Corrected

BUTTS INCIDENT

CA-LNU-005333

Incident Action Plan

Operational Period

July 04, 2014

0700 - 0700

INCIDENT OBJECTIVES

1. INCIDENT NAME	2. DATE PREPARED	3. TIME PREPARED
Butts	7-3-2014	1600

4. OPERATIONAL PERIOD (DATE/TIME)
7-4-2014 0700-0700

5. GENERAL CONTROL OBJECTIVES FOR THE INCIDENT (INCLUDE ALTERNATIVES)

Control Objectives:

- **Keep fire south and west of Putah Creek**
- **Keep fire north of Pope Creek**
- **Keep fire east of Oat Hill Road**

Management Objectives:

- **Utilize a risk management process and appropriate mitigations to provide responder and public safety throughout the incident.**
- **Consult with Resource Advisors to preserve cultural and archeological sites throughout all operational incident activities.**
- **Maintain a detailed financial tracking process to keep cost commensurate with values at risk that are endangered by the incident.**
- **Collect and validate incident intelligence to ensure accurate, timely, and approved internal and external information is released throughout the incident.**

6. WEATHER FORCAST FOR OPERATIONAL PERIOD

- ***See attached spot weather forecast***

7. GENERAL SAFETY MESSAGE

Provide proper work rest cycles for all personnel while ensuring hydration takes place throughout the operational period. Be aware of the traffic from the sheltered in place local residents. Ensure that all crews receive an operational briefing.

8. ATTACHMENTS (X IF ATTACHED)

[X] ORGANIZATION LIST(ICS 203)	[X] MEDICAL PLAN (ICS 206)	[ ]
[X] ASSIGNMENT LIST (ICS 204)	[X] INCIDENT MAP	[ ]
[X] COMMUNICATIONS PLAN (ICS 205)	[ ] TRAFFIC PLAN	[ ]

9. PREPARED BY (PLANNING SECTION CHIEF)	10. ARRPOVED BY (INCIDENT COMMANDER)
Roger Noon RESL	

202 ICS (1/99)

Incident Forecast for the Butts Fire
1600 PDT Thursday July 3, 2014

Location T10N R5W Sec 32 Elev. 800-2000' S-W aspect Drainage Hope Valley
Based on RAWS weather data from Konocti, Lake County RAWS and onsite observations

*** **NOTE** - All forecast winds are for the ***20-ft level*** ***

Discussion: Distant upper low off the Pacific Northwest coast will dominate our weather Friday with moderate WSW flow. Even though this is a cooler onshore pattern for the immediate coast, the incident itself is too far inland to be significantly affected by the deepening marine layer. As a result, despite the cool mornings, daytime highs will still rise into the 90's with afternoon humidity falling to near 20%. Winds during the overnight thru late morning hours should remain very light, but moderate SW to W winds will be increasing each afternoon over the next few days. As yesterday, morning inversions will quickly lift by about 10 am. 4-Corners High Pressure will push westward towards CA starting Friday into the weekend, bringing a gradual rise in temperatures. Winds should remain SW to W at light to locally moderate speeds....but diminishing late in the weekend.

Today (Friday): Minimal inversion, lifting by 10 am. Otherwise sunny & hot. Max temps 95-100 deg. Min RH 17-22%. Winds light, mainly variable to E 1-4 mph thru 10 am, then , becoming WSW 7-12 mph gusts 17 mph by mid-afternoon. Ridge winds light early but becoming WSW 12-17 mph gusts 22 mph by afternoon.

Tonight: Clear . Min temps 60-65 deg. Max RH 60-70%. Winds light drainage 0-3 mph.

Saturday: Sunny and hot. Max temps 96-101 deg. Min RH 16-21%. Winds becoming WSW 8-13 mph gusts 18 mph by late afternoon. Ridge winds becoming WSW 13-18 mph gusts 25 mph by afternoon.

Outlook for Sunday: Continued sunny and hot. Max temps 97-102 deg, Min RH 15-20%. Winds SW 4-8 mph gusts 12 mph.

Yesterdays Onsite Observations:

Time	Elev	Location	Temp	RH	Wind (eye-level)
1215	1200 ft	Div T	93	39%	upslope 1-3 gusts 6
1245	Unknown	Div M	92	35%	S-SE 2-4 mph
1315	800 ft	Div T	95	40%	S 1-3 gusts 6
1415	Unknown	Div Q	91	40%	S-SE 1-3 G 6

Basil Newmerzhycky
Basil Newmerzhycky
Incident Meteorologist – Predictive Services

SAFETY MESSAGE

We are **ALL** Accountable and Responsible for **SAFE** behaviors

INCIDENT: Butts	Date: July 4, 2014 Time: 0700-0700

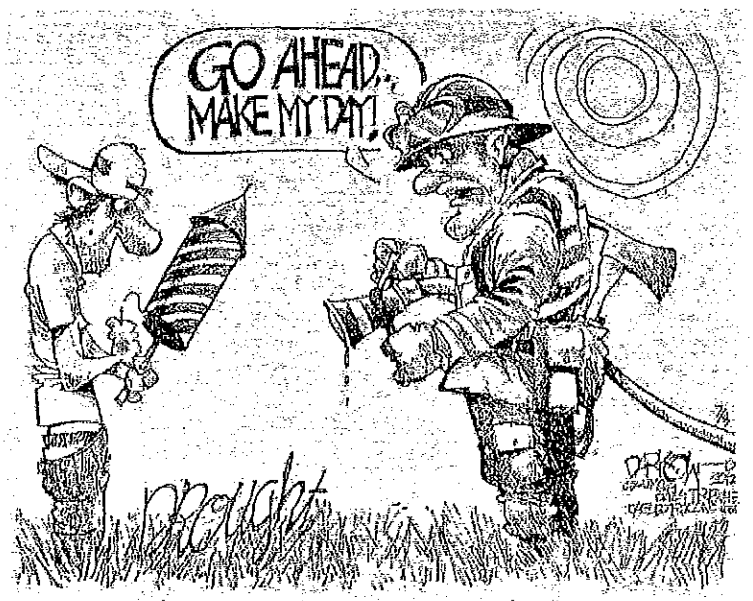
MAJOR HAZARDS

- **TRAVEL: Fourth of July holiday traffic, beware of congestion and pedestrians in roadway.**
- **FIRE BEHAVIOR: Fuel moistures are at critical lows-live and dead loads are 8 weeks ahead of schedule.**
- **PERSONAL AND PERSONNEL ACCOUNTABILITY: Make sure everyone is informed and understands the mission and or objectives. Tailgate Safety Briefings REQUIRED.**

Fire Order of the Day –**Maintain prompt communications with your crew, Your supervisor, and adjoining forces.**

- **Exertional Illness Prevention-** Monitor each other for effects of heat illness, take frequent hydration and nutrition breaks throughout your work assignment. Don't delay reporting exertional illness symptoms.
- **Repopulation of fire area–** Be alert for repopulation of fire area and residential traffic.
- **Poison Oak** – Watch out for Poison Oak on the fireline, see Med Unit sooner than later for treatment. Change out clothes and wash affected areas as soon as appropriate to prevent exposure and spread.
- **Driving:** Keep your speeds down on all fire roads, watch out for loose, dusty roads, unstable shoulders and fire debris. Keep speeds to posted limits. Watch for civilian traffic in the fire area. Be alert to July 4th holiday traffic.
- **Illegal Fireworks:** Safe and Sane fireworks are permissible in St. Helena and Lakeport. All other areas fireworks are illegal. If observed report to DIVS for referral to Law Enforcement.

Watch Out Situation of the Day



HAZARD TREE SAFETY

HAZARD TREES, BOTH DEAD SNAGS AND LIVE GREEN TREES ARE ONE OF THE MOST COMMON RISKS ENCOUNTERED ON THE FIRELINE. ALL FIREFIGHTERS SHOULD FREQUENTLY SURVEY THEIR WORK AREA FOR POTENTIAL HAZARD TREES.

SITUATIONAL AWARENESS

ENVIRONMENT:
CURRENT AND FORECASTED WINDS
NIGHT OPS
STEEP SLOPES
NUMBER AND HEIGHT OF HAZARD TREES
ANTICIPATED BURN-DOWN TIME
POTENTIAL FOR TREES TO DOMINO

INDICATORS:

TREES BURNING FOR ANY PERIOD OF TIME
HIGH RISK TREE SPECIES
NUMEROUS DOWNED TREES
DEAD, BROKEN OR BURNING TOPS AND LIMBS,
ACCUMULATION OF DOWNED LIMBS,
ABSENCE OF NEEDLES, BARK OR LIMBS
LEANING OR HUNG UP

Incident Safety Officer: Scott Hansen SOF1(T) Deputy IC: Ron Bravo

DIVISION ASSIGNMENT LIST	1. Branch	2. Division/Group
	BRANCH I	A
3. Incident Name	4. Operational Period	
Butts CA-LNU-005333	Date: 7-4-14	Time: 0700-0700 Hrs.

5. Operations Personnel

Operations Chief	Mike Parks – Day Mike Olivarria - Night	Division/Group Supervisor	Doug Jones
Branch Director	Brent Stangeland	Air Attack Supervisor No.	

6. Resources Assigned this Period

Strike Team/Task Force/ Resource Designator	Briefing	Leader	Number Persons	Trans. Needed	Report Location	On Shift	Arrival Time	Off Shift
STC ~~LNU~~ 9440 C TCU		M. Hernandez	18		Drop Point 2		0700	
STG LNU 9140 G		J. Layton	27		Drop Point 2		0700	
SOFR		K. Margiott	1		Drop Point 2		0700	
FEMP		M. Menard	1		Drop Point 2		0700	
FEMT		J. Farrer	1		Drop Point 2		0700	

7. Control Operations

Improve fire line and mop 200' in.

8. Special Instruction

Use caution around down power lines.
Fireline Paramedic & EMT will be shared throughout enitre Branch.
SOFR will be used throughout entire Branch.

9. Division/Group Communication Summary

Function	Frequency	System	Channel	Function	Frequency	System	Channel
Command	RX 151.2650 N TX 159.3300 N	Tone 103.5 Tone 141.3	CDF CMD 2	Emergency	RX/TX 168.6250 N		Guard
Tactical Div/Group	RX/TX 151.1375 N	Tone 156.7	VTAC 11	Air to Ground	RX/TX 159.4500 N		CDF T23

Prepared by (Resource Unit Ldr.)	Approved by (Planning Sect. Ch.)	Date	Time
Roger Noon	Sean Griffis	07/03/14	1900

DIVISION ASSIGNMENT LIST	1. Branch	2. Division/Group
	BRANCH I	M

3. Incident Name	4. Operational Period
Butts CA-LNU-005333	Date: 7-4-14 Time: 0700-0700 Hrs.

5. Operations Personnel

Operations Chief	Mike Parks – Day Mike Olivarria - Night	Division/Group Supervisor	Mike Crosby Jeremey Pierce (T)
Branch Director	Brent Stangeland	Air Attack Supervisor No.	

6. Resources Assigned this Period

Strike Team/Task Force/ Resource Designator	Briefing	Leader	Number Persons	Trans. Needed	Report Location	On Shift	Arrival Time	Off Shift
STC MMU 9420C		R. Gladwin	21		Drop Point 2		0700	
STC SHU 9240C		K. White	20		Drop Point 2		0700	
STC NEU 9232C		S. Robinson	35		Drop Point 2		0700	
STG HUU 9126G		E. Rudesill	29		Drop Point 2		0700	
STG HUU 9124G		D. Tikkanen	33		Drop Point 2		0700	
DOZ E-33 COLEMAN			2		Drop Point 2		0700	
DOZ E-34 A/T WANZER			2		Drop Point 2		0700	
WT E-38 PIVNISKA		C. Pivniska	2		Drop Point 2		0700	
WT E-40 CASINI		P. Casini	2		Drop Point 2		0700	
WT E-39 BURGESS		D. Burgess	2		Drop Point 2		0700	

7. Control Operations

Improve fire line and mop 200' in.

8. Special Instruction

Use caution around down power lines.

Fireline Paramedic & EMT will be shared throughout entire Branch.

SOFR will be shared throughout entire Branch.

9. Division/Group Communication Summary

Function	Frequency	System	Channel	Function	Frequency	System	Channel
Command	RX 151.2650 N TX 159.3300 N	Tone 103.5 Tone 141.3	CDF CMD 2	Emergency	RX/TX 168.6250 N		Guard
Tactical Div/Group	RX/TX 158.7375 N	Tone 156.7	VTAC 13	Air to Ground	RX/TX 159.4500 N		CDF T23

Prepared by (Resource Unit Ldr.)	Approved by (Planning Sect. Ch.)	Date	Time
Roger Noon	Sean Griffis	07/03/14	1900

DIVISION ASSIGNMENT LIST	1. Branch: BRANCH III	2. Division/Group: T
3. Incident Name: Butts CA-LNU-005333	4. Operational Period: Date: 7-4-14	Time: 0700-0700 Hrs.

5. Operations Personnel

Operations Chief	Mike Parks – Day Mike Olivarria - Night	Division/Group Supervisor	David Carney
Branch Director	Felix Berbena	Air Attack Supervisor No.	

6. Resources Assigned this Period

Strike Team/Task Force/ Resource Designator	Briefing	Leader	Number Persons	Trans. Needed	Report Location	On Shift	Arrival Time	Off Shift
STC BEU 9460C		J. Campbell	17		Drop Point 3		0700	
STC MEU 9112C		T. Howard	19		Drop Point 3		0700	
STG NEU 9231G		J. Russell	33		Drop Point 3		0700	
STL NEU 9230L		M Crandall	5		Drop Point 3		0700	
WT E-44 A/T Wanzer		G. Lindeblan	2		Drop Point 3		0700	
SOFR		M. Chamblin	1		Drop Point 3		0700	
SOFR (T)		K. Swope	1		Drop Point 3		0700	
FEMP		D. Williams	1		Drop Point 3		0700	
FEMT		S. Pearson	1		Drop Point 3		0700	

7. Control Operations

Improve fire line and mop-up 200' in.

8. Special Instruction

Use caution around down power lines.

9. Division/Group Communication Summary

Function	Frequency	System	Channel	Function	Frequency	System	Channel
Command	RX 151.2650 N TX 159.3300 N	Tone 103.5 Tone 141.3	CDF CMD 2	Emergency	RX/TX 168.6250 N		Guard
Tactical Div/Group	RX/TX 154.2725 N	Tone 156.7	VFIRE 24	Air to Ground	RX/TX 159.4500 N	192.8	CDF T23

Prepared by (Resource Unit Ldr.)	Approved by (Planning Sect. Ch.)	Date	Time
Roger Noon	Sean Griffis	07/03/14	1900

DIVISION ASSIGNMENT LIST	1. Branch	2. Division/Group
		Fire Suppression Repair
3. Incident Name: Butts CA-LNU-005333	4. Operational Period: Date: 7-4-14	Time: 0700-0700 Hrs.

5. Operations Personnel

Operations Chief	Mike Parks – Day Mike Olivarria - Night	Division/Group Supervisor	Gerrie Finn
Branch Director		Air Attack Supervisor No.	

6. Resources Assigned this Period

Strike Team/Task Force/ Resource Designator	Briefing	Leader	Number Persons	Trans. Needed	Report Location	On Shift	Arrival Time	Off Shift
DOZ LNU 1443		G. Reynolds	1		Butts Staging		0700	
DOZ LNU 1445		J. Deforge	1		Butts Staging		0700	
FOBS		G. Anderson	1		Butts Staging		0700	
FOBS		E. Simpson	1		Butts Staging		0700	
THSP		M. Sheeline	1		Butts Staging		0700	

7. Control Operations

Evaluate needs for fire suppression repair.

Conduct fire suppression repair where identified.

8. Special Instruction

Use caution around down power lines.

9. Division/Group Communication Summary

Function	Frequency	System	Channel	Function	Frequency	System	Channel
Command	RX 151.2650 N TX 159.3300 N	Tone 103.5 Tone 141.3	CDF CMD 2	Emergency	RX/TX 168.6250 N		Guard
Tactical Div/Group				Air to Ground	RX/TX 159.4500 N		CDF T23

Prepared by (Resource Unit Ldr.)	Approved by (Planning Sect. Ch.)	Date	Time
Roger Noon	Sean Griffis	07/03/14	1900

AIR OPERATIONS SUMMARY

PREPARED BY: Frank Podesta

PREPARED DATE/TIME:2000 07/03/14

1. INCIDENT NAME: Butts	2. OPERATIONAL PERIOD DATE: 07/04/14 START TIME: 0600 END TIME: 2000 SUNRISE: 5:52 SUNSET: 20:36

3. REMARKS (Safety Notes, Hazards, Air Operations Special Equipment,, etc.):	4. MEDEVAC A/C:	5. TFR: Radius: 5 NM
1) Do not fly over structures with external loads. 2) Ensure ground personnel are working with aviation assets when conducting water drops. 3) Divisions order tactical requests directly through Air Attack or Helicopter Coordinator. 4) All Lat and Long locations are to be in Degrees, Minutes, Decimal Minutes when possible.	Cal Fire 104 With Hoist (See Medical Plan)	Altitude: 5500 = MSL Centerpoint: Lat: 38 41.69 Long: 122 26.69

6. PERSONNEL	Phone	7. FREQUENCIES	AM	FM
AOBD: Frank Podesta	209-419-4408	AIR/AIR FW:	118.5750 (Briefing)	169.150
ATGS: Chris Jurasek	707-576-2586	AIR/AIR RW:	123.1750	
HLCO:		AIR/GROUND:		159.450
ASGS: Jon Chin	760-250-6230	COMMAND:	CDF Command 2 Tone 13	
HEBM: Dave Ito	530-391-6583	COMMAND RPT	Rx:151.265 Tx:159.330	
ATB MGR:		DECK FREQ:		163.100
		TOLC FREQ:	123.0250	

8. FIXED-WING	# Avail / Type/ Make-Model / FAA N# / Base(s)
Airtankers	2 - Type 3
Leadplanes	
Base FAX #:	
ATGS Aircraft	AA-140
Other	

9. HELICOPTERS (Use Additional Sheets As Necessary)

FAA N#	TY	MAKE/MODEL	BASE	AVAIL	START	REMARKS	FAA N#	TY	MAKE/MODEL	BASE	AVAIL	START	REMARKS
202 WM	1	K- Max	Angwin		0800	A-13							
715 HT	1	CH54B	Angwin		0800	A-22							
207PJ	2	UH-1H	Angwin		0800	A-24							
209PJ	2	UH-1	Angwin		0800	A-25							
104	2	UH-1H	Angwin		0800	A-05							
90301	3	B206B	Angwin		0800	A-28							
988B	3	B206LH	Angwin		0800	A-49							

MEDICAL PLAN ICS 206 *"IMT 5"*	1. INCIDENT NAME Butts Incident	2. DATE PREPARED July 3, 2014	3. TIME PREPARED 1700	4. OPERATIONAL PERIOD July 4, 2014 0700 - 0700

5. INCIDENT MEDICAL AID STATIONS

MEDICAL AID STATIONS	LOCATION	PARAMEDICS YES	PARAMEDICS NO
Medical Unit	ICP 13044 California Hwy 29, Lower Lake, CA		X

6. TRANSPORTATION

A. AMBULANCE SERVICES

NAME	LOCATION	PHONE	PARAMEDICS YES	PARAMEDICS NO
South Lake County Fire Department	21095 California Hwy 175, Middletown, CA	(707) 987-0605	X	
South Lake County Fire Department	19287 Hartmann Road, Middletown, CA	(707) 987-0605	X	
Cal Fire Helicopter Copter 104	Angwin Helibase	(707) 967-5205		X
CHP H30 & H32 (9am-4am)	Napa Airport (Hoist daytime only)	(707) 257-0103	X	
Reach Air Ambulance Reach 6	Lampson Field (No hoist)	(800) 338-4045	X	

B. INCIDENT AMBULANCES

NAME	LOCATION	PARAMEDICS YES	PARAMEDICS NO
Medic 6012	21095 California Hwy 175, Middletown, CA	X	

7. HOSPITALS

NAME Med Net Channel	ADDRESS	TRAVEL TIME AIR	TRAVEL TIME GRND	PHONE	HELIPAD YES	HELIPAD NO	BURN CENTER YES	BURN CENTER NO
St. Helena Clear Lake	15630 18th Ave., Clear Lake, CA	5 min	15min	(707) 994-6486	X			X
St. Helena Hospital	10 Woodland, St. Helena, CA	15min	40min	(707) 963-6425	X			X
Queen of the Valley (Trauma)	1000 Trancas St., Napa, CA	16min	45min	(707) 257-4014	X			X
Santa Rosa Memorial (Trauma)	1165 Montgomery Drive, Santa Rosa, CA	20min	50min	(707) 525-5207	X			X
UC Davis Trauma & Regional Burn Center	2315 Stockton Blvd., Sacramento, CA	30min	2 hour	(916) 734-3636	X		X	

8. MEDICAL EMERGENCY PROCEDURES

LINE EMERGENCY:
Crew Supervisor to contact Division Supervisor with patient complaint/condition and location.

- Division Supervisor contacts:
  1. Line EMT
  2. Communications Unit
- Communications Unit contacts:
  1. Heli-Base for AIR EVAC only
  2. Medical Unit (619) 743-8895
  3. Operations
  4. Safety
- Division Supervisor will run medical emergency on command channel
- Communication Unit will clear command channel for emergency traffic
- Medical Unit will:
  1. Dispatch ground ambulance to nearest drop-point for ground transport only.
  2. Dispatch ambulance to Angwin Heli-base for AIR EVAC.
  3. Notify receiving hospital of injury status.

CAMP EMERGENCY:
Contact Medical Unit with patient complaint/condition and location. Medical Staff will respond to stabilize incident:

- Medical Unit contacts:
  1. Communications
  2. Safety
  3. Logistics
  4. Operations
  5. Crew Supervisor

INJURY REPORTING PROCEDURES

NATURE OF INJURY_____
LOCATION OF PATIENT_____
TRANSPORTATION REQUESTED BY:AIR___ GROUND__
POINT OF PICKUP_____
LAT _____ LONG _____
PATIENT UNIT ID_____
IS A EMT WITH PATIENT: YES _____ NO_____
AGE_____
SEX: MALE____ FEMALE____

ALL EMERGENCIES---Secure the area and identify witnesses for later investigation. Keep an accurate log of events.

ICS 206 FR	9. PREPARED BY: (Medical Unit Leader) B. Hunter	10. REVIEWED BY: (Safety Officer) S. Hansen

TRAINING SPECIALIST MESSAGE

A Training Specialist is now on the incident.

ALL ASSIGNED TRAINEES

working on position task books will need to register with the Incident Training Specialist in order to receive proper credit for your assignment.

The Training Specialist is available immediately following the morning Operations Briefing. Location: Main Street next to the copy trailer.

TRAINING SPECIALIST

Claudia Soiza

Cell-(949)632-7813

CAL FIRE
INCIDENT MANAGEMENT TEAM
WATER USAGE PLAN

California Drought Emergency

The following shall be considered and implemented by all fire resources as a means to provide maximum efficiencies when utilizing water resources, while minimizing the impacts to private and public water supplies. Accountability shall be maintained for all water supplies that are utilized and care should be applied to ensure proper replacement and/or reimbursement to the supplier/owner.

Fireline personnel- (During mop up operations)

- Use Pencil Hose and Garden Nozzles with Shut-Offs.
- Use Back pumps.
- Use Dry Mop-up and consolidation of heavy fuels to areas where they can burn out safely.
- Locate/Relocate Firelines to lighter fuels or natural barriers when safe.
- Set up and use portable tanks in anticipation of longer transport times for Water Tenders.
- Use of foams, gels and other water enhancers.
- Evaluate need to mop up in excess of 200 feet from fireline.

Road Maintenance and Repair-

- Monitor and water roads only when and where needed.
- Water when most effective (evening and nights).
- Use chemical treatments when available (Magchloride, Omni bind etc.).
- Consider use of tertiary or treated water.

Aviation Operations-

- Consider use of Gels, Foams and Retardants. Set up portable plants.
- Consider using Blivits and Pencil Hose for interior mop up operations as opposed to numerous bucket drops.
- Establish and use pre-use agreements for existing and known water sources.
- Use large watershed dip sites when able. Minimize use of small, static ponds and lakes.
- Maintain accountability of water used and locations of dip sites.
- Evaluate need for interior bucket drops.

Private Water Supplies-

- Notify property owner as early as possible.
- Minimize usage and develop alternative water supplies when and where appropriate.
- Track usage (meter, ICS-214, Water Usage Reports) and develop a plan to replace water.
- Make arrangements for reimbursement and damage claims if needed.

Public/Municipal Water Supplies-

- Notify Agency as soon as possible and request a representative to the incident.
- Identify fill areas and request metering devices. Note locations on incident map.
- Use alternative or reclaimed water sources when available. Note locations on incident map.
- Make arrangements for reimbursement and damage claims if needed.

Management and Supervision- .

- Consider complexity of water use on incidents. Establish a Water Supply Group Supervisor to coordinate additional resources to support the incident needs.
- Complete the Water Usage Report daily and turn in to Finance.
- Review this check list and brief daily.

Fire Suppression Repair Plan – Butts Incident

Fire suppression repair is the repair of damage caused directly from fire suppression activities. It is not the repair of infrastructure or rehabilitation of burned areas caused by the fire. We cannot upgrade facilities beyond their pre-fire condition. Any projects too large or complicated to be completed by the Fire Suppression Repair Group shall be turned over to the Comp/Claims Unit or the local Unit.
Repair work shall be done when and where fire suppression activities are completed and Operations have authorized. The Fire Suppression Repair Group resources shall look in all Divisions for appropriate repair needs. This includes areas inside and outside the fire perimeter, provided the damage was caused by official fire suppression personnel.

Infrastructure Damage

This category includes damage to:

- Fences and gates
- Culverts/bridges/other watercourse crossings
- Water sources
- Utility distribution lines (above or below ground)
- Road barriers removed for fire access
- Trash, debris and supplies left by fire suppression activities
- Miscellaneous damage to residential property

Natural Resource Damage

This category includes repair of existing problems caused by fire suppression activities (direct effect) to natural resources and to prevent likely future problems such as accelerated erosion caused by winter rains (indirect effect). The goal is to minimize:

- Soil erosion
- Adverse impacts to water quality
- Adverse impacts to protected species of plants and animals

Dozers constructed fire perimeter and contingency lines. Dozer line width varies greatly. The following measures shall be implemented for constructed dozer line:

- Berms and push-piles shall be spread out to the extent feasible. This may be accomplished by back-blading and/or using ripper shanks or grapples if present. Debris piled against trees or perched above watercourses is especially important to remove or disperse.
- Maximum spacing of waterbreaks shall be as follows:

Prevailing Gradient	0-10%	11-15%	26-50%	>50%
Maximum Waterbreak Spacing	200 feet	150 feet	100 feet	75 feet

Spacing criteria is a general guide. Actual location of waterbreaks should be tailored to the topography and placement should be suited to the best dispersal of water flow.

- Waterbreaks shall be constructed at an approximately 45 degree angle and shall be a minimum depth of 12 inches from the bottom of the cut to the top of the berm. Where feasible, the discharge from waterbreaks shall be directed into vegetated areas.
- Where slopes exceed the range at which a tractor can effectively work, waterbreaks shall be constructed with hand tools.
- Roads used in fire suppression activities shall be left in at least as good a condition as they were found. Gravel and soil surfaced roads shall be watered to prevent excessive dust formation. Where suppression activities have damaged or rendered road drainage facilities non-functional, waterbreaks or drivable drainage dips shall be installed for drainage.
- Where suppression activities have filled in or damaged inside ditches, the ditches shall be cleaned and left unobstructed.

UNIT LOG ICS 214	1. INCIDENT NAME	2. DATE PREPARED	3. TIME PREPARED
4. UNIT NAME/DESIGNATOR	5. UNIT LEADER (NAME AND POSITION)		6. OPERATIONAL PERIOD

PERSONNEL ROSTER ASSIGNED

NAME	ICS POSITION	HOME BASE

ACTIVITY LOG (CONTINUE ON REVERSE)

TIME	MAJOR EVENTS

PREPARED BY (Name & Position)