

## Wildland Fire Situation Analysis

### WFSA Information

**WFSA Number:** 2

**Fire Name:** Indians

**Incident Number:** LPF-1491

**Date/Time Prepared:** 06/12/2008 0900

**Jurisdiction(s):** Forest Service

**Geographic Area:** Indians Area

**Unit:** Monterey Ranger District

**Accounting or Management Code:** P5D7T3

### Fire Situation

**Start Date/Time:** 06/08/2008 1236

**Current Fire Size:** 15,000 acres

#### Fuel Conditions

Fuel Model: Grass, Chaparral and Oak Woodland.  
Live Fuels Moisture average 97.22%

#### Topography

Southwest and east facing slopes.  
Slopes are greater than 100%.  
Extremely steep walls within the Arroyo Seco River corridor.

#### Jurisdiction and Land Ownership in the Fire Area

Currently the fire is all within the Los Padres National Forest.  
Fire is burning in the Ventana Wilderness on both sides of the Arroyo Seco Indians Road.  
There is potential for the fire to involve DOD, BLM and private lands.

#### Fire Behavior - Current and Forecast

**Current Fire Behavior:** Rapid rate of spread in the grass and moderate to high rate of spread in chaparral. The fire has made significant upslope and downwind runs.

**Future Expected Fire Behavior:** Expect increased fire behavior and perimeter growth due to low RH values and increased temperatures.

Expect continued interior burning where fuels persist.

Conditions should moderate after sunset.

#### Forecast Weather (3 and 10 day) and Current Seasonal Conditions

Current: 2000 hrs. 06/10/08

Temps: 93-99 degrees - little change from yesterday.

RH 9-16% - little change from yesterday.

Winds: NE 4-10 gusts to 20 mph.

Forecast: Wednesday

Temps: 85-99 degrees

RH 6-15%.

20 Foot Winds:

Ridgetop - NE 8-18 mph through 1000 hrs becoming N 5-10 mph in the afternoon.

Slope/Valley - N 10 mph early the upslope/upcanyon 3-7 mph in the afternoon.

No significant inversion expected on Wednesday.

Wednesday Night Forecast: Clear with areas of smoke in drainages.

Ridge top winds NE 7-14 mph

Downslope winds 1-4 mph in drainages and valleys.

RH recovery 40-50% with lows 50-60.

Outlook for Thursday: Sunny - A little warmer and drier.

Highs 95-100 degrees.

Minimum RH 6-12%

NW ridgetop winds NE 5-10 mph with afternoon upcanyon winds 3-7 mph.

Be aware of shifting winds.

### **National and Regional Fire Preparedness, and Suppression Resource Availability**

Five extended attack CDF fires with structures threatened.

There will be competition for Type 1 handcrews and Air resources (tankers).

### **Current Strategy**

Current Strategy: Anchor and Flank.

Construct and hold indirect lines.

Proceed with request for dozers in the wilderness in support of larger fire alternative.

# Decision Summary

## Selected Alternative

B. Central Avenue/Jolon Road

Most Cost Effective Alternative: A. Minimize Non-Forest Acres Burned

## Selected Alternative Description

This alternative substantially increases the amount of private and DOD lands inside the eastern perimeter west of Central Avenue and Jolon Road.  
Take full suppression action as identified in the long term implementation plan (LTIP) being developed for this fire. The LTIP will identify primary and alternate control lines.

Keep the fire:

South of the Marble Peak Trail and the Arroyo Seco Road;  
West of the Central Avenue, Jolon Road, and Sulphur Springs Road;  
North of the Nacimiento Ferguson Road;  
East of the Cone Peak Road and the North Coast Ridge Trail and Road.

## Rationale for selecting this alternative

Gives additional time to construct hand containment lines in Wilderness.

Control lines on the east boundary are existing roads so construction will be rapid and ability to hold this section of line is high.

This alternative was chosen because it has a higher probability of success than alternative A (most cost effective alternative).

## WFSA revision or amendment thresholds and protocol

## Critical fire management resources

## Special considerations

Analysis prepared by:	
Agency Administrator Approval	Date/Time



## Values at Risk

Item			Value at Risk (\$)
Wilderness			1,000,000
Developed Recreation			10,000,000
Wild and Scenic River			100,000
Special Use Recreation Cabins			1,000,000
Steelhead			100,000
Trails			1,000,000
Roads			1,000,000
Total value at risk (rounded)			<u>14,000,000</u>

## Resource Management Objectives

### **Developed and General Forest**

Providing for public and firefighter safety as the highest priority on all suppression actions.

All suppression strategies (control, confine and contain) are authorized.

Work closely with cooperating agencies to share the cost of structure protection in local communities.

Prevent the spread of noxious weed to the greatest extent feasible by implementing the Noxious Weed Management Strategy (LMP part 3, Appendix M).

Limit the spread of Sudden Oak Death through the proper cleaning of suppression and rehabilitation tools and equipment

Protect important historic structures, archaeological sites and critical habitat areas to the greatest extent feasible without jeopardizing public or fire fighter safety.

### **Wilderness, Research Natural and Special Interest Areas**

Wilderness - Protect and manage to improve the capability to sustain a desired range of benefits so that changes in the ecosystem are primary a consequence of natural forces.

Emphasize Minimum Impact Suppression Tactics on all wilderness fires.

All control strategies (control, contain confine) are authorized.

Wilderness Resource Advisors will be assigned as necessary to all wilderness fires.

Use the minimum tool necessary to accomplish management activities, including suppression and rehabilitation of fires.

Research Natural Areas - Protect and manage to maintain unmodified conditions and natural processes.

Special Interest Areas - Protect and manage for values and features for which they were established (LMP Part 2, 101-106)

## Objectives

Objective	Priority (high=10)	Weight
<b>Environmental</b>		
<b>Fisheries</b> Include Resource Advisor in strategic planning. Protect existing or potential steelhead habitat in all drainages. No fire retardant within 300 feet of wet drainages.	5	0.11
<b>T,E&amp;S plants</b> Include Resource Advisor in strategic planning. Sensitive plants in the area likely to be present. Protect existing or potential habitat.	3	0.07
<b>Heritage Resources/Tribal Coordination</b> Include Resource Advisor in strategic planning. Coordinate with local tribes to address any concerns. Protect known heritage sites.	5	0.11
<b>Riparian Areas</b> Include Resource Advisor in strategic planning. Follow MIST guidelines - including Guidelines for Fire Suppression in Riparian Areas.	5	0.11
<b>Condors</b> Include Resource Advisor in strategic planning. Coordinate with US Fish and Wildlife Service when fire suppression operations may affect California Condor.	5	0.11
<b>Social</b>		
<b>Media and Public</b> Keep the media and the public informed of current fire activities.	6	0.14
<b>Local Residences</b> Keep permittee and local residents informed on potential threats and current fire activities.	7	0.16
<b>Visuals</b> Suppression rehabilitation efforts to minimize long term visual impacts are a priority in wilderness.	8	0.18

## Safety Issues

Safety Issues		
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<b>Firefighter Exposure</b>		
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Risk to firefighters: Heat related risks, steep rocky terrain, and poison oak.

<b>Public Safety</b>		
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Potential for recreational use of the wilderness and campgrounds.

The fire has burned through Special Use permitted cabins near the old Indians Guard Station - One structure partially burned.

There are scattered residences and ranch structures within the Forest boundary.

<b>Aviation Safety</b>		
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Pilots need to be made aware of on-going air operations at Fort Hunter Liggett.

Inform all pilots to be on the look out for condors - avoid collisions.

**Alternatives**

Keep the fire:  
South of the Marble Peak Trail and the Arroyo Seco Road;

West of the Central Avenue, Jolon Road, and Sulphur Springs Road;  
**Alternative B. Central Avenue/Jolon Road**

This alternative substantially increases the amount of private and DOD lands inside the eastern perimeter west of Central Avenue and Jolon Road.  
Take full suppression action as identified in the long term implementation plan (LTIP) being developed for this fire. The LTIP will identify primary and alternate control lines.

**Target Outcome**

Keep the fire:  
South of the Marble Peak Trail and the Arroyo Seco Road;  
West of the Central Avenue, Jolon Road, and Sulphur Springs Road;  
North of the Nacimiento Ferguson Road;  
East of the Cone Peak Road and the North Coast Ridge Trail and Road.

**Extreme Outcome**

Keep the fire:  
South of the Big Pines Trail, Rock Ridge Trail, and the Cachagua Road  
West of the Carmel Valley Road, the Arroyo Seco Road, Central Avenue, Jolon Road, and Sulphur Springs Road;  
North of the Nacimiento Ferguson Road;  
East of Highway 1.

Probability:	70%			Probability:	30%
Final Fire Size:	96000 acres			Final Fire Size:	0 acres
Time to Contain:	45 days			Time to Contain:	0 days
Time to Control:	60 days			Time to Control:	0 days

**Alternative A. Minimize Non-Forest Acres Burned**

This alternative includes mostly National Forest Lands. There are approximately 15,000 acres private, 4000 acres of BLM lands, and 25,000 acres of DOD land within the perimeter.

**Target Outcome**

Keep the fire:  
South of the Marble Peak Trail and the Arroyo Seco Road;  
West of the Reliz Canyon and Stoney Valley;  
North of the Nacimiento Ferguson Road;  
East of the Cone Peak Road and the North Coast Ridge Trail.

**Extreme Outcome**

Keep the fire:  
South of the Big Pines Trail, Rock Ridge Trail, and the Cachagua Road  
West of the Carmel Valley Road, the Arroyo Seco Road, Central Avenue, Jolon Road, and Sulphur Springs Road;  
North of the Nacimiento Ferguson Road;  
East of Highway 1.

Probability:	60%			Probability:	40%
Final Fire Size:	74000 acres			Final Fire Size:	0 acres
Time to Contain:	30 days			Time to Contain:	0 days
Time to Control:	40 days			Time to Control:	0 days

**Alternative C. Carmel River/Big Sur/Hwy 1**

This alternative includes the Carmel River, Big Sur River, and Big Sur Coastal drainages.

The coastal drainages have heavy fuel loads from Sudden Oak Death.

**Target Outcome**

**Extreme Outcome**

Keep the fire:  
 South of the Marble Peak Trail and the Arroyo Seco Road;  
 West of the Central Avenue, Jolon Road, and Sulphur Springs Road;  
 North of the Nacimiento Ferguson Road;  
 East of the Cone Peak Road and the North Coast Ridge Trail and Road.

Keep the fire:  
 South of the Big Pines Trail, Rock Ridge Trail, and the Cachagua Road  
 West of the Carmel Valley Road, the Arroyo Seco Road, Central Avenue, Jolon Road, and Sulphur Springs Road;  
 North of the Nacimiento Ferguson Road;  
 East of Highway 1.

Probability:	85%			Probability:	15%
Final Fire Size:	160000 acres			Final Fire Size:	0 acres
Time to Contain:	65 days			Time to Contain:	0 days
Time to Control:	80 days			Time to Control:	0 days

## Estimated Suppression Costs

<b>Alternative B. Central Avenue/Jolon Road</b>					
<b>Target Outcome</b>			<b>Extreme Outcome</b>		
Estimated suppression cost: \$54,700,000			Estimated suppression cost: \$0		
Basis for cost estimate: Historic average cost per acre			Basis for cost estimate: Historic average cost per acre		

<b>Alternative A. Minimize Non-Forest Acres Burned</b>					
<b>Target Outcome</b>			<b>Extreme Outcome</b>		
Estimated suppression cost: \$42,200,000			Estimated suppression cost: \$0		
Basis for cost estimate: Historic average cost per acre			Basis for cost estimate: Historic average cost per acre		

<b>Alternative C. Carmel River/Big Sur/Hwy 1</b>					
<b>Target Outcome</b>			<b>Extreme Outcome</b>		
Estimated suppression cost: \$91,200,000			Estimated suppression cost: \$0		
Basis for cost estimate: Historic average cost per acre			Basis for cost estimate: Historic average cost per acre		

## AAC Tables

### Fire Management Unit: 01-Monterey District-1

<b>From</b>	<b>To</b>	<b>Cost</b>
0	0.25	\$15016
0.26	10.00	\$4664
11.00	100.00	\$2597
101.00	300.00	\$1057
301.00	1,000.00	\$3544
1,001.00	9,999,999.00	\$570

## Values Protected

Note: Outcome values are rounded to 3 significant digits counting from the left.  
Totals are rounded to 2 significant digits.

### Alternative B. Central Avenue/Jolon Road

Item	Values At Risk	Protected in Target Outcome (70%)	Protected in Extreme Outcome (30%)	Expected Values Protected
Wilderness	1,000,000	1,000,000	1,000,000	
Developed Recreation	10,000,000	10,000,000	10,000,000	
Wild and Scenic River	100,000	100,000	100,000	
Special Use Recreation Cabins	1,000,000	1,000,000	1,000,000	
Steelhead	100,000	100,000	100,000	
Trails	1,000,000	1,000,000	1,000,000	
Roads	1,000,000	1,000,000	1,000,000	
Total (rounded)	\$14,000,000	\$14,000,000	\$14,000,000	\$14,000,000

### Alternative A. Minimize Non-Forest Acres Burned

Item	Values At Risk	Protected in Target Outcome (60%)	Protected in Extreme Outcome (40%)	Expected Values Protected
Wilderness	1,000,000	900,000	1,000,000	
Developed Recreation	10,000,000	9,000,000	10,000,000	
Wild and Scenic River	100,000	0	100,000	
Special Use Recreation Cabins	1,000,000	0	1,000,000	
Steelhead	100,000	90,000	100,000	
Trails	1,000,000	0	1,000,000	
Roads	1,000,000	0	1,000,000	
Total (rounded)	\$14,000,000	\$10,000,000	\$14,000,000	\$12,000,000

### Alternative C. Carmel River/Big Sur/Hwy 1

Item	Values At Risk	Protected in Target Outcome (85%)	Protected in Extreme Outcome (15%)	Expected Values Protected
Wilderness	1,000,000	1,000,000	1,000,000	
Developed Recreation	10,000,000	10,000,000	10,000,000	
Wild and Scenic River	100,000	100,000	100,000	
Special Use Recreation Cabins	1,000,000	1,000,000	1,000,000	
Steelhead	100,000	100,000	100,000	
Trails	1,000,000	1,000,000	1,000,000	
Roads	1,000,000	1,000,000	1,000,000	
Total (rounded)	\$14,000,000	\$14,000,000	\$14,000,000	\$14,000,000

## Resource Value Losses

Note: Outcome values, including totals, are rounded to 3 significant digits counting from the left. Expected Impact is rounded to 2 significant digits.

### Alternative B. Central Avenue/Jolon Road

Item	Target Outcome (70%)		Extreme Outcome (30%)	Expected Impact
Forage	3,840		0	
Fisheries - Wm/Cd Wtr	0		0	
Fisheries - Anad Sport	0		0	
Wildlife - Big Game	194,000		0	
Wildlife - Other	201,000		0	
Recreation - Disp/Dev	68,700,000		0	
Recreation - Wilderness	80,600		0	
Total (rounded)	\$69,000,000		\$0	\$48,000,000

### Alternative A. Minimize Non-Forest Acres Burned

Item	Target Outcome (60%)		Extreme Outcome (40%)	Expected Impact
Forage	2,960		0	
Fisheries - Wm/Cd Wtr	0		0	
Fisheries - Anad Sport	0		0	
Wildlife - Big Game	149,000		0	
Wildlife - Other	155,000		0	
Recreation - Disp/Dev	53,000,000		0	
Recreation - Wilderness	62,200		0	
Total (rounded)	\$53,000,000		\$0	\$32,000,000

### Alternative C. Carmel River/Big Sur/Hwy 1

Item	Target Outcome (85%)		Extreme Outcome (15%)	Expected Impact
Forage	6,400		0	
Fisheries - Wm/Cd Wtr	0		0	
Fisheries - Anad Sport	0		0	
Wildlife - Big Game	323,000		0	
Wildlife - Other	335,000		0	
Recreation - Disp/Dev	115,000,000		0	
Recreation - Wilderness	134,000		0	
Total (rounded)	\$120,000,000		\$0	\$100,000,000

## Computation of NVC Losses by FMU and FIL

<b>Alternative B. Central Avenue/Jolon Road</b>											
			Target Outcome				Extreme Outcome				
FMU	FIL	\$/acre	%	Acres	Impact				%	Acres	Impact
01-Monterey District-1	1	0	0	0	0				0	0	0
	2	0	20	19200	0				20	0	0
	3	-389	30	28800	-11203200				30	0	0
	4	-1210	50	48000	-58080000				50	0	0
	5	-2100	0	0	0				0	0	0
	6	-2930	0	0	0				0	0	0
<b>Total</b>			100	96000	-\$69,000,000				100	0	\$0

<b>Alternative A. Minimize Non-Forest Acres Burned</b>											
			Target Outcome				Extreme Outcome				
FMU	FIL	\$/acre	%	Acres	Impact				%	Acres	Impact
01-Monterey District-1	1	0	0	0	0				0	0	0
	2	0	20	14800	0				20	0	0
	3	-389	30	22200	-8635800				30	0	0
	4	-1210	50	37000	-44770000				50	0	0
	5	-2100	0	0	0				0	0	0
	6	-2930	0	0	0				0	0	0
<b>Total</b>			100	74000	-\$53,000,000				100	0	\$0

<b>Alternative C. Carmel River/Big Sur/Hwy 1</b>											
			Target Outcome				Extreme Outcome				
FMU	FIL	\$/acre	%	Acres	Impact				%	Acres	Impact
01-Monterey District-1	1	0	0	0	0				0	0	0
	2	0	20	32000	0				20	0	0
	3	-389	30	48000	-18672000				30	0	0
	4	-1210	50	80000	-96800000				50	0	0
	5	-2100	0	0	0				0	0	0
	6	-2930	0	0	0				0	0	0
<b>Total</b>			100	160000	-\$120,000,000				100	0	\$0

## NVC Tables

Only negative values are included for this fire.

### Fire Management Unit: 01-Monterey District-1

	FIL 1	FIL 2	FIL 3	FIL 4	FIL 5	FIL 6
Mature Timber	0	0	0	0	0	0
Immature Poles	0	0	0	0	0	0
Seed and Saplings	0	0	0	0	0	0
Forage	0	0	0	-0.08	-0.16	-0.32
Water Use	0	0	0	0	0	0
Water Storage	0	0	0	0	0	0
Fisheries - Wm/Cd Wtr	0	0	0	0	-6.45	-7.87
Fisheries - Anad Sport	0	0	0	0	-38.96	-49.53
Fisheries - Commercial	0	0	0	0	0	0
Wildlife - Big Game	0	0	0	-4.04	-5.03	-6.03
Wildlife - Other	0	0	0	-4.19	-4.68	-6.18
Recreation - Disp/Dev	0	0	-388.78	-1198.79	-2041.26	-2851.27
Recreation - Wilderness	0	0	0	-1.68	-3.44	-5.04
Improvements	0	0	0	0	0	0
Totals	\$0	\$0	-\$389	-\$1,209	-\$2,100	-\$2,926

## Safety Assessment

<b>Alternative B. Central Avenue/Jolon Road</b>		
Target Outcome	Fallback Outcome	Extreme Outcome
Issue: Firefighter Exposure		
Rating: 6 / 10		Rating: 0 / 10
Issue: Public Safety		
Rating: 6 / 10		Rating: 0 / 10
Issue: Aviation Safety		
Rating: 5 / 10		Rating: 0 / 10

<b>Alternative A. Minimize Non-Forest Acres Burned</b>		
Target Outcome	Fallback Outcome	Extreme Outcome
Issue: Firefighter Exposure		
Rating: 5 / 10		Rating: 0 / 10
Issue: Public Safety		
Rating: 7 / 10		Rating: 0 / 10
Issue: Aviation Safety		
Rating: 5 / 10		Rating: 0 / 10

<b>Alternative C. Carmel River/Big Sur/Hwy 1</b>		
Target Outcome	Fallback Outcome	Extreme Outcome
Issue: Firefighter Exposure		
Rating: 5 / 10		Rating: 0 / 10
Issue: Public Safety		
Rating: 4 / 10		Rating: 0 / 10
Issue: Aviation Safety		
Rating: 6 / 10		Rating: 0 / 10

## Decision Tree

## Comparison of Alternatives

		Alternatives											
		B. Central Avenue/ Jolon Road				A. Minimize Non- Forest Acres Burned				C. Carmel River/Big Sur/Hwy 1			
Estimated Target Suppression Cost		\$55,000,000				\$42,000,000				\$91,000,000			
Expected Suppression Cost		\$38,000,000				\$25,000,000				\$78,000,000			
Expected Values Protected		\$14,000,000				\$12,000,000				\$14,000,000			
Expected Resource Loss		\$48,000,000				\$32,000,000				\$100,000,000			
<b>Total Expected Financial Impact</b>		<b>-\$72,000,000</b>				<b>-\$45,000,000</b>				<b>-\$164,000,000</b>			
<b>Expected Objectives Score</b>		<b>4.3</b>				<b>3.7</b>				<b>4.2</b>			
		Outcomes						Outcomes					
		Alt. B			Alt. A			Alt. C					
		Tgt	FB	Ex	Tgt	FB	Ex	Tgt	FB	Ex			
Probability (%)		70	0	30	60	0	40	85	0	15			
<b>Objective</b>		<b>Wgt</b>											
<b>Environmental</b>													
Fisheries	0.11	5		0	3.5	5		0	3.0	3		0	2.5
T,E&S plants	0.07	8		0	5.6	8		0	4.8	8		0	6.8
Heritage Resources/Tribal Coordination	0.11	4		0	2.8	4		0	2.4	4		0	3.4
Riparian Areas	0.11	5		0	3.5	5		0	3.0	3		0	2.5
Condors	0.11	6		0	4.2	6		0	3.6	5		0	4.2
<b>Social</b>													
Media and Public	0.14	8		0	5.6	8		0	4.8	7		0	5.9
Local Residences	0.16	8		0	5.6	8		0	4.8	7		0	5.9
Visuals	0.18	5		0	3.5	5		0	3.0	3		0	2.5
<b>Expected Safety Score</b>		<b>3.9</b>				<b>3.4</b>				<b>4.3</b>			
Firefighter Exposure	0.32	6		0	4.2	5		0	3.0	5		0	4.2
Public Safety	0.28	6		0	4.2	7		0	4.2	4		0	3.4
Aviation Safety	0.40	5		0	3.5	5		0	3.0	6		0	5.1

## Comparison of Alternatives

-		Incident action plans, briefing and incident complexity analysis
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**Incident Complexity Rating:** Type 1

**Rationale:**

NO	YES	FACTOR
<b>A. Fire Behavior</b>		
-		Burning index predicted to be above the 90% level.
	X	Potential exists for "blowup" conditions (fuel moisture, winds, etc.).
	X	Crowning, profuse or long-range spotting.
	X	Weather forecast indicating no significant relief or worsening conditions.
<b>B. Resources Committed</b>		
	X	200 or more personnel assigned.
	X	Three or more divisions.
	X	Wide variety of special support personnel.
-		Substantial air operation which is not properly staffed.
-		Majority of initial attack resources committed.
<b>C. Resources Threatened</b>		
-		Urban interface.
	X	Developments and facilities.
	X	Restricted, threatened or endangered species habitat.
	X	Cultural sites.
	X	Unique natural resources, special designated zones or wilderness.
-		Other special resources.
<b>D. Safety</b>		
	X	Unusually hazardous fire line conditions.
-		Serious accidents or fatalities.
-		Threat to safety of visitors from fire and related operations.
	X	Restrictions and/or closures in effect or being considered.
-		No night operations in place for safety reasons.
<b>E. Ownership</b>		
	X	Fire burning or threatening more than one jurisdiction.
-		Potential for claims (damages).
-		Different or conflicting management objectives.
-		Disputes over suppression responsibility.
	X	Potential for unified command.
<b>F. External Influences</b>		
-		Controversial wildland fire management policy.
-		Pre-existing controversies/relationships.
-		Sensitive media relationships.
	X	Smoke management problems.
-		Sensitive political interests.
	X	Other external influences.
<b>G. Change in Strategy</b>		
-		Change to a more aggressive suppression strategy.
	X	Large amounts of unburned fuel within planned perimeter.
	X	WFSA invalid or requires updating.
<b>H. Existing Overhead</b>		
	X	Worked two operational periods without achieving initial objectives.
-		Existing management organization ineffective.
-		Overhead overextended themselves mentally and/or physically.

-		Incident action plans, briefings, etc. missing or poorly prepared.
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