



report

recommendations to enhance
companion animal emergency management in New Zealand.

**"Pets are one of the family and it is not okay to leave
them behind when evacuating"**



notices

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introduction

In August 2005, Hurricane Katrina struck the Gulf Coast of the United States of America. In its wake, it left US\$110 billion in damage and 1,836 people dead making it the third deadliest disaster in US history (Kurpis, 2009). This disaster also highlighted the importance of companion animal emergency management with over 50,000 pets being left behind during the evacuation of New Orleans and 80-90% of these pets perishing. What was anticipated to be over within a few days turned into a disaster beyond comprehension and triggered the largest animal rescue operation in US history – an operation that rescued approximately 15,000 pets supported by some 5,000 volunteers (Shiley, 2006). Following Katrina, in reaction to public outcry over the thousands of pets that died the Senate passed, by a landslide 349 to 24 vote, the Pet Evacuation & Transportation Standards (PETS) Act 2006, which included the requirement for local and state emergency management agencies to have companion animal emergency management measures in place.

In contrast, New Zealand has very few mechanisms to protect companion animals during a disaster. In jest, some emergency managers believe shooting pets is the solution. But with no funding or evidence based advice available to emergency managers and animal care professionals the opportunity to protect companion animals and by doing so, protecting the human population is lost or simply put in the *too hard basket*.

This report has been developed to act as a catalyst to encourage dialogue between emergency management actors and support the development of tools and guidelines that will enhance New Zealand's approach to companion animal emergency management. It has been compiled with the assistance of international and domestic subject matter experts and over 150 references have been reviewed as part of its compilation. Aimed at both emergency managers and animal care professionals, this report provides 60 recommendations for national and local authorities to consider.

Whether emergency managers have a liking of companion animals or not, the reality is that failure to protect companion animals during an emergency actually puts human life at risk and there is substantial research to support this reasoning – whereas there is no evidence found to support further inaction.

issues and recommendations

philosophy

Close to 100% of pet owners identify their pets as one of the family (Glasse, 2010; Irvine, 2009). The New Zealand Society for the Prevention of Cruelty to Animals operates a *One of the family* campaign run with the support of celebrity and former *All Black* Norm Hewitt as its ambassador. As the campaign's ambassador, Hewitt promotes that animals are *One of the family* in recognition of the correlation between animal and domestic abuse (Royal New Zealand Society for the Prevention of Cruelty to Animals, 2009). Pet owners are more likely to refuse to evacuate if they are required to leave their pets, placing them and emergency service personnel at risk (Anderson & Anderson, 2006; Basler, 2006; Edmonds & Cutter, 2008; Heath, 1999a; Irvine, 2009; Leonard & Scammon, 2007; Shiley, 2006).

Recommendation:

1. The following philosophy should be adopted for companion animal emergency management:

"Pets are one of the family and it is not okay to leave them behind when evacuating"

psychosocial relationship

The importance of the human-animal bond should not be underestimated. Following Hurricane Katrina (2005), people were just as likely to suffer from depression from losing their pet as they did losing their home (Hunt, Al-Awadi, et al., 2008). Research has clearly identified the negative impacts of pet loss, especially during traumatic times such as in a disaster. Pets are treated as members of the family and pet owners often experience negative psychological impacts following the loss of their pet (Edmonds & Cutter, 2008; Gerwolls & Labott, 1994; Hall, Ng, et al., 2004; Heath, 1999b; Hunt, Al-Awadi, et al., 2008; Leonard & Scammon, 2007; Lockwood, 1995; Mort, Convery, et al., 2008; Orr, 2005). In 2010, an online survey of pet owners living in Wellington and Taranaki (n=92), over 63% of respondents identified their pet as an important psychosocial coping mechanism (Glasse). Social services need to understand the importance of ensuring pets are evacuated and accessible for disaster victims. The National Health Emergency Plan (Ministry of Health, 2007) does not mention the significance of the human-animal bond and the associated psychosocial aspects of pet loss. It seems somewhat contradictory to evacuate pets, who can be an

important psychosocial coping mechanism, then separate from their owners into pet boarding establishments while attempting to comfort the owner with complete strangers from social care agencies – especially given when 91% (Glassey, 2010) wish to be involved in the ongoing care of their pet. The importance of involving disaster survivors in relief operations is reflected in the *Principles of Conduct for The International Red Cross and Red Crescent Movement and NGOs in Disaster Response Programmes* (International Federation of Red Cross and Red Crescent Societies, 2009). Relief beneficiaries should be empowered and given a sense of purpose including being able to actively contribute to the ongoing care of their pet, not substituted by well meaning volunteers.

Recommendations:

2. The National Health Emergency Management Plan needs to acknowledge the significance of pet loss and ensure that psychosocial support agencies advocate for pets to be evacuated, cared for and not separated from their owners.
3. Guidelines are needed to encourage the establishment of pet friendly shelters to ensure pets and their owners remain unseparated as now practiced in the United States following lessons learned from Hurricane Katrina.
4. Evacuated and affected pet owners need to be empowered through being involved in pet friendly shelter operations and the care of their animal.

evacuation planning

From those surveyed earlier this year, over 56% indicated they would not evacuate unless they could take their pets and 79% were not prepared to leave their pets behind during an evacuation (Glassey, 2010). Emergency planners need to ensure plans are developed based on likely behaviours, not correct behaviours in order to be effective (Heide, 1989). In the wake of Hurricane Katrina in 2005, one of the key outcomes was the passage of the Pet Evacuation and Transportation Standards Act 2006 that required state and local plans to include arrangements for pets and service animals; funding for state and local pet and service animal emergency preparedness; and lastly, requirements that pets were rescued, cared and sheltered during emergencies (Edmonds & Cutter, 2008). “The need to plan and prepare to care for animals in advance of disease pandemics and disasters and then to provide coordinated, measured management in response when such crises occur—requires collaboration between all agencies involved as well as increasing attention and resources” (Appleby & Stokes, 2008).

Recommendations:

5. Evacuation plans need to be developed with the assumption that evacuated companion animals will need to be accommodated.
6. Emergency service and management officials need to provide evacuation orders as early as possible to ensure owners have adequate time to manage the safe evacuation of their pets.
7. Legislation similar to that of the PETS Act 2005 needs to be introduced. This would require every Civil Defence Emergency Management Group Plan to have a companion animal emergency management plan and that planning tools, resources and funding are made available to support this process.

returning evacuees

Over 58% of the sample group indicated they would return to rescue their pets from an evacuation zone despite public official warnings (Glasse, 2010). In the 1997 Yubba County Flood event, 80% of those who re-entered the evacuation zone without authorisation, did so to reclaim their pet (Heath, 2001). In a propane carriage derailment in Weyauwega, Wisconsin (1996), the entire town population of 1,700 people were evacuated and pets were not. Within 4-5 days 50% of owners had attempted to illegally re-enter the evacuation zone to rescue their pets and frustrated with the lack of action by local emergency services, a bomb threat was made to the Emergency Operations Centre (Irvine, 2009). Therefore the consequence of pets being left behind places the safety of pet owners and emergency service personnel at risk (Health, 1999a; Irvine, 2009; Nolen & Rezendes, 2006; Rezendes, 2007; Williams, 2006).

Recommendations:

8. The ramifications of failing to evacuate pets with their owners, regardless of the incident's anticipated duration, needs to be made clear to emergency service personnel.
9. Emergency services need to update standard operating procedures to require response personnel to evacuate companion animals in conjunction with local emergency management arrangements.

refusal of medical treatment

Refusal of medical treatment by pet owners if animal's needs are not met has also been reported as an issue for emergency service and health officials to consider (Health & Champion, 1995). Some pet owners see their pets as surrogate children and act paternally to protect their interests before their own.

Recommendation:

10. Emergency medical services need to ensure they advocate for local companion animal emergency management.

11. Welfare centres should have sufficient capacity to deal with evacuated pets, including injured pets. This may be provided by Veterinary Nurses, Veterinarians or an *on call* service, depending on the circumstance.

criminal liability

The Civil Defence Emergency Management Act 2002 does not generally affect other legislation (s.6), including the Animal Welfare Act 1999. Pet owners still have a statutory responsibility for the care and attention of their animals, and failure to do so is a criminal offence. The Animal Welfare Act 1999 does provide for a *defence* in an emergency situation (s.14), however it should be understood that this is not an exemption and places the onus of proof for strict liability offences on the defendant and such defence is open to challenge. The protection from liability (s.110) within the Civil Defence Emergency Management Act 2002 only extends to damage and loss, not any exemption from criminal liability. It is also believed that emergency service officials who require evacuees to leave their pets, may by default become the *person in charge* of that animal as they are the only person able to make any provisions for that animal and therefore become legally liable for the care and attention of that animal. Emergency service officials who force an owner to abandon their animal during an evacuation may also be liable under aiding and abetting offences. Owners who leave food and water out and then leave their animals do not relinquish their obligations under the Animal Welfare Act 2002, as food and water is only part of meeting the animals care requirements. Should the animal become injured, sick or the food/water source is disrupted or contaminated, then the animal is put at risk – leaving food behind is simply not appropriate and also encourages rodents, so such advice is against international humanitarian standards for vector control (SPHERE, 2004). In New Zealand there has been a successful prosecution against animal owners who failed to provide care and attention during flooding (Royal New Zealand Society for the Prevention of Cruelty to Animals, 2005) – this is an example that pet owner obligations are not limited by adverse events.

Recommendation:

12. Mitigation is the simplest solution. Pets are part of the family, it is not okay to leave them behind when evacuating. Emergency service officials need to be educated on the consequence and liabilities when failing to evacuate pets. Abandoning pets and leaving food does not remove statutory obligations for the owner and encourages rodents.

spontaneous volunteers

Hurricane Katrina illustrated both positive and negative examples of spontaneous animal rescue groups impacting on rescue and recovery operations (Anderson & Anderson, 2006; Shiley, 2006). Systems need to be in place to maximise the benefits of spontaneous animal rescuers, whilst also minimising the risks (see below). Although work has progressed with Civil Defence Emergency Management Response Teams Competencies (Ministry of Civil Defence & Emergency Management, 2009), the credentialing of volunteers for high risk animal rescue should be further mapped and based on international technical animal rescue curriculum. There is no current surge capacity for veterinary disaster management, pet friendly shelter operations or technical animal rescue in New Zealand and this creates risks for the community and emergency service officials. Other countries including the United States (Anderson & Anderson, 2006) and Canada (Wittnich & Belanger, 2008) have developed such specialist capacities and these should also be developed in New Zealand. Spontaneous untrained volunteers involved in rescue efforts following Hurricane Katrina were more likely to be injured, bitten and suffer from post traumatic stress than trained animal rescue professionals. (Anderson & Anderson, 2006; Shiley, 2006), highlighting the need to for pre-event training and for on-deployment and post-deployment support.

Recommendation:

13. That a national animal disaster management surge capacity system be developed that incorporates a mechanism to integrate spontaneous volunteers. This should be in the form of a new section of the National Civil Defence Emergency Management Plan (Order and Guide) and be encompassing of the zoological spectrum including companion animals, rural and factory farmed animals, wildlife, and captive animals (zoos, safari and laboratories). Such a system could also be used to support major animal welfare investigation operations and animal disease outbreaks. Psychosocial support systems are made available to spontaneous animal rescue personnel.

family unit preparedness

Current emergency management practice encourages resilient communities, however little provisions are made for less vulnerable family members such as pets – yet pet owners are more likely to take preparedness measures that will benefit their pets than they are to protect themselves (Leonard & Scammon, 2007; Selbert, 2002). As emergency management programmes are often evaluated on community preparedness indicators, advocating to include pets in family emergency plans is likely to improve such indicators.

Recommendation:

14. That consideration is given to a joint SPCA and Ministry of Civil Defence & Emergency Management campaign on pet emergency preparedness. This could be a merging of the *One of the Family* (Royal New Zealand Society for the Prevention of Cruelty to Animals, 2009) and the *Get Ready – Get thru* (Ministry of Civil Defence & Emergency Management, 2010b) campaigns, incorporating the new companion animal emergency management philosophy *Pets are part of the family and it is not okay to leave them behind when evacuating.*

zoological vulnerability

It is important that emergency managers recognise that pets are the least vulnerable animal group, with others, such as factory farmed animals and those in captivity (such as laboratories and zoos) are more zoologically vulnerable according to Irvine (2009). In September 2000, several tornados destroyed twelve battery farming sheds outside of Croton, Ohio. Over one million birds were trapped in mangled cages (Irvine, 2009). In New Zealand, the largest battery farm is operated by Mainland Poultry in Dunedin and has resource consent for 1,000,000 hens (H. Kriek, personal communication, 11 January 2010). Factory farms are highly vulnerable to disasters and emergency managers should take an active part of any resource consent to ensure hazards are mitigated and adequate emergency plans are in place and monitored. Failure to ensure the mitigation such risks, could result in significant adverse attention from animal rights groups and the public aimed at both the factory operator and local emergency management, as well as unnecessary distress to the animals.

Recommendations:

15. That emergency management takes an active role in factory farming consents to ensure zoologically vulnerable animal groups have adequate emergency management measures afforded to them.
16. That research laboratories using live animals have emergency management plans in place as part of compliance requirements.
17. That pet shops and pet boarding establishments have emergency management plans which encompass caring for rescued animals as well as those they already house, in place as part of compliance requirements.

reunification and microchipping

Following Hurricane Katrina over 50,000 pets were stranded in New Orleans. 80-90% of these stranded pets died. 10,000 – 15,000 pets were rescued and only 2,000 – 3,000 of these were reunified with owners (Anderson & Anderson, 2006; Shiley, 2006). Pets were relocated outside of their respective States and there was no one central database for lost and found pets. Pet collars with associated identification discs became separated or in some cases thrown away purposefully by spontaneous animal rescue volunteers who felt their owners did not *deserve* them (Shiley, 2006). Anderson and Anderson (2006), who wrote a book on the pet rescue operations following Hurricane Katrina, made a list of key recommendations. One of these recommendations was to ensure pets were micro-chipped and the need for a central microchip register. Fortunately in New Zealand there is a standardised and national register for companion animal microchips, known as the New Zealand Companion Animal Register. It is operated by the New Zealand Companion Animal Trust which ensures a standard type of chip and reader are in service in New Zealand for companion animals. The importance of microchipping as a disaster mitigation tool also led to the development of disaster microchipping guidelines being developed in the United States (American Microchip Advisory Council for Animals, 2007).

Another lesson learnt following Hurricane Katrina was that because people were evacuated out of the state, contact details on pet identification discs were unable to be used (Anderson & Anderson, 2006). Anderson and Anderson (2006) recommend that alternate contact details are also put on the disc to ensure out of region reunification can occur more effectively. In review of the NZCAR application form, there is already provision for an alternate contact, however the NZCAR application form does not consider the information being clearly used or available for civil defence emergencies or prompt the applicant to consider providing clearly specify an out of region contact as the alternate contact to ensure reunification in the event of a disaster.

Similarly, since 2002 a national online lost and found pet database is also operating in New Zealand known as *Pets on the Net* (Buchanan & Buchanan, 2009). According to Anderson and Anderson (2006) another recommendation arising from Hurricane Katrina was to ensure a central pet reunification database is used in the future. The *Pets on the net* website site provides for this by default, however it is important that emergency management and animal welfare agencies ensure such default provision is continued and not duplicated.

Also Section 92 of the Civil Defence Emergency Management Act 2002 does provide for the marking of animals. However, it is not clear whether this would extend to the implantation of microchips to assist with animal identification and tracking. The New Zealand Companion Animal Register recognises Mahurangi Technical Institute graduates as microchip implanters (B. Kerridge, personal communication, 13 January 2010). Mahurangi Technical Institute offer a three hour course to certify companion animal microchip implanters (Mahurangi Technical Institute, 2010) and this would be the logical means to determine who is suitably qualified to implant under the CDEM Act 2002 as per the following recommendation.

Recommendations:

18. Microchipping of companion animals should be strongly advocated by emergency management and animal welfare agencies to significantly increase the reunification of pets with their owners. Microchipping days should be promoted and supported. Pet retailers and adoption centres should ensure all rehomed pets are microchipped as a standard sale or adoption practice.
19. The existing national online database for lost and found pets (Pets on the net) should be formally appointed in emergency planning guidelines as the sole national pet lost and found database during emergencies.
20. Unaccompanied evacuated pets should be microchipped as soon as possible to enhance reunification efforts. Consideration should be given to training animal rescue teams in companion animal microchipping and this acknowledged as a critical part of companion animal emergency management and eligible to be reimbursed as an emergency welfare cost under the National Civil Defence Emergency Management Plan Guide.
21. The existing NZCAR (microchip) application form should be updated to inform applicants that alternate contact details should be that of a person outside their domicile region in case of a civil defence emergency and that the terms and conditions disclose that information provided could be used for civil defence emergency management purposes.
22. That the existing NZCAR application and database also allow for an extra data field to record or associate a Red Cross registration unique identifier.
23. That provision is made to permit the microchipping of animals by suitably qualified persons as an emergency power under the CDEM Act 2002 and the definition of suitably qualified microchip implanters is included in proposed national guidelines.
24. That local civil defence emergency management plans include a directory of locally qualified and current practising microchip implanters to assist with civil defence animal evacuation operations. This would include details on the location of locally held microchip scanners and bulk supplies of microchips.

25. That technical animal rescue organisations (such as the SPCA Animal Rescue Unit) consider establishing and maintaining an internal capacity (i.e. train some rescue technicians) to implant and read microchips.

pet friendly shelters

The concept of Pet Friendly Shelters developed post-Katrina has been proven effective in the United States and 81% of pet owners in sample size of 92 agreed that they would be more likely to comply with evacuation orders if evacuation/welfare centres catered for pets too (Glassey, 2010). Where emergency management officials do separate pets from their owners (into pet boarding establishments) or more likely redistribute unowned pets to other regions, such animals should be microchipped as early as possible to create a track and trace of animals to enhance reunification. Further evidence is provided by research undertaken by Drabek (2001) who found more than half of flood affected pet owners acknowledged the influence of their animal on their sheltering decision. During Hurricane Katrina, placing temporary animal shelters near human evacuation shelters was highly effective in reducing human, economic and emotional costs (Anderson & Anderson, 2006). Pet friendly shelters are also more economical than outsourcing to existing pet boarding establishments for mass evacuation operations and provide for greater surge capacity when existing animal shelters are often operated at near or full capacity during seasonal periods. There are already a considerable number of guidelines and training resources developed for pet friendly shelter operations including those developed in Florida (see Big Bend Disaster Animal Response Team, 2007; Federal Emergency Management Agency, 2007b; Florida State Agricultural Response Team, 2006; University of Florida, 2008). However, where possible pet owners should attempt to relocate to family or friends who are able to host them as well as their animals as part of the family emergency plan in preference to alternative accommodation including pet friendly shelters. As the Civil Defence Emergency Management Act 2002 does not affect other legislation, pet friendly shelters are still required to meet the requirements of the Animal Welfare Act 1999 and any code of welfare issued pursuant to such Act. Codes of Welfare under the Animal Welfare Act are established by the National Animal Welfare Advisory Committee (NAWAC), a ministerial advisory committee established under the Animal Welfare Act 1999 (Ministry of Agriculture & Forestry, 2009b). NAWAC are currently developing a Code of Welfare for temporary housing including boarding establishments for animals (Ministry of Agriculture & Forestry, 2009a).

Recommendations:

26. That consideration be given to establishing guidelines on the operation of pet friendly shelters in New Zealand and that funding and operational capacity is established to implement such guidelines. This

capacity should be integrated with the national surge capacity system outlined in spontaneous volunteers recommendations.

27. That Civil Defence Emergency Management Welfare Centres are required to receive evacuated pets, albeit they may relocate the animals to pet friendly motels, pet friendly shelters or boarding establishments or animal shelters. The public need confidence that welfare centres provide a consistent range of services.
28. That NAWAC consult with the National Animal Welfare Emergency Management Group to ensure provisions are made for pet friendly shelter design and operation standards. Such standards should ensure general environmental and health protection regulations are adhered to and/or amended if required.

alternative pet accommodation

There appears to be a default tendency to separate companion animals from their owners upon being evacuated to welfare centres. The Pet Friendly Shelter concept needs to be a preference where evacuees are placed in mass care shelters, however where they are placed into motels such as in small adverse events affecting only a small number of the community, consideration should be given to identifying pet friendly motels, even if these motels only offer such services during civil defence emergency management operations. It would be reasonable to provide financial incentives to motel owners for accommodating evacuated pets with their owners. With the average price of boarding a dog privately at NZ\$16-39 a day, these should be attractive to motel owners and the costs should be eligible for reimbursement under the National Civil Defence Emergency Management Plan (Guide). This would improve the psychosocial wellbeing of pet owners by ensuring their family is not separated. In Hurricane Katrina, alternative accommodation for unclaimed companion animals included foster homes, Prisons and transporting animals to other shelters outside the affected state (Anderson & Anderson, 2006; Shiley, 2006). In the case of Prison accommodation, the Dixon Prison provided emergency shelter with inmates providing care. Prison Warden James Le Blanc said that 48 dogs remained at the Prison and continue to provide a therapeutic and rehabilitative programme for inmates and that the programme had a long term positive effect (Shiley, 2006).

Recommendations:

29. That motels are encouraged to become pet friendly or at least pet friendly for emergencies.
30. That the Department of Corrections is engaged and asked to consider providing emergency pet sheltering surge capacity for major events.

pet carriers

In the Yubba county Flood Event, Heath (2001) reported that cat evacuation failure was twice as likely to occur as dog evacuation failure, and was associated with not having a cat carrier. Research undertaken by Glassey (2010), indicated that 11-24% of Taranaki and Wellington cat owners did not have any or insufficient quantities of pet carriers to accommodate an evacuation of their cats. Although 76% of cat owners did have a pet carrier for each of their pets (Glassey, 2010), the lack of pet carrier availability is a causal factor for evacuation non compliance.

Recommendations:

31. That public education messaging includes the need to have a pet carrier for each animal.
32. That consideration is given to the development of a *Get Ready – Get thru* cardboard pet carrier to extend the range of campaign products. This product could have a checklist of all the essential emergency items required for pets and record owner, pet and microchip details.
33. That stocks of pet carriers are available and deployed when emergency services commence evacuation operations to enhance evacuation compliance.

public education messages

Although there appears to be an improvement in public information on pet emergency planning, such as the information supplied on the www.getthru.govt.nz website, there are still a number of deficiencies that need to be addressed.

Recommendations:

34. Public education should strongly advocate that *Pets are one of the family and it is not okay to leave them behind when evacuating*. Public education information should also recommend that family emergency plans include alternative accommodation for animals and alternative arrangements to have their animals evacuated or collected if owners are unable to return home to do so. Additional evacuation items should also include a picture of their animal to aid with reunification, veterinary records, veterinary prescribed medications and litter/tray. Each small companion animal should have their own pet carrier and all dogs should have their own muzzle. Lastly, microchipping needs to be strongly encouraged and pet discs should include an out of region secondary contact if possible.
35. Public education materials should use existing networks such as veterinary clinics, pet shops, adoption shelters and the like. Territorial authorities should also include information on local companion animal emergency management when mailing out annual dog registration dues and/or rates invoices.

36. Organisations providing disability assist dogs under the Dog Control Act 1996 are specifically included in companion animal emergency preparedness campaigns. Such organisations include the Royal Foundation for the Blind, Hearing Dogs for Deaf People of New Zealand, Mobility Assistance Dogs Trust, New Zealand Epilepsy Assist Dog Trust and the Top Dog Companion Trust. These organisations need to be engaged by emergency management to ensure disability assist dog owners are prepared for emergencies.

pet population data

There is currently no publicly available accurate pet population data information available in New Zealand (B. Kerridge, personal communication, 03/01/2010), however the New Zealand Companion Animal Council intends to undertake a survey later in 2010 that will gather such information. Pet population data is as critical for emergency planning as human population data. This activity is being coordinated by a non-profit organisation, despite its importance for emergency management planning.

Recommendation:

37. That funding and support is provided to the New Zealand Companion Animal Council to ensure that pet population data is maintained and available for emergency planning. This project could be supported by Universities specialising in veterinary, epidemiology and emergency management such as Massey University.

practitioner education

The sub discipline of companion animal emergency management is relatively new and the Hurricane Katrina and the subsequent passage of the Pet Evacuation and Transportation Standards (PETS) Act 2006 has been a significant catalyst for its interest and growth. However, the issues and solutions of protecting pets during emergencies are quite foreign to the majority of emergency managers and animal care professionals in New Zealand. Effective companion animal emergency management will demand that both sectors work collaboratively to achieve successful outcomes, however no tertiary providers currently offer any evidence based companion animal emergency management education programmes and unfortunately much of the current thinking is not necessarily based on international best practice. Veterinarians and Veterinary Schools play an important part in emergency management and should be integrated into emergency planning and response (Dorn, Gordon, et al., 1993; Heath & Linnabary, 1993; Lesch-Hollis, 2008; Lovern, 2003, 2005). Emergency management education needs to be collaborative and ensure pathways for competency development, on both practical and academic spectrums (Glasse, 2008), companion animal emergency management is no different and there are significant opportunities for such collaborative

educational arrangements to be developed. Specifically, inter department initiatives also could be considered, such as those between the Veterinary and Emergency Management faculties at Massey University. Masters level research has already commenced in this area by Massey University (H. Squance, personal communication, 5 February 2010) and in due course the created thesis may assist in guiding the development of such educational frameworks for companion animal emergency management in New Zealand.

Recommendation:

38. That joint sector companion animal emergency management education programmes are developed and included in tertiary qualifications required for emergency managers, veterinarians, veterinary nurses, animal welfare inspectors, animal control officers and the like. Competency framework role maps should also reflect the need to include companion animal emergency management.

reducing vulnerability of owners of multiple dogs

Anderson and Anderson (2006) reported that the more pets people had, the less likely they were to evacuate and this was due to the logistical challenges associated with multiple pets. Under section 10(3) of the Dog Control Act 1996, territorial authorities establish policies for dog control including owner education and classification of owners. Most territorial authorities put in place policies or bylaws that limit how many dogs a person may have without seeking special authorisation and in granting such authorisation may impose restrictions or requirements upon the owner. Owners of multiple dogs are more vulnerable to disaster and because it is often the logistical demands of evacuating multiple dogs that reduces evacuation compliance, it would be appropriate to mitigate this risk by ensuring such owners have adequate measures in place to safely evacuate all their dogs.

Recommendation:

39. That where territorial authorities have multiple dog ownership policies, that as part of granting permission to own multiple dogs above the locally specified threshold, that the dog owner provides and maintains a family emergency plan, pet emergency evacuation items and specifically that all dogs are microchipped, have their own leash and muzzle and a transportation crate is immediately available for each dog.

40. That the impact of the above recommendation on owners of multiple working dogs, such as farmers is further investigated. Massey University have a Working Dog Centre that may be of use in developing such policies.

animal rescue appeals

Following Hurricanes Katrina and Rita a record US\$50 million dollars was donated to animal welfare organisations (Anderson & Anderson, 2006). Under the current arrangements in New Zealand, the New Zealand Red Cross are responsible for the official national relief appeal (Ministry of Civil Defence & Emergency Management, 2006). It is unlikely that Red Cross funds would be used toward animal disaster relief operations and in absence of a national appeal for animal disaster relief, there could be a plethora of organisations seeking donations from the public in a non uniform or unaccountable way. In addition to national appeals, each territorial authority may operate a Mayoral Relief Fund. The beneficiary criteria for each Mayoral Relief Fund is determined by each authority, however in a review of a small number of existing fund policies none provided for any specific allowances for the welfare of constituent's pets.

Recommendation:

41. That the Royal New Zealand Society for the Prevention of Cruelty to Animals is consulted to become the lead appeal agency for animal disaster relief under the National Civil Defence Emergency Management Plan.
42. The deed or policy for Mayoral Relief Funds should be reviewed by territorial authorities to ensure funds can be applied for local animal welfare purposes following an emergency.

rescue operations

Animal rescue operations need to be carried out by trained personnel who have the necessary competencies to not only handle animals, but also work in an emergency response environment. The FEMA resource typing and credentialing programme (Federal Emergency Management Agency, 2005, 2007a, 2009) has developed competency profiles for animal rescue professionals and uses common core requirements with human rescue professionals to ensure standardisation and inter-operability. In Hurricane Katrina, the lack of incident ground certification for animal rescue personnel was an issue as anyone with a bag of dog food could paint SPCA on their vehicle and drive around without being harassed by the police or military; looters caught onto this and often broke into homes to steal valuable Pit Bull Terriers to be used in dog fighting (Anderson & Anderson, 2006). It is important that the term "Animal Rescue" is differentiated from 'Technical Animal Rescue', the former being animal care organisations providing a range of adoption and care services, to the later being accredited specialist rescue that is capable of rescuing animals from hazardous environments that typically would have been otherwise dealt with by the Fire Service, such as cliff, tree, confined space and water rescues. New Zealand has only one technical animal rescue group, known as the Animal Rescue Unit, which is a volunteer section of the

Wellington SPCA. They are trained to unit standards often set by the Fire & Rescue Services Industry Training Organisation (FRSITO), the same standards used by the New Zealand Fire Service in areas such as incident management, rope rescue, first aid (animal and first aid), confined space operations, basic disaster rescue (human), and animal specific emergency skills. Unlike the United States which has now significant technical animal rescue capacity within Fire Departments and Humane Societies, New Zealand has a pool of 14 currently qualified SPCA Animal Rescue Technicians (Wellington SPCA, 2009). It is not appropriate to consider animal control officers, veterinary nurses or SPCA Inspectors as technical animal rescue experts, unless specific accredited rescue training is provided.

In the United States the FEMA search assessment marking system is nationally adopted, however in the majority of other countries, the United Nations International Search & Rescue Advisory Guideline markings are used. The INSARAG marking system provides for a Search Assessment Marking for the structure and Victim Markings to identify entrapped people, alive or otherwise (United Nations, 2006). The INSARAG markings are made using international orange paint or crayon by convention. In the Hurricane Katrina, spray painting of buildings by rescue groups “went wild” (Anderson & Anderson, 2006) and variations of the FEMA marking system was used to incorporate animal rescue operations (Shiley, 2006) outside of convention. During flood and structural collapse incidents, there is potential risk to companion animals including search and rescue dogs. The flood water in New Orleans following Hurricane Katrina was so contaminated it could kill dogs quicker than dehydration (Woodard, 2005), so suitable methods for decontamination (Soric, Belanger, et al., 2008) to treat chemical burns etc must be in place and understood for animal rescue personnel and the animals they rescue. During Hurricane Katrina, one of the reasons why emergency service officials refused to take pets was that they were operating inflatable rescue boats and feared that the animals could bite or scratch the vessel and thereby place themselves and evacuation operations at risk (Anderson & Anderson, 2006).

Recommendations:

43. That Civil Defence Emergency Management Groups recognise, encourage and support technical animal rescue capacity development or inter-region agreements for such capabilities. Where such capabilities do not exist, formal agreements should be made with the SPCA Animal Rescue Unit or other accredited response teams with technical animal rescue competencies.
44. That the New Zealand Fire Service and other emergency response organisations receive accredited training in animal rescue or at least basic animal handling and decontamination, new FRSITO qualifications and standards could be developed.
45. That the National Urban Search & Rescue Board engage in discussion with the International Search & Rescue Advisory Group amendments to the Search Assessment and Victim Markings to integrate

animal search and rescue information. One option would be to allow for the markings to be applied by animal rescue organisations, using a blue paint to distinguish the team type.

46. That recognition is given that during flood rescue operations that inflatable boats may have limitations when transporting pets and that other boat types should be included to improve evacuation attempts. An alternative to this is to have socks or masking/duct tape to enclose the pads of paws to prevent damage to inflatable craft, although such handling may cause additional stress on the animal.
47. That technical animal rescue and disaster veterinary personnel are aware of basic hazardous material incident safety, protective equipment use and decontamination.

requisitioning powers (CDEM Act 2002)

According to section 90(1) of the Civil Defence Emergency Management (CDEM) Act 2002, a Controller or member of the Police may requisition if such power is required for the “preservation of human life”. The lack of acknowledgement that pets are part of the family is systemic in the Civil Defence Emergency Management Act 2002. The current statute does not permit requisitions to assist with emergency rescue or care of animals, companion or otherwise.

Recommendation:

48. That the CDEM Act 2002 is amended to acknowledge that animals too, are more than just property and that requisitions are justifiable to protect them during emergencies.

evacuation (CDEM Act 2002)

Similarly, section 86 of the CDEM Act 2002 provides power to evacuate premises and places applies where it is necessary for the preservation of human life. It is not clear whether under this section, a Controller or member of the Police could require a person to evacuate their animal, although there are provisions to give directions (s.91) and to seize animals (s.92).

Recommendation:

49. To avoid any ambiguity of the evacuation provisions under the CDEM Act 2002, section 86 should be amended to ensure that evacuations can be required where necessary for the preservation of life (not just human life) and specific inclusion of animals into evacuation and exclusion orders.

animal seizure (CDEM Act 2002)

Inspectors appointed under the Animal Welfare Act 1999, such as SPCA Inspectors, may seize animals where they are injured, sick, or abandoned. However, the caveat that complicates seizing animals such as those left behind during evacuations, is that the Inspector is required to leave a notice of entry for each property and the animal can not be disposed of without owner consent unless the court orders otherwise. Seizing the animal under these conditions is not necessarily a precursor to prosecution, but it does provide some legal authority to seize pets left behind for whatever reason. During a declared state of emergency, animals may be seized under section 92 of the CDEM Act 2002 and if they are delivered to an approved organisation under section 141 of the Animal Welfare Act 1999, then they then can be disposed of (rehoming or otherwise) after 7 days, which makes the management of evacuated animals easier in comparison to seizing them under the Animal Welfare Act 1999 which then requires a lengthy and expensive process for the charity if the animal is unclaimed. The statutory 7 days under section 141 of the Animal Welfare Act 1999 may however be insufficient for a displaced or injured owner to reclaim their animal and this should be considered by approved organisations before determining means of disposal. This issue again highlights the importance of microchipping as this enables the SPCA (or approved organisation) to identify the owner and reunite the animal in a timely manner. Given that many emergencies involving emergency management are in non-declared situations (Patea Fire, 2008; Canterbury Snow Storm 2006) it is important companion animals can be evacuated quickly in support of human evacuation operations to improve overall evacuation compliance. By amending current legislative to provide specific power to undertake rescue, protections are then afforded to Inspector or Auxiliary Officer under the Fire Service Act 1975 or Animal Welfare Act 1999.

Recommendations:

50. That the Fire Service Act 1975 is amended to ensure the Chief Fire Officer or person in charge has the authority to rescue and evacuate animals, and that animals removed as such shall be delivered to an approved organisation under section 141 of the Animal Welfare Act 1999.
51. That the Animal Welfare Act 1999 is amended to permit Inspectors and Auxiliary Officers under the direction of either a Chief Fire Officer (or person in charge), Civil Defence Controller or Constable during an emergency situation to rescue or evacuate, with assistance as necessary, any animal without notice of entry and that such animals shall be disposed of pursuant to sections 138 (destruction of sick or injured animals) or 141 (disposal of animals) of the Animal Welfare Act 1999.
52. That section 141 of the Animal Welfare Act 1999 is amended to extend the minimum holding period from 7 days to 14 days where animals have been seized in an emergency (in accordance with the previous recommendation).

53. That technical animal rescue organisations consider the appointment of Auxiliary Officers if the above recommendations are made. This will ensure they have power to carry out rescues and are afforded specific protection from liability.

destruction of animals (CDEM Act 2002)

Section 92 of the Civil Defence Emergency Management Act 2002 provides the power to destroy animals. During Hurricane Katrina, “despite pleas from dog owners in writing scrawled across the walls of a middle school, fourteen dogs, left by their owners in hopes of returning to them, were slaughtered, shot in the body cavity, forcing the dogs to suffer a prolonged death. All were found dead at Beauregard Middle School in St. Bernard Parish, New Orleans”(Pet-Abuse.com, 2006). This action caused serious negative public reaction as well as a criminal prosecution (Shiley, 2006). According to Glassey (2010) 59% of 92 surveyed pet owners in Wellington and Taranaki, indicated that that emergency service officials should not be able to destroy pets left behind in the evacuation zone, a further 22% were unsure, leaving only 19% in agreement of shooting pets if required. Not only does shooting pets potentially create criminal liabilities, it also creates significant political and media risks for emergency management officials and should not be considered lightly.

Recommendation:

54. Police and emergency management officials should have an awareness of the potential risks of shooting pets. Such information should be part of companion animal emergency management education programmes and response guidelines.

national civil defence emergency management plan - guide

According to section 48(2) the National Civil Defence Emergency Management Plan Order (2005) , the territorial authority is locally responsible for companion animal emergency management, although it may be assisted by the SPCA. Welfare expenses incurred by the territorial authority under section 26.4.1 caring for the displaced (Ministry of Civil Defence & Emergency Management, 2006) is limited to costs incurred for people, not animals – yet a charity is expected to assist response efforts without statutory protection to have their operational expenses reimbursed or provided for. Although 76% of surveyed pet owners (n=92) said they would be able to afford pet boarding fees for up to three days if required (Glassey, 2010), the main issue lies with operational costs such as transportation, microchipping, cleaning (recommissioning of pet friendly shelters) and rescue of owned and unowned animals. Some territorial authorities already have agreements in place with their local SPCA to reimburse such costs, but it is unclear whether these would be accepted as an expense claim by central government under the guide. The other reality is that should

incurred costs be passed onto owners, any large costs, such as veterinary care or sheltering, may force owners to relinquish ownership to avoid payment. This however, still leaves the SPCA or veterinary service with expenses that may not be able to be recovered. The SPCA receives no government funding for its services, and it is unrealistic that such services are not clearly eligible under the National Civil Defence Emergency Management Plan Guide, whereas the expenses incurred by their human welfare agency counterparts are.

Recommendation:

55. That the National Civil Defence Emergency Management Plan Guide be amended to ensure operational costs incurred by the SPCA in support of CDEM are claimable. This shall include, but not be limited to, rescue, evacuation, transportation, accommodation, microchipping, veterinary treatment, disposal and care.

directors guidelines

The Ministry has published a series of comprehensive guidelines, issued under the authority of the Director pursuant to section 9(3) of the Civil Defence Emergency Management Act 2002. By doing so, such statutory guidelines must be taken into consideration by Civil Defence Emergency Management Groups when developing or revising their CDEM Group Plan as per section 53 of the Civil Defence Emergency Management Act 2002. There is a lack of consistent and evidence based advice for Civil Defence Emergency Management Groups in developing companion animal emergency management plans. The National Animal Welfare Emergency Management (NAWEM) Group is currently developing a guideline to assist in this area. The new companion animal emergency management philosophy “Pets are part of the family and it is not okay to leave them behind when evacuating” is not well advocated throughout the Director’s series of guidelines, however in fairness Australia (T. Pearce, personal communication, 27 July 2009) or the United Kingdom (E. Coles, personal communication, 24 July 2009) do not have any significant guidelines for companion animal emergency management either. The aftermath of Hurricane Katrina has prompted the United States to become the leading country for companion animal emergency management public policy and practice.

Recommendations:

56. That the NAWEM guideline in development is based on international best practice and is issued pursuant to section 9(3) of the Civil Defence Emergency Management Act 2002.

57. That the series of Director Guidelines (*Welfare in an emergency* and *Mass Evacuation Planning* in particular) and other Ministry of Civil Defence & Emergency Management references are reviewed to incorporate companion animal emergency management international best practice.
58. That Civil Defence Emergency Management Groups are given a specified function under section 17(1) of the Civil Defence Emergency Management Act 2002 to take into account the needs of pets and service animals and other such amendments consistent to the requirements specified in the Pet Emergency & Transportation Standards Act 2005 (United States).
59. Companion animal emergency management capabilities and requirements are included in future versions of the Ministry's *Monitoring and Evaluation Programme*.

registration systems

Evacuated and affected persons are entitled to support services during and following an emergency. Such support services are controlled through a range of mechanisms including registration of those requiring such assistance. As part of this registration process, a national registration form has been developed by the New Zealand Red Cross in conjunction with the Ministry of Civil Defence & Emergency Management. The current form has no information in regards to pet information needs. Currently, the Ministry of Civil Defence & Emergency Management is scoping the requirements of a registration system during evacuations in New Zealand (Ministry of Civil Defence & Emergency Management, 2010a).

Recommendations:

60. That any new registration system being developed considers the needs of pet owners, records pet information and can integrate data from the www.petsonthenet.co.nz lost and found pet website and/or the New Zealand Companion Animal Register.

conclusion

In New Zealand the existing national arrangements and framework for companion animal emergency management do not currently meet international best practice. While effort is being made within the sector to address the issue, it is often ad hoc and accomplished through the sheer good will and personal interest of individuals with little or no financial and technical support. It is not appropriate to assume that charities such as the SPCA will carry out the necessary companion animal emergency planning which is a statutory responsibility of the territorial authority, especially when national instruments do not provide for the reimbursement of their operational response costs – making them financially vulnerable for simply trying to help during a disaster. What is needed is a comprehensive companion animal emergency management strategy that is led by the Ministry of Agriculture and Forestry with sufficient financial and personnel resources to create legislative change and a framework that provides for specialist surge capacity, practitioner education and a series of supporting statutory guidelines. The United States has implemented major projects and provided significant funding for companion animal emergency management as a result of the lessons learned following Hurricane Katrina. New Zealand has the opportunity to mitigate the same risks and prevent similar catastrophes, providing strong leadership and commitment can be exemplified by central government agencies. As *Kiwi* families consider their pets a member of their family, emergency managers need to plan on the same assumption. If stakeholders follow the philosophy that ‘Pets are one of the family and it is not okay to leave them behind when evacuating’, we will continue to enhance companion animal emergency management in New Zealand in support of our vision for a resilient New Zealand.

Steve Glassey CEM®

Director

Mercalli Disaster Management Consulting

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distribution

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- AUT University – Emergency Management Faculty
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- Information Services, Department of Internal Affairs
- International Association of Emergency Managers – Oceania Council
- Massey University – Joint Centre for Disaster Research
- Ministry of Agriculture & Forestry
- Ministry of Civil Defence & Emergency Management
- National Animal Welfare Advisory Committee
- National Animal Welfare Emergency Management Group
- National Library of New Zealand
- National USAR Search Dog Association
- National Welfare Coordinating Group
- New Zealand Companion Animal Council
- New Zealand Fire Service – National Headquarters
- New Zealand Police – National Headquarters
- Royal New Zealand Society for the Prevention of Cruelty to Animals – National Office
- Save Animals from Exploitation
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- Wellington Society for the Prevention of Cruelty to Animals - Inspectorate
- Wellington Society for the Prevention of Cruelty to Animals - Animal Rescue Unit
- World Society for the Protection of Animals (New Zealand and Asia-Pacific).

abbreviations

ACO	Animal Control Officer
ARU	Animal Rescue Unit
BCP	Business Continuity Planning
CAEM	Companion Animal Emergency Management
CDEM	Civil Defence Emergency Management
CDEMG	Civil Defence Emergency Management Group
CIMS	Coordinated Incident Management System
CIS	Critical Incident Stress
CSU	Charles Sturt University
DGL	Directors Guideline
EMO	Emergency Management Officer
EOC	Emergency Operations Centre
FEMA	Federal Emergency Management Agency (US)
HSUS	Humane Society of the United States
IAEM	International Association of Emergency Managers
ID	Identification
IFAW	International Fund for Animal Welfare
INSARAG	International Search And Rescue Advisory Group
LGITO	Local Government Industry Training Organisation
LWC	Local Welfare Committee
MAF	Ministry of Agriculture and Forestry
MCDEM	Ministry of Civil Defence & Emergency Management
NAWAC	National Animal Welfare Advisory Committee
NAWEM	National Animal Welfare Emergency Management (Group)
NGO	Non Governmental Organisation
NWCG	National Welfare Coordination Group
NZCAC	New Zealand Companion Animal Council
NZCAR	New Zealand Companion Animal Register
NZKC	New Zealand Kennel Club
NZRC	New Zealand Red Cross
NZRT	New Zealand Response Team
NZVA	New Zealand Veterinary Association
PETS	Pet evacuation and transportation standards
PIM	Public Information Manager
PPE	Personal Protective Equipment
PTSD	Post Traumatic Stress Disorder
PTWC	Pacific Tsunami Warning Centre
SOP	Standard Operating Procedure
SPCA	Society for the Prevention of Cruelty to Animals
TEMO	Taranaki Emergency Management Office
USAR	Urban Search and Rescue
UN	United Nations
WAG	Welfare Advisory Group (Group/Regional Level)
WC	Welfare Centre
WSPA	World Society for the Protection of Animals

recommended websites

American Society for the Prevention of Cruelty to Animals

<http://www.aspca.org/pet-care/disaster-preparedness/>

Animal Rescue Unit

www.aru.org.nz

Federal Emergency Management Agency: IS-10 Animals in disasters online course (module A)

<http://training.fema.gov/EMIWeb/IS/is10.asp>

Humane Society of the United States (HSUS): public education

http://www.humanesociety.org/issues/animal_rescue/tips/disaster_preparedness_for_1.html

Humane Society of the United States (HSUS): emergency planning

http://www.animalsheltering.org/programs_and_services/emergency_services/

Ministry of Civil Defence & Emergency Management

www.civildefence.govt.nz

National Animal Welfare Emergency Management (NAWEM) Group

<http://www.biosecurity.govt.nz/publications/biosecurity-magazine/issue-73/national-animal-welfare>

New Zealand Companion Animal Council

www.nzcac.org.nz

Royal New Zealand Society for the Prevention of Cruelty to Animals

www.rnzspca.org.nz

Wellington SPCA

www.wellingtonspca.org.nz

World Society for the Protection of Animals

www.wspa.org.nz

biography

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As a former Disaster Management Officer for the United Nations and Advisor with the Ministry of Civil Defence & Emergency Management, Steve has extensive operational experience. Steve has been involved in international disaster response including the Pacific Tsunami (Samoa, 2009) and Typhoon Katsana (Laos, 2009) as well as domestic emergency events including Manawatu Storm (2004) and Bay of Plenty Storm (2004).

Before his career in emergency management, Steve was a SPCA Inspector and Animal Control Officer with Wellington SPCA. While at Wellington SPCA in 1995, Steve was the investigating officer in charge of Operation Arawhata – one of New Zealand’s worst domestic animal neglect cases (52 cats and 9 dogs). He also founded the country’s only technical animal rescue unit – the Animal Rescue Unit (ARU) which over the past 10 years has rescued hundreds of animals from difficult and high risk environments.

As the former Chief Executive of the Emergency Management Academy of New Zealand Ltd, Steve joined forces with Chief Animal Welfare Inspector Ritchie Dawson of Wellington SPCA to run the first national workshop on animal disaster management. His curiosity with the interaction between animal welfare and disaster management has led him to research companion animal emergency management in New Zealand as part of his studies toward the Charles Sturt University *Master of Emergency Management*.

Steve has completed a *Graduate Diploma in Emergency Management* with Massey University, *National Diploma in Adult Education & Training*, several tertiary certificates in emergency management and specialist rescue, is a qualified *Rescue 3 International Technical Animal Rescue Instructor* and achieved the prestigious *Certified Emergency Manager (CEM®)* credential awarded by the International Association of Emergency Managers. In 1998, he was the *Wellingtonian of the Year: Community Services* category winner and later in 1999 awarded the Royal New Zealand SPCA Silver Service Medal, both for his service and contribution to animal welfare.

In 2010, Steve also completed the first research into *Pet owner emergency preparedness and perceptions* (Glassey, 2010) in New Zealand, for the Wellington and Taranaki regions and published a public report on these findings.

Based in Wellington, he now provides specialist disaster management consulting and continues his education at Victoria University of Wellington studying law and public management.

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bibliography

- American Microchip Advisory Council for Animals (2007). Companion animal identification: an emergency management guide (pp. 14).
- Anderson, A., & Anderson, L. (2006). *Rescued: Savings animals from disaster*. California: New World Library.
- Appleby, M. C., & Stokes, T. (2008). Why should we care about non-human animals during times of crisis? *Journal of Applied Animal Welfare Science*, 11(2), 90-97.
- Basler, B. (2006). No Friend Left Behind: The public demands evacuation plans for people and pets *AARP Bulletin Today*. Retrieved 17 November 2009, from http://bulletin.aarp.org/yourworld/family/articles/no_friend_left_behind.html
- Big Bend Disaster Animal Response Team (2007). Emergency Pet Shelter Manual. Tallahassee, FL.
- Buchanan, K., & Buchanan, G. (2009). Pets on the net: NZ's nation wide database for lost and found pets Retrieved 13/01/2010, from <http://www.petsonthenet.co.nz/>
- Dorn, C. R., Gordon, J. G., & Sherry, C. (1993). Veterinary service and animal care emergency operations plans. *Journal of the American Veterinary Medical Association*, 203(7), 1005-1008.
- Drabek, T. (2001). Disaster warning and evacuation responses by private business employees. *Disasters*, 25(1), 76-94.
- Edmonds, A. S., & Cutter, S. L. (2008). Planning for Pet Evacuations during Disaster. *Journal of Homeland Security and Emergency Management*, 5(1).
- Federal Emergency Management Agency (2005). *Typed Resource Definitions: Animal Health Resources (FEMA 508-1)*.
- Federal Emergency Management Agency (2007a). *Animal Emergency Response (AER) Positions Credentials* from http://www.fema.gov/library/file?type=publishedFile&file=aer_credentials_for_nic_oct07_final_2_.pdf&fileid=0369d660-8337-11dc-9b37-000bdba87d5b.
- Federal Emergency Management Agency (2007b). Lessons Learned: Best Practice - Pet Friendly Shelters.
- Federal Emergency Management Agency (2009). NIMS Resource Centre: Resource Management Retrieved 27 July 2009, 2009, from <http://www.fema.gov/emergency/nims/ResourceMngmnt.shtm>
- Florida State Agricultural Response Team (2006). Pets & Disasters: Sheltering Options in Mass Evacuations Workbook Retrieved 17 November 2009, 2009, from <http://www.flasart.org/PDF/PET-shelter-WB-0606.pdf>
- Gerwolls, M. K., & Labott, S. M. (1994). Adjustment to the death of a companion animal. *Anthrozoos*, 7, 172-176.
- Glasse, S. (2008). Developing a collaborative educational pathway for emergency management in New Zealand (pp. 45). Palmerston North.

- Glassey, S. (2010). Pet owner emergency preparedness and perceptions survey report: Taranaki and Wellington Regions. Wellington: Mercalli Disaster Management Consulting.
- Hall, M. J., Ng, A., Ursano, R. J., Holloway, H., Fullerton, C., & Casper, J. (2004). Psychological impact of the animal-human bond in disaster preparedness and response. *Journal of Psychiatric Practice*, 10(6), 368-374.
- Heath, S. E. (1999a). *Animal management in disasters*. St. Louis, Missouri: Mosby.
- Heath, S. E. (1999b). The Public and Animal Health Consequences of Pet Ownership in a Disaster: The January 1997 Flood of Yuba County (California).
- Heath, S. E. (2001). Human and Pet-related risk factors for household evacuation failure during a natural disaster. *American Journal of Epidemiology*, 153(7), 659-665.
- Heath, S. E., & Champion, M. (1995). Human health concerns from pet ownership after a Tornado. *Prehospital and Disaster Medicine*, 11(1).
- Heath, S. E., & Linnabary, R. (1993). Potential roles of veterinary schools in emergency and disaster management. *Journal of the American Veterinary Medical Association*, 203(7), 953-956.
- Heide, E. A. d. (1989). *Disaster Response: Principles of Preparation and Coordination*: C.V. Mosby Company.
- Hunt, M., Al-Awadi, H., & Johnson, M. (2008). Psychological sequelae of pet loss following Hurricane Katrina. *Anthrozoos*, 21(2), 109-121.
- International Federation of Red Cross and Red Crescent Societies (2009). Code of Conduct Retrieved 1/10/2009, from <http://www.ifrc.org/publicat/conduct/code.asp>
- Irvine, L. (2009). *Filling the ark: animal welfare in disasters*. Philadelphia, PA: Temple University Press.
- Kurpis, B. (2009). FAQs Retrieved 22 January 2010, from <http://www.hurricanekatrinarelieff.com/faqs.html>
- Leonard, H. A., & Scammon, D. L. (2007). No pet left behind: Accommodating pets in emergency planning. *Journal of Public Policy & Marketing*, 26(1), 49-52.
- Lesch-Hollis, A. (2008). Thoughts on protecting veterinary responders following natural disasters. *Journal of the American Veterinary Medical Association*, 232(8), 1131.
- Lockwood, R. (1995). *Through hell and high water: and the human-animal bond*. Paper presented at the Second International Conference on Equine Rescue.
- Lovern, C. (2003). Veterinary participation in emergency response plans is vital. *Journal of the American Veterinary Medical Association*, 222(1), 11.
- Lovern, C. (2005). AVMA Veterinary Medical Assistance Teams. *Journal of the American Veterinary Medical Association*, 227(12), 1881-1882.
- Mahurangi Technical Institute (2010). Certificate in Microchipping Companion Animals Retrieved 13/01/2010, from <http://www.mti.net.nz/courses/ccas-pets/national-certificate-in-microchipping-companion-animals.html>

- Ministry of Agriculture & Forestry (2009a). Codes of Welfare Retrieved 18/01/2010, from <http://www.biosecurity.govt.nz/regs/animal-welfare/stds/codes>
- Ministry of Agriculture & Forestry (2009b). National Animal Welfare Advisory Committee Retrieved 18/01/2010, from <http://www.biosecurity.govt.nz/regs/animal-welfare/nz/nawac>
- Ministry of Civil Defence & Emergency Management (2006). A guide to the National Civil Defence Emergency Management Plan
- Ministry of Civil Defence & Emergency Management (2009). Competency Framework Role Map: CDEM Response Teams.
- Ministry of Civil Defence & Emergency Management (2010a). E-Bulletin: January 2010 (Welfare update) Retrieved 18/01/2010, from http://www.civildefence.govt.nz/memwebsite.nsf/wpg_URL/For-the-CDEM-Sector-E-Bulletin-E-bulletin-Jan10?OpenDocument
- Ministry of Civil Defence & Emergency Management (2010b). Get Ready, Get Thru Retrieved 13/01/2010, from www.getthru.govt.nz
- Ministry of Health (2007). Planning for Individual and Community Recovery in an Emergency Event: Principles for Psychosocial Support. National Health Emergency Plan. Wellington: Ministry of Health.
- Mort, M., Convery, I., Baxter, J., & Bailey, C. (2008). Animal disease and human trauma: The psychosocial implications of the 2001 UK Foot and Mouth disease disaster. *Journal of Applied Animal Welfare Science*, 11(2), 133-148.
- New Zealand Parliament (2005). National Civil Defence Emergency Management Plan (Order) (pp. 68). New Zealand.
- Nolen, R. S., & Rezendes, A. (2006). Summit works toward national animal disaster plan: groups seek to avoid mistakes of Katrina. *Journal of the American Veterinary Medical Association*, 228(12), 1835-1836.
- Orr, A. E. (2005). *The role of pets in the experience of Hurricane Charley victims: a phenomenological study*. Unpublished Doctoral, Capella University, Minneapolis.
- Pet-Abuse.com (2006). 33 dogs shot to death. Saint Bernard Parish, LA (US) Retrieved 14/01/2010, from <http://www.pet-abuse.com/cases/5644/LA/US/>
- Rezendes, A. (2007). Surviving a flood. *Journal of the American Veterinary Medical Association*, 231(9), 1324.
- Royal New Zealand Society for the Prevention of Cruelty to Animals (2005). Cattle left to drown. *Animals Advocate*.
- Royal New Zealand Society for the Prevention of Cruelty to Animals (2009). Helping one, helps another Retrieved 13/01/2010, from <http://www.oneofthefamily.co.nz/>
- Selbert, R. (2002). Pet Trend: Anthropomorphism. *Growth Strategies*, 944(August), 1-2.
- Shiley, M. (2006). Dark Water Rising: Survival Stories of Hurricane Katrina Animal Rescues (DVD). United States of America.

Soric, S., Belanger, M. P., & Wittnich, C. (2008). A method for decontamination of animals involved in floodwater disasters. *Journal of the American Veterinary Medical Association*, 232(3), 364-370.

SPHERE (2004). Humanitarian Charter and Minimum Standards in Disaster Response. Geneva: Sphere Project.

United Nations (2006). INSARAG Guidelines and Methodology.

University of Florida (2008). Organizing Pet-Friendly Shelters: Best Practices for Florida - Training Guide Retrieved 17 November 2009, 2009, from <http://www.flsart.org/PDF/PET-shelter-WB-0606.pdf>

Wellington SPCA (2009). Animal Rescue Unit: Current Crew Retrieved 24/10/2010, from <http://www.aru.org.nz/currentcrew.html>

Williams, S. (2006). Social and community recovery challenges following large-scale evacuation and relocation. In Ministry of Civil Defence & Emergency Management (Ed.) (pp. 16-20). Wellington.

Wittnich, C., & Belanger, M. (2008). How well is animal welfare addressed in Canada's emergency response plans? *Journal of Applied Animal Welfare Science*, 11(2), 125-132.

Woodard, K. (2005). Nature/PBS feature: Katrina's Animal Rescue (DVD). United States of America.