

Findings and Recommendations from the Horse River Fire, Fort McMurray, Alberta





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About the Centre for Community Disaster Research

The Centre for Community Disaster Research (CCDR) is a trans-disciplinary hub for research, education, and outreach related to disasters of all types. The Centre is mandated with promoting rigorous academic research that is led by community need, and involves university researchers, students, community groups, government stakeholders, and end-users of research as meaningful partners. Born out of the devastating 2013 Southern Alberta Flood, the CCDR conducts original research, guided by community need, and shares findings widely with diverse stakeholders.

The CCDR is guided by the interests and expertise of our 13 faculty affiliates, and more than 50 student researchers. The CCDR funds, supports, and promotes research projects on disasters, disaster recovery, and post-disaster resilience. We also support initiatives that teach about disasters and crises, including field schools, internships, honours thesis projects, and service learning projects. Finally, we are a hub for community debate about public policy, resilience initiatives, the needs of first responders, and best practices for communication during times of disaster. We host frequent seminars, brownbags, guest speakers, symposia, and panels that promote this crucial dialogue.

Through our work, we create knowledge that makes communities in Southern Alberta — and all over Canada — more prepared and more resilient. Our events and initiatives have helped to make both Mount Royal and Calgary the leading Canadian centres for thought, planning, and action related to disasters and risk mitigation.



Mount Royal University and its Centre for Community Disaster Research are located in the traditional lands of the Blackfoot, Tsuut'ina, and Îyârhe Nakoda peoples, and also of the Métis Nation of Alberta. The site of this project, Fort McMurray, Alberta, is located within the traditional territories of the Sicannie (Sikanni), Slavey, Beaver (Dunne-za), Cree, and Saulteau peoples.

Executive Summary

Wildfire MWF-009-16, the Horse River Fire, was first spotted on Sunday, May 1, 2016 approximately seven kilometres southwest of Fort McMurray, Alberta. Having likely erupted from an abandoned backcountry campfire, the fire spread unusually fast due to abnormally high temperatures and extreme drought conditions, and, within hours, it became one of the largest recorded wildfires in Canadian history. A state of emergency was declared that same evening for the entire Regional Municipality of Wood Buffalo (RMWB), and by 6:30pm on Tuesday, May 3, the entire city of Fort McMurray was under a mandatory evacuation order.

The fire destroyed approximately 2,400 homes and buildings in Fort McMurray before continuing its path across northern Alberta and into Saskatchewan, consuming ancient boreal forests, threatening several First Nations communities, and severely impacting Alberta's Athabasca oil sands operations, which produces roughly 4 million barrels per day from the world's third-largest oil reserve. The fire spread across approximately 1.5 million acres before it was finally declared "under control" on July 5, 2016 — three months after it was spotted. In neoliberal economic terms, it is, as of this writing, the costliest disaster in Canadian history (Morgan 2016).

Remarkably, there were no human casualties as a direct result of the fire; all of the more than 80,000 human residents of Fort McMurray and the surrounding area were safely evacuated, spread far and wide throughout the province—and indeed the country—to lodges, hotels, university dorms, and other temporary housing solutions. Their companion animals, however, were not so fortunate.

Based upon interviews with key stakeholders affected by or involved in companion animal evacuation, temporary housing, and rehoming and/or reunification during the Fort McMurray fire and its immediate aftermath, this report (a) reveals that many Fort McMurray residents did not have a wildfire emergency evacuation plan for either themselves or their companion animals prior to the evacuation on May 3, 2016 and (b) exposes the invisibility of companion animals within current emergency and disaster management (EDM) protocols and best practices.

Although nearly all the residents of Fort McMurray who wanted to had returned to the city by the end of August 2016, prominent members of Alberta's animal welfare community remain concerned that the valuable lessons learned about the successes and failures of evacuating companion animals from Fort McMurray will be forgotten the next time disaster strikes in our province.

Having now become home to seven of the most costliest catastrophes in Canadian history (Morgan 2016), the Province of Alberta has the opportunity to become an international leader in EDM by incorporating the safe evacuation and reunification/rehoming of companion animals into its official emergency preparedness plans. This report provides a number of concrete policy recommendations for municipal and provincial government officials, first responders, policymakers, and animal welfare organizations.

Key Abbreviations

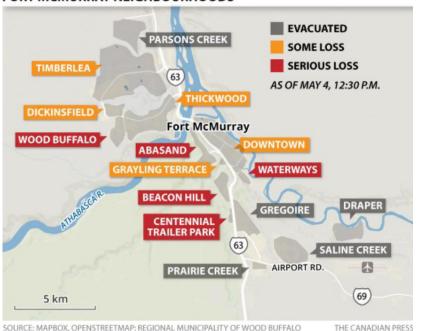
- » ICS: Incident Command System
- » EDM: Emergency and Disaster Management
- » EOC: Emergency Operations Centre
- » RMWB: Regional Municipality of Wood Buffalo
- » RCMP: Royal Canadian Mounted Police
- » AEMA: Alberta Emergency Management Agency
- » ASNTF: Alberta Spay and Neuter Task Force
- » AARCS: Alberta Animal Rescue Crew Society
- » ASPCA: Alberta Society for the Prevention of Cruelty to Animals
- » AVMA: Alberta Veterinary Medical Association

- Although the risk of wildfire is high in and around Fort McMurray, neither the province nor the RMWB had a plan for how to manage companion animals during a disaster.
- While all first responders adhered successfully to current best practices of EDM according to Incident Command System (ICS) procedures and the recommendations of the Alberta Emergency Management Agency (AEMA), those best practices render companion animals largely invisible.
- There was a lack of effective interagency communication with regard to how best to incorporate companion animals into procedures for, and manage them during, the evacuation.
- The official process of reporting forcibly abandoned pet(s) to the RMWB was delayed and disorganized.
- The expertise of local animal welfare organizations in overseeing largescale animal care, tracking, and reunification and/or rehoming was neither understood nor recognized by professional first responders and was, thus, severely under-utilized.
- There was little preparation made for recruiting, housing, and feeding the many animal welfare volunteers who were invited by the RMWB into the evacuation area to assist first responders in the days after the evacuation.
 - > Some of these volunteers, the overwhelming majority of whom were women, expressed concern for their physical safety in a maledominated disaster area.
- Veterinarians did not have access to pets' medical histories or health records when treating evacuated animals.
- » In the immediate days, weeks, and months after the evacuation, there was a severe shortage of pet friendly emergency and long-term temporary housing.
- Unclaimed evacuated animals were, according to some stakeholders, prematurely rehomed.

Fort McMurray on Fire

The human evacuation of Fort McMurray was both sudden and involuntary. Interviewees' accounts of the evacuation correspond with retrospective news reports (Canadian Press 2016; French 2016; Phillips 2016). On Sunday, May 1st, neighborhoods in the south and southwest of the city were the first to be warned to prepare for evacuation as emergency crews worked to hold the fire. Overnight on Monday, May 2nd, the fire expanded but was moving away from the city. But by mid-morning on Tuesday, May 3rd, changing atmospheric conditions caused the fire to explode and change direction toward the city, forcing the evacuation of Fort McMurray's southern-most communities. Affected neighborhoods were added to the order throughout the day until, by 6:30pm that same evening, the mandatory evacuation order was extended to the entire city.

FORT MCMURRAY NEIGHBOURHOODS



Leaving companion animals behind in Fort McMurray was not voluntary. A unique combination of natural geography and urban planning means that the small city of roughly 80,000 humans that straddles the banks of the Athabasca River in Northern Alberta is comprised of a series of insular neighborhoods, most of which are officially accessible to vehicles by just one main thoroughfare each. Once the mandatory evacuation order was issued for a particular community, it was very easy for first responders to create road blocks that prevented evacuees, many of whom were away from their homes when the evacuation orders went out, from returning even for a few minutes to collect things like clothes, computers, cell phone chargers — or their pets. As a result, of the approximately 40,000 companion animals of many species that Fort McMurray Animal Control officials estimate lived in the city at the time of the fire, somewhere between 1,200 and 1,500 did not make it out during the May 3rd evacuation.

Because the evacuation was expected to be a short one (72 hours at most), officials opted for the EDM best practice of "maintain in place," meaning that first responders went from home to home providing food and water for animals that had been left behind. On or about Friday, May 6th, however, when it became clear that the evacuation would be much longer, the decision was made to evacuate the city's pets to Edmonton. A highly selective group of animal handlers was recruited to the disaster area, and animal rescue began officially on Saturday, May 7th — four days after the human evacuation, with the first truckload of pets arriving at the Edmonton emergency evacuation and triage centre in the early hours of the morning on Sunday, May 8th.

Once evacuated, residents who were forced to leave their pets behind reported difficulties communicating with officials about the status and whereabouts of their animals. And those residents who had been able to evacuate with their companion animals struggled to find short- and long-term pet friendly housing. Even when the first wave of residents were able to return to the city at the end of June, roughly eight weeks after the evacuation, many landlords took the opportunity to renegotiate leases that did not accommodate pets.

In the end, the Horse River Fire destroyed approximately 2,400 homes and buildings in the city of Fort McMurray before continuing its path across northern Alberta and into Saskatchewan, consuming ancient boreal forests, threatening several First Nations communities, and severely impacting Alberta's Athabasca oil sands operations, which produce roughly 4 million

barrels per day from the world's third-largest oil reserve. The fire spread across approximately 1.5 million acres before it was declared "under control" on July 5, 2016. In neoliberal economic terms, it is, as of this writing, the costliest disaster in Canadian history.

For a wide variety of complex reasons, there is no available estimate or sense of how many pets perished in, or as a direct result of, the fire and its immediate aftermath.



"Landscape view of wildfire near Highway 63 in south Fort McMurray" by DarrenRD, Creative Commons license CC BY-SA 4.0.

Context: Hurricane Katrina

Hurricane Katrina resulted in more than 50,000 forcibly abandoned pets and triggered the largest volunteer-led emergency animal rescue effort in American history (*Dark Water Rising 2006 and Mine 2009*). Since that time, there has been an evolving shift throughout North America in how emergency and disaster management (EDM) officials deal with non-human animals during mass evacuations. This has been most obviously evidenced in the US by the sweeping bipartisan support for what is now the Pets Evacuation and Transportation Standards (PETS) Act, which became US law in fall 2006, just over one year after Hurricane Katrina.

Thinking about how to include and accommodate family pets and service animals in EDM has paralleled the changing social and legal status of companion animals, particularly cats and dogs, in Canada and the US over the course of the last two decades (Schaffer 2009 and Grimm 2014).

Three main issues seem to be driving this shift:

- 1. To force people to evacuate without their pets puts the lives of civilians and first responders at risk: Civilians are at risk because many of them will not leave without their pets, and first responders are at risk because they are responsible not only for each other in a dangerous situation, but also for the lives of those civilians who refuse to leave and for the spontaneous volunteers who will inevitably try to enter the evacuated area to rescue the animals left behind (Trigg, et al. 2015).
- 2. There is an increased understanding among healthcare professionals of the important contribution made by companion animals to human resilience and mental wellness. Healthy people create healthy families that then contribute to healthy, sustainable communities (Chandler 2011).
- 3. Lastly, there is the perspective from the animal rights movement that argues that humans must avoid the oppressive practice of speciesism by evaluating why human animals seem to matter more than non-human animals (Leonard and Scammon 2007).

Context: Flooding in High River

In June 2013, southern Alberta experienced usually heavy rainfall that caused catastrophic flooding in areas along the Bow, Elbow, Highwood, Red Deer, Sheep, Little Bow, and South Saskatchewan rivers and their tributaries. Thirty-two states of emergency were declared (Government of Alberta 2013b), and twenty-eight emergency operations centres were activated in municipalities and on First Nations reserves across the affected area (Government of Alberta 2013a). More than 100,000 people were forcibly evacuated from their homes.

The town of High River, located 68 kilometres south of Calgary in the Highwood River flood plain, was among the hardest hit. Southern Alberta's animal welfare experts estimate that, because of the fast rise of rushing waters, up to 2,000 companion animals and livestock were forcibly abandoned during the mandatory evacuation of the town's 13,000 human residents on June 20, 2013 (Verlage 2013). While the town remained evacuated, animal welfare volunteers were called in to extract those animals that were left behind. By June 27th, High River's by-law services reported the rescue of only 400 pets. Many hundreds died in the rising floodwaters.

In the months after the water receded, emergency management personnel in the town of High River, in conjunction with Heaven Can Wait, High River's animal welfare organization, and the Calgary-based Alberta Animal Rescue Crew Society (AARCS), drew up a blueprint for how best to integrate attention to the safety of companion animals into EDM.

Carly Benson, then High River's Director of Emergency Management, led the charge on this effort, and the town of High River now includes on its emergency management website a section entitled "Family Pet Information" (https://hrready.ca/family-pet-information). This site reflects innovative practices for incorporating companion animals into disaster preparation and explains the town's now-institutionalized process for handling abandoned pets during an evacuation.

Upon its completion in 2014, the High River animal emergency evacuation plan was distributed to AEMA and municipalities across the province, including to emergency management officials in the RMWB. This plan has not been implemented in any meaningful way, and it certainly was not utilized in Fort McMurray.

Also in the wake of the 2013 flood, a detailed proposal for a permanent province-wide **Animal Emergency Plan and Dedicated Task** Force emerged from the animal welfare groups that worked to rescue pets from homes in High River. The proposal, available in its entirety via https://drive.google.com/drive/ folders/0B8k7rdR8m5s5YTdCLTInWU82bWM, includes a suggested EOC Animal Rescue Plan, an Emergency Social Services Plan with specific roles and responsibilities, an ICS-style chain of command diagram, an equipment list, a sample Request for Assistance for Pet Owners outline, and templates for media briefs. The authors of this plan are willing to work with municipalities and the province to adapt it for a wide variety of contexts and types of emergencies. They are also prepared to create a plan for large animal and livestock.

This Project:

Managing Fort McMurray's Abandoned Pets

Beginning in June 2016, using funds awarded through a Quick Response Research Grant from MRU's Centre for Community Disaster Research, I launched a project to examine the processes, politics, and people that were involved with the evacuation, temporary care, and rehoming/reunification of companion animals during and immediately after the Horse River Fire forced the emergency evacuation of Fort McMurray on May 3, 2016.

For the purposes of this study, I use the terms "pets" and "companion animals" interchangeably to refer specifically to non-human animals that commonly live with humans in their homes and that are not livestock. This includes (but is certainly not limited to) cats, dogs, birds, reptiles, fish, and rodents.

Data was collected through in-depth interviews with key stakeholders including: emergency management personnel, first responders, veterinarians, staff and volunteers from animal rescue organizations, and the owners/ guardians of companion animals affected by the evacuation. I created a central website (www.fortmacpets.weebly.com) to provide information about the project and to recruit participants. I also adapted a communication studies/marketing research method called "social listening," which is the systemic process of identifying and assessing what is being said about a topic on the Internet, with a particular focus on social media. In this study, I focused on the Twitter and Facebook feeds of extant animal welfare groups as well as those that emerged in the wake of the evacuation. Data

collection wrapped up in May 2017, one year after the evacuation.

In January 2017, I presented my initial findings at the Wood Buffalo Regional Library in Fort McMurray to a small group of stakeholders that included local animal welfare advocates, emergency management officials, veterinarians, returned evacuees, and three of my previous interviewees.

After this community conversation, I revised and appended my findings accordingly, presenting my revised and appended findings to stakeholders in Fort McMurray on two subsequent occasions:

- In March 2017 as part of the 5th Annual Arts and Humanities Conference at Keyano College.
- In May 2017 at the invitation of that city's SPCA (https://fmspca.ca) during its emergency preparation event commemorating the first anniversary of the fire.

Feedback from the community on all these occasions has been invaluable.

Also in May 2017, I presented a summary of my findings and recommendations to roughly 400 first responders, academics, community members, and emergency management officials from across Southern Alberta in a TEDTalkstyle presentation as part of Resilient Calgary at Mount Royal University. That presentation is available at https://youtu.be/Hn1TCIML is.

The goal of this research has been to hear the stories, ideas, and experiences of as wide a variety of stakeholders as possible in order to describe what did and did not work in managing pets during and in the immediate aftermath of the Fort McMurray wildfire and to make recommendations to enhance outcomes during future events. My questions were:

- How prepared were pet guardians for a disaster and emergency evacuation scenario?
- How prepared were RMWB first responders and other emergency personnel for dealing with pets?
- What was the process for evacuating companion animals from Fort McMurray, and who were the people involved?
- What local and provincial resources were allocated to pet evacuation, recovery, and rehoming/reunification?

By the end of my research, I had interviewed a total of 32 evacuees, first responders, veterinarians, volunteers, politicians, policymakers, and animal welfare professionals across Alberta, in Calgary, Edmonton, Erskine, Fort McMurray, Lac La Biche, Okotoks, Red Deer, and Weskatawin. I had also logged more than forty hours of social listening on relevant Facebook sites and Twitter feeds, where evacuated humans, the general public, and animal rescue organizations engaged in a process of locating, identifying, and tracking abandoned pets, finding volunteer foster homes for evacuated animals, and reunifying and/or rehoming those same animals.

The combined experiences of these stakeholders provides some of the best information available anywhere in the world on the processes, politics, and people involved in and affected by the emergency evacuation of family pets during a disaster.

In the pages that follow, I provide an overview of the information these stakeholders shared about pet-related emergency preparedness, evacuation decisions and experiences, and the process of reunification and/or rehoming in the wake of disaster.



"Animal Shelter" by Dave Parker, Creative Commons license CC BY 2.0.

Fort McMurray's Pets:

Timeline of Evacuation & Management

DATE	EVENT
May 1st	The Horse River Fire, officially known as MWF-009-16, is spotted and spreads unusually rapidly due to extreme drought conditions.
May 3rd	Fire declared out of control; wind changes direction and pushes fire to Fort McMurray town site; entire city under mandatory evacuation order by 6:30pm that evening; many thousands of people spend more than twenty-four hours stuck in traffic on the one highway out of this remote northern Alberta community. Among those forcibly evacuated (along with the animals in their care) is the entire staff of the Fort McMurray SPCA, the only local animal shelter.
May 4th	RCMP begins "maintain in place" policy for pets and livestock left behind. In response to evacuated humans via social media, especially Facebook and Twitter, spontaneous volunteers (i.e., those neither invited nor authorized by the RMWB RCMP) begin process of sneaking behind the fire line and breaking into homes to rescue pets. Google Doc created and distributed by AARCS via Facebook for evacuated humans to register their pets and livestock with the RMWB.
May 5th (?)	Form with duplicate purpose is made available on the official RMWB website. Two forms results in mass confusion among emergency responders and panic, frustration, and anxiety among human evacuees worried about their pets. At some point, over the ensuing 48-72 hours, animal rescue Facebook sites begin directing people to the official RMWB form. A dedicated telephone hotline is also set up and maintained by the RCMP.
May 5th	RMWB officials confirm that all 80,000+ human evacuees have been accounted for; RCMP and RMWB request assistance from emergency responders and disaster management personnel from around the province (particularly High River) and nearby Saskatchewan. As requested by the RMWB, staff and volunteers from AARCS and ASNTF arrive in Fort McMurray to assist with "maintain in place" policy, but are forced to wait at the fire line while awaiting clearance to enter the evacuated area.

May 6th

Emergency and disaster management personnel up in Fort McMurray from High River are made aware of "maintain in place" policy for animals stuck in homes and, realizing the inadequacy of that plan for this particular situation, begin the process of coordinating the logistics of evacuations with the Alberta SPCA and other animal welfare organizations.

May 7th and onward

Using forms completed online via the RMWB website, staff and volunteers from AARCS and ASNTF traverse the city to locate, identify, and extract known pets from their homes. Each team was comprised of a volunteer animal handler from AARCS and/or ASNTF, an SPCA Peace Officer, and a locksmith. Later in the process, rescue became recovery, as some animals died of starvation, dehydration, and/or toxic smoke inhalation.

Rescued pets were triaged and housed on MacDonald Island, just north of downtown Fort McMurray where the Clearwater River flows into the Athabasca.

May 7th

Four full days after the human evacuation: Pet evacuations begin using any and all available modes of transport, from city and school buses to cattle cars and flatbed trucks.

May 8th

In the early hours of the morning, the first load of dogs, cats, and exotics arrive in Edmonton, where a makeshift triage centre has been set up in a hastily rented warehouse; aquariums and other habitats for exotics are also arranged. The Edmonton triage centre was made possible and coordinated by a combination of staff and volunteers from the Alberta Veterinary Medical Association (AVMA), Edmonton Animal Services, and the Alberta SPCA.

June 1st

Phased reentry of evacuated humans begins, as do ongoing attempts to locate animals, especially cats, which may have escaped to safety during the fire.

June 30th

Deadline imposed by the Alberta SPCA for humans to reclaim their pets; after this date, pets begin to be adopted out to new homes. Critiques of this arbitrary deadline appear immediately on social media. The two major arguments were that many human evacuees (1) may have evacuated out of Alberta and/or (2) have not yet secured pet-friendly housing.

Summer and Fall 2016

Bulldozing of burnt-out homes and buildings without a thorough search for still-missing animals, particularly cats, who are more likely than other companion animals to have survived the extreme conditions. Reconstruction begins.

Late 2016 and early 2017

Reunification attempts continue via social media, especially on Facebook, by self-identified "pet detectives."

Findings:

How pets were managed during and immediately after the Fort McMurray wildfire

The stakeholders I interviewed all said one thing: despite the history and context of Hurricane Katrina and the flooding in High River, **RMWB** first responders had no plan for managing companion animals during a disaster. One RMWB-stationed RCMP officer said,

We were prepared for a human evacuation with all kinds of resources [...], and we got 80,000 people out of here in twelve hours, you know? Not one of those communities were [sic] prepared for the animals, and it is because we don't have preparedness. We can talk about it all we want, we can read it in the paper, but we don't have organized preparedness.

Because neither the city of Fort McMurray nor the RMWB had an EDM plan that accounted for companion animals, officials charged with the human evacuation of Fort McMurray found themselves in the unenviable position of having to, under extraordinarily challenging and dangerous conditions, create a plan for dealing with forcibly-abandoned pets while simultaneously *implementing* it.

Effective and efficient communication between first responders and other relevant stakeholders, including animal welfare organizations, the concerned public, and human evacuees, has proven essential to getting pets safely out of an evacuated area and, when possible, reunited with their human caretakers. However, given the lack of either a municipal or provincial companion animal management plan for Fort McMurray,

it is not surprising that the overwhelming majority of my interviewees cited a lack of communication by the RMWB and/or Alberta Emergency Management Agency (AEMA) as the chief hurdle in accomplishing these goals.

" My direction [...] was that [the evacuation] was going to be over in a couple of days, and just find out where the pets are, and we will feed them in their homes."



5

Mishandling of "Maintain in Place"

In the earliest days of the evacuation, while firefighters were working to prevent the wildfire from consuming the entirety of Fort McMurray, the RMWB followed what is still considered best practice for managing abandoned pets in a disaster. EDM calls this practice "maintain in place," meaning that first responders within a disaster area are instructed to go from home to home, providing abandoned pets with water and food until such time as evacuees are allowed back into the area. This practice is time consuming and can only ever be a short-term solution. It is also dependent upon knowing which animals are in which homes.

In Fort McMurray, because RCMP officers had been heavily criticized for breaking into homes during the 2013 High River flood in southern Alberta (Gilligan 2015; Government of Canada 2016, and MacCharles 2013), the RMWB RCMP also insisted on getting explicit permission from homeowners.

In order to facilitate the EDM "maintain in place" procedure, the RMWB created an on-line form, accessible through its official website (www.rmwb.ca), for evacuees to complete. This form went live roughly three days after the evacuation.

Unfortunately, the RMWB's on-line form not only neglected to collect vital information (including, for example, the species of animal(s) first responders were meant to care for), but also duplicated the earlier efforts of the Alberta Spay & Neuter Task Force (ASNTF) and Alberta Animal Rescue Foundation (AARCS). These two Calgary-based organizations that do year-round province-wide animal welfare work collaborated

to distribute a similar (and, by most stakeholder accounts, significantly more useful) on-line form via social media within 24 hours of the evacuation order. More than 500 people completed that form in the first 36 hours after having been evacuated from their homes.

Although aware of this first on-line form and the resulting evacuee information that had been collected, the RMWB chose instead to create their own form, and no attempt seems to have ever been made by either the RCMP or AEMA to cross-reference information gathered from their form with that collected much earlier by ASNTF and AARCS. Additionally, having two separate on-line forms complicated things for evacuees; many reported that they were unsure of which of the two forms to use, and anger and confusion at having already completed one form only to learn that they should have filled out the other were common emotions in my interviews with evacuees, as well as on Twitter and Facebook at the time of the evacuation.

Consequently, because it is highly unlikely that the RMWB ever had a complete list of which pets were in which homes, their "maintain in place" strategy, currently considered best EDM practice for managing abandoned companion animals in a disaster, was built on shaky ground from the outset. Still, for roughly four days after the evacuation, as firefighters battled the blazing wildfire around them, about two dozen locksmiths, RCMP officers, and other emergency services personnel recruited from across the province traversed the evacuated disaster area to care for forcibly-abandoned pets.

(Perceived) Silence Breeds Panic— and Unqualified Volunteers

Within days of the evacuation, the RMWB set up a dedicated telephone number and website contact form meant to be used by evacuees wanting information on the status of their pet(s). This pet rescue hotline was staffed by one RMWB RCMP officer who fielded thousands of calls and made a concerted effort to get back to people as soon as possible. Once first responder said, "We agreed as a group that [...] we didn't want it [...] being a third party thing, that we wanted to make sure that we were getting information directly."

" We live in an age of instant answers and when you are in the middle of something like that you can't give everyone an answer."

Unfortunately, after the evacuees with whom I spoke had completed one or both online forms and/or called and/or emailed the hotline, they expected to hear sooner rather than later about the condition and whereabouts of their pet. When that did not happen, they began utilizing social media to post pleas for anyone who was in (or able to get into) the evacuation area to break into their homes and rescue their pets. They provided addresses, species information, where to find the animal(s), and any other details they thought pertinent to the mission.

Armed with a collection of addresses and which pets they were meant to rescue, several spontaneous volunteers from around the province — all with the best intentions — then presented themselves to RCMP officers at the fire line, requesting access to the disaster area. When they were inevitably turned away, they found more surreptitious ways to get into their target neighbourhoods, including via hiking trails and unpaved fire access roads.

From the perspective of the RCMP, which was charged with security of people and property in the evacuated city, there were two main problems with this. First, those spontaneous volunteers posed a potential risk to security of property within the disaster area; they could not be vetted in advance, they did not have proper background checks, and they were largely unknown to first responders. Second, and perhaps most importantly, spontaneous volunteers (some interviewees called them "rogue volunteers") posed a direct risk to the safety of first responders, who were charged with ensuring the safety of all humans within the disaster area, including those who entered without their knowledge or permission. If those volunteers got themselves into trouble trying to rescue an animal, it was the first responders who were then obligated to go and rescue them.

This potential risk to the security of property and the safety of first responders was a major catalyst for the RMWB's shift from maintaining animals in place (May 3-6) to extrication and evacuation (May 7-19). The logic seems to have been that if there are no animals left in the city, then there will be no unauthorized entry into the disaster area by spontaneous volunteers looking to rescue them. Additionally, that the concerned public would be able to see evidence of action being taken would, in theory, quell the panic that resulted in evacuees' social media pleas. Additionally, by May 6th, first responders had begun to understand that the displacement of people would be longer than had been originally anticipated or expected. At that point, maintaining animals in place was no longer feasible.

Better communication with the public about the RMWB's "maintain in place" strategy may have prevented the rogue volunteers and assuaged panicked pet guardians.



Available Expertise was Neither Valued nor Effectively Utilized

The spontaneous volunteers also posed a problem from the perspective of Alberta's leading animal welfare advocates, largely because the former had no animal handling skills or experience beyond their own personal pets. For example, many rogue volunteers forced their way into homes, which, in several cases, further traumatized the animals who lived in them. They were not prepared



"They really had no idea what kind of organizations we were."

or able to spend the time required to locate terrified cats. They transported dogs many hundreds of miles in truck beds without crates or restraints. And, perhaps, most troublingly, they neglected to keep track of which pets they extracted from which homes, which caused much confusion at the animal evacuation and triage centre in Edmonton.

The spontaneous volunteers also amplified a larger, systemic problem as "maintain in place" turned into pet extrication and evacuation: regional and provincial officials in charge of managing the disaster did not initially trust or respect Alberta's animal welfare experts. They seemed to assume that all those concerned with the status of Fort McMurray's abandoned companion animals would be as unskilled and reckless as those first rogue rescuers. With few exceptions, the major critique of the animal evacuation process emerging from those Alberta's animal welfare experts I interviewed was that their expertise in managing large-scale animal housing, tracking, and reunification in disaster and non-disaster scenarios was not recognized or understood and, thus, severely under-utilized — even by the Alberta SPCA and Alberta Agriculture, which were the provincial agencies officially put in charge of the pet evacuation and reunification process. The consequence, of course, is that not as many pets made it out of Fort McMurray as could have, and the reunification process did not go as smoothly as it might have.



U.S. Air Force photo by Senior Airman Brittany E. N. Murphy, 2016

Animal Rescue is Largely Women's Work

Since it began in the late nineteenth century, animal welfare, rights, and rescue work has been dominated by women, the overwhelming majority of whom are unpaid volunteers (Gaarder 2011). This means that animal welfare advocacy is an example of invisible, unpaid labour done by women (Waring 2004).

The process of evacuating and caring for animals from Fort McMurray was no exception: of the thirty-two people I interviewed for this project between June 2016 and May 2017, twenty-six (or just over two-thirds) served in unpaid capacities during the fire. Of those twenty-six volunteers, only one was a man. In other words, of the six men I interviewed who were involved in evacuating and caring for animals from Fort McMurray, five of them were in official paid positions during the fire as either first responders or animal welfare specialists. Everyone else, all but one of whom was a woman, was working unremunerated to rescue and care for animals.

Consequently, this difficult work is heavily feminized, being carried out for free, and largely by women of varying degrees of experience, skill, and preparedness. And because of the continued existence of sexism and misogyny in our culture, any movement dominated by women is going to struggle for legitimacy. It is hardly surprising, then, that the experience and expertise of woman-dominated animal welfare groups here in Alberta were devalued by EDM officials, the overwhelming majority of whom are men, during the evacuation process. But here in Alberta, the people with the skills and experience to manage pets in disaster scenarios are overwhelmingly women. To take them seriously would result in better outcomes.

Necessary Supplies and Resources Were Not Readily Available

Once the decision was made in Fort McMurray to evacuate abandoned pets, the call went out across Western Canada for transportation and supplies. Unfortunately, however, it was incredibly difficult not only to collect the proper supplies, but also to then physically get them up to a disaster area in a remote part of Alberta on such short notice. As one interviewee reported,

I think my requests shocked a lot of people as to what was required, you know? I think I asked once for nine hundred carriers and it was like, 'Well how the heck are we going to get those up to Fort McMurray for you today?'

Meanwhile in Edmonton, the AVMA was charged by the ASPCA to set up an emergency animal evacuation and triage centre, equipped with basic veterinary equipment and supplies for a wide variety of species. This included not only finding, renting, and outfitting from scratch an appropriate warehouse space in less than 48 hours, but also recruiting and mobilizing on incredibly short notice a volunteer army of veterinarians, veterinary technicians, and reptile specialists along with others who

could provide more generalized services such as: animal intake, cleaning kennels and cat litter boxes, walking dogs, and providing administrative support. Volunteer counselors and other emotional support specialists were also recruited to manage humans looking for their pets.

Once the Edmonton evacuation centre was operational, animals in Fort McMurray were loaded onto a wide variety of hastily outfitted, but not necessarily animal-friendly, conveyances (including any and all available livestock trailers and Fort McMurray city buses) for transport. Once they arrived in Edmonton, animals were assessed, treated, and housed until temporary housing or (preferably) reunification with their human(s) could be arranged.

Time Matters

Among the most important lessons to be learned from Fort McMurray is that, when dealing with pets trapped inside homes that are rapidly filling with ash, soot, and smoke, time is of the essence. Unfortunately, RMWB and provincial officials took roughly four days to decide on evacuation and another day to organize logistics. Consequently, companion animal evacuations out of Fort McMurrray did not officially begin until very late on Saturday, May 7th — just short of five full days after the human evacuation.

A key part of those logistics was identifying and recruiting qualified and experienced animal handlers (including for snakes, fish, and other exotics) who were willing and prepared to work behind the fire line, going house to house to extricate abandoned pets. According to some interviewees, this seems to be where much time was wasted. First responders were, quite understandably, unwilling to let just anyone into the disaster area, and they were not familiar in advance with Alberta's most respected and experienced animal welfare organizations.

While their caution was, in part, about the security of evacuees' property, it was largely about ensuring the safety of first responders as well as the physical and psychological preparedness of those volunteers who would be extricating animals. One RCMP officer expressed concern that volunteers coming into the area would not understand how to conduct themselves during a "command and control" situation in which an Incident Command System (ICS) has been activated, or that they were entering a situation in which there was no food, water, shelter, or electricity.



"We had to push our way in.

We had to earn trust up there.

But there was no time."

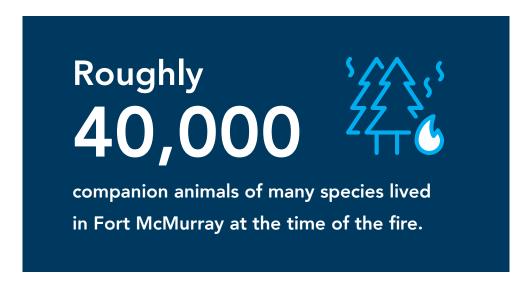
Once the appropriate animal handlers had been identified, they had to be approved to enter the disaster area by the RMWB RCMP. Interviewees reported that this took quite a long time.

They also expressed concern that the existence of the two separate on-line forms caused extraordinary delays as teams traversed the city, sometimes returning three or four times in one day to the same neighborhood or, indeed, to the same home, because there was duplicate information — or in some cases, not enough information — on the form created by the RMWB, which had no prior experience with large-scale pet identification and tracking.

The first truckload of animals arrived at the joint AVMA-ASPCA animal evacuation and medical centre in the early hours of the morning on Sunday, May 8th. The last intake at the Edmonton emergency animal evacuation and medical centre was recorded on May 19th. In other words, there were animals who had survived (or not) alone in their homes for up to seventeen days. For obvious reasons, the longer pets were left alone, the more likely it was that they would be in need of acute veterinary assistance — or worse.

Unexpectedly Large Number of Cats and Exotics

57% of Canadian households own at least one pet, with popularity skewed slightly toward cats over dogs (Government of Alberta 2014). Fort McMurray Animal Control officials estimate that there may have been as many as 40,000 companion and farm animals of many species living in Fort McMurray at the time of the fire. They emphasize, however, that this estimate can only ever be just that



because there is currently no provincial legislation mandating humans to license companion animals, and many people do not heed municipal licensing by-laws.

The Alberta SPCA reports admitting 1192 extracted animals to its Edmonton emergency animal evacuation and triage centre between May 8th and 19th (ASPCA Animal Intake and Outcome Summary 2016). Some unknown number of animals made it out with their humans, either by car or plane; a few of those stories were featured in local media (Geens and Quenneville 2016 and Reiger 2016). And some perished as their homes burned. But roughly 80% of structures in Fort Mac were not damaged in the fire.

One of the big unanswered questions in this story is, "How many animals perished or went missing during the fire?" That this question remains impossible to answer means that we must recognize the continued disconnect between provincial best practices for emergency management and disaster relief and the realities of the importance of companion animals in the lives of Albertans.

Animal welfare interviewees report that among the animals left behind were mostly cats, a small number of dogs, left tied up in backyards or in indoor crates, and many more exotics (birds, lizards, fish, snakes, etc.) than they had expected or anticipated. One evacuee reported having taken her dog with her to Edmonton but making the conscious choice to leave her cat behind with three days' worth of food and water, because (1) she had been told it was likely to be a short evacuation, (2) cats simply require less daily care and attention than dogs, and (3) she could not actually find her cat in the matter of minutes that the RCMP allowed her into her home to grab what she needed to evacuate. Animal welfare experts have assumed that this evacuee's thought process was similar to that of others who were forced to make similar choices very quickly.

Human-Pet Reunification Was Disorganized, and the Rehoming of "Abandoned" Pets was Premature

Due to a combination of factors and circumstances (some of which has been detailed above, and all of which emerged from a lack of preparedness and/ or poor communication between relevant agencies and with the public), the accuracy of tracking which animals had been removed from which homes and where they ended up was specious, at best.

Once the province and the RMWB made the decision to evacuate companion animals from Fort McMurray, abandoned pets were collected and triaged on MacDonald Island, just north of downtown Fort McMurray where the Clearwater River flows into the Athabasca. After ensuring that they were healthy enough for transport, animals were loaded onto a wide variety of hastily outfitted conveyances (including livestock trailers and city buses) for transport to the emergency evacuation centre in Edmonton, where animals were assessed, treated, and housed until temporary housing or (preferably) reunification with their human(s) could be arranged.

Based on the data collected, it seems that healthy animals were held at the Edmonton animal evacuation centre for roughly two to three days before being sent off, if they remained unclaimed by their guardians, to temporary housing solutions throughout the province. These included organizations such as the Edmonton Humane Society, the Edmonton Animal Care & Control Centre, the Calgary Humane Society, AARCS, several other animal welfare organizations, and a great many private foster homes.

Looking Ahead: Recommendations

As has been made clear by this and other research on companion animals in disaster scenarios (most notably, Hurricane Katrina), pets are an integral part of people's families, and humans will delay or refuse evacuation if they cannot evacuate with their pets — or, at the very least, be assured that first responders and emergency management personnel have a well-organized plan for managing those pets that must be left behind. And spontaneous volunteers will sneak into disaster areas to rescue forcibly abandoned pets for the same reasons.

That family pets are not a permanent feature of EDM planning and implementation puts civilians and first responders at risk.

Companion animals have also been proven again and again to make recovery for their humans faster and resilience more sustainable. Since Alberta is now home to seven of the costliest catastrophes in Canadian history (Morgan 2016), which scientists around the world have linked to climate change (Holthaus 2018; Kaufmann 2018; Wright 2018), the Province of Alberta now has the opportunity to become an international leader in EDM by incorporating the safe evacuation and reunification/rehoming of companion animals into its official emergency preparedness plans.

Based upon the findings of this research, there are several steps that should be taken to enhance residents' knowledge of disaster preparation that includes their pets, improve provincial and municipal responses to companion animals in disaster scenarios, and increase community resiliency.

For the Province and Municipalities

- " [Thinking about animals] was taking too much time, and I didn't have the time to spend on it. [...]

 I had six other business functions beside animal [management]. [...] I just didn't have time."
 - Non-human animal welfare during a disaster scenario should be given equal weight and priority to the safety of humans and property.
 - > Since dealing with animals in a disaster scenario is not (nor should it be) the purview of human- and property-oriented ICS commanders, consider providing a desk at the EOC for animal welfare. In a disaster situation, "animal welfare" must be focused on and experienced with large-scale pet care, identification, and tracking. In Alberta, this is ASNTF and AARCS.
 - This may mean creating an ICS-based approach to animal care, evacuation, recovery, and reunification. Identify an ICS team specifically for this aspect of EDM. Ensure that members of this team are experts in animal handling, and remunerate them appropriately for their skills and expertise. Draw from and utilize those Alberta-based animal rescue and welfare organizations already doing the work of large-scale pet care, identification, and tracking, most notably the ASNTF and AARCS. Such a plan has been developed and is available at https://drive.google.com/drive/folders/088k7rdR8m5s5YTdCLTlnWU82bWM.
 - Become familiar with the work of the Canadian Disaster Animal Rescue Team (CDART; www.cdart.org), which "provide[s] disaster response services for domesticated animals," trains volunteers, "educate[s] the public on disaster preparedness for their animals," and identify and increase the numbers of CDART-trained personnel in Alberta. Several animal welfare exerts who work with the ASNTF and AARCS (among others) have completed CDART training.

- Build more trust and create more open lines of communication between government agencies and the public not only during, but also before declared disasters. To accomplish this, provincial and municipal governments may consider:
 - Utilizing trusted community members, such as local animal welfare organizations, veterinarians, animal boarding and daycare facilities, and other pet-oriented businesses, as purveyors of information during normal times. For example, pet emergency preparedness kits could be provided to humans at the moment of pet purchase/adoption. These types of collaborations would significantly contribute to making "natural" the incorporation of pets into emergency preparedness conversations. These community-embedded liaisons could then be used to effectively communicate with the public once an emergency is declared.
 - Including on AEMA and municipal EDM websites clear information about how officials will handle pets left behind during an evacuation. The town of High River's "Family Pet Information" page is an excellent model (https://hrready.ca/family-pet-information), but it must be supported by appropriate local systems and structures.
 - Developing a system that automatically gives first responders permission to break into homes to retrieve abandoned pets, perhaps modeled after the Alberta Organ and Tissue Donation Registry (AOTDR) or linked to a homeowner's driver's license and/or Alberta Health Card.
- Create and maintain a province-wide database of emergency animal evacuation and reunification information so that the ICS team has all they need in one location. This might include: pet evacuation transportation, qualified and experienced animal handlers (especially of exotics), veterinarians and veterinary technicians willing to do pro-bono work in particular communities, local animal welfare organizations, pet-friendly lodging, and so forth.
- Create and maintain a database of pet health records similar to that of Alberta Health for humans. This could be linked to animal licensing and could easily be used as incentive for pet guardians to license their animal(s), which should be provincially (rather than municipally) mandated.
- Permanently stock and maintain several sea canisters full of non-perishable supplies in strategic locations throughout the province so that they can be accessed and moved quickly: crates in various sizes, kitty litter and litter boxes, blankets and linens, dry kibble, fish tanks and pumps, bird cages, etc.
- EDM personnel should be prepared to ensure the physical safety of the animal welfare volunteers that are recruited into the disaster area. This must include safety from sexual violence for the majority-woman animal welfare experts.
- There should also be mental wellness services available during and after the disaster for all first responders including animal welfare personnel.

For Animal Welfare Organizations

- Work with the province and/or municipality to create and provide pet emergency kits to humans when pets get purchased/adopted; this will facilitate the work of making "natural" the incorporation of pets into emergency preparedness conversations. Since the fire, the Fort McMurray SPCA (https://fmspca.ca) has been distributing an excellent package that could be used as a model, and CDART offers a list of items to be included for dogs, cats, horses, and birds at https://www.cdart.org/pet-first-aid-kit/ (accessed August 15, 2018).
- Ensure paid staff and volunteers are prepared to function as first responders. This could involve getting trained in ICS and as a CDART member. AEMA offers periodic training in the former at http://www.aema.alberta.ca/training. For CDART's training opportunities, email info@cdart.org.
- Have a business continuity plan, both for going to a disaster scenario and for being in the disaster area. This should include liability insurance for those staff members and volunteers who will be animal welfare first responders.
- When responding to an EDM situation, consider wearing highly visible uniforms that include (at least) your organization's logo and "ANIMAL WELFARE" printed on the back. Look professional to the professionals. The uniform should be in a colour that is easily distinguishable from emergency management personnel and EOC staff.

For Pet Guardians

- Have a 72-hour emergency and disaster plan ready to go for humans and pets. CDART offers a list of items to be included in kits for dogs, cats, horses, and birds at https://www.cdart.org/pet-first-aid-kit.
- Familiarize yourself with your municipality's EDM plan for humans and companion animals. If your municipality does not appear to have one, call and/or email them to find out why not. Pressure policymakers in your community to create one and make it easily accessible.
- Do not stay in or reenter a disaster area; you will not need to do so if you are prepared with both supplies and information.

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