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First name	Thomas
Last name	Reeve
I am making this submission as	Emergency services
Submission type	Personal
Organisation making the submission (if applicable)	
Your position in the organisation (if applicable)	Captain Orara Brigade
Consent to make submission public	Public
Your story	Please refer to Submission PDF attached. I would be happy to Clarify and answer any questions you may have. Sincerely Tom Reeve
1.1 Causes and contributing factors	Please refer to Submission PDF attached.
1.2 Preparation and planning	Please refer to Submission PDF attached.
1.3 Response to bushfires	Please refer to Submission PDF attached.
1.4 Any other matters	Please refer to Submission PDF attached.

Upload files

CSIRO-1976-bushfire-history.pdf - [Download File](#)
submission-mar-2020.pdf - [Download File](#)
Toms-fire.pdf - [Download File](#)

I preface this submission with acknowledgment of my own errors and I am not suggesting I have all the answers. Thanks to the constructive feedback from fellow firefighters from the MNC I had directions for improvement as the season progressed. I hope the following will help others right up to the top also improve.

- We all need to take responsibility for the deaths and property loss. Yes, the RFS as well, we could have been more vocal about the dangers.
- Litigation is not the solution, spend money on fixing the problem. Eg Wiriri Rd Near Billy's Creek. An environmentalist (self-proclaimed) didn't want a backburn done (note if we didn't do it their house would have been lost) and a suspicious fire started 800m from the backburn. She immediately started to ask for compensation. This lack of understanding (excluding suspicious behaviour) would tie up the courts and waist taxpayer's money on solicitors instead of solutions.
- Unprecedented, not so, see attached CSIRO report 1976, and the 2 links below (hat tip Will O'Brien)
- 1938-9 My Dad remembers these fires, he lived it Queanbeyan.
fire https://www.google.com.au/url?sa=t&source=web&rct=j&url=https://en.m.wikipedia.org/wiki/Black_Friday_bushfires&ved=2ahUKEwi0qKLi_tTnAhUXQH0KHdThCwEQFjAAegQIAxB&usg=AOvVaw1ji0AdJo1LxMH7JmA-s6TY ,
- 1850
https://www.google.com.au/url?sa=t&source=web&rct=j&url=https://en.m.wikipedia.org/wiki/Black_Thursday_bushfires&ved=2ahUKEwjlvgb_9TnAhWBV30KHS4ZDA8QFjACegQIAhA-B&usg=AOvVaw2li_zpJU6jd7Fvn0LyesKP .
- 1940 fire sign near Eastbank station. A big one in our area which a lot of old timers remember.
- Complacency, unelected bureaucrats modifying govt directives for their own political view and or building their empire, corporatisation of state forestry where money comes before protecting the community.
- Ignorant so-called environmentalists making decisions for the NPWS that are wrong and then use bureaucratic talk to justify themselves. Fire respects truth, spin just doesn't cut it. Its time to be adults.
- Complacency and a lack of education and understanding of the bush. Bush used to be woodland now its dense forest full of fuel. Two examples of poor understanding of the bush- Koalas follow fire (watch their populations explode over the next year), feral cats killing birds and marsupials that turn the leaf litter mixing soil with it which helps break it down reducing the fuel load.
- Modern focus on what the screen says instead of going out to the bush and listening to it
- Lack of understanding of the effects of soil types on fire behaviour.
- Fear of fire and a lack of understanding of what HR burns do.
- Fire is a part of our landscape when managed but whole ecosystems have been wiped out due to the intensity from this season.
- Simple fact- what we have done over the last 20 years is wrong. It doesn't work. The dominance of socialisation of decisions instead of simple facts e.g. Koalas following bushfires. The system we have been using is badly broken. We have allowed fuel loads to build up over the last 35 years

- Can't say 5 to 10% of NP and 10% of state forest, crown and council land is being burnt each year. Don't believe in 10 to 25-year rule anyway. Some areas rarely need fire like the southern side of Little Mt Coramba but it needs protecting with regular burns in the adjacent state forest to the north. Mosaic burns.
- Huge fuel loads e.g. Wiriri Rd (leaf litter over 60cm deep in large areas). Upper Orara has fuel loads over 30T/H on all sides. Photos included of Orara west state forest with high fuel loads ready to burn on Nov 12th.
- Private land owners big and small also at fault. Results from 12th Nov attached. Very concerned that even if there were plenty of trucks 40% of the properties visited that day were undefendable. Way too many places had fuel (bush or old cars etc) right next to the house. Larger properties with huge fuel loads and lots of ladder fuel in their "beautiful bush".
- Dinner creek fire(s) had cattle in the state forest.
- Sir Ivan inquest didn't mention fuel loads nor poor initial response due to budget restraints.
- Haven't learnt from BoBo fires 25 years ago which was caused by Forestry not wanting to spend money on a dozer and quick response (my opinion).

Solutions

- HR's , mosaic burns by people connected to the land.
- Fire Trails including containment lines between Federal, State, Council land and private property. Breaking up forest types for mosaic burns and quick access to wildfire. This is a big one we can work on over winter. The Mt brown fire could have been put out that first night if we had access but the trails were bad. Note some challenges where trails need to be on private land.
- Open style RFS management. Intent based planning, see MCS attachment. Separates Command and control.
- State forest must HR within 6 months of harvesting
- Private land owners need education, carrot and stick to clear around assets.
- While its not a war on fire it is a battle. Need to attack in favourable conditions. Too much risk aversion. ACT fire, 2 periods of a couple of days each where containment and backburning were possible but nothing happened as the Commissioner herself had to sign off on any backburns. That fire was allowed to burn and destroy many assets in NSW.
- Grants to put in and maintain fire breaks around homes next to public lands.
- Include Army resources in big fires.
- Fire a lot of bureaucrats and give control back to the local area. Stop the politics and focus on protecting the community. Huge IMT in Glen Innes running 3 s44 fires and 5 people from IMT rang up about one invoice from the hocky fields at Grafton. Everybody was doing everything instead of allocating responsibility to a single person. I.e. no clear lines of reasonability.
- Educate the public on back burns. The escaped Bells Line Rd backburn was framed as the cause of 20 houses lost when in fact they would have been lost if nothing was done. Not everything works in a battle.

Leadership and head office

- Fires near me app sowing confusion with the public, bushfire.io shows fire front and may be better.
- Drones to GL's
- Heat cameras to Cat 1's
- Using army resources like logistics, reconnaissance, engineers all highly trained and want to help.
- Excessive and unnecessary middle to upper management with poor leadership ability. Too many generals.
- Corporate governance that is transaction based when it should be open and community based.
- I have found the OODA approach useful as a CL. Overview, Orient (get the team to be present), Decision and Action. It's from US marines. I think it would also be useful higher up the command structure.

Area commands and IMT

- Problems with risk aversion and cover your ass approach instead of fighting the fire.
- Attended fires with IMT's based in 9 districts. 6 of which were poor to very poor in organisation ability. Some had a lot of conflict, poor logistics support and risk aversion.
- 3 day turnover with IMT volunteers. A problem with transitions and poor briefings. Not designed for a long-term campaign. No clear lines of responsibility.
- Total ignorance about Peet fires. Eg Yamba and east of Casino were declared out so they could put a stop to the s44. In both cases they reignited and caused a lot of damage a few weeks later. Government thinking instead of listening to the people on the ground.
- Wack a mole response is no way to fight fires, east of Braidwood the crews were run haggard. No clear containment strategy because they don't backburn. One of our local Group leaders had a problem with an on then off then on backburn that was stopped half way through. The next day the wildfire broke containment where the BB was stopped. (have photos and GR). I note here and at Yamba unburnt areas were left between the fire and containment line.

MNC

- MNC doesn't burn...bulldust. A combination of well geared (thanks to council) crews, dedicated local FCC that resource well, keen core of volunteers and clay-based soils (hold moisture longer) allow us to put out fires before they get too big. Note Dec 24 and the wet gullies were no more, lucky we had rain. Our area was ready to burn.
- Tom's fire, see attached map. We stopped a breakout using rake hoes and backpacks. Half the crew on the strike team did not participate. People didn't understand why it needed to be done, note fuel between containment and fire.
- Back burning and HR burning course. Wet paint don't touch. Seen some really bad practices. Including starting a burn at the bottom of a hill and fire front perpendicular to containment. Some vocational education is required.

Examples of current problems in our area

- Black butt ridges in Bindarri not burnt for 15 years
- Areas of stringy bark. Behind my place is a large stretch of bark on mudstone ready to spot 10km on a bad weather day. Will get photos soon.
- Orara west state forest. No fire for 38 years, harvest, too dangerous to HR?!! Upper Orara has huge fuel loads in all directions. Council and crown land just as bad.
- Bees nest, huge fuel loads no break to private land, risk adverse management knew bad weather coming and needed to take out a section of bush west of Guy Fawkes river and didn't.

Public

- Its not the job of the RFS to clear around houses, we have families and jobs too. Put the responsibility back on the landholders.
- Education and personal responsibility v's cycle of complacency with big fires every 20 to 30 years. We just don't seem to learn and keep repeating the same mistakes.
- Fear of fire tends to lead to a tendency to ignore it. IE don't do anything to reduce the risk.
- Private landholders poorly prepared.
- The fires coming, run away warnings did save a lot of lives but there appears to be a lack of resilience at the community level. Offering courses on preparing your property for fire and linking it to a reduction on insurance might be one of the carrots offered. I have other ideas.

One final important point that hasn't been given much attention is most of the death and injury from falling trees could have been AVOIDED with regular HR burns which culls the dangerous trees in more controlled conditions.

Putting all this together was difficult. This season has been very challenging for all of us and the existing RFS system is flawed but it has been the best we could do and many things worked, lives were lost and saved as was property. I hope the issues raised in this submission will prove useful for improvements and our service to the broader community. For me it has been an absolute privilege working with all of you. As a newish Captain I have learnt a lot. Thank you.

Regards

Tom Reeve

B.App.Sci (Hon), Captain Orara Brigade.

Annex

CSIRO Report, MCS Doctrine and intent, observations of a suspicious fire, results of visit 12th Nov, 2 photos, toms fire, comments on Mt Browne fire.

Results from house visits last Tuesday 12th Nov 2019

Our visits to the houses had some surprising results. During the difficult time on Tuesday 12th Nov The Orara trucks visited all the houses on Dairyville Rd, Upper Orara Rd from Dairyville Rd to and including Cochran's pool (the 280's) and Mt Browne Rd to the railway bridge. Approximately 150 houses in total. We collected data based on limited resources (two trucks from the brigade and 6 NPWS slip-ons) and no air support.

Based on the assumption of a fast-moving fire and we had to keep resources available to rescue people results were-

50% were defensible. Exit safely and space to park an appliance safely.

15% were not defensible (bush close to the house, poor house construction, flammable junk around house) but safe to rescue people (accessible safely).

35% were not defensible nor safe to rescue people.

If the fire was slower moving and we had more appliances where some would be trapped safely approximately 66% of the houses were defensible. With air support that could have gone up to approximately 75% (dousing the exit).

Other facts

36% of the people were staying (26% of which were in defensible positions)

Approximately 33% of all the properties had water available near their assets. Dam, pool or SWS tank.

One had a fire bunker

Note the above is a guide only as we had 3 different crews making very quick judgements.

I would expect Friday creek Rd would be similar.

The loop roads would be different. Many more properties would have water and be defensible.

Also of note were decisions that properties on Mt Brown Rd from the top of the hill () down to Coramba Rd at some point would not be accessible when fire impacted the road. Also that Properties between and and on Jacaranda Pl would most likely not be defensible due to the intensity of the fire coming up the hill but we could respond to save people. At some point we expected to be cut off on upper Orara Rd beyond the dam wall.

Regards

Tom

From: [REDACTED]
Sent: Wednesday, 18 December 2019 12:47 PM
To: Sean McArdle [REDACTED]
Subject: Mt Brown Help

Dear Sean,

It is with a lot of gratitude that I would like to thank everyone in the MNC team for their efforts controlling the Mt Brown fire.

It was such a relief as the trucks rolled in as, having worked with most of the crews, I knew their level of professionalism and determination.

So many things could have gone wrong. 4 of the 11 houses on Mt Brown Rd were almost indefensible and all hell would have broken loose if the fire got on the other side of Mt Brown Rd or Jacaranda Drive.

With the hard work of RFS crews and forestry and the weather we didn't lose anything. This as all done without outside assistance and with the Andersons fire running as well.

I feel both humbled and pride to be a part of a great team.

Thank you all

Tom



Tom Reeve

Farmer

Mirum Creek Organics

[REDACTED]

[REDACTED]

[REDACTED]



Typical fuel load Grid Reference 970 454 Upper Orara 1/3/220



Typical fuel load Grid Reference 971 456 Upper Orara 1/3/20

Following is part of an email from a fellow firefighter, Marty Williams, with some suggestions which could be fleshed out.

200 years of poor land and fire management is the catalyst with climate change variables providing the perfect fuel loads.

Forestry and Parks need to go back to the firefighter numbers they had 30 years ago to adequately manage their assets.

HRBs must be vigorously pursued with less red tape during the very limited window of opportunity. Mitigation expanded to assist reach the HRB targets.

Community Fire Units need to be promoted and more widely created/ supported.

Build Back Better must be the mindset with appropriate land use rezoning where applicable.

RFS must adopt tethered drone systems for patrol, early warning, mapping, night time intelligence gathering and as communication relay points to improve FG comms (see:

<https://www.foxtechfpv.com/foxtech-t3500-plus-tethered-power-system.html>)

Media must only be permitted into firegrounds under escort or face criminal prosecution.

Resources must be assigned for escorting wildlife carers into firegrounds as soon as reasonably safe to do so (suitable persons with BFS or BFA and PPE).

Police, ambulance and SES should all be provided compulsory BFS or BFA training for bushfire support and making wiser decisions.

Traditional burning must be widely adopted along with identifying ancient song lines containing environmental data and transposing to GIS.

Community engagement programs must be suitably resourced to leave meaningful message based items in the community (eg keep looking while cooking spoons)

Yep, I'm with you... nice simple things that can be adopted.

Most of the above is in the VBRC recommendations but some are my own twist on things.

Will happily sit down and discuss further when time suits better and you have your property sorted.

Regards,
Marty

Observations on what I consider as a suspicious spot over. North of [REDACTED] aprox 01.00 on the 17th September 2019.

- One of the trucks from the other overnight strike team was stopped by the owner at [REDACTED] after midnight. They walked to the back of her property and found a long line of fire along her back boundary approximately 300m from her house to the north.
- Rob tasked Orara 9 to look after her.
- We met the owner's brother in a Subaru forester AKN491 who took us onto her place and showed us the fire. He also showed us an overgrown track that he thought would take us around behind the fire. 613 636. I chose not to walk the track as I was starting to get suspicious and was concerned we could get cut off by fire.
- We took 2 bearings at around 01.00. 0 deg at 617 633 and 284 deg 620 633 (magnetic). The fire appeared to be small (100meters diameter, based on the glow and about 400m from her house) Weather was mostly calm with a 1 to 2 km/h intermittent breeze from the south.
- Around 2 am we were relieved for a break (Boambee 7?). Neil was super tired so I left him at Tyringham fire station and I returned to look after [REDACTED].
- Sometime around 03.00 the owner approached our trucks. She was distressed and hadn't slept for 2 days. Both Boambee and myself let her unwind and talk it out with supportive comments. Then out of the blue her demeanour changed and she said that she told them she didn't want the backburn because of spot overs and that the fire was on her place so how much compensation would she get. It was at that stage I realised that supportive comments were dangerous so I felt I had to challenge her statements. Pointing out that without the backburn the wildfire would have roared up the hill from the south and most likely taken out her house. I also mentioned that "her" spot over may have been deliberately lit as the fire to the south of her place was suspicious. She calmed down after a bit when I said I am not accusing anyone. The conversation got better when I asked her about herself in which she said she was a conservationist and I mentioned I was an certified organic farmer. I encouraged her to get some sleep as we were here and would knock on her door if things changed. Meanwhile the fire had slowly moved down the slope to about 250m from her house in calm conditions.
- I walked towards the fire to asses fuel loads which were in excess of 20t/h halfway up the ridge, flame height varied from 500mm to 8 m when some vines dried out. Water vine on either side of the creek bed which became the trigger point for back burning (about 60m from her house).
- Given all the drama at [REDACTED] I agreed with Rob to only act when the house was threatened so left her to sleep and kept the trucks away from the house and kept the crews calm.
- Weather at 05.30 in the gully 617 633. Temp 12.5 Humidity 73% wind occasional 1 to 2 km/h breeze from the west (Katabatic).
- At daybreak I met Nicki. A local RFS member who lived down the street. A practical country woman whom I would welcome in Orara brigade anytime. She thanked me for getting the owner to sleep and we took of to investigate the broken containment. She didn't think the owner started it but knew of 3 men who were her associates who hated forestry and knew of the track in behind [REDACTED]. Together we worked out how to get a dozer around the fire and she left for Tyringham station.
- I caught up with Rob who had a very frustrating time trying to get resources to deal with the "spot over". I made a mistake in interacting with the forestry dozer driver which Rob fixed up. And then got the RFS d7 dozer started on the track at 613 636 with a request to avoid

disturbing the fire origin. Nicki was back and took over the dozer escort. Unfortunately, the dozer would have wiped footprints of the track.

- I returned to [REDACTED] and joined the rest of the strike team. While I prepped them for action, I kept them busy with questions and away from the house. Given the volatility I thought it best to do the least. Judy was quite concerned that we were not prepared but I hadn't shared with the crews my concerns and having been there for may hours knew we had plenty of time.
- Shortly thereafter Rob returned and we were relieved. The fire was still 75 m from the house and hadn't reached my trigger point.

Rob developed the opinion that it was a spot over. Given the initial crews observations of a line, my observations at around 01.00 re the size and position and the calm weather I have a different opinion. There was no way an ember travelled 400meters plus to start that fire late Monday night. I expect the owner will try to take the matter further. If this is investigated, I would be interested in the conclusion.

On a personal note I felt observed at times and realised this was potentially a dangerous situation. It wasn't the fire that was the problem. I welcome others ideas on how I could have handled things better.

Regards

Tom

Mission-Driven Culture

By Mark Smith & Don Whitemore

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A tsunami of fire closes in on a casino resort in the foothills east of San Diego. A CalFire Battalion Chief, scouting as a field observer along with a sheriff's deputy, arrives on scene to unfolding catastrophe: people are panicking and attempting to evacuate on a narrow, winding road. In the BC's judgment, the 2500 people around the casino will face certain death in their struggle to escape the flames. He orders everyone inside and directs management to lock the doors. When the flame front passes, the BC directs the deputy to go door to door and evacuate to as many homes as possible in the fire's path.

Post-event investigations all agree that together the BC and sheriff's deputy saved thousands of lives that night. Their extraordinary actions were not the result of specific policies or standard operating procedures. They were the result of an organizational culture that fosters adaptability and resilience – a Mission-Driven Culture (MDC).

The Battalion Chief had no positional or delegated authority to take the actions he did, nonetheless, it was the necessary thing to do and it was the right thing to do. The Los Angeles Times agreed: "In a night where few guesses proved right, [the battalion chief's] gamble paid off. Like a moat, the parking lot and golf course protected the casino as flames raged past."

Contrast that story with this headline from an incident several years later that sparked community outrage:

'Handcuffed by policy': Fire crews watch man die

About 75 beachgoers could not understand why [city] firefighters and police officers stood idly by and watched the man slowly succumb to the 60-degree water.

"It's horrible," [a witness] said. "How can we let that happen? How can our emergency personnel allow that to happen? I don't get it, I don't understand it."

The [city] Fire Department says budget constraints are preventing it from recertifying its firefighters in land-based water rescues. Without it, the city would be open to liability.

When asked by [the news] if he would enter the water to save a drowning child, [city] Fire Div. Chief [name] said: " Well, if I was off duty I would know what I would do, but I think you're asking me my on-duty response and I would have to stay within our policies and procedures because that's what's required by our department to do."

In one situation, responders over-rode policy and saved thousands of lives. In the other, they followed policy and a 50-year old man spent nearly an hour in the chilly water before drowning in plain sight of those sworn to save him.

Followers are conditioned to follow rules. When they encounter ambiguity, they ask permission to act. Until then, they wait to be told what to do. Rules make sense for things that cannot be delegated or have no value being delegated. When they interfere with doing the right thing, that's a problem. Tragically, accounts of agencies shackled by their own policies are all too common. Initially well intended, these policies become "Tail Wags Dog" stories, counterproductive to the organization's mission.

How are we to equip people with the necessary guidance so the right action is taken, at the right time, and for the right reasons? The answer lies not in beefing up current policies, but in shifting culture to value operators over followers.

MDC consists of a set of foundational values and principles that integrate existing sets of values and practices throughout the organization and align them to the core purpose of the organization. MDC seeks to optimize balance of safety, efficiency, and effectiveness to best deliver service to the customer. It places priority on maximizing successful mission accomplishment over rote process.

Bureaucracies tend to rely on systems and processes to make decisions. MDC relies on individuals to use their judgment, guided by values and principles versus policies and rules. In standard circumstances, the best course will normally be to use the applicable standard operating procedure (SOP). Standard situations are where the inputs are well understood and the outputs (the results) are highly predictable. In abnormal circumstances, the SOP is inadequate to solve the problem and achieve success.

A Mission Driven Culture (MDC) has six core values:

- Service for the Common Good
- High Trust State
- Pursuit of Truth
- Form & Function Defined by the End State
- Individual Initiative
- Continuous Improvement

MDC uses a system of mission command - decentralized decision-making, guided by a framework of leader's intent combined with the authority and expectation to act. Senior leaders communicate the task, purpose and end state of an assignment and provide the needed resources. The how of getting it done – the planning and the execution - is delegated to sub leaders.

In the absence of guidance, operators are expected to act within the intent of the organization's mission. Operators should constantly strive to influence their environment to accomplish the mission. They act as leaders regardless of rank. The BC at the casino was an operator. By his telling, his decisions and actions were a product of a mission-driven culture.

Mission command is extraordinarily disciplined. Each operator is highly accountable for their actions and the flow of information. Senior leaders still communicate constraints – things that must be done or things that cannot be done – but MDC focuses on training people how to use their judgment, rather than rely solely on rules and policy.

Agencies are experiencing an explosion of complexity, and with that, increased expectations and accountability. Federal assistance is shrinking or at best, flat lined. These trends drive the need for greater adaptability, and increasing the speed of the decision cycle. The model of hierarchal, centralized command and control reflects an obsolete leadership paradigm that believes people are cogs and controllable by systems. This model fails in large, dynamic events. Information cannot flow 'up', be decided upon, and flow 'down' fast enough before the decision is rendered irrelevant by changing circumstance.

Paradoxically, centralization seems part of our nature. For the most part, emergency responders work in government agencies that tend to be bureaucracies. Bureaucracies seek equilibrium and self-preservation. The goal is expressed as control and is most frequently achieved by attempting to eliminate uncertainty and surprises. The absence of bad things becomes valued more than the presence of good things. The well-worn path to avoid bad things is to make lots of rules and centralize authority.

Inevitably layers on layers of policies and rules impact operational culture. They create a culture of permission asking followers. Originally intended to eliminate negative outcomes, myriad rules end up stifling initiative, discretion and judgment. While waiting for permission, critical windows of opportunity are missed, and, as we read earlier, a man drowns to death.

This is the Myth of Control. The more one tries to reach down and grab control in chaos, the less control one actually has. That cultural model creates micromanagers and followers rather than leaders and operators.

The culture of permission asking also creates risk aversion. Followers are more afraid of breaking rules and making mistakes than of missing an opportunity to make a difference. Team failure is acceptable because of the cultural norm that individual failure, and not team failure, is what gets punished. Thus, the focus is not on success, but rather on avoiding failure.

Nearly 200 years ago, Carl von Clausewitz first used the term Fog in describing the effects of chaos on the battlefield. The phrase, Fog of War quickly became part of military science. He noted that the combination of friction, danger and uncertainty would stymie the efforts of a force to project its will on the operational environment. These elements are inherent in the DNA of chaos. An increase in one – uncertainty, for example – tends to start a snowball effect with the other two elements and quite often magnifies their cumulative effects unexpectedly.

We're at a point in society where the fire or the flood is no longer the primary issue. Second and third order effects that cascade into the strategic, human driven dimensions of incident management create new levels of complexity: Political, Security, Economic, Social, Infrastructure, Information. These dimensions greatly magnify expectations and demands for results. They add to the confusion and challenge inherent in the fog. Operators do not implement strategy, but in this environment one operator, at the right time and place – or the wrong time and place – can have strategic impact. Just contrast the two stories at the beginning for examples of both.

The fog guarantees that, by the time a request has reached higher authority, the situation has completely changed. The window of opportunity has closed. Mission Command doctrine urges "...the use of commander's intent and exercising disciplined initiative to seize, exploit and retain the initiative."

MDC and its intent based planning system is based on 3 foundational assumptions about an operating environment where the fog of war is common:

- Uncertainty - Every decision made in real time is imperfect.
- Friction - Generally, the best decisions will be made by those closest to the event.
- Danger - A well trained operator, taking reasonable precautions, can still be injured or killed.

Rules and standard operating procedures that work well in routine emergencies begin to break down quickly as the fog increases.

In MDC, many policies and rules are considered authoritative but flexible. Operators are expected to use disciplined initiative to adapt the rule to the situation. Operators are even expected to disobey literal orders when they understand the situation has changed where following those orders would prevent accomplishing mission intent.

MDC relies on professional judgment to reach the appropriate decision in chaotic circumstances. Decisions that result in bad outcomes, if made in good faith trying to meet the intent, are underwritten as acceptable losses and learning opportunities for the organization.

The Myth of Control leads to another logic flaw within operational culture – that systems govern people instead of the other way around. This leads to a compliance mindset. Compliance is necessary and effective in managing machines, material and money. It is counter-productive in managing human behavior. Bureaucracies tend to forget that bringing order to chaos is a creative and interactive social process between humans. This type of collaboration is not managed well by policies.

In a rules-based system, any failure results in one of two possible conclusions:

1. There was no rule, so now, we just need to make a new rule.
2. The existing rule did not work. We need a better rule. A stronger rule!

Over time, the density of policy documents results in many rules that contradict others. This guarantees an environment where people cannot do their jobs and comply with all the rules on the best day. Thus, on the worst day, as chaos and the fog of war increase, mission success is even more unachievable. When such failure is investigated and judged in hindsight against the agency's own rules, leaders often have no viable defense.

In contrast to a centralized, rules based leadership system, Mission-Driven Culture (MDC) relies on disciplined individual initiative and professional judgment in interpreting a set (or sets) of principles, and one of MDC's most powerful organizational effects is that while accountability goes up, liability goes down. Thus, external evaluation is left to determine whether the operator's judgment was within acceptable or reasonable limits by people with roughly the same level of training, qualifications and experience as the decision maker in question. Moreover, because fear of liability is reduced, leaders can use more peer reviews or Facilitated Learning Analysis Teams for minor failures and near misses, and real discipline is reserved for willfully violating policy or for gross negligence. All other issues can be dealt with through mentoring and training.

To be sure, operator accountability is paramount. They must trust their leadership and be trusted by leadership. Operators must be trained and extremely proficient in principles based critical thinking. Consider for a moment our story of the Fire Div Chief unwilling to save a drowning child if doing so meant violating department policies and procedures. It is doubtful that those rules were enacted specifically to hamper life-saving actions, but rather to limit some other action or behavior that produced an undesirable outcome. Thus, the intent behind the policy is lost and blind adherence to them results not only in individual failure, but ultimately organizational failure as well.

Organizational leaders who have adopted intent based planning approaches to address this gap in mission achievement, describe the following indicators of success:

1. Leaders at all levels are feeling like the quality of risk decisions and discussions has improved.
2. Leaders feel like the trust state has increased up and down the chain as well as with executive staff above the agency or incident management team.

3. Leaders feel like they are getting fewer "surprises" as managers.
4. Leaders feel like they are getting better "buy in" from cooperators and stakeholders.
5. Leaders feel like they are getting higher levels of support internally and externally.

Other critical organizational metrics manifest over time: a decrease in grievances, an increase in retention, and fewer lost days. In totality, the six mission driven culture values, which provide for initiative, trust, truth and improvement, provide for greater individual judgment and accountability. Operators are specifically delegated the opportunity to succeed and, in doing so, the organization is aligned for success as well.

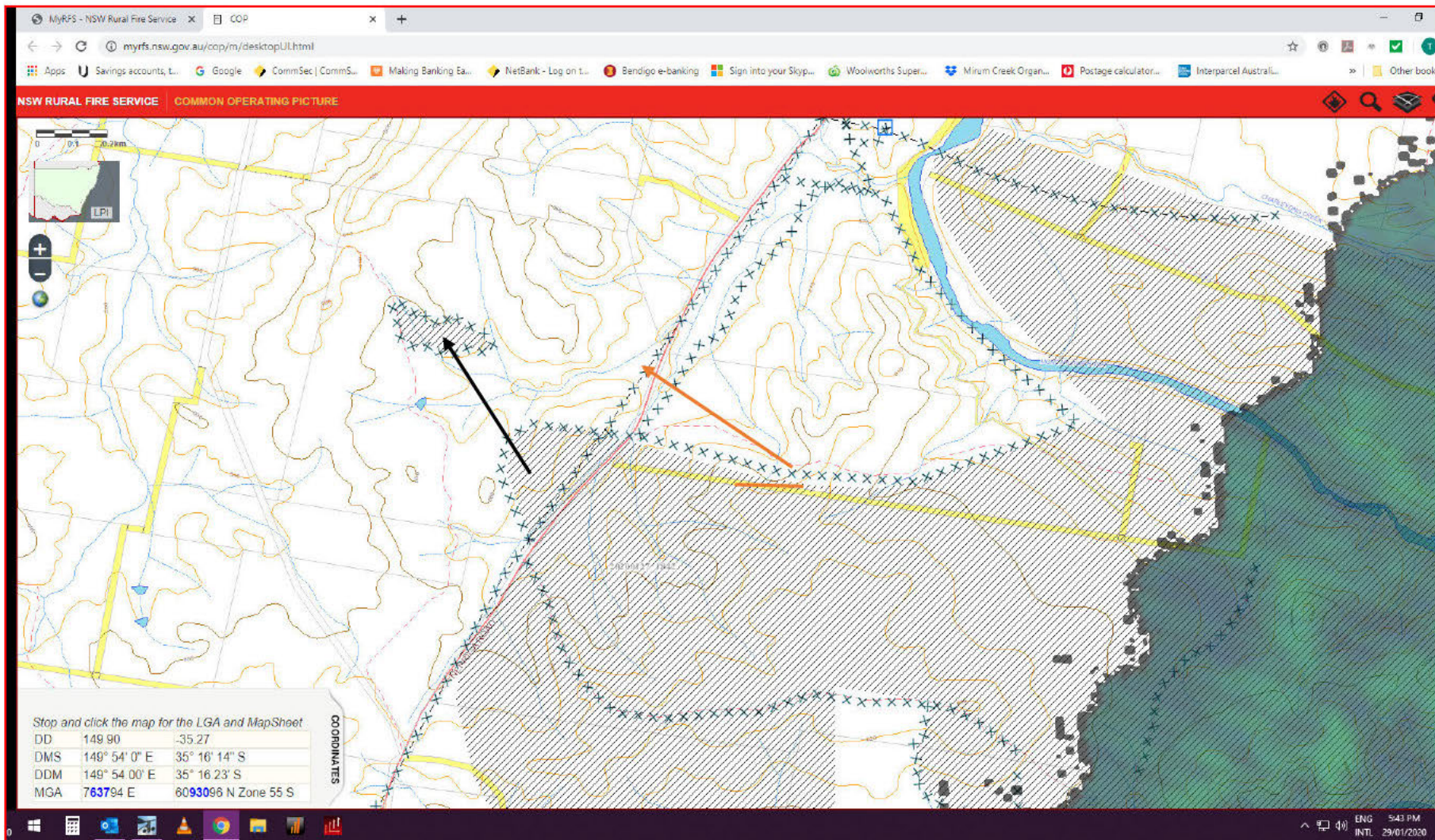
What's surprising about the \$11B (USD) of federal funding provided post-9/11 to state and local response organizations for equipment and technical training is the fact that only .0058% of it has been spent on command or leader development. Another way to view this is we've likely spent more money for the helmet and gear that go on a responder's head, than what goes in it. Priorities have focused on acquiring "things" as opposed to developing skills such as decision-making, critical thinking and judgment during chaotic, complex events. The investment and commitment to the developing right culture is the necessary next step in the evolution of emergency services.

There is no denying the increased challenges responders face. Expectations are expanding; risk is escalating; societal networks are growing more complex and, consequently, more vulnerable. In this world, the centralized decision-making model is increasingly a recipe for failure. MDC and its intent based principles and tools encourage and enable critical thinking, a common operating picture, concentric decision-making, and risk management at the operator level. MDC minimizes the friction, uncertainty and risk inherent in the Fog of War by increasing flexibility and adaptability. Using the context of leader's intent, operational decisions are accelerated to take advantage of opportunities for success in the field.

MDC is not like a fire extinguisher – in case of emergency break glass – that you can pull out and use only when a crisis hits. To be there when "it" hits the fan, it must be part of how business is done every day. In other words, train as you fight.

In the military, a force multiplier is a... "capability that, when added to and employed by a combat force, significantly increases the combat potential of that force and thus enhances the probability of successful mission accomplishment." Mission-Driven Culture is a force multiplier.

The call to action is for senior leaders of today's emergency response agencies to make the investment of time, energy and resources to build the culture that is adaptive and resilient to the ever-growing list of challenges. The outcome will be a higher level of customer service and mission accomplishment; increased trust within the community; and, leaders better prepared for future positions of increased responsibility as well as the large complex events they will undoubtedly encounter.



Orange bar Toms fire, Note north of fire was tea tree which had spotted 200m that afternoon.

Orange arrow what we stopped happening. Black arrow was a separate fire. Note map was 1 week after our return.

I preface this submission with acknowledgment of my own errors and I am not suggesting I have all the answers. Thanks to the constructive feedback from fellow firefighters from the MNC I had directions for improvement as the season progressed. I hope the following will help others right up to the top also improve.

- We all need to take responsibility for the deaths and property loss. Yes, the RFS as well, we could have been more vocal about the dangers.
- Litigation is not the solution, spend money on fixing the problem. Eg Wiriri Rd Near Billy's Creek. An environmentalist (self-proclaimed) didn't want a backburn done (note if we didn't do it their house would have been lost) and a suspicious fire started 800m from the backburn. She immediately started to ask for compensation. This lack of understanding (excluding suspicious behaviour) would tie up the courts and waist taxpayer's money on solicitors instead of solutions.
- Unprecedented, not so, see attached CSIRO report 1976, and the 2 links below (hat tip Will O'Brien)
- 1938-9 My Dad remembers these fires, he lived it Queanbeyan.
fire https://www.google.com.au/url?sa=t&source=web&rct=j&url=https://en.m.wikipedia.org/wiki/Black_Friday_bushfires&ved=2ahUKEwi0qKLi_tTnAhUXQH0KHdThCwEQFjAAegQIAxB&usg=AOvVaw1jI0AdJo1LxMH7JmA-s6TY ,
- 1850
https://www.google.com.au/url?sa=t&source=web&rct=j&url=https://en.m.wikipedia.org/wiki/Black_Thursday_bushfires&ved=2ahUKEwjlvgb_9TnAhWBV30KHS4ZDA8QFjACegQIAhA-B&usg=AOvVaw2Ii_zpJU6jd7Fvn0LyesKP .
- 1940 fire sign near Eastbank station. A big one in our area which a lot of old timers remember.
- Complacency, unelected bureaucrats modifying govt directives for their own political view and or building their empire, corporatisation of state forestry where money comes before protecting the community.
- Ignorant so-called environmentalists making decisions for the NPWS that are wrong and then use bureaucratic talk to justify themselves. Fire respects truth, spin just doesn't cut it. Its time to be adults.
- Complacency and a lack of education and understanding of the bush. Bush used to be woodland now its dense forest full of fuel. Two examples of poor understanding of the bush- Koalas follow fire (watch their populations explode over the next year), feral cats killing birds and marsupials that turn the leaf litter mixing soil with it which helps break it down reducing the fuel load.
- Modern focus on what the screen says instead of going out to the bush and listening to it
- Lack of understanding of the effects of soil types on fire behaviour.
- Fear of fire and a lack of understanding of what HR burns do.
- Fire is a part of our landscape when managed but whole ecosystems have been wiped out due to the intensity from this season.
- Simple fact- what we have done over the last 20 years is wrong. It doesn't work. The dominance of socialisation of decisions instead of simple facts e.g. Koalas following bushfires. The system we have been using is badly broken. We have allowed fuel loads to build up over the last 35 years

- Can't say 5 to 10% of NP and 10% of state forest, crown and council land is being burnt each year. Don't believe in 10 to 25-year rule anyway. Some areas rarely need fire like the southern side of Little Mt Coramba but it needs protecting with regular burns in the adjacent state forest to the north. Mosaic burns.
- Huge fuel loads e.g. Wiriri Rd (leaf litter over 60cm deep in large areas). Upper Orara has fuel loads over 30T/H on all sides. Photos included of Orara west state forest with high fuel loads ready to burn on Nov 12th.
- Private land owners big and small also at fault. Results from 12th Nov attached. Very concerned that even if there were plenty of trucks 40% of the properties visited that day were undefendable. Way too many places had fuel (bush or old cars etc) right next to the house. Larger properties with huge fuel loads and lots of ladder fuel in their "beautiful bush".
- Dinner creek fire(s) had cattle in the state forest.
- Sir Ivan inquest didn't mention fuel loads nor poor initial response due to budget restraints.
- Haven't learnt from BoBo fires 25 years ago which was caused by Forestry not wanting to spend money on a dozer and quick response (my opinion).

Solutions

- HR's , mosaic burns by people connected to the land.
- Fire Trails including containment lines between Federal, State, Council land and private property. Breaking up forest types for mosaic burns and quick access to wildfire. This is a big one we can work on over winter. The Mt brown fire could have been put out that first night if we had access but the trails were bad. Note some challenges where trails need to be on private land.
- Open style RFS management. Intent based planning, see MCS attachment. Separates Command and control.
- State forest must HR within 6 months of harvesting
- Private land owners need education, carrot and stick to clear around assets.
- While its not a war on fire it is a battle. Need to attack in favourable conditions. Too much risk aversion. ACT fire, 2 periods of a couple of days each where containment and backburning were possible but nothing happened as the Commissioner herself had to sign off on any backburns. That fire was allowed to burn and destroy many assets in NSW.
- Grants to put in and maintain fire breaks around homes next to public lands.
- Include Army resources in big fires.
- Fire a lot of bureaucrats and give control back to the local area. Stop the politics and focus on protecting the community. Huge IMT in Glen Innes running 3 s44 fires and 5 people from IMT rang up about one invoice from the hocky fields at Grafton. Everybody was doing everything instead of allocating responsibility to a single person. I.e. no clear lines of reasonability.
- Educate the public on back burns. The escaped Bells Line Rd backburn was framed as the cause of 20 houses lost when in fact they would have been lost if nothing was done. Not everything works in a battle.

Leadership and head office

- Fires near me app sowing confusion with the public, bushfire.io shows fire front and may be better.
- Drones to GL's
- Heat cameras to Cat 1's
- Using army resources like logistics, reconnaissance, engineers all highly trained and want to help.
- Excessive and unnecessary middle to upper management with poor leadership ability. Too many generals.
- Corporate governance that is transaction based when it should be open and community based.
- I have found the OODA approach useful as a CL. Overview, Orient (get the team to be present), Decision and Action. It's from US marines. I think it would also be useful higher up the command structure.

Area commands and IMT

- Problems with risk aversion and cover your ass approach instead of fighting the fire.
- Attended fires with IMT's based in 9 districts. 6 of which were poor to very poor in organisation ability. Some had a lot of conflict, poor logistics support and risk aversion.
- 3 day turnover with IMT volunteers. A problem with transitions and poor briefings. Not designed for a long-term campaign. No clear lines of responsibility.
- Total ignorance about Peet fires. Eg Yamba and east of Casino were declared out so they could put a stop to the s44. In both cases they reignited and caused a lot of damage a few weeks later. Government thinking instead of listening to the people on the ground.
- Wack a mole response is no way to fight fires, east of Braidwood the crews were run haggard. No clear containment strategy because they don't backburn. One of our local Group leaders had a problem with an on then off then on backburn that was stopped half way through. The next day the wildfire broke containment where the BB was stopped. (have photos and GR). I note here and at Yamba unburnt areas were left between the fire and containment line.

MNC

- MNC doesn't burn...bulldust. A combination of well geared (thanks to council) crews, dedicated local FCC that resource well, keen core of volunteers and clay-based soils (hold moisture longer) allow us to put out fires before they get too big. Note Dec 24 and the wet gullies were no more, lucky we had rain. Our area was ready to burn.
- Tom's fire, see attached map. We stopped a breakout using rake hoes and backpacks. Half the crew on the strike team did not participate. People didn't understand why it needed to be done, note fuel between containment and fire.
- Back burning and HR burning course. Wet paint don't touch. Seen some really bad practices. Including starting a burn at the bottom of a hill and fire front perpendicular to containment. Some vocational education is required.

Examples of current problems in our area

- Black butt ridges in Bindarri not burnt for 15 years
- Areas of stringy bark. Behind my place is a large stretch of bark on mudstone ready to spot 10km on a bad weather day. Will get photos soon.
- Orara west state forest. No fire for 38 years, harvest, too dangerous to HR?!! Upper Orara has huge fuel loads in all directions. Council and crown land just as bad.
- Bees nest, huge fuel loads no break to private land, risk adverse management knew bad weather coming and needed to take out a section of bush west of Guy Fawkes river and didn't.

Public

- Its not the job of the RFS to clear around houses, we have families and jobs too. Put the responsibility back on the landholders.
- Education and personal responsibility v's cycle of complacency with big fires every 20 to 30 years. We just don't seem to learn and keep repeating the same mistakes.
- Fear of fire tends to lead to a tendency to ignore it. IE don't do anything to reduce the risk.
- Private landholders poorly prepared.
- The fires coming, run away warnings did save a lot of lives but there appears to be a lack of resilience at the community level. Offering courses on preparing your property for fire and linking it to a reduction on insurance might be one of the carrots offered. I have other ideas.

One final important point that hasn't been given much attention is most of the death and injury from falling trees could have been AVOIDED with regular HR burns which culls the dangerous trees in more controlled conditions.

Putting all this together was difficult. This season has been very challenging for all of us and the existing RFS system is flawed but it has been the best we could do and many things worked, lives were lost and saved as was property. I hope the issues raised in this submission will prove useful for improvements and our service to the broader community. For me it has been an absolute privilege working with all of you. As a newish Captain I have learnt a lot. Thank you.

Regards

Tom Reeve

B.App.Sci (Hon), Captain Orara Brigade.

Annex

CSIRO Report, MCS Doctrine and intent, observations of a suspicious fire, results of visit 12th Nov, 2 photos, toms fire, comments on Mt Browne fire.

Results from house visits last Tuesday 12th Nov 2019

Our visits to the houses had some surprising results. During the difficult time on Tuesday 12th Nov The Orara trucks visited all the houses on Dairyville Rd, Upper Orara Rd from Dairyville Rd to and including Cochran's pool (the 280's) and Mt Browne Rd to the railway bridge. Approximately 150 houses in total. We collected data based on limited resources (two trucks from the brigade and 6 NPWS slip-ons) and no air support.

Based on the assumption of a fast-moving fire and we had to keep resources available to rescue people results were-

50% were defensible. Exit safely and space to park an appliance safely.

15% were not defensible (bush close to the house, poor house construction, flammable junk around house) but safe to rescue people (accessible safely).

35% were not defensible nor safe to rescue people.

If the fire was slower moving and we had more appliances where some would be trapped safely approximately 66% of the houses were defensible. With air support that could have gone up to approximately 75% (dousing the exit).

Other facts

36% of the people were staying (26% of which were in defensible positions)

Approximately 33% of all the properties had water available near their assets. Dam, pool or SWS tank.

One had a fire bunker

Note the above is a guide only as we had 3 different crews making very quick judgements.

I would expect Friday creek Rd would be similar.

The loop roads would be different. Many more properties would have water and be defensible.

Also of note were decisions that properties on Mt Brown Rd from the top of the hill () down to Coramba Rd at some point would not be accessible when fire impacted the road. Also that Properties between and and on Jacaranda Pl would most likely not be defensible due to the intensity of the fire coming up the hill but we could respond to save people. At some point we expected to be cut off on upper Orara Rd beyond the dam wall.

Regards

Tom

From: tom@mirumcreek.com.au <tom@mirumcreek.com.au>

Sent: Wednesday, 18 December 2019 12:47 PM

To: Sean McArdle <Sean.McArdle@rfs.nsw.gov.au>

Subject: Mt Brown Help

Dear Sean,

It is with a lot of gratitude that I would like to thank everyone in the MNC team for their efforts controlling the Mt Brown fire.

It was such a relief as the trucks rolled in as, having worked with most of the crews, I knew their level of professionalism and determination.

So many things could have gone wrong. 4 of the 11 houses on Mt Brown Rd were almost indefensible and all hell would have broken loose if the fire got on the other side of Mt Brown Rd or Jacaranda Drive.

With the hard work of RFS crews and forestry and the weather we didn't lose anything. This as all done without outside assistance and with the Andersons fire running as well.

I feel both humbled and pride to be a part of a great team.

Thank you all

Tom



Tom Reeve

Farmer

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Typical fuel load Grid Reference 970 454 Upper Orara 1/3/220



Typical fuel load Grid Reference 971 456 Upper Orara 1/3/20

Following is part of an email from a fellow firefighter, Marty Williams, with some suggestions which could be fleshed out.

200 years of poor land and fire management is the catalyst with climate change variables providing the perfect fuel loads.

Forestry and Parks need to go back to the firefighter numbers they had 30 years ago to adequately manage their assets.

HRBs must be vigorously pursued with less red tape during the very limited window of opportunity. Mitigation expanded to assist reach the HRB targets.

Community Fire Units need to be promoted and more widely created/ supported.

Build Back Better must be the mindset with appropriate land use rezoning where applicable.

RFS must adopt tethered drone systems for patrol, early warning, mapping, night time intelligence gathering and as communication relay points to improve FG comms (see:

<https://www.foxtechfpv.com/foxtech-t3500-plus-tethered-power-system.html>)

Media must only be permitted into firegrounds under escort or face criminal prosecution.

Resources must be assigned for escorting wildlife carers into firegrounds as soon as reasonably safe to do so (suitable persons with BFS or BFA and PPE).

Police, ambulance and SES should all be provided compulsory BFS or BFA training for bushfire support and making wiser decisions.

Traditional burning must be widely adopted along with identifying ancient song lines containing environmental data and transposing to GIS.

Community engagement programs must be suitably resourced to leave meaningful message based items in the community (eg keep looking while cooking spoons)

Yep, I'm with you... nice simple things that can be adopted.

Most of the above is in the VBRC recommendations but some are my own twist on things.

Will happily sit down and discuss further when time suits better and you have your property sorted.

Regards,

Marty

Observations on what I consider as a suspicious spot over. North of 209 Wiriri Rd approx 01.00 on the 17th September 2019.

- One of the trucks from the other overnight strike team was stopped by the owner at 209 after midnight. They walked to the back of her property and found a long line of fire along her back boundary approximately 300m from her house to the north.
- Rob tasked Orara 9 to look after her.
- We met the owner's brother in a Subaru forester AKN491 who took us onto her place and showed us the fire. He also showed us an overgrown track that he thought would take us around behind the fire. 613 636. I chose not to walk the track as I was starting to get suspicious and was concerned we could get cut off by fire.
- We took 2 bearings at around 01.00. 0 deg at 617 633 and 284 deg 620 633 (magnetic). The fire appeared to be small (100meters diameter, based on the glow and about 400m from her house) Weather was mostly calm with a 1 to 2 km/h intermittent breeze from the south.
- Around 2 am we were relieved for a break (Boambee 7?). Neil was super tired so I left him at Tyringham fire station and I returned to look after 209.
- Sometime around 03.00 the owner approached our trucks. She was distressed and hadn't slept for 2 days. Both Boambee and myself let her unwind and talk it out with supportive comments. Then out of the blue her demeanour changed and she said that she told them she didn't want the backburn because of spot overs and that the fire was on her place so how much compensation would she get. It was at that stage I realised that supportive comments were dangerous so I felt I had to challenge her statements. Pointing out that without the backburn the wildfire would have roared up the hill from the south and most likely taken out her house. I also mentioned that "her" spot over may have been deliberately lit as the fire to the south of her place was suspicious. She calmed down after a bit when I said I am not accusing anyone. The conversation got better when I asked her about herself in which she said she was a conservationist and I mentioned I was an certified organic farmer. I encouraged her to get some sleep as we were here and would knock on her door if things changed. Meanwhile the fire had slowly moved down the slope to about 250m from her house in calm conditions.
- I walked towards the fire to asses fuel loads which were in excess of 20t/h halfway up the ridge, flame height varied from 500mm to 8 m when some vines dried out. Water vine on either side of the creek bed which became the trigger point for back burning (about 60m from her house).
- Given all the drama at 209 I agreed with Rob to only act when the house was threatened so left her to sleep and kept the trucks away from the house and kept the crews calm.
- Weather at 05.30 in the gully 617 633. Temp 12.5 Humidity 73% wind occasional 1 to 2 km/h breeze from the west (Katabatic).
- At daybreak I met Nicki. A local RFS member who lived down the street. A practical country woman whom I would welcome in Orara brigade anytime. She thanked me for getting the owner to sleep and we took of to investigate the broken containment. She didn't think the owner started it but knew of 3 men who were her associates who hated forestry and knew of the track in behind 209. Together we worked out how to get a dozer around the fire and she left for Tyringham station.
- I caught up with Rob who had a very frustrating time trying to get resources to deal with the "spot over". I made a mistake in interacting with the forestry dozer driver which Rob fixed up. And then got the RFS d7 dozer started on the track at 613 636 with a request to avoid

disturbing the fire origin. Nicki was back and took over the dozer escort. Unfortunately, the dozer would have wiped footprints of the track.

- I returned to 209 and joined the rest of the strike team. While I prepped them for action, I kept them busy with questions and away from the house. Given the volatility I thought it best to do the least. Judy was quite concerned that we were not prepared but I hadn't shared with the crews my concerns and having been there for many hours knew we had plenty of time.
- Shortly thereafter Rob returned and we were relieved. The fire was still 75 m from the house and hadn't reached my trigger point.

Rob developed the opinion that it was a spot over. Given the initial crews observations of a line, my observations at around 01.00 re the size and position and the calm weather I have a different opinion. There was no way an ember travelled 400meters plus to start that fire late Monday night. I expect the owner will try to take the matter further. If this is investigated, I would be interested in the conclusion.

On a personal note I felt observed at times and realised this was potentially a dangerous situation. It wasn't the fire that was the problem. I welcome others ideas on how I could have handled things better.

Regards

Tom

Mission-Driven Culture

By Mark Smith & Don Whitemore

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A tsunami of fire closes in on a casino resort in the foothills east of San Diego. A CalFire Battalion Chief, scouting as a field observer along with a sheriff's deputy, arrives on scene to unfolding catastrophe: people are panicking and attempting to evacuate on a narrow, winding road. In the BC's judgment, the 2500 people around the casino will face certain death in their struggle to escape the flames. He orders everyone inside and directs management to lock the doors. When the flame front passes, the BC directs the deputy to go door to door and evacuate to as many homes as possible in the fire's path.

Post-event investigations all agree that together the BC and sheriff's deputy saved thousands of lives that night. Their extraordinary actions were not the result of specific policies or standard operating procedures. They were the result of an organizational culture that fosters adaptability and resilience – a Mission-Driven Culture (MDC).

The Battalion Chief had no positional or delegated authority to take the actions he did, nonetheless, it was the necessary thing to do and it was the right thing to do. The Los Angeles Times agreed: "In a night where few guesses proved right, [the battalion chief's] gamble paid off. Like a moat, the parking lot and golf course protected the casino as flames raged past."

Contrast that story with this headline from an incident several years later that sparked community outrage:

'Handcuffed by policy': Fire crews watch man die

About 75 beachgoers could not understand why [city] firefighters and police officers stood idly by and watched the man slowly succumb to the 60-degree water.

"It's horrible," [a witness] said. "How can we let that happen? How can our emergency personnel allow that to happen? I don't get it, I don't understand it."

The [city] Fire Department says budget constraints are preventing it from recertifying its firefighters in land-based water rescues. Without it, the city would be open to liability.

When asked by [the news] if he would enter the water to save a drowning child, [city] Fire Div. Chief [name] said: " Well, if I was off duty I would know what I would do, but I think you're asking me my on-duty response and I would have to stay within our policies and procedures because that's what's required by our department to do."

In one situation, responders over-rode policy and saved thousands of lives. In the other, they followed policy and a 50-year old man spent nearly an hour in the chilly water before drowning in plain sight of those sworn to save him.

Followers are conditioned to follow rules. When they encounter ambiguity, they ask permission to act. Until then, they wait to be told what to do. Rules make sense for things that cannot be delegated or have no value being delegated. When they interfere with doing the right thing, that's a problem. Tragically, accounts of agencies shackled by their own policies are all too common. Initially well intended, these policies become "Tail Wags Dog" stories, counterproductive to the organization's mission.

How are we to equip people with the necessary guidance so the right action is taken, at the right time, and for the right reasons? The answer lies not in beefing up current policies, but in shifting culture to value operators over followers.

MDC consists of a set of foundational values and principles that integrate existing sets of values and practices throughout the organization and align them to the core purpose of the organization. MDC seeks to optimize balance of safety, efficiency, and effectiveness to best deliver service to the customer. It places priority on maximizing successful mission accomplishment over rote process.

Bureaucracies tend to rely on systems and processes to make decisions. MDC relies on individuals to use their judgment, guided by values and principles versus policies and rules. In standard circumstances, the best course will normally be to use the applicable standard operating procedure (SOP). Standard situations are where the inputs are well understood and the outputs (the results) are highly predictable. In abnormal circumstances, the SOP is inadequate to solve the problem and achieve success.

A Mission Driven Culture (MDC) has six core values:

- Service for the Common Good
- High Trust State
- Pursuit of Truth
- Form & Function Defined by the End State
- Individual Initiative
- Continuous Improvement

MDC uses a system of mission command - decentralized decision-making, guided by a framework of leader's intent combined with the authority and expectation to act. Senior leaders communicate the task, purpose and end state of an assignment and provide the needed resources. The how of getting it done – the planning and the execution - is delegated to sub leaders.

In the absence of guidance, operators are expected to act within the intent of the organization's mission. Operators should constantly strive to influence their environment to accomplish the mission. They act as leaders regardless of rank. The BC at the casino was an operator. By his telling, his decisions and actions were a product of a mission-driven culture.

Mission command is extraordinarily disciplined. Each operator is highly accountable for their actions and the flow of information. Senior leaders still communicate constraints – things that must be done or things that cannot be done – but MDC focuses on training people how to use their judgment, rather than rely solely on rules and policy.

Agencies are experiencing an explosion of complexity, and with that, increased expectations and accountability. Federal assistance is shrinking or at best, flat lined. These trends drive the need for greater adaptability, and increasing the speed of the decision cycle. The model of hierarchal, centralized command and control reflects an obsolete leadership paradigm that believes people are cogs and controllable by systems. This model fails in large, dynamic events. Information cannot flow 'up', be decided upon, and flow 'down' fast enough before the decision is rendered irrelevant by changing circumstance.

Paradoxically, centralization seems part of our nature. For the most part, emergency responders work in government agencies that tend to be bureaucracies. Bureaucracies seek equilibrium and self-preservation. The goal is expressed as control and is most frequently achieved by attempting to eliminate uncertainty and surprises. The absence of bad things becomes valued more than the presence of good things. The well-worn path to avoid bad things is to make lots of rules and centralize authority.

Inevitably layers on layers of policies and rules impact operational culture. They create a culture of permission asking followers. Originally intended to eliminate negative outcomes, myriad rules end up stifling initiative, discretion and judgment. While waiting for permission, critical windows of opportunity are missed, and, as we read earlier, a man drowns to death.

This is the Myth of Control. The more one tries to reach down and grab control in chaos, the less control one actually has. That cultural model creates micromanagers and followers rather than leaders and operators.

The culture of permission asking also creates risk aversion. Followers are more afraid of breaking rules and making mistakes than of missing an opportunity to make a difference. Team failure is acceptable because of the cultural norm that individual failure, and not team failure, is what gets punished. Thus, the focus is not on success, but rather on avoiding failure.

Nearly 200 years ago, Carl von Clausewitz first used the term Fog in describing the effects of chaos on the battlefield. The phrase, Fog of War quickly became part of military science. He noted that the combination of friction, danger and uncertainty would stymie the efforts of a force to project its will on the operational environment. These elements are inherent in the DNA of chaos. An increase in one – uncertainty, for example – tends to start a snowball effect with the other two elements and quite often magnifies their cumulative effects unexpectedly.

We're at a point in society where the fire or the flood is no longer the primary issue. Second and third order effects that cascade into the strategic, human driven dimensions of incident management create new levels of complexity: Political, Security, Economic, Social, Infrastructure, Information. These dimensions greatly magnify expectations and demands for results. They add to the confusion and challenge inherent in the fog. Operators do not implement strategy, but in this environment one operator, at the right time and place – or the wrong time and place – can have strategic impact. Just contrast the two stories at the beginning for examples of both.

The fog guarantees that, by the time a request has reached higher authority, the situation has completely changed. The window of opportunity has closed. Mission Command doctrine urges "...the use of commander's intent and exercising disciplined initiative to seize, exploit and retain the initiative."

MDC and its intent based planning system is based on 3 foundational assumptions about an operating environment where the fog of war is common:

- Uncertainty - Every decision made in real time is imperfect.
- Friction - Generally, the best decisions will be made by those closest to the event.
- Danger - A well trained operator, taking reasonable precautions, can still be injured or killed.

Rules and standard operating procedures that work well in routine emergencies begin to break down quickly as the fog increases.

In MDC, many policies and rules are considered authoritative but flexible. Operators are expected to use disciplined initiative to adapt the rule to the situation. Operators are even expected to disobey literal orders when they understand the situation has changed where following those orders would prevent accomplishing mission intent.

MDC relies on professional judgment to reach the appropriate decision in chaotic circumstances. Decisions that result in bad outcomes, if made in good faith trying to meet the intent, are underwritten as acceptable losses and learning opportunities for the organization.

The Myth of Control leads to another logic flaw within operational culture – that systems govern people instead of the other way around. This leads to a compliance mindset. Compliance is necessary and effective in managing machines, material and money. It is counter-productive in managing human behavior. Bureaucracies tend to forget that bringing order to chaos is a creative and interactive social process between humans. This type of collaboration is not managed well by policies.

In a rules-based system, any failure results in one of two possible conclusions:

1. There was no rule, so now, we just need to make a new rule.
2. The existing rule did not work. We need a better rule. A stronger rule!

Over time, the density of policy documents results in many rules that contradict others. This guarantees an environment where people cannot do their jobs and comply with all the rules on the best day. Thus, on the worst day, as chaos and the fog of war increase, mission success is even more unachievable. When such failure is investigated and judged in hindsight against the agency's own rules, leaders often have no viable defense.

In contrast to a centralized, rules based leadership system, Mission-Driven Culture (MDC) relies on disciplined individual initiative and professional judgment in interpreting a set (or sets) of principles, and one of MDC's most powerful organizational effects is that while accountability goes up, liability goes down. Thus, external evaluation is left to determine whether the operator's judgment was within acceptable or reasonable limits by people with roughly the same level of training, qualifications and experience as the decision maker in question. Moreover, because fear of liability is reduced, leaders can use more peer reviews or Facilitated Learning Analysis Teams for minor failures and near misses, and real discipline is reserved for willfully violating policy or for gross negligence. All other issues can be dealt with through mentoring and training.

To be sure, operator accountability is paramount. They must trust their leadership and be trusted by leadership. Operators must be trained and extremely proficient in principles based critical thinking. Consider for a moment our story of the Fire Div Chief unwilling to save a drowning child if doing so meant violating department policies and procedures. It is doubtful that those rules were enacted specifically to hamper life-saving actions, but rather to limit some other action or behavior that produced an undesirable outcome. Thus, the intent behind the policy is lost and blind adherence to them results not only in individual failure, but ultimately organizational failure as well.

Organizational leaders who have adopted intent based planning approaches to address this gap in mission achievement, describe the following indicators of success:

1. Leaders at all levels are feeling like the quality of risk decisions and discussions has improved.
2. Leaders feel like the trust state has increased up and down the chain as well as with executive staff above the agency or incident management team.

3. Leaders feel like they are getting fewer "surprises" as managers.
4. Leaders feel like they are getting better "buy in" from cooperators and stakeholders.
5. Leaders feel like they are getting higher levels of support internally and externally.

Other critical organizational metrics manifest over time: a decrease in grievances, an increase in retention, and fewer lost days. In totality, the six mission driven culture values, which provide for initiative, trust, truth and improvement, provide for greater individual judgment and accountability. Operators are specifically delegated the opportunity to succeed and, in doing so, the organization is aligned for success as well.

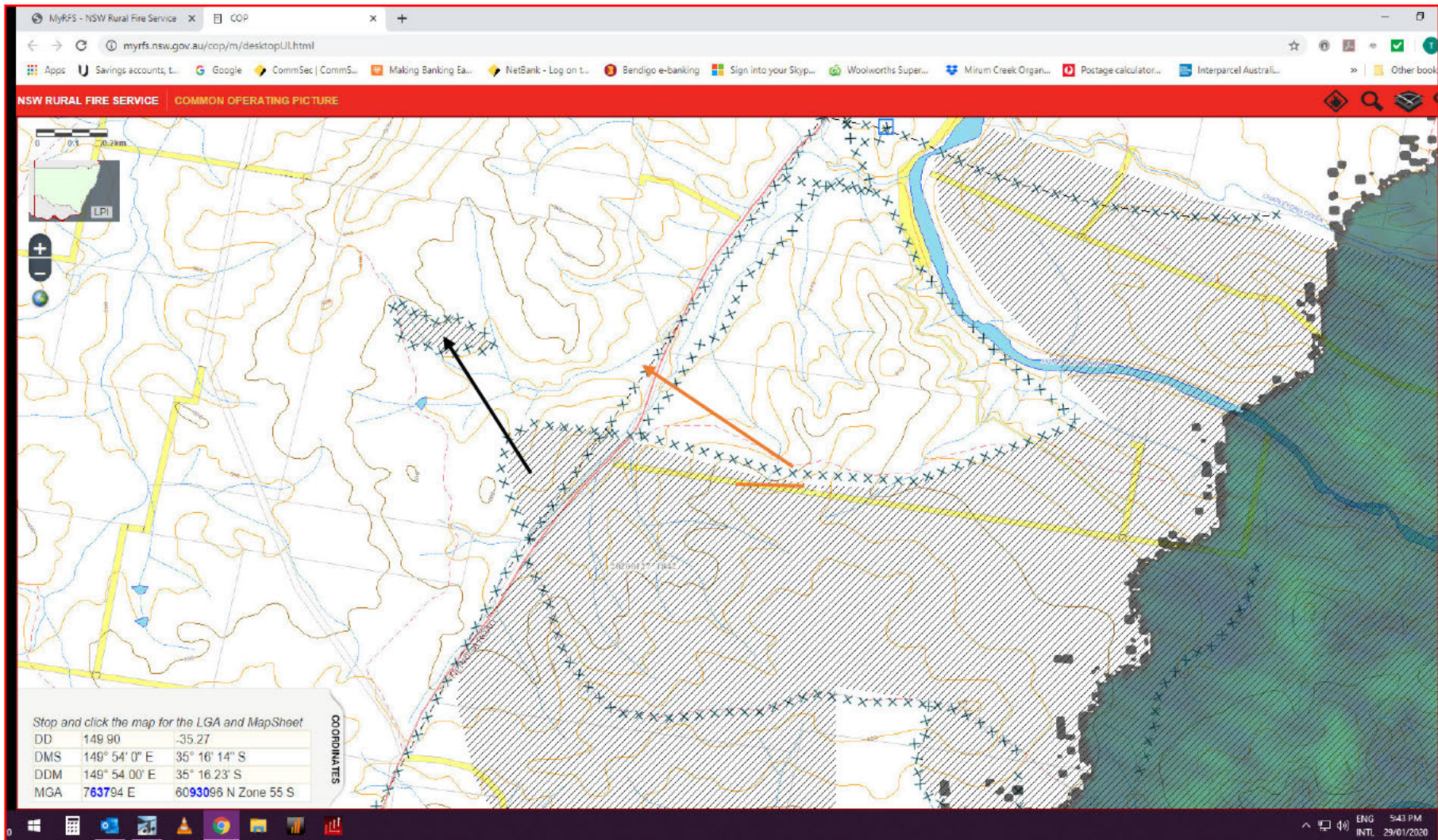
What's surprising about the \$11B (USD) of federal funding provided post-9/11 to state and local response organizations for equipment and technical training is the fact that only .0058% of it has been spent on command or leader development. Another way to view this is we've likely spent more money for the helmet and gear that go on a responder's head, than what goes in it. Priorities have focused on acquiring "things" as opposed to developing skills such as decision-making, critical thinking and judgment during chaotic, complex events. The investment and commitment to the developing right culture is the necessary next step in the evolution of emergency services.

There is no denying the increased challenges responders face. Expectations are expanding; risk is escalating; societal networks are growing more complex and, consequently, more vulnerable. In this world, the centralized decision-making model is increasingly a recipe for failure. MDC and its intent based principles and tools encourage and enable critical thinking, a common operating picture, concentric decision-making, and risk management at the operator level. MDC minimizes the friction, uncertainty and risk inherent in the Fog of War by increasing flexibility and adaptability. Using the context of leader's intent, operational decisions are accelerated to take advantage of opportunities for success in the field.

MDC is not like a fire extinguisher – in case of emergency break glass – that you can pull out and use only when a crisis hits. To be there when "it" hits the fan, it must be part of how business is done every day. In other words, train as you fight.

In the military, a force multiplier is a... "capability that, when added to and employed by a combat force, significantly increases the combat potential of that force and thus enhances the probability of successful mission accomplishment." Mission-Driven Culture is a force multiplier.

The call to action is for senior leaders of today's emergency response agencies to make the investment of time, energy and resources to build the culture that is adaptive and resilient to the ever-growing list of challenges. The outcome will be a higher level of customer service and mission accomplishment; increased trust within the community; and, leaders better prepared for future positions of increased responsibility as well as the large complex events they will undoubtedly encounter.



Orange bar Toms fire, Note north of fire was tea tree which had spotted 200m that afternoon.

Orange arrow what we stopped happening. Black arrow was a separate fire. Note map was 1 week after our return.

