NSW FIRE BRIGADES

ANNUAL STATISTICAL REPORT
2004/05

PREVENTPREPAREPROTECT

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Introduction

This Annual Statistical Report provides the NSWFB and interested organisations and individuals with information and statistics on fires and other emergency incidents which the NSWFB responded to and reported on in 2004/05. The statistics are a selection of commonly sought data extracted from the Australian Incident Reporting System (AIRS).

The report is organised in sections to help users identify relevant information by subject area. The sections include statistical information on responses to fires and other emergency incidents by region, zone and fire station, as well as by local government area. Other sections provide detailed statistical information on the types of fires experienced by businesses and communities, including the types of properties involved in fires. The last section provides information on reported fire injuries and fatalities.

This report reflects selections from NSWFB AIRS data. While this report indicates trends, it is recommended that other information be accessed to complement this report and provide further depth of understanding interrelationships between socio-demographic, economic, geographic and environmental factors and emergencies.

Definitions for terminology used in this report can be found in the last section of the report. These definitions are taken from the AIRS Reference Manual.

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The 2004/05 Annual Statistical Report and a selection of previous Annual Statistical Reports are available on our web site www.fire.nsw.gov.au

Highlights of 2004/05

In 2004/05 the NSWFB reported attending 129,731 primary incidents throughout NSW, resulting in 188,119 turnouts (refer to definitions). Because many incidents require the response of more than one fire unit the number of responses exceeds the number of incidents.

The data shows that in 2004/05 the NSWFB responded to:

- Just over 90,000 fire calls including calls to automatic fire alarms. The NSWFB is required by legislation to respond to and investigate all fire calls.
- 14,377 non-fire rescue incidents and other service calls such as pumping out water from flooded basements. This was 11% of primary incidents. Of these, 8,630 were to non-fire rescue calls (predominantly motor vehicle accidents) where a total of 2,417 people were rescued.
- 11,802 hazardous condition incidents such as chemical spillages and power lines down. This represented 9% of primary incidents. Many of these incidents were major chemical emergencies requiring a substantial commitment from the NSWFB as the combat agency to protect lives, property and the environment.
- 33,240 actual fires, reflecting an increase of 2% on 2003/04. Vegetation fires accounted for 33% of all fires, building fires 19% and mobile property fires 16%. About 31% of all fires were incendiary or suspicious in nature.

The number of fire related injuries declined by 14% from 985 in 2003/04 to 849 in 2004/05. The majority of fire related injuries occurred in the home.

The number of fire related fatalities fluctuates from year to year. This volatility must be taken into account in any interpretation. The number of fire related fatalities increased by 23% from 47 in 2003/04 to 58 in 2004/05. With fire fatalities, as in the case of fire related injuries most occurred in the home.

The NSWFB also responded to a series of major incidents, demonstrating the organisation's capacity to deal with large scale emergencies while at the same time maintaining its level of normal service to business and communities. Across NSW some of the major incidents responded to in 2004/05 included:

- A fire that gutted a large furniture factory in Ashfield in March. The fire took three days to extinguish and involved 900 fire fire-fighters from about 60 stations. The NSWFB were assisted by other government agencies such as Police, Ambulance and RTA. Parramatta Road was closed in both directions for several hours.
- A fire which occurred in a lift plant room within a high rise office block in Sydney CBD during April resulting in 1,500 people being evacuated.

- A fire in Tweed Heads shopping mall requiring about 1,000 people to be evacuated.
- A fire, also in Tweed Heads, involving exhaust fans in the toilets of a school resulting in approximately 600 students being evacuated.
- A building used as a garbage storage depot containing 700 tonnes of garbage located in Matraville that caught fire in the early hours of a February morning. About 30 pumpers were used to extinguish the fire along with 120 fire-fighters. The fire took one and a half days to control.
- A single truck accident at Mittagong during August which resulted in the truck and two trailers, including the contents of mixed dangerous goods and general goods, being destroyed by fire. The accident took at least a day and a half to control and required the commitment of 150 NSWFB personnel.
- A major HazMat operation in Wahroonga due to a petrol tanker that overturned causing the spillage of 38,000 litres of petrol. The incident occurred near live wires causing possible ignition hazards and approximately 100 NSWFB personnel were involved in the incident.
- A two-storey house fire in Doyalson in the middle of winter, July. On the top level of the home, a small child was trapped. During the rescue attempt a retained fire-fighter collapsed and passed away a short time later in hospital. Unfortunately the fire-fighters were unable to save the small child.

Data Collection

The statistics in this report were derived from data supplied by NSWFB firefighters using AIRS.

Not all fires that occur are included in this statistical report. Most fires are not reported to fire services. These are usually small fires in the home or in workplaces which go out by themselves or are extinguished by an occupant. We do not have sufficient information to be able to estimate the number of unreported fires. This report contains information on only those emergency incidents which the NSWFB attended.

Most of the information in this report, such as the origin, cause of fire and dollar loss, is based on the reporting officer's observations at the time of the incident. Subsequent investigation findings may vary from the initial report.

Data presented in this report was compiled in December 2006. In this report, figures for previous years may vary from figures in other NSWFB publications because additional information has been received since those documents were published.

The NSWFB is committed to collecting quality data. A number of indicators were used to measure the quality of AIRS data. These measures, derived from total data quality methodologies, include measures of correctness, completeness, currency and accessibility.

The NSWFB also validated AIRS data with other sources. The NSW State Coroner, for example, assisted by validating fire fatality information.

Glossary

Accredited rescue station
A rescue unit accredited by the State Rescue Board to undertake rescue in NSW. Accreditation provides the authority for units to undertake the types of rescue operations for which they are accredited. (See Appendix for a complete list).

Area of fire origin
The area within a property where the fire originated. The area of fire origin is defined by its use at the time of the fire ignition. It may be a room or part of a room, a space, a vehicle or portion of a vehicle or some open area devoted to a specific purpose.

Arrival time
The time that each NSW Fire Brigades appliance and specialist units including senior officers arrived at the incident.

Casualties
The sum total of the number of non-fire fighting persons injured and the number of non-fire fighting fatalities.

Distance travelled
The distance in kilometres from the station or dispatch point to the incident or starting point for each responding appliance or vehicle.

Duration time
Duration time is the time between the arrival time to the time the NSW Fire Brigades involvement in the incident is terminated.

Equipment involved in ignition
The equipment which provided the principal heat that caused ignition.

Extent of flame damage
The extent of the area burnt or charred by flame impingement.

Fatalities
The number of deaths of non-firefighting people that are attributable to the incident or the action of handling the incident. This information is drawn only from AIRS reports, and does not include deaths at a date after the form is submitted.

Fires confined to object and room of origin The extent of the area burned or charred by flame impingement being confined to the object or room of origin. Does not include areas browned or scorched by heat.

Form of heat ignition
The form of heat energy which caused the ignition

Form of material ignited first
The form of material ignited first by the heat source.

Hazmat incidents
A reportable hazmat incident must involve a sudden, unexpected and unplanned release event outside the range of normally expected operating problems, with only limited opportunity for prevention or mitigation action. These incidents may cause damage or risk to life, property and the environment. These incidents involve hazardous materials including petroleum products, explosives, explosions due to physical/ engineering causes, and chemical reactions and radioactive materials and contamination.

Ignition factor
This is the circumstance which permitted the heat source and combustible material to combine and start the fire.

Incident
See primary incident

Injuries
The number of non-fire fighting persons who received injuries that are attributable to the incident or its handling. Injuries include those that required treatment by a medical practitioner or at least one day of restricted activity immediately following the incident.

Local government area
The local government area in which the incident occurred or originated, in terms of Australian Bureau of Statistics' Geographical Classification Code (Catalogue No 1216.0 – 1996).

Major method of extinguishment
The method which had the major effect in extinguishing the fire.

Mobile property type
Property that is designed to be movable, either under its own power or towed, whether it is still movable or not.

Non-fire rescue incidents
These include incidents involving medical assistance from units not accredited to regularly provide emergency medical services (EMS), accredited units providing EMS, lock-ins, searches, extrications, rescues, electrocutions, and rescue or EMS standbys.

Operation of smoke alarms/detectors
The status, location and operation of smoke alarms or detectors in the structure involved in fire.

Percentage of property involved on arrival
The reporting officer's estimation of the percentage of the structure involved in fire on arrival at the fire.

Percentage of property saved due to fire fighting
The percentage of the property saved from fire that can be attributed to firefighting operations and salvage work carried out.

Persons evacuated
The number of persons removed from a hazardous or potentially hazardous area by the NSW Fire Brigades or by other persons or authorities.

Persons rescued
The number of persons (non-injured, injured or deceased) who were trapped, in difficulty, etc, who were subsequently released or rescued by the NSW Fire Brigades.

Primary incident
Refers to a response by the station which submitted the incident report form. More than one station usually attends an incident. However, only one station submits the incidents equals to the total number of incidents. (See also Total responses)

Property type
This relates to the specific property in which the incident occurred.

Basic industry, utility, defence property
Included are agriculture, forest, the extractive and mining industries, mineral products, utilities, laboratories, nuclear plants and communication facilities; and national defence sites, since they depend so heavily on communications.

Educational property
Educational properties are those used for the gathering of groups of people for purposes of instruction such as school, colleges, universities and academies. Included are partday nursery schools kindergartens and other schools whose primary purpose is education.

Institutional property
Institutional properties are those used for purposes such as medical or other treatment, or care of persons suffering from physical or mental illness, disease, or infirmity, for the care of infants, convalescent, or aged persons; or for penal or corrective purposes. Institutional buildings ordinarily provide sleeping facilities for the occupants.

Manufacturing property
Included are properties where there is mechanical or chemical transformation of inorganic substances into new products, whether the work is performed by power driven machines or by hand, whether it is done in a factory or in the worker's home, and whether the products are sold wholesale or retail.

Public assembly property
Place where people gather for amusement, recreation, social, religious, civic, travel and similar purposes.

Residential property
A residential property is one in which sleeping accommodation is provided for normal living purposes, and includes all buildings designed to provide sleeping accommodation except those classified as institutional property.

Shop, store, office property
Commercial or store properties include all markets and other areas, buildings, or structures for the display, sale, repair, or service of merchandise, new or used, purchased or rented.

Special property
These properties are mainly outdoor properties and are not readily classified in any of the preceding major divisions.

Storage property
Storage properties are all buildings, structures, or areas utilised primarily for the storage or sheltering of goods, merchandise, products, vehicles or animals; and incidental servicing processing and repair operations.

Response (see Total responses)

Sprinkler performance
The status and operation of sprinkler systems in the structure involved in fire.

Total responses
The turnout of every station or unit to an incident whereas primary incident refers only to when a station attends an incident and is responsible for reporting it. As at least two stations usually respond to an incident in Sydney, Newcastle and Wollongong, about twice as many responses as primary incidents are recorded.

Type of incident
The type of incident that has occurred, as determined by the reporting officer after arriving at the scene. The type of incident reported should reflect the most serious situation that occurred, whether it still existed when the first brigade/unit arrived or not.

False alarms and false calls

- Bomb scares.
- Detectors operating as designed, with no fire.
- Local alarm system malfunctions (not monitored by fire service).
- Malicious, mischievous false alarms.
- Proprietary or centrally linked alarm system malfunctions.
- Unintentional alarms not involving a malfunction.

Fire and explosions
This includes fires that are out on arrival and excludes cases of unauthorised burning (ie defying area or time bans) or controlled burning.

- **Building fires:** include any fires damaging either or both structure and contents; fires in buildings confined to non-combustible containers (such as foodstuffs burnt, confined to cooking equipment; chimney or flue fires confined; incinerator fires confined; oil burner delayed ignition, malfunction or misuse confined; compactor fires confined to rubbish; garbage bin or waste basket fire confined to rubbish within non-combustible garbage bin).
- **Explosions not as a result of fire:** include munitions or bomb explosions; blasting agent explosions; gas explosions; vapour explosions; explosions with ensuing fire.
- **Mobile property type fires:** include are fires in such mobile property as passenger vehicles; road transport vehicles; rail vehicles; water vessels; aircraft; campers, caravans or recreational vehicles; off-road vehicles or mobile equipment.
- **Outside rubbish fires:** include fires such as abandoned outside rubbish, refuse or waste fires; garbage dump or sanitary landfill fires; construction or demolition landfill fires; dumpster or other outside garbage receptacle fires; outside stationary compactor or compacted garbage fires.
- **Outside storage fires:** include outside storage fires, not rubbish; storage yards (eg timber yards, tyres).
- **Special structure fires:** include pier, quay or piling fires; tunnel, underground fires; bridge, trestle, or overhead elevated structure fires; transformer, power or utility vault, utility equipment fires and power poles; fence fires; air supported structure fires or tent fires; oil refinery fires.
- **Vegetation fires:** include fires in forests or woods; grass; cultivated grain or crops; cultivated orchards or vineyards; cultivated trees or nursery stock; small vegetation which can be less than one hectare.

Good intent calls

- Alarm sounded - no evidence of fire
- Burglar alarm ringing
- Controlled burning
- Smoke scare odour of smoke.
- Steam vapour fog or dust thought to be smoke.

Hazardous condition (not a fire)

- Aircraft incidents, aircraft emergencies.
- Combustible/flammable spills and leaks; includes petrol or other flammable liquid spills; odour of gas, gas leaks (LPG); oil or other combustible liquid spills.
- Explosives.
- Heat-related and electrical.
- Miscellaneous hazardous situations include attempts to burn; threats to burn; buildings weakened or collapsed.

- Other hazardous materials includes chemical hazards (no spill or leak); chemical spills or leaks; radiation leaks, radioactive material; refrigerant leaks; asbestos incidents (no fire); unstable, reactive, explosive materials; carbon monoxide incidents.

Other incident types

- Call-offs.
- Cover assignment.
- Standbys at fire stations.

Overpressure rupture (no combustion)
This includes overpressure ruptures of pipelines or pipes, boilers, and pressure vessels.

Rescue and emergency medical service

- **Electrocution**
- **Emergency medical services** refers to a unit trained, equipped and regularly utilised for response to medical emergencies to provide basic or advanced life support.
- **Extrications/rescues;** includes extrications of victim(s) from mobile property; vehicle accidents without injuries; removal of victim(s) from stalled elevator/escalators; trench rescues; confined space rescues; high angle and vertical rescues; extrications of victim(s) from buildings.
- **Lock-ins.**
- **Medical assistance** - an incident is classified as medical assistance when a unit is called or utilised to provide emergency life support or first aid in support of, or prior to the arrival of, ambulance or medical services. That is, the unit is not accredited to regularly provide emergency medical services.
- **Rescue or emergency medical services standby.**
- **Searches.**
- **Water and ice-related rescues,**

Service, salvage calls

- Assisting other agencies.
- Other assists such as lockouts and animal rescues.
- Severe weather and natural disasters.
- Unauthorised burning.
- Water removal.

Type of material ignited first
The composition of the material which was first ignited by the heat source.

Appendix

Primary Rescue Stations

Station Number and Name

214	Barham
75	Berowra
63	Blacktown
230	Bombala
232	Boorowa
236	Braidwood
237	Branxton
15	Burwood
71	Castle Hill
262	Coolamon
265	Coonamble
266	Cootamundra
271	Crookwell
36	Crows Nest
59	Eastwood
295	Forster
20	Hurstville
336	Jerilderie
343	Katoomba
358	Laurieton
8	Liverpool
365	Lockhart
84	Macquarie Fields
395	Merimbula
380	Molong
394	Mulwala
68	Narrabeen
402	Nelson Bay
406	Nyngan
412	Orange
426	Perisher Valley
428	Queanbeyan
488	Shellharbour
449	South West Rocks
471	Tea Gardens
451	Thredbo
465	Trangie
466	Tumbarumba
477	Ulladulla
475	Uralla
492	Wauchope
494	Wentworth
507	Woolgoolga
511	Yass
513	Young
858	Rescue Section

Appendix

Secondary Rescue Stations

Station Number and Name

203	Albury Central
204	Alstonville
205	Armidale
211	Ballina
212	Balranald
213	Bangalow
215	Barraba
217	Batemans Bay
218	Batlow
219	Bega
221	Bellingen
223	Berrigan
225	Bingara
227	Blayney
229	Boggabri
233	Bourke
235	Bowraville
238	Broken Hill
240	Brunswick Heads
241	Bulli
243	Byron Bay
250	Canowindra
253	Casino
001	City of Sydney
256	Cobar
257	Coffs Harbour
259	Condobolin
261	Coolah
264	Coonabarabran
267	Coraki
268	Corowa
270	Cowra
272	Culcairn
278	Denilquin
279	Dorrigo
280	Dubbo
281	Dunedoo
282	Dungog
286	Eden
288	Evans Head
293	Finley
294	Forbes
300	Gilgandra
302	Glen Innes
303	Gloucester
304	Gosford
305	Goulburn
306	Grafton
308	Grenfell
311	Griffith
312	Gulgong
313	Gundagai
315	Guyra
389	Harden
321	Hay
322	Henty
323	Hillston
324	Holbrook
331	Inverell
338	Jindabyne
337	Junee
342	Kandos
345	Kempsey
346	Kiama
347	Kingscliff
350	Kyogle
355	Lake Cargelligo
367	Lightning Ridge
362	Lismore
363	Lithgow
371	Macksville
372	Maclean
375	Manilla
393	Merriwa
379	Moama
381	Moree
384	Moruya
387	Mudgee
388	Mullumbimby
391	Murwillumbah
397	Nambucca Heads
398	Narooma
399	Narrabri
400	Narrandera
401	Narromine
260	Newcastle
405	Nowra
411	Oberon
417	Parkes
419	Peak Hill
86	Penrith
421	Picton
424	Port Macquarie
429	Quirindi
82	Richmond
441	Sawtell
444	Singleton
307	South Grafton
445	Springwood
452	Tamworth
453	Taree
456	Temora
457	Tenterfield
463	Tocumwal
467	Tumut
472	Turvey Park
468	Tweed Heads
476	Urunga
482	Walgett
487	Warialda
491	Warren
506	Wee Waa
493	Wellington
496	Werris Creek
499	West Wyalong
81	Windsor
502	Wingham
503	Wollongong
510	Yamba
512	Yenda