

DETAILED LESSON OUTLINE

COURSE: LCES WORKSHOP

UNIT: UNIT 3 - ENGINE SCENARIO
"BLUNT FIRE"

SUGGESTED TIME: TWO HOURS

TRAINING AIDS: HANDOUTS
SLIDES
"SCHOOLBOOK ANSWERS"
COPY OF GROUP LCES CONTRACT

OBJECTIVES: Students working in groups will enhance their knowledge of LCES as it applies to situations which could be encountered during initial attack with an engine.

Written By: Paul Chamberlin

OUTLINE		AIDS & CUES
I.	INTRODUCTION The Engine Scenario gives firefighters an opportunity to practice their LCES contract on a typical broken terrain, tall grass fire simulation.	
II.	ELEMENTS PRESENTED A. Practice using ICS 201 form and updating map. B. Inadequate common communications. C. Lack of basic training and experience in one cooperater.	

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> D. Operating in continuous fuels down wind from main fire. Escape Route hampered by obstruction and smoke. E. Mechanical failures. F. Unburned fuel left within the line. G. One flank is engine accessible, the other is not. F. Independent actions by cooperating agencies. H. This fire is going beyond the ability of the resources provided. The groups must carefully manage each resource, recognize the indicators of extreme conditions, and eventually pull everyone into safety zones. 	
<p>III. FORMAT</p> <ul style="list-style-type: none"> A. Slides set the general overview and familiarize students with the fuel type, terrain, and equipment. B. Inputs and map updates are provided by viewgraph. C. Inputs will be provided in sequential order. Each input must receive an appropriate response or will cause problems later. This will not be an extensive or complicated process. If the group did not respond, one close call or worse will develop. D. Each group will note their concerns, actions and directions on the form provided. The instructor(s) will determine when subsequent inputs are appropriate. 	

OUTLINE	AIDS & CUES
<p>E. Each table group will have a basic map on which locations of equipment and fire perimeter will be noted.</p> <p>F. A slide projector and overhead projector are required, each with an individual screen. A second overhead projector and third screen dedicated to maps will be useful.</p>	
<p>IV. INSTRUCTOR NOTES</p> <p>Divide class into small groups of three to six people. Each group should include people of mixed experience and backgrounds, if possible.</p> <p>Using the timetable provided in the script, provide each group with inputs in order, coordinated with the slides and maps.</p> <p>Each group will maintain a fire map identifying the location and activities of each assigned resource.</p> <p>Initial attack resources are on the scene when “Group IC” arrives. Students will be expected to assess the actions and locations of these resources. LCES can and should guide tactical alternatives.</p> <p>The fire is on federal land, in an area of intermixed lands with overlapping jurisdictions.</p> <p>The Spruceville RFD has responded with two engines and a water tender. The information provided by the Interagency Dispatcher only includes one engine and one water tender. The tender, WT-60, has two radios and can monitor both the BLM and the RFD frequencies. The two RFD engines, Engine 21 and Engine 22, each have only the RFD radio.</p>	

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<p>Remind students to be flexible. Simply adjust when the scenario makes an assumption about the position of a specific resource, the fire events will be the same.</p> <p>Students are likely to present insights and course of action not mentioned in the script. These additions will benefit the discussion.</p>	
<p>V. BLUNT FIRE SCENARIO</p>	
<p>A. 1630, OPENING INPUT</p>	<p>Copy of group's LCES Contract</p>
<p>The blunt fire began during an intense lightning storm on September 3, and was detected by a lookout at 1630. Brisk southwest winds caused flame lengths of 3 to 5 feet and immediate fire spread. The grass on this land is highly valued by the lease holder.</p>	<p>Form ICS 201</p> <p>03D-01-LCES-VG 03D-02-LCES-VG 03D-01-LCES-SL 03D-01-LCES-HO</p>
<p>Note key points and information you would write down in this situation. Use the ICS 201 as appropriate.</p> <p><i>Students should initiate note taking and capture the critical portion of these verbal instructions.</i></p>	
<p>B. WEATHER FOR THE DAY:</p>	
<p>Continuation of hot and dry weather pattern, with likely intense afternoon dry lightning storms.</p> <p>Prevailing winds 8 to 12 mph from the southwest and strong erratic winds accompanying thunder cells. RH is 12% which is very dry for the area. Several weeks have passed with no significant precipitation.</p>	<p>03D-03-LCES-VG 03D-02-LCES-SL</p>

OUTLINE	AIDS & CUES
<p>C. INPUT FROM INTERAGENCY DISPATCH</p> <p>Interagency Dispatch has dispatched a strike team of engines and one dozer for the BLM. To compile the strike team, two engines and a water tender were dispatched from Pine Station, and three engines were dispatched from Oak Station. The dozer is also from Pine Station. You are the engine Strike Team Leader (from Pine Station with a separate vehicle) and have been ordered to become the Initial Attack Incident Commander.</p> <p>As you leave your station, the dispatcher informs you the Spruceville RFD has responded with one brush engine and one water tender. The RFD resources are expected to arrive in 15 minutes. You, your two engines and water tender will arrive in 30 minutes. The dozer will arrive in 35 minutes and the three engines from Oak Station in 45 minutes. You are also informed that a Type 3 helicopter is available to you. Flight time to the incident is ten minutes.</p> <p>What are your concerns? What are your directions? (Write these on the form provided).</p> <p>(Students must request, then write down call numbers and frequencies for each of these units.)</p> <p><i>Check with RFD resources, determine exact resources, frequencies and communications capability. Determine who is in charge of RFD resources and their qualifications.</i></p> <p><i>Define LCES expectations to RFD resources.</i></p> <p><i>Discuss tactics.</i></p>	<p>03D-04-LCES-VG</p> <p>03D-03-LCES-SL 03D-04-LCES-SL 03D-05-LCES-SL 03D-06-LCES-SL 03D-07-LCES-SL</p> <p>03D-05-LCES-VG 03D-08-LCES-SL 03D-09-LCES-SL</p>

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<p>D. 1700 INPUT</p> <p>You are able to see smoke in the distance, and report this to interagency dispatch.</p> <p>What are your concerns? What are your directions?</p> <p><i>If the helicopter was requested, ask for a quick recon report, and/or arrange for a recon flight for IC or other operational personnel. Air tankers may be ordered but will not arrive during this exercise.</i></p>	<p>03D-10-LCES-SL 03D-07-LCES-VG</p>
<p>E. 1710 INPUT</p> <p>You arrive on the fire scene. RFD Engine 21 is up on top working on the right flank, heading north. RFD Water Tender 60 is on the road at the southwest corner of the fire.</p> <p>The left flank is moderately active at the heel of the fire, but the ground is inaccessible by engine. Engine 22 has begun a hoselay up the left flank.</p> <p>What are your concerns? What are your directions?</p> <p><i>The communications problems with the RFD should by now be addressed. Also, the fact there are two RFD engines, not one as originally reported, should request and receive a briefing from the RFD IC, and inform all resources of the current command structure.</i></p>	<p>03D-08-LCES-VG</p> <p>03D-09-LCES-VG 03D-11-LCES-SL 03D-12-LCES-SL</p>

OUTLINE	AIDS & CUES
<p><i>The fire edge from the road to the flats was smoldering when the RFD arrived and they have failed to tie into the road as an anchor point. Unless directed by group, they have no lookout watching this section of line.</i></p>	
<p>F. 1715 INPUT FROM DOZER OPERATOR</p> <p>Dozer Arrives.</p> <p>What are your concerns? What are your directions?</p> <p><i>Must conduct a quality briefing including all BLM resources (including dozer operator) and preferably RFD resources. If RFD resources are not at briefing, must either find them and give a quality briefing or do a detailed briefing on the radio. Detailed information on their experience, qualifications and the distribution of their experience must be ascertained. (Add RFD experience and qualifications only if requested.</i></p>	<p>03D-10-LCES-VG</p> <p>03D-13-LCES-SL</p>
<p>G. 1720 INPUT</p> <p>The fireline from the road to the top was not properly worked by Engine 21. The fire is making a run to the top and hooking around the right flank.</p> <p>What are your concerns? What are your directions?</p> <p><i>This escape is an indicator of two things; 1) This fire is very active and will require utmost caution; 2) the fact these particular RDF firefighters did not anchor or post a lookout reveals lack in their basic wildland firefighter skills. Consider additional air support including air tankers and air attack.</i></p>	<p>03D-14-LCES-SL</p> <p>03D-11-LCES-VG</p>

OUTLINE	AIDS & CUES
<p>1725 INPUT ENGINES ARRIVE</p> <p>Two of the additional three BLM engines arrive. The last engine arrives five minutes later and reports ignition problems caused by the motor to quit twice enroute; however, it seems to be OK now.</p> <p>What are your concerns? What are your directions?</p> <p><i>Ground engine or park in black to support the hose lay. The briefing must be repeated for these firefighters.</i></p>	<p>03D-12-LCES-VG</p>
<p>1800 INPUT</p> <p>The fires has reach the North-South road. An engine reports the road is holding, but smoke and a few embers are crossing the road.</p> <p>What are your concerns? What are your directions?</p> <p><i>Will a lookout be able to see a spot in this area? If the engine starts working a spot, will LCES mitigations be in place?</i></p>	<p>03D-15-LCES-SL 03D-13-LCES-VG 03D-14-LCES-VG</p>
<p>1810 INPUT</p> <p>The dozer has left a large finger of unburned brush inside the line.</p> <p>What are your concerns? What are your directions?</p> <p><i>With the predicted winds, this must be re-lined or cold trailed.</i></p>	<p>03D-15-LCES-VG</p>

OUTLINE	AIDS & CUES
<p>1820 INPUT</p> <p>Engine 21 has seen a spot fire on the NE side of North-South road and has driven to suppress it.</p> <p>What are your concerns? What are your directions?</p> <p><i>Review LCES with Engine 21.</i></p>	<p>03D-16-LCES-SL 03D-16-LCES-VG</p>
<p>1827 INPUT</p> <p>The spot fire was successfully caught. (Instructor announces to group).</p>	
<p>1830 INPUT</p> <p>Interagency Dispatch informed you the National Weather Service has issued a Red Flag Warning for the fire area due to a large cell moving north towards the fire. Winds from This system could exceed 50 mph. Looking south, you can see this thunderhead approaching.</p> <p>What are your directions? What do you do?</p> <p><i>Ensure Red Flag Warning and accompanying details reach each and every firefighter. Recheck LCES mitigations with each resource.</i></p>	<p>03D-17-LCES-VG</p>
<p>1840 INPUT</p> <p>As the cell approaches, you notice the wind shift from the southwest to the southeast, with strong gusts.</p> <p>What are your directions? What do you do?</p> <p><i>Lookouts should have reported this wind shift. Alert all resources, starting with those downwind. Shifting winds and downdrafts are likely.</i></p>	<p>03D-18-LCES-VG 03D-17-LCES-SL</p>

OUTLINE	AIDS & CUES
<p>1845 INPUT</p> <p>Firefighters on the left flank report a spot fire west of the fire about 200 feet outside the line. Three firefighters are laying a hose to pick it up.</p> <p>What are your concerns? What do you do?</p> <p><i>This spot, down wind and in difficult terrain is an indicator things are getting out of hand. The Escape Route back to the black must be carefully evaluated, preferably by you. the advance warning a lookout can give must be greater than the time required to access the black.</i></p>	<p>03D-19-LCE-VG 03D-20-LCES-VG 03D-18-LCES-SL 03D-19-LCES-SL</p>
<p>1850 INPUT</p> <p>The helicopter will be immediately reassigned to an emergency medical evacuation on another incident.</p> <p>What are your concerns? What are your directions?</p> <p><i>Any LCES function the helicopter may have been serving is now absent. Other mitigations are needed to replace it or affected operations ceased until they are. Medivac plans may have been affected.</i></p>	<p>03D-20-LCES-SL 03D-20-LCES-VG</p>
<p>1855 INPUT</p> <p>(Input overhead by radio conversation). Water Tender 60 has moved to point zz to better serve the engines and has informed the RFD engines of their location on the RFD frequency. Engines can reach the tender by driving across the grass about 200 yards.</p>	<p>03D-22-LCES-VG 03D-23-LCES-VG</p>

OUTLINE	AIDS & CUES
<p>What are your concerns? What are your directions?</p> <p><i>Are the safety zones available to the water tender in this location? Is there a chance the engines will become trapped within this continuous fuel? Can the existing lookouts serve this arrangement? The water tender's relocation was without direction from the IC.</i></p>	
<p>1900 - Possible input if a lookout is in position to see it.</p>	03D-24-LCES-VG
<p>The fire has crossed the line just below the edge of the draw on the left flank of the fire.</p>	03D-25-LCES-VG 03D-21-LCES-SL
<p>What are your concerns? What are your directions?</p> <p><i>If a lookout is in position to see this, fire will burn the hose and move towards the people at the end of the hoselay outside the line.</i></p>	
<p>1905 Inupt</p>	
<p>The escaped fire on the left flank is making an aggressive run up the draw to the northwest, and out of the draw to the north.</p>	03D-26-LCES-VG 03D-27-LCES-VG 03D-22-LCES-SL
<p>What are your concerns? What are your directions?</p> <p><i>The left flank is now lost and all resources on this side must be pulled into the black and accounted for.</i></p>	
<p>1910 Observations and slides</p>	
<p>What additional resources would you recommend to the interagency dispatch center?</p>	

OUTLINE

AIDS & CUES

At this point, the fire has pretty well taken off and if we have done things right and provided LCES for everyone, all forces are accounted for and in safe areas. The interagency dispatch center must be updated on the situation, and additional resources must be ordered. Additional resources may include: additional engines, dozers, overhead, air tankers, air attack, and additional supervisory personnel.

What are your additional concerns? What are your additional responsibilities?

Continue monitoring conditions of resources. As possible, and if the cell and erratic winds allow, create a new anchor point continue flanking. With maps and/or aerial support, identify possible fuel breaks and barriers (roads) ahead of fire. Be prepared to brief incoming resources and possibly replacement IC. Be especially aware of the critical problems encountered during transition and do your part in their mitigation.

THE BLUNT FIRE SCENARIO
LCES WORKSHOP

Table Group Responses

1630 (Opening input from instructor, map, weather report, and slide).
Note key points and information you would write down in this situation.

1640 (Input from Interagency Dispatch Center and map update)
What are your concerns? What are your directions?

1655 (Input from Interagency Dispatch Center)
What are your concerns? What are your directions?

THE BLUNT FIRE SCENARIO
LCES WORKSHOP, Page 2

Table Group Responses

1700 (Input from slide)

What are your concerns? What are your directions?

1710 (Input from instructor and slides, based on what you observe at the scene).

What are your concerns? What are your directions?

1715 (Input from observing dozer arrive)

What are your concerns? What are your directions?

THE BLUNT FIRE SCENARIO
LCES WORKSHOP, Page 3

Table Group Responses

1720 (Input from instructor and slides, based on what you observe at the scene).

What are your concerns? What are your directions?

1725 (Input from BLM engine).

What are your concerns? What are your directions?

1800 (Input from Engine 21 and map update).

What are your concerns? What are your directions?

THE BLUNT FIRE SCENARIO
LCES WORKSHOP, Page 4

Table Group Responses

1810 (Input from observation).
What are your concerns? What are your directions?

1820 (Input from Engine 21, spot fire).
What are your concerns? What are your directions?

1830 (Input from Interagency Dispatch Center)
What are your concerns? What are your directions?

THE BLUNT FIRE SCENARIO
LCES WORKSHOP, Page 5

Table Group Responses

1840 (Input from lookouts if posted, and slides).

What are your concerns? What are your directions?

1845 (Input from firefighters on left flank).

What are your concerns? What are your directions?

1850 (Input from Interagency Dispatch Center, helicopter)

What are your concerns? What are your directions?

THE BLUNT FIRE SCENARIO
LCES WORKSHOP, Page 6

Table Group Responses

1855 (Input, overheard radio conversation).

What are your concerns? What are your directions?

1900 (Input, if lookout is in a position to see it).

What are your concerns? What do you do?

1905 (Inputs from lookouts and firefighters on left flank)

What are your concerns? What are your directions?

THE BLUNT FIRE SCENARIO
LCES WORKSHOP, Page 7

Table Group Responses

1910 (Input from map update based on observations and reports from firefighters).

What additional resources would you recommend to the Interagency Dispatch Center?

1915 (Map update and slide).

What are your additional concerns? What are your additional responsibilities?

THE BLUNT FIRE SCENARIO
LCES WORKSHOP

Table Group Responses

1630 (Opening input from instructor, map, weather report, and slide).
Using this form and the ICS 201 provided, note key points and information you would write down in this situation).

LCES CONCERNS AND MITIGATIONS

NOTES

Communications

Escape Routes

Safety Zones

1640 (Input from Interagency Dispatch Center and map update)
What are your concerns? What are your directions?

LCES CONCERNS AND MITIGATIONS

TACTICAL ACTIONS

Lookouts

Communications

Escape Routes

Safety Zones

THE BLUNT FIRE SCENARIO
LCES WORKSHOP, Page 2

Table Group Responses

1655 (Input from Interagency Dispatch)

What are your concerns? What are your directions?

LCES CONCERNS AND MITIGATIONS

TACTICAL ACTIONS

Lookouts

Communications

Escape Routes

Safety Zones

1700 (Input from slide)

What are your concerns? What are your directions?

LCES CONCERNS AND MITIGATIONS

TACTICAL ACTIONS

Lookouts

Communications

Escape Routes

Safety Zones

THE BLUNT FIRE SCENARIO
LCES WORKSHOP, Page 3

Table Group Responses

1710 (Input from instructor and slides, based on what you observe at the scene).

What are your concerns? What are your directions?

LCES CONCERNS AND MITIGATIONS

TACTICAL ACTIONS

Lookouts

Communications

Escape Routes

Safety Zones

1715 (Input from observing dozer arrive)

What are your concerns? What are your directions?

LCES CONCERNS AND MITIGATIONS

TACTICAL ACTIONS

Lookouts

Communications

Escape Routes

Safety Zones

THE BLUNT FIRE SCENARIO
LCES WORKSHOP, Page 4

Table Group Responses

1720 (Input from instructor and slides, based on what you observe at the scene).

What are your concerns? What are your directions?

LCES CONCERNS AND MITIGATIONS

TACTICAL ACTIONS

Lookouts

Communications

Escape Routes

Safety Zones

1725 (Input from BLM engine).

What are your concerns? What are your directions?

LCES CONCERNS AND MITIGATIONS

TACTICAL ACTIONS

Lookouts

Communications

Escape Routes

Safety Zones

THE BLUNT FIRE SCENARIO
LCES WORKSHOP, Page 5

Table Group Responses

1800 (Input from Engine 21 and map update).

What are your concerns? What are your directions?

LCES CONCERNS AND MITIGATIONS

TACTICAL ACTIONS

Lookouts

Communications

Escape Routes

Safety Zones

1810 (Input from observation).

What are your concerns? What are your directions?

LCES CONCERNS AND MITIGATIONS

TACTICAL ACTIONS

Lookouts

Communications

Escape Routes

Safety Zones

THE BLUNT FIRE SCENARIO
LCES WORKSHOP, Page 6

Table Group Responses

1820 (Input from Engine 21, spot fire).

What are your concerns? What are your directions?

LCES CONCERNS AND MITIGATIONS

TACTICAL ACTIONS

Lookouts

Communications

Escape Routes

Safety Zones

1830 (Input from Interagency Dispatch Center)

What are your concerns? What are your directions?

LCES CONCERNS AND MITIGATIONS

TACTICAL ACTIONS

Lookouts

Communications

Escape Routes

Safety Zones

THE BLUNT FIRE SCENARIO
LCES WORKSHOP, Page 7

Table Group Responses

1840 (Input from lookouts if posted, and slides).

What are your concerns? What are your directions?

LCES CONCERNS AND MITIGATIONS

TACTICAL ACTIONS

Lookouts

Communications

Escape Routes

Safety Zones

1845 (Input from firefighters on left flank).

What are your concerns? What are your directions?

LCES CONCERNS AND MITIGATIONS

TACTICAL ACTIONS

Lookouts

Communications

Escape Routes

Safety Zones

THE BLUNT FIRE SCENARIO
LCES WORKSHOP, Page 8

Table Group Responses

1850 (Input from Interagency Dispatch Center, helicopter)

What are your concerns? What are your directions?

LCES CONCERNS AND MITIGATIONS

TACTICAL ACTIONS

Lookouts

Communications

Escape Routes

Safety Zones

1855 (Input, overheard radio conversation).

What are your concerns? What are your directions?

LCES CONCERNS AND MITIGATIONS

TACTICAL ACTIONS

Lookouts

Communications

Escape Routes

Safety Zones

THE BLUNT FIRE SCENARIO
LCES WORKSHOP, Page 9

Table Group Responses

1900 (Input, if lookout is in a position to see it).

What are your concerns? What do you do?

LCES CONCERNS AND MITIGATIONS

TACTICAL ACTIONS

Lookouts

Communications

Escape Routes

Safety Zones

1905 (Inputs from lookouts and firefighters on left flank)

What are your concerns? What are your directions?

LCES CONCERNS AND MITIGATIONS

TACTICAL ACTIONS

Lookouts

Communications

Escape Routes

Safety Zones

THE BLUNT FIRE SCENARIO
LCES WORKSHOP, Page 10

Table Group Responses

1910 (Input from map update based on observations and reports from firefighters).

What additional resources would you recommend to the Interagency Dispatch Center?

LCES CONCERNS AND MITIGATIONS

TACTICAL ACTIONS

Lookouts

Communications

Escape Routes

Safety Zones

1915 (Map update and slide).

What are your additional concerns? What are your additional responsibilities?