PLANNING FOR EMERGENCIES

NSW DEPARTMENT OF
PRIMARY INDUSTRIES

2007

A guide for animal holding establishments

Why response planning is necessary

Every business needs an effective response plan for dealing with emergencies. In any emergency, such as a fire, flood or storm, a response plan can help to minimise loss of life, injury, property damage and costly disruption to business operations. Effective planning by individual businesses also helps authorities to better coordinate emergency planning and response.

These guidelines are designed to assist operators of businesses or properties where significant numbers of animals are kept to develop an emergency response plan. Holding establishments such as boarding kennels, veterinary centres, research facilities, zoos, horse stables, wildlife parks, pet shops and intensive livestock farms are among those likely to benefit from the information supplied.

The guide focuses on the most common threats animal holding facilities may face and identifies considerations you need to address as you prepare your own emergency plan. It is intended for use in conjunction with advice and information provided by emergency service authorities and other professionals.

Who can help?

NSW DPI

NSW DPI is responsible for coordinating responses in emergencies involving animals including wildlife, livestock, aquatic animals and companion animals. It coordinates the resources of agencies and support services such as the RSPCA and other animal welfare organisations to assist animals at risk. This role includes coordinating evacuations and providing assistance with planning and post emergency recovery. Effective emergency response planning by individual animal holding establishments is vital to animal welfare.

Emergency authorities

It is essential that you consult and liaise with emergency agencies and committees in your area as you develop and update a response plan to protect your staff, animals and property. Emergency service agencies such as the NSW Rural Fire Service (RFS), NSW Fire Brigades

(NSWFB) and the NSW State Emergency Service (SES) can provide advice and information needed to effectively address many of the issues raised in this document. You should access the information provided by these agencies on their web sites for assistance when planning. Your local council or Local Emergency Management Committee may also provide planning assistance.

As you consult local emergency authorities they will be made aware of your situation, emergency requirements and existing contingency plans. This may prevent serious conflicts later, such as forced evacuations when you are prepared and capable of defending your facility.

Developing your plan

Getting started

Decide which members of your organisation will plan your emergency needs – small organisations might only need to nominate a few people; larger ones may need a planning committee. All involved should have a clear understanding of the purpose of your plan and the issues it will need to address. You may create your own plan or use or modify one developed by the SES which can be found through the SES link at the end of this document.

Aim to develop a plan that will:

• ensure the safety of staff and the protection of your facility and animals in an emergency;

• set a minimum standard of preparedness and response to various types of incidents or threats;

• provide mechanisms for assessing the level of response to an external or internal incident or threat;

• provide guidance to individuals and staff in responding to emergencies or incidents; and

• serve as an information package that will provide emergency service agencies with details of your response capabilities.

Risk assessment and management, emergency preparations and post-emergency recovery are among important issues that must be addressed as you prepare your plan. You will need to hold regular meetings and gather information from a variety of sources to develop an effective plan.

Consider the risks

Response planning should begin with an assessment of risks to your facility. Risk assessment and the strategies you adopt to manage those risks will be central to the development of your plan.

Several successful strategies have been devised to help you to assess and manage risk. One involves the following steps (see also Figure 1):

Figure 1. Risk assessment and management
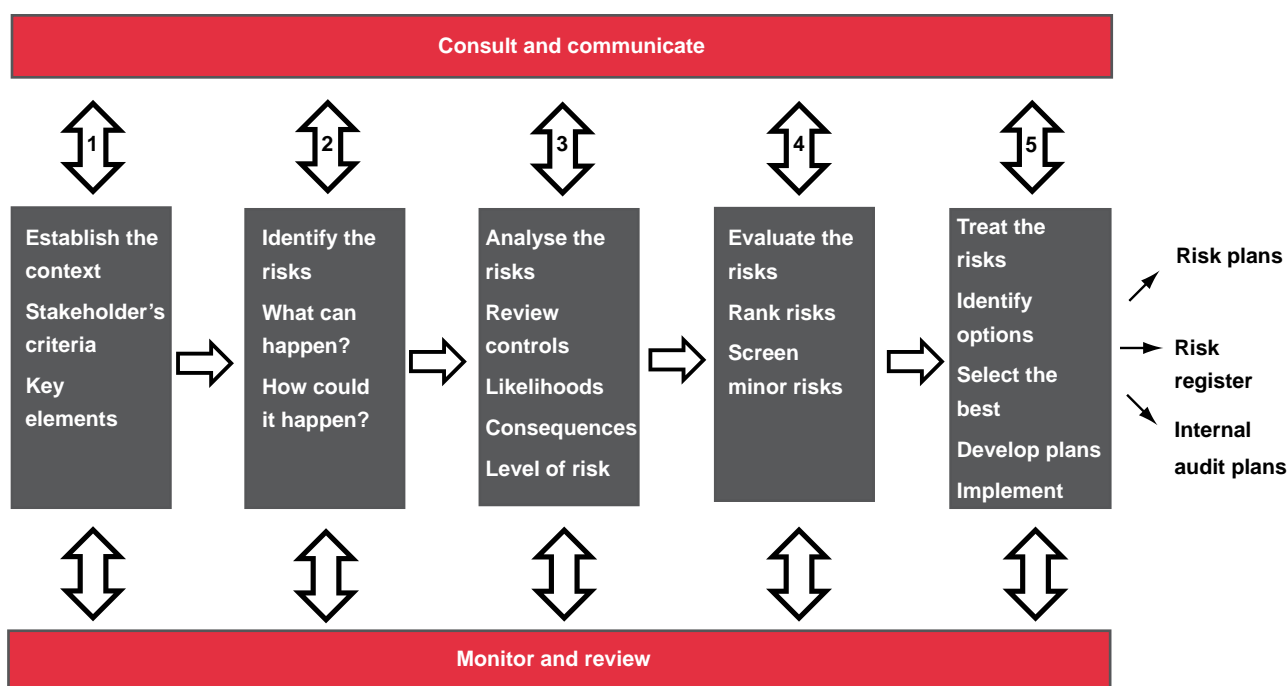
Figure 2. Develop a plan for your business that will ensure the safety of your staff and protect your facility and animals in an emergency.

1. **Communicate and consult:** Do this with internal and external stakeholders at each stage of the risk management process. Effective communication will ensure everyone understands the decisions made and actions required.

2. **Establish the context:** This involves establishing the external, internal and risk management context in which the rest of the process will take place. The goals, objectives, strategies, scope and parameters should be established and the criteria to be used in measuring the consequences of risk should be identified.

3. **Identify risks:** The aim is to generate a comprehensive list of risks and events that may impact on your ability to achieve the objectives identified in Step 2. It is necessary to consider where, when, why and how events could prevent, degrade, delay or enhance the achievement of objectives. Your judgement in this area may be based on experience or arrived at through brainstorming.

4. **Analyse risks:** Identify and evaluate existing control measures for the identified risks. Consider the strengths and weaknesses of the controls and assess any risks associated with the controls as they exist now. The consequences of the risk/event occurring should be determined, along with the likelihood of it occurring. An overall risk ranking can be established by analysing the range of potential consequences and how these could occur. (Refer to tables 1–3).

5. **Evaluate risks:** The purpose of this step is to make decisions, based on the outcome of the risk analysis, about which risks need treatment and to set priorities for treating these risks. Assess the risks identified and consider the balance between potential benefits and adverse outcomes. At this point you will need to set risk priorities, identify treatment/mitigation options and re-rate risks to gain an acceptable risk rating.

6. Treat risks: This involves identifying the range of options for treating risks and determining the best options for treating the risks that have been identified. This step can include ongoing monitoring and reporting on the status of the risk, or may involve developing and implementing specific cost-effective strategies and actions for increasing potential benefits and reducing potential costs.

7. Monitor and/or review: It is necessary to monitor the effectiveness of the risk management process that you have put in place, in order to continually improve its effectiveness. It is important to review the risks that you have identified and the effectiveness of their treatment measures to ensure changing circumstances do not alter priorities.

Analysing risks associated with your facility

In order to assess the level of risk for each risk identified, you need to be able to rate the consequences and likelihood of each risk. This is achieved using the following tables.

Table 1. Consequence of risk occurring

Classification		Consequence
1	Severe	The consequences may threaten the survival of your facility
2	Major	Would produce a threat to the survival or effective performance of your facility
3	Moderate	Functions of the facility could be subject to significant review or changes to operations
4	Minor	A threat to the efficiency or effectiveness of some aspects of the facility's operations, but at a level which can be dealt with internally
5	Insignificant	The consequences can be dealt with by routine operations

Table 2. Likelihood of risk occurring

Risk Level Description		Likelihood
1	Almost certain	Very high – may occur several times over a short period (or continuously)
2	Likely	High – may occur monthly to several times a year
3	Possible	Might occur once in a period of one to three years
4	Unlikely	Could occur over time (e.g. every five to ten years)
5	Rare	May occur only in exceptional circumstances (e.g. every 10 to 20 years or less)

In Table 3 the overall risk ranking is established through a combination of the characteristics of consequence and likelihood. The matrix developed from this information provides a guide for planners to determine which risks are the highest priorities from the perspective of the timeliness of the corrective action required.

Table 3. Risk ranking matrix

Likelihood	Consequence				
	Severe 1	Major 2	Moderate 3	Minor 4	Insignificant 5
Almost certain 1	E	E	H	H	L
Likely 2	E	E	H	M	L
Possible 3	H	H	M	M	L
Unlikely 4	H	M	M	L	L
Rare 5	M	M	L	L	L

Matrix legend

E – Extreme (Immediate action required)

H – High (Senior management attention needed)

M – Moderate (Management responsibility must be specified)

L – Low (Manage by routine procedures)

Your Local Emergency Management Committee has a responsibility for conducting emergency risk processes and may provide valuable input. Your local council is another source for information on risk management.

Further valuable information on risk management can be found on the Standards Australia web site.

Information you will need

You will need to gather information on the history of incidents in your area and incidents that may occur within your facility. Establish patterns and trends by looking at the frequency of emergency events and their impact on the facility. All local government areas have a Local Disaster Plan, with many having more specific flood or fire plans, so you may access this information to assist you with your plan.

Common risks include fire (bushfires and building fires), flooding (including burst pipes) and/or storms. You may also want to consider other threats such as damage caused by strong winds, loss of essential services, hazardous chemical incidents, disease outbreaks, earthquakes and/or building collapse.

Seek information from emergency agencies in your area, your neighbours and operators of similar facilities who may be able to help identify external threats and internal hazards. You will also need to categorise and prioritise the threats or emergencies to which your facility may be vulnerable.

Figure 3. Location and accessibility of your property will in part determine the risks and the impact of an emergency.

The impact of an emergency will be influenced by several factors including:

- location and accessibility of your property and buildings;

- vegetation;

- location of infrastructure;

- water (source and quantity);

- physical capabilities of you or staff members;

- emergency training;

- the proximity and response times by local emergency authorities;

- availability of equipment and facilities to defend your facility against threats;

- the maximum number of animals housed at any one time in the facility or on the property;

- road access to and from the property and the likelihood of closure;

- communications;

- fire alarm systems in place; and

- plans for storage of data backup and files including removal offsite.

Devising risk management strategies

After assessing the risks you can begin developing or revising a site emergency plan to manage them. There are basically two options to consider – one involving defensive plans and the other involving evacuation plans. Your decisions on the responses that will best suit your facility will be influenced by many factors including:

- the location and defensive capability of the facility;

- the type of internal/external threats it may face;

- the number and type of animals you have; and

- your ability to evacuate animals from your facility.

Planning to stay

Any decision to develop a defensive plan to protect your facility and animals on site in an emergency should involve prior consultation with emergency service agencies. Local fire and flood agencies are well placed to help you assess your defensive capabilities. Agencies such as WorkCover NSW may also provide advice on staff safety and welfare considerations.

Figure 4. When fire threatens you must have plans in place that enable you to successfully protect your animals on site or to move them to a safe location.

A plan to keep animals within your facility in an emergency must address the need for safe areas or buildings where they can be cared for until the danger passes.

Important considerations for any facility contemplating on-site protection in an emergency include:

• How will your animals be confined and what protection would they need? Consider providing temporary small holding areas to contain animals during a threat. Animals should never be left where they may escape onto a road during an emergency. They will be in danger from traffic and may cause an accident, leaving you legally responsible.

• How much feed and water will be needed by your animals during an emergency? A minimum supply of three days water and food on hand is generally recommended by emergency agencies. Where can the feed and water be safely stored and who will be responsible for ensuring it is supplied to the animals?

• What buffer zones may need to be developed within and surrounding your facility to help you provide safe areas in an emergency?

• Can your animals be properly cared for during a power outage or will you need a backup supply? Having solar-powered electric fencing ready for emergency use may be an option.

Planning to evacuate

Deciding which animals may need to be moved, where they will be taken and how they will be transported are important considerations when preparing for any evacuation.

Your plan should detail arrangements and establish procedures for moving animals to safe and secure holding facilities away from danger zones during a threat. If you don't have your own transport for animals make prior alternative arrangements with neighbours and local transporters.

Identification is important in case your animals become lost or mixed with others during an evacuation. Make sure you can list and identify all animals in your care. Records should be kept to verify ownership or your status as a carer. Methods may involve identification tags, photographs, microchip numbers, tattoos, colours and markings. Identify any problem animals you have, such as those most at risk and those that are difficult to manage or dangerous, and establish a procedure for dealing with them in an emergency.

An effective evacuation plan will also take into account:

• the availability of safe evacuation routes, considering the surrounding vegetation, topography, watercourses and the possibility of road closures;

• the proximity of and anticipated response times by local emergency agencies;

• the time required to vacate the property, including time to gather, identify and load animals;

• your need for backup power supply should the mains power fail, especially during a night-time evacuation;

• your requirements for effective internal and external emergency communications; and

• the need for additional assistance in handling of your animals in an emergency.

You will need to consider what handling equipment will be needed for moving your animals and where it should be stored for emergency use.

An evacuation kit may include:

• torch, radio and spare batteries;

• contact phone numbers;

• buckets and bowls for food and water;

• cotton lead ropes, leather collars, halters or chains;

• wire cutters (pliers) and a knife;

• first-aid items (discuss with your local veterinarian);

• suitable cages, bags, containers; and

• towels to cover cages.

If you will need assistance to evacuate animals plan to notify emergency agencies early with details of:

• the location of your animals;

• type and number of animals;

• your handling facilities and equipment, leads, halters, etc;

• problem animals that may be hard to manage or need special care or medication;

• a contact person (short and long term);

• whether you can transport some of the animals to a designated safe area or refuge;

• whether you have alternative accommodation for your animals after the immediate danger period or evacuation; and

• alternative contact information.

Figure 5. It's commonsense – when a flood threatens move your stock to the highest ground.

Managing the risk of fire

Your emergency response plan should provide for ongoing programs aimed at fire hazard reduction and improved fire protection. Reducing hazards through regular checks and maintenance will increase the defensibility of your facility and can simplify your planning needs.

Invite local fire agencies (the NSWFB and the NSW RFS) to inspect your property. They will help you identify hazards and suggest fire safety precautions. They can also advise on the development of buffers that will assist to protect your facility.

Other ways to improve fire safety may include:

- Ensure flammable materials such as timber, fodder, fuel and chemicals are stored away from buildings and animals.

- Have an electrician inspect power points, cables and leads as damaged or incorrectly connected wires are a fire hazard.

- Ensure adequate water and equipment is available for firefighting. Your emergency plan should identify any tanks, dams, swimming pools or other water sources.

- Ensure regular maintenance to remove excess vegetation, leaf litter from gutters, dust and cobwebs from inside buildings.

- Be wary of vehicle or machinery exhaust systems as sparks may ignite grass or fodder.

Fire prevention systems may involve building design and the use of fire retardant materials, early warning devices and fire suppression mechanisms. There are a range of other prevention considerations and fire engineers and fire protection professionals can offer advice on these issues.

Where flooding is a threat

Plan to move animals to a safe location above the anticipated water level at the earliest sign or warning of a flood. Choose the highest ground irrespective of whether or not the anticipated flood level is lower. Animals should be moved from threatened areas unless such action will compromise personal safety.

Have all the equipment needed to move your animals and have it readily accessible. Staff should be made aware of safety precautions they need to take in a flood emergency and warned against dangerous practices such as driving on flooded roads, walking through flowing water or riding horses through swift moving or deep water.

Plan escape routes for animals. Avoid leaving animals tied or locked up where they will be at risk. Animals should not be forced into swift flowing or deep water unless such action is unavoidable.

Consider strategies for protecting outdoor items and moving valuable items. You may need to plan to move pumps and machinery to high ground and to turn off utilities such as electricity and gas.

Key preparations for an emergency

Your response plan must address the key preparations needed to ensure the risk management strategies you have devised operate efficiently and effectively in an emergency. Areas that require attention include the following.

Staff training

You will need to establish mechanisms for the way staff respond to internal and external incidents. Roles and responsibilities for individuals during an emergency need to be defined. This might include establishing a chain of command in larger organisations. Remember that the safety of you and your staff is paramount. Emergency agencies are best placed to offer advice on staff survival techniques.

Provision also needs to be made for staff to practise their emergency management duties. Regular training and drills will test the effectiveness of your plan as well as staff capabilities. Experience and feedback from such sessions will enable you to update and improve your plan. A program for

regular testing and maintenance of emergency equipment is also essential.

Communications

Effective internal and external communications will be vital to the success of your plan. Develop strategies for contacting emergency agencies and alerting staff in an emergency.

Prepare a list of contacts and store it with your emergency plan. Large organisations may need to establish a phone notification tree to ensure that all staff can be contacted efficiently either at work or after hours if their help is required.

Plan to provide clear instructions in emergencies. Ensure staff who may be contacting emergency service providers are aware of information they will need to supply. Callers need to communicate the nature of the incident, the exact location, including business, premises or property name, the address including details of the nearest intersection or landmark, the number and species of animals at risk and the contact number and name of the person making the call.

Have the right equipment on hand

Your plan should provide for stocks of equipment likely to be needed. Comprehensive human and animal first-aid kits and a collection of appropriate firefighting tools (seek advice from your local fire service agency) are essential items. Equipment for moving animals in an emergency, protective clothing for staff and protective equipment for animals may also be needed. Emergency kits should be kept in easily accessible locations and clearly marked 'Emergency use only.' Staff should be made aware of the location of the equipment and trained in its use.

You should have up-to-date protective clothing stored in an accessible location. This may include non-flammable materials such as cotton and wool (synthetics melt and can cause serious burns to people and animals), long-sleeved cotton shirts, woollen jumpers, jeans, solid leather boots, hat, leather gloves, cotton scarf/handkerchief to be dampened and used to shield your face and goggles for eye protection.

Photograph: Taronga Zoological Society

Figure 6. Quokka

Planning for recovery

Strategies for recovery after an emergency need to be included in your response plan. Considerations include post-emergency safety precautions and inspections, preparation for effective treatment of injured animals and possible disposal of dead animals.

After a fire

Once a fire has passed buildings and surrounding vegetation will need to be inspected to identify any hot spots. Safety precautions need to be observed and anyone involved should be aware of the dangers and wear appropriate protective equipment. Hot spots may flare up without warning and partially burned structures and trees may be unstable. Surrounds need to be checked for hazards such as ash pits, dangerous debris, downed power lines and burnt-out trees. Always beware of falling limbs from fire affected trees.

Figure 7. Many holding establishments contain a large variety of wildlife such as the quokka (Figure 6) and wombat (above) and therefore need to plan for an emergency.

Injured animals

Plan to inspect all animals as soon as it is safe to do so. Consider calling a veterinarian in this instance. Frightened animals need to be approached with care and it is best to work in pairs. Look for injuries resulting from the fire or transport trauma. Assess which animals require immediate attention.

Injuries most likely to occur during a fire include burns, blindness from damaged eyes, lacerations and smoke inhalation.

Arranging treatment

Injured animals will need to be provided with prompt veterinary treatment. NSW DPI can help you arrange assistance with injury assessment and possible destruction of seriously injured animals. If help is likely to be delayed, you may be required to carry out some treatment.

A close watch will need to be kept on animals for delayed development of respiratory distress (up to 10 hours). These animals need urgent veterinary treatment, especially those with burns around the eyes or muzzle, singeing or with soot-stained discharge from the nose.

Animals with quite severe burns will often respond well to intensive treatment, but this can be time-consuming and costly.

Destruction of injured animals

Circumstances which may warrant emergency destruction of animals on humane grounds include:

- where animals suffer severe burns to more than 50% of the body surface with charring of limbs, muscles or facial tissue;

- where animals suffer severe smoke or flame inhalation resulting in acute respiratory distress (pulmonary oedema), as indicated by facial burns, laboured breathing, frothing at the mouth and nose, and coughing; and

- where animals are unable to stand due to injuries or burns.

The disposal of carcasses of animals should be carried out promptly. NSW DPI is able to coordinate assistance. If burying dead animals avoid low-lying areas and consider the requirements of the NSW Department of Environment and Climate Change (DECC) and any insurance issues.

Wildlife and stray animals

Plan to separate stray animals and wildlife from those in your care. Arrange for wildlife to be examined and dealt with by a local wildlife rehabilitation organisation.

Lost animals

If you are missing animals after a fire notify the emergency operations centre in your area and NSW DPI. Animal welfare organisations, local councils, veterinarians and neighbours may also provide information that will help you to locate lost animals. Listen for radio broadcasts which may alert you to which organisations may be accepting lost animals.

After a flood

During the recovery process safety precautions need to be adopted to prevent further damage or injury. These include:

- Before entering buildings check for structural damage.

- Be wary of venomous snakes or wildlife that may be trapped inside buildings or disturbed by the flood.

- Take extreme care when entering a building as escaped gas or other hazards may be present.

- Make sure the power is turned off and try not to use any electricity until checked for safety.

- Before animals are returned to a facility or property ensure all perimeter fences are intact and the facility is secure.

- Check any animals that may have been standing in mud or water for extended periods as they can develop health problems.

- Monitor for any diseases that can occur following a flood.

Figure 8. Animals that have been standing in mud or water for long periods may develop health problems.

Special considerations

Small animals

Evacuation may not always be an option for facilities where large numbers of smaller animals such as cats or dogs are kept. In such cases plan and prepare alternate safe areas for animals remaining within the facility. Safe areas need food and water on hand as well as medicines and equipment such as containers, collars, leads, chains and litter. Operators who plan to evacuate small animals will need appropriate carry containers. Identification details for the animals should be attached to carriers. Covers help provide security and reduce stress for animals such as birds during transport and hessian bags are useful for transporting cats. Any kennel or cattery with aisles should have exits at both ends which should be kept clear.

Plan to monitor the health of small animals closely for several days. Animals may display symptoms of disease or injury suffered during the emergency several days after the actual event.

Horses and fires

A response plan should identify safe areas where horses can be placed. On extreme fire danger days or when alerts have been posted, plan to move horses to low risk areas. These may include fallow paddocks, swampy country, paddocks with green vegetation or paddocks that have been closely grazed. Other safe areas may include sand ménages or indoor arenas containing little flammable material.

Prioritise removal of horses so that those at greater risk are shifted first. Shifting horses early allows them to settle in the new surroundings. It is preferable not to give them the option of returning to their stables where they may feel more secure despite the fire danger.

If subdivisional fences are electrified make sure that perimeter fences are stock proof as power can fail during a fire.

Do not shut horses in stables or buildings that have a significant risk of being lost in a fire. Horses kept outside with plenty of room to move will generally stand a better chance of survival. They will gallop through or around flames and stand on previously burnt areas and often remain there until the fire has passed.

Horses can become stressed and possibly dangerous when fire threatens. Personal safety remains paramount as is the case with any response planning. Approach frightened horses with caution. If moving a fractious animal a temporary blindfold over the eyes may help. Dousing the coat of the horse with water can help prevent burns.

Figure 9. Small animals such as cats and dogs have special requirements that need to be considered when formulating an emergency plan.

Photograph: Hanrob®

Figure 10. Horses threatened by fire often stand a better chance of survival when kept in paddocks rather than being confined in stables or buildings.

Remove synthetic horse equipment as it burns easily. Train animals that may need to be moved to safe areas so they are accustomed to being floated or trucked.

Make sure all horses are identified. Tattoos, brands and microchips are all helpful. Temporary identification may include tags on halters, neck or fetlock bands and grease crayon or spray can marking of the horse's coat. Identification should include a contact name and phone number where possible. Keep all identification information such as photos and registration papers to verify ownership. This information should be in your evacuation kit and/or copies of all important documents should be stored in a secure off site location.

Check fences before allowing horses back into paddocks. Check animals for injuries and contact a veterinarian if necessary. Fire-damaged trees can provide shelter from sun and wind, so don't remove them too quickly. However, remember that burnt trees can pose a risk from falling limbs.

Consider having your horses registered on the Horse Emergency Contact Database of the Australian Horse Industry Council. To register visit: www.horsecouncil.org.au .

Dangerous and exotic animals

Ensure only trained and experienced people are involved with the movement of such animals. Staff and others who may enter your facility during an emergency need advance warning about the type of animals they may encounter, especially if some animals escape holding areas.

Many dangerous species need to be immobilised or tranquillised so they can be moved safely. Plan to have access to any assistance or prescription medications required.

Ensure secure carriers or cages are available to move dangerous animals. Cages, including primate cages, should be locked to prevent escape.

Immediately report any escapes to the appropriate agencies. Some species could pose a threat to public safety and must be recaptured or destroyed as soon as possible.

Laboratory animals

Animal research establishments should develop specialised response plans for dealing with emergencies. They need to consider the suggestions previously mentioned and other issues necessary to protect animals, accumulated specimens or valuable data. Disruptions during an emergency can cause loss or injury of animals, contamination of tissue cultures, temperature fluctuations in incubators, etc.

Putting your plan to good use

The manager of your facility should ensure a copy of the emergency plan is kept at the facility and is accessible to all who need it. The plan must be communicated to all relevant staff and a copy may also be given to local emergency management authorities. It is recommended that a copy of your plan be submitted to your Local Emergency Management Committee for their information. This committee consists of members from local emergency agencies. Emergency phone numbers, including that of the local fire service should be kept with the plan. Map reference numbers and/or GPS readings are best stored with the plan. Consider displaying a copy of your plan at your entrance gate.

It is important to test your plan to ensure its effectiveness, provide any training to staff and continue to review and update your plan and ensure staff and others are made aware of any changes.

For more information

To obtain detailed information on NSW DPI roles and responsibilities relating to emergencies visit the Emergency Management web page at: http://www.agric.nsw.gov.au/reader/emergency on the department web site.

For further information relating to fires contact the NSW Rural Fire Service at: http://www.rfs.nsw.gov.au/

or the NSW Fire Brigades at: http://www.nswfb.nsw.gov.au/

For further information on the NSW State Emergency Service visit: http://www.ses.nsw.gov.au/

The Business Floodsafe guide can be obtained at: http://www.ses.nsw.gov.au/multiattachments/5437/DocumentName/Flash_flood_BFSTK.pdf

For access to the various New South Wales emergency plans, visit Emergency NSW at: http://www.emergency.nsw.gov.au

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