



FIRE PREVENTION BUREAU

**CAL FIRE
SAN BERNARDINO-INYO-MONO UNIT (BDU)
2011 IGNITION MANAGEMENT PLAN**

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2010 Fire Season Ignition Statistics

Wildland fire ignition statistics were tracked for the entire year of 2010. The Unit experienced 130 fires within its Direct Protection Area (DPA) for the year. This number represents an 8% decrease from 2009 (138 fires).

The five largest fires in the Unit for 2010 were:

- 1) Scott Fire at 95 acres, Unknown monetary damage, and cost to suppress estimated at \$145,242, and the cause off road vehicle.
- 2) Miller Fire at 66 acres, Unknown monetary damage, and cost to suppress estimated at \$218,417.43, and the cause arson.
- 3) High Fire at 3 acres, Unknown monetary damage, cost to suppress estimated at \$36,406, and the cause Lightning.
- 4) Coyote Fire at 1 acre, Unknown monetary damage, cost to suppress estimated at \$4,447.46, and the cause arson.

5) Foley Fire at 1 acre, \$ Unknown monetary damage, cost to suppress estimated at \$5,636.04, and caused by equipment.

<u>2010 Five Largest Fires</u>	<u>Acres</u>	<u>Total Cost</u>	<u>Cause</u>
Scott Fire	95	\$145,242.00	Vehicle
Miller Fire	66	\$218,417.43	Arson
High Fire	3	\$36,406.00	Lightning
Coyote Fire	1	\$ 4,447.46	Arson
Foley Fire	1	\$ 5,636.04	Equipment

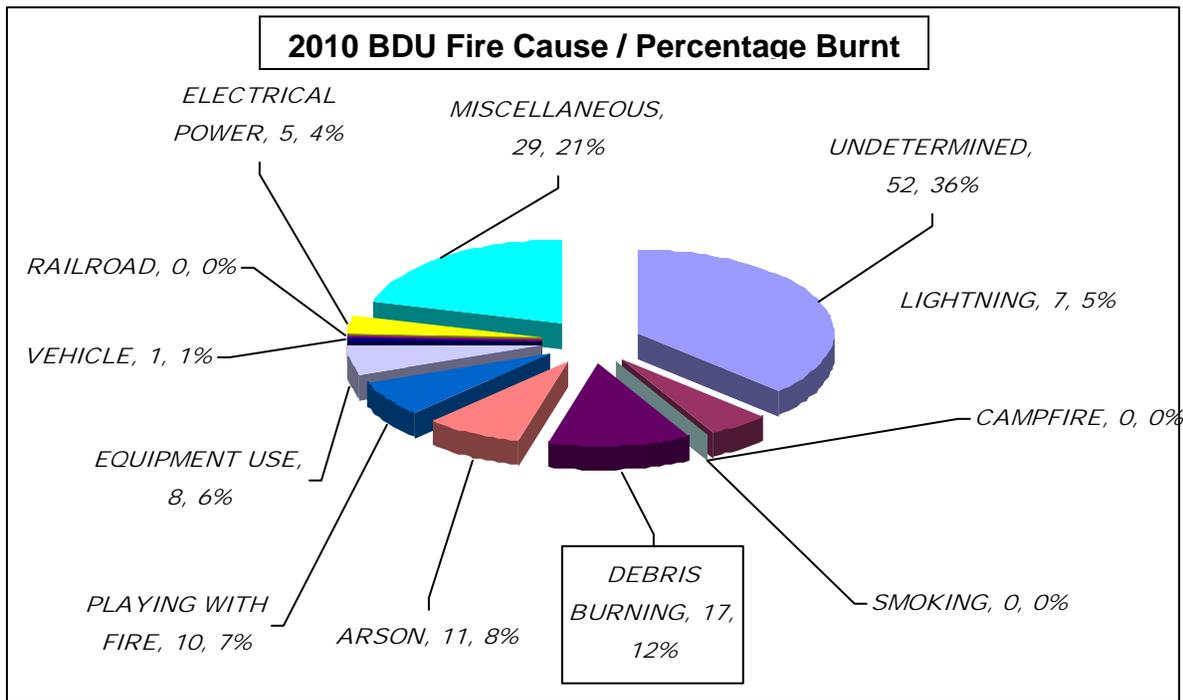
Approximately 193 acres burned in 2010. Damage caused by these fires in 2010 was estimated at approximately \$410,148.93.

In reviewing fire causes during the 2010 season, it was found that the five leading causes of vegetation fires in the Unit were:

- 1) Undetermined (52 fires – 40%)**
- 2) Miscellaneous (29 fires – 22%)**
- 3) Debris (17 fires – 13%)**
- 4) Arson (11 fires – 8%)**
- 5) Equipment (8 fires – 6%)**

These accounted for 117 fires or 90% of all fires that occurred. These were followed in order by: Lightening (7 fires – 5%), Power lines (5 fires – 3%), Vehicle (1 fire – .7%), smoking (0 fires – 0%), campfire (0 fires – 0%), and railroad (0 fires).

In 2010, the four categories that increased over the 5 year average were playing with Fire, Undetermined, Arson and Debris caused fires. All other categories decreased from the 5-year average of fire activity. Ignitions causing the most acreage loss were arson, miscellaneous, and unidentified fires. When analyzing data for the whole year, undetermined fires caused the most fires (52). Playing with Fire caused 10 fires, debris fires caused 17 fires, Arson fires totaled 11 fires for the year with 66 plus acres burnt. One Arson fire accounted for 66 acres.



Fire activity for 2010 was down in the Unit as well as throughout the state. In order to better address ignition management for the Unit, a more detailed analysis of the fires in each major cause classification was conducted.

1) Control Burning (debris burning) accounted for 17 fires or 8% of the total fires in the Unit. Escaped control burns resulted in increase of acres being burned and a low percentage of the Unit's total. This cause saw a 65% increase from the 5-year average of 11. The increase can be explained by the Unit's lack of educational programs along with the lack of inspections and follow up in burn permits for the Unit. This lack of effort has substantially increased the number and severity of these fires over the last five years. The number one cause of escaped control burns was lack of inspection of burn permits issued, instructions on the permits, clearance followed by wind, and old control burns re-igniting (coming back to life). Unattended control burns also contributed to the totals. All fire departments in San Bernardino, Inyo and Mono Counties would benefit in assisting the Unit in handing out legal notices (LE-100's) on all control burn caused fires. These legal notices would serve to educate the public and put them on notice that their next escape will result in a citation as well as civil cost recovery. This cooperation would prove to continually keep number and acres lost below the 5 year average.

2) Vehicles accounted for 1 fire or .7% of the total ignitions in the Unit. Vehicle caused fires resulted in 1 acre being burned or .5% of the Unit's total. This represents a 20% decrease from the 5-year average 5. This category has been one of the minimal causes of fires in the Unit for the past several years. The majority of these fires occurred along the major traffic corridors of Hwy 215, 15, 395, 18, and 138. Catalytic Converter failure and other maintenance issues remain to be the leading cause of fires caused by vehicles. With the current economic conditions there appears to be less maintenance done on vehicles.

3) Electrical power accounted for 5 fires or 4% of the total ignitions in the Unit. Electrically caused fires resulted in 11 acres burned or 6% of the Unit's total. Electrically caused fires stayed at the average from the 5 year average of 5. Most of these fires resulted from trees, branches or birds into the power lines.

4) Equipment accounted for 8 fires or 6% of the total ignitions in the Unit. Equipment caused fires resulted in 95 plus acres being burned or 49% of the Unit's total. This represents a 33% decrease from the 5-year average of 24. Historically, this classification has been one of the top causes of wildfire starts in the Unit. Through continuing displays and education programs (handouts and the 4291 Program), we hope to continue a downward trend. The main cause of equipment fires continues to be mower fires. These fires were due to mower blades striking rocks and friction belts igniting chaff collected around the belt. Ironically, most of the mower caused fires occurred as a result of residents trying to clear their property for fire safety but they were clearing during the hottest part of the day, usually between the hours of 10:00 AM and 6:00 PM.

5) Miscellaneous causes accounted for 29 fires or 22% of the total ignitions in the Unit. Miscellaneous caused fires resulted in 3 acres burned or 2% of the Unit's total. This cause class saw a 56% decrease from the 5 year average of 52. This classification includes causes such as spontaneous combustion, fireplace ashes deposited in the wildland, barbequing, cooking fires, and fireworks.

6) Playing with Fire accounted for 10 fires or 7% of the total ignitions in the Unit. Playing with Fire resulted in 2 acres burned or 1% of the Unit's total. This was a 100% increase from the 5 year average of 5. Several juveniles were caught and were referred through either a Juvenile Fire Setter Class and others were sent to the Juvenile Justice System and sentenced to probation. Due to the lack of education and the Juvenile Fire Setter (JFS) program, this increase may have been reduced.

7) Undetermined accounted for 52 fires or 40% of the total ignitions in the Unit. Undetermined caused fires resulted in 44 acres being burned or 23% of the Unit's total. This category saw a 75% increase of the 5 year average of 39. Continued hard work and dedication of the Unit's Fire Prevention Staff and the company officers who conduct thorough origin and cause investigations aid in the declining number in this cause class if they had the proper training and education. Thorough origin and cause investigations such as FI 110 and FI 210 for the company officers this would assist in determining fire patterns which may be reduced by public education and or enforcement.

8) Arson accounted for 11 fires or 8% of the total ignitions in the Unit. Arson caused fires resulted in 66 plus acres burned or 34% of the Unit's total. Arson caused fires increased by 10% from the 5-year average of 10. The two large arson fires were the Miller Fire that burnt 66 acres and the Coyote Fire that burnt 1 acre. It appears the past years arrests of serial arsonists and a proactive approach in seeking out and prosecuting arsonists have caused the decrease in some areas. However, the Units major arson problem is currently in the contract cities of Yucaipa and Highland. This increase could be a result of the economic downturn and lack of public awareness and education. The continued working relationships between all fire and law enforcement agencies is definitely aiding in the cause to try and reduce this ongoing problem.

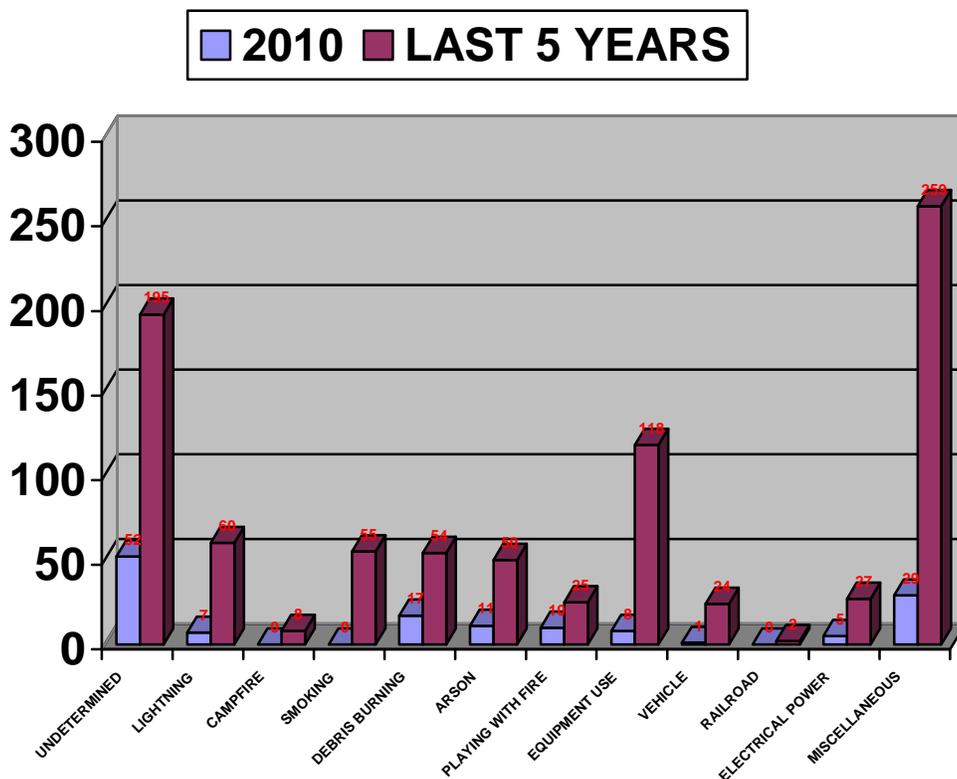
9) **Lightning** accounted for 7 fires or 5% of the total ignitions in the Unit. Lightning caused fires resulted in 13 acres burned or 7% of the Unit's total. Lightning caused fires decreased by 58% from the 5-year average of 12. Not much can be done to prevent or alter this category.

10) **Smoking** accounted for zero fires in 2010 of the total ignitions in the Unit. Smoking caused fires resulted in 0 acres burned or 0% of the Unit's total. This was a decrease by 100% of the fires from the 5 year average of 11. The majority of these fires were carelessly discarded cigarettes along our roadways of the years prior.

11) **Illegal campfires and campfire escapes** accounted for zero fires in 2010 of the total ignitions in the Unit. No acres burned were recorded as a result of these fires. Campfire caused fires decreased by two from the 5-year average of average of 2.

12) **Railroad** accounted for zero fires in 2010. No active rail lines are working in either Inyo or Mono Counties at this time. San Bernardino County contains the major rail lines for southern California in the SRA.

The following chart compares the 2010 primary causes compared to the 5-year average.



Education and (Volunteer in Prevention)/VIP

The BDU VIP Program assists the Unit in a variety of Fire Prevention Activities. The Unit currently utilizes the VIP's to help support community outreach events, defensible space evaluations, home and garden shows, and educational events. The VIP's are active for the fair the first part of the year in the Unit.

The Fire Prevention Public Information Office actively works with the media in order to keep the public informed on fire safety and wildfire awareness. Numerous press releases are issued through out the year to remind residents of such items as: defensible space requirements, burn permit requirements, burn permit restrictions, ready-set-go campaign information, and wildland fire incident information. Prevention personnel, along with fire engine personnel, participate in fairs, school activities, and community programs.

Unit Burn Permit Administrative Plan

The unit Burn Permit Administrative Plan has not been updated or reviewed in years. Training and education on this plan and following the outline of the 9200 has not be done resulting in many issues of illegal burning and escaped debris burns. This plan needs to be reviewed and updated along with immediate implementation to reduce the issues of illegal burning and escape burns. This will also assist Unit Company and Chief Officers with the information need to follow the parameters set forth in policy and the Public Resources Code. This would reduce the potential liability to the Unit Administrator and his designees as well as the department.

Juvenile Fire setters

The JFS Program is initiated when a juvenile has been experimenting with fire. The Unit has not established this program in the SRA or the contract cities. Our current response to the juvenile fire setter program is to contact San Bernardino County Fire for assistance. In the Inyo and Mono Counties, there is no active participation or program with any of the local fire districts which are mostly volunteer. CAL FIRE would be the lead department due to geographical commitment for this program. Recommendation to the Unit is to establish this program with our FPS and assistance from the VIP's.

The program would consist of the Juvenile and parents/caregivers assessment utilizing the FEMA JFS assessment program. Following the assessment, the family would view one or two videos specifically designed for JFS. If further assistance is needed, the referrals would be processed through the juvenile justice system.

Assessments are done in cooperation with the US Forest Service and local fire districts. The objectives of the JFS Program are:

- Identify juvenile firesetters
- Assess the juvenile firesetters needs
- Provide life skill training and education
- Provide referrals to family counseling
- Evaluate firesetters and program progress

Public Resources Code 4290

In 1986, the California Board of Forestry and Fire Protection, supported by CAL FIRE, introduced legislation (Senate Bill 1075, Rogers) to develop *minimum* statewide standards for defensible space in State Responsibility Areas (SRA). This legislation was motivated by local government's general lack of response to wildland fire prevention and protection problems over the previous 20 years. This comprehensive wildland fire safety legislation was passed by the Legislature and signed by the Governor in 1987. SB1075 required the California Board of Forestry and Fire Protection to establish minimum fire safety requirements that applied to SRA.

Regulation development began in early in 1988, and final implementation of the state and local regulation packages occurred on January 1, 1992 via PRC 4290. PRC 4290 requirements address emergency access and water supplies, addressing and street signing, and fuel modification relating to new construction and development. The implementation of these regulations occurs through the local government building permit and subdivision map approval process. Local government is still the approving authority for development.

PRC 4290 regulations are triggered by the application for a building permit for purposes other than limited remodels, including but not limited to submittal of a subdivision map, application for a use permit, placement of a mobile or manufactured home, or constructing a road. These regulations do not supersede existing local regulations that are equal to or more stringent than the state regulations.

The San Bernardino-Inyo-Mono Unit Fire Prevention Bureau oversees the application of Public Resources Code Section 4290 and Title 14 of the California Code of Regulations Section 1270 on all private lands classified as SRA within the Unit. These regulations are best known as the "SRA Fire Safe Regulations," and constitute the basic wildland fire protection standards of the California Board of Forestry and Fire Protection. CAL FIRE has been given the role of wildland fire protection expert and is provided the opportunity to review and comment on all proposed construction and development within the SRA. In cooperation with Inyo County Planning, Mono County Planning and San Bernardino County Planning when requested, CAL FIRE has oversight responsibility and reviews Land Division Applications for compliance with PRC 4290. CAL FIRE forwards recommendations to the appropriate Planning Department specifying the minimum requirements necessary to meet state law.

Access

Access is a major fire prevention and protection need, whether wildland or structural. Failure to provide reasonable access for emergency equipment and evacuation exits for civilians can result in major loss of life, property and natural resources. Fire apparatus sitting at an intersection, waiting for civilians to exit on a narrow road, cannot provide the necessary fire suppression action. Safe access requires street and road networks that limit dead-end roads and provide reasonable widths, grades and curves on all roads and driveways.

Addressing and Street Signing

The difficulty of locating an unnamed or poorly signed road during an emergency, especially under smoky conditions, is a major problem to wildland and structural firefighters. Beyond this, many jurisdictions have allowed duplicate numbering and naming for roads and access, further compounding the location problem. The potential losses of life, property and resources are greater without an adequately visible and consistent addressing and numbering system.

Water Supplies

The application of water and the construction of a fire line are the primary tools used by wildland firefighters to contain and control a wildfire. The location and availability of sufficient quantities of water are essential to fire suppression and firefighter safety. While a single system of water delivery and/or storage is adequate, the effectiveness of any suppression system increases with diversity. Emergency water supplies are necessary to provide readily available, and accessible, emergency water for structural and wildland fire protection.

Fuel Modification Considerations

The establishment of physical barriers between a structure and the wildland is recognized as a major deterrent and loss reduction measure. Such barriers should be considered key to individual and community defensible space. While fuel breaks have strategic application over large geographical areas, they are expensive to construct and maintain. Other measures, such as the strategic placement of roads, recreational parks, irrigated landscaping, setback from property lines and fuel modification around structures are more suitable around homes and subdivisions.

Treatment of Structure Ignitability

The San Bernardino, Inyo, Mono Unit contains many communities that are threatened with potential loss of life and property due to wildfires. These and many other communities in California are subject to threats from wildfire, yet thousands of homes continue to be constructed every year that are not safe for fire prone areas. Due to major wildfires that have occurred in California, various statutes and regulations have been enacted to combat the ever-increasing threats to lives and property due to wildfire. Laws have been enacted to govern fire safety in regards to vegetation management, land use and more. However, aside from fire retardant roofing requirements, little had been accomplished at the state in regards to adoption of "Fire Safe" building standards for homes and other structures. With passing of Assembly Bill 1216 in January 2005, the California State Fire Marshall (SFM) was given statutory authority to expand fire safety building standards in areas with high fire risk to include components such as: roofs, exterior walls, attic eave vents, windows and structure projections including porches, decks, balconies, and eaves.

Treatment of Structure Ignitability (cont.)

This law will reduce the spread of fire to and from structures and will save lives, minimize property loss, and protect the environment.

On September 20, 2005, the California Building Standards Commission approved the Office of the State Fire Marshal's emergency regulations amending the California Code of Regulations (CCR), Title 24, Part 2, known as the 2007 California Building Code (CBC).

"701A.3.2 New Buildings Located in Any Fire Hazard Severity Zone. New buildings located in any Fire Hazard Severity Zone within State Responsibility Areas, any Local Agency Very-High Fire Hazard Severity Zone, or any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter. New buildings located in any Fire Hazard Severity Zone shall comply with one of the following:

1. State Responsibility Areas.

New buildings located in any Fire Hazard Severity Zone within State Responsibility Areas, for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter.

2. Local Agency Very-High Fire Hazard Severity Zone.

New buildings located in any Local Agency Very High Fire Hazard Severity Zone for which an application for a building permit is submitted on or after July 1, 2008, shall comply with all sections of this chapter.

3. Wildland-Urban Interface Fire Area designated by the enforcing agency.

New buildings located in any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter.

Protecting a building from wildfire takes a two-pronged approach:

- Remove flammable materials from around the building
- Construct the building of fire resistant material

The law requires that homeowners do fuel modification to 100 feet (or the property line) around their buildings to create a defensible space for firefighters and to protect their homes from wildfires.

New building codes will protect buildings from being ignited by flying embers which can travel as much as a mile away from the wildfire.

In addition to the 4290 requirements our local schedule "A" contracts have established preplans for commercial occupancies as well as inspections of those occupancies. However, the pre-plans to many of the commercial occupancies are out dated and in the process of being updated to meet the current occupancy load and information. These updates will provide current information of occupancy and fuel load to ensure the public and firefighters safety. This will also prepare for quick and efficient fire suppression activity.

Public Resources Code 4291:

Managing and reducing the flammable vegetation around structures will also reduce the number of structure ignitions from wildland fires. Clearing vegetation and maintaining that clearance is required by section 4291 of the Public Resources Code (PRC 4291). In 2005 PRC 4291 was amended to increase the minimum vegetation clearance requirement from 30 feet to 100 feet around structures. Although this law requires it, many landowners fail to maintain adequate clearance around their structures. CAL-FIRE's fire safe inspection program is used to enforce compliance with PRC-4291. Additionally, the fuel reduction projects within BDU are aimed at reducing wildland fuels and educating the public on what they can do for themselves to protect their homes from wildfires and reducing structure ignitability.

Additionally we are working with our cooperators in sensitive areas to conduct defensible space inspections and training within their jurisdiction on SRA lands. With these inspections and training they are encouraged to report them on our state forms with monthly reporting back to the Unit Fire Prevention Bureau.

Public Resources Code(s) 4292 and 4293:

PRC 4292 calls for a ground clearance of ten feet around the base and eight feet above the ground of power poles that contain equipment that could result in sparking if it failed. PRC 4293 says that vegetation needs to be a minimum of four feet away from high voltage lines. That means from beneath, the side, or above.

Any person that owns, controls, operates, or maintains any electrical transmission or distribution line on any mountainous, or forest, brush, or grass covered land shall maintain around any pole or tower which supports a switch, fuse, transformer, lightning arrester, line junction, or tower. (PRC 4292)

Any person that owns, controls, operates, or maintains any electrical transmission or distribution line upon any mountainous, or forest, brush, or grass covered land shall maintain a clearance between all vegetation and all conductors which are carrying electric current:

(a) For any line which is operating at 2,400 or more volts, but less than 72,000 volts, four feet.

(b) For any line which is operating at 72,000 or more volts, but less than 110,000 volts, six feet.

(c) For any line which is operating at 110,000 or more volts, 10 feet (PRC 4293)

San Bernardino, Inyo, Mono Unit and Southern California Edison have worked together in a program to reduce the threat of wildland fires caused by power line and power pole failures. This program is known as Operation Santa Ana. Operation Santa Ana began in 2000 as a way to reduce vegetation fires that were caused when trees, grasses and power lines interacted with one another. These fires were caused by winds blowing tree limbs into the power lines, equipment failures that discharged with sparks igniting dry vegetation nearby, or faulty equipment that needed to be repaired or replaced.

Public Resources Code(s) 4292 and 4293: (cont.)

Every year, San Bernardino, Inyo, Mono Unit perform visual inspections of more than 5,000 power poles in San Bernardino County. The inspectors are checking to see that the clearance mandates of the Public Resources Code, sections 4292 and 4293 are in their annual compliance.

Fire Prevention Signs:

The Unit has numerous Fire Prevention Signs and are strategically placed within the Unit. These signs have not been maintained or accounted for within the Unit or Battalions for many years. The signs in place in the battalions identify defensible space requirements and fire specific issues from careless acts to arson. The signs within certain battalions have been abandon and left for the Fire Safe Council to maintain or replace on SRA or LRA within our sphere of influence under contract. We were awarded 14 signs in addition to what was in place for the Unit and we targeted the northern part of the Unit in the Inyo and Mono county areas. The signs in the Inyo and Mono county areas have locations identified but yet to have been put into place.

Fire Prevention Education and Development:

These programs have been successful but have not been documented to the Unit FPS or the Fire Prevention Bureau for the proper tracking of hours and contacts. Again the education to the Battalion Chiefs and the suppression personnel has been identified as one of the primary concerns with this program. With this education and training and redirection of proper accountability and documentation we will be able to capture the true impact of this sensitive and needed program(s) for the Units Success.

The Fire Prevention Bureau's Primary targets for the Burn Plan are as follows:

1. Educate and assist the Chief Officers in the importance of documentation and overall needs to their own battalions pertaining to Fire Prevention.
2. Defensible Space awareness and public education.
3. Fire Prevention Signs accountability and maintenance.
4. Inter acting with the Fire Safe Councils within the Unit and reporting back to the Fire Prevention Bureau of the programs established with the councils.
5. Identifying and training VIPS for the Fire Prevention Bureau as outlined in policy to reduce liability and assist in the fore mentioned programs. This will enhance the overall goal to accomplish tasks in the Fire Prevention component within the Unit.
6. Recruitment of VIP's through out the Unit.
Establish the Unit Fire Permit Administrative Burn Plan.