APPENDIX G – Pre-Attack Plan

LASSEN VOLCANIC NATIONAL PARK
FIRE MANAGEMENT OFFICE
PRE- ATTACK PLANNING PACKAGE

September 2004

Pre Attack Planning Package

Introduction

This packet was prepared to familiarize in coming resources with the Fire Organization at Lassen Volcanic National Park. This document contains information on local fuels, weather and fire behavior. Also, information on the management structure of the program, important contacts, suppression protocol, communications, logistical information and general area maps.

The Pre Attack Planning Package provides general information to the Fire Program at Lassen Volcanic National Park. It is up to the incoming resource to obtain detailed information, such as maps, incident briefings and logistical arrangements from the Fire Management Officer, Assistant Fire Management Officer or Duty Officer.

Firefighter safety is always the number one priority on any fire assignment. Fire resources and supervisors are expected to follow all agency and NWCG established safety policies and practices before engaging in any assignments.

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FIRE MANAGEMENT EXPECTATIONS

While working in Lassen Volcanic National Park, you will be held to the highest standard of performance, conduct, cooperation and professionalism. The following list of expectation will help you enjoy your assignment here and work well with Park fire staff.

- Unless directed otherwise, normal duty day is 0930 to 1800 with a ½ hour lunch break.
- Work/Rest guidelines will be strictly adhered to - - 1 hour of rest for every two hours worked. Except for the first shift on initial attack, maximum shift length is 16 hours.
- Upon arrival at your assigned duty station, advise the local area duty officer of your length of time remaining for 14 day assignment, number of hours you have worked during your current shift, any special logistical needs, i.e. mechanical repairs, lodging requirements, etc.
- Crew Time Reports must be signed by your assigned supervisor and appropriate agency time sheets (i.e. OF- 288) need to be approved by the Fire Business Manager before you leave.
- For crews, motel lodging is generally not provided, but camping facilities are.
- The Fire Management Officer, AFMO or duty officer will inform you of lodging and meal arrangements.
- Resources assigned to the Park are expected to spend standby duty time with physical fitness training, informal training, assisting with daily fire station maintenance and project work as directed by the AFMO or Duty Officer.
- While assigned to Lassen Volcanic National Park, remember you are representing the Park, your agency and the entire wildland fire service. You are expected to be courteous, cooperative and professional, during and after duty hours to the public, community and other agency cooperators. Misconduct will be dealt with appropriately.
- While on standby at either the Mineral or Manzanita Lake fire stations, you are expected to remain fire ready and in constant radio communications with dispatch.

BRIEFING CHECKLIST

1. INCIDENT STATUS:

Name: _____
Location: _____
Jurisdiction: _____
Size: _____
Hazards: _____

2. INCIDENT SITE:

Forest/Grassland/etc: _____
General Health: _____
Terrain: _____

3. FUEL CONDITIONS:

Live Fuel Moisture: _____
1- hour: _____
10- hour: _____
1000- hour: _____
Important Indices (BI or ERC): _____

4. WEATHER CONDITIONS:

Current: _____ Forecasted: _____
Air Temp: _____ Air Temp: _____
Wind Speed: _____ Wind Speed: _____
Direction: _____ Direction: _____
RH: _____ RH: _____

5. COMMAND/CONTROL

Incident Commander/Supervisor: _____

- Resources Ordered or Assigned: _____
- Reporting Procedures: _____
- Emergency Procedures: _____
- Phone Numbers: _____
- Radio Freqs
    - Command Freq: _____
    - Tactical: _____
    - Air to Ground: _____

6. FIRE BEHAVIOR:

Current: _____ Forecasted: _____

7. MISSION/EXPECTATIONS

Strategy: _____
Objectives: _____
Assignment: _____

8. RISK MANAGEMENT:

General

- Hazards: _____
- Mitigation: _____

Aviation

- Hazards: _____
- Restrictions: _____

Trigger Points: _____

FIRE SAFETY BRIEFING CHECKLIST

_____ I/WE UNDERSTAND THAT THE SAFETY OF PERSONNEL AND THE PUBLIC IS THE MOST IMPORTANT PRIORITY IN LASSEN VOLCANIC NATIONAL PARK.

_____ Current fire weather forecast has been obtained or discussed (including weather trend, special conditions, i.e. drought).

_____ Assignment is CLEAR and UNDERSTOOD.

_____ Radio frequencies and procedures have been received.

_____ Standard dispatch procedures are understood.

_____ Immediate supervisor/contact person is known.

_____ Crew manifest turned into Fire Business Manager.

_____ Logistic arrangements are made and understood.

_____ Contact method for off shift is arranged with Duty Officer.

_____ Red Cards have been reviewed and personnel are qualified for assignments.

_____ Maps of the area or incident have been received as needed.

_____ Potential HAZARDS have been discussed.

_____ Park Pocket Cards have been reviewed.

When the briefing has been completed, sign and date. List all who attended from each crew. When completed, turn this page into the Fire Business Manager.

Briefing conducted by: _____ Date: _____

Briefing received by: _____ Date: _____

LASSEN VOLCANIC NATIONAL PARK ORIENTATION

Lassen Volcanic National Park was established by an Act of Congress on August 9, 1916 "for recreation purposes by the public and for the preservation from injury or spoliation of all timber, mineral deposits and natural curiosities or wonders within said park and their retention in their natural condition and… provide against the wanton destruction…" Incorporated into the park were Cinder Cone and Lassen Peak National Monuments, which were established by Presidential Proclamation, May 6, 1907, as part of the Lassen Peak Forest Reserve.

The park encompasses 107,170 acres of mountainous terrain at the southern end of the volcanic Cascade Mountain Range in northeastern California. Preserved within the park is the site of the most recent volcanic eruption in the continental United States, prior to the Mount Saint Helens eruption in May 1980. Lassen Peak is one of the largest plug dome volcanoes in the world. The park is unique in that it also preserves, in a relatively small geographic area, examples of the three other types of volcanoes recognized by geologists: shield volcanoes, composite volcanoes and cinder cones. Also within the park is the most extensive, intact network of geothermal resources west of Yellowstone National park, including outstanding examples of boiling springs, mud- pots, and fumaroles. The park preserves cinder cones, lava flows and other volcanic evidence, as well as areas of undisturbed forest, lakes and streams. Three biogeographic regions come together in the park: the southern Cascade Mountain Range, the northern Sierra Nevada Mountains and the Basin and Range Province.

VEGETATION/FUELS:

Lassen Volcanic National Park covers approximately 500 km^2 of the southernmost peaks of the Cascade Mountain range. Elevation in the park varies from 1616 m at Warner Valley to 3187 m on Lassen Peak. Most of the park below 2400 m is forested, with the distribution of conifer species being strongly correlated with elevation (Parker 1991). Red fir (Abies magnifica) and lodgepole pine (Pinus contorta var. murrayana) dominate upper elevations (2100 to 2400 m), whereas white fir (A. concolor) and Jeffrey pine (P. jeffreyi) are most abundant on lower slopes (<2100 m). Distributions of these tree species vary considerable within individual forest types. Lodgepole pine can occur in nearly pure stands on the lower 1/3 of slopes. Stands dominated by mature White fir are also represented and are likely the result specific disturbance histories. Limited stands of mountain hemlock (Tsuga mertensiana) occur along the treeline >2400 m.

Other minor vegetation communities occur in the park. Montane chaparral, in scatter stands, can be found at lower elevations and drier aspects. Dispersed within forest communities low stands of pinemat manzanita connect individual stands of red fir and lodgepole pine. Seasonally wet meadows are also common in valley bottoms, along streams and lake margins (White et al 1995).

Non-Native Vegetation

According to surveys completed in 2002, Lassen Volcanic National Park has been invaded by at least 49 species of non- native vascular plants. These non- native

populations are found throughout the park on approximately 10,000 acres (9% of land base) and are associated with areas that have experienced some form of site disturbance whether natural (e.g. soil erosion, intense fire) or human- caused (e.g. facility, trail and road construction) (Koenig 2004). The most wide- spread species include common plantain (Plantago major), dandelion (Taraxacum officinale), and Kentucky bluegrass (Poa pratensis ssp. pratensis).

There are no federally listed threatened and endangered plants that occur in Lassen Volcanic National Park. There are no state listed threatened or endangered plants either. The park is home to 24 special status species being tracked by park botanists and the California Native Plant Society (Koenig 2004). These species are often associated with aquatic or alpine habitats and are unlikely to experience fire events.

Fuel Characteristics

Within the timber litter fuel complex, most of the park's fuel types would fall under FBO fuel model 8 (1978 NFDRS fuel model H) consisting of closed canopy stands of short-needle conifer; and FBO fuel model 10 (1978 NFDRS fuel model G) which is short-needle conifer stands with heavy accumulations of dead/down material. Many of these stands are dominated by Lodgepole pine (Pinus contorta) and surface fuels may burn more readily than typical fuel model 10 examples. There is a smaller component of FBO fuel model 9 (1978 NFDRS fuel model U) where there are stands dominated by Jeffery pine (Pinus jefferyi). The remainder of the landscape is capture in FBO fuel models 2 (1978 NFDRS fuel model C) for the open pine stands with grass understory and FBO fuel model 5 (1978 NFDRS fuel model F) for areas of low shrub cover dominated by pinemate manzanita (Arctostaphylos nevadensis) or more developed montane chaparral including manzanita (Arctostaphylos patula), snowbrush ceanothus (Ceanothus velutinus), and bush chinquapin (Castanopsis sempervirens). Significant areas in the park have a low occurrence of surface fuels. Past disturbance and edaphic conditions can result in open stands of large diameter trees with little ability to sustain surface fire spread

WEATHER:

The weather in Lassen Volcanic National Park is typically characterized as having cool summers and cold winters. Mean annual high temperatures range from 21degrees F in winter to 81 degrees F during the summer months. Annual average precipitation as measured in Mineral is approximately 52 inches. The Park does experience higher levels, and most precipitation is in the form of snowfall which can be heavy (235 inches in 1978).

TOPOGRAPHY:

Topography in the Park varies greatly and is made up of rugged mountains on the west, reaching a maximum elevation of 10,457 feet on Lassen Peak. The eastern portion is a lava plateau averaging 6.500 feet in elevation, while the southern portion is characterized

by a deep cut valley exhibiting steep glaciated walls. The northern portion of the park is characterized by peaks and ridges of lava modified by over a hundred years of erosion.

FIRE BEHAVIOR:

A large percent of the timber litter fuels within Lassen Volcanic National Park consist of short needle pine, most commonly dominated by Lodgepole or Red Fir and are characterized by fuel model 8 or 10 if heavy dead and down material exist. Under closed canopy stands where there is surface litter fire behavior is usually represented by slow burning ground fires with low flame heights. In fuel model 8 there may be occasional flare ups from a jackpot of fuel and an occasional individual tree torch where latter fuels exist which could result in some intermittent short range spotting. Fuel model 10 will generally exhibit many of the same characteristics as FM 8 however, due to the increased quantities of dead and down material fires burn in the surface and ground fuels with greater intensity than FM 8. The increased fuel availability and intensity contribute to more frequent individual tree torching and occasional group tree torching. If wind and slope align there may also be potential for a small crown run. This fuel model will also display subsequent short range spotting as a result of the increased activity.

A smaller portion of the timber litter group can be characterized as fuel model 9. It consists of stands that are mostly dominated by Jeffery pine. Fire behavior is defined by higher flame heights and increased rates of spread through the surface litter. This fuel model will also exhibit possible individual tree torching, short range spotting and some crown fire activity if there are considerable concentrations of dead/down material.

The rest of Lassen Volcanic National Parks landscape can be classified in the grass and shrub group as fuel models 2 and 5. Fires in these fuel models are usually surface fires that spread through the herbaceous fuels and surface litter. Fire intensities may very depending on site specific accumulations of fuel and live to dead ratio in the shrub layer. Rates of spread will generally be low to moderate unless wind and slope align which could result in a fast moving surface fire with occasional torching and spotting if an overstory is present and ladder fuels exist.

Much of the park has little to no surface fuels and can be characterized by jackpots or small accumulations of large diameter material. The main mechanism for fire spread is through spotting. During years of drought when indices have reached critical levels long range spotting has occurred up to 1.5 miles ahead of the main fire. Fires have also made significant runs of greater than 800 acres in a single day.

ENERGY RELEASE COMPONENT

ERC is the potential available energy (BTU) released per unit area in the flaming zone of a fire. It is dependent on fuel characteristics (loading, compactness, arrangement, etc.) heat of combustion and mineral content. Day to day variations in ERC are caused by moisture content of 1, 10, 100 and 1000hr fuel classes. ERC traces the seasonal trends of

fire danger better than any other indices in this fuel type and is the least responsive to short period fluctuations in fire danger,

Lassen Volcanic National Park uses Energy Release Component (ERC) as the key variable for establishment of staffing classes. The ERC's listed below have been calculated according to analysis of 42 years of weather collected at the Manzanita Lake RAWS from 1962 through 2004, data is on file in the Lassen Volcanic National Park fire management office

SC	Adjective Rating	Percentile	Energy Release Component
1	Low		0- 37
2	Moderate		38- 47
3	High		48- 61
4	Very High	90	62- 70
5	Extreme	97	71+

SEASONAL TRENDS

The typical fire season for the park occurs between July 10 and October 15 of each year, based on an historical fire weather analysis with data collected from the Manzanita Lake and Chester RAWS and individual fire incident reports dating back to 1961. The highest incidence of lightening occurs during this time period, along with the highest mean daytime temperatures and lowest mean daytime relative humidity's. Before and after these dates, fuel moistures and persistent snowpack reduce the burning indices to near zero.

PRE ATTACK WFSA

Preplanned WFSA components are on file in Lassen Volcanic National Parks Fire Management office.

PRE POSITION NEEDS

Lassen Volcanic National Park will generally pre- position resources when weather services predict a (LAL) of 3 or greater, Red Flag Warning, Fire Weather Watch, when fire danger is extreme or during periods of high visitation when the potential for human caused ignition is great.

The Fire Management Officer or Duty Officer may pre- position resources when a quick response is required to implement the appropriate management response for potential natural or human caused ignitions. Pre- positioning will generally occur along main park road, on the north side of the park at Manzanita or Butte Lake, on the south side of the

park at Juniper Lake or in Warner Valley. The exact location, number and kind of resource to be pre- positioned will be dependant on the potential for new ignitions either natural or human caused, expected fire behavior and weather service predictions.

DELEGATION OF AUTHORITY

Sample Delegations of Authority have been developed and are on file in the Lassen Volcanic National Park fire management office.

MANAGEMENT CONSTRAINTS

LAVO is a park managed for wilderness values and all fire management activities within the designated Wilderness Area will employ the lowest impact approach based upon a Minimum Requirement and Minimum Tool Determination. All fire management activities within the Wilderness Area will follow established Minimum Impact Suppression Tactics (MIST) guidelines.

Access to most back country areas of the park is limited to existing paved roads within the front country and some improved gravel roads on the adjoining National Forests. Approximately 160 miles of recreational trails and former fire patrol roads occur in the backcountry, forming a network from which fires can be accessed and controlled.

Water sources are very limited in the park and are generally associated with a few large lakes. A list of prohibited water sources is currently being worked on and will be included in the revised aviation plan. Current restrictions are limited to double dipping. Aviation resources should not dip out of more then one water source during the same mission. All potential water sources must be approved by the Resource Advisor.

For some potions of the park, smoke impacts to local communities could be a concern. Smoke management plans will be developed for all prescribed fires and conditions monitored closely. Undesirable smoke impacts could warrant conversion of both prescribed fires and wildland fire use events.

INTERAGENCY AGREEMENTS

Lassen Volcanic National Park has a number of active agreements with local, county, state and federal cooperators. These agreements are essential to provide for a collaborated effort in the management of any planned or unplanned incident related to the protection of life, property and natural or cultural resources and general program support.

Most important to the purpose of this document is the Five Party Agreement and the Manzanita Lake Interagency Engine Agreement. The Five Party agreement is between the State of California, Office of Emergency Services; State of California, Department of Forestry and Fire Protection; Pacific Southwest Region, USDA Forest Service; USDI

Bureau of Land Management, California State Office; and USDI National Park Service, Pacific West Region for effective and efficient exchange of protection area responsibilities and emergency apparatus or personnel (local responsibility area is not part of this agreement).

The Manzanita Lake Interagency Engine Agreement is between the USDI National Park Service, Lassen Volcanic National Park and the USDA Forest Service, Lassen National Forest. It describes responsibilities and outlines the support that each agency is required to provide for implementation of an interagency engine program.

A copy of all cooperative agreements that Lassen Volcanic National Park is currently engaged in can be found on file in the Fire Management office.

EVACUATION PROCEDURES

In the event that park officials needed to evacuate an area with in its jurisdictional boundaries an ICS organization would be developed. The size and complexity of the incident would dictate the type of organization required to safely execute an evacuation. Generally an evacuation would be implemented by the ranger division but may require the cooperation of all divisions for efficient and effective operations.

STRUCTURAL PROTECTION NEEDS

Lassen Volcanic National Park has a diverse list of improvements/structures within its jurisdictional boundaries that must be mitigated during wildland fire suppression, planned prescribed or wildland fire use efforts.

Areas with in Lassen Volcanic National Park that contain improvements or values at risk include:

Mineral Headquarters	T29N, R5E, S25 and 26
Manzanita Lake	T31N, R4E, S18
Drakesbad	T30N, R5E, S22
Butte Lake	T31N, R6E, S9 and 10
Summit Lake	T34N, R5E, S4
Juniper Lake	T33N, R5E, S15
Southwest Area	T30N, R4E, S27 and 28
Hat Creek	T34N, R4E, S17
Warner Valley	T31N, R5E, S23
Horseshoe Lake	T33N, R6E, S8
Twin Lakes	T35N, R5E, S25
Mt. Harkness	T30N, R6E, S27
Reflection Lake	T31N, R4E, S18
Bumpass Hell	T30N, R4E, S18
Devastated Area	T31N, R4E, S24
Kings Creek	T30N, R5E, S18

A comprehensive list of values at risk within each of these areas is attached to the back of this document.

In the event that a fire was to escape initial management action and require the implementation of mitigation measures to prevent loss, values and improvements can be broken into two categories, those requiring little to no action and those requiring moderate to extensive mitigation.

Values and improvements at Mt. Harkness, Bumpass Hell, Reflection Lake, Devastated Area and Kings Creek would require little to no mitigation action due to there location, proximity to adjacent fuels, or construction material. Mitigation measures that may be implemented could include but may not be limited to the application of foam, surfactants, structure protection wrap prior to the passing flame front or fuels treatment around and adjacent to improvements and values.

Mitigation measures to prevent the loss of values and improvements at Mineral Headquarters, Manzanita Lake, Drakesbad, Butte Lake, Summit Lake, Juniper Lake, Hat Creek, Warner Valley, Horseshoe Lake and Twin Lakes would require moderate to extensive actions. In some cases the values and improvements that may be at risk in these areas could be privately owned and include seasonal or permanent residence. Mitigation measures include but may not be limited to the deployment of structure protection groups which could consist of hand crews, engines, water tenders other equipment and the implementation of protection/mitigation plans. The protection/mitigation plan to be implemented would be specific to the value or improvement at risk, its location and may include the treatment or modification of fuels around and adjacent to the value, the use of pumps, hose lays, sprinklers, foam or surfactants, structure protection wrap, and the implementation of burn out operations.

CLOSURE PROCEDURES

In the event that conditions within Lassen Volcanic National Park become unsafe for visitors, fire fighters, contractors or park staff an emergency closure may be implemented. All closures will be implemented with the development of an ICS organization. Closures would generally be based on defined geographical locations at or with in park boundaries and could consist of but may not be limited to trails, roads, camping, recreation, day use areas or the entire park.

A closure order may be initiated by the park superintendent, management staff or an incident commander. Depending on the scope of the closure it may require full cooperation of incident personnel, park staff, federal, state and local cooperators.

If an emergency closure is required for an incident the incident commander has the authority to institute the closure for the duration of an operational period. In this instance all closure responsibilities and activities during the operational period would befall the Incident Commander. To institute or extend a closure beyond one operational period the Incident Commander would need approval from the park management staff

or superintendent. When road closures are implemented refer to Superintendents order #3 "Road Closures" for specific policy and associated procedures.

FIRE WEATHER FORECASTS

The National Weather Service provides Fire weather forecasting for Lassen Volcanic National Park out of Sacramento, Reno and Redding. Redding Fire Weather Center (in the predictive services section of the Northern California GACC) provides a daily fire weather and fire danger discussion that consolidates National Weather Service forecasts into one product. This is the forecast that will be broadcast to field units. These forecasts are based on "Predictive Service Areas".

The forecast for Lassen Volcanic National Park (zone 268) and other predictive service products can be viewed on the web at: htt;://www.fs.fed.us/r5/fire/north/fwx/

It is standard procedure for SIFC Dispatch to broadcast the fire weather forecast twice a day at approximately 1000 hours and 1630 hours. Special watches and warnings may also be broadcast at any time.

The Redding Interagency Fire Weather and Forecasting Unit at the Northern California Geographic Coordination Center in Redding, provide additional forecasting services

STAGING AREA LOCATIONS

Lassen Volcanic National Park has the ability to stage resources in many different locations. These locations can be broken down into:

Primary locations – These are large areas that can accommodate multiple resources, one to two strike teams or task forces. (Multiple engines, crews, equipment and vehicles)

Secondary locations – These are smaller areas that can not accommodate multiple resources, but can still sufficiently provide for one or two single resources (one engine, one crew, etc.)

The Primary locations are located at:

1) Southwest Visitor Center parking lot – This parking lot is located just inside the southwest entrance to the park. It has the ability to hold large amounts of engines, crews, and vehicles. Also has the ability to provide for helicopter operations.
2) Lassen Peak parking lot – This lot is along the main park road, approximately 7 miles inside the southwest entrance also has the ability to hold multiple resources at once. This lot also has room for helicopter operations
3) Loomis Museum – This lot is located 1 mile inside the park from the entrance at Manzanita Lake. This lot also has the ability to hold multiple resources.

The Secondary locations are located at:

1) Bumpass Hell parking lot – This lot is located approximately 6 miles inside the southwest entrance of the park. This lot is not as large as the others, but is the biggest of the secondary locations.
2) Summit Lake campgrounds – This Area is located approximately 15 miles inside the southwest entrance.
3) Devastated Area – This lot is located approximately 10 miles inside the park from the entrance at Manzanita Lake.
4) Butte Lake campground – This area is located 6 miles off of Highway 44 in the NE corner of the park.
5) Juniper Lake campground – This area is located approximately 15 miles north of Chester, Ca.
6) Warner Valley area – Located approximately 20 miles northwest of Chester, Ca.

INTERAGENCY FIRE OPERATIONS:

Lassen Volcanic National Park is a cooperative member of an interagency dispatch center (Susanville Interagency Fire Center or SIFC). As such, fire resources assigned to the Park can expect to be part of initial attack dispatched to incidents in the Park, Lassen National Forest, BLM and local CDF Units. Procedures for dispatch to incidents on the Park and other agencies are described in the Radio Operating & Dispatch Procedures" section of this package.

RADIO OPERATING & DISPATCH PROCEDURES

The prime purpose of having standardized radio operating procedures is to reduce net congestion, and provide a rapid means of positive communication. With numerous radios using the same frequencies it is important that strict discipline and procedures be followed. This is necessary to facilitate emergency traffic.

The most important part of net discipline is short – clear messages. Think your message through before starting your transmission. Keep superficial conversation to a minimum. When you are being called, be ready to write down the message.

For transmitting messages, depress the mic button and delay speaking for 1- 2 seconds to allow mountain top repeaters to open. Messages should not exceed 30 seconds. If they do, break your transmission after 30 seconds with the work BREAK. Allow 10- 15 seconds before resuming your transmission and this will allow any emergency traffic to access the net. Speak normally, and hold the microphone about 1- 2" form the lips. Say numbers and letters slowly and clearly.

Normal Radio Transmissions

Transmissions should follow a prescribed format. They should begin by identifying the person/station the message is directed to, then identifying the message originator.

When you are called, answer with your identifier or last name. When you have received and understood the message, acknowledge it and give your identifier or call sign to sign off. This will indicate to others that you have completed your business.

Be concise! Listen before transmitting to avoid cutting in on another conversation. When calling in routine traffic, give the complete transmission all at one time. For example: "Susanville, Engine 74 in quarters, Mineral". SIFC can acknowledge with the time and call sign.

Remember to be CLEAR, CONCISE, COMPLETE, AND PROFESSIONAL

The call sign for SIFC is "Susanville".

Important Radio Transmissions

Morning Staffing – approximately 0945 hours. SIFC contacts federal stations or units for daily staffing reports. The Park Duty Officer will call staffing into Dispatch.

Daily Fire Weather Forecasts – occurs at approximately 1030 and 1600 every day of fire season. Crews and resources should listen carefully to these reports and possibly conduct special internal briefing based on the forecasts.

Fire Danger and Dispatch Levels – actual levels are reported at approximately 1445 and predicted levels for the following day re reported at 1600 following the fire weather forecast.

Alert Tones – a two tone alert is used for general information, weather gathering, forecasts, radio net control, instructions, report of fie conditions, or non- emergency messages requiring action or immediate dissemination. A three alert tone is used for emergency dispatch actions, normally requiring a code 3 response.

Dispatch Procedures

For dispatching fire stations CDF uses the group quick call during the day and the individual quick call or telephone at night. BLM, LNF AND LNP use the alert tone during the day and telephone at night.

Initial Attack Dispatches – on SIFC, a pre- alert of three tones followed by the incident type and location is given. This is to allow units to determine the incident location and begin to silently respond if it is in their responsibility area. After 3 alert tones & a preannouncement of the incident type and general location, SIFC will come back on the air with the dispatch. They will list resources to respond, location and announce the command and tactical nets assigned to the incident.

Responding units should immediately switch to the assigned command frequency and wait until SIFC asks for check- back. They will read off each units radio identifier and then the units should reply that they are responding.

Until ground resources assume command of an incident, the Dispatcher is the Incident Commander. If Air Attack arrives first, they will assume the IC role until a qualified

ground unit arrives. The first qualified person reaching the incident will immediately take over the Incident Commanders duties until relieved. The dispatcher will give the Incident Commander full information of personnel and equipment en- route to the incident and the approximate time of arrival. From this point on, the dispatcher will assume a support role and fill any needs that the Incident Commander may have to help meet incident objectives.

Reporting of Incidents

SIFC operates in the central dispatch mode. All incidents are reported directly to the Center for action. SIFC can be reached by radio year- round, day or night, by calling "Susanville", and/or calling the business phone number (530)257- 5575.

Lightning Plan

Lightning is the major source of fire activity through out the SIFC area. Often lighting storms produce multiple fires in a short period of time throughout multiple agency jurisdictions. Some of these fires can become major incidents on more than one agency. With four agencies operation out of one dispatch center, dispatchers and field units can get overwhelmed quickly. To handle this rapid increase in business, SIFC operates under a "Lightning Plan". The plan standardizes how all of the SIFC agencies operate in initial attack for multiple lightning fires. When a lightning fire develops into a major incident, it is removed from the lightning plan and treated as a separate incident.

Activation of the Lightning Plan occurs when one or more of the following conditions exist:

1. Down strikes or eminent lighting is predicted on any of the SIFC direct protection areas.
2. Report of one or more lightning fires on any of the SIFC direct protection areas.
3. There are severe resource shortages with eminent lightning.

SIFC will notify all field units by radio broadcast of activation of the lightning plan.

Under the lightning plan, normal dispatching of resources to fires will be modified because there are usually multiple starts, and resources are in short supply. A single ground resource will be sent to each fire, and if available an air resource. This dispatch can be modified at the Duty Officer's request.

If the situation dictates (usually multiple fires in a single area of influence), Lightning Coordination Areas (LCAs) will be established. These are delineated by Field Office, Ranger District, CDF Battalion boundaries or the Park boundary. In this scenario, each LCA has a designated Incident Commander who is responsible for the operational action on all wildfires in his/her LCA. In addition, the IC is responsible for all of the logistical support for resources assigned to the LCA. LCAs may develop a small incident command team to help manage LCA activities.

Under LCA operations, it is very important to remember that all fires must be reported to SIFC. SIFC will then hand the fires off to the LCA for the appropriate management response and necessary follow- up. Resources will be dispatched by the LCA IC, and

those resources will direct all radio traffic to the LCA. Only contact SIFC to report new fires, or in emergency situations if the LCA cannot be reached.

Deactivation of LCA operations will be done by the LCA, IC or SIFC. This action will be announced to all units by radio.

RADIO GROUPS AND FREQUENCIES

LNP/LNF/TACTICAL/ AIR GROUP					
GROUP 1	**Rx**	**Tx**	**Rx CG**	**Tx CG**	**Tone**
LNP DIRECT	170.0750	170.0750		167.9	
LNP PEAK	170.0750	169.7250		110.9	T-1
LNP HARK	170.0750	169.7250		123.0	T-2
LNP W. PROS	170.0750	169.7250		131.8	T-3
LNP TAC 1	168.3500	168.3500			
LNP TAC 2	163.1000	163.1000			
NIFC TAC 1	168.0500	168.0500			
NIFC TAC 2	168.2000	168.2000			
LNF DIR	172.2250	172.2250		167.9	T-7
LNF W. PROS	172.2250	171.4750		131.8	T-3
LNF TURNER	172.2250	171.4750		146.2	T-5
USFS A2G	170.0000	170.0000			
CALCORD	156.0750	156.0750			
TGU LOCAL	151.3700	159.2850		110.9	T-1

WHIS/LABE/CRLA/WX GROUP					
GROUP 3	**Rx**	**Tx**	**Rx CG**	**Tx CG**	**Tone**
WEATHER	162.5500				
WNP DIR	165.3125	165.3125		110.9	
WNP RPTR	165.3125	164.4250		123.0	
BNP DIR	171.7500	171.7500			
BNP RPTR	171.7500	172.4500	110.9	146.2	T-1
BNP TAC 1	168.0500	168.0500			
BNP TAC 2	168.2000	168.2000			
BNP TAC 3	168.6000	168.6000			
CNP DIRECT	170.1000	170.1000			
CNP RPTR	170.1000	169.5500		97.4	
CNP RPTR	170.1000	169.5500		107.2	
CNP DIRECT 2	168.3500	168.3500			

CDF/TEHAMA FIRE/TACTICAL/AIR GROUP					
GROUP 2	**Rx**	**Tx**	**Rx CG**	**Tx CG**	**Tone**
TGU LOCAL	151.3700	159.2850		110.9	T-1
TEH. CO. FIRE	154.3850	154.3850			
CDF TAC1	151.1450	151.1450			
CDF COMM 7	151.4600	159.3900		110.9	T-1
TAC 3	151.1750	151.1750			
TAC 4	151.1900	151.1900			
TAC 11	151.4450	151.4450			
TAC 12	151.4600	151.4600			
CALCORD	156.0750	156.0750			
CDF A2G	151.2200	151.2200			

WHITE	154.2800	154.2800				

LASSEN VOLCANIC NATIONAL PARK
ORGANIZATION AND PHONE NUMBERS

Name	Position	Work #	Cell #
-- Fire Staff		530-595-4444	
Mike Lewelling	Fire Management Officer	x5168	530-604-3687
Eric Hensel	Assit Fire Management Officer	x5165	530-604-3568
Cris Jones	Fire Business Manager	x5167	530-604-4301
Scott Isaacson	Fire Information Officer	x5162	530-604-0895
Jay Fassett	Eng Captain-Mineral	x5166	530-6040896
Doug Young	Eng Captain-Manzanita Lake	x5188	
Jesse Brunk	Eng Operator-Manzanita Lake	x5188	
Vacant	Asst Eng Operator-Manzanita Lk	x5188	530-604-4720
Matt Snider	Fuels Tech	x5163	530-604-0839
Bill Fouts	Cache Manager	x5160	530-200-2959
-- LNP Staff			
Marilyn Parris	Superintendent	x5100	530-604-3410
John Roth	Chief Ranger	x5150	530-604-6415
Karen Stoll	Administrative Officer	x5140	N/A
Louise Johnson	Chief Resource Mgt	x5170	530-604-3012
Karen Haner	Chief Interp & Cultural Resources	x5130	N/A
Cari Kreshak	Archeologist	x5131	N/A
Dan Jones	Chief of Maintenance	x5120	530-604-3200

Name	Position	Work #	Cell #
- - Regional Office			
Sue Husari	Regional FMO	510- 817- 1371	415- 613- 7752
John Kraushaar	Assit Regional FMO- Suppression	510- 817- 1370	415- 990- 1370
Christy Neille	Assit Regional FMO- Fuels		
Berkley Yoshida	Regional Budget Analyst	808- 985- 6100	510- 604- 1373
Ed Duncan	DOI coordinator @ North Ops	530- 226- 2801	N/A
- - Lassen NF			
Tom Cable	Forest FMO	530- 257- 2151	
Christie Whitcome	Assit Forest FMO	530- 257- 2151	
Ken Larson	Almanor District FMO	530- 258- 2141	
	Air Attack Base	530- 258- 5150	
John Stoffer	Hat Creek District FMO	530- 336- 5521	
Mike Holmes	Eagle Lake District FMO	530- 257- 4188	
- - BLM- Susanville			
Jim Brown	FMO	530-	
Paul Whitcome	AFMO		
- - SIFC			
Chuck Judd	BLM Center Manager	530- 257- 5575	
Larry Ault	Forest Service Center Manager	530- 257- 5575	

EMERGENCY SERVICES

POLICE DEPARTMENTS:

Redbluff Police Department:

Emergency 530- 527- 3131
Dispatch 530- 527- 3132
Administration 530- 527- 8282

Susanville Police Department

Emergency
Dispatch 530- 257- 2171
Administration 530- 257- 5603

Redding Police Department:

Emergency

Dispatch
Administration

SHERIFF:

Tehama County:
Emergency 530- 527- 9111
Dispatch
Business 530- 529- 7900

Lassen County:
Emergency
Dispatch
Administration 530- 257- 6121

Shasta County:
Emergency
Dispatch
Administration

Plumas County:
Emergency
Dispatch
Administration 530- 283- 6300

Chester Substation: 530- 258- 3111

CALIFORNIA HIGHWAY PATROL:

CHP Redbluff:
Administration 530- 527- 2034

CHP Redding:
Administration 530- 242- 3200

CHP Susanville:
Administration 530- 257- 2191

CHP Burney Office 530- 335- 4581

FIRE DEPARTMENTS:

Redbluff Fire Department:
Emergency 530- 527- 1125
Business 530- 527- 1126

CDF Redbluff Fire Station
Emergency
Business 530- 529- 8540

Chester Fire Protection District
Emergency
Business 530- 258- 3456

Susanville Fire Department
Emergency
Business 530- 257- 5152

Burney Fire Department
Emergency 911
Business 530- 335- 2212

Hat Creek Fire Department

Emergency 911

Mineral Fire Department
Emergency 911

Old Station VFD
Emergency 911
Business 530- 335- 7111

Shingletown VFD
Emergency 911
Business 530- 474- 3914

Shasta- Trinity CDF
Business 530- 225- 2418

Shingletown CDF Station
Business 530- 474- 3115

CDF Inmate Camps:

Ishi Conservation Camp
Business 530- 597- 2846

Sugar Pine Conservation Camp
Business 530- 472- 3121

Antelope Conservation Camp
Business 530- 257- 2295

Devils Garden Conservation Camp
Business 530- 233- 3634

HOSPITALS:

Lassen Community Hospital 530- 257- 5325
560 Hospital Lane Susanville

Seneca Healthcare District
130 Brentwood Drive, Chester 530- 258- 2151

Mercy Hospital
Redding 1- 800- 831- 3122

Redding Medical Center
1100 Butte Street, Redding 530- 244- 5400

GARBAGE & RECYCLING:

Garbage- Recycling Green Waste of Tehama 530- 527- 4281

Solid Waste Management
19995 Plymire Rd, Redbluff 530- 528- 1102

Lassen Waste Systems
125 S Lassen St Susanville 530- 257- 3553

UTILITIES:

Lassen Municipal Utility District
65 S. Roop St, Susanville 530- 257- 4174

Chester Public Utilities District
209 Main St Chester 530- 258- 2171

City of Susanville Water Billing
66 N Lassen St Susanville 530- 257- 1002

MOTELS:

Redding:

La Quinta Inn	2180 Hilltop Dr	(530)221- 8200
Holiday Inn Express	1080 Twin View	(530)241- 1935
Redlion Inn	1830 Hilltop	(530)221- 8700

Redbluff:
Comfort Inn

Mineral:

Mineral Lodge	Hwy 36	(530)595- 4422

Chester:

Deer Creek Lodge	Hwy 36	(530)258- 2939
Seneca Motel	545 Martin Way	(530)258- 2815
Antlers	Hwy 36	(530)258- 2722
Cedar Lodge	Hwy 36	(530)258- 2904
Chester Manor	306 Main	(530)258- 2441
Plumas Pines Resort	3000 Almanor Dr West LK	(530)259- 4343

Susanville:

High Country Inn	3015 E. Riverside Dr	(530)257- 3450
River Inn	1710 Main St	(530)257- 6051
Super 8 Motel	2975 Johnsonville Rd	(530)257- 2782
Best Western	2785 Main St	(530)257- 4123

INCIDENT COMMAND POST AND BASE CAMP LOCATIONS

LOCATION: Ball field at headquarters

LEGAL: T 29 N, R 3 E, SEC. 26 NW QUAD., SE corner

DIRECTIONS: On HWY. 36 E. across from the Caltrans Work Station 300 yards west of Lassen Volcanic National Park Headquarters, ½ miles west of Mineral.

WATER: Potable water is available in limited quantities. Actual amount to be determined by park B&U Staff.

POWER: PG&E Lines run through the camp area. They could be contacted for power supply if needed.

TELEPHONE: Telephone lines run through the camp area. Frontier would be the contact.

COMMUNICATIONS: LAVO Radio net is available. Cell phone reception.

HELIPORT/ LZ: 300 yards west of camp the property is a wide, flat, grassy meadow with access from the highway. The property is owned by Battle Creek Ranch. First contact for use is Dan Foster, (Caretaker for the property).

MOU'S: None Known

HAZARDS: A few trees should be removed prior to use, In addition, several areas require thinning to be safe for camp use.

FUELING POINT. 300 Yards west of the camp on the North side of the road is a good flat area with two access points. The land is privately owned and the contact is unknown.

GENERAL: The ball field area is a large flat, grassy area that lends itself well to a camp. Trees surround the perimeter. It has good interior access, as well as good access to the highway. Several favorable factors are it's readily available potable water, power and telephone sources, and it's proximity to LAVO headquarters and the USFS work station just east of Mineral.
Heliport and fueling points are just west of camp on either side of the highway. These however, need MOU's or contracts with the current owners.
Another factor that must be taken into consideration is the camp ground adjacent to the ball field. It is used as seasonal RV sites for park staff during the summer months.
This area would have to be fenced off and placed out of bounds to all emergency staff except law enforcement and those empowered by the IC, Park Superintendent or Chief Ranger. The park staff who resides there will need to have a minimum of interference with their work/sleep schedules and the understanding of all personnel that these are not park owned housing, but private domiciles.
By removing a section of fence, capping, cutting a water line, and removing a few rocks, a circle road can be completed alleviating traffic flow and supply problems.
For a small camp (of up to 80 people) sleeping areas and vehicle parking are adequate. With a little work this area could accommodate up to 100- 150 people. That would be the upper limit in my estimation, with traffic and sleeping areas becoming critically unsafe after that point.
Another option may be to establish the ICP at the LAVO headquarters fire cache. This provides access to power, phones, lights, computers, etc.

OTHER CONSIDERATIONS: This camp location has poor drainage and is susceptible to standing water. There is very little drainage of the area and it could become boggy. MOU's or contracts should be established to be prepared for an emergency/incident, fueling points and heliport/LZ's can quickly be put in place
along with rest of the base/camp.

SUMMARY: Dependant on size/complexity of the incident, this would make a good camp for up to 100 people, downgrading to fair to poor for 150 people. Because of the parking problem, 4 or 5 strike teams would overrun most of the available parking, whereas 6 to 8 handcrews who generally arrive in a bus or a couple buggies plus a support vehicle.

LOCATION: Juniper Lake Base Camp

LEGAL: T 30 N, R 6 E, Sec. 22 NE quad, NE corner

DIRECTIONS: Hwy 36 to Chester, turn on Feather River Drive, north. Go .6 mi. to Y and bear right. Go 5.3 mi. to Juniper Lake, Bennel Creek sign. Continue straight ahead miles to camp.

WATER: None

TELEPHONE: None

POWER; None

COMMUNICATIONS: Radio and, possible cell phone coverage.

HELIPORT/LZ: None known. Small LZ near/on beach for Type 3 helo.

MOU'S: None known

HAZARDS: A few hazard trees would need to be removed. Inholders use road, along with general usage by park visitors and local public for fire wood gathering, hunting and fishing. Some logging may go on along road leading to camp. Road would need to be watered and graded in sections if used very heavily.

FUELING POINT: Generally south on road has several good fueling locations.

GENERAL: Camp area is flat, with good parking locations in and around camp area. It has good trail connections to backcountry. Camp could support 100 if needed. The Horse corral area is not suitable for a camp location.

SUMMARY: A good camp location, though it would take a great deal of traffic to support operations in that area for any length of time. There are inholder considerations. Chester being nearby lends itself to potable water transport, garbage disposal and feeding of operations personnel.

LOCATION: Butte Lake Base Camp(s)

LEGAL: Camp A T 31 N, R 6 E, SEC. 9, NW QUAD.,
SW Corner below ranger station.

Camp B: T 31 N, R 6 E, SEC. 10, NE QUAD.
SE Corner campground loop B.

DIRECTIONS. On Hwy 36 at town of Westwood, turn toward Hwy. 44 on road A 21 north. Go 17.8 mi. to Hwy 44. Turn left on Hwy 44 and go 16.6 mi to the Butte Lake turn off. Turn left on Butte Lake road.

From Hwy 89 at Manzanita Lake, turn right on Hwy 44/89 toward Old Station, 12.9 mi. Right on Hwy 44 E. 10.8 miles to the Butte Lake turn off. Right on Butte Lake Road.

WATER: Available in limited quantities.

TELEPHONE: None

POWER: None

COMMUNICATIONS. Radio

HELIPORT/LZ: Established LZ at Butte lake on the NW edge of the lake with a serviceable road leading to it. The road will need to be widened, and the LZ is small. Support a Type 3 helo- however this is not the safest LZ to use.

MOU's: None known

HAZARDS: Some hazard trees may need to be removed. Also a fairly well used area of the park.

FUELING POINT: Several good fueling points can be utilized depending on the camp used.

GENERAL: Butte Lake has two good camps. A smaller camp located below the Ranger station will easily hold 60 - 80 personnel, whereas the B Loop can accommodate a moderate Type II organization. The area is well paved with good traffic flow. There are a few pit toilets that are available for use. Potable water will be a problem.
As well as hot food delivery. It is recommended that a catering service be utilized.

SUMMARY: An excellent site to be used for an incident base provided that there is some pre- planning done to mitigate any logistical concerns due to the remote location.

LOCATION: Warner Valley Base Camp

LEGAL: T 30 N, R 5 E, SEC. 23, SW QUAD, SW corner

DIRECTIONS: On Hwy. 36 in Chester, turn north on Feather River Drive. Go .6 mi. and bear left and the Y towards Drakesbad. Turn right 5.9 miles toward Drakesbad on Warner Valley Road. The road will turn to dirt 13.1 miles in from Chester, continue on the dirt road to Warner Valley C.G.

WATER: Available in limited quantities.

TELEPHONE: None

POWER: None

COMMO: Radio

HELIPORT/LZ: In meadow approximately ¼ mile. NW of C.G.

MOU'S: Drakesbad Guest Ranch ½ mile from camp area. Contract/MOU info unknown.

HAZARDS: Rough narrow road, well used with lots of summer traffic. There is also a large number of hazard trees that would need to be removed from the camp ground.

FUELING POINT: Best spot is near the Ranger Station

GENERAL: The road in and out is narrow and the traffic flow is not very good. The road would have to be graded and water regularly with the increase in traffic. There is a large number of hazard trees that need to be removed from the camp area. Water is available, along with toilets, food lockers, tables, a fairly flat area, good parking and traffic flow through the camp area. This camp could support 60 to 80 personnel.

Summary: This camps major draws are it's flat terrain, readily available toilets and water. The drawbacks are the roads and the tourist traffic. ICP would have to consider shutting down day use traffic and possibly interfering with the operations of the guest ranch. It is however a good camp location.

LOCATION: Summertown Base Camp

LEGAL: T 31 N, R 4 E, SEC. 7, CENTER SOUTH, SEC. 18, CENTER NORTH

DIRECTIONS: At the Manzanita Lake entrance station turn right on the service road and follow camp signs.

WATER: None

TELEPHONE: Lines run through camp location.

POWER: Lines run through the camp location.

COMMO: Radio

HELIPORT/LZ: At Manzanita Lake Fire Station.

MOU'S: None known

HAZARDS: There is a large number f hazard trees in camp, along the road and a lot old garbage in the camp area.

FUELING POINT: Several locations in this area would make good fueling points.

GENERAL: This is not a very good camp location. There are too many hazards associated with this camp to warrant its use by more than 40 personnel, unless an effort is made to rehab the area and remove the hazards. There is no water; the road is very narrow and not designed for two way traffic. Parking is almost non existent and the sleeping areas are marginal.

SUMMARY: With some work this camp is marginal at best and could only work for a small number of people for a short duration. This location would not provide for 24 hr operations due to the narrow roads. Consider this camp for use only if no other alternative is available.

VALUES AT RISK

The following is a comprehensive list of values at risk, their location and the improvements located within its geographical area.

Mineral Headquarters: T29N, R3E, S25 and 26.

Bldg #	Constructed Use	Current Use	Historic	Roof Types	Structural Type
1	Admin	Admin	Yes	Cedar Shake	Wood Frame, Concrete Foundation
2	Employee Quarters	Science Center	Yes	Cedar Shake	Wood Frame, Concrete Foundation
3	Garage	Storage	Yes	Cedar Shake	Wood Frame, Walls- masonry rock work
4	Residence	Residence	Yes	Cedar Shake	Wood Frame, Concrete Foundation
5	Garage	Garage	Yes	Cedar Shake	
6	Residence	Residence	Yes	Cedar Shake	Wood frame; concrete foundation w/masonry rock work
7	Garage	Garage	Yes	Cedar Shake	
8	Residence	Residence	Yes	Cedar Shake	Wood Frame, Walls- masonry rock work
9	Garage	Garage	Yes	Cedar Shake	Wood Frame, Concrete foundation
10	Residence	Residence	Yes	Cedar	Wood Frame, Walls- masonry

				Shake	rock work
11	Residence	Residence	Yes	Cedar Shake	Wood Frame, Walls- masonry rock work
12	Garage	Garage	Yes	Cedar Shake	
13	Residence	Residence	No	Cedar Shake	
14	Dormitory	Dormitory		Cedar Shake	
16	Residence	Residence		Cedar Shake	Wood frame, concrete foundation
17	Residence	Residence		Cedar Shake	Wood frame, concrete foundation
19	Wash house	Wash house		Cedar Shake	Wood frame, concrete foundation
20	Fire Cache	Storage		Cedar Shake	Wood frame, concrete foundation
21	Service Station	Storage		Cedar Shake	Wood frame, concrete foundation
22	Warehouse	Offices/Warehouse		Cedar Shake	Wood frame, concrete foundation
23	Auto Shop	Auto Shop	Yes	Metal	Wood frame, concrete foundation
24		Equipment shed/LMA storage	Yes	Metal	Wood frame, concrete foundation
25		Storage/Fitness	Yes	Metal	Wood frame, concrete foundation
26		Storage/Conference Center	Yes	Metal	Wood frame, concrete foundation
27		Carpenter Shop	Yes	Metal	Wood frame, concrete foundation
28		Sign Storage		Metal	Wood frame, concrete foundation
29		Electric Shop		Metal	
30			Yes	Metal	Wood frame, concrete foundation
31		Seismograph		Cedar Shake	Concrete w/ concrete foundation
101	Residence	Ranger Operations	No		Wood frame, concrete foundation
110	Residence	Residence	No	Metal	Wood frame, concrete foundation
111	Residence	Residence	No	Metal	Wood frame, concrete foundation
113	Fuel Stat/Paint/Wash Rack	Service Station/Paint Storage/Wash Rack	No	Metal	Concrete block
115	Residence	Ranger Operations	No		Wood frame, concrete foundation
120	Residence	Residence	No	Metal	Wood frame, concrete foundation
225	Residence	Residence	No	Metal	Wood frame, cement block foundation
239					
240	Chlorinated Shed	Chlorinated Shed	No	Cedar Shake	Wood frame, cement block foundation

260	Residence	Residence	No	Metal	Wood frame, cement block foundation
261	Residence	Residence	No	Metal	Wood frame, concrete foundation
262	Residence	Residence	No	Metal	Wood frame, concrete foundation
265	Residence	Residence	No	Metal	Wood frame, cement block foundation
384	Garage	Garage	No	Metal	Wood frame
388	Residence	Residence	No	Metal	Wood fraame, concrete foundation
640	Chlorinated shed	Small shed	No		
671	Residence	Residence	No	Metal	Wood frame, concrete foundation
AI	Bus Stop	Bus Stop	No	Cedar Shake	Wood frame
AK	LP shed		No	Metal	Wood frame
AL	Fire Cache	Fire Cache	No	Metal	Metal, cement block
AM	Recycle Building	Recycle Shed/Lumber Storage	No	Metal	Metal w/ concrete foundation
AN	Structural Fire	Storage	No	Metal	Metal w/ concrete foundation
AO	Fire hydrant shed				
AP	Storage shed				

Manzanita Lake: T31N, R4E, S18.

Bldg #	Constructed Use	Current Use	Historic	Roof Types	Structural Type
39	Loomis residence	Ranger station	Yes	Red Shingle	Rock
40		Garage	No	Red Shingle	Wood
41	Residence	Environmental Education Center	Yes	Cedar Shake	
42	Garage	Garage	?	Cedar Shake	Wood frame, concrete foundation
43	Museum	Museum	Yes	Flat- tar paper	Rock masonry, concrete foundation
46		Restroom	Yes	Metal	Wood frame, concrete foundation
47		Restroom	Yes	Metal	Wood frame, concrete foundation
49	Residence	Fee Collections Office	Yes	Cedar Shake	Rock masonry w/ wood beams; rock and concrete foundation
50	Kiosk	Kiosk	Yes	Cedar Shake	Rock masonry
51	Storage	Recycle/storage		Metal	Wood frame, concrete foundation
133	Maintenance building	Maintenance building	No	Metal	Wood frame, concrete foundation

178	Seismograph	Seismograph	Yes	Tar paper	Rock masonry; concrete foundation
295	Garage/Storage	Garage/Storage	No	Metal	Wood frame; concrete for garage, no foundation for bay area
295A	Open Bay		No		
297		Interpretive Storage	No		
298	Restroom	Restroom	No	Tar paper	Wood frame; concrete foundation
300	Restroom	Restroom	No		
301	Restroom	Restroom	No		
302	Restroom	Restroom	No	Tar paper	Wood frame; concrete foundation
303	Restroom	Restroom	No	Tar paper	Wood frame; concrete foundation
304	Restroom	Restroom	No	Tar paper	Wood frame; concrete foundation
305	Restroom	Restroom	No	Tar paper	Wood frame; concrete foundation
354	Projector Building	Projector Building	No	Cedar Shake	Wood frame; concrete slab
387	Residence	Residence	No	Metal	Wood fraame, concrete foundation
504	Comfort Station				
544	Storage	Storage	No	Metal	Wood frame, concrete foundation
618	Camper store	Camper store	No	Cedar Shake	Wood Frame; concrete foundation
642	Chlorine House	Chlorine House	No	Metal	Wood frame
649	Ranger Residence				
653	Wash House	Laundry/fitness/bathroom	No	Metal	Wood frame
656	Seasonal Cabins	Seasonal Cabins	No	Metal	Wood frame, concrete foundation
657	Seasonal Cabins	Seasonal Cabins	No	Metal	Wood frame, concrete foundation
658	Seasonal Cabins	Seasonal Cabins	No	Metal	Wood frame, concrete foundation
659	Seasonal Cabins	Seasonal Cabins	No	Metal	Wood frame, concrete foundation
660	Seasonal Cabins	Seasonal Cabins	No	Metal	Wood frame, concrete foundation
661	Seasonal Cabins	Seasonal Cabins	No	Metal	Wood frame, concrete foundation
662	Seasonal Cabins	Seasonal Cabins	No	Metal	Wood frame, concrete foundation
663	Seasonal Cabins	Seasonal Cabins	No	Metal	Wood frame, concrete foundation
664	Seasonal Cabins	Seasonal Cabins	No	Metal	Wood frame, concrete foundation
665	Seasonal Cabins	Seasonal Cabins	No	Metal	Wood frame, concrete foundation
666	Seasonal Cabins	Seasonal Cabins	No	Metal	Wood frame, concrete foundation
667	Seasonal Cabins	Seasonal Cabins	No	Metal	Wood frame, concrete foundation
668	Seasonal Cabins	Seasonal Cabins	No	Metal	Wood frame, concrete foundation
669	Seasonal Cabins	Seasonal Cabins	No	Metal	Wood frame, concrete foundation
670	Fire Station	Fire Station		Metal	Wood frame, concrete foundation
671	Residence	Residence	No	Metal	Wood frame, concrete foundation
672	Residence	Residence	No	Metal	Wood frame, concrete foundation
V	Hazmat	Hazmat	No		
W	Amphitheater				
X	Restroom	Restroom	No	Composite Shingle	Wood frame; concrete foundation

Y	Monitoring building	Air quality monitoring		Metal	Pre- fab
Z	Prospect Peak Look Out			Cedar Shake	Wood frame
AA	Storage Shed			Metal	Wood frame, concrete foundation
AB	Restroom	Restroom	No	Metal	Wood beams, concrete foundation
AC	Interpretive Display	Interpretive Display	No		Log beams
AD	Interpretive Display	Interpretive Display	No		Log beams
AE	Interpretive Display	Interpretive Display	No		Log beams
AF	Interpretive Display	Interpretive Display	No		Log beams
AG	Winter water plant	Winter water plant	No		Cement block
AH	Fueling Station/Pump Area	Fueling Station/Pump Area	No	Metal	Metal

Drakesbad: T30N, R5E, S22.

Bldg #	Constructed Use	Current Use	Historic	Roof Types	Structural Type
267	Guest Lodge	Guest Lodge	Yes	Galvanized Metal	Wood Frame; concrete foundation
268	Dining Hall and Kitchen	Dining Hall, Kitchen, Office, Employee Qtrs.	Yes	Galvanized Metal	Wood Frame; rock foundation
269	Guest House	Guest House	Yes	Galvanized Metal	Wood Frame; pier blocks foundation
272	Guest House	Guest House	Yes	Galvanized Metal	Wood Frame; concrete foundation
273	Guest House	Guest House	Yes	Galvanized Metal	Wood Frame; concrete foundation
274	Guest House	Guest House	No	Galvanized Metal	Wood Frame; concrete foundation
275	Guest House	Guest House	No	Galvanized Metal	Wood Frame; concrete foundation
281	Laundry/Qtrs	Laundry/Employee Quarters	Yes	Galvanized Metal	Wood Frame; foundation on blocks
284	Tack Shed	Tack Shed	No	Galvanized Metal	Wood Frame; concrete piers foundation
355	Chlorine House	Chlorine House	No	Composite Shingle	Wood frame
394	Generator Shed	Generator Shed	No	Galvanized Metal	Concrete Block; concrete blocks; concrete floor
395	Cook Shed	Employee Quarters	No	Galvanized Metal	Wood Frame; concrete piers
612	Guest House	Guest House	No	Galvanized	Wood Frame; concrete

				Metal	foundation
620	Bath House	Bath House	No	Galvanized Metal	Wood Frame; concrete foundation
627	Guest House	Guest House	No	Cedar Shake	Wood Frame; concrete foundation
631	Guest House	Guest House	No	Cedar Shake	Wood Frame; concrete foundation
632	Guest House	Guest House	No	Cedar Shake	Wood Frame; concrete foundation
673	Pool Shed		No		
L	Lift Station	Lift Station		Cedar Shake	Wood frame, concrete foundation
M	Diesel Storage		No		
N	Cellar	Cellar/storage	Yes	Flat- tar paper	Rock masonry

Butte Lake: T31N, R6E, S9 and 10.

Bldg #	Constructed Use	Current Use	Historic	Roof Types	Structural Type
121	Restroom	Restroom	No	Metal	Wood frame, concrete foundation
169	Cabin	Not in use	No	Cedar Shake	Wood frame, concrete foundation
227	Pumphouse	Not in use	No		
233	Ranger Station	Residence and Admin	No	Metal	Wood frame, concrete foundation
306	Comfort Station	Comfort Station	No	Metal	Wood frame
307	Comfort Station	Comfort Station	No	Metal	Wood frame
308	Comfort Station	Comfort Station	No	Metal	Wood frame
340	Projector Bldg.	Not in use	No	Corrugated tin	Wood frame
B	Water Treatment Plant	Water Treatment Plant	No	Metal	Concrete block; concrete foundation
C			No		
D	Amphitheaters	Not in use	No	Corrugated tin	Wood
E	Restroom	Restroom	No	Concrete	Concrete; concrete foundation
F	Restroom	Restroom	No	Concrete	Concrete; concrete foundation
G	Restroom	Restroom	No	Concrete	Concrete; concrete foundation
H	Restroom	Restroom	No	Concrete	Concrete; concrete foundation
I	Restroom	Restroom	No	Concrete	Concrete; concrete foundation
J	Restroom	Restroom	No	Concrete	Concrete

Summit Lake: T34N, R5E, S4.

Bldg #	Constructed Use	Current Use	Historic	Roof Types	Structural Type
37	Ranger Station	Ranger Residence	Yes	Cedar Shake	Wood frame
103	Comfort Station	Comfort Station	No	Flat- paper	Wood frame, concrete foundation
231	Comfort Station	Comfort Station	No	Flat- tar paper	Wood frame, concrete foundation
644	Filter House	Filter House	No	Metal	Wood frame
645	Filter House	Filter House	No	Metal	Wood frame
AR	Restroom	Restroom	No	Concrete	Concrete; concrete foundation
AS	Amphitheater				
AT	Horse Corral				
AU	Unknown	Storage shed		Wood tongue/groove	Wood frame; concrete foundation
AV	Restroom	Restroom	No	Cedar Shake	Wood frame
AW	Storage shed	Storage shed	No	Metal	Wood, plywood base, foundation - pier blocks

Juniper Lake: T33N, R5E, S15.

Bldg #	Constructed Use	Current Use	Historic	Roof Types	Structural Type
276	Residence		No		
277	Residence		No		
278	Residence		No		
289	Storage shed				
339	Shower House				
356	Residence - Inholder				
T	Ranger Station	Ranger Station	No	Metal	Wood frame; concrete foundation

Southwest Area: T30N, R4E, S27 and 28.

Bldg #	Constructed Use	Current Use	Historic	Roof Types	Structural Type
132	Public/Ski Chalet	Public	No	Metal	Concrete/steel
318	Generator/Chlorinator	Generator/Chlorinator	No	Asphalt?	Concrete foundation
342	Restroom	Restroom	No	Tar paper	Concrete foundation
343	Kiosk	Kiosk	No	Metal	Wood frame
344	Kiosk	Kiosk	No	Metal	Wood frame
AQ	Propane tank containment	Propane tank containment	No	Metal	Cement block

Hat Creek: T34N, R4E, S17

Bldg #	Constructed Use	Current Use	Historic	Roof Types	Structural Type
363	Residence - Inholder				
385	Residence - Inholder				
386	Pump House				
O	Storage Shed - Inholder	Storage		Metal	Wood frame, Plywood
P	Restroom	Restroom	No		Pre- fab concrete faux log
Q	Vacation cabin	Not in use		Cedar Shake	Wood frame, rock foundation w/ concrete mortor

Warner Valley: T31N, R5E, S23.

Bldg #	Constructed Use	Current Use	Historic	Roof Types	Structural Type
58	Ranger Residence	Ranger Residence	Yes	Cedar Shake	Stacked 2 x 6's - wooden, concrete foundation
59	Garage	Storage	Yes	Cedar Shake	Wood frame, concrete foundation
60	Barn	Storage	Yes	Cedar Shake	Wood frame, concrete foundation
641	Comfort Station	Comfort Station	No	Cedar Shake	Wood frame, concrete foundation

Horseshoe Lake: T33N, R6E, S8.

Bldg #	Constructed Use	Current Use	Historic	Roof Types	Structural Type
56	Ranger Residence	Ranger Residence	Yes	Cedar Shake	Log
R	Restroom	Restroom	No		Pre- fab concrete faux log
S	Storage	Storage	Yes	Flat	Wood frame

Twin Lakes: T35N, R5E, S25.

Bldg #	Constructed Use	Current Use	Historic	Roof Types	Structural Type
53	Wilderness Ranger Station	Wilderness Ranger Station	Yes	Shake/Shingle	Log
AX	Restroom	Restroom	No		Pre- fab concrete faux log

Mt. Harkness: T30N, R6E, S27.

Bldg #	Constructed Use	Current Use	Historic	Roof Types	Structural Type
57	Fire Lookout	Fire Lookout	Yes	Wood shingle	
353	Toilet	Not in use	Yes		

Reflection Lake: T31N, R4E, S18.

Bldg #	Constructed Use	Current Use	Historic	Roof Types	Structural Type
131	Comfort Station	Not in use	No	Flat- tar paper	Wood frame, concrete foundation

Bumpass Hell: T30N, R4E, S14.

Bldg #	Constructed Use	Current Use	Historic	Roof Types	Structural Type
A	Restroom	Restroom	No	Concrete	Concrete

Devastated Area: T31N, R4E, S24.

Bldg #	Constructed Use	Current Use	Historic	Roof Types	Structural Type
K	Restroom	Restroom	No	Concrete	Concrete

Kings Creek: T30N, R5E, S18.

Bldg #	Constructed Use	Current Use	Historic	Roof Types	Structural Type
U	Restroom	Restroom	No	Concrete	Concrete; concrete foundation

APPENDIX H – Long-term Prescribed Fire and Hazard Fuel Reduction Plan

NAME	ACRES	STATUS
Prospect	3417	2004
GR II	1297	2004
Flumetank	381	2005
Loomis	135	2005
Stonehenge USFS	1076	2006
Stonehenge	849	2006
Raker	2052	2007
Devastated	3362	2007
Red Cinder	6820	2008
Inspiration	2267	2009
Flatiron	1420	2010
Boiling	1249	2011
Proposed	1123	2013
Proposed	320	2013
Juniper	5192	2013
Lava FS	1451	2014
Drake	3169	2014
Lava	2919	2014
Crescent	3274	2014
Hole	554	complete
Crags	150	complete
Knob	77	complete
Tollroad	86	complete
Watertank	117	complete
Butte 04	493	complete
Summertown	611	complete
TOTAL ACRES	**43861**	

APPENDIX I – Public Information, Education and Prevention Plan

Reference chapter 9 for public information and education, a detailed prevention plan is under development and will be added as an addendum.

APPENDIX J – Rental Agreements

Lassen Volcanic National Park currently does not have any rental agreements in place. Blanket Purchase Agreements are established on a yearly basis with local vendors for food service. A copy of the BPA may be found in the contracting office or with the Fire Business Manager.

APPENDIX K – Contracts for Suppression and Prescribed Fire Resources

Lassen Volcanic National Park currently does not have any contracts for suppression or prescribed fire resources.

APPENDIX L – Burned Area Emergency Stabilization and Rehabilitation (ESR)

AGENCY/UNIT: XXXXX

LOCATION: *City, County, State*

DATE: *Date Prepared*

PREPARED BY: *Individual, formal team, or ad hoc team*

Submitted By: _____ Date: _____
Title (i.e., Burned Area Emergency Stabilization and Rehabilitation Team Leader.)

REVIEW AND APPROVAL

Specify agency, XXXXX

I. Suppression Operations Funding Approval (check one box below):

- Approved
- Approved with Revision (see attached)
- Disapproved

Specify Title and Jurisdiction (Field Unit Agency Administrator), Date

II. Burned Area Rehabilitation Funding Approval (check one box below):

- Approved
- Approved with Revision (see attached)
- Disapproved

Specify Title and Jurisdiction (Region/State Agency Administrator), Date

Regional Fire Management Coordinator concurrence that the plan fits the technical definition for use of Burned Area Rehabilitation finding. *(U.S. Fish and Wildlife Service Only)*

Regional Fire Management Coordinator, Region *X* Date

III. Agency Operational Base Funding Approval (check one box below):

- Approved
- Approved with Revision (see attached)
- Disapproved

Specify Title and Jurisdiction (Region/State), Date

III. Burned Area Rehabilitation Funding Approval (check one box below):

- Approved
- Approved with Revision (see attached)
- Disapproved

Specify Title and Jurisdiction (Headquarters), Date

PART E - SUMMARY OF ACTIVITIES AND COSTS

The summary of activities and cost table below identifies emergency stabilization and rehabilitation costs charged or proposed for funding from Suppression Operations, Burned Area Rehabilitation, agency operation, and other funding sources. Expenditures are displayed in the total cost column. They are coded with the appropriate cost authority. The total cost of the rehabilitation effort to date, excluding the costs absorbed by the fire account (fire crews, labor, and associated overhead) is displayed as either Suppression Operations (F), Burned Area Rehabilitation (BAR), Emergency Watershed Protection (EWP), or Agency Operations/Other (O/OP) or other.

Fire Name: YYYYY

As of *date*

Specification Cost Summary

~~Account~~	~~Dollars~~	~~Dollars~~
~~Fire Suppression Activity Damage Rehabilitation (F)~~		
~~Burned Area Rehabilitation (BAR)~~		~~$0~~
~~Emergency Stabilization~~	~~$~~	
~~Rehabilitation~~	~~$~~	
~~Emergency Watershed Protection (EWP)~~		
~~Agency Operations/Other (OP/O)~~		
~~Funding Summary - Estimated Total~~		~~$0~~

PART B - NATURE OF PLAN

I. Type of Plan (check one box below)

	Emergency Stabilization
	Rehabilitation
	Both Emergency Stabilization and Rehabilitation

II. Type of Action (check one box below)

	Initial Submission
	Updating or Revising the Initial Submission
	Supplying Information of Accomplishment to Date on Work
	Different Phase of Project
	Final Accomplishment Report (To Comply with the Closure of the 9262 Account)

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PART A - FIRE LOCATION AND BACKGROUND INFORMATION

Fire Name	YYYYY
Fire Number	
Agency Unit	
Region	
State	
County(s)	
Ignition Date/Cause	
Zone	
Date Controlled	
Jurisdiction	Acres
XXXXX	
other jurisdictions	
other jurisdictions	
other jurisdictions	
other jurisdictions	
other jurisdictions	
Total Acres	
Date Contained	

PART B - NATURE OF PLAN

I. Type of Plan (check one box below)

	Emergency Stabilization
	Rehabilitation
	Both Emergency Stabilization and Rehabilitation

II. Type of Action (check one box below)

	Initial Submission
	Updating or Revising the Initial Submission
	Supplying Information of Accomplishment to Date on Work
	Different Phase of Project
	Final Accomplishment Report (To Comply with the Closure of the 9262 Account)

PART C - EMERGENCY STABILIZATION AND REHABILITATION ASSESSMENT

Emergency Stabilization Objectives

- *Locate and stabilize severely burned slopes which pose a direct threat to human life, property or critically important cultural and/or natural resources.*
- *As practical and necessary, restore natural conditions to areas disturbed by fire suppression actions.*
- *Prevent the establishment of non- native invasive plants.*
- *Prevent degradation of unburned areas within the fire perimeter before spring greenup by wild ungulates and horses.*
- *Etc.*
- *Etc.*

Rehabilitation Objectives

- *Rehabilitate former salt- cedar areas with willows, cottonwoods, and other native species as specified in the refuge's approved Comprehensive Conservation and Habitat Management Plan.*
- *Rehabilitate burned grazing program infrastructure (i.e., boundary and allotment management fences and water troughs).*
- *Repair or replace burned facilities in the Coot Creek campground.*
- *Etc.*
- *Etc.*

PART D - TEAM ORGANIZATION, MEMBERS, AND RESOURCE ADVISORS

I. Approval Authorities

Specify Agency (for multi- agency plans duplicate for each agency)

Activities Requiring Local Agency Administrator Approval Fire Suppression Damages (charged to Fire Suppression)	Status	Cost
Subtotal		

Status: C=Completed,; O=Ongoing; P=Planned

Activities Requiring Regional/State/Headquarters Approval Emergency Stabilization and Rehabilitation (charged to BAR)	Status	Cost
Subtotal		

Status: C=Completed,; O=Ongoing; P=Planned

Total Emergency Stabilization and Rehabilitation Costs	

II. Burned Area Emergency Stabilization and Rehabilitation (ESR)Team Members: *(List of technical specialists used to develop the plan)*

Position	Team Member (Agency)
Team Leader	*Cathy Smith (NPS)*
Public Information	
Operations	
NEPA Compliance & Planning	
Hydrologist	
Soil Scientist	
Geologist	
Cultural Resources/Archeologist	
Vegetation Specialist	
Wildlife Biologist	
GIS Specialist	
Documentation/Computer Specialist	
Photographer	
Other Technical Specialists	

III. Resource Advisors: (Note: Resource Advisors are individuals who assisted the ESR Team with the preparation of the plan. See Part H for a full list of agencies and individuals who were consulted or otherwise contributed to the development of the plan.

Name	Affiliation
Jane Doe	*XXXXX NWR, Project Leader*

PART E - SUMMARY OF ACTIVITIES AND COSTS

The summary of activities and cost table below identifies emergency stabilization and rehabilitation costs charged or proposed for funding from Suppression Operations, Burned Area Rehabilitation, agency operation, and other funding sources. Expenditures are displayed in the total cost column. They are coded with the appropriate cost authority. The total cost of the rehabilitation effort to date, excluding the costs absorbed by the fire account (fire crews, labor, and associated overhead) is displayed as either Suppression Operations (F), Burned Area Rehabilitation (BAR), Emergency Watershed Protection (EWP), or Agency Operations/Other (O/OP) or other.

Fire Name: YYYYY

As of *date*

Specification Cost Summary

Account	Dollars	Dollars
Fire Suppression Activity Damage Rehabilitation (F)		
Burned Area Rehabilitation (BAR)		$o
Emergency Stabilization	$	
Rehabilitation	$	
Emergency Watershed Protection (EWP)		
Agency Operations/Other (OP/O)		
Funding Summary - Estimated Total		$o

PART E - SUMMARY OF EMERGENCY STABILIZATION ACTIVITIES - COST SUMMARY TABLE - YYYYY Fire

Spec #	Title	Unit	Unit Cost	# of Units	Cost by Funding Source				Implementation Method	Specification Total
					F	BAR	EWP	OP/O		
N-3b	*Soil Stabilization*	*Acre*	*$ 264.85*	*200*		*$ 52,970*			*P,C*	*$ 52,970*

Spec #	Title	Unit	Unit Cost	# of Units	Cost by Funding Source				Implementation Method	Specification Total
					F	BAR	EWP	OP/O		
TOTAL COST					$ 0	$ 52,970	$ 0	$ 0		$ 52,970

COST: F1=Suppression Operations, BAR=Burned Area Rehabilitation, EWP=Emergency Watershed Protection, OP/O=Agency Operations Funding, Other **METHOD**: FC=Crew Assigned to Fire, C=Contract, EFC=Emergency Fire Contract, P=Agency Personnel

PART E - SUMMARY OF REHABILITATION ACTIVITIES - COST SUMMARY TABLE - YYYYY Fire

Spec #	Title	Unit	Unit Cost	# of Units	Cost by Funding Source		Implementation Method	Specification Total
					BAR	OP/O		
N-3b	*Sagebrush Planting*	*Acre*	*$ 264.85*	*200*	*$ 52,970*		*P,C*	*$ 52,970*

Spec #	Title	Unit	Unit Cost	# of Units	Cost by Funding Source		Implementation Method	Specification Total
					BAR	OP/O		
TOTAL COST					$ 52,970	$ 0		$ 52,970

COST: BAR=Burned Area Rehabilitation, OP/O=Agency Operations Funding, Other **METHOD**: FC=Crew Assigned to Fire, C=Contract, EFC=Emergency Fire Contract, P=Agency Personnel

PART F - INDIVIDUAL TREATMENT SPECIFICATIONS

SPECIFICATION TITLE:		**AGENCY:**	
PART E LINE ITEM:		**FISCAL YEAR(S) (list each year):**	

I. WORK TO BE DONE (describe or attach exact specifications of work to be done):

Number and Describe Each Task:

A. General Description:

B. Location/(Suitable) Sites:

C. Design/Construction Specifications:

1.

2.

D. Purpose of Treatment Specifications:

E. Treatment Effectiveness Monitoring Proposed:

II. LABOR, MATERIALS AND OTHER COST:

➢ **PERSONNEL SERVICES: (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item): Do not include contract personnel costs here (see contractor services below).**	**COST/ITEM**
TOTAL PERSONNEL SERVICE COST	
• **EQUIPMENT PURCHASE, LEASE AND/OR RENT (Item @ Cost/Hour X # of Hours X #Fiscal Years = Cost/Item): Note: Purchases require written justification that demonstrates cost benefits over leasing or renting.**	**COST/ITEM**
TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST	
• **MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X #Fiscal Years = Cost/Item):**	**COST/ITE**

	M
TOTAL MATERIALS AND SUPPLY COST	
• **TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X #Fiscal Years = Cost/Item):**	**COST/ITEM**
TOTAL TRAVEL COST	
• **CONTRACT COST (Labor or Equipment @ Cost/Hour X #Hours X #Fiscal Years = Cost/Item):**	**COST/ITEM**
TOTAL CONTRACT COST	

SPECIFICATION COST SUMMARY

FISCAL YEAR	UNIT	UNITS COST	# OF UNITS	COST	FUNDING SOURCE	METHOD
FY__						
FY__						
FY__						
FY__						
FY__						
TOTAL						

FUNDING SOURCE METHODS
F - Suppression Operations **P** - Agency Personnel Services
BAR - Burned Area Rehabilitation **C** - Contract (long- term)
EWP - Emergency Watershed Protection **EFC** - Emergency Fire Contract (short- term)
OP/O - Agency Operations/Other **FC** - Incident Management Crew Assignment

SOURCE OF COST ESTIMATE

1. Estimate obtained from 2- 3 independent contractual sources.	
2. Documented cost figures from similar project work obtained from local agency sources.	
3. Estimate supported by cost guides from independent sources or other federal agencies	

4. Estimates based upon government wage rates and material cost.	
5. No cost estimate required - cost charged to Fire Suppression Account	

P = Personnel Services, **E** = Equipment **M** = Materials/Supplies, **T** = Travel, **C** = Contract, **F** = Suppression

III. RELEVANT DETAILS, MAPS AND DOCUMENTATION INCLUDED IN THIS REPORT:

List Relevant Documentation and Cross- Reference Location within ESR Plan Accomplishment Report (for Rehabilitation treatments quote (include page number, approving officials name, and date approved for review and auditing purposes) pertinent passages from approved land management plans:

PART G - POST- REHABILITATION REQUIREMENT[1]

The following are post- rehabilitation, implementation, operation, maintenance, monitoring, and evaluation actions beyond three years to ensure the effectiveness of initial investments. Estimated annual cost and funding source is indicated.

Emergency Stabilization

1. Monitor and maintain road culverts clear of debris ($5,000 - OP/O)
2. Monitor ($1,000) and dredge ($75,000 - OP/O) sediment ponds as need
3. Continue invasive species monitoring and control ($50,000 - OP/O)
4. Etc.
5. Etc.
6. Etc.

Rehabilitation

1. Monitor and maintain drip irrigation system ($25,000 - OP/O)
2. Long- term Monitoring
A. Monitor riparian vegetation recovery ($10,000 - OP/O)
B. Complete district cultural resources systematic survey ($75,000 - OP/O)
C. Southwestern willow flycatcher population monitoring ($25,000 - OP/O)
3. Etc.
4. Etc.
5. Etc.

[1] Non-9262 funding

PART H - CONSULTATIONS

U.S. Fish and Wildlife Service
Jane Doe, Regional Archeologist

National Marine Fisheries Service
John Doe, Anadromous Fish Biologist

Umatilla Tribe
Jane J. Doe, Tribal Council Member

Etc., etc., etc.

APPENDIX I - ESR BURNED AREA ASSESSMENT REPORTS

- *Soil & Watershed Damage Assessment Report*
- *Vegetation Damage Assessment Report*
- *Forest Damage Assessment Report*
- *Wildlife Damage Assessment Report*
- *Cultural Damage Assessment Report*
- *Faculty Assessment Report*
- *Etc.*

YYYY FIRE *RESOURCE* DAMAGE ASSESSMENT REPORT

1. Objectives
2. Issues
3. Observations
    1. Background Information
    2. Reconnaissance Method
    3. Findings
4. Recommendations
    1. Management (specification related)
    2. Specification Monitoring (specification related)
    3. Management (non- specification related)
5. Consultations
6. References

-APPENDIX II - ENVIRONMENTAL COMPLIANCE

Federal, State, and Private Lands Environmental Compliance Responsibilities

All projects proposed in the YYYYY Fire Burned Area Emergency Stabilization and Rehabilitation (ESR) Plan that are prescribed, funded, or implemented by Federal agencies on Federal, State, or private lands are subject to compliance with the National Environmental Policy Act (NEPA) in accordance with the guidelines provided by the Council on Environmental Quality (CEQ) Regulations (40 CFR 1500- 1508); *insert department and agency policy*. This Appendix documents the ESR Team considerations of NEPA compliance requirements for prescribed rehabilitation and monitoring actions described in this plan for all jurisdictions affected by the YYYYY burned area emergency.

Related Plans and Cumulative Impact Analysis

XXXXX *Specify Plan (approval date)*. The XXXXX *Specify Plan* was reviewed and it was determined that actions proposed in the YYYYY Fire ESR Plan within the boundary of the XXXXX are consistent with the management objectives established in the Comprehensive Conservation Plan. The Comprehensive Conservation Plan NEPA compliance process specifically addresses:

· *List specific issues*

(Duplicate for all plans reviewed)

Cumulative Impact Analysis

Cumulative effects are the environmental impacts resulting from the incremental impacts of a proposed action when added to other past, present, and reasonably foreseeable future actions, both Federal and non- Federal. Cumulative impacts can result from individually minor, but collectively significant actions taking place over a period of time. The emergency protection and rehabilitation treatments for areas affected by the YYYYY Fire, as proposed in the YYYYY Fire ESR Plan, do not result in an intensity of impact (i.e. major ground disturbance, etc.) that would cumulatively constitute a significant impact on the quality of the environment. The treatments are consistent with the above jurisdictional management plans and associated environmental compliance documents and categorical exclusions listed below.

Applicable and Relevant Categorical Exclusions

The individual actions proposed in this plan for XXXXX are Categorically Excluded from further environmental analysis as provided for in the *specify relevant departmental and agency Categorical Exclusions*. All applicable and relevant Department and Agency Categorical Exclusions are listed below. Categorical Exclusion decisions were made with consideration given to the results of required emergency consultations completed by the ESR Team and documented below.
Applicable Department *specify* Categorical Exclusions

List

Applicable *specify* agency Categorical Exclusions

Statement of Compliance for the YYYYY Fire Burned Area Emergency Stabilization and Rehabilitation Plan.

This section documents consideration given to the requirements of specific environmental laws in the development of the YYYYY Fire ESR Plan. Specific consultations initiated or completed during development and implementation of this plan are also documented. The following executive orders and legislative acts have been reviewed as they apply to the YYYYY Fire ESR Plan:

- National Historic Preservation Art (NHPA).
- Executive Order ll988. Floodplain Management.
- Executive Order 11990. Protection of Wetlands.
- Executive Order 12372. Intergovernmental Review.
- Executive Order 12892. Federal Actions to Address Environmental Justice in Minority and Low-income Populations.
- Endangered Species Act.
- Secretarial Order 3127. Federal Contaminated
- Clean Water Act.
- Clean Air Act.

CONSULTATIONS

- *List partners and neighbors consulted*

NEPA Checklist: If any of the following exception applies, the ESR Plan cannot be Categorically Excluded and an Environmental Assessment (EA) is required.

(Yes) (No)
( ) ( ) Adversely affect Public Health and Safety
( ) ( ) Adversely affect historic or cultural resources, wilderness, wild and scenic rivers aquifers, prime farmlands, wetlands, floodplains, ecologically critical areas, or Natural Landmarks.
( ) ( ) Have highly controversial environmental effects.
( ) ( ) Have highly uncertain environmental effects or involve unique or unknown environmental risks.
( ) ( ) Establish a precedent resulting in significant environmental effects.
( ) ( ) Relates to other actions with individually insignificant but cumulatively significant environmental effects.
( ) ( ) Adversely effects properties listed or eligible for listing in the National Register of Historic Places
( ) ( ) Adversely affect a species listed or proposed to be listed as Threatened or Endangered.
( ) ( ) Threaten to violate any laws or requirements imposted for the "protection of the environment" such as Executive Order 1 1 988 (Floodplain Management) or Executive Order 1 1 990 (Protection of Wetlands).

National Historic Preservation Act

Ground Disturbance:

( )None
( )Ground disturbance did occur and an archeologist survey, required under section 110 of the NHPA will be prepared. A report will be prepared under contract as specified by the ESR Plan.

A NHPA Clearance Form:

( )Is required because the project may have affected a site that is eligible or on the national register. The clearance form is attached. SHPO has been consulted under Section 106 (see Cultural Resource Assessment, Appendix I).
( )Is not required because the ESR Plan has no potential to affect cultural resources (initial of cultural resource specialist).

Other Requirements

(Yes) (No)
( ) ( ) Does the ESR Plan have potential to affect any Native American uses? If so, consultation with affiliated tribes is needed.
( ) ( ) Are any toxic chemicals, including pesticides or treated wood, proposed for use? If so, local agency

I have reviewed the proposals in the YYYYY Fire Burned Area Emergency Stabilization and Rehabilitation Plan in accordance with the criteria above and have determined that the proposed actions would not involve any significant environmental effect. Therefore it is categorically excluded from further environmental (NEPA) review and documentation. ESR Team technical specialists have

completed necessary coordination and consultation to insure compliance with the National Historic Preservation Act, Endangered Species Act, Clean Water Act and other Federal, State and local environment review requirements.

ESR Team Environmental Protection Specialist Date

Project Leader, XXXXX National Wildlife Refuge Date

APPENDIX III - MAPS

- *Fire Perimeter*
- *Jurisdiction Map*
- *Suppression Impacts*
- *Soils*
- *Burn Severity*
- *Vegetation Communities*
- *Vegetation Mortality*
- *Threatened and Endangered Species Areas*
- *Invasive Species*
- *Wind Erosion Risk Map*

APPENDIX IV - PHOTO DOCUMENTATION

APPENDIX V - SUPPORT DOCUMENTS

Directions for filing out Plan

COVER PAGE

Replace the italic text with the requested information.

REVIEW AND APPROVAL PAGE

Obtain the appropriate approval(s) and concurrence(s). Approvals and concurrences may differ between agencies. Check individual agency ESR policies for details.

EXECUTIVE SUMMARY

Replace the italic text with the requested information. Replace all examples with plan specific information.

TABLE OF CONTENTS

When the plan is completed, complete or generate a page numbers.
(Tools/Reference/Table of Contents)

PART A - FIRE LOCATION AND BACKGROUND INFORMATION

Fill in the table and replace italics with specific information.

PART B - NATURE OF PLAN

Check the appropriate box.

PART C - EMERGENCY STABILIZATION AND REHABILITATION ASSESSMENT

Replace the italic objectives with the plan specific objectives.

PART D - TEAM ORGANIZATION, MEMBERS, AND RESOURCE ADVISORS

Fill in the tables with the appropriate team member and resource advisor name(s).

PART E - SUMMARY OF ACTIVITIES AND COSTS

Insert the correct date. Fill in the Specification Cost Summary table from the appropriate Summary of Fire Suppression Damage Rehabilitation, Emergency Stabilization, Rehabilitation, Agency Operations, and Other Accounts tables. Fill in the Summary of Fire Suppression Activity Damage Rehabilitation, Emergency Stabilization, Rehabilitation, Agency Operations, and Other Accounts from the Individual Treatment

Specifications in PART F. Completed only after all Individual Treatment Specifications are inserted in PART F.

PART F - INDIVIDUAL TREATMENT SPECIFICATIONS

Fill in all information in all sections (I, II, III) of the individual Specification. The individual Fire Assessment Damage reports provide most of the necessary information. Use the 24 Command Fire BAER Plan as an example of the type of information required. Insert as many Individual Treatment Specifications (specifications.wpd) as necessary.

PART G - POST- REHABILITATION REQUIREMENT

Identify the post- rehabilitation actions and estimated costs and funding source(s) that must continue following curtailment of Burned Area Rehabilitation subactivity funding.

PART H - CONSULTATIONS

List all consultations made during the preparation of the plan.

APPENDIX I - ESR BURNED AREA ASSESSMENT REPORTS

List all the necessary individual Burned Area Assessment Reports that follow.

Using information gained from the broad scale reconnaissance and ground assessment, prepare and insert all necessary Burned Area Assessment Reports (assessment.wpd). Title each assessment appropriately and complete all sections. Refer to the 24 Command example for the information required.

APPENDIX II - ENVIRONMENTAL COMPLIANCE

Replace the italic text with the requested information and list partners and neighbors consulted. Complete all checklists and obtain all necessary signatures.

APPENDIX III - MAPS

Insert all maps.

APPENDIX V - SUPPORT DOCUMENTS

Insert all photo documentation.

APPENDIX M – Yearly Readiness Check List

Yearly Readiness Checklist

This checklist consists of program activities with suggested accomplishment dates. It should only be used as a guide to aid in successful program implementation.

JANUARY

- Complete and submit all project IAP's.

FEBRUARY

- Complete repairs on any fire apparatus or equipment.

MARCH

- Complete seasonal hiring.
- Ensure physicals for employees with primary firefighting responsibilities are complete.
- Task order for Lassen National Forest submitted.
- Fire shelters are inspected and meet current standards.
- Prepare for spring burning and implement approved projects when in prescription.

APRIL

- Determine required in Park training needs and establish dates. (CPR, Defensive Driving, Hazmat, First-Aid, Blood Born Pathogens, 8hr refresher, Ethics/Conduct, S130, S190, S211, S212).
- Inventory cache.
- Begin work capacity testing.
- Develop list of required cache replacement items for field season.
- Prepare/update crew safety folders.
- Review/update FMP.
- Review/update IDP's for permanent and STF staff.

MAY

- Return fire vehicles from winter storage.
- Begin clean up, maintenance, servicing and restocking of all fire vehicles, engine and patrol vehicles.
- Test pumps, saws and other suppression/project equipment prior to issue in field season.
- Perform fire extinguisher checks.
- Begin formal morning briefings consisting of daily weather, 6 minutes for safety, situation report, and daily operations.
- Bulletin boards have required posted info and are maintained.

JUNE

- EOD for seasonal work force (engine, fuels, monitors, bio-techs).
- Complete required training for seasonal work force.
- Complete 8 hr refresher training for all fire staff.
- Begin daily vehicle readiness checks.
- Begin or continue physical training programs.
- Issue Red Cards.
- Begin season long proficiency training as per readiness review standards.
- Begin fuel moisture and fuel load sampling.
- SIFC Board of Directors meeting.
- Five party agreement meeting.
- Fire shelter training and practice drills are completed.

JULY

- Activate weather station at Mt. Harkness Look out.
- Activate Mt Harkness Look out.
- Pressure test all fire hose.
- Complete Readiness Review.

AUGUST

- Cache/supply replacement list is updated and submitted to senior staff.

SEPTEMBER

- Prepare for fall prescribed burning and implement approved projects when in prescription.
- Determine NWCG training needs for permanent/STF staff.

OCTOBER

- Update fire history and 1202 data base.
- Submit updated red card information (experience/training).
- Complete all annual fire reports and other required reports.
- Initiate new performance standards and finalize current performance ratings.

NOVEMBER

- Rehab all fire equipment, cache supplies, pumps, saws, hand tools, camping equipment.
- Inventory cache.
- Develop list of required cache replacement items.
- Deactivate weather station at Mt. Harkness Look out.(may occur prior to season ending snow event)
- Winterize Mt. Harkness Look out. (may occur prior to season ending snow event)
- Review/update IDP’s for permanent and STF staff.

DECEMBER

- Issue seasonal job announcements.
- Winterize all vehicles and place in storage for winter.

APPENDIX N – Preparedness Staffing Plan

Preparedness Actions

Preparedness plan actions taken within Lassen Volcanic National Park will be complimentary to actions taken on adjacent districts of the Lassen National Forest. However since the U.S. Forest Service in Region 5 has stopped using defined preparedness planning to delineate acceptable or mandated actions in favor of duty officer defined actions taken at district levels it may not always be possible or practical to take similar actions. Pertinent documents that identify operational actions and provide guidance include National and California Mobilization Guides and Susanville Interagency Fire Center (SIFC) operations plans.

The Park utilizes 3 NFDRS stations for analyzing its fire danger. Two are USFS Lassen National Forest stations (Chester and Bogard) and one coop station (Manzanita Lake). These stations are summarized in the table below:

Station Name	NFDRS #	*MSGC	Owner	Location
Manzanita Lake	040609	G2A3	LNF/LNP	NW entrance to park
Bogard	040703	G1A3	FS-LNF	10 mi NE of park
Chester	040904	G1A3	FS-LNF	Chester

*Model/Slope/Grass/Climate Class

Lassen Volcanic National Park has selected Energy Release Component (ERC) from the National Fire Danger Rating System as the key variable for establishment of staffing classes. The ERC's listed below have been calculated according to analysis of 42 years of weather collected at the Manzanita Lake RAWS from 1962 through 2004, data is on file in the Lassen Volcanic National Park fire management office

SC	Adjective Rating	Percentile	Energy Release Component
1	Low		0-37
2	Moderate		38-47
3	High		48-61
4	Very High	90	62-70
5	Extreme	97	71+

Each staffing class has been identified with a corresponding ERC and fire danger adjective rating. The analysis of this information allows fire managers to evaluate the potential for new natural or human caused ignitions, potential for expected fire behavior

and difficulties that may be encountered while implementing appropriate management actions.

All operations will be conducted in accordance with National Park Service and interagency wildland fire policies and guidelines (DO-18, RM18, Federal Wildland Fire Policy Implementation Guide).

Step-Up Plan

Staffing Class	ERC		Step-Up Action
1	0-37		Normal tours of duty and numbers of initial attack/fuels crew personnel.
2	38-47		Normal tours of duty and numbers of initial attack/fuels crew personnel. Authorize additional staffing and specify tours of duty to meet prescribed fire and wildland fire use objectives. Begin collecting fuel samples from plot sites as access becomes feasible, maintain throughout season.
3	48-61		All actions in class 2. Specify and extend tours of duty for key permanent staff, initial attack and fuels crew personnel, as needed. If the Park has active fire use fires, consider the need for outside resources. Duty officer is available during normal duty hours. Type 4 Incident Commander is available during operational shift. Type 2 Fire Use Manager is available. Provide a daily briefing to all operational personnel that includes a safety discussion, daily weather and local, regional and national situational review.

If it is determined that a period of high visitation and or holiday weekends may pose exceptional risk of human caused wildland fire, forecasted weather calls for a Fire Weather Watch, Red Flag Warning or there is predicted or an observed lightning activity level (LAL) of 3 or greater, staffing may automatically advance to class 4.

Staffing Class	ERC		Step-Up Action
*4	62-70		All actions in class 3. Open step-up account for extended staffing, outside resources as required and other associated costs. Request severity if analyses indicates log term drought conditions. Initial attack personnel available within 3-5 minute response time. Extended work week and tours of duty are authorized. If lightning is forecasted detection flights may be requested. Provide 7 day engine coverage. Staff MT Harkness lookout. Provide prevention patrols in areas with high visitation. Initial attack/monitoring crews will consist of a minimum of 2 people, one of whom will be qualified as a Type 5 IC, Squad boss or Fire Effects Monitor. Review the need for support personnel from other park staff. The emergency hire of AD personnel is authorized. Consider outside management for fire use activities. Coordinate with adjoining land management agencies to assure adequate staffing for response area.
5	71+		All actions in class 4. Superintendent is advised of current situation and all applicable park staff are made available to support emergency preparedness work. Severity request is submitted. Work week and daily tours of duty may be extended for all fire qualified in park support and key permanent staff. Initial attack and or monitoring crews will be available at Mineral and Manzanita Lake. Look out shift may be extended or altered to cover evening or night time periods when the LAL is 3 or greater.

*When weather services predict a Fire Weather Watch, Red Flag Warning, high risk of lightning or there is an increased risk of human caused fires the staffing class will automatically advance to 5.

APPENDIX O – Minimum Impact Suppression Tactics (MIST)

MINIMUM IMPACT SUPPRESSION TACTICS GUIDELINES

CONCEPT

The concept of Minimum Impact Suppression Tactics (MIST) is to use the minimum amount of forces necessary to effectively achieve the fire management protection objectives consistent with land and resource management objectives. It implies a greater sensitivity to the impacts of suppression tactics and their long- term effects when determining how to implement an appropriate suppression response. In some cases MIST may indicate cold trailing or wet line may be more appropriate than constructed hand line. In another example, the use of an excavator may be used rather than a dozer. Individual determinations will be dependent on the specific situation and circumstances of each fire.

MIST is not intended to represent a separate or distinct classification of firefighting tactics but rather a mind set of how to suppress a wildfire while minimizing the long-term effects of the suppression action. When the term MIST is used in this document it reflects the above principle.

Suppression actions on all wildfires within Forest Service protected wilderness in the Northern Region will be those having a minimum impact on the physical resources associated with each site. In so doing, the principle of fighting fire aggressively but providing for safety first will not be compromised.

The key challenge to the line officer, fire manager and firefighter is to be able to select the wildfire suppression tactics that are appropriate given the fire's probable or potential behavior. The guiding principle is always least cost plus loss while meeting land and resource management objectives. It is the second part of this statement which must be recognized more than it has in the past. Appreciation of the values associated with wilderness have been more difficult to articulate but, nevertheless, are important. As this recognition emerges, actions must be modified to accommodate a new awareness of them.

These actions, or MIST, may result in an increase in the amount of time spent watching, rather than disturbing, a dying fire to insure it does not rise again. They may also involve additional rehabilitation measures on the site that were not previously carried out.

When selecting an appropriate suppression response, firefighter safety must remain the highest concern. In addition, fire managers must be assured the planned actions will be effective and will remain effective over the expected duration of the fire.

Other guides, like the grizzly bear or salmon guides, will also have a bearing on what type of tactics are used.

GOAL

The goal of MIST is to halt or delay fire spread in order to maintain the fire within predetermined parameters while producing the least possible impact on the resource being protected. These parameters are represented by the initial attack incident commander's size- up of the situation in the case of a new start or by the escaped fire situation analysis (EFSA) in case of an escaped fire.

It is important to consider probable rehabilitation need as a part of selecting the appropriate suppression response. Tactics that reduce the need for rehab are preferred whenever feasible.

SUPPRESSION RESPONSIBILITY

As stated previously, safety is the highest priority. All action will be anchored to the standard fire orders and watch out situations. Safety will remain the responsibility of each person involved with the incident.

Initial/Extended Attack

Incident Commander – To understand and carry out an appropriate suppression response, which will best meet the land management objectives of the area at the least cost plus loss. Insure all forces used on the fire understand the plan for suppressing the fire in conjunction with MIST.

Keep in communication with responsible fire management or line officer to insure understanding and support of tactics being used on the fire. Evaluate and provide feedback as to the tactical effectiveness during and after fire incident.

Project Fire

Type 1/ Type 2 Incident Commander – To carry out instructions given by the responsible line officer both verbally and through the EFSA. Establish and nurture a close dialogue with the resource advisor assigned to the fire team. Review actions on site and evaluate for compliance with land line officer direction and effectiveness at meeting fire management protection objectives.

Responsible Line Officer – To transmit the land management objectives of the fire area to the fire team and to define specific fire management protection objectives. Periodically review for compliance.

Resource Advisor – To insure the interpretation and implementation of EFSA and other oral or written line officer direction is adequately carried out. Provide specific direction and guidelines as needed. Participate at fire team planning sessions, review

incident action plans and attend daily briefings to emphasize resource concerns and management's expectations. Provide assistance in updating EFSA when necessary. Participate in incident management team debriefing and assist in evaluation of team performance related to MIST.

GUIDELINES

Following is a list of considerations for each fire situation.

Hot-Line/Ground Fuels

- Allow fire to burn to natural barriers.
- Use cold- trail, wet line or combination when appropriate.
- If constructed fireline is necessary, use only width and depth to check fire spread.
- Consider use of fireline explosives for line construction.
- Burn out and use low impact tools like swatter or 'gunny' sack.
- Minimize bucking and cutting of trees to establish fireline; build line around logs when possible.
- Use alternative mechanized equipment such as excavators, rubber tired skidders, etc. rather than tracked vehicles. Use high pressure type sprayers on equipment prior to assigning to incident to help prevent spread of noxious weeds.
- Constantly re- check cold trailed fireline.

Hot-Line/Aerial Fuels

- Limb vegetation adjacent to fireline only as needed to prevent additional fire spread.
- During fireline construction, cut shrubs or small trees only when necessary. Make all cuts flush with the ground.
- Minimize felling of trees and snags unless they threaten the fireline or seriously endanger workers. In lieu of felling, identify hazard trees with a lookout or flagging.
- Scrape around tree bases near fireline if it is likely they will ignite.
- Use fireline explosives for felling when possible to meet the need for more natural appearing stumps.

Mopup/Ground Fuels

- Do minimal spading; restrict spading to hot areas near fireline.
- Cold- trail charred logs near fireline; do minimal tool scarring.
- Minimize bucking of logs to extinguish fire or to check for hotspots; roll the logs instead if possible.
- Return logs to original position after checking and when ground is cool.
- Refrain from making bone yards; burned and partially burned fuels that were moved should be returned to a natural arrangement.
- Consider allowing large logs to burnout. Use a lever rather than bucking to manage large logs which must be extinguished.

- Use gravity socks in stream sources and/or a combination of water blivits and fold- a- tanks to minimize impacts to streams.
- Consider using infrared detection devices along perimeter to reduce risk.
- Personnel should avoid using rehabilitated firelines as travel corridors whenever possible because of potential soil compaction and possible detrimental impacts to rehab work, i.e. water bars.

Mopup/Aerial Fuels

- Remove or limb only those fuels which if ignited have potential to spread fire outside the fireline.
- Before felling consider allowing ignited tree/snag to burn itself out. Ensure adequate safety measures are communicated if this option is chosen.
- Identify hazard trees with a lookout or flagging.
- If burning trees/snag pose a serious threat of spreading fire brands, extinguish fire with water or dirt whenever possible. Consider felling by blasting when feasible. Felling by crosscut or chainsaw should be the last resort.
- Align saw cuts to minimize visual impacts from more heavily traveled corridors. Slope cut away from line of sight when possible.

LOGISTICS

Campsite Considerations

- Locate facilities outside of wilderness whenever possible.
- Coordinate with the Resource Advisor in choosing a site with the most reasonable qualities of resource protection and safety concerns.
- Evaluate short- term low impact camps such as coyote or spike versus use of longer- term higher impact camps.
- Use existing campsites such as reserved sites used by outfitters if possible.
- New site locations should be on impact resistant and naturally draining areas such as rocky or sandy soils, or openings with heavy timber.
- Avoid camps in meadows, along streams or on lakeshores. Located at least 200 feet from lakes, streams, trails, or other sensitive areas.
- Consider impacts on both present and future users. An agency commitment to wilderness values will promote those values to the public.
- Lay out the camp components carefully from the start. Define cooking, sleeping, latrine, and water supply.
- Minimize the number of trails and ensure adequate marking.
- Consider fabric ground cloth for protection in high use areas such as around cooking facilities.
- Use commercial portable toilet facilities where available. If these cannot be used a latrine hole should be utilized.
- Select latrine sites a minimum of 200 feet from water sources with natural screening.
- Do not use nails in trees.

- Constantly evaluate the impacts which will occur, both short and long term.

Personal Camp Conduct

- Use "leave no trace" camping techniques.
- Minimize disturbance to land when preparing bedding site. Do not clear vegetation or trench to create bedding sites.
- Use stoves for cooking, when possible. If a campfire is used limit to one site and keep it as small as reasonable. Build either a "pit" or "mound" type fire. Avoid use of rocks to ring fires.
- Use down and dead firewood. Use small diameter wood, which burns down more cleanly.
- Don't burn plastics or aluminum – "pack it out" with other garbage.
- Keep a clean camp and store food and garbage so it is unavailable to bears. Ensure items such as empty food containers are clean and odor free, never bury them.
- Select travel routes between camp and fire and define clearly.
- Carry water and bathe away from lakes and streams. Personnel must not introduce soaps, shampoos or other personal grooming chemicals into waterways.

AVIATION MANAGEMENT

One of the goals of wilderness managers is to minimize the disturbance caused by air operations during an incident.

Aviation Use Guidelines

- Maximize back haul flights as much as possible.
- Use long line remote hook in lieu of constructed helispots for delivery or retrieval of supplies and gear.
- Take precautions to insure noxious weeds are not inadvertently spread through the deployment of cargo nets and other external loads.
- Use natural openings for helispots and paracargo landing zones as far as practical. If construction is necessary, avoid high visitor use areas.
- Consider maintenance of existing helispots over creating new sites.
- Obtain specific instructions for appropriate helispot construction prior to the commencement of any ground work.
- Consider directional falling of trees and snags so they will be in a natural appearing arrangement.
- Buck and limb only what is necessary to achieve safe/practical operating space in and around the landing pad area.

Retardant Use

During initial attack, fire managers must weigh the non- use of retardant with the probability of initial attack crews being able to successfully control or contain a wildfire. If it is determined that use of retardant may prevent a larger, more damaging

wildfire, then the manager might consider retardant use even in sensitive areas. This decision must take into account all values at risk and the consequences of larger firefighting forces' impact on the land.

- Consider impacts of water drops versus use of foam/retardant. If foam/retardant is deemed necessary, consider use of foam before retardant use.

HAZARDOUS MATERIALS

Flammable/Combustible Liquids

- Store and dispense aircraft and equipment fuels in accordance with National Fire Protection Association (NFPA) and Health and Safety Handbook requirements.
- Avoid spilling or leakage of oil or fuel, from sources such as portable pumps, into water sources or soils.
- Store any liquid petroleum gas (propane) downhill and downwind from firecamps and away from ignition sources.

Flammable Solids

- Pick up residual fusees debris from the fireline and dispose of properly.

Fire Retardant/Foaming Agents

- Do not drop retardant or other suppressants near surface waters.
- Use caution when operating pumps or engines with foaming agents to avoid contamination of water sources.

Fireline Explosives

- Remove all undetonated fireline explosives from storage areas and fireline at the conclusion of the incident and dispose of according to Bureau of Alcohol, Tobacco, and Firearms (BATF) and Fireline Blaster Handbook requirements. Properly dispose of all packaging materials.

FIRE REHABILITATION

Rehabilitation is a critical need. This need arises primarily because of the impacts associated with fire suppression and the logistics that support it. The process of constructing control lines, transport of personnel and materials, providing food and shelter for personnel, and other suppression activities has a significant impact on sensitive resources regardless of the mitigating measures used. Therefore, rehabilitation must be undertaken in a timely, professional manner.

During implementation, the resource advisor should be available for expert advice and support of personnel doing this work as well as quality control.

Rehabilitation Guidelines

- Pick up and remove all flagging, garbage, litter, and equipment. Dispose of trash appropriately.
- Clean fire pit of unburned materials and fill back in.
- Discourage use of newly established trails created during the suppression effort by covering with brush, limbs, small diameter poles, and rotten logs in a naturally appearing arrangement.
- Replace dug- out soil and/or duff and obliterate any berms created during the suppression effort.
- If impacted trails have developed on slopes greater than six percent, construct waterbars according to the following waterbar spacing guide:

Trail Percent Grade	Maximum Spacing Ft.
6-9	400
10-15	200
15-25	100
25+	50

- Where soil has been exposed and compacted, such as in camps, on user- trails, at helispots and pump sites, scarify the top 2- 4 inches and scatter with needles, twigs, rocks, and dead branches. It is unlikely that seed and fertilizer for barren areas will be appropriate, in order to maintain the genetic integrity of the area. It may be possible, depending on the time of year and/or possibility of a rainy period, to harvest and scatter nearby seed, or to transplant certain native vegetation.
- Blend campsites with natural surroundings, by filling in and covering latrine with soil, rocks, and other natural material. Naturalize campfire area by scattering ashes in nearby brush (after making sure any sparks are out) and returning site to a natural appearance.
- Where trees were cut or limbed, cut stumps flush with ground, scatter limbs and boles, out of sight in unburned area. Camouflage stumps and tree boles using rocks, dead woody material, fragments of stumps, bolewood, limbs, soil and fallen or broken green branches. Scattered sawdust and shavings will assist in decomposition and be less noticeable. Use native materials from adjacent, unimpacted areas if necessary.
- Remove newly cut tree boles that are visible from trails or meadows. Drag other highly visible woody debris created during the suppression effort into timbered areas and disburse. Tree boles that are too large to move should be slant cut so a minimal amount of the cut surface is exposed to view. Chopping up the surface with an axe or pulaski, to make it jagged and rough, will speed natural decomposition.
- Leave tops of felled trees attached. This will appear more natural than scattering the debris.

- Consider using explosives on some stumps and cut faces of the bolewood for a more natural appearance.
- Consider, if no other alternatives are available, helicopter sling loading rounds and tops from a disturbed site when there has been an excessive amount of bucking, limbing and topping.
- Tear out sumps or dams, where they have been used, and return site to natural condition. Replace any displaced rocks or streambed material that has been moved. Reclaim streambed to its predistrubed state, when appropriate.
- Walk through adjacent undisturbed area and take a look at your rehab efforts to determine your success at returning the area to as natural a state as possible. Good examples should be documented and shared with others!

DEMOBILIZATION

Because demob is often a time when people are tired or when weather conditions are less than ideal, enough time must be allowed to do a good job. When moving people and equipment, choose the most efficient and least impactive method to both the landscape and fire organization mission. An on- the- ground analysis of "How Things Went" will be important.

POST-FIRE EVALUATION

Post- fire evaluation is important for any fire occurrence so management can find out how things went. Identify areas needing improvement, to formulate strategies and to produce quality work in the future. This activity is especially important in wilderness and like sensitive areas due to their fragility and inclination to long- term damage by human impacts.

Resource advisors and functional specialists such as wilderness rangers will be responsible for conducting the post- fire evaluation. They are the people who have the experience and knowledge to provide information required to make the evaluation meaningful and productive.

Post- fire evaluation will consist of data collection, documentation and recommendations. This process and report will, in most cases, be fairly simple and to the point. It should be accomplished before an overhead team departs from the fire. The evaluation emphasis should be on the MIST actions and not on the effects on the fire.

APPENDIX P – Example Delegation of Authority

DELEGATION OF AUTHORITY
FOR
Lassen Volcanic National Park
Fire Name

_____ is hereby delegated authority, effective _____, as Fire Use Manager Type 1 (FUM1) for management of the _____ Fire. You have full authority and responsibility for fire management activities within the framework of laws, Agency policies, and direction provided in the Stage III _____ Fire analyses and Agency Administrator briefing package.

Your primary responsibility is to organize and direct your assigned resources for efficient and effective management of the _____ fire. You are accountable to the Agency Administrator or the representatives designated below.

Specific directions for this incident, covering management and environmental concerns are:

1. Provide for firefighter and public safety.
2. Allowing the fire to play its natural role in the ecosystem is the next priority task. To be successful, the fire will be contained within the primary Target Management Area, (TMA), with the South flank the highest priority. The TMA keeps the fire north of the current south containment line continuing along the ridge to the east tying into Horseshoe Meadows, east of the Pacific Crest Trail, west of the Grassy Creek Drainage and Holding actions will be necessary to keep fire spread within this TMA. The holding actions and resources need to be commensurate with fire activity and ensure success. Additional resource needs can be ordered through Susanville Interagency Fire Center (SIFC).
3. As the FUM1, you are authorized to include any new natural ignitions in the Wildland Fire Use zone as candidates for Wildland fire usage. Stage 1 WFIP's must be approved by the Agency Administrator. If approved, all activities in the management of these fires must be accomplished within the framework of agency policy and specifics passed forward in this delegation.
4. Initial attack responsibilities will remain with Susanville Interagency Fire Center (SIFC) located in Susanville and coordinated with the Lassen Volcanic National Park FMO, Mike Lewelling or AFMO Eric Hensel. The FMO/AFMO will immediately notify the FUM1 of fire locations and size- up information on any new starts within the Wildland Fire Use unit of the park.
5. Manage the fire with as little environmental damage as possible. Ensure Wilderness values are protected. MIST guidelines are attached to the Stage 3 WFIP.
6. Limit costs commensurate with the resources to be protected.

7. Manage the human resources assigned to the fire in a manner that promotes mutual respect and consistent with Interior agencies' policies for preventing sexual harassment.
8. Provide training opportunities for Lassen Volcanic National Park staff and local area fire management personnel within the constraints of #1 and #2.
9. Logistics and finance shall be coordinated with the Park fire organization, and SIFC when necessary.
10. The standard guidelines on safety for Work and Rest ratios shall be followed.
11. New resource orders as well as demobilization shall be coordinated with the FMO/AFMO, and placed through Cris Jones, Fire Business Manager and through SIFC.
12. Coordinate all matters of public relation with LAVO's Fire Information Officer, Scott Isaacson. He will follow all park policies on dissemination of information. Press releases will be approved by Lassen Volcanic National Park Superintendent or designee.
13. The Agency Resource Advisor is Louise Johnson, (Chief of Resource Management) .

Louise Johnson will represent Lassen Volcanic National Park Superintendent, Marilyn H. Parris on any occasion in her absence when she is not immediately available.

_____ _____

Marilyn H. Parris Date
Superintendent, Lassen Volcanic National Park

Delegation accepted: _____ _____

Date

APPENDIX Q – Organizational Chart

Lassen Volcanic National Park
Fire Management
Organizational Chart