200.	<ol style="list-style-type: none"> <li>1. Realize that a public building is a place where people congregate for civic, political, religious, social or recreational purposes. Examples include state buildings, courthouses, schools, colleges, churches, dance halls, armories, jails, lecture halls, etc.</li> <li>2. Realize that if a fire official is challenged regarding this law, have them contact their Deputy State Fire Marshal.</li> </ol>
IV. Recognize minimum water supply requirements for other buildings and facilities based on NFPA 1142.	1. Realize that this standard identifies the minimum requirements for water supply for structural fire fighting purposes only when adequate and reliable water supply systems do not exist.
IV.A. Recognize how to determine a structure survey using NFPA 1142.	1. Realize that total water supply for NFPA 1142 is determined by a combination of factors including the structural dimensions, occupancy hazard, construction type and exposure hazards.

## FIRE AND LIFE SAFETY AWARENESS LESSON PLAN

<b>MODULE 2 B LEARNING OBJECTIVE</b>	<b>LEARNING OUTCOME</b>
IV.B. Recognize how to determine occupancy hazard classifications using NFPA 1142.	<ol style="list-style-type: none"> <li>1. Realize occupancy hazard classification ranges from three to seven each hazard has a value associated with them ranging from three (highest) to seven (lowest).</li> <li>2. Realize where more than one hazard is present in a structure; the occupancy hazard for the most hazardous occupancy will be used for the entire structure.</li> </ol>
IV.C. Recognize how to determine the construction classifications using NFPA 1142.	<ol style="list-style-type: none"> <li>1. Realize structures are classified by the type of construction and are assigned a construction classification number.</li> <li>2. Realize that there are five types of construction classification each with a different type of fire resistance rating (in hours).</li> <li>3. Realize where more than one type of construction is present in a structure, the higher construction classification number will be used for the entire structure</li> </ol>
IV.D. Recognize how to determine if an exposure hazard is present using NFPA 1142.	<ol style="list-style-type: none"> <li>1. Realize that exposure hazards exist if a structure is within 50 feet and is an occupancy hazard of three or four regardless of size. All other hazard classifications are only considered an exposure hazard if they are 100 ft<sup>2</sup> or larger and within 50 feet.</li> </ol>
IV.E. Demonstrate ability to determine and calculate water supply using construction classifications using NFPA 1142.	<ol style="list-style-type: none"> <li>1. Calculate water supply for buildings or facilities without exposure hazards using NFPA 1142.</li> <li>2. Calculate water supply for buildings or facilities with an exposure hazard using NFPA 1142.</li> </ol>
IV.F. Recognize fire flow requirement changes when a structure is fully or partially protected with an approved automatic sprinkler system using NFPA 1142.	<ol style="list-style-type: none"> <li>1. Realize that when a building or structure is fully protected with automatic sprinklers in accordance with NFPA 13, 13D or 13 R the fire code official can choose to waive water supply requirements.</li> <li>2. Realize that when sprinkler systems do not meet the above requirements than water supply will be in accordance with this standard.</li> <li>3. Realize that fully or partially protected building with other automatic fire suppression systems not listed above the fire code official can determine the minimum water supply.</li> </ol>

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<b>MODULE 2 B LEARNING OBJECTIVE</b>	<b>LEARNING OUTCOME</b>
V.A. Recognize required water supply and water supply sources based on OFC Appendix B.	<ol style="list-style-type: none"> <li>1. Realize that an approved water supply must have an adequate source of water, distribution system, and proper pressure for delivery.</li> <li>2. Realize that water supply can consist of private or public reservoirs, pressure tanks, elevated tanks, water mains, or other fixed systems.</li> <li>3. Realize that fire flow is determined by type of construction and square footage of fire area.</li> </ol>
V.B. Recognize water supply test requirements based on OFC Appendix B.	<ol style="list-style-type: none"> <li>1. Realize that a water supply test is required prior to final approval of water supply system and must be witnessed by a fire code official or approved documentation must be submitted to a fire code official.</li> </ol>
V.C. Recognize the fire flow calculation area based on OFC Appendix B.	<ol style="list-style-type: none"> <li>1. Realize that fire area is the total floor area of all floor levels within the exterior walls and under the horizontal projection of the roof unless Type IA or IB construction.</li> <li>2. Realize that portions of a building separated by fire walls without openings can be considered separate fire-flow calculations.</li> <li>3. Realize that fire area in Type IA or IB construction consist of the three largest successive floors.</li> <li>4. Realize that when areas do not have the infrastructure to provide large amounts of water as required by OFC that they should use NFPA 1142 or IUWI.</li> </ol>
V.C.1. Recognize the fire flow can be modified by the fire code official based on OFC Appendix B.	<ol style="list-style-type: none"> <li>1. Realize that the fire flow can be decreased by the fire code official when the development of full fire-flow requirements is impractical. Examples of this include type of occupancy, location of property, height and number of stories, floor area, fire walls, and fire-fighting capabilities of the jurisdiction.</li> <li>2. Realize that the fire flow can be increased by the fire code official when conditions indicate high susceptibility to group fires or conflagrations.</li> <li>3. Realize that the fire code official can limit the maximum fire-flow based on their fire-fighting capabilities. Some jurisdictions limit the demand on water system infrastructure by limiting the fire flow for new construction.</li> </ol>

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<b>MODULE 2 B LEARNING OBJECTIVE</b>	<b>LEARNING OUTCOME</b>
<p>V.C.2. Recognize the fire flow requirements based on OFC Appendix B.</p>	<ol style="list-style-type: none"> <li>1. Realize basic flow requirements for one and two family dwellings. If the dwelling is under 3,600 ft<sup>2</sup> = 1,000 GPM for 2 hrs is required. One and two family dwelling larger than 3,600ft<sup>2</sup> the fire official must use Table B105.1. The OFC allows for a 50 percent reduction for sprinkler systems.</li> <li>2. Realize that the OFC allows one R-3 occupancy, less than 3,600 ft<sup>2</sup>, located on a minimum of one acre parcel with one Group U or agricultural building (defined in ORS 455.315) the fire flow can be modified by the FCO believes fire fighting or rescue operations will not be impaired.</li> <li>3. All buildings other than one and two family dwellings use Table B105.1. The OFC allows a reduction in fire flow of 75 percent for sprinkler systems and reduction of 25 percent for automatic and manual alarm systems installed throughout the building and monitored by a central receiving station. However the reduction cannot be less than 1,500 gpm.</li> </ol>
<p>V.C.3. Recognize how to determine fire flow based on OFC Table B105.1.</p>	<ol style="list-style-type: none"> <li>1. Realize that flow duration might be a problem that each jurisdiction may need to consider when assessing the capabilities of the fire department, hazard presented, and availability of water supply.</li> <li>2. Realize that Table B105.1 establishes fire flow and duration requirements based on fire area and construction type.</li> <li>3. Realize the fire flow requirements will increase when construction types become more combustible and/or building area increases</li> <li>4. Realize the duration of fire flow varies from two to four hours.</li> </ol>
<p>V.C.4. Demonstrate ability to determine fire flow based on OFC Appendix B.</p>	<ol style="list-style-type: none"> <li>1. Calculate fire flow and duration for a buildings or facilities without a sprinkler system.</li> <li>2. Calculate fire flow and duration for a building or facility with a sprinkler system.</li> <li>3. Calculate fire flow and duration for building or facility containing multiple types of construction.</li> </ol>

## FIRE AND LIFE SAFETY AWARENESS LESSON PLAN

<b>MODULE 2 B LEARNING OBJECTIVE</b>	<b>LEARNING OUTCOME</b>
VI. Recognize the requirements for fire hydrants.	<ol style="list-style-type: none"> <li>1. Realize that fire hydrants must be provided along fire apparatus access roads and adjacent public streets.</li> <li>2. Realize the number and distribution of hydrants is determined using Table C105.1</li> </ol>
VI.A. Recognize the requirements for fire hydrants number and spacing using OFC Table C105.1	<ol style="list-style-type: none"> <li>1. Recognize that the number of hydrants, average spacing, and maximum distance is based on fire flow requirements.</li> </ol>
VI.B. Recognize the requirements for average hydrant spacing using OFC Table C105.1	<ol style="list-style-type: none"> <li>1. Recognize that Table C105.1 defines minimum number of hydrants required for building based on fire flow.</li> <li>2. Recognize that average spacing between hydrants cannot exceed the requirements listed in Appendix C. However, the fire code official can accept a ten percent deficiency where existing hydrants provide all or a portion of the required fire hydrant service.</li> <li>3. Realize that average spacing between hydrants on dead-end streets or roads can be reduced by 100 feet</li> <li>4. Realize that hydrants that are intended for highway hazards can be spaced 500 feet on each side in alternating positions.</li> <li>5. Realize where water mains are extended along streets without structures fire hydrants must be spaced at least every 1,000 feet.</li> </ol>
VI.C. Recognize the maximum travel distance to fire hydrants based on OFC Table C105.1	<ol style="list-style-type: none"> <li>1. Realize that regardless of average spacing no point on a street or access road can exceed the maximum distance to a hydrant.</li> <li>2. Realize you can reduce the maximum distance to a hydrant by 50 feet on dead-end streets and roads.</li> </ol>
VI.D. Recognize the minimum number of hydrants based on OFC Table C105.1	<ol style="list-style-type: none"> <li>1. Realize that OFC Table C105.1 establishes the minimum number of hydrants. When Appendix C requires the minimum number of fire hydrants to be eight or more an additional hydrant needs to be added for every 1,000 gpm.</li> </ol>