



**House Natural Resources Committee
Subcommittee on National Parks, Forests, and Public Lands
Oversight Hearing: *Wildfire in a Warming World: Opportunities to Improve Community
Collaboration, Climate Resilience, and Workforce Capacity*
Thursday, April 29, 2021
1:00 p.m. EDT**

**Testimony of
Dr. Dave Daley
California Cattlemen's Association, National Cattlemen's Beef Association, and Public
Lands Council**

Good afternoon Chairman Neguse, Ranking Member Fulcher, and members of the subcommittee.

I am Dr. Dave Daley, a native Californian and fifth-generation cattle producer from Butte County. I am a father, educator, and survivor of catastrophic wildfire.

It would be no exaggeration to say that I have spent my life in service of the California natural resources and landscapes I call home. My family has spent five generations living, working, and caring for the lands, waters, and wildlife that inhabit this area – and they have done it while also ensuring that our communities have access to high quality protein.

I am also an educator. I have spent more than 30 years working with the next generations of farmers, ranchers, range scientists, lab technicians, and agriculture specialists at California State University, Chico. I have directed research, guided students, and applied cutting-edge technology in an agriculture industry that grows and adapts every day.

I am here today to testify on behalf of my home state association, the California Cattlemen's Association. My testimony is not unique to California, however, and the recommendations I make today are in concert with the National Cattlemen's Beef Association and the national Public Lands Council, where I serve as chair of the Federal Lands Committee and the Ecosystem and Environment Committee, respectively.

It is the sum of my experience that brings me before you today. From the beginning, stewardship of the land and an active engagement with the natural resources around me was a necessary and inevitable outcome of our cattle operation. On private land, resource stewardship is expected – you take care of the ground you own, not only because of pride in ownership, but also because your inputs determine your output. Resource stewardship is directed by the desirable outcomes. Ranchers cultivate landscapes that have healthy soil, flourishing plant biodiversity, and intact water features. We do so as an obvious component of our operations, but also because there is an

inextricable and innate desire to take care of the resources that take care of you. It is an immense responsibility and an immense privilege.

The same is true for public lands grazing allotments. Across the West, federal agencies manage more than 250 million acres for livestock grazing, with various levels of grazing authorized. These authorizations are based on robust environmental analysis and are adapted to ecosystem conditions. Livestock grazing is the only multiple use that pays to improve the landscapes on which it occurs, leaving the resource more resilient than before. Moreover, these grazing activities are the first line of defense against some of the most significant threats facing incredibly expansive ecosystems. Wildfire is chief among those threats.

Generally, fire plays a natural part of ecosystem management. As this committee has heard many times, fire is a critical part in eliminating or thinning specific fuels, is important for germination of certain tree species, and can be a valuable intervention for certain soil types. That kind of fire is still possible, and occurs in any number of areas every year. That is not the fire we're here to discuss today.

West-wide, ecosystems have changed. Overcautious policy to correct real or perceived wrongs in stewardship resulted in decreased active management of forests, grasslands, and rangelands across the West. The result: dense canopies more prone to fire, rangelands overgrown by invasive species after abnormally hot fires, and fires that seem to be impossible to stop.

The world is changing. The climate is changing. We live in a time where communities are expanding further into forested areas while residents are further away than ever before from the direct knowledge of the farm or the wilderness. Too often, preparations for wildfire focus on defensible space and thinning in the wildland-urban interface (WUI) without acknowledgement that strategic and widespread intervention is desperately needed across hundreds of millions of acres.

Last year, 4.2 million acres went up in flames in California alone – equivalent to the size of Rhode Island and Connecticut combined. More than 10.3 million acres – nearly 1.5 times the size of Hawaii – burned West-wide. 9,900 of the 57,000 fires last year were in California alone. We all saw the photos of the homes, businesses, and cars destroyed. The tragic loss of human life was unfathomable. Outside of California, communities were quite literally choked by the smoke and particulate matter coming from California fires. In the midst of the COVID-19 pandemic, air quality was consistently “unhealthy”, even for those who were not suffering from respiratory symptoms. Recent study has demonstrated that particulate matter found in wildfire smoke can be up to ten times more harmful for human health than particles from other sources – including other types of fire like prescribed fire.

The consequences of poor management, of poor adaptation to changing conditions has brought us to a place where we need swift, decisive, and strategic intervention to interrupt the current fire cycle that perpetuates the negative impacts of drought, fire, loss of biodiversity, decrease in watershed health, and more.

Unfortunately, this is not an academic exercise for me. Over the last three years, Butte County has seen firsthand the devastating impacts of repeated bouts of catastrophic fire. The Camp Fire in 2018 killed nearly 100 and destroyed the town of Paradise. It was the most destructive fire in California history, both for human structures and hundreds of thousands of acres. Since then, catastrophic fire has destroyed communities like Berry Creek and decimated entire ecosystems like those near Lake Oroville – and this is just in Butte County.

In 2020, the Bear Fire consumed the mountain I have called home for my entire life. With it, the fire took my cattle, the hundred-year old trees, and the soil store of native seeds for grasses and shrubs that hold the topsoil, secure streambanks, and are the forests' life source. It took deer and birds and foxes. It destroyed homes and fences and outbuildings. For a time, it destroyed hope.

As an addendum to my written testimony you will see an account I wrote during the midst of the fire – *I cry for the mountains and the legacy lost: The Bear Fire*. I kept the account as a way to work through some of the anger, despair, and frustration I felt as my neighbors, my children, and I walked through smoldering trees and over hot ground knowing that the ecosystem that had once been a thriving and complex system was now a hellscape of ash and sterile dirt.

We must do better, and often the question is “how?” It is the “how” that has been politicized. Those who want to protect the forests, rangelands, and grasslands have sought to do so – at any cost. That protection has too often meant preservation – which limits human interaction in an effort to keep the ecosystems pristine - but that’s now how nature works. Ecosystems are ever changing, influenced by direct actions and factors that may be miles – or years – away. To keep an ecosystem healthy, it needs constant interaction and cultivation, the kind of cultivation that takes coordination among state, federal, and non-governmental entities. This is the kind of coordination and cooperation we see on grazing allotments. It needs to be replicated.

The premise of the hearing today is fire in the context of a changing climate, and what to do about it. I urge the Committee not to miss the forest for the trees, quite literally. National policy debates about climate and environmental management often are overwhelming and attempt to take on too much at once. We do however need coordinated action that uses discrete tools, over a diverse landscape, to make a difference. This year, much of the West is facing an unprecedented drought. This fire season has the potential to be one of the worst we’ve seen in recent history. Said without hyperbole, this is a call to action for you as natural resource policy leaders, to recognize that your leadership is desperately needed.

After last year’s catastrophic fire season, California political officials, fire experts, natural resource managers, and private citizens finally agreed on a few basic principles: catastrophic fire conditions are pervasive, intervention isn’t optional, and the current management system has failed. Federal and state bureaucracy that was intended to be protective had become restrictive. Environmental analysis that was intended to prevent negative outcomes had delayed critical activities that were necessary to prevent truly catastrophic outcomes. Governor Newsome has worked with us at the California Cattlemen’s Association and with other land management groups to find an expedited path to reclaim burned lands and intervene in areas at critical risk of fire. He and his administration have invested in firefighter training to keep them safe as they

battle the blazes. Perhaps most importantly, he and his administration have invested in a strategic plan to reduce fuels through the use of prescribed fire and other tools that will not just put fires out, but prevent them from escalating.

There is an opportunity to recognize that natural resource-related jobs are critical for communities. When Congress and federal agencies pursued a largescale abandonment of several critical rural industries including logging, there was an accompanying loss of infrastructure, expertise, and local economic productivity. Congress has attempted to fill that void with programs like the Secure Rural Schools (SRS) funding stream. While SRS funds are critical to rural communities, they are also a reminder that industries and local revenue were lost in pursuit of a more pristine forest climate. What has resulted are small towns, without natural resource jobs and infrastructure, and landscapes desperately in need of the kind of active management those communities once provided.

The rural workforce needs predictable jobs. Jobs in forestry, land management, and energy – both traditional and emerging – are critical. Seasonal fire jobs are not the kind of long-term stability our communities, or the President as part of his Build Back Better initiative, have in mind. Restoring ecologies and making landscapes more resilient means cultivating experts in environmental analysis. It means supporting ranchers who are bringing home the next generation of agriculture and land managers. It means ensuring that there are healthy landscapes for future generations by investing in those who can do the boots-on-the-ground work of reseeding and prescribed fire management. It's not just the temporary investment in seasonal fire crews, despite their immense value and contribution to safe communities. It is an all-of-the-above approach that rural stakeholders have been bringing to Congress for years in hopes that Congress would listen.

Forests, rangelands, and grasslands that are at high risk of catastrophic wildfire are not resilient. The cycle of fuel loading, catastrophic wildfire, and loss of biodiversity decreases carbon storage potential in the soil and plant community. In addition to the loss of storage potential, fires release immense volumes of carbon; the [California Air Resources Board](#) estimated that the state's fire in 2020 emitted approximately 112 million metric tons of carbon dioxide, roughly equivalent to more than 24 million cars. Congress has been so focused on the big picture, wallowing in the intransigence of the issue, rather than picking a solution and making it work. You eat an elephant one bite at a time, and you improve the health and resilience of millions of acres of forest a few acres at a time – replicated over many areas.

If there is one salient takeaway from today's hearing is that there are options available to Congress and to the federal agencies, if only you will avail yourselves of them. Using "good" fire – prescribed fire – to decrease fuel loading is one. Where conditions prevent the use of fire, prescribed grazing should instead be used. The national media is alight with stories of goats grazing in Central Park in New York City, or of the traveling goat herds that graze the lawns of Town Halls from Georgia to Oregon. Cattle and sheep can do the same sort of targeted fuels management, and they do it faster and more efficiently. As a rancher, and an expert in animal science, I can tell you that the most nimble tool to address dense grasses in the most protective way is to graze these landscapes.

Mister Chairman, Mister Vice Chairman, thank you for seeking my input. This committee has an immense opportunity to do good with great immediacy, but you have to be directed by science, nature, and those who have demonstrated success year after year, generation after generation. I leave you with some of the closing words I shared during the worst days of recovery efforts on the Bear Fire:

And now we go on. What will happen? This is devastating emotionally and financially. And I am not sure of the next steps. I do know this: We must change our land management practices if we expect the West to survive. It is best done locally, not from DC or Sacramento, but I have tilted at windmills before.

We won't quit. We need to get tougher and stronger. We never have quit for 140 years and I won't be the first. Suffer the bureaucratic maze and try to make incremental change. And, as always, work with nature. I have to. Juni Daley, and the next generation, needs to see the mountains the same way we have seen them forever, to have hot chocolate on a cold fall morning and gather cows. It can't be just stories from her Granddad.

Appendix A:

I cry for the mountains and the legacy lost: The Bear Fire

By Dave Daley, Butte County Rancher & CCA Immediate Past President

It is almost midnight. We have been pushing hard for 18-20 hours every day since the Bear Fire tore through our mountain cattle range on September 8th, and there is so much swirling in my head I can't sleep anyway. The fire destroyed our cattle range, our cattle, and even worse our family legacy. Someone asked my daughter if I had lost our family home. She told them "No, that would be replaceable. This is not!" I would gladly sleep in my truck for the rest of my life to have our mountains back.

I am enveloped by overwhelming sadness and grief, and then anger. I'm angry at everyone, and no one. Grieving for things lost that will never be the same. I wake myself weeping almost soundlessly. And, it is hard to stop.

I cry for the forest, the trees and streams, and the horrible deaths suffered by the wildlife and our cattle. The suffering was unimaginable.



When you find groups of cows and their baby calves tumbled in a ravine trying to escape, burned almost beyond recognition, you try not to wretch. You only pray death was swift. A fawn and small calf side by side as if hoping to protect one another. Worse, in searing memory, cows with their hooves, udder and even legs burned off who had to be euthanized. A doe laying in the ashes with three fawns, not all hers I bet. And you are glad they can stand and move, even with a limp, because you really cannot imagine any more death today. Euthanasia is not pleasant, but sometimes it's the only option. But you don't want more suffering. How many horrible choices have faced us in the past three days?

We have taken cattle to the Plumas National Forest since before it was designated such. It is a steep and vast land of predominantly mixed conifers and a few stringer meadows on the western slope of the Sierra Nevada mountains straddling Butte and Plumas Counties.

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My Great, Great Grandfather started moving cattle to the high country sometime after he arrived in 1852 to the Oroville area looking for gold. The earliest family diary of driving cattle to our range in the mountains dates back to 1882. Poor Irish immigrants trying to scratch a living from the land.

The range is between the South Fork and Middle Fork of the Feather River, the drainage that fills Lake Oroville. It is 80-inch rainfall country from October to May with deep snow at the high end, and then it goes completely dry. Three major streams/rivers and hundreds of creeks and springs punctuate the land. My friends from the arid west can't understand why it is hard to gather – “don't you just go to the water?” Not that simple in this environment. It is difficult country, in some ways more suited to sheep because of the browse, but politics and predators killed the sheep industry in the country years ago. But the cows love the range and do well. Cool days and nights, no flies, higher elevations avoiding the hot summers in the valleys. A great place to summer cattle. They actually like to go as much as we do!

For those of you who have never seen this land, this isn't riding a horse into a meadow or open ridge where you can see cattle. This is literally “hunting” through a vast forest of deep canyons, rivers and creeks, and the high ridges in between. It is not an easy place to gather or even find cattle in the best conditions.

There are six generations who have loved that land, and my new granddaughter, Juni, is the seventh. And I find myself overcome with emotion as I think of the things she will never see, but only hear in stories told to her by Grandad. We all love the mountains. They are part of us and we are part of them. All destroyed. In one day. I am angry.

As a child in the early 60s, days “going to the mountains” were the greatest ever for my family. It was our playground and our quiet spot. Sure, we worked, but we learned so much about the world, the trees, birds and flowers. And in my family sometimes that may have included learning the scientific name or at least the family of the plant. There were lessons on botany, forestry, geology, archaeology. We didn't even know we were learning but we imbibed it until it became a part of our souls.

And then my kids. For them, the mountains were the best! Rolling into a little seat behind Grandma and Grandpa to “go hunt for cows” as we gathered in the Fall. Hot chocolate from Grandma as soon as we got there. On cold, dusty or wet days, it was sometimes discouraging, but they loved it and still do. It was their sanctuary where “no matter what happens, this will always be here.” And now it is gone. It is a death and we are still in shock and not sure how to move forward. What will my granddaughter know of the truth and grounding that comes from nature? Will we gather cows in the mountains while I sing cowboy tunes off key and she sips hot chocolate? I am overcome.

When the news broke of the fire in our cattle range, my son Kyle, who ranches with me, and I were sure it could not be as bad as it sounded. We had close to 400 cows, most of them

calving or close to calving in our mountain range, ready to gather and bring home in early October. They were the heart of the herd. Old cows, problems, bought cows and first calf heifers stayed in the valley. Only the good cows who knew the land were there. That first day, we had no access and were relying on spotty reporting posted to local news or social media. My daughter Kate, a veterinarian, who practices about four hours away, "I'm on the way." My youngest son, Rob (named for his Grandad) a soldier stationed in Louisiana, "I have a lot of leave and I'm on a plane tomorrow." All three have been unbelievable and we have all needed each other to navigate this heartbreak.

At first, we couldn't get into the range and were frantic as it was completely locked down because of safety. We knew cattle were dying as we waited. I received a call from a Pennsylvania number and answered before thinking. A wonderfully nice man from the Forest Service was calling to tell me about the fire since I had a cattle allotment in the Bear Fire area. I had to help him find it on the map! Frustrating. And he knew less than me. Later I got a call from San Bernardino (500 miles south), another fire resource officer from the Forest Service. I asked about access. "Well," he said, "maybe next week and only if we provide an escort. We have to make it safe first." He, too, had no idea where the allotment was or the challenge that I faced. All the cattle would be dead if I waited a week. I politely told him I would figure out an alternative - through private timber land and common sense!

I called our County Sheriff who has been a great friend of the cattle community. I had to wait one day, but he provided two sergeants to navigate the road-blocks until I was in the range. Was it dangerous? Yes. Were animals dying? Absolutely. Local solutions are always better. Thanks to Sheriff Honea, of Camp Fire and Lake Oroville Dam breach fame, and Sergeants Tavelli and Caulkins who got us access. All incredible people who get it. Local.



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On our first day, Kyle and I make a fast trip up to reconnoiter. We are unprepared for the total destruction of everything we have always known. Nothing left and active flames on both sides burning trees and stumps. Shocking. Surreal. We make it to our Fall River corral somewhat hopeful that there would be green and water to mitigate the disaster. Everything is completely gone and we see dead cows as we start down the hill. Everywhere. This is our first step in what will be an impossible week. We go home hoping against hope that we have seen the worst. Little did we realize that it was just the beginning and it could get worse.

It is 3:30 in the morning now and time to start this nightmare again. To find the courage to throw some things in the truck, run with the kids to check and feed the survivors, and hit repeat. I dread it but know we must. And I work to be optimistic because that is who I am. Not easy.

As we make a plan and split up to run 4-wheelers up and down logging roads hunting life and death, I think how lucky I am. So many people have offered to help. I am grateful but it is difficult to explain how challenging it is to gather in almost 90,000 acres of incredibly difficult terrain (and that's on a flat map!). Each canyon and ridge is dotted with logging spur roads that could be choked with down and burning trees. Much of it is unrecognizable, even to me. Only those with deep, local knowledge of these mountains can help. Fortunately, my family, the Carter boys (Devin and Doyle), Brian Jones—all friends of my kids—and now friends of mine, plus my best friend Sean Earley all stepped up. They know the mountains well and have helped us for years. They just showed up and said, "We're here. We're going. What can we do?" So, we strap chainsaws and some alfalfa on 4-wheelers and set out hoping against hope to find something alive.

We split up and my crew takes the Lava Top and Ross Creek drainage, while the other half goes towards Twin Bridges and Fall River. It is eerie, and as Rob said, "There is no sound in the Forest, just death." We are learning. When we traditionally gathered cows, they were always towards the ridge top in the morning and down by water in the afternoon. Now, we find nothing high up, except the occasional dead cow that wasn't fast enough. We just hunt for the deep holes where there was a chance for water and life.

You learn as you ride through the apocalyptic murk. Rob's head goes up and I catch the scent at the same time. The scent of death and charred flesh mingled with the acrid smoke that burns your eyes. You begin looking in the draws hoping it is not cattle. It always is. Eight cows and three baby calves in a pile at the bottom of a ravine, rushing in terror to escape. A sight you won't soon forget.

But today, when we meet up, Kyle and Kate had great news. They found sixteen head at our Twin Bridges corral! The largest group to date. I had baited it with alfalfa last night and there were cattle standing in the little corral of temporary panels. Remarkable. Two of them are heifers that I gave Kyle and Jordan (my daughter in-law and Juni's mom) for their

wedding. Kyle branded them with my Dad's original brand just to keep them straight. Someone in our crew said Dad gathered them for us so we wouldn't miss them. Maybe he did. My Dad was a cow whisperer who has been gone over four years after roaming the mountains for almost 90. Maybe he is still helping lead us and the cattle home. I turn away as I feel emotion begin to rise. Again. For some reason, I am more emotional when I find the live cattle than those that died. I don't know why? Maybe thinking what they went through and I wasn't there to help? And, more frightening, death has become more expected than life.

I completely dread taking my Mom to see this tragedy. She will be 90 in less than a month and still loves the mountains and gathering cows. She is tough but this could break anyone. She worked these mountains with my Dad from 1948 when she was 18, he was 21, and they had just married. She told me in later years that she had always loved the outdoors but really was "sort of afraid of cows" since she had not ever been around them. She never told Dad though and learned to be one of the best trackers and gatherers the mountains have ever seen, knowing every plant, tree and road.

You can learn more from old people. They may not use PowerPoint or Zoom. They may not be elegant in politics, but they have life experience. We are quickly losing that vital perspective from the land before we have allowed them to teach us. Far more valuable than a visiting scholar or great consultant. Local knowledge and observation. I wish we would listen.

I am again angry at everyone and no one. Why did this happen? I am absolutely tired of politicians and politics, from both the left and the right. Shut up. You use tragedies to fuel agendas and raise money to feed egos. I am sick of it. And it plays out on social media and cable news with distorted and half-truths. ON BOTH SIDES. Washington, DC is 3000 miles away and is filled with lobbyists, consultants and regulators who wouldn't know a sugar pine from a fir. Sacramento is 100 miles south and feels even more distant than DC. And to the regulators who write the Code of Federal Regulations, the policies and procedures and then debate the placement of a comma, you mean well, I know. And I am sure you are good people. But you are useless when it comes to doing things to help the land. And the "non-profits" (yea, right), lawyers and academics, this is all too often a game for you to successfully navigate your own institution. "How do I get a grant to study something that if I looked closely, generations before already knew?" Nothing happens on the ground to make change. I do understand that most folks truly care and start with the best intentions. For those of you on the right who want to blame the left and California, these are National Forest lands that are "managed" by the feds. They have failed miserably over the past 50 years. Smokey the Bear was the cruelest joke ever played on the western landscape, a decades long campaign to prevent forest fires has resulted in megafires of a scope we've never seen. Thanks, Smokey.

The US Forest Service is constantly threatened with litigation from extremists who don't want anyone to "use" the Forest. It is to be "preserved." Great job in helping to get us

where we are. And I feel bad for Forest Service personnel. Most of them are great people who work there because they love the land like I do. But they are chained to desks to write reports and follow edicts handed down from those who don't know. One size fits all regulations are not a solution in diverse ecosystems. And, the Forest Service budget is consumed by fire suppression and litigation. What funds are left to actually work on the land?

And, for those of you on the left who want to blame it all on climate change, the regulations at the state and federal level have crippled—no, stopped—any progress towards changing the unmitigated disasters facing our landscapes. I wonder how many of you have walked the canyons or ridges or seen the wildlife and beauty at a secret stream?

Politicians stage drive by photo-ops to raise money at the fringe. None of us really like you. We just are forced to deal with you. Of course, there are many exceptions and you know who you are. I hate to visit an office to discuss issues when the legislator is far more interested in talking than listening. It seems that nobody can be a centrist and make sense and win. There is plenty of blame to go around on both sides of the aisle.

And just maybe it's both—horrible forest management and climate change. Don't you think months of massive smoke covering the West may impact the climate, especially added to our other pollutants? Does it matter which came first? Why not invest in solutions rather than using soundbites to gin up the base? And locally, we know the solutions. And those investments should be locally conceived and locally driven.

I grew up hearing the stories from my Dad and Grandad of the “last man out” lighting the forest floor to burn the low undergrowth. Their generations knew to reduce the ladder fuels that spread the fire to the canopy, to open it up for the wildlife. It was a pact between our friends the Native Americans who had managed it this way for 13,000 years, the loggers, miners and ranchers. They knew ecology and botany and wildlife. They worked together because they loved and knew the land.

It was the early 1960s and snow was already on the ground in December on our foothill ranch. I would have been about four and holding my Grandfather's hand as he lit some piles of brush on fire to open the landscape. It was the practice he had learned from generations before. And the CDF (now Cal Fire) crew showed up, put out the fire, and lectured him for burning. My Grandad was the kindest, gentlest and funniest man I have ever known. And he was mad. It was the beginning of the end for our forest home. And it has proceeded at an unprecedented rate.

I am angry. Try a control burn in the winter now and watch someone cite you because it is not an approved “burn day,” you had the wrong permit and approval and you might impact air quality. It is beyond moronic. How is the choking air quality that has blanketed the west this past month, when people can't go outside without a mask, a better alternative? Are you

kidding me? Bureaucrats and well-intentioned regulators who don't know they don't know have tied our hands, and the blame is shared at the both the state and federal levels.



Lest you think I am a complete rube, I earned my PhD in Animal Science 35 years ago at Colorado State. I loved teaching and ranching – so I did both. But I am a cattleman at heart. And, I have been involved in industry activities for many years, serving as Past President of the California Cattlemen's Association, current Chair of the California Cattle Council, Chair of the Forest Service committee for the Public Lands Council and Chair of Federal Lands for the National Cattlemen's Beef Association. I have walked the halls of Congress, met with legislators in both Sacramento and DC and I am willing to advocate for the cattle community to anyone who will listen. I have dined with legislators in DC, Chicago and Sacramento at wonderful restaurants noted for fine dining. The company, food and conversation were enjoyable. And I have had bologna sandwiches and beer in the mountains with ranchers and loggers. Somehow, the air seemed cleaner and the food was better with the latter. Something about straight forward honesty and hard work is appealing.

I invite any legislator or regulator, state or federal, to come with me to this devastation. Leave your photographer behind, put on boots and let's go. I will buy the bologna. We have created tragedy after tragedy across the West, and we need solutions.

Look at the mega-fires California has experienced in recent years. If you study them closely, almost all of them start on State or Federally owned land. Fifty percent of California is owned by the feds or state, land that has unmanaged fuel loads because of the restrictions to do anything on the land. Right now, the only buffer to these disasters are private, well managed, grazed landscapes. They may still burn, but the fires are not as catastrophic and can be controlled. Butte County alone has recently had the Camp Fire which destroyed the town of Paradise, population of 20,000 where almost a

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hundred people died. And now the Bear Fire where Berry Creek, a small community of about 1000 residents had at least 14 deaths, an even higher percentage.

Our segmented view of the landscape has led us to tragedy after tragedy. As a rancher on the Forest, I am required, in the name of ecosystem health, to monitor meadow utilization, browse of willows and streambank alteration. Fine. I comply. If I hit 41% meadow utilization I can get a letter of non-compliance since 40% is considered the maximum. The Bear Fire did not leave 60% of the meadow! I wonder if I will get a letter of non-compliance? Again, the forest for the trees.

It is not the Forest Service range conservationist's fault that I have to monitor these three factors. It is the guidelines they were handed. But they are arbitrary and ineffective measures to "protect" the environment, and of no use against decades of unmitigated fuel growth. Can anybody look up and see the meadows and water disappearing? Is the health of the meadow crippled by unchecked understory growth that sucks the water out and allows invasion of conifers? It is easier to blame the cow. Look up. Watch nature. She will talk to you....

I think it is as simple as not seeing the forest for the trees. And in my academic life, it was the norm. I worked with wonderful faculty, staff and students who were committed to research and teaching. However, we rarely looked at the big picture because we were encouraged to publish in our disciplines without seeking out how our work connected with others or how our small piece was part of a larger solution. That "siloes" thinking plagues most bureaucracies and agencies. We only know what we know. And, in most disciplines in the academy, most faculty are now several generations removed from a direct connection with the land.

Listen to the generations before. Mega-fires are a recent product of lack of use of fire, less grazing and over-regulation. And if you look at recent history, almost every mega-fire that I can recall has started on state and federal lands. Mismanagement. And those catastrophic fires contribute to climate change. Yet the guidelines followed by the feds on National Forest and the State on State Parks lands are "one size fits all." It is beyond dumb. And no one's fault. And everyone's fault. Listen to the Forest. Listen to the locals.

The fire in Santa Rosa in 2018 was estimated to produce more CO2 and pollutants in one week than all of the cars in California in one year. We have already had six of the largest twenty fires in California history in 2020. The Bear Fire has eclipsed 250,000 acres and is still burning. To me this is very personal, but this is a much bigger problem than my family having our cattle killed.



I get frustrated with experts and consultants who drive by and “know just what to do.” For 35 years I have attended conferences, given presentations and listened. What I have learned is solutions are local and specific. What happens in one watershed in Plumas or Butte County may be entirely different in the Lassen National Forest just next door. But experts of all kinds are glad to tell you how to do it. “Let’s prescribe graze, use virtual fences, change your timing, change your genetics.” Prescribe graze the forest and canyons? Yea. Right. They don’t know what they don’t know but they will take the honorarium anyway and have a great dinner on your dime. Another game where the people who live here and the land rarely benefit.

I have traveled and given presentations nationally and internationally for decades as the odd “academic cowman.” I learned quickly that it is insulting to make suggestions if you don’t know the land, the people and the culture. I love these canned “you should do this and

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this” PowerPoint talks. It is frustrating. My approach has always been “this is what I do and why—it may not fit here so don’t force it.” I loved those trips not because of what I taught but of what I learned from the locals.

Cattle, like the wildlife, follow the season in this wildland we love. They start at low elevation in June and work east and higher until early October. As leaves begin to change, they start west and down. How and why would you fence this land? Again, an expert from afar who wrote a text or did it in a different ecosystem thought it was a great idea. It is exhausting.

Yesterday was day four of the recovery effort. I now understand what first responders mean when they say, “rescue to recovery.” I hold out little hope for live cattle. We have to get to Hartman Bar ridge between the middle fork and south branch of the Feather River. It is the furthest north, most breathtaking and the hardest to access. One road in and one road out, choked with downed and sometimes burning trees. We see a burnt bear cub trying to climb a tree, two miles further a mature bear, burnt but staying in the water trying to ease the pain. We give them both a chance because they made it this far.

We don’t euthanize even though our brains say we should. Our hearts say let them try. We have about six miles of road to make passable to get stock trailers through, but we make short work of it. Sometimes you can travel a quarter mile and sometimes a hundred feet. But chainsaws and strong hands get us there.

I have passed several streams today and tried to wade across one looking for cattle. It strikes me as strange. All the creeks have close to double the flow of last week. I see some springs running that haven’t been active for years. And it hits me. We have released the water that the brush was sucking from the land. The Native Americans were right again. Observe. Let nature talk.

We pulled up the grade to Hartman and Whiskey Hill, and there were cattle tracks in the burn! Lots of them. I couldn’t believe it. The fire roared up out of the middle fork so quickly I expected nothing to be alive. I had myself prepared. But we found cattle and some in pretty good shape. It was slow going. Incredibly steep and rugged with lost, hungry cattle. In one pocket we picked up 14 head with nary a scratch. Two old cows (12 plus years which is old for a cow) and a bunch of young stock. Those old ladies knew where to hide! Wisdom from days gone by.

After a long day, we had 32 alive and loaded. Some may not make it but we had to bring them home to give them a chance. They made it this far. More jarring, though, was to walk down the drainage by the old Mountain House Ridge corral and find 26 dead, spread from top to bottom. That fetid smell of death permeated the walk I used to love.

Even with the dead cattle on Hartman Ridge that we found, why did we find over half alive here and nowhere else? If anything, I assumed this steep ridge gave them no chance at all.

Dr. Dave Daley, Testimony
4/29/2021

And I realized that there had been a much smaller fire here about five years ago. The country was more open and the fire moved quickly. Less fuel and more things lived. Trees, wildlife, and cows.

I observed the same phenomenon in the remnants of the town of Feather Falls—where only a school and cemetery remain. The school had over 80 students less than 50 years ago, until the lumber mill closed and the village died. The school was destroyed by fire. The cemetery, however, still stands with green stately pines respecting the graves of mostly Native American veterans with flags at each grave. The cemetery was maintained free of deadfall and litter by family members. All the trees lived.

Day five begins.

We move as fast as we can, opening roads with saws and running 4-wheelers down every logging spur. We hope against hope for cow tracks but there are none. Hartman Ridge is about 10 miles long with the only narrow paved Forest Service road in the entire mountains. Nothing new but the cow tracks from those we found yesterday. Nothing at Socrates Spring, Harry Waite's, the Lower Reservoir, DeJonah, Sheep Tank Meadow, Stag Point, Steward Ravine — and a hundred more name places that are being lost. Nothing.



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Up by Tamarack Flat, I run into five pick-ups belonging to timber reps from Sierra Pacific, the private land holder who we lease from and who has private property throughout our range. I am walking the logging road looking and listening, as I had run out of gas a mile or so ago. Too much country to cover! They were no doubt shocked to see me in that desolation striding down the road, covered in ash from head to foot. I know most of them. Foresters by trade who, like me, love the land. "It is all gone," they say. Almost. I told them I could show them a few pockets where trees survived. But very few. We are sad and angry together.

By the end of a grueling day, we have 7 head loaded. Five of them are cattle we had seen before and were just able to get portable panels to and load, 3 of which are badly burned and will get a chance for feed and water before they will most likely die or need to be euthanized. We know of three more live cattle that we have seen and not loaded. That may be it. Over one hundred brought home, so far, but I will be surprised if eighty live. Many of those who live will have lost their baby calves to fire. **There are no words. 20% of the herd we drove to the mountains on June 1. Maybe.**

Our crew will be smaller today. Rob flies back to his duty station in the army. Kate is back working as a veterinarian. They leave with overwhelming sadness and "we will help any way we can." Most of the rest of our crew have to get back to their jobs, but "are a phone call away with a stock trailer" if we find something to load beyond the two trailers we will haul ourselves. I doubt we will. Kyle and I will start the search, compulsively walking creeks and canyons that we have already searched, hoping something straggles in behind. You never know and you can't quit. That is not who we are.

And now we go on. What will happen? This is devastating emotionally and financially. And I am not sure of the next steps. I do know this: We must change our land management practices if we expect the West to survive. It is best done locally, not from DC or Sacramento, but I have tilted at windmills before.

We won't quit. We need to get tougher and stronger. We never have quit for 140 years and I won't be the first. Suffer the bureaucratic maze and try to make incremental change. And, as always, work with nature. I have to. Juni Daley, and the next generation, needs to see the mountains the same way we have seen them forever, to have hot chocolate on a cold fall morning and gather cows. It can't be just stories from her Granddad.

We found an orphan heifer calf today, about two weeks old. Her mother didn't make it. Kyle stumbled on her hiding in one of the few living willow patches along a stream. He followed her for over an hour straight up from the bottom of a canyon. We caught her and she is now on a bottle getting milk replacer. That rescue was good for my heart. My Granddaughter Juni's first heifer I decide! They can grow up together.

We saw life at Fall River today. Green grass trying to sprout at a spring. Life is resilient. So are we. Next year. And the next 100.

Dave Postscript

It is day 12 and we still are at the same pace because we have no choice. We are finding one or two per day that have lived so it is difficult to stop, but that is dwindling so we have to shift our focus to those that lived. It is hard to do. We have put 1200 miles on the 4-wheelers on old logging roads and skid trails in the last few days. I quit counting the number of tires we have ruined and how much chainsaw work we are doing. Unfortunately, today we had to begin euthanizing some of the cattle that we brought home. But they were home, fed and watered.

The fire is still not contained and takes runs depending on the wind. I am not sure what next year will bring.

Appendix B:

Cattle grazing and prescribed burns can help California beat devastating wildfires

BY DAVE DALEY

SPECIAL TO THE SACRAMENTO BEE

APRIL 24, 2021 06:00 AM

For all the misery that 2020 wrought in California, it also presented the state with a precious opportunity — a chance to seriously invest in wildfire prevention.

Gov. Gavin Newsom, in his [January budget proposal](#), wisely laid out a framework for the California State Legislature to seize that opportunity. Because tax revenue, to the surprise of many, remained robust, Newsom has proposed an unprecedented, one-time expenditure of \$1 billion in new [wildfire-prevention investments](#). He is asking lawmakers to act quickly, so that about a third of that money can be used for early actions this spring.

State and federal officials have long talked of better preparing California landscapes to reduce the spread of wildfires but have often been overwhelmed by the costs of annually fighting relentless fires.

“This budget does represent somewhat of a paradigm shift,” Wade Crowfoot, secretary of the California Natural Resources Agency, told the [San Francisco Chronicle](#). “It’s really a quantum increase in wildfire resilience investment.”

Spent wisely, those funds could support infrastructure and programs to reduce and control the wildland fuels that enable fires to burn so broadly and rapidly.

The need for action has never been greater. Last year was by far the [worst fire year in California history](#), as thousands of fires collectively consumed more than 4.2 million acres. Those wildfires included six of the 10 largest recorded in state history.

The economic cost to homeowners, businesses, ranchers and government agencies was in the tens of billions of dollars.

Policymakers now have both the motivation and resources to take urgent action. There are proven strategies to reduce the size, spread and severity of catastrophic wildfires.

Among them is one that is decidedly low-tech but unquestionably effective: Expand the use of grazing by cattle, sheep and goats to reduce wildfire fuel.

Research by UC Cooperative Extension experts has shown that targeted grazing is a cost-effective tool for managing vegetation, and one that can be employed in areas where other measures are not possible.

California's cattle ranchers, who own or manage much of the state's 38 million acres of rangeland, were hard hit by last year's unprecedented wildfires. Not only did they lose thousands of acres of pasture and hundreds of cattle, but ranchers also saw their rural communities decimated by fire.

They now need to be part of the solution by deploying livestock to reduce the accumulation of fine fuels on private rangeland and on public lands. The legislature can promote this proven landscape-management tool by appropriating funds for infrastructure such as fencing, and also authorizing long-term leases that would spur private investment for grazing on public lands.

Grazing is one of just two fuel-management methods that actually achieve the goal of removing fuel from our landscapes. The other is the use of prescribed burns — the practice of burning fuel under favorable weather conditions, rather than allowing it to build up only to burst into flame during the hottest, driest, windiest days of the year.

Newsom's budget proposal seeks more than \$500 million for large-scale vegetation projects including prescribed burning. The goal is to improve fire resiliency across 500,000 acres every year.

In addition to executing plans and conducting training, an effective prescribed burning program must also include policy changes such as reducing liability and reassessing air-quality considerations. These changes are vital to balance the effects of a limited amount of smoke from prescribed burns against the massive harm from the smoke and ash that blanketed much of California last year.

California has before it an opportunity to indeed change the wildfire paradigm from one of suppression to one of prevention. Lawmakers must seize the opportunity and act quickly so that work can begin this spring.

The reality of a changing climate is that California has seen a succession of monstrous fire seasons, capped by the worst ever in 2020. The possibility of what lies ahead is unsettling. The time to begin fighting the fires of 2021 is now, long before they start.

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