

VOST Victoria: Coverage of the Hazelwood Mine Fire

Abstract: On 9 February 2014, a fire broke out in the Latrobe Valley's Hazelwood coal mine, the unruly nature of the blaze meaning it was not declared under control until 10 March. During that month, the incident caused two major emergencies – a complex fire emergency and a public health emergency. Victoria's Virtual Operations Support Team (VOST) monitored both aspects via Twitter, and to assist other social media in emergency management (SMEM) operators, created a record of the disaster through the eyes of this social media channel. This case study details the origins of VOST Victoria and its significant work during the Hazelwood mine fire less than a year later, its most demanding task to date.

As the fire begins, so do the hashtags

On 9 February 2014, a prolonged heatwave was the catalyst for fires to break out across Victoria. Among them was a blaze in the Hazelwood mine, an open cut brown coal mine nearly three kilometres south of the town of Morwell in the Latrobe Valley. Inquiry evidence concluded that the mine fire was sparked by spotting embers from a nearby bushfire, spreading quickly and proving difficult to extinguish. Subsequent smoke, ash and carbon monoxide levels in the air overwhelmed the community and were an ongoing concern.¹

With Twitter such a popular tool for instant sharing of information, it was inevitable that Morwell residents began using the online social networking site to relay thoughts and observations about the fire to their followers. Additional tweets from media organisations, emergency management and health sectors provided updates on critical information such as fire and transport accessibility and smoke levels, using Twitter's allotted 140 characters, web links and photographs of the area.² The Virtual Operations Support Team (VOST) Victoria began monitoring the Hazelwood fire from 7 February and on 11 February began logging a filtered feed of associated tweets, resulting in a more manageable read for fellow social media in

¹ Teague B, Catford J and Petering S, Hazelwood Mine Fire Inquiry, August 2014

² VOST Victoria Evernote job notes (11-17 February 2014), viewed 31 October 2014

emergency management (SMEM) operators. This work not only kept everyone on the same page, but also helped quality information reach the public in a timely manner. VOST Victoria's monitoring continued for almost five weeks, proving to be an important addition to crisis communications not only during the fire, but also in the recovery phase of the disaster.

VOST Victoria – a brief history

The formation of a VOST in Victoria (there are at least 36 VOSTs internationally) was formalised approximately five months earlier, in September 2013 at Incident Alert's 1 Step Beyond conference, which was attended by SMEM volunteers. VOST Victoria was then officially launched on 14 October 2013, with the intention of assisting and protecting local SMEM operators from potential legal action that may arise if they were to tweet about a disaster event independently. The world's first VOST was assembled in America in March 2011, as it was apparent that during disasters that anyone trying to monitor and respond using social media was quickly overwhelmed by the amount of data that requires examining and sorting into useful information.³ VOST was created to fill that void.

According to the VOST Victoria website, "While VOST Victoria does deal with all types of emergencies, one of the most frighteningly common scenarios we face is that of a bushfire reaching the Wildland/Urban Interface (WUI). When this occurs, there is an overwhelming volume of traffic on social media as populated areas come under threat. We try to collate this traffic and extract tweets with important information, and we forward this on to authorities for analysis."⁴

Following the 1 Step Beyond conference, Brad Lemon was nominated as operations manager and given the job of creating VOST Victoria – an ongoing challenge given it works on a volunteer basis. "One of the greatest challenges facing VOST anywhere in the world is volunteers, because they have to have a certain skill set," says Lemon. "They need to be familiar with SMEM duties and know how to approach jobs on Twitter, and that takes quite a bit of training. You also have to have someone who thinks a bit like a firefighter, because fires are dynamic."⁵

³ Reuter, S, "What is a Virtual Operations Support Team?", idisaster 2.0, 13 February 2012, website viewed 6 March 2015

⁴ VOST Victoria website, operations update December 2014, website viewed 10 December 2014

⁵ Phone interview with Brad Lemon on 31 October 2014. All further quotes from Lemon are from this interview unless otherwise indicated

VOST Victoria doesn't use typical VOST modelling and spreadsheets, as while they're suitable for other disaster events, they're not geared specifically for Victorian bushfires. Instead, they log Twitter traffic using Evernote software, which is designed for collating desktop "job notes" (be it webpage excerpts, photographs, voice memos, or in this case, captured tweets). "We quickly realised that Twitter was the only source of real time communication available," says Lemon. "Facebook's got a bit of lag to it and we felt we were getting enough reach with Twitter to justify concentrating on that."

Once a job note is created, VOST Victoria uses Storify, which captures the original text and images and stores a marked-up format. The use of this social networking service was introduced after the Hazelwood mine fire job, as they found their initial approach of capturing an image of every tweet both tedious and time consuming. Storify is faster, keeps a record even if the tweet is deleted and easily includes information from other social media. Published job notes are then uploaded to a blog which is accessible via a password.

VOST begins monitoring the Hazelwood mine fire

On 9 February, a fire impacting Mickleham on the northern fringes of Melbourne generated a considerable amount of social media traffic, and subsequently the VOST Victoria team paid little attention to the Hernes Oak fire (north-west of Hazelwood mine in the La Trobe Valley) which had begun two days earlier. "At that particular time there was the most intense fire weather," says Lemon. "We had a lot of jobs going on in Victoria and while there were four of us creating job notes, we simply didn't have enough arms to go around. A fire impacting WUI requires a lot of resources just to track the massive amount of traffic and this may partly explain why we were slow to begin our job notes for Hazelwood."

After listening to developments on the radio and observing the emergency warnings for Morwell and number of fire trucks assigned to the fire via social media, Lemon began Hazelwood job notes on 11 February. He recalls mentioning to others in Google Hangout (an instant messaging and video chat platform) at the time, "This Hazelwood job is going to be the worst job this state's ever seen". VOST Victoria's George Hall took over monitoring of the Mickleham fire and others across the state, while colleague Adam O'Halloran also observed Victoria's fire activity and alerted the team as new fires developed. The pair also amplified

important tweets about Hazelwood. This freed Lemon and Eshuis to begin capturing tweets on the Hazelwood blaze.

At the height of the Hazelwood mine fire, Lemon logged Twitter traffic for an average of five hours a day, ensuring he captured current information that amplified authoritative messages. “We’ve never wanted to make VOST Victoria look like a source of information to the public, because we’re not an authority,” he says. A very complex Twitter search term (approximately 300 characters long) was developed to capture mentions of the disaster. As the event unfolded and became a global news story, this included tweets from international sources, newspaper cartoons interpreting the health impacts, La Trobe Valley residents protesting at State Parliament about potential long term health impacts and the announcement of an independent inquiry into the fire. Lemon says the selection criteria used to filter tweets was based on common sense. “If the tweet was from the authorities, it was always included. If the tweet was from the public, then I looked for information that added something to group wisdom. Tweets from locals near the disaster were nearly always included.” Alternatively, if a member of the public outside the immediate area tweeted, unless it added new information, or contributed to the known information in a meaningful way, it was ignored. Lemon would include one example of a tweet that represented many tweets from multiple accounts with the same sentiment. He also captured tweets from media if they linked to a new story, and nearly always captured tweets from local journalists who were onsite. All mentions of the event by overseas media were captured. Shortly after the fire began, a #quitcoal campaign became very active, with people sending many politically driven tweets about coal. As these made no worthwhile contribution to dealing with the disaster, Lemon imposed a blanket rule that any tweet from that campaign was ignored. He put a note in the heading of each job note explaining this.⁶

The hits and misses

Among these 4778 tweets were a small number by the VOST Victoria team, who tweeted using their personal Twitter accounts. A particular tweet Lemon sent at 1.20 pm on 15 February caused him some concern: “I’m gonna go right out on a limb here and suggest that if you are pregnant, you should vacate area north of Princes Hwy at Morwell.”⁷

⁶ Brad Lemon email, 12 March 2015

⁷ VOST Victoria Evernote job notes (11-17 February 2014), viewed 31 October 2014

“A Watch and Act had been issued for Morwell due to elevated levels of carbon monoxide. I was aware that women who were pregnant weren’t to go near the mine, as carbon monoxide could be highly risky to a foetus,” he says. “It was the only time in my SMEM career that I’ve ever taken an operational role on Twitter and taken a real risk by suggesting part of the town evacuate. To this day I still don’t know if I did the right thing or not and I would be very hesitant to take on an operational role again because we’re not an authority at all, we can’t do that kind of stuff. We’re not the incident controller and we don’t have the big picture.”

Eshuis had the complex task of gathering resources and creating a *Morwell Open Cut/Hazelwood Mine Fire Info* document on VOST Victoria’s website, one of the rare occasions it published information specifically for public consumption. “We identified there was a lot of relevant information coming from many different agencies, but there was no single source for people to find the information,” Eshuis says. “The info doc was a running collation of all the most recent information and sources, always with a link back to the original source. VOST voted on the decision to publish it and it turned out to be one of the most important things we did.”⁸ The compilation included Country Fire Authority, Health Department and council updates, the accessibility of vacuum cleaners and face masks, smoke forecasts, alternative accommodation options and an extensive list of websites to other resources. Updated at least twice a day, it was the only online source listing all the information relating to the Hazelwood disaster.⁹ Lemon estimates this page of VOST’s website received a total of more than 3000 hits. “We were ambitious and initially thought we might get 1000 hits from curious people,” he says. “Once we got past a few hundred, we realised we were onto something good. We didn’t expect 3000 hits and didn’t expect people to push it as much as they did. When people discovered the resource existed and was frequently updated, word started getting around, people started helping us out by promoting the link to that document, and then that started to snowball. VOST was never mentioned on mainstream media, so relied on word of mouth and social media.”

VOST and the community

Another element of VOST Victoria works solely with animal welfare. During emergencies, volunteer Rose Lemon (Brad’s wife) works predominantly via Facebook to keep VOST

⁸ Phone interview with Daniel Eshuis on 10 March 2015. All further quotes from Eshuis are from this interview unless otherwise indicated

⁹ Brad Lemon email, 6 March 2015

connected with animal welfare organisations, with the aim of securing resources that assist people with their pets and livestock.¹⁰ Lemon says this became an issue during the Hazelwood mine fire, as people wouldn't leave their pets and so ignored orders to evacuate. "There were a lot of very sick animals because they don't tolerate toxic conditions as well as humans do. People were trying to find places to put their stock, we noticed that was a hole and wanted to help out where we could on social media." On 3 March, Lemon tweeted @latrobacity (La Trobe City Council) "Dear team. Can you please tell us where the designated respite area is for people with pets from Morwell? Thank you."¹¹ Every evacuation centre had a 'no pet' policy and while VOST Victoria worked with the State Government and local council in a bid to access nearby Moe racecourse or Sale showgrounds, neither eventuated.

VOST Victoria attended a community meeting in Morwell on 19 February to try and determine the type of information locals wanted, and how that might shape the tweets they collected and news they detailed on the website. "We didn't get much of a response, because the people didn't know what they wanted," says Lemon of the 100 attendees. "They were in this very difficult spot – what they wanted was leadership and action and we were offering information." VOST Victoria was able to assist by supporting Morwell Neighbourhood House, which Lemon says "literally held Morwell together during that entire incident." VOST shared Morwell Neighbourhood House information on its website, as well as promoting its services via Twitter.

VOST Victoria also activated its goods and services donor's register during the fire. "The system is in place to use in the event of catastrophe," explains Lemon. "VOST doesn't have anything to do with the goods or services. We just collect the information for relief agencies and in the event things are needed, they can view our register and send us a message. We put them in touch with the donor, but don't have anything to do with the transaction and no money changes hands." During the Hazelwood mine fire, VOST Victoria received eight offers of respite accommodation and three offers of assistance for animals/pets, however none of the offers were utilised by the public. Eshuis says one of the lessons learned from the Hazelwood job was to develop relationships with agencies in advance. "That was one of the challenges we had," he says. "We were able to set up the goods and services register pretty quickly, but didn't go public for a while because we had nowhere to feed things into. We struggled to make connections because everyone was busy

¹⁰ VOST Victoria website, operations update December 2014, website viewed 10 December 2014

¹¹ VOST Victoria Evernote job notes (3-6 March 2014), viewed 25 February 2015

dealing with the incident. As a voluntary organisation they didn't know about, we didn't fit into their predefined plans."

The Twitter chatter comes to a close

The last day of VOST Victoria's recorded tweets on the Hazelwood Mine Fire was 17 March 2014. The final three were: Channel 10 Melbourne reporting on Morwell residents returning home as air quality improved, a random alert about an electricity outage, and a link to an article on The Conversation website entitled, "*Stronger laws needed to prevent another Hazelwood coal mine fire*".¹²

The Hazelwood Mine Fire Inquiry Report was released on 29 August 2014 and acknowledged VOST Victoria for their time and cooperation in supporting the work of the Board.¹³ VOST was asked by the Board to undertake analytics on logged tweets, which were categorised by numerous subject matters. Of the 2381 tweets analysed, the majority covered the following categories: 32.9% environmental impacts, 26.2% health and wellbeing, and 20.8% fire response.¹⁴

"We learned a lot during the Hazelwood disaster about our own systems," Lemon says. "VOST evolves as new technology presents new opportunities, but the intense nature of this disaster was a steep learning curve for us. We've since deployed a method of capturing every tweet about a given job into a spreadsheet and now use Storify to make captures of tweets. We still produce job notes, created using Evernote, posted on the VOST Operations website, and emailed to our clients.¹⁵ Our first year was hard with little support from agencies (but) we have a better relationship with authorities now (and) we're excited that we're entering this (2014-15 fire) season with much better resources for reporting."¹⁶

¹² VOST Victoria Evernote job notes (17 March 2014), viewed 25 February 2015

¹³ Teague B, Catford J and Petering S, Hazelwood Mine Fire Inquiry, August 2014, p 44

¹⁴ Hazelwood/Yallourn Mine Fire data analytics by VOST Victoria, 12 May 2014

¹⁵ Brad Lemon email 6 March 2015

¹⁶ Brad Lemon email 29 October 2015