



2006 SAFENET REVIEW

INTRODUCTION

The SAFENET database was created and established during the 2000 fire season in response to a recommendation from Phase III of the Wildland Fire Safety Awareness Study. It serves as a method for reporting and resolving safety concerns encountered in wildland fire (wildfire, wildland fire use, and prescribed fire) and all hazard incidents. It provides a forum for front-line wildland firefighters to share their concerns and highlight issues they feel upper management and the general public should be made aware of. The SAFENET database is endorsed by the National Wildfire Coordinating Group (NWCG).

The following review summarizes the use of the SAFENET database for the FY 2006 fire season.

The SAFENET database has been in operation for seven years. FY 2006 had the second highest numbers of submissions with 155 SAFENETs filed during the time period of October 1, 2005 through September 30, 2006. The following table shows the annual number of SAFENETs filed since the establishment of the database in 2000.

Total SAFENETs Filed	
FY 2000	68
FY 2001	93
FY 2002	110
FY 2003	99
FY 2004	139
FY 2005	180
FY 2006	155

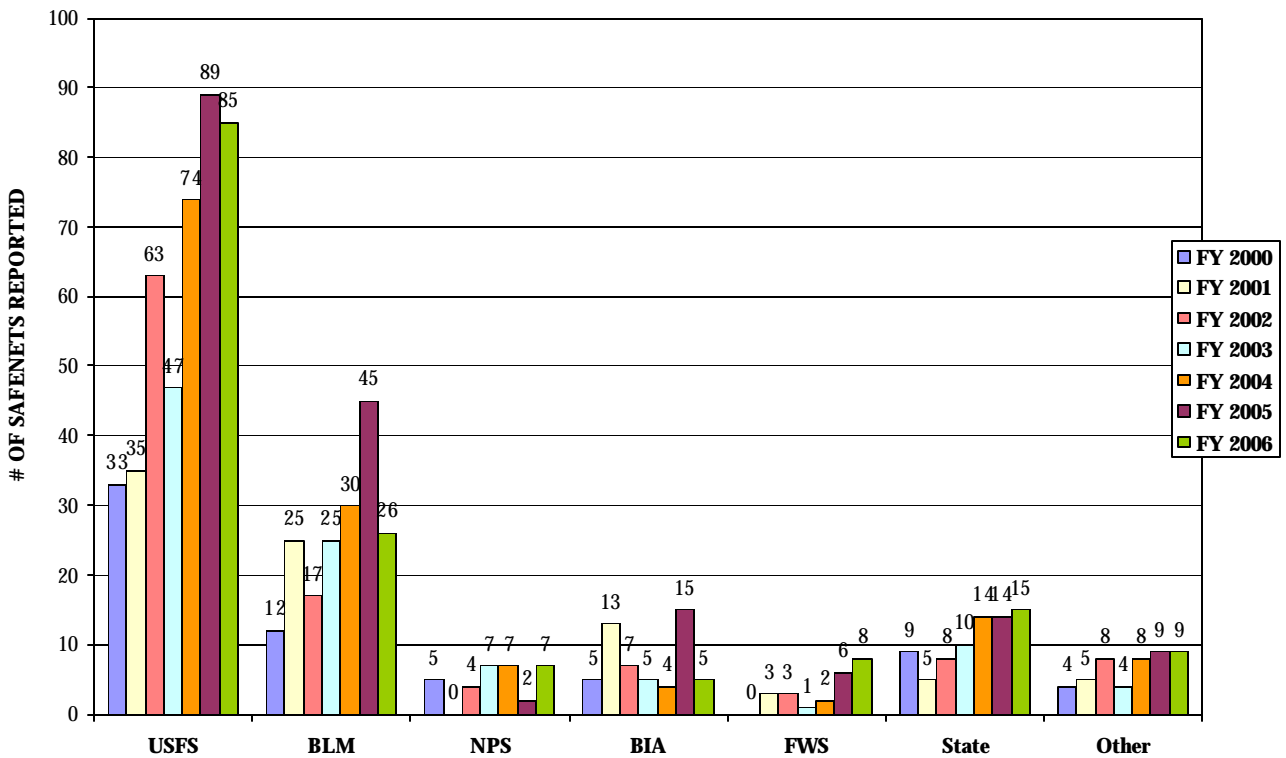
The annual SAFENET Review is intended to analyze the submissions for the year to determine issues facing the field with regard to safety concerns. The review summarizes the concerns of the season and is compiled to provide a tool for managers to identify and address areas of concern.

What happens to a SAENET?

Upon submission, a SAFENET is forwarded to the national fire management safety program manager for the jurisdictional agency identified in the submission. In addition to the five land management agencies, a state representative is identified for SAFENET notification. These individuals determine the course of action for the submission, forwarding to the regional, state or local level for response.

The jurisdictional agency is responsible for researching the issue identified in the submission, taking appropriate action, and filing a corrective action outlining the agency's response. Below is a graph showing the number of SAFENETs filed for each jurisdictional agency. The graph identifies FY 2006 submissions as well as cumulative trend since the establishment of the database in 2000.

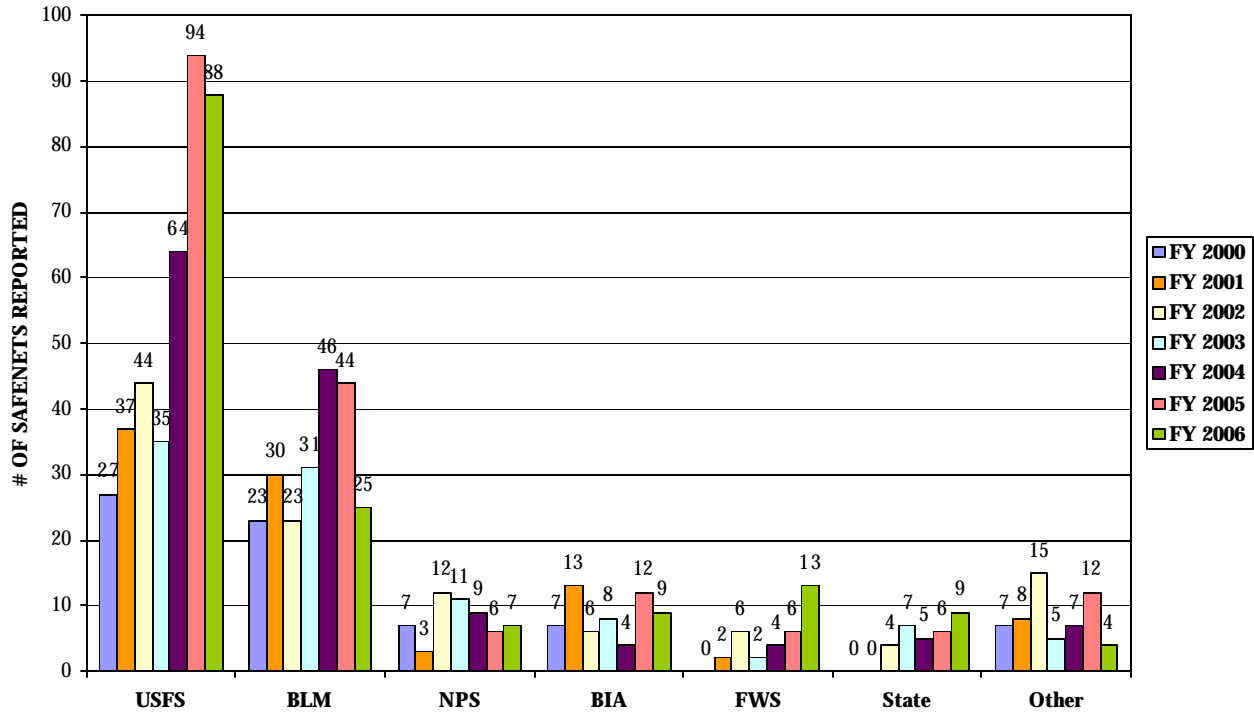
JURISDICTIONAL AGENCY YEARLY COMPARISON



Based on the size of the agency and the amount of land encompassed by the US Forest Service (USFS), it is not a surprise to see they received 55% of the submissions. The Bureau of Land Management (BLM) received 17%, the US Fish & Wildlife Service (FWS) received 5%, the National Park Service (NPS) received 4%, and the Bureau of Indian Affairs (BIA) received 3%. In addition, states were the jurisdictional agency in 10% of SAFENET submissions and 6% of the submissions fell into the “Other” category, which includes FEMA, rural fire departments, and counties.

In comparison, the following graph identifies the number of SAFENETs received based on the agency of the submitter.

REPORTING AGENCY YEARLY COMPARISON

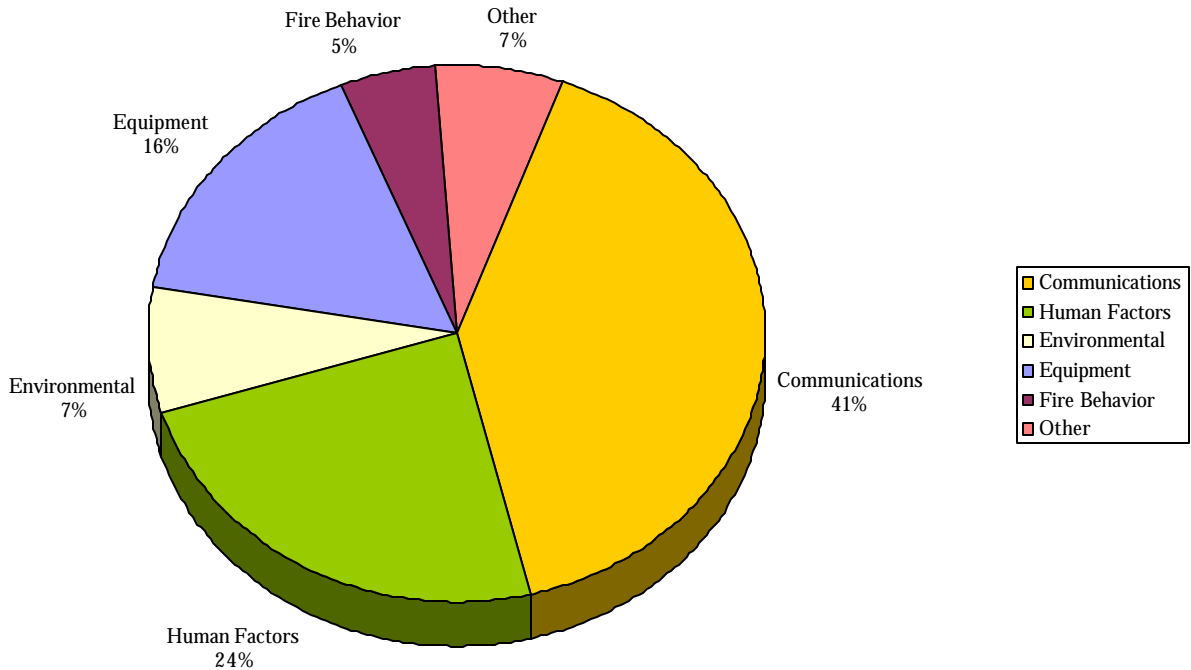


Forest Service employees continue to file the highest number of SAFENETs. The rest of the submissions are distributed amongst the other agencies and states, along with county and volunteer fire departments which make up the “Other” category.

CONTRIBUTING FACTORS

One of the key elements analyzed by managers is contributing factors. Managers want to know what caused or lead to a safety concern in the field. The SAFENET system allows the submitter to choose from six different elements that may be present, including communications, human factors, equipment, fire behavior, environmental, and other. Many submissions cite more than one contributing factor. The following chart identifies the contributing factors involved in the submissions for FY 2006 by percentage.

2006 SAFENET - CONTRIBUTING FACTORS



Communications – 41%

For the sixth time in seven seasons, Communications has been the leading contributing factor in SAFENET submissions. The majority of submissions in this category deal with communications equipment along with several submissions that refer to personal communication issues.

Communications Equipment

- Radio and/or repeater systems not functioning properly.
- Inability to clone or program radios.
- Phones systems in dispatch centers not functioning properly or dropping calls.
- Disruption in service due to relocation of a dispatch center.
- Lack of frequencies available and bleed over on frequencies.

Personal Communications

- Declaration of command by an IC prior to meeting and discussing situation with current IC in command.
- Lack of communication or disagreement in tactics between subordinate and supervisor.
- Alleged non-response or lack of support of dispatchers to field personnel.

Many submissions in the personal communications category are based on the submitter's perception of another individual's attitude or actions and are therefore subjective.

Human Factors – 24%

Human factors were cited in a quarter of SAFENET submissions. This category consists of several elements including Decision Making, Leadership, Situational Awareness, Risk Assessment, Performance, and Fatigue. Many of these elements are overlapping in nature and are subjective based on the opinion of the SAFENET author. However, below are a few examples of submissions received that exhibit each of these elements.

Decision Making – 55

- Center manager refusing to staff dispatch center for night operations.
- Engine operator crossing median of interstate and not yielding to traffic when merging onto west bound lane, causing interstate traffic (including a semi-truck & trailer) to take evasive maneuvers.
- Firefighter deploying fire shelter to avoid getting wet in a rain storm.

Leadership – 33

- Incident supervisors allowing non-incident personnel on the fireline without proper PPE.
- Management deciding not to staff critical fire management positions at the local unit.
- Individuals in leadership positions not sharing critical information with the field.
- Line officer showing up on the fireline without a fire shelter and expecting line personnel to provide it.

Situational Awareness – 48

- Conducting a burnout operation while unaware of location of other resources.
- Opening gas cap on chain saw while too close to a fire, causing vapors to ignite.
- Improper engine positioning causing a hose lay across three lanes of traffic.
- Backing water tender into a bank causing a bent bumper.

Risk Assessment – 32

- Insecticide sprayed over food unit area.
- Requiring an employee to drive beyond the duty day limit to avoid hotel costs.
- Conducting a prescribed burn without necessary preparedness steps.
- Alleged use of sewer water for bucket use too close to fireline personnel.

Performance – 27

- Local unit creating pocket cards with erroneous information on them.
- Dispatcher unfamiliar with location of local resources for effective dispatching.
- Slow response by the End User Support Center to deal with Forest Service radio and repeater issues.

Fatigue – 6

- Engine instructed to travel to new assignment at 2100 hours and arriving at 0330 hours resulting in a 20 hour shift.
- Failure to meet 2:1 work/rest guidelines.

Equipment – 16%

The majority of submissions dealing with equipment are pertaining to radio and repeater issues. The majority of these are a duplicate of those listed in the “Communications” category. Other equipment submissions include:

- Shotguns ordered for bear protection in Alaska had adjustable chokes and ineffective sights that were unacceptable for use with the ammunition needed for bear protection.
- Several blow-outs and flat tires with General tires issued on Ford engines.
- Personnel not wearing personal protective equipment.
- Improper equipment sent with Heliwell package causing liner and chains to fail upon filling with water.

Environmental – 7%

- Vehicle accident due to a blind turn and a motorcycle in the oncoming driver’s lane.
- ATV rolling mid-way up a hill due to steep slope.
- Firefighters riding out a lightning storm through the night on a mountain fire, while being stalked by mountain lions.

Other – 7%

- Work capacity test issues – no first aid/CPR personnel, testers not paying attention to participants, allowing participants to run, passing participants who do not finish in 45 minutes.
- Accusations of fire employee creating hostile work environment.
- Lack of leadership by state/regional FMO – not sharing information with multiple county fire departments.

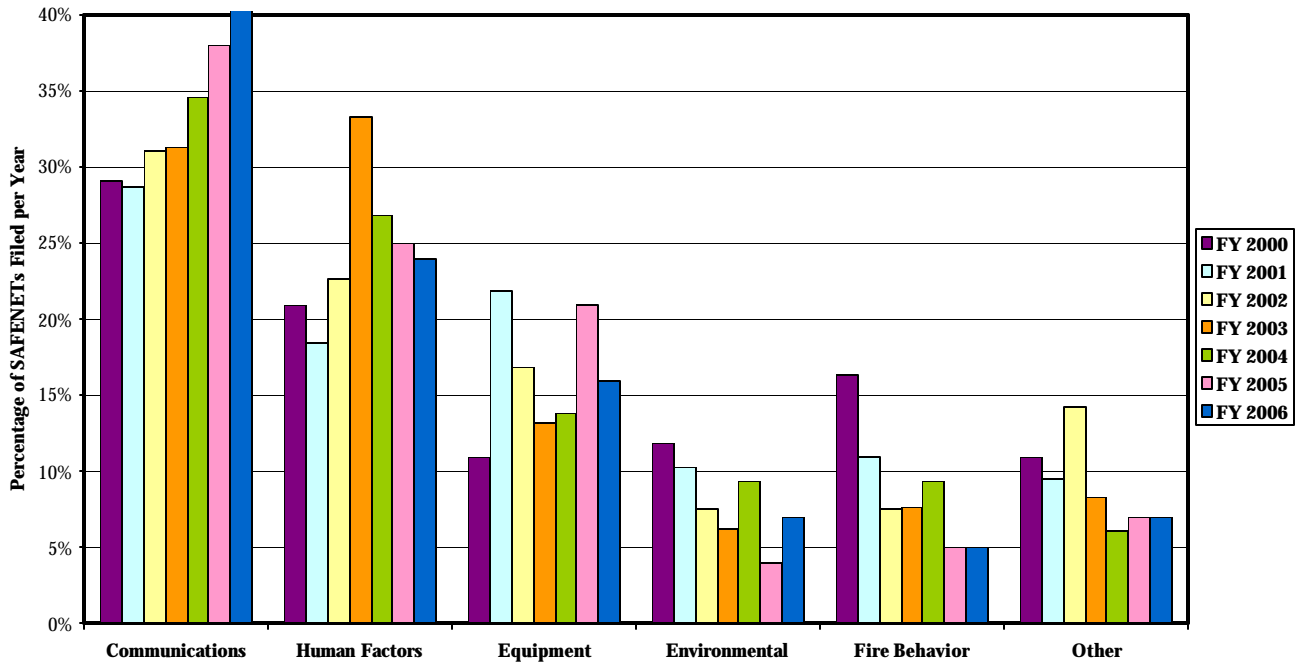
Fire Behavior – 5%

- Active fire behavior not accounted for.
- Missed or delayed red flag warning causing significant risks.
- Instant change in wind direction causing retreat from fireline.

TRENDS

The SAFENET program has been operational for seven years and allows managers to determine trends in concerns from the field regarding safety related issues. This allows managers to focus on areas that seem of consistently high concern. Below is a chart that compares Contributing Factors amongst the past seven seasons.

Contributing Factors Comparison

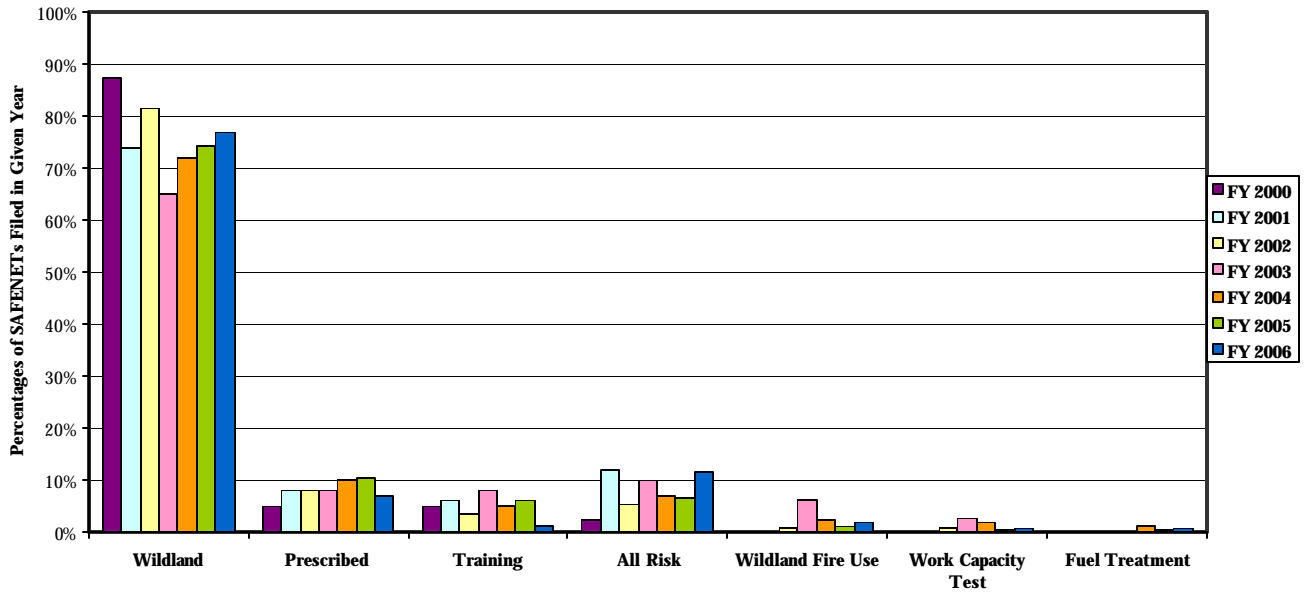


Communications (both equipment issues and personal communication issues) continues to be the most common Contributing Factor to wildfire safety related incidents that are filed through the SAFENET system. As a critical element of firefighting protocols (LCES), it is a major concern to the field when there is a breakdown in communications. This SAFENET report identifies issues and allows managers to focus efforts on concerns such as non-functioning repeaters and radios, cloning and programming issues, and lack of frequencies.

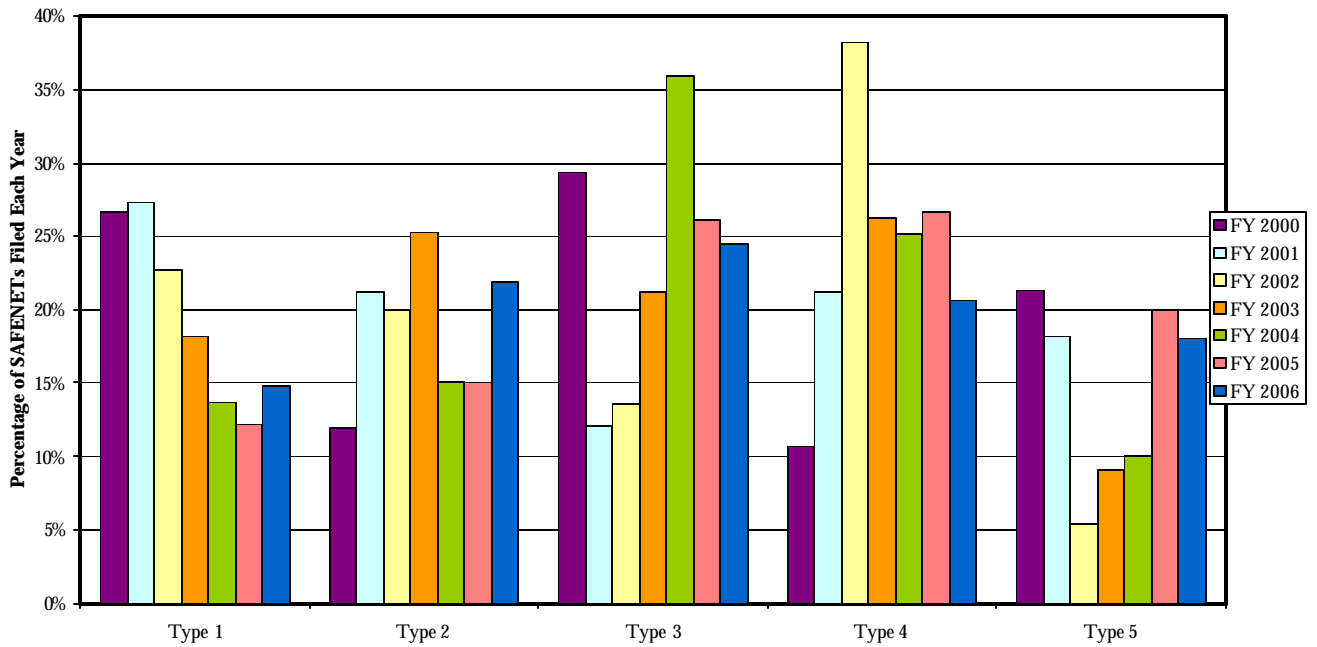
Human Factors is consistently the second most common Contributing Factor of SAFENETs filed. This is a difficult factor to address as it deals with the human element including differing perceptions, opinions, and communication styles. Many SAFENET submissions are based on the author's perception of the events or other individual's behavior which may be very different from other individuals involved in the event. Since these are not tangible elements, it is difficult for managers to recognize a specific causal factor and reduce the instance of events.

Another trend that can be ascertained pertains to the type of incident in which the majority of safety concerns occur. Not surprisingly, wildland fire gathers the majority of submissions as this is where the majority of firefighters spend their time and is also the environment that is the most unpredictable and uncontrollable. The management level most commonly associated with submissions can be reviewed to illustrate to managers what level should be focused on to make changes. The graphs below identify the comparison of these elements during the past seven seasons.

Incident Type Comparison



Management Level Comparison

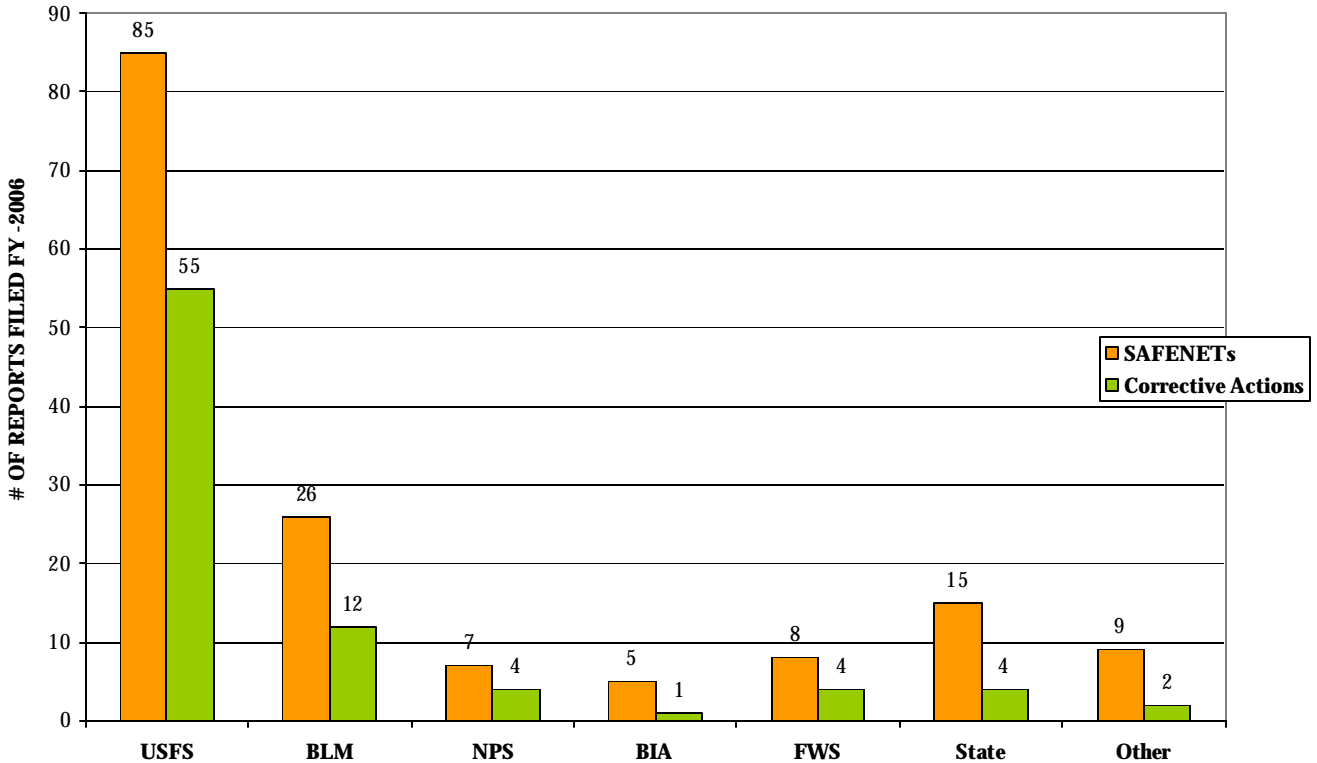


CORRECTIVE ACTIONS

As stated earlier, SAFENETs are forwarded to the jurisdictional agency listed in the submission and it is their responsibility to research the incident and provide a Corrective Action. The general public also has the capability to access SAFENETs and provide a Corrective Action if they feel it is necessary. Below is a chart that identifies the number of SAFENETs received by agency along with the number of Corrective Actions supplied.

CORRECTIVE ACTION COMPARISON

(shows corrective actions submitted relative to the jurisdictional agency of the SAFENET)



As the graph indicates, the USFS received the majority of SAFENETs with 85 but also had the highest number of Corrective Actions, responding to 65% of their submissions. The other agencies provided Corrective Actions as follows: NPS – 57%, FWS – 50%, BLM – 46%, State – 27%, Other – 22%, and BIA – 20%. Managers are encouraged to submit Corrective Actions for every SAFENET received, whether the incident is unfounded or not. Below are some statistics on Corrective Actions filed:

Corrective Action Responses – 82

Action Taken: 76

- Action due to SAFENET: 51
- Action taken prior SAFENET: 25

Unfounded: 6

Cumulatively, Corrective Actions were filed on 53% of SAFENET submissions. Managers took Corrective Action prior to SAFENET submission 33% of the time. This is due to the author being proactive and contacting their supervisor or other responsible individual. In 67% of the Corrective Actions, managers were unaware of an issue until brought to light through the SAFENET system.

The SAFENET system continues to provide valuable information related to safety related issues in the field. Along with other reporting systems, managers are able to gather information to identify areas of concern and focus energy to create a safer and more effective work environment. Wildland fire personnel are encouraged to continue fighting fire safely and report issues of safety concern.

Appendix A

For reference purposes, below is a list of incidents on which SAFENETs were filed for the FY 2006 season.

Wildland Fires

161	101 Fire
56 MM	98 Fire
ABCD Misc (4)	Adams Springs
Alpine Lake	Anchorite
Bailey Ridge	Big Bar Complex (3)
BDF Dispatch / various IA	Bear
Bear Gulch 2	Beetle
Big Spring	Bridgeport
CA South Ops Support	Capulin
Cathedral	CHF
Columbia Complex	Communications
Como 11	Cottonwood
Crystal Creek	Daily Radio Use (2)
Day (2)	Deacon
Deer Mt	Delaware
Derby (2)	Dog Valley
Double Nickel	Dry Creek
Dutch Oven	Elk Song
Elkhorn	Elm Rd
EUL	Fishhole Complex
Flick Creek Rattlesnake Complex	Garley Fire / Severity
Gash	Grandson
Hackberry (2)	Heaven's Gate Complex
Horse Incident	Horton Hay Complex
Hunter (3)	Initial Attack (2)
Isabelle (2)	Jenny Gulch
July Lightning Staging	Jungle
Landing	Lincoln Beach
LPF Cover Engines	M31 Fire
MM 168	Multiple
Nellie	New York Peak
Nimrod (2)	On-going Issue (2)
Pagni	Parks Highway
Phone System Failure	Potato
Project Work	Ratckiff
Red Lake	Rock Canyon
Saunders	Schooner Creek
Semi	Sheep (2)
Slaughter	South Fork Complex
Spillway	Spooner 3

Star Mountain	Stipes
Sunrise Complex	Thomas
Three Fire Complex	Tiger
Topanga	Tower 2 / Kolob
Tracer	Tripod (2)
Water Tank	West Texas Fires
Wild-Cad	Wilderness
Windmill Flats	

Wildland Fire Use

Warm Fire (2)	

Prescribed Fire

Arminto Stock Driveway Rx	Bear Grass Rx
Boundary Rx	Fiddler Rx
Fish SW	Holly Hollow Rx
Kuehnle Rx	Mamm Creek Rx
Melvin Slough	Rx Operations
Topeka Rx	

Fuel Treatment

Mt. Trumbull	
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All Risk, Training, & Other Incidents

Black Pulaski Complex	District Work
Fairmont Repeater	Forest Radios
Hurricane Katrina	Hurricane Rita
Mercury Spill	Misc ABCD
Numerous	On-going Issue
Training	Tweedy Complex (2)
Various	Volkswagen (3)
Work Capacity Test	