

CA Fire Services Task Force on Climate Impacts

Meeting Minutes – **CONFIDENTIAL**

October 13, 2015

Present: Matt Bowman (CNG - for MG Baldwin), Dan Bout (Cal OES), Jeff Bowman (Orange Co. Fire Authority), Tina Curry (Cal OES), Ralph Domanski (Cal OES), Mike Esparza (CA State Firefighters Association), Brian Fennessy (San Diego Fire-Rescue), Robert Fenton (FEMA RIX), Glenn Flamik (CALFIRE L2881), Mark Ghilarducci (Cal OES), Tracey Hansen (Cal Chiefs), Mark Hartwig (CA Metro Fire Chiefs Assoc.), Tonya Hoover (Office of the CA State Fire Marshal), Matthew Johnson (National Park Service), John Juskie (FEMA RIX), Patrick Kemp (CNRA – for John Laird), Jon Kolman (Cal OES), Jose Lara (Cal OES), Shawna Legarza (USFS), Mark Lorenzen (Ventura Co. Fire Protection District), Sam Marouk (BLM), Max Moritz (U.C. Berkeley), Daryl Osby (FIRESCOPE), Lou Paulson (CPF), Richard Pearce (Fire Districts Assoc. of CA), Ken Pimlott (CAL FIRE), Dave Roberts (El Dorado Hills Fire Dept.), Dave Rocha (Alameda Co. Fire Dept.), Kendall Skillicorn (Cal OES), Chad Stokes (Cal OES), Dave Teter (CAL FIRE), Janet Upton (CAL FIRE), Megan Walton (Cal OES), Jason Weber (Marin Co. Fire Dept.), Kim Zagaris (Cal OES)

Phone: Ashley Conrad-Saydah (EPA)

I. Welcome and Introductions (Mark Ghilarducci/Chair, Cal OES)

Thanked people for their response efforts, proud of everyone's efforts and the coordination and the overall system – your commitment is appreciated. We're facing more problems due to climate issues (fires, dry/dead trees, drought, El Nino, etc.). We have some daunting challenges in front of us as a Task Force, and we're here to consider what we need to do in order to stay in front of evolving conditions. There is currently support in legislation and with the Department of Finance to help us take care of what we need right now and in the future to deal with the impacts. We want this Task Force to bring a series of recommendations up to the Governor.

- Approval of Meeting Minutes
 - Edit suggested - Page 5, top of page (last sentence of Legarza's talk) - change to "using helicopters and authorized drones would move forward technology in the future"
 - Motion was made to approve 7/13/15 meeting minutes with change, seconded, and minutes were approved by Task Force members.
- Task Force Charter
 - Intended to provide a clear mission for the Task Force
 - Question came up regarding term for Task Force members...is one year sufficient, or is longer needed? Mark - the length of term is incumbent upon what the Task Force can accomplish in that year's timeframe, but a longer term may be needed. We should be making recommendations as a group sooner rather than later. As a suggestion, maybe institute a minimum – we need to provide continuity and stability.
 - Tina – also sees "as needed" as longer than a year, as Task Force doesn't meet that often. Overall recommendation was made to add in "minimum of one year" to term language.

- Charter motioned for approval with changes, seconded, and approved by Task Force members.

II. 2015 Fire Response

- Cal Fire Response (Ken Pimlott, Cal Fire)

Want to tag onto what Mark said at the beginning of the meeting – the changing climate and current situation affects all of us, and we're still continuing to live through fire season. We struggle in the fire service by trying to do things the way that we've always done them. Collectively, our picture doesn't look the same. Things aren't the way that they were even 20 years ago, and we need to look outside of the box. This year we learned a lot about where we need to go – staffing, resources, etc. – and this group can be used as a way forward to look at things.

5,741 fires have already occurred in 2015, topping last year's 3,954 fires, which is well above the 5-year average. 306,427 acres have been burned, to date, for this year.

We are having fires escaping initial attack, with unprecedented rates of spread. The initial attack workload system is dependent on keeping events small so they don't become the large fires. July 2015 really kicked things off (Rag Fire in Napa County). There was also the Butte Fire – which started in Amador County and burned into Calaveras County. In the Butte fire, 70,868 acres were burned, 965 structures were destroyed, and 2 lives were lost. When the Butte fire crossed into Calaveras County, it happened within the first several operational periods. (Showed map of the Butte Fire...which was the 7th most damaging fire in the state's history.) 30-40% of that fire burned at intense levels. When it comes to determining the total damage of a fire, it's not coming down to size/acres burned, it's coming down to the amount of structures that are being destroyed.

Common theme – long range spotting. Fires are now spreading, not through wind, but almost entirely by fuel-driven scenarios - growing and causing massive firestorms that have thousands of acres of growth in a few hours. We had many Incident Management Teams (IMTs) on scene for the Butte Fire. Across the board we want to work towards building type 3 teams - building local rosters so we can continue to have "depth on the bench" and provide enough capacity to manage those fires that don't quite get to type 1.

As a state, we went very deep into resources early on in the fire season. Mutual aid resources used this fire season were huge, numbers were astounding and we brought things to the brink. We continue to lean forward to support anticipated needs. Title 10 DOD assets and infantry divisions have provided additional fire resources. We activated CNG resources (helicopters) for additional support, along with everything else that was available, and also used hand crews. CA is becoming the national model on how to determine the right size and appropriate use of resources– matching the need to what's available. 2008 was our first chance to utilize these hand crew resources, and we learned a lot from that season on how to train, use resources, organize, deploy, etc. CNG provided 12 hand crews this latest fire event to support firefighting resources. We leaned way forward from a training standpoint, thinking outside of the box about the best ways to utilize the resources available to us. We also went out of state early, when we realized we were maxing out local/state resources, and placed an order for 50 engines. We ran out of type 3 teams, even across the country – so let's find appropriate uses for types 4,5 and 6 and use them. Let's work together to best utilize the resources that are available as part of the mutual aid system.

For the Butte Fire, life safety and getting control over that situation was the priority over perimeter control. It was about evacuating and saving people. All hands were on deck, from Law Enforcement to Fire, to help make that happen. Recent fires are burning in ways that many people have never seen fires burn. Within two months, the last few fires have really helped to show just how much fire behavior and the overall fire situation is changing. It has been a few years since urban interface wildfire fighting. We have to recognize that there is a time to go direct, and there is a time to recognize that it's not going to work and look at what we can do.

For the Valley fire, 76,067 acres burned, 2,048 structures were destroyed, and 4 lives were lost. The Valley fire started at 2:30 pm, and within a 4-6 hour window the fire made a huge run and burned a lot of acreage. After the first operational period was completed for that fire, most of the total acreage had already burned. The Valley fire is now identified as the 3rd most damaging fire in the state's history. None of these fires are burning how anyone could predict, which is a serious wakeup call to everyone.

(Threw conversation to Tanya Hoover to discuss transition from fire fight to recovery.)

Tanya Hoover – Within the last few years, damage assessment is changing, now initially focusing on construction. In 1997 FIRESCOPE organized the damage inspection system, and damage inspection teams (DINS) were created. Since 1997, there has been a stop and go with how we have collected damage assessment information. Forms have changed over time, and we are working with local partners to develop a unified way to collect the information so it can be translated into a mitigation perspective. This year we used damage assessment teams to help support that process for the Valley and Butte fires. Between both fires, 12-15 damage assessment teams were launched and, within 24 hours of mobilizing, we had boots on the ground with their equipment ready to perform damage assessments. The objective of these teams was to gather data, synthesize it, overlay it on maps, and take a look at what's working, what's not working, what needs to be changed, etc. Double-pane windows work. We also know that defensible space works...is more space needed? Do new standards work? What do we need to expand upon? Using the damage assessment team information will help to strengthen CA by conveying information to communities and supporting planning efforts. When we left both of these fires, we were looking forward to next steps with these DINS. There is a lot more work to come on gathering damage assessment information and a lot of lessons learned that we are going to need to take care of.

The Post Fire Watershed Flood Emergency Response Teams (formerly the State's State Emergency Assessment Teams, or SEAT) – 2 interdisciplinary teams were created, one for each of the recent fires (Butte and Valley). These multi-agency teams are comprised of state experts in hydrology, geology, forestry, GIS, and water quality, and evaluated the impacts to life safety and natural resources in the wake of the destructive Valley and Butte fires. As of this meeting, they have been onsite at the burn areas for over 3 weeks now. The information they compiled was put into a report that was sent out and is being discussed at all levels of government. Now that we've identified risks, how do we work to mitigate those risks? In particular regarding Lake County, and the multiple fires they've had recently, how have these events affected their watersheds and overall capabilities?

First phase of the damage assessment included looking at onsite downstream threats – those immediate threats that could come with initial rains. How do we go about mitigating these threats? Now the teams are transitioning to phase two – looking at impacts to watersheds.

How can we collect this type of information so that it is more readily available to use in determining next steps to help facilitate the jobs of state and federal decision-makers? This is becoming too frequent and

becoming too much the norm to think that we can continue to operate at the same level that we have been. The system should be looked at to make some changes to help support our existing resources.

(There is a FIRESCOPE meeting tomorrow, and this process was recommended to be discussed at that meeting and the findings brought back to this Task Force.)

Shawna Legarza – Planning and drawdown has occurred all across the nation (we were in planning level 5 for 24 days straight), with resources having been utilized from Boise. We also sent resources from CA to help WA state. Though we've worked well together, this fire season has been very busy, and we're not done yet.

Sam Marouk (BLM) – We have been very busy nationally, and locals are still fighting fires within their towns. The Rough fire this year was the big incident. On the interior side, thank you to the state for your support.

- Mutual Aid Response (Kim Zagaris, Cal OES)

Statewide there are around 55,000 firefighters (volunteer and paid) – this is down from 10 years ago when we had around 62,000. We're dealing with a different era of fire source people, with some living hundreds of miles away and commuting to work. It's interesting to look at early years to where we're at today. We have also added type 3 and type 1 engines, watertenders, and other similar resources. The fire sieges in 2003 and 2007 siege were very heavy with mutual aid resources, with strictly local government assets on the deck during those times. Historically, over the last 10 years, we have been using a lot of retired annuitants to build upon existing resources. As the fire season draws on, using retired annuitants doesn't take long to draw down on their available hours. Where else are we going to get resources to supplement existing resources?

On June 15th, the North Fire shut down I-15, a major interstate, on a Friday afternoon. There were initial reports that people were burned (later proved to be untrue, but we ramped up resources until intelligence was confirmed).

We did send resources to WA to help them respond to their large fire incident. We were in between large fires, and they were at a critical juncture with theirs. The northwest sent resources to CA in 2008. CA does have the best mutual aid system in the world, but it's not meant to address the level of activities that we have been seeing. These events are becoming too frequent and more the norm, making it harder for us to continue to staff and have resources at these levels. Fortunate that with as tired as people are, things went as well as they did with these fires.

Ken – we grabbed onto helicopters to protect the state and put them on exclusive use agreements. That effort has paid off in dividends, and they've been extremely busy. We're doing more with less – and this can't be the sustainable model going forward. We need a more permanent solution.

CNG – Had requests for 3 task forces. We did get 50% of those already trained diverted to Valley fire (didn't train as many at once, but staggered the training). From a taxpayer perspective, this was a great use of resources. And soldiers that were called up ended up volunteering to come back and support.

Kim – CNG also does a lot behind the scenes to make sure those CNG resources are available. Resources from one fire that was in the process of being contained (Butte Fire) were then utilized for the next fire (Valley) that was just beginning to break out – and some of those resources/firefighters were

losing their homes. CalFIRE is also using retired annuitants to support fire resources. Look at the 2003 and 2007 sieges as good benchmarks – all local government assets were on deck.

We have a mutual aid system has been around since the 1940s - neighbor helping neighbor. After 65 years, the mutual aid system continues to work; however, we are continuing to have to make changes to adjust to the increase in resource needs. Cooperation between agencies and levels of government is a must, but the system is being threatened by the financial situation. It has really gotten to a point where you can only go so far without the money. Funding needs have become a much more prominent issue when it comes to requesting and sharing mutual aid resources. We've seen an impact in the overhead out there, but firefighter vacancies are getting a little better. Agencies are merging – and usually coming out with less resources – smaller agencies don't usually have a lot of money. Local resources are being exhausted and are concerned as to how quickly they can be reimbursed, and reimbursement is a significant issue for all of us. We have been struggling to meet the requirements of the CA Fire Assistance Agreement (CFAA), and it's slowing us down with being able to process reimbursements. Dealing with the Butte fire, Butte has lost a lot of homes, which is going to impact their tax base and could have long-term impacts.

We need to, as a group, support and invest in new technology and find ways to make it easier for the people who do this. We also need to make sure all of our systems have an integration point to help with sharing of information and to provide more situational awareness at a faster rate. We need to do a better job at sharing who we protect. We also need to have the information available for legislature at a faster rate. It's essential for us to continue to work with national fire chiefs on the national mutual aid system - the International Association of Fire Chiefs, interstate compacts, etc. We used the interstate compact with NV to get inmates for hand crews/strike teams to support firefighting resources – in this case it worked better than the Emergency Management Assistance Compact (EMAC).

Shared video of news story from ABC regarding Butte and Valley Fires

Mark – in some cases, we're moving smoothly and rapidly, which can be a double-edged sword, as we're setting new expectations and raising the bar for our response.

III. Tree Mortality and Mitigation (Ken Pimlott, Cal Fire)

Everyone has heard of insect and disease-induced tree mortality in CA. Almost week by week and month by month, pandemic or base level of insects are present throughout Sierra, and part of a natural process. Recently, however, these insects are multiplying at an exponential rate, with the Central and Southern Sierra, southern CA, and the central coast being hit the hardest. The threat of bark beetles is typically in southern and central Sierra (Kern to NV counties), and a continued lack of moisture for trees means that beetles are more of a threat. With a lack of water, the tree loses the ability to create enough sap to push the bugs out, and the bark beetles are eating the layer beneath the bark – killing the trees beyond normal/natural levels. Bark beetles are spreading and are an increasing threat to trees due to the changing climate. 20-40 million trees are either dead or dying - over 70% of the native Monterey pine in the Cambria area alone has died. Rainfall isn't going to change the damage that has been done, and trees that are green may already have been exposed to the beetle.

When trees die and fall to the forest floor, they then become fuel for fires. Falling trees are also a public safety hazard, as they can down power lines, fall on people/houses, etc. There is no way to just remove

over 40 million affected trees. How can we work collectively to identify areas that we most need to work in to mitigate these effects? A lot of counties have submitted requests up through their government to the state for assistance with this issue, and no one has the ability to address this issue individually – it needs to be a collective effort. Money isn't going to be the fixer of this problem.

Our efforts need to start with public education – helping to educate on mitigating some of the spread - when to cut trees, how to cover firewood to help lessen the spread of disease, etc. The mills are really busy dealing with fire salvage, they are at capacity and there is not a lot of room to take these dead trees. We are also working with local utilities to use bio mass to generate electricity using the dead trees. How else can we use these excess resources/trees? What can we do with all of this material that's being generated? What are the challenges the locals are facing with this problem? We're working with a number of agencies to find solutions, such as CalRecycle, CalTrans, etc. We're also talking to the Board of Forestry and Fire Protection regarding easing up on regulations to remove trees that are considered hazardous trees. It's going to take multiple pieces of the puzzle to work on this problem.

We're also seeing a change in vegetation...moving north and into higher elevations based on changes in temperature (increase in mean temperatures). We're not going to see an end to these problems until we see significant precipitation over the next several years. The Governor's Office is working with Cal OES, CalFIRE, and others to really look at the concerns and work to determine the best ways to deal with this.

MG – There was a similar issue with this in 2002 – a number of initiatives were completed to address it. There was innovative work from FEMA and hazard mitigation groups (using mitigation funds). There was a big effort to reduce the fire threat back then, but the problem is now exponentially worse, and the threat is statewide. There are also significant challenges with using existing resources (ie mills are full from Rim and King fires), and there is no simple solution to this problem. The threat is outpacing the cost to deal with the issue. The governor seems to be on point with that, and we will need to eventually deal with the funding issue.

MG - Current and future state and federal policies – what do they mean and how are they coming into play? The climate impacts of potentially going into a fifth year of drought – what does that mean and what policies may be needed to support that?

Pimlott – We're focusing on short term mitigation issues, and long term discussions are beginning to occur. Intense burning fires are increasing in number, and are not a benefit to the land. Policy discussion is needed on how to drive forward on these concerns for the future, as it's really a long term issue.

LUNCH BREAK

IV. Climate Science and Future Fire Risk (Dr. Max Moritz, UC Berkeley)

When looking at climate models, we rely on historical data/looking back, and we see a future variation that doesn't overlap with current data very much. We are no longer able to look at the past as a yardstick for what's coming in the future. What controls fire activity and what may the future bring? You may all have perspective on fire behavior, but zooming out and looking at it broad scale is the fire *activity*. Models will also change based on the future – lands in different locations will be developed, population will likely migrate, housing density trends will change, etc.

Fire service has a history of looking back at lessons learned to determine current actions, which has historically been very effective. Scientists do the same, learn from the past – but climate change models show a number of possible futures. Climate change and fire – we should be using maps of fires around the world to learn about fire activity and force these models forward. Research products have their uncertainties, but can still produce projections that can be integrated into decision-making.

The CA Public Utilities Commission (CPUC) charged Cal Fire to help create new engineering guidelines for the utilities sector, and we've integrated some of the future fire projections with overlaid utilities. Once we understand historically how climate has impacted fire activity, we may be able to look more into the future predictability of fire activity. Fire affects many systems – lives, buildings, infrastructure, habitat, ecosystems...basically everything we care about in CA. (Talked about the Russian fires of 2010.)

Many of us look at these as coupled human systems, and how all of these systems come together makes this very complex – the Wildland Urban Interface (WUI). If we can get a handle on an interface for WUI, we can begin to imagine ways to get ahead of the problem. Controls on fire vary, and there are reasons fires are more prolific in some areas of the state than in others. When it comes to climate change, the effects of climate change will likely cause more fires, but it depends on how climate change continues to manifest itself – we don't really know yet when and where climate change will affect hazards. There is a difference between the types of fire and amounts of fire that appear on different types of landscapes. Variables that feed into this are ignitions, atmospheric conditions, and resources. Environmental variables should also be taken into consideration. What changes the controls of fire activity in various parts of the world?

Pyrogeography (geographical study of the spread of fire) and climate change – there are known controls and predictable patterns in fire frequencies. In general, however, the various global climate models (GCMs) vary in what the predictions are for future hazard risks. GCMs have large uncertainties and we don't trust interannual variation yet. Fire doesn't occur in some places for obvious reasons, and we can use these data sets and models to make predictions. Climate change is going to lead to more fires – that's a given. More fire, but why, when, and where? Use information from a global scale and start to get at the issue at why certain areas are more fire prone than others. (Mentioned document produced regarding fire and climate change in CA, which can be found here: <http://www.energy.ca.gov/2012publications/CEC-500-2012-026/CEC-500-2012-026.pdf>)

Fire season controls include atmospheric conditions, resources to burn, and ignitions. As we look forward, we try to find variables that do a decent job explaining these. Multimodel ensemble forecast – using multiple climate models to project fire models. People look for model agreement – in the near term, over 50% of the models don't actually agree on an increase or decrease. As you get further into the future, however, the models start to have more agreement. We have been using various fire locations and variables in CA for the modeling, and have gotten good responses for predicting past fires. We tend to use long term climate norms, and those that are more generalized in time, because we don't trust those fine scale numbers (they aren't producing that level of detail yet). We borrowed a lot from niche modeling.

What controls the amount of climate change occurring in different parts of the world? Every different biome has a different variable to different climate changes, and there are different levels of modeling agreement for climate change. For example, there is not a lot of agreement on precipitation, and we have learned from this and discovered that there are known and predictable patterns.

People are using these forecasts, and because of uncertainty, we know 2 dozen models can all be wrong. But this is what we get out of the GCMs as we try to bracket the range of plausible climate effects for the future. There is some consistency between fire predictions despite the modeling approaches. Though we look for model agreement, where we see model disagreement, it's probably because of precipitation. This is the way we are headed to try and bring models together, to present them in a form that is helpful and useful for decision-making.

Interannual climate variability – we're getting better at it, but we don't yet know which development scenario we will see in CA. The best way is to build resilience and resistance to all projected effects. Where are we going to get the biggest bang with our projections? On the WUI and the human side. A big part of this is a social dimension that we don't have a decent handle on. Fire hazard severity zone maps have helped – and the information now guides building codes. The stateside methodology now includes wind maps – no other state is really doing this like CA is.

We can finally look at fire as a natural hazard like we look at others (flood, earthquake). Take road widths and construction codes – Australia has used climate projections and has taken parts of landscapes and are not allowing building at those locations. As good as these are, the methods and maps are not yet forward looking – not looking at climate change. They are based on the last 10 years of fire patterns, not the future ones.

We need to get ahead of the problem and work to break the cycle. Take both sides of the problem – people and WUI – and it makes things much more complicated. How are we going to address that as a task force – the complication of both human and natural? CalFIRE land use planning program and land use planning is under-utilized. Fold in climate change and you can use for future development. For models, some agree on the areas that there are areas that are more susceptible to fire activity throughout CA. There are still gaps in knowledge, however. How important is interannual climate variability? What development scenario will we see across CA? How will wind patterns change? Bay Area currently has the diablo winds, Santa Ana has the Santa Ana winds, Santa Barbara has the sundowner winds...etc.

Then there is understanding the fire resistance side of things, which links to coupled socio-ecological systems. We need to address both resilience of natural systems and resistance of human systems. Future fire areas depend on both climate change and (human) development. Land use development changes are currently imbedded within climate scenarios. New climate models are now looking at census-tracked data. That information can be used to build housing forecast models, which we can then use to predict land area development. We have to factor in climate change and where people are going to be moving forward when trying to do fire forecasts.

Mark – Regarding the science of what makes up the threat, there is no single factor, and some weigh more than others. It's important to articulate the reasons behind the better building of infrastructure. Is a 100 foot clearance enough? Maybe in some places but not in others. Need to also understand, as population continues to increase, that an increase in fire activity is going to happen. Resiliency needs to be built into communities; otherwise, we need to fortify our fire resources.

Task Force member – there is a connection between available resources and initial attack capabilities, and a connection between WUI and initial attack resources.

Mark – We need to have initial attack to keep fires contained, but what are we doing for communities when the event goes beyond resources needed for initial attack? Land use planning is a big part of all of this – typically starts at a local level, but should we at a state or federal level get more involved in that

process? The other part of this is the insurance industry. They work by region as a scale, vs. parcel to parcel. In some cases, they could pull out of supporting a region entirely. These may be unexplored avenues to look into.

Questions?

Mark – Thank you for presenting. It is important to use science to learn about the threat, and also to be able to articulate the reasons behind better building zones, clearing zones, etc. This helps us to understand as populations continue to increase, there will also be an increase in fires. We need to build more resilience in communities; otherwise, in absence of that, we need more resources.

Max – From the academic side, there is so much uncertainty and complexity – if we don't try to distill what we can to help provide information to decision makers, we're not doing our job. Regarding the connection between the initial attack resources and fires, make sure we have initial attack capabilities spread throughout these communities, within the WUI.

Mark – Resources for initial attack are needed, but what are we doing in these communities to help once initial attack resources have been used? How we currently approach fire, I'm amazed by the number of fires that have burned, and how they have burned – because they haven't mitigated the fire in any way.

Max – People can be naïve about the vulnerability of their structures. It's an education and outreach problem. About the climate and fire prediction modeling – sometimes we get asked for it. It's not where we are at yet, but it is where we are trying to head.

How do we incentivize following/implementing land use policy based on modeling? Land use planning – I think we're passing the buck to just say it's a local problem. We have local authority in regards to flood plans and other natural hazards. There are probably policy levers for land use, we just need to identify them and do better in the future.

V. Review of Blue Ribbon Commission (BRC) Recommendations (Kim Zagaris, Cal OES)

Chief Zagaris began to go through the 2008 Blue Ribbon Fire Commission Status Summary sheet (handout in participant packets) line by line to discuss status of each item.

Mark – Progress has been made on a lot of these, but where are we at on these and how it affects overall strategy? Are there 4-5 priority items on this list that this Task Force can address? FIRESCOPE can then go back and look through and determine what's been done and bring it back to the Task Force to help make it a more manageable amount to tackle. We need a good baseline of what has been done and where we're at. If anyone on the Task Force reviews the list and has anything that should be addressed as a priority, please review it and get back to the Task Force on those items as soon as possible.

VI. Facilitated Discussion: Current and Future Impacts to Fire Services and TF Recommendations

Mark – We covered a lot of ground this morning, and I would like to open the floor up now. Who would like to start the conversation about the resources they have provided to these recent events and the impacts that are occurring? Based on what we heard this morning, what are your thoughts on challenges

ahead of us, what are your concerns, thoughts about the system, frustrations, etc.? Items to consider include training, funding, planning, risk reduction, and community engagement.

Task Force member – BRC – I looked at the report card and listened to the conversation. I don't see a lot of progress, and it's disappointing that we haven't had a review since 2008, as a review is supposed to happen annually. I would like to see the FIRESCOPE board give A-F grades on these. As far as the recent fires are concerned, Kim made some good points. As a local agency giving hundreds of fire fighters to these events, the impacts on local agencies are significant. Not sure if those impacts are being reported to the governor...? If not, we need to share these concerns with him. Had to abandon the general rules regarding deployment times – there are few two week deployments anymore. There are impacts on individuals and their families based on long-term deployments as a result of these events – huge family issues erupt from these events that don't always get noticed or mentioned. Another impact on local government is the financial impacts, and some agencies are struggling to make ends meet, especially with paying overtime. One thing that hasn't been mentioned is what happens when the fires are out – the money that firefighters are earning in overtime – the W2 impacts are tremendous, with longer term impacts on the families of firefighters, the counties sending staff and the cost to send them, etc. It's an important thing to remember – the impacts on both individuals and the communities. Locals rail about firefighter's overtime, not understanding that this money is reimbursed, and the additional time worked causes time away from their families. A public service message thanking the local agencies could go a long way. Getting local politicians to understand that yes, the firefighters are making money, but there's a point at which it takes a personal toll on these people. Unable to fund is an interesting issue – some agencies are having a hard time staffing their day-to-day operations, as well as allowing employees time off (due to insufficient resources). We can't demand that our people stay at work weeks at a time – during times when half are up in northern CA (fires in the north have been aggressive), and knowing that our turn is coming. We understand the issues, but want those at state level to share the concerns the locals have. These issues don't often come up at the state level – something to please consider when meeting with policymakers, etc.

Mark – I've had those discussions with the governor – the impacts to local government are being discussed at the state level, though we haven't really gotten into the family issues, nor the overtime and the impact on locals. Resources are an issue. Do we minimize the impacts to local government by utilizing more state resources? Or do we give locals more resources to draw upon? Tough issue...where is the best place for resources to lie? With the turnover of elected personnel, people don't know how it all operates, so part of the solution could be education.

Ken – Spot on regarding the workload piece, which is extensive. Even for us, people are hitting the 30-day mark. Our surge capacity has changed – it's now almost not a surge, it's a sustained level of operations, and that's the problem. We are continuing to have to give more. The mission of the state can't happen without coming up with a plan to fund resources, but I don't think there is any one solution for it. State has a role in it, but the whole mission can't happen without the locals. The number one issue across the board that came up this summer was people. A lack of personnel resources is a safety issue – we are burning our people out. How do we come up with the plan to get resources funded?

It's bigger than local government – have seen press conferences occur during events where the local government is not even represented. Need to solidify communication and coordination at and between ALL levels. Recommended that the state report back to locals and show their support, making sure local governments understand the response is going to impact their budgets. Support an aggressive public service announcement (PSA) to let people know about the system to help get the message heard.

Currently, there appears to be a host of misunderstandings and lack of education. We need to do a better job to let elected and community members to understand how things work.

Lou – With the original BRC, their issue was we had plenty of firefighters and not enough engines. Now we have more engines and more fires (and a different fire dynamic), but less people. The presentation slides we've seen today don't really account for local government issues and what we're dealing with all the time. (Mentioned AB 1203). The issue is instead of moving resources all over the state, we believe it's the state's responsibility to pay local government to staff local offices to full capacity. Then, we can more effectively backfill to take care of logistical needs.

Mark – As soon as we get into fire weather, that should be the trigger for the state to prepare, including upstaffing in projected fire areas.

Lou – Agreed – support upstaffing during predicted fire weather and be ready for worst case scenarios, putting as many resources as you can on the fire as quickly as possible.

Kim – In the original BRC days, the state would pay to do some of that upstaffing. As we have fallen on harder financial times, we've been more “gun-shy” about staffing up. It's not just the state's responsibility, but also our federal partners – their resources should also be in play.

Lou – I know we haven't talked about flood, but this model would work the same for the mutual aid system.

Mark – The pre-disaster mitigation strategy – this year will be the first year that the pre-disaster mitigation funding has not been zeroed out. We need to maybe change the models we are looking at, including the process to use funds now or use funds later. This year they added a mitigation piece to the Fire Management Assistance Grant (FMAG). Pre-disaster declaration – when the southeast expects a hurricane, they are set for it. Feds provide resources – and FMAG does this already. We aren't reimbursing state and local governments, and we have the same constraints you guys do, with our administrators and the operating environment changing.

Ken - Upstaffing for a fire is different than upstaffing for a hurricane. If we don't increase the depth, then we will still be burning through the same people. How do we get you to, or help you to get, the depth to do your day-to-day business and help the state? A broader question may be how did we squeeze additional resources into the system before? We've had funding challenges in the past, why is this current climate any different? Why can't we put as many resources into the system as we did in the past? We may not be able to fix this issue this season, but should look into it for the future. We need to get everyone involved and committed, and get more folks into the system. Maybe if we got to the fires faster, there could be less loss.

We also need to have a deeper conversation about why there appears to be a reluctance to send stuff from the south to the north. In the last three years, our response model has gone up. Our daily responsibilities have increased and response times have gone up, so it's tough to send things to other jurisdictions. Now that we have reimbursement, we should be able to get more resources out of the system. We need to find out why people aren't sending those resources. I don't understand the reluctance to put as many resources into the system as we can, and have done in the past.

El Dorado County – Through years of unintended consequences, half of the districts in our state are close to making the decision of permanently closing the doors. Prop 13 and other regulations don't account for

demand and increasing costs. Half of the districts are trying to figure out not who should I send out on a strike team, but should I lay someone off, or fix a leaky roof. Some counties are much more conservative about what they send out for mutual aid and what they keep in the county for local incidents. There's much more involvement and discussion about what locals are sending out and where they're sending it out to. Some are having to start to make those hard decisions because of funding issues. It's frustrating to hear the massive amount of funding that the state has committed to reducing the carbon footprint, when we're trying to figure out at the local level how to keep the lights on and continue fighting fires. The governor needs to understand the history of the system before we move forward – need to answer the “why” so we can work together to have a more robust system. We need to be able to rely on one another at the local, state, and federal levels.

Kim – When people decide to “opt-out”, it puts a greater demand on those in the system. As time goes on, some chiefs don't feel the same about the system as we do. We need to determine how we give people more flexibility. There is a much higher level of scrutiny now, and more sensitivity about what you send out and what you receive. Maybe we should add to the FIRESCOPE list public outreach and information to address the impacts of the mutual aid system and support public education. I think we have less staff, and we are forced to hire more now than ever before. Current firefighters don't seem as involved in the process, can't get people to sign up as much, not getting volunteers to go out on strike teams, etc. Values are part of this – people are less likely to miss family events.

Mark – We're looking at a good seven years of financial impact. There hasn't been a catch-up, but this is not just a money issue. What does fire service in the next X number of years look like? Future planning needs to take into consideration the generation of millennials and how they'll be included in things, their outlook, etc. We can use this Task Force as the catalyst for change.

The annexations, it's ridiculous to have that many districts in a county. Maybe a state incentive is needed to minimize districts, more money could go out, and problem might be reduced. We need to continue to prioritize resources, such as air resources. How do we prioritize limited resources with the current fire response climate? There may be challenges, such as Incident Commanders (ICs) holding on to ground resources. We have to have the ability to have contact with the ICs to free up resources.

What is the actual expectation that the system should provide? Is there a cap on resources that should be expected, or should it be an expectation of unlimited resources? We need to start with everyone coming up with expectations – something reasonable. Currently, there is no threshold, and we have different limitations (Memorandums of Understanding, staffing, etc.).

Kim – FIRESCOPE recently produced a document to help with drawdown. Rule of thumb in the past has been locals typically providing around 20-25% of their resources. It's somewhat hard to nail down, but most of our agencies do have a drawdown. We should be able to nail it down better – we can't be the answer to everything and every incident. The next attack will be on how much these people were paid. Someone needs to acknowledge that we made them go. The issue is really focused on three components: adequate, well trained resources; sufficient defensible space; and timely reimbursement. If you only address one of these components, you're not going to succeed.

Mark - Anything associated with funding and related to resources, let's look at the existing BRC recommendations and start prioritizing some of those items. We can then go back to the Governor and say this is what services we do have, and these are our deltas and where we need to fill the gaps. I will work on a letter for the Governor to send out reaffirming the commitment of state support to locals. We

need to get everyone on the same page with the important issues discussed here today. People are not heeding evacuation orders. There is a mindset that they don't understand the complexity of fires.

VII. Compounding Threats – El Nino Update (Mark Ghilarducci, Cal OES)

We are in a situation where we have mostly empty reservoirs, with reservoirs being so low in the north that, if there is no snow pack, we're going to be in the same condition next year. Predictive modeling is a moving target for us in preparing for what El Nino means, and where it's going to hit this year. Every week it's getting a little clearer – and we're being told that the local impacts could be greater in southern CA than in northern CA. It's incumbent upon us to start preparing for impacts. Flash flooding is a definite possibility, and there are concerns for the tremendous number of burn scars and what the run-off will be. Right now, we have teams focusing on debris clearance, especially in burn scar/run-off areas. We are talking to the Governor about all of this.

FEMA – We've put together an El Nino Task Force out of FEMA Region IX in Oakland to help address these concerns. The Task Force is in the infancy stage, and we are working with stakeholders to gather information about past El Nino events.

Mark – We have similar challenges with limited resources for flood, same as fire, and we're looking at how we're going to handle all of that. Tina Curry's Preparedness team is working on a catastrophic flood response plan. The Cal OES Hazard Mitigation Planning Division is also working with Department of Water Resources (DWR) staff to look at assessing the situation of the state's dams. This is important, given that around 1,800 dams overtopped or failed recently in South Carolina. If you have any information on your local dams, please share that with our agency.

VIII. Meeting Summary and Action Items (Mark Ghilarducci, Cal OES)

Recommend that Janet and Kelly work on expanding a PSA. Years ago we did a great video on the mutual aid system. Tomorrow is the FIRESCOPE Board meeting – they will look at the BRC recommendations. I will complete the letter to the jurisdictions, and will work with the CalChiefs to disseminate the information.

Open Discussion

The Task Force charter calls for Mark appointing a Vice Chair. Jeff Bowman was nominated, seconded and approved as the Vice Chair for the Task Force.

Adjourn

Please note that these minutes are a summary of the meeting. Updates will be made to the minutes upon receipt of recommendations from parties present at each meeting. Approval of the minutes will be determined by consensus of those Task Force members present at the subsequent Task Force meeting.