STATE OF CALIFORNIA

GOVERNOR'S BLUE RIBBON FIRE COMMISSION

BEFORE THE GOVERNOR'S BLUE RIBBON FIRE COMMISSION, Senator William Campbell, Chair	TRANSCRIPT OF PROCEEDINGS January 7, 2004 Ventura County, California

CHAIR CAMPBELL: **[mid-sentence]** laryngitis. And for anybody in politics, laryngitis is a catastrophic illness. But we'll try and see how long the voice holds up. We'd like to first of all welcome you to Ventura County. It was the intent of the commission to hold one meeting in each county of the five counties involved in the October/November fires here in Southern California. So, we'd like to ask you to stand at this point and we'd ask the chairperson of the Ventura County Board of Supervisors, Judy Mikels, to lead us in the pledge of our flag.

[Pledge of Allegiance is recited.]

CHAIR CAMPBELL: Thank you. If I might go over some details for the members of the commission. The way in which you turn on your mike is you press the button, the green button, at the bottom. And when you press it a second time, it will turn it off.

Good morning, ladies and gentlemen. My name is William Campbell and I'm Chair of the Governor's Blue Ribbon Commission on the fire. The commission members and I welcome you to this third hearing in a review of the state's efforts to combat the destructive series of wildland and wildland urban interface fires that scourged Southern California last October and November. The fires burned nearly three-quarters of a million acres, destroyed over 3,600 homes and took the lives of 22 people. And now we are witnessing the tragic aftermath of these fires. Fifteen people lost their lives when a church camp was inundated by a mudslide, resulting from the loss of protective vegetation due to the fires. As the former Chairman of the California State Legislature Select Committees on Fire Services, and as Joint Committee on Fire, Police and Emergency Disaster Services, I have participated in several different reviews of federal, state and local firefighting efforts. We owe it to our communities and the residents and the brave firefighters to take this opportunity to ascertain what government, the private sector, our communities, and

our families, as well as individuals can do to not only prevent such fires from occurring, but how to better combat them when they do erupt.

As you may know, the Blue Ribbon Fire Commission has already conducted two hearings. The first hearing was on Thursday, November 11, 2003, in the Los Angeles area, and the second hearing was on Thursday, December 4, 2003, in the San Bernardino area. Those hearings provided the commission members with an overview and a chronological history of the fires that besieged Southern California during late October and early November. We also learned about California's wildland and wildland urban interface firefighting capabilities, the number and types of federal, state, local, military and private sector resources available to combat wildland and wildland urban interface fires, and how these resources were dispatched and coordinated during the firefighting response.

Today's hearing will address fire prevention and pre-fire management efforts. We are all well aware of the fact that California has a constant and growing population with an ever-increasing demand for new housing. This exploding population has forced an ever-relentless encroachment of housing and developments into the state's wildland and rural areas, which geometrically increased the difficulty and demand for fire prevention and fire suppression programs and services. However, we cannot simply depend upon an ever-increasing number of fire suppression resources to solve our wildland fire problems. We must also consider, and encourage, the use of sound, effective fire safety and fire prevention practices. Fire safe building standards and codes, realistic and coordinated fuel reduction programs, and the commitment of communities, families and individuals to fire safety and fire protection practices. These are vital and critical and complimentary programs that support our fire suppression capabilities. We have long known California's a fire prone state. Our Mediterranean climate, our long, dry summers and Santa Ana winds, chaparral brush and rangelands, and wooded foothills, and the forested mountains, make California a prime target for wildland fires. When you add to this combination California's burgeoning population, the residential development of our wildland areas, the environmental and air quality regulations that severely impede fuel reduction programs, budgetary restrictions, and the malicious acts of cowardly persons, it is no wonder why California's periodic fire disasters occur.

However, such impediments must not deter us in our effort to minimize the wildland fire threat. In today's hearing, the commission will benefit from the presentation of experts on the benefits and

roadblocks to sound pre-fire management efforts. Please note, at the conclusion of our invited presentations, anyone wishing to address the commission in regard to our review, will have the opportunity to speak. Those who wish to address the commission today, please see Mr. Springer at the end of the dais down there. If you wish to submit written testimony instead, Mr. Springer can inform you on where to send the information. Again, thank you for your attendance. Do any of the commission members wish to comment at this time? If not, we'll begin first of all with Dallas Jones. Dallas, we've asked Dallas, who's the Director of the Office of Emergency Services, to review the report of the, I think it's officially titled the East Bay Hills Fire of 1991, but most of us kind of call it the Oakland Hills Fire of 1991. There was a major report done as a result after that, similar to the one we're doing now, and what we'd like to do is find out what information they garnered from that, how that information was utilized, what recommendations we adopted, and those that we didn't adopt, that might have been beneficial. So, Dallas, you're on. Thank you.

DIRECTOR JONES: Mr. Chairman and honored commissioners, I have to say this is the first time in many, many years that I've seen the chairman almost speechless. [Laughter.]

CHAIR CAMPBELL: Some people are grateful, by the way.

DIRECTOR JONES: It's not really a good thing, because his humor always enlightens our meetings and I always look forward to that, so we'll try to save his voice as much as possible.

I'd like to review with you the lessons learned from the Oakland Hills Fire, or as we called it officially, the 1991 East Bay Hill Fire. We will review some of the recommendations, many of which since the time they were put together, have been implemented in California. The speakers to follow me will review some of those, what they're doing in their different agencies, but also I believe some of the newer things that we've learned in that period of time, also. But first I'd like to overview, a little bit, the fire itself.

CHAIR CAMPBELL: For those of you, if you'd like, the presentation will be on the chart at the rear of this room. You might want to turn your chair around a little bit to help you. Otherwise we'll have a chiropractor on duty to provide services.

DIRECTOR JONES: This fire started in a residential area near the Caldecott Tunnel in the Oakland Hills. The homes were built on steep slopes, surrounded by abundant shrubbery and trees.

Previous fires in the area included the 1970 fire that burned 200+ acres, and 37 homes, and the 1923 fire that destroyed over 600 homes in one hour. It started near a three-acre fire that had burned the previous day and at 0830 the following morning a spark within the burn area was blown into a fuel-rich area outside, and the fire began. Within minutes the fire was out of control. East Bay Hills was a classic canyon-influenced fire with winds rapidly moving it toward residential populations. A thermal inversion layer developed and worked to put a lid on the bowl that trapped the fire. Pre-heated fuels within the bowl made ignition most likely. The fire swept down slope, driven by fierce winds, and engulfed brush, trees and homes. Within 15 minutes of the first house ignition, the fire gained such intensity that it looked and behaved like a tornado, much like several of the fires in the recent firestorms.

Resources were immediately overtaxed. Communications were inadequate. Water pressure was insufficient. Narrow streets quickly became blocked. Untreated wood roosts contributed to the rapid spread, and most homes had improper brush clearance. Incoming mutual aid units were unfamiliar with the area. With the first hour had ignited 790 structures, now that's within the first hour of that fire. In the 10 hours it burned through Oakland and Berkeley, it ignited homes at a rate of one every 11 seconds. Total destruction: 25 people killed, 150 injured, 1,600 acres burned, 3,354 single family dwellings, 456 apartments, and $1.5 billion in damages -- the most expensive fire in California history, until last year.

The after action report outlined many recommendations with a goal of improving fire safety and public safety within the Oakland and Berkeley area, but also throughout California. This presentation will provide a brief summary of the recommendations and remediation efforts. The areas we'll be touching on are preparedness, communications, strategy and tactics, mutual aid support, incident command, evacuations, volunteers, mop-up and demobilization, public information and emergency management. The recommendations on preparedness were to improve public agencies' understanding of the National Fire Rating System. The training related to ignition, spotting potential, expected rates of spread, and fire behavior are available to all personnel in California. Develop local emergency action plans that deal with red flag programs. Currently training on the application of the National Fire Danger System is available, again throughout California.

Recommendations were made to revise local hillside intermix fire plans in light of the fire. This is getting all the agencies in the area together to talk about jointly responding to these kinds of fires. Oakland

has revised its fire plan, and works very closely with the surrounding jurisdictions. There's also coordination plans and mitigation measures with other jurisdictions surrounding the areas, because these fires tend to, as we know, go out of the area often, which wasn't necessarily the case in Oakland Hills because it was confined to 1,600 acres, but it was potentially very, very dangerous for spread.

To make fire control a component of scheduled training. Before these fires, often Northern California fire departments, especially in the Bay Area, weren't doing a lot of wildland fire training because they felt that it wasn't a big major threat in their areas, or history hadn't repeated itself in recent times, so we did have a lot of brush training in that area. Since the fires, of course, much training is being conducted throughout California.

On communications – it was recommended to assign a supervising fire dispatcher at all times. This was to allow coordination between the different dispatchers in a **(UNINTELLIGIBLE)**. And of course this is contingent upon agency budgets and that varies throughout California. Separate fire and police dispatch functions were impossible. It was found that specializing in these fires was a positive accomplishment because when you try to put evacuation notices through the same dispatch center, it just adds to the mix, so recommendation was made to keep separate dispatch functions. They were also recommending that we train fire dispatchers in mobilization and fire support services, and their operations. There seemed to be at the time a lack of understanding by some of the dispatchers of some of the requests that were coming back through their operation centers. And of course this varies widely with departments throughout California currently. The California fire chiefs are establishing minimum standards for dispatchers and it's well under way.

Recommendations again on communications to train dispatchers and mutual aid requesting and recognizing the intent of mutual aid requests, the intent being to move these resources as quickly as possible, which wasn't necessarily the case in the 1991 fire. Many dispatch centers took the liberty to contact chief officers that were off duty to make sure that it was okay to send resources, so there was some lag time. That's currently been done away with. There was planned allocate radio frequencies by function, operational division and support service, so that you had more capabilities on the fire ground and you didn't have so much traffic on just individual frequencies. And Oakland as well as other agencies have improved their communications on incidents. It was recommended to set up dedicated outgoing only

phone lines and dispatch centers, they've become overloaded with calls coming in, they were unable to call out on hard lines to make requests. They had to go over the radios, makes it very difficult to move equipment. It was recommended to conduct frequent interagency radio communications exercises, and of course this varies by department, budget and function.

On strategy and tactics, it was recommended to expand the operational level command staff to meet recognized standards for span of control. Often the span of control on these major fires, they become overloaded, the command staff had too much jurisdiction to try to cover and it became fragmented. SIMS and the ICS recognizes this aspect and has recommendations for all fire command and control.

It was recommended to appoint a deputy chief to enhance interplatoon coordination and insure the unity of command concepts. Fire agencies in California primarily work on a three-platoon system. You have three different groups of people that are constantly rotating over the three days, and it's easy to lose continuity between the shifts if you don't have somebody keeping track of that.

It was recommended to recognize the limitation of air tankers and water-dropping helicopters. This is ongoing problem in many of these fires, ground personnel often to do not recognize the limitations and the functions that those craft are used for.

Develop a more expedient means of adapting hydrant outlets. This was very specific to the Oakland Hills, they had three-inch hydrant outlets and they couldn't hook up the 2½ hose that most of the fire agencies carried. That's been taken care of. It was recommended that they upgrade their water grid sufficiently to produce a water flow consistent with building density and size. Each of your fire agencies knows exactly what their fire flow requirements are in these areas, and often they are not quite up to standards, especially when you put a tremendous strain on the system with people wetting down their roofs and our fire agencies hooking into the hydrant system and refilling their tanks. To install permanent auxiliary pumping system for refilling all upper water zones in hill areas. There's another area that they found they were deficient in, that they didn't have enough pumping capacity to pump water up to these tanks that they had in the hill areas to provide gravity flow, so they weren't able to refill them quickly enough, and that's another area they had to work on.

Maintain a list of locally available water tenders at all fire dispatch centers. These are primarily used for refilling fire engines up in the area, they can go back and forth between a hydrant and, say a strike team, and refill using the tender.

It was recommended to prepare all fire service agencies for worse case scenarios. Nobody likes to think of it, but here in California being the Disneyland of disasters, we all need to constantly remind ourselves that it could be worse. And set ourselves with that thinking and work on worse case scenario-type fires, so we've done, I think, a fair job of discussing that and talking about it, but we all could use more practice.

Increase the response speed and capability of California's mutual aid system. It was somewhat slow because many of the areas were contacted and they had to rely on a chief calling back and saying, yeah, it's okay to dispatch equipment. Most of that has been all pretty well taken care of. When they get a call from mutual aid, they man up and move out. The capability of California's mutual aid system is very dynamic. We constant have to keep upgrading it, and that was one of the things they brought into play.

Improve inter-regional alerting protocols. The state is divided into regions and this was region communications between each of these fire chiefs that are coordinating mutual aid resources to make sure that they all knew what the fire situation was. Currently it's done by conference calls, rather than face-to-face meetings. Quite effective.

Hold more frequent mutual aid mobilization exercises, include a designated strike team leader in all pre-determined strike team assignments, and begin moving requested resources immediately. All fire departments should plan for receiving mutual aid from many participants. This is something that the city of New York recently found out, that they were unprepared to receive mutual aid assistance, and they always felt that they were, like many huge agencies, they would always be the donor of mutual aid, but never the recipient. So they were unprepared for companies coming in to man their existing stations to respond to the day-to-day activities. This is something in California that has become now very routine. All of the areas work with their corresponding jurisdictions around so that they can accept incoming mutual aid equipment, and of course common terminology is also another factor in that.

Make exercises for wildland structural fires part of the regular training schedule. This is always difficult when it gets to training, some of these exercises are very costly, so their budget is contingent on

many of these agencies that, in lean times especially, those are some of the first areas to go as you're training and exercising, but it's important that we continue as best we can in those efforts.

Establish **(UNINTELLIGIBLE)** boundary drops and interagency zones for mutual threat zones. This has been quite a fertile ground in California. Many of the fire agencies have agreed with their neighboring agencies to basically drop the boundaries, whoever's got the closest resource response, start working and then they work out the paper work after the fact. It's been very effective in increasing the response times and making sure that nobody falls through the cracks. Used to get a lot of questions. I live right on the boundary. Am I fearful that one agency is going to argue with the other and not come in? Quite frankly people who live on the boundaries are the benefactors of generally most agencies, both of them respond and then sort it out after the fact. So, it's quite effective for managing these fire responses.

Familiarizing all of the personnel with protocols, procedures and terminology for requesting air support. This is something that isn't often done on fires, and it's something that continually needs to be trained to the fire resources in California.

We talked a little bit previously about the incident command system. The recommendations in the report were to provide training and all local emergency response personnel in ICS. This is of course back a number of years ago when it wasn't as common that the fire service knew ICS and was fully engaged in practicing it. Currently in California, ICS is used on almost every fire our agencies respond to, outside of maybe a car fire or a trash fire. That's so they can maintain the practice of using the terminology and going through the different steps of setting up an incident command when the big one comes because you can't wait to train when the bell goes off.

Scheduling increased interdepartmental drills in ICS. It's a little more difficult. Reducing compatibility and communications systems at all levels and among local and state agencies. We've made progress on that but we're not where we should be yet. I chair another committee that was formed by Assemblyman **(UNINTELLIGIBLE),** and we're putting together our first report, I think it's due the last part of this month, on interoperability in California, and it's obvious, not just from these fires, but from other incidents, that we still have a way to go on interoperability of communications. We've gone a long ways. Many agencies such as L.A. and several others have gone a long ways on interoperability of the

various agencies, but we're not where we should be quite yet. And again, it's another very expensive endeavor.

Include ICS training and drills opportunities to learn and practice a transition from single resource to multi-agency incident. Now think about it. When a fire starts, the first people on scene are generally engine company personnel and hopefully a chief officer. They see a fairly small fire building, and so they have to recognize very quickly, is this something that our immediate first response can handle, or do we need additional assistance and to what level? Not to say that they have to order up everything that eventually they may need, but it's to keep that in mind that it may be going multiple alarm or outside their agency, and that's something that constantly needs to be reinforced. We need to design exercises to allow all officers to gain experience in all operational roles. Now most of these have been done since the Oakland Hills fire, because remember, these are recommendations from over 10 years ago.

Include a communications function in the ICS structure – been done. Plan for early information intelligence gathering and procedures for sharing with the EOC, Emergency Operation Center, and the media. On evacuations – it was found that we needed to clarify in each jurisdiction which agency had the statutory authority to order and supervise evacuations. Now it sounds like kind of an easy recommendation, but it needs to be done periodically because you have people retiring, you have new people coming in, and you need to have all your managers aware of who's responsible, and has the authority, to order those evacuations. And as we found in many of these fire areas in the '93 fires, that became critical to life safety. And so that's a big key in this, we need to keep talking about that.

I'm sorry, I slipped forward, but one of the other areas they found in Oakland Hills, the fire engines needed to be equipped with loudspeakers so the firefighters could inform the citizens. They were making very quick evacuations, they didn't have that capability. Currently it's part of the new siren system in most of these rigs, so they have that capability by just flipping a switch. Need scheduled information exchanges among all operational level fire and police personnel, understanding that most of these major fires are multi-period. We talk about a 12-hour burn period, so you have people coming in, command staff, for a 12-hour period, they have reports they need to pass on to the people that are taking their place, and it's all been through the ICS system, very well documented. They actually put a 12-hour incident action plan together each 12 hours so that the oncoming shift knows not only what they've done, but what's expected to be

accomplished in the next 12-hour period. This is critically important because you can't have people leaving the scene with all the information of what's been done and what needs to be done, and just turning it over to a new group, and that's critically important on these major incidents that go for multiple time periods.

The UC Emergency Broadcast System and the Emergency Digital Information System should be used to its fullest. It was not applied in the Oakland Hills Fire, and certainly it should have. The other was to conduct public information campaigns throughout California on evacuation issues. Now some areas are better at this than others. Contra Costa's probably the best county in the state of California because of hazardous materials threats in that area, but they're very efficient on both notifying and ordering up evacuations, and we recommend that that model be spread throughout California.

On the use of volunteers – all the agencies should plan and prepare to deal with and use spontaneous volunteers and resources. A critically important issue in all of these events is that you have, not only personnel responding, but you also have offers of assistance, as we did throughout the fire siege, and to be able to manage those without endangering life, but increasing the effectiveness of the response needs to be done prior to the event. Are you just going to accept everybody that comes down, to me is tantamount to sending our troops to Iraq without training. Just saying, Hey, anybody who's got a gun, we need you to go to Iraq. You cannot allow that, because the eventuality of the outcome is directly affected by the training and experience and abilities of the people you put into play to fight these fires. And so it's not so simple as, just everybody come down and we'll put you to work. You have to verify training, you have to make sure that they're going to be in a safe enough environment that they won't lose their own life, and that they're properly supervised. That's another major issue. They were recommended to create an organizational element in fire departments to manage and use the voluntary resources. Develop a policy in every emergency organization to promote and use volunteers. In the emergency management function, donations management is actually a specialty within our venue. And it becomes critically important when you have these large disasters, and I'll just give you a couple of examples of two warehouses full of clothing and things that were donated to the World Trade Center, when in fact they really didn't need that. And so it becomes operationally an impediment. It could get in the way of the ongoing operations if you

get up with donations and things that you really don't need, so the management of that whole process if very, very important.

On mop-up and demobilization, seems like, well, that's after the fact. This is making sure all the fire's out and then demobilization being the return of resources that have been working on the incident. It was recommended to make wildland fire mop up techniques a component of scheduled training. Now understanding, many of the fire departments are quite urban in their approach to fire fighting, and so when they're called out to work on these brush fires, that's not one that normally gets a lot of training is the mop up of these wildland fires. But critically important to it not starting again, or rekindling and in some areas, maybe even starting a bigger fire the next day.

Demobilization -- the independent committee of fire rescue mutual aid system was studying the issue and made a lot of recommendations for that. The reason for that is that in demobilization, or releasing resources, it doesn't happen all at once, just everyone go home. It's done in a systematic base. One, that the equipment is worthy of being on the road, it has to go through a mechanics check. Two, you need to get the equipment back to their jurisdictions as quickly as possible on a priority basis, because some agencies pull their resources down to the extremes in these major, major fires. So you want to make sure that you return that equipment first. The equipment that OES has, we have 110 engines that we man up and send to these fires throughout California, should be some of the last equipment to go because that's surge capacity equipment, so somebody's not relying on that equipment back home to provide ongoing fire protection, and so that's how the system is done currently, but back then it wasn't, therefore that's why the recommendation.

The recommendation on emergency public information were that dispatch be trained, PIO immediately be dispatched these fires so that you have an ability to reach out and deal with the media and provide up to date timely information so that the citizens were aware. Include a team of PIO's and emergency response for every city and county on these larger fires. Equip a PIO team that has a mobile and EOC information center, complete with staff, phones, and fax machines. Plan to provide media reports with access to information, whether by phone or by entrance into the disaster area. Train law enforcement personnel from all cities and recognizing the access rights of the media representatives. Media representatives can be both a hindrance but a godsend for getting information out. As we all know, CNN

will cover these events faster, quicker and better than any governmental agency will ever be able to do. In fact, we have, in our office, we have the ability to monitor what they're doing so that we're able to monitor using their resource information gathering, at least their helicopters and things in the sky. I know many of the fire agencies even utilize that for Intel. They've got so many helicopters up on these events that you get a pretty clear picture of what's going on. At that time they weren't doing that.

Enhance multi-discipline coordination, particularly between fire, law and emergency service agencies at all levels. And of course this directly translates into training and exercises, having **(UNINTELLIGIBLE)** all hazards, making sure that all the agencies that will be involved, are involved. And that OES should develop formal mutual aid procedures for Emergency Services personnel. We also have an Emergency Management Mutual Aid system we're very proud of, so we believe accomplished that function.

Now as a direct result -- I included a couple of slides in here. As a direct result of the after-action report from the '91 fire, SB 1841 was passed in the state legislature. Now it was known at the time that one of the legislator's house had burned down, so he was quite adamant about solving some of these major jurisdictional problems, so they passed the Standardized Emergency Management System legislation, which was 1841. Basically what that did, it was a framework for emergency management and responses in California. Since the '96, all state agencies are now required to use it, Government Code 8607. It has its roots in the incident command system, multi-agency coordination, and the mutual aid system. And as we had reviewed – very quickly, only have a couple slides on this because we've gone over ICS a little bit – the elements of ICS are incident command, operation area concept, the master mutual aid agreement, and multi-agency coordination. The five levels of course being the field level, or incident level. If the resources aren't adequate, they go up to the next level, which is the local government level. Then to an operational level, which is your county wide regional, there's three of them in California, and then if they can't supply the resources, it goes on up to the state level operation center.

The sequence of events in a disaster is the same: the locals remain in charge, it's a local responsibility, mutual aid is only provided by request, and the flow of information and resource requests go up through that chain. This is a draft of the mutual aid regions for fire in California, there are six of them, each of those regions has an elected fire chief who manages mutual aid resources and tasking in that region

for no compensation, quite frankly I'm not sure why they do it, but they do it because it 's the right thing to do in California, and have become very efficient at moving mutual aid resources throughout the state.

Now from other agency representatives, the testimony you will hear about many of these recommendations that have been instituted, but I think also additional recommendations that will be made on best practices and so, I would ask that you pay close attention to them because I'm very aware of some of the great work that some of these agencies have done, and it really should be models for the rest of California. With that I'll close. If you would like, I'd be more than happy to take questions.

CHAIR CAMPBELL: Dallas, one question. Based on your testimony, what would you say the success of the recommendations that came out of that report were?

DIRECTOR JONES: I believe the success was very good, probably over 90% very closely to the event of people being aware and starting to work on them. But as we found in California with earthquakes, the further you get away from the earthquake, the less it's in your mind, and what's happened over the years I believe is many agencies, because of budget constraints and other factors, haven't done as much training and exercising as we should be doing throughout the state. And that's critically important to maintaining these best practices that were learned and keeping them up to speed. The other thing I have to say is some of the mitigation measures I don't believe have been followed as well, both in Oakland, uh, they have, before the city council this week, a tax override that the council's considering to go back and do some of the fuel modification and some of the things that hadn't got accomplished since Oakland Hills. I have to tell you, I flew the boundaries of the Oakland Hill Fire about two years ago, and you could have that fire tomorrow. The same as it was before. Because a lot of things have let slide, brush clearance, a lot of things, and uh, that's kind of the history and that's something I think that training and exercising and eventually overcome if we maintain and stay fast in doing that.

CHAIR CAMPBELL: Did you widen any of the streets?

DIRECTOR JONES: What's that?

CHAIR CAMPBELL: Did they widen any of the streets?

DIRECTOR JONES: You know, unfortunately they widened very few streets.

CHAIR CAMPBELL: So you still have the problem?

DIRECTOR JONES: Yes.

CHAIR CAMPBELL: Can't get equipment through there.

DIRECTOR JONES: Yeah. I have to say I think I was on at least three Malibu fires before they widened the streets and put in some of the things up there. So maybe you have to burn these places three times before they get the picture.

CHAIR CAMPBELL: I don't think we want to do that.

DIRECTOR JONES: No. I sure don't.

CHAIR CAMPBELL: Any questions?

UNIDENTIFIED FEMALE SPEAKER: Chairman Campbell and Dallas, thank you for your presentation, you did an excellent job on describing the operational situation and the improvements that were made. I don't think you quite hit the nail though on the fuel management part, and since part of today's conversation is about fuel management and land use, I would like to say that out of the Oakland Hills Fire, the Hills Emergency Forum was created. And that is sort of a very sophisticated high-level fire safe council at which the fire chiefs actually attend almost every meeting. This is Berkeley, Oakland, Kensington, El Sorrito, UC Berkeley, the Lawrence Lab is represented by the county of Alameda, and East Bay Regional Parks, and they have had a very aggressive, doing the very best they can, effort on fuel reduction because the canyon that that occurred in, that same fire as you said will occur in the next door canyon immediately, but the neighbors, the residence, have a very active fuel management program with goats, and mechanical clearing, and as you mentioned, I did want to make that point, that they are today counting the ballots of a mail-in ballot in Oakland for a $65.00 per parcel fuel management fee. It's not – I don't think there's as much operational there, but it is a fuel management fee. So as we get into more of today's conversation, as lessons learned, they did – as you look through this '91 report, they really do not speak much to fuel management. It really is operational and the best thing was SEMS that came out of it, and a lot of the operational things that did occur. But really, fuels management did take hold there and it's, uh, they're working as hard as they can today. Thanks.

DIRECTOR JONES: Yes, you're very, very correct. And it's actually covered the mitigation portion is really covered in a separate document. They were very effective in creating and working mitigation measures immediately after. Unfortunately over budgets and things, the old goats died, I guess, and they couldn't purchase new ones and a number of things went into play, but, uh, so we kind of slipped

back, but they are making another run at going back and re-establishing better control system. Thank you very much.

MR. CAINE: Mr. Chairman, my name is David Caine, I'm representing Senator Brulte today. He apologizes, he's not able to attend. I have a question for you, Dallas, if you don't mind.

DIRECTOR JONES: Certainly.

MR. CAINE: Um, I happen to live a few miles, and by that, maybe three or four, from where we lost 300 homes in the Cedar Glen area of Lake Arrowhead. I am concerned over an issue, and I'd like to ask you, in about 11 or 12 years from the Oakland fire and the lessons learned, is there no funding to agencies that's tied to the training programs that you indicated on the slide? In other words, would funding be withheld if training is not taken by agencies?

DIRECTOR JONES: Yeah, most of the training that's available in California is not specifically funded separately. It's part of an ongoing budget of an agency, and so it's an allocation by priority. Is it a priority to put personnel on a responding engine versus training more than what the minimals might be, and so –

MR. CAINE: I think you misunderstood. My question is more whether there's a funding program from the state to benefit agencies only if they qualify on the mitigation or the measures that are in the training programs, and if they do not take the programs they do not get that funding. Is that – that's my question.

DIRECTOR JONES: Oh. No, there are no funding streams in California hat are contingent upon meeting the standards.

MR. CAINE: Okay, so there's no incentive then, through training programs to take a training program and wildland fire management techniques for agencies that feel that they don't respond to enough of those fires to make that a priority, is that right?

DIRECTOR JONES: That's correct.

MR. CAINE: Okay. Another question I have is, following a visit from your staff in September 2002 to the Governor's office in Riverside, there was another visit on November 6, 2002 directly to Lake Arrowhead in the San Bernardino Mountain region where your staff witnessed first hand a substantial fuel build up. I was on that tour. The language around me was very evident that this was awesome, it was

frightening, it was dense – you know the story. Is mitigation not a lesson learned from the Oakland fire that should be employed in the preliminary steps of your presentation where it is the underlying program and method of fighting fires?

DIRECTOR JONES: No, I, I agree with you. Mitigation should be the number one method of preventing these fires, because that's – not only fires, disasters in California. We found an earthquake mitigation, same thing. Flood mitigation measures, very effective. It should be just like we breathe. That should our primary focus in California in mitigating these disasters.

MR. CAINE: I'm glad to hear that. The last question, and as a follow up to that, and that is, what did your staff advise you after they witnessed the fuel build up in the San Bernardino Mountain area in November 2002, a year prior this fire that we just had.

DIRECTOR JONES: Well, as you well now, the bark beetle situation, much like the sudden oak death syndrome problem on the coastal region in Northern California creates a great deal of fuel load in those areas, and it was well noted that that was a design for disaster. We had put together a working group to talk to the local agencies – but what happens is you start matching programs with the problem, and unfortunately in California we don't have a lot of mitigation funding to be able to go out pre-disaster and do some of these things. You know, often people say, well, gee, let's declare a disaster. Well, if you look at the programs under disaster declarations, they really pay for response costs and debris removal and the types of things that are after the fact. It doesn't trigger one dime of mitigation money. And that's unfortunate, I believe.

On the federal side, tied to each disaster, there is mitigation money. A percentage of the disasters allocated for post-fire mitigation, and that of course will come into play. But isn't it unfortunate that we put so much emphasis after the disaster. And so I totally agree with you, that's really where our focus should be, and we should definitely look at that, because many of these issues are dependent upon fuels management, clearances, building codes, and many other things. You'll hear about some great best practices during the presentations today.

CHAIR CAMPBELL: I was just going to say, we're going to get into that later on. But unless the legislature recognizes the need and funds it, the money's just not there. So I would think if we establish the priority, we have to create the financial resources with which to carry out our programs.

DIRECTOR JONES: I really do need, in all deference to the agencies involved, I do need to bring up on the bark beetle situation, a tremendous effort was done and I want to publicly acknowledge the U.S. Forest Service, the California Department of Forestry and Fire Protection, for taking all of their mitigation efforts and centralizing, and also to the Governor, for putting together all the agencies representatives in Sacramento to try to determine what we could do, given our existing authorities, to be able to mitigate against the problem. And one of the best examples I can use is Cal Trans. They have an authority for clearing right-aways that goes so many feel off a roadway. Well he brought every crew almost in California into that area to make sure that was done. So a lot of effort was done by a lot of great agencies, both local, federal and state, so I didn't want to say **(UNINTELLIGIBLE).**

CHAIR CAMPBELL: **(UNINTELLIGIBLE)**. However, we must also recognize that there was money provided from the federal government, particularly in the San Bernardino Mountains, for mitigation of, uh, and it was not utilized because of a variety of conflicts between agencies, regulations and things of that nature, so those are some of the things hopefully that this commission can help clear up. Senator Soto.

SENATOR SOTO: I don't know if, before I came in you addressed the mudslide situation? But I'm really concerned about that because of what happened last week. We had such a horrible disaster there with the mudslides, and the children being affected by it. Are there any plans, and how do you propose to address that, to make it so that in case of another fire there will not be the horrible devastation with the mudslides? How can we – uh, what can we do to think about now, doing something about preventing that type of situation from occurring again? It just seems to me that it was such a senseless loss of life when people were allowed to go up there when there was such a potential for danger and what happened to occur. Are there any plans to, uh, and perhaps we ought to legislate that. I don't really know how far you can go with legislation on this, but it seems to me that we could have done something to prevent what happened last week when all the people were covered with the mud and we lost some people with that. Do you have any ideas or any plans, and I'd be glad to carry it, legislation, on how we can prevent that from happening. I don't know how you can mandate people staying away from those areas. And perhaps we can do it, and maybe that's one of those "there oughta be a law" kind of thing, you know? So, if you can help me out, or I'd be glad to do it if there's someway that we can avoid that from happening again, because you know there's going to be more fires, there's going to be more curious people coming up there to see, just to

(UNINTELLIGIBLE) and what they can do. How in the world anybody could have thought that it was safe to go up there and take all those children that it was almost to be inexplicable that they could have done that. And yet, they were allowed to go up and stay there, knowing the potential for disaster. It seems to me that we ought to either legislate something on that or have a prevention plan, or something, so that we could avoid doing that again and that happening again in the future. That's one question that I had. And, I know that the City of San Bernardino, and the Mayor's here, maybe she can verify this, I read that they're already making plans on the land use on some of those areas up there that, uh, giving some people some perimeters on how they can build up there. Any of the other cities doing that, that are up along the fire border? Are there any other cities doing that – I think San Bernardino just did that last week, if I'm not mistaken, they brought up some ideas into their planning department, the perimeters under which people could build up there. And I would hope that more cities would be aware and conscious of doing that.

DIRECTOR JONES: I'll take your last question first, if you don't mind. Most of the local jurisdictions are re-looking at their land use, cause quite frankly in California, when people build structures, then basically they're there until they're either torn down and rebuilt, or some catastrophe takes them out and, see we call it repetitive loss. Most of the agencies are reviewing their land-use patterns because quite frankly some of these structures should not be built, or re-built, in a few of these areas. Just a minor few of them. But yes, most of them are looking at that.

On the flooding, well known in California, after fires comes flood. We have the four seasons: earthquakes, floods, fires, and whatever. Before the fires were put out, we had convened just like we did on the fire effort, a multi-agency coordination group. It numbered into the hundreds, I think we had 140 at one time, and this is the U.S. Forest Service bear team, the Department of Forestry and Fire Protection, L.A. County Forestry, all of the people who have responsibilities and have some flood and stream erosion, fish and game, that can come in and do mitigation of flooding or mud slides and debris removal. Before the fires were out, to convene all of them to one, using all of the same mapping because there's an economy, if you over-fly all of those areas, you can identify the denuded areas and the water stream where they'll run off, and then be able to maximize the federal, state and local abilities to come in and work on those measures, both in a short, medium and long-term perspective. As we speak, the corps of engineers is expending over $10 million in taking the debris out of those basins, the debris catch basins. Now, there are,

again, many, many different programs that have bits and pieces. FEMA has a mitigation program that can come in and do emergency measures for mitigating against the flood disaster. The state has some affect in dealing with the Department of Water Resources. They brought in pre-**(UNINTELLIGIBLE)** sandbags and a lot of things, they came in and started flood-fighting school for teaching and working with local government, so a lot is happening on trying to mitigate against tomorrow's disaster. I can't speak to the terrible, terrible tragic loss of those individuals up that canyon. I can't imagine. I mean, we were talking to every local government agency, before the fires were out, about the flooding potential in those hills. The first drop of rain, I'd have been out of there in a heartbeat. I just – I can't – it's unconscionable to me to imagine staying up in there and expecting something bad enough to come. I don't know the exact circumstances because I'm not there, but obviously it happened. But it could happen tomorrow in another area, and we have to be moving and we are, I think very aggressively and working with the federal government, state government, and all of the local governments to try to do something on mitigation of any floods or further debris flows.

CHAIR CAMPBELL: Our next three speakers are going to deal with vegetation management. But, Judy, go ahead.

MAYOR VALLES: Judith Valles, the Mayor of the City of San Bernardino, and I appreciate Senator Soto's comments, but I need to clarify two issues. But first of all I certainly commend you for the recommendations and presentation that you made today. The question was asked, have those recommendations been in affect and I think your answer was about 90% of them, but I want to stress two points, and I think you also made them here. Ultimately it is at the local level – by that I mean city and county – that must implement these recommendations and see that they are in affect. Another point that you made, which I think is – we sometimes underestimate the power of the media and the information and communications that must get out to the community. You're absolutely right, Dallas. Right when the fires were occurring, we put together IGIS mappers, as many as we could, all the agencies came together, and we identified the potential flooding that would occur. We had it shaded, it was in the newspaper, and I believe even the Los Angeles Times, it was in there. However, you cannot force people to get that information. While the fires were going on, we made plans for sandbagging and **K rails** to try to divert the mud flows as much as we could. There were some areas over which the city had no jurisdiction, and I'm

not pointing fingers at anyone. However, it's really incumbent upon local leaders to make sure that all your constituents get the necessary information, that Waterman Canyon where that St. Sophia camp was, was a prime area for disaster. Unfortunately, the family that chose to go there, not that they didn't heed the advice, they were unaware of the danger. And when the mudslides occurred it was next to impossible to move upward and warn them of the pending disasters. So, you know, we do the best we can at the local level, but ultimately all these recommendations for local leaders that see them, you've got to make sure that you implement them and that you follow through. That is really critical. The state and feds, well if you provide us with the funding, that'd be terrific, but even that creates a bureaucratic nightmare because somebody's waiting – who's gonna come up with the bucks first before the other person comes up with the bucks, and meanwhile you have the local level waiting, desperately, for some assistance to come. Just as a brief explanation, and I thank Senator Soto for being on top of these issues. Thanks.

DIRECTOR JONES: I agree wholeheartedly with what you said.

CHAIR CAMPBELL: Dallas, thank you very much for your testimony. Next we're going to hear from Chief Bob Roper of the Ventura County Fire Department, and he'll talk about vegetation management. Chief? Thank you for being here today.

CHIEF ROPER: Thank you, Senator, members of the commission. I'm Bob Roper, Fire Chief of the Ventura County Fire Protection District. It's my honor to give you a presentation on our vegetation management program, and some of the barriers that we encounter, and also some recommendations. Let me first start off with our key program, which we build defensible space on. Every year, our local engine companies within each of their sectors survey their areas, and we send out the notice that you see up on the wall, to about 15,000 people in the county. These are people who live in the wildland interface area, and are subject to fire conditions. This program started in 1967 and we have adopted it by local ordinance within the county, and within each of the cities that protect in the county. By June 1 of each year, the residents are required to have a 100' clearance from their structures to provide a defensible space, not only to save their structures, but also for the firefighters. If the property owner is noncompliant with this direction, then through the fire district we have an approved contractor that we have under contract. We send that contractor out to remove the hazard, to abate the nuisance. When that happens then the charges are put onto the property tax bill of the property owner, which can be substantial because it's not only the

hand clearing that is done, but it's also the $635.00 per parcel administrative charge that supports the cost of our program. This program is truly our number one most successful program for protecting homes and keeping the safety of firefighters, and it's really been proven over the history of our department. By the picture that you see, this is recently from the Piru Fire this year, where the house sits up on the hill and you can see the area below the house where the weed abatement was able to protect the home, and really save it. Today, or compliance rate out of 15,000 notices that we send out, we only clear 30 lots a year. And this is tremendous because over time we used to clean about 400 or 500 lots, and it's gone down now to 30 lots a year.

Now let me go into our fuel modification program. Following the California fire plan adopted by the state in 1994, we took the lower half of Ventura County and we began to determine where the historical fires were occurring. We identified 10 separate fuel beds, and these are separate areas that have fire history within them. And the one thing that we know from the history records **[SIDE A, TAPE ONE, ENDS. SIDE B, TAPE ONE BEGINS MID-SENTENCE]** heli-torch, hand torches, **FUSIES**, a variety of different means. Our records have indicated by some of our successful projects where fires have bumped into our actual prescribed fires before, is it's costing roughly $25.00 an acre to treat these areas by prescribed fire and it's **(UNINTELLIGIBLE)** versus about $1,100 an acre to suppress the same type of fire in that area. The picture that you see is directly across from the hotel, across the freeway, is where this fire was conducted in March of 2002. This is called the **Kevington** Tract in Thousand Oaks and it's an area that's one of our high fire hazard areas cause the large number of homes that are built up on top of hills that are prone to the topography on spreading fires. When these homes were built, they all had shake shingle roofs, and through cooperation with the local city and planning departments, that ordinance was changed and so they're all non-combustible roofs right now. But even with that, we've seen homes burn because of fire spread.

Another method we use is what we term cut and stack. We use this method in areas where the fuels are in close proximity to homes and we can't do large scale fires. And what we go in an do is we cut the brush and stack it, and wait until the middle of winter during the rains, and we burn it during that time. It's a very expensive, labor intensified process, but it's very effective but it's light on the land.

The next method we use is herbicides. What we do is we work with landowners, this is primarily range lands with cattle ranchers who need to convert their brush from brush to grazing. Under that operation, we have a large fuel bed that we need to actually kill so that we can go back in during the winter months when it's safe and burn it. So what we do is we treat it with a herbicide by aerial spraying, killing off a number of acres that we go back and re-ignite during the winter under a safe condition, which is quite effective.

The next one is chipping. Chipping is a new method for us. We've purchased a chipper through some FEMA grants over the past years. This is a very efficient operation but very expensive because of the handwork involved. It's also very dangerous because of the type of equipment that the hand crews have to work on. But the one benefit of doing this is we get the roadside clearance and then the other thing we do is introduce a biomass of the chipping, is blown right over the side of the road and it shades the other area and its composted naturally.

Another way that we have to take the fuels and try to kill it so that we can burn it, is we use a disc. We have a forestry disc that we drag through the brush and it just kind of collapses, it doesn't disk up the earth like normal disk does, but then that also allows us to go in during the winter on low angle slopes and convert the fuel types.

The next one is mowing. This is a new program that we just adopted this year, and our forestry mower is on display out in front of the hotel, and it will be on display through the lunch hour. But this is a cost-efficient model that we're beginning to take off this year. What we have is, I'll use for an example, the community here in Thousand Oaks loves its open space, so that they so is they have like a one-acre knob of hill with homes and tracts built all around it. It doesn't work out too well to go in and burn of that little knob of the hill in the middle of the neighborhood. So, but these fuels have been accumulating and we have to do something with it. To go in and clear it by hand really gets to be expensive, so what we did is we purchased a mower, and this is kind of a hammer/knife mower with tracts, and we're working with a local open space district that we're going in and we're mowing about a quarter of these areas a year. And with the hope being, by only doing a quarter of the area a year, we don't have erosion problems, the animal life has somewhere else to go, and we just rotate around the area. We have high hopes for that.

The next one is biotreatment, or grazing. And this one we've had some mixed results on. We've looked at using sheep, and sheep really only converts the fine grasses of an area, so we looked at using goats. And with goats we'll go into some of the heavier brush, but the biggest problem with the sheep or the goats we having is the fact that the natural predators to the area, uh, it's hard to deal with herd maintenance. But we're really have a successful story in is with the cattle ranchers.

CHAIR CAMPBELL: Do you mean you have a problem with the coyotes?

CHIEF ROPER: Coyotes, bobcats.

CHAIR CAMPBELL: Mountain lions?

CHIEF ROPER: Yes. Yes. And, some poachers. So, but our real success now has been a partnership we're forming with the Ventura County Cattleman's Association. Under this partnership, by what you see in the middle of the slide, is the fact that we have a historical fuel bed that runs from Santa Paula to Ventura City here. Fire has run through this area, and it usually comes under an east wind condition. What we're doing is exchanging in this partnership with the cattle ranchers that we will convert the hills of brush through control burns into graze land areas for them. In return, they're going to be modifying and moving their fence lines, and they're going to create these 1,000 to 2,000 foot buffer areas right through the middle of a fuel zone. With that happening, they have promised under a signed agreement that they will take and do early cattle grazing in these fuel zones. And then they'll move their cattle out of there. So what we'll have is, hopefully, a permanently maintained fuel control zone in these historical fuel beds. Our problem is that there's only three of those ten fuel beds we identified are subject to cattle grazing operations.

The last area that we deal with is fuel breaks. We have quite a fuel break system established here in the county, and under these fuel breaks, they're designed to have strategic control points to stop fires and also protect communities. We have a great partnership with Southern California Edison to where we maintain the access roads to their electrical towers, and we tie those into our fire roads so that we have strategic access points to get to the wildland areas.

Now let me go over a few of the barriers to the implementation of these programs. The number one barrier that we have is the liability issue. Ventura County Fire is a contract county to the California Department of Forestry, and one of the great benefits we have with that association is that under prescribed

fires, if we follow all the CEQA guidelines and the prescription to light the fire that CDF and the state backs us up on the liability of conducting those burns. We're fortunate because we have that capability and not everybody else does. But with that, with the CEQA guidelines, it takes us six to nine months to be able to get a document done, approved, and to get a burn done. And what we have a lot is small acreages here in the county from 1 to 5 to 20 acres of private property owners who would like to do some type of fuels management, but we do not as an agency, have the time to do an environmental document on all the small parcels, and these property owners for them to take on that responsibility, they can get a burn permit through us to conduct those burns. But then the liability, if the fire escapes, its all on their own. So liability is a great barrier for the successful implementation of a progressive prescribed fire program.

The availability of resources is another thing. As any fire agency here in the room has, we have to respond to hazardous materials, terrorism, everything else in the world. There is more fuel out there than we can manage, and for us to get real aggressive in fuels management, we have to develop a whole wildland fire division to be able to go out there, do the documents, and have staff available to conduct the burns as often as we can.

Another thing is the burn days. The Air Pollution Control District of Ventura County and ourselves have a great working relationship to where they give us a large window when they think the weather conditions are going to be conducive to conducting burns. But between weather conditions, and then during extreme weather conditions when fire departments ourselves have to ban burning, we don't have very many days that everything comes into alignment where our CEQA documents are done, all the pre-work is done as the controls lines that we have the resources, and now we have the actual day we can burn. So it's very scarce, and it's really a barrier to the success of the program.

We also have to take, and we have a responsibility to the public. Because anybody who lives in the wildland areas knows that when they see smoke, they call 911. And so what we try to do is try to get two days' notice to the public through our media contacts of radio, the print, TV. But a lot of the times we give the notification to the public, and all of a sudden APCD calls us and tells us the weather window just closed. Then the public is waiting for us to burn and we can't burn, and then it's on again, off again. So sometimes the public gets tired of hearing about the burns cause sometimes they just don't happen.

And then the last real barrier that we have now to the implementation of some of our fuel modification programs are the open space districts. We have more and more open space districts within Ventura County, ranging from what I'll call the National Park Service is that even local private open space districts, people love to have the open spaces to walk around in, and I fully support it. But what's happening is that they do not adopt the idea of what to do with the fuels within those open space areas. Fire managers, we have a responsibility to identify it, but we have to have the custodians of the open space districts adopt the philosophy to partner with fire management to be able to implement successful fuel modification programs in those areas.

Let me talk to you about the cooperation among the government and the public. By this slide, you see different color vehicles, and that doesn't really represent all of them. This is from a recent burn we had where we had the U.S. Forest Service do a burn with us with, uh, CDF was there, L.A. County was there, Santa Barbara County, we have mixed agencies come. It's only through that cooperation that we're as successful as we are, trying to get the limited amount of burns done. And it's great training for our troops because one thing that we have is we use each of these burns as training on organizational management, as well as how to light a fire and how to control the intensity of a fire, so it's a real good educational tool that works out well. When we talk about cooperation, a recent example was, during this last year the U.S. Fish and Wildlife gave us a grant to do treatment of about 20 acres of their area out in Piru. This is in the Condor Sanctuary where they have custodian houses and also they have condor coops, I guess I'll call it. And we went in there and we did the vegetation management project around that area. Little did we know that in October, the fire would run right through that area and they did not lose a structure. And, uh, we don't know about the birds really, but that project worked well.

We're also working with Fire-Safe Councils, I believe there's representatives here today about that. But our Fire Safe Councils, we really only one viable one, and that's in the Ojai area. The tough thing is it's hard to keep that group engaged, because like any Fire Safe Council, if we provide fire safety and they don't have any fires in there, there's no real incentive to keep having meetings and keep going, so it's a hard thing for us to keep going with them, but it's a great tool to keep that local public awareness in that community of what the hazards are. The other thing we reach out to the public is, our annual Wildland Fire Expo. What we do is set up an area where we invite vendors to come in, we set up displays, and we usually

have some vegetation that we burn, and we try to teach and educate the private homeowners that you have a responsibility to help defend your home. Here's some products that vendors can sell, cause if you live in those area, why not buy your own foam system, your own fire pump, you know, help take care of yourself, cause there is not enough fire engines to go to every house when a brush fire comes through.

Under Codes and Guidelines, the things that's really worked out well for us is involving city and county planners. This is something that we have not always done historically in the past, and I can tell you today we're paying the price of that because of some of the issues like up in Oakland and the Bay Hills, some of those issues were poor planning in t he past years. But now we're working, and by this slide you can see, off to the side of the homes, there's a greenbelt between the burnt area and the homes themselves. The golf course also helps on the other side, but the greenbelts and their planned developments really help.

Then we also involve county and city building officials here, and we work on addressing and street signs. Because we find that when mutual aid resources come, or when we go into another area, in the remote areas, there's not the normal street sign at the street corner. In fact, it's hard to find a corner. In fact, it's hard to find a mailbox, or you'll find a group of mailboxes and all the addresses are there and you've got a long driveway, it's hard to get there.

There other thing is access. As you can see by this slide, we're not immune in Ventura County as far as having small, one-lane roads going up a canyon with overgrown vegetation. Today we have modern standards to prevent that from happening. We also encourage and require firefighting water supply that's dedicated to the fire department in those rural areas now.

Then the last thing is, is the high fire hazard construction requirements. We've had these since the early '70's that require non-combustible roofs, non-combustible siding, heavy tempered construction like on patios and so forth, so it's a real partnership between planning and building officials, along with our fire marshal. As we go in – you know, I was asked to make recommendations back to your commission. I've given you a copy of our after-action report that each of you have that's also available on our web site, but in there, on page 14, there's 23 separate recommendations. Some of those are particular to Ventura County, many of those are applicable back to the state. And let me just read through about six of them to pay attention to.

Establish basic training certification requirements for all fire resources. Senator, you asked what was done since the Oakland Hills Bay Fire. This was also identified during that time, and also after the Calabasas Fire in the early '90's, and we will have, when mutual aid comes in, sometimes the level of training and experience from mutual aid resources – the experience level we can't fault on, but the training, we still don't have a requirement at the state level that when I request a fire engine from an area that I know exactly what they're trained in.

Develop interoperable radio communications capability. This one has a high price tag, and this was also identified after the 9/11 attack and the problems they had in New York.

Bring new technology into fire operations. The one thing that we don't have as fire commanders is, we don't have the latest DOD type of high tech training and the up front intelligence. Usually we are watching the television figuring out where the fire is, or we have a helicopter overhead, but we need to bring in new technology.

We need to create buy-in and adopt the social responsibility of the fire problem to the community. We can have this commission meeting and afterwards we all go away, but is the community going to step up and do anything themselves about that?

Bring in the insurance industry into the solution. There are some people on the dais who know that I've tried to bring this forward in the past, and I see no reason why, if the insurance industry gives you a discount on your deadbolts and security alarms at your house, why don't they give you a discount if you remove vegetation, create defensible space, and have good building construction requirements around your house? The fire service has supported the insurance companies and they reap the benefits of it, and the taxpayers pay for it twice.

Suggest fire and building code changes for high fire hazard areas, and there's a list in your report of many of those that we have to have the building officials go through the process and hopefully adopt. And then we need to remove the bureaucratic process and some of the liability issues on prescribed fire projects if we really want to address the fuels management.

I would like to acknowledge, even though my boss is sitting on the dais today, I would do this even if she wasn't here, that really the success of at least the programs in Ventura County, it really sits on the sole and the back of the Board of Supervisors. The Board of Supervisors, as you can see on the Weed

Abatement Program, has adopted this since 1967 and they support it today, and also our vegetation management projects. They sit as a final repeals review body of the fire district. If a person has a weed abatement charge, they bring it back to me. If they don't like my answer, they can take it back to the Board of Supervisors. To give you an example, last year we had a property owner who had a $50,000 weed abatement charge assessed on the property tax bill. We presented that back to the Board of Supervisors, gave them the justification, the before and after picture is what we use to try to mitigate it prior to final charges and the Board of Supervisors stood behind the $50,000 bill on somebody. That's the type –

CHAIR CAMPBELL: Did you send the paramedics when you delivered the bill? [Laughter]

CHIEF ROPER: They get it in the mail. [Laughter.] But that's the type of support that the policy makers, as elected officials, need to provide the managers as we bring the items forward. And I think all the Board for that.

In conclusion, after considering all the issues identified, it appears that there are many pre-existing conditions like narrow roads, type of housing construction, that may never be addressed on a scale large enough to really make a significant difference today. Hopefully new developments will be regulated enough to provide future fire-safe communities. Therefore, only three distinct areas can bring timely fire mitigation tactics to a wildland urban interface problem that we encounter today:

#1: Remove the barriers and become aggressive in conducting fuels management programs ranging from clearing diseased vegetation to conducting prescribed burns.

#2: Establish 100' baseline defensible space program that has the ability to consider additional space requirements dependent upon fuels and slope.

#3: Engage the public in active wildland safety and outreach programs.

These three pre-fire steps will provide the best use of tax dollars in combating the challenges of wildland interface urban fires today. These steps are not the final solution, but I believe that they are rather an effective approach to reality-based actions. Because I see, no matter what we do, by changing a building code, for instance, it will affect the future, but our problem is today.

That concludes my presentation. The web site, our report is on our web site, and if you want copies of it we'll be happy to provide those also.

CHAIR CAMPBELL: Thank you very much. Appreciate you being here. Down there – Mayor?

MAYOR VALLES: Uh, yes, thank you. Just one question, and it's related to the fuel management. And I was pleased to hear that you are working with the California Fish and Wildlife. My question is this. When you have identified an area that is perceived – not is perceived, but has been identified as a potential hazard because of the fuel, and but, it has also been identified as a habitat for either some critter or some fly or some flea, how do you work – how do you deal with that? Because sometimes that, that really has been an issue in California, and that's been an issue in San Bernardino County. So, how do you deal with that?

CHIEF ROPER: We have several areas that have been identified for certain plant life or wildlife that are protected. And if it's a large enough area, it may be that we just don't burn certain areas. But usually what we do, is there's a term that we call like a **(UNINTELLIGIBLE)** zone, which is down at the bottom of a canyon with trees and vegetation. Under the prescription of a fire, what we do is, it's said that fire cannot go into that area, or it say the intensity of the fire has to be what we call a backing fire so it doesn't denude all the sticks and everything. So there's different things that are accounted in the CEQA process, or in federal, the NEPA process, that protects the wildlife so yet you still can do vegetation management and try to achieve the goal, but without denuding the whole area.

MAYOR VALLES: Okay, that sounded good, but in fact that's not working.

CHIEF ROPER: Well, I have not had a problem in my county that we – we have not had an area that we can't do.

MAYOR VALLES: Then you've been very fortunate. Thank you.

CHAIR CAMPBELL: Senator Alpert.

SENATOR ALPERT: Thank you. I was very impressed with the programs you run for fuel management, and as you pointed out an awful lot of them are labor intensive because they have to be done by hand. Do you get any assistance either in your county, or do you know in other places in California from the Conservation Corp, from honor camps, from any of the – I mean, are there people that we can use to help in the process?

CHIEF ROPER: There's a variety. For a lot of our handwork, besides our crews, we also use, because we're a contract county, we use the California Department of Forestry crews. Those are usually incarcerated crews that we bring in to do the projects. We also use a group out of Ojai, it's called The

Crew, it's concerned resources and environmental workers, and what they are, are juveniles that are endangered in society that are looking at different work projects. So we have a variety. We have not used the CCC's particularly on our type of projects. They're primarily The Crew, or the CDF crews come in.

CHAIR CAMPBELL: Thank you. Yes? Excuse me.

SUPERVISOR MIKELS: No problem. But just quickly, um, this dais is full of paperwork here. We took care of some of those trees that didn't burn. [Laughter.] Never fails in a government meeting. But I would like to say in response to Judith's comments about it is local government, it may go over some heads when the Chief said that the fuel management program and the rules and regulations that the Board has instituted are important. It is very difficult to sit there and have your constituents screaming at you because they got a bill for $673.00 because they were too lazy, ornery, uninformed, or any of those other words, to do the work themselves. And if people, the policymakers and local government don't recognize in our county, San Bernardino County, San Diego County, we have issues others don't. But we're the ones that can put the policies in place, and we're the ones who can go get the grants, we're the ones who can work with the regulating agencies and do prescribed burns, which quite frankly in our county are very unpopular with the environmental groups, with the no-growth groups, with the open space groups. And so it's critical I think, when this report gets done, that it gets into the hands of the policy makers for implementation and that there is some incentive, some reality check, for those policy makers to implement and to move forward. Because if we don't do that, all of this will be a wasted effort and in 10 years living where we live in California, we'll be right back here doing the same thing on some other, you know, wildland fire. And so, you know, I truly believe that we don't accidentally have the equipment we have, the programs we have, we have a fine fire service, they brought it to the Board, the Board has supported it, and locally the cities have supported it as well. So, we didn't lose as much in the same acreage, in structures, and in life, and I think part of it is because we've implemented these programs. So if I could have you take anything away from your visit to Ventura County, and we're pleased to have you here, it is that you've got to get your policy makers to bite the bullet and do the implementation when this final report comes out. At least that which is realistic, you know, for your own organization. One of the things that was brought up was what I call punitive legislation and I would request that my colleagues at this dais don't think in that direction. To say that we will withhold funds if certain things aren't done is counter

productive. Because you just re-focus an agency on those things in order to get the funding, and it may not be relevant to their agency, and so I would say that the more positive thing is to earmark funds for those agencies who do have wildland urban interface issues and create a program there where they can be proactive and certainly, you know, any support that I can give, or any of the Boards of Supervisors, I think, you know, they will be there. We live through this stuff on a daily basis, and we face these fires on a yearly basis, so those would kind of be my comments, and I thank our fire service and everybody. You know, it's a case of how prepared are they and how much can we prepare.

CHAIR CAMPBELL: Thank you, Supervisor Mikels. Mr. Hamilton with the Bureau of Land Management.

MR. HAMILTON: Thank you, Mr. Chairman. One of the barriers I didn't hear you mention was funding, and I was curious what different funding sources you're using for your fuels management program and in the best case scenario, what would you say the percentage is at this point of being able to fund your program:

CHIEF ROPER: We've been fortunate over the past since 1993 when we got real aggressive into fuels management. It was the aftermath of the Malibu fires and Topanga fires and so forth. And FEMA came up with, through the state, through hazard mitigation grants. We tapped into that and we still been using them today. We've tapped into BLM Park Service, Forest Service grants, stuff through CDF, and we tap every grant source that we can. Actually funding for us to get the grant money, there's been a lot of available funding out there. We haven't had a problem – I hate to say that – we haven't had a problem getting grant funding for vegetation management programs at this point.

MR. WOLF: I have a quick question.

(UNIDENTIFIED FEMALE SPEAKER): Sure.

MR. WOLF: Bob Wolf, Professional Firefighters. Chief, you mentioned – I want to echo one key point you made about the training value of these control burns. I've been to countless ones, myself. I can tell you that they provide invaluable tools to train new crews, especially at the beginning of fire season, and readiness and operations, and burning is one of the major control tools that we utilize in the fire service to combat these fires. I was interested in your thoughts on that, and a second question for you is, you sound like you rely a lot on the CDF crews to provide, you know, the work to get in there and cut the brush and

do those types of things for you. If we were to lose CDF crews because of budget reductions, would that have an impact on your ability to perform your pre-fire management burns?

CHIEF ROPER: Okay. I'll start with your second question. The CDF crews are paramount to us in doing all the pre-work to the fires. They are also there when we're actually lighting the fires, and contained in my report under one of the recommendations is the issue that what we ran into during the fires was we had a lot of fire engines in Southern California, but on the conference calls as we talked about what did we need to put out the fires, a lot of it was we needed hand crews. We were protecting the structures, but nobody was putting a line, or we had limited success in getting lines around the fires, so in the report one of the things I did notice is, we need to protect the hand crew program of CDF and in fact augment from what the results were from this year's fires.

As far as training, the one thing I can just testify to this commission is that the local fire service here is going through a high rate of attrition in retirements. And the experience level is really what we rely on when we combat the fires, so these control burns are real proving in training grounds to build the success that we had this year because that's really where people learn. And it's that experience when the fire's coming down upon you, you fall back on your experience, is pure and simple, and that's why it's instrumental having those.

MAYOR VALLES: Mr. Coleman, do you have a question?

MR. COLEMAN: Yes, I do. It's not so much a question as it is a clarification and a kind of historical context. You used the term high fire hazard zone, and if my memory serves me correctly, creation of the very high fire hazard zones from the Bates Bill came out in the '91 fires. And one of the issues that's associated with that is where it applies and people being concerned if it does apply to them. Because the second half of your comment was, you made a statement about the insurance incentives. And in the state of California there are areas that do get penalized for being in areas they haven't mitigated, it's under the Fair Plan. What I heard you say a few minutes ago is that we need to be coming up with techniques to motivate people to stay out of those zones and to reduce the level, is that correct?

CHIEF ROPER: At least if they're gonna move into them, to deal with the problem. The one thing I need to point out is the Bates map, the Bates provisions that had certain criteria that provided an

area to be eligible for that. In Ventura County we went above that with our own definition of what a high fire hazard area is, because Bates was not – it was too general, it was not specific enough.

MR. COLEMAN: I wanted to clarify that because in the Bates bill, it actually allowed local jurisdictions to establish those boundaries, and there was a lot of resistance to establishing those boundaries, so what your saying is your particular county actually went the other way, which is to make it more restrictive than the Bates bill.

CHIEF ROPER: Correct.

MAYOR VALLES: Yes, Senator Brulte's representative?

MR. CAINE: Yes, I have a quick question for you, Chief, uh, first I want to say I admire your program, I think it's a very sound program as outlined. Earlier in the program you spoke about cut and stack programs and used the term that it was very expensive and labor intensive. However, in the prescribed burn you had a $25.00 mitigation cost, protected $1,100 in suppression cost per acre, correct? What would be cost in cut and stack programs in mitigation efforts compared to suppression costs for the same acreage? Do you have any figure on that?

CHIEF ROPER: I don't have anything I could quote you today, but it would be much more expense.

MR. CAINE**:** All right. Uh, Terry Raley said about three years go he thought the figure was, for every dollar invested in cut and stack, it protected $17.00 in suppression. Do you think that's not a realistic figure today?

CHIEF ROPER: I wouldn't dispute that.

MR. CAINE: Would agree with that?

CHIEF ROPER: I probably would. He works for me. [Laughter.]

MR. CAINE: Okay. Well, I've been quoting it often and I want to know if I'm right. [Laughter.] Thank you. The other question I have is you mentioned that CEQA causes a six to nine month delay in fuels management on a one-acre parcel, you had some questions about whether it was worthwhile to bother with EIR reports, correct?

CHIEF ROPER: Okay. Of those that you completed in CEQA reporting and conducted the EIR, you went through the lengthy process. Were any rejected?

CHIEF ROPER: I don't believe we've had any rejected. What we've had to do through the CEQA process is we may have to go around an area that has a protected species or something, but I don't believe any have been outright rejected.

MR. CAINE: And were any of those modifications unforeseen and the CEQA process actually revealed them, or were they foreseen in the beginning and the CEQA process was rather a delay tactic, or delay method, or problem, that you experienced?

CHIEF ROPER: Usually the CEQA process, what it would unveil, is part of it is an environmental study of plant life, per se, we might not be aware if there's an endangered species there. Or, on archeological review of the area that we're going to burn, so some of those are hidden things that come out as part of the CEQA process, which is not bad, but I just want to point out the scope of the timing and stuff. Basically we don't have enough time to deal with the process and address the magnitude of the fuels problem.

MR. CAINE: Were any of those findings in the smaller parcels, though, that you were trying to get clearance on?

CHIEF ROPER: No, usually the smaller parcels we try to get a property owner who will just assume the liability themselves and do it under a burn permit, and that's a very simple process, that can be done over the counter.

MR. CAINE: Thank you very much.

MAYOR VALLES: Senator Soto?

SENATOR SOTO: Thank you, **(UNINTELLIGIBLE)**. Seems to me that with all the work there is to do, and how we're supporting inmates, there was one day I was up there, I was up there maybe three or four times in the last week or so, there were some inmates that were cleaning up the mud. It seems to me, though, that this is probably a group that we could use with the trustees to do some of this preventive measures that we've been talking about and hoping that we could do. Is there some kind of a provision that allows us to do that? Or do we need legislation to do that? Or, how is it that we can make that more available to the different agencies to be able to take care and use that, that labor force to be able to do that. Is that something we could consider doing? There's a lot of people out there that would be used as trustees that could clear up some of the land, that could help with the clean up after a fire, that could do a lot of

these things that I think is just a wasted **(UNINTELLIGIBLE)** capability that we have there that we're not using, cause these people are being supported by the county, or the state, or whatever it is. If there in prison, if they could be trusted enough to be taken up there, and with some of the clean up, with some of the preventive measures. Uh, why is it that we don't do that more? One of the days that I was up there, there may have been five inmates when they could have used a lot more. And in fact this was the day they started cleaning up the mud after the mudslides. So, are there any plans to do that? Do we have the capability of doing that? Or do we need legislation to do it?

CHIEF ROPER: I'll try to give you a simple answer, cause this would probably be better answered by CDF, but, for any of the crews, incarcerated crews, it requires a certain amount of overhead staff from the correction services agency to provide the guidance and supervision. Okay, with that comes a price tag, okay? So, simply put, if there was more funding made available to the corrections agency and, I'll just speak for the director, CDF would take more crews if the state would pay them for more overhead.

SENATOR SOTO: But what if that was a requirement and part of their responsibility that they have as supervisors of these people? Why couldn't we add that to some of the responsibility on their, say their, resumes, or their job descriptions?

CHIEF ROPER: Of the incarcerated people?

SENATOR SOTO: Of the incarcerated people. Why couldn't we say to the supervisor, if you have people, uh, trustees, that they be made available to any of the clean up, any of the preventive measures that we want to take, so that we could – these people are being supported by the county and the state. Why can't we use them to do some of this work, cause we keep going back to the problem, well, there isn't any money for this, there isn't any money for that. We're spending a lot of money supporting these people. Why can't we use that to do some of these things that need to done, these measures that need to be taken, for prevention, or for clean up, or whatever we have to do? Who could answer that question?

CHIEF ROPER: Well, I – all I can tell you is –

SENATOR SOTO: I'll be glad to legislative it, I don't know. Maybe, you know, it just seems to me like there's a work force there that we could be taking advantage of and we're not.

CHIEF ROPER: And I think, what I'd like to ask is somebody from CDF to talk to you at the break.

CHAIR CAMPBELL: I'm going to ask Director Tuttle to respond at this point.

DIRECTOR TUTTLE: Of course, what you've asked is a very large question and we could spend quite a bit of time on this. The short answer is that every CDF crew is fully tapped out all the time. Everyone of our units that has camps within them, all of the crews are not just sitting there idle at any time. Their schedules are full with community projects, fields projects, and responding to disasters whenever it's appropriate for CDF to be involved. So as far as CDF crews, uh we, they are tapped out, they are working very hard, they are out there. There may be other local types of crews that you would have to deal with within your own county authority and so on. But as far as CDF, we, uh, you're getting your money's worth out of those. They are very well tasked and we would always like to have more. There's two issues, one is the staffing, the CDF staffing portion of it, and the other one is, and we need to acknowledge this, is the supply of inmates which are the low security inmates that are qualified or able to go out into a community setting with CDF supervision. As we have alternative programs that draw off the lower security – they're not in the hard walls anymore, and they're drawn out into community programs, then the ones that are left for us to use tend to be more hardcore, so that sort of the supply of inmates is something that we always **(UNINTELLIGIBLE)**.

CHAIR CAMPBELL: So none of the inmates you use are from Pelican Bay?

DIRECTOR TUTTLE: No! No, you will not find them – uh, you can rest assured. Certainly in Los Angeles County we use the juvenile camps as a source of prevention, I'm sure that Chief Freeman will explain some of the mechanisms. But not only are they used in terms – we have specific forestry camps that are called upon that are under the probation department that are available and are utilized.

I had one additional comment, when you're ready for it. Uh, if you're still speaking, then do ahead and I'll –

CHAIR CAMPBELL: No, go ahead, Andrea.

DIRECTOR TUTTLE: I wanted to add a bit more information to Chief Coleman's comment about the Bates bill. These were maps that were made available at the time, and they were appropriate at the time, and I just want to make it clear that we have far more sophisticated maps that are available now on fuel threat that through the fire service and our **(UNINTELLIGIBLE [FRAP?])** program, we now have for the whole state very sophisticated fuels maps, fire threat maps, on a Pixel level, which are available for

every county and every unit. So, if you're interested in those they are on the **(UNINTELLIGIBLE)** website. And they're the step up from what Chief Coleman was referring to. Thanks.

CHAIR CAMPBELL: Mr. Fukutomi from FEMA.

MR. FUKUTOMI: Thank you, Mr. Chairman. I'd like to – as a lifelong resident of Ventura County, I'd like to thank Supervisor Mikels and Chief Roper, and their predecessors for having the courage to enact these ordinances and the enforcement. I can tell you, coming from the private sector before government service, that it wasn't always popular the day those notices came in the mail, and they took an awful lot of heat from property owners. But it saved untold millions in costs and lives and homes. I'd also like to thank Chief Roper for mentioning some of the programs and the funding he's received from us, not only the Department of Homeland Security through the fire grant program, but he talked about our hazard mitigation grant program and Director Jones mentioned that, too. And this reminds the representative of the jurisdiction here that we'll be providing in excess of $14 million as a result of this fire disaster through the state and Director Jones an OES will be talking about the priorities and the application process shortly. Some of that money is going to become available for some of the programs that Chief Roper and the other chiefs are going to be talking about today. So kinda get your wish list out, you might be want to be checking it once and twice and waiting for OES's announcement on the availability of that grant money shortly. Thank you.

CHAIR CAMPBELL: Thank you, sir. Chief, thank you very much. Chief Freeman. Oh, I'm sorry. Supervisor Mikels.

SUPERVISOR MIKELS: Just real quickly, one more comment and this is for the commission to consider, the chief kind of went over it lightly, but it's in terms of open space districts. When open space districts are formed, either through conservancy or in a county, city, park district, whatever, no one ever address the fuels management, nobody addresses the cost, if that puppy goes up. And it's something that is extremely important. Our county is talking about instituting a county-wide open space district, and no one is talking about that. And is this – you know, the objective supposedly is to preserve as near natural untouched areas as possible. Well, most of those are in those steep canyons, they're in areas they want them to be passive, not too much intrusion by humans in order to protect wildlife, etc. Those are the primary areas for wildland fires, so I think that is something that agencies are going to have to start

thinking about, and I think this commission needs to talk about what kind of recommendations could be made, because we're talking in some cases, huge areas. You know, thousands and thousands of acres. If they're left in the middle and you're trying to mitigate what's on either edge of it, you're wasting a lot of time and effort. Thank you.

CHAIR CAMPBELL: Thank you very much. Chief Freeman from the Los Angeles County Fire Department. Before you begin, Chief, I'd like to recess the meeting at noon for lunch. I'm going to ask us to try to have lunch in a half-hour period. If you look at the agenda, we have quite a few other people to go through. I know you're not going to do half an hour, but if I say 40 minutes, you'll make it an hour. So, uh, let me suggest that we adjourn here at noon – we don't adjourn, we recess at noon for lunch until somewhere between 12:30 and 12:40, but please make 12:40 the latest. Chief Freeman, thank you for being here today.

CHIEF FREEMAN: Thank you very much, Mr. Chairman. Members of the commission, it is indeed a privilege to be able to address you. In the presentation we have provided four hand-outs already. One is the Wild Fire Safety Panel Report to the Board of Supervisors dated in '94. We also have a summary of building requirements for the very high fire hazard severity zone, and then we also have a copy of our fuel modification plan guidelines for your later reference. We've also provided you with a copy of the presentation and in the interest of time, and what has already transpired, I will go quickly over those areas that have been more than adequately addressed by distinguished colleagues.

Just by way of information, I am Mike Freeman, Fire Chief of Los Angeles County Fire Department. I am a member of your commission, and I also function as one of the regional mutual aid coordinators for mutual aid here in the state of California for the five-county areas of Los Angeles, Orange, Ventura, Santa Barbara and San Luis Obispo.

Los Angeles County Fire Department, although it is a county fire department, is a special fire district under California law. It is a dependent district – that means we are accountable to the County Board of Supervisors. We have county-wide responsibility for fire, as well as conservation efforts. We also protect 57 incorporated cities, and we have about 734 square miles of wildland interface, those areas where the wildland does come up and meet, if not over run, populated areas. And that of course does include the very high fire hazard severity zones. I believe the next slide is fairly graphic and actually, the

reason we're all here this morning is because of an extraordinary fire siege that struck Southern California. This fire gives you some example, very graphically, of populated areas that are at risk due to a wildland fire. This particular fire was not burning under Santa Ana conditions, and while it was a very large fire in 2002, relatively few structures were lost. Our experience in Los Angeles County is that we do have a major challenge. And as members of this commission, you have joined us in that challenge, and the challenge is here in California: the Santa Ana weather conditions plus flammable wildland fuels, which equals a history of major fires and significant structure loss, and unfortunately quite often the loss of life. The reason this commission was convened was because of extraordinary circumstances. I think that's a very important thing to remember is that we're trying to deal and cope with the potential of future extraordinary circumstances. More recently in Los Angeles County we had a very serious fire experience in 1993, as did some other communities in Southern California. In Altadena, the so-called **(UNINTELLIGIBLE)** Fire, 121 residents were lost. That was in a period of probably three hours early one morning when the Santa Ana winds did sweep down across the San Gabriel Mountains and pushed the fire into that community. About a week and one-half later, the old Topanga Fire destroyed 352 structures in the Santa Monica Mountain/Malibu area. Now, in that particular fire, there were staggering losses and yet we had a **(UNINTELLIGIBLE)** study that was commissioned that came in and command and control in response to that fire. There was a 90% save ratio for the fire fighting resources in that fire, so simply said, the firefighting forces did an extraordinarily good job, considering the extreme and extraordinary conditions. Nevertheless, we have tried to change history, and what we're trying to do is, in these extraordinary circumstances, we're trying to cheat Mother Nature, we're trying to cheat Mother Nature when the winds, the low humidity, and the fire combine, creating a fire storm. In this particular fire siege at midnight in the city of Claremont, on the east end of Los Angeles County, as that fire was coming through that community, we had 100 mph wind gusts, humidity of 5%, and a temperature of 95%. That was at midnight.

Following the '93 fire storms in Los Angeles County, we did a number of things. Very briefly, on the firefighting improvements which I think are very important, is we entered into a cooperative helicopter response with Los Angeles City Fire Department, which basically sends, regardless of where the fire is, we send the closest three available helicopters and then follow up. We've also adopted a program internally, primarily at our own cost until recently this year, and the state has provided some funding and I

compliment CDF and Governor Davis, or the funding to do augmented staffing, that is when the weather conditions are such that we need to staff up, put additional resources on the street. We've developed pre-attack plans to deal with communities and neighborhoods to try to anticipate what our resource needs would be. We also used some FEMA money and evaluated the two Canadian built Super Scoopers. That was back in 1994, and as a result of that evaluation, we have continued to lease those aircraft each year during the peak of the fire season. We also, on the local basis, have leased the air cranes, the heavy lift helicopters, one of those in conjunction with the U.S. Forest Service, which we use each year. We've also used an airborne command helicopter. A couple of years ago, with the support of the Board of Supervisors, we did purchase two of the Fire Hawk helicopters, and that was a major step forward because our local experienced pilots can fly those aircraft that carry 1,000 gallon tanks rather than the 360 gallon tank, and we found them to be quite effective. We also think it's very important, and we've done this for many years, is we do fly the helicopters at night, under the proper conditions, with experienced local pilots, and we've done very effective firefighting in the nighttime hours.

We also added water educters to our engine companies after the 1993 fires, which means that the fire crews can go into someone's backyard that has a swimming pool and by pumping water through these educters can actually that swimming pool water to protect that structure or maybe neighboring structures. We've also developed local maps for the mutual aid companies coming in so that we can hand those out, and in some cases where we have available personnel, assign birddogs, as we call them, to lead them into these key areas.

The next slide shows one of the Fire Hawk helicopters which was used quite effectively in protecting the community in Stevenson's Ranch in the recent fire siege. The Wild Fire Safety Panel was convened after the fires in 1993 by the County Board of Supervisors, and this panel was composed of various subject matter experts, and in conjunction with personnel from the fire service, these experts developed 39 recommendations. These were represented to the Board of Supervisors and they were adopted unanimously by the Board. Also, our 22 incorporated cities that are in the very high fire hazard severity zones have also adopted most of these changes. Some of them were code changes, and they're covered in the handout, which summarizes the requirements. But some examples are here on the slides, multi-paned windows, double glazing, and protection of openings. We found that to be very, very critical,

even in some cases in Altadena and in the '93 fire in Malibu with fire resistive roof construction, is that with open eaves and unprotected openings into foundations and into the attic spaces that the wind-driven embers would go right in. So all of that has been changed with those building and fire code changes. We also, it's not noted on the slides, quite obvious, is that there is a Class A roofing requirement in the very high fire hazard severity zones and in certain areas, no wood shake or wood shingle roofs, regardless of what classification they meet. Also in the Santa Monica Mountain area and areas of San Gabriel Mountains where residences and occupancies are further than three miles from a fire station, residential sprinklers are required as a matter of practice.

There were also changes that address the accessory structures, which we found quite often. As the fire front would move through, there would be embers that would be buried within wood piles, within wood decks, and so forth, and then the fire would begin anew and destroy structures after the fire finally had moved on. As part of the code changes, also, there was a requirement for all new swimming pools to have a draft opening at the street level so that the fire department could draw water conveniently from swimming pools in the event the local system failed, and quite often the local water systems are overwhelmed.

Another important part of the Wild Fire Safety Panel recommendation was the fuel modification plant, and we'll be talking about that in a little more detail in a moment.

I'd like to briefly touch on our vegetation management program, and as you've already heard from the presentation, the vegetation management is the use of planned prescribed burning, prescribed fire, it can be the use of mechanical means to modify the fuel, or biological using some sort of grazing goats, sheep, cattle. We don't have too many cattle in L.A. County that I'm aware of, but we do use goats. And the whole idea is to try to reduce that fuel bed. In our programs, we do use the prescribed fire, many of the same issues that Chief Roper mentioned are challenges, and we do have the difficulty of limited windows weather wise to actually do these prescribed burns. Something that we have utilized and we've found to be quite effective is a brush crusher. I will say it's not without controversy, in fact we have a study underway right now. But this brush crusher is a large crusher that is used remotely on cables, from a bulldozer up on a hillside or a ridgeline, and they run the brush crusher on cables up and down the hillside, and what it does is it crushes the brush. So just by that action, it changes the arrangement of the fuel so if a fire were to come into that area, it is not going to burn as rapidly when it's in that crushed state. What we have done as

a matter of practice is after the brush is crushed and cured, we go back in and burn it under controlled conditions. The controversy is, some individuals feel that perhaps that crushed brush is burning longer and therefore hotter at the soil level, which may be in some way endangering the replenishment or re-growth of that fuel, so there's a study that is expected to be concluded in a couple of months. But we believe that in terms of the efficient and the effectiveness of the crusher. It's possible to treat many acres, or to change the configuration of the fuel on many acres of very rapidly using the brush crusher.

What we have provided to try to give some sense of agency commitment is a significant amount of start-up cost if an agency does not already have personnel and equipment and a brush crusher and a heli-torch, which uses a helicopter to do some of these activities. We have found that it is important in our jurisdiction to have fully trained and dedicated staff, people that are committed year-round to the vegetation management program. Some of the barriers have been touched upon, obviously, the conflicting agendas, conflicting missions, conservation preservation, **[TAPE 1, SIDE TWO ENDS; TAPE 2, SIDE A BEGINS]** up when it burned into the old cottontail burn, and then in the '96 Calabasas Fire the **MONTANITO** prescribed burn actually provided a good defensible space to stop a flank of that fire. We've also been working on a pro-active basis in the La Crescenta area to try to form a buffer around that community, which is quite old, and is existing non-conforming, it doesn't meet our current requirements and we're very concerned about that, so we're trying to build a buffer around that community.

The next topic is fuel modification, and what this is, is a permanent alteration of combustible native, as well as ornamental, plants. And I would point out to the commission, and my fire service colleagues recognize this, we have found through sad experience that quite often ornamental shrubbery and vegetation around homes actually create a fire hazard. So we have tried to address that also to create a safety buffer around a particular structure, as well as a community. The components include approved plant lists, irrigation zones, it's part of the building permit process, which has been adopted by the Board of Supervisors, and by our communities or incorporated cities, so in new development and new construction, final approval must be obtained before construction for a subdivision and for individual properties. And again our commitment is a trained, dedicated staff to review the plans, suggest modifications, and to provide for the follow up inspections to insure that there is compliance. Again we deal with some conflicting missions of stakeholder agencies and sometimes there's community opposition to implementing

the fuel modification, because it does require certain changes or certain requirements in the particular property for irrigation systems and things of that nature. We did have very good success with the fuel modification in Los Angeles County when the fire did move into the Stevenson's Ranch area last October. The next slide shows you a very quick diagram of how the fuel modification plan works. The kind of strange, dark shape in the center represents a structure. Outside of that we've got at least 20 feet, which is the set-back zone, and that would be covered by ground cover or lawns, and then we have an additional 30 feet, which is the irrigation zone where the native vegetation is removed basically, but we still provide for some vegetation to maintain protection against erosion, and then the remaining 100 feet, and in extreme situations could be an additional 100 feet to a total of 200 feet, a thinning zone to provide protection for that property.

The next slide gives you a very graphic idea of what the firefighters and the citizens in the community of Santa Clarita in Stevenson's Ranch faced as that fire was moving into the community. Now, from the firefighting prospective, this is a challenge. It took hundreds of engine companies to assure that this did not destroy structures. But essentially this is a backing fire, it is moving against the wind. You'll notice that the smoke is lying away from the structures. The reason we're here, ladies and gentlemen, is because the fires that struck other parts of our state, the wind was lying into the structures. But our fuel modification requirements proved quite effective, along with the new construction that was present in Stephenson's Ranch. Brush clearance is an ongoing program in the County of Los Angeles. It's the removal, on an annual basis, of combustible fuel, including native and ornamental vegetation. We have 38,000 parcels within Los Angeles County that are on a brush clearance required list each year, and in the very high fire hazard severity zone, the clearance requirement is 200 feet rather than the standard 100 feet. Commitment, of course, the training of the personnel, we do use our fire station personnel to do the initial inspections, follow up inspections are done by them. If necessary, our forestry personnel get involved. In the event someone is unwilling or unable to clear their property, then the Department of Agriculture, the Weed Abatement Unit in L.A. County goes out and clears the brush for them on time, on our schedule, and then the cost of that is assessed to their property tax. Absentee owners are a problem and sometimes we run into stakeholders whose property abuts danger areas and they have different views. They may not permit us to clear the brush all the way into their property, and those of course become problematic for us.

We believe in 1996 the fire that struck the area of Calabasas, while it covered nearly the same acreage as the 1993 Old Topanga Fire, is that we only had six structures lost versus the 352 three years previously. There was some difference in wind and weather conditions, although it was a Santa Ana fire, but we believe that the brush clearance, the aggressive brush clearance that had preceded that fire in 1996 made a big difference. I mentioned earlier the weather and wind conditions we faced in Claremont this past October. We did have 21 residences lost in that community, and that is very devastating to those individuals, and it's devastating to the fire service. However, we attribute the success of saving the other 750 to great extent to the brush clearance that was in place in that community. That area, by the way, is one of the existing non-conforming areas of our jurisdiction.

The next slide shows just a picture of a properly constructed house, which would meet our current requirements in the fire hazard severity zone, and then you can see the affect of brush clearance, so the firefighters have a defensible space and they have a structure that's going to withstand the onslaught of burning embers and so forth. We do have community outreach, obviously, in our department. We try to build partnerships with the other agencies and local citizens to create a fire safe community. We've got a number of those listed here. The Fire-Wise Community USA Program is something we're involved with, we'd like to see that expand. We're very pleased with some work that's been done in some of our high fire-prone areas, the Topanga Fire Safe Committee has worked quite effectively. And some of the barriers again is funding, and where there are various grants and so forth, it's time consuming, it's difficult, sometimes to compete for all of that grant money. But we have had some successes as we've noted there in various areas where we've utilized grant money and worked with local home owners associations to bring about some modification of fuel so that we can make a safer community.

In conclusion, what I would like to do is just to share with you as colleagues on the commission some of the relevant issues, obviously, and some recommendations. We've tried to break this down into basic categories. First of all, regarding vegetation management. It would be nice if it were possible somehow to streamline the federal and state process for vegetation management, and where we have issues as the mayor raised where there are endangered species and protected habitats, that we come to some rapid solution as to how we're going to deal with those to protect the communities at risk. The environmental and air quality restrictions, we've not in our locality had a lot of problem with that, but I think it's

something that the commission probably ought to consider to be sure that air quality restrictions are not inappropriately holding up vegetation management, particularly the prescribed burn. It's important that the national fire plane grants be available throughout the state of California, north and south. And again, they're competing interests there, but that's an important recommendation. We would suggest maybe further study on the brush crusher and once this study is completed that I mentioned, I think we'll know a little bit better on the true affect of burning under those conditions, but as I said, that can treat a lot of acreage very rapidly and its limited in terms of the commitment of personnel and staffing, and perhaps the state or even federal, if it proves to be effective, could consider some funding for brush crushers in and around our state. This is a recommendation that as we present this, it's separate and apart from anything that's currently in place that we're aware of. For lack of a better term we're calling it a Fire Safe Planning Committee. And we're recommending that the commission consider establishing or recommending the establishment of such a committee in every county in the state of California. And it would be composed of local experts, local citizens, local elected officials would certainly need to include local fire service, law enforcement and other first responder agencies, but to establish these committees, which would be a standing committee in the good times as well as the not-so-good times, to coordinate the planning, the response and the recovery for fires, and could also immediately be available to implement the Blue Ribbon Commission recommendations where if in fact they deal with local areas.

As far as fuel modification, we would encourage that the commission consider some sort of statewide adoption of fuel modification programs, with appropriate standards, based on experience. And also, and this is key, is the development for some sort of retroactive fuel modification for existing wildland development with insurance incentives. Chief Roper and I haven't talked about that, but we believe that for the communities and the areas that do make these steps possible, there ought to be some incentive and I think based on experience, we can probably show that the insurance industry would benefit in terms of their loss ratios, and this is key, I believe, because it addresses, existing, non-conforming -- and new construction is not where our problem is. New construction is meeting the current codes and requirements. It's the existing, non-conforming communities that have been there for 30 or 40 years that don't meet the current day requirements. Brush clearance, we would suggest the adoption and enforcement of stringent building codes and brush clearance standards in wildland interface and intermix areas of the state. Certainly the

community involvement in the Fire Safe Planning Committee, efforts, which we've already talked about, and the expansion of the fire-wise communities USA throughout the state.

Lastly, but certainly important in fire suppression, is consider petitioning the legislature for additional OES engines. In our particular experience in Los Angeles County, we had every single piece of equipment on the road that we could possibly gather. We had stations that had no one in them because we had firefighters and equipment responding all over Southern California. And we have problem with that. But had I had additional engine companies, I could have put personnel on them. This is a one-time cost, essentially, and we would suggest consideration of that.

Request federal state funding for augmented staffing levels, especially during the high fire hazard conditions. Solicit state and federal coordination to support for the funding of wireless inoperability, which we've talked about, and of course that's a common issue, whether we're talking about Homeland Security, terrorism, and so forth, the ability to talk to one another. And it varies across the state, there are different levels of capability and that's really something that needs to be addressed. The suggestion here is to do a study, come up with some solutions.

Seek congressional support. For state-of-the-art firefighting aircraft, federal firefighting aircraft for use on forests, forests that do, if on fire, pose significant threats to densely populated areas. And then lastly under fire suppression, another utilization that the Fire Safe Planning Committees we recommended previously is to insure effective multi-agency evaluation planning and drills. The drilling is very important. The plans can be in place, but if law enforcement, fire, and if the neighborhoods and communities don't practice once in awhile, we're not going to be as effective.

To solicit consistent long-term commitment to fire safe communities from elected officials. We believe that the fire safe planning committee with this cross section of individuals could maintain a focus on these issues, which would serve to assist in maintaining a good fire safe community.

And lastly to coordinate effective interface fire tech program within each county, which would take into account aircraft, hand crews, engine companies, mutual aid response, and all of the other things. As I began, we are here because of an extraordinary circumstance, and extraordinary event that was basically driven by the weather. It's going to probably take some extraordinary actions and some extraordinary recommendations from this commission in order to deal with future fire sieges in the state of California.

But I am pleased to be here to make the presentation to share our experiences and I'm also committed, along with you, to do the necessary, reasonable, but extraordinary, steps to try to prevent this from happening again in our state.

CHAIR CAMPBELL: Chief, thank you very much. The hour 12:00 having arisen, and as you can all see, I have never missed a lunch. [Laughter.] Is there anybody in the commission who would dare to ask a question? [Laughter.] We will stand in recess for lunch to the hour of 12:40 at the very latest.

[**Back from lunch recess.]**

CHAIR CAMPBELL: We are now after – it's uh, 13:03. So if we could ask the members of the commission to please be seated. Gentlemen, if we could begin our afternoon session. We have, uh, our first speaker this afternoon is from the commission, the Chief of the Los Angeles City Fire Department, Chief Bamattre.

CHIEF BAMATTRE: Thank you, sir.

CHAIR CAMPBELL: And?

CHIEF BAMATTRE: I've got, uh, Deputy Chief Jim Hill.

CHAIR CAMPBELL: Okay, before you begin, I would ask the members of the commission that all of our hearings are recorded and if before you ask a question, for the assistance of the person who will be transcribing these hearings, would you please state your name and the title of the group with which you are associated? If we could do that, I would appreciate it. Chief, go ahead, thank you for being here.

CHIEF BAMATTRE: Thank you very much, Senator Campbell. Now that you've all had – I'm sure you've all had vegetarian lunches after our big brush presentation this morning. Just by way of a little background, I'm Bill Bamattre, Fire Chief, City of Los Angeles. But as, on the Blue Ribbon Commission, I sit as the Chair of the California Metropolitan Fire Chiefs. The California Metropolitan Fire Chiefs, to qualify as a Metro Chief, be the Fire Chief of a metropolitan department that has a minimum of 400 firefighters. In California we have about 16 departments that qualify, and the agencies that are Metro Chiefs, we represent actually a little over 45% of the population in the state of California.

I want to first of all express my appreciation to all of you, the members of the commission, for your participation. I am truly optimistic that the work of this commission will have a positive impact in addressing the wild fire challenge here that California faces. When Chief McCammon and advocated the

creation of this commission, many didn't believe that it would be possible given the unusual political environment that only California could create, and we were at a time where we had the transition of the two governors. However, certainly the miraculous birth of this commission I think bodes well and provides the optimism that the product out of this commission would be something that the entire state can use. I really believe that the success of this commission's efforts will depend on our ability to promote broad recommendations in the framework of a pragmatic approach. The acceptance and implementation of our recommendations is dependent upon the collective political will. This morning I know a number of you as elected officials had some different questions about fuel management and the process. The prior presentations I think laid a great foundation, and we're going to modify our presentation a little bit to provide you a little bit of a case study of what we did in the City of Los Angeles, and I want to really compliment that went prior to me, Chief Roper and Chief Freeman. They're already into managing the goats and the cattle, and I'm still trying to manage the people that we've got in Los Angeles. It's certainly, fuel management is a very broad subject, and what we want to demonstrate to you that, uh, I think you have to be prepared to be somewhat flexible and to deal with the reality of the political environment. And really the task facing this commission is not similar to when I took over as Fire Chief in 1995. One of the first things that I look at was, what was the biggest threat to the City of Los Angeles that I was responsible for and dealing with? Without a doubt, that was the threat of brush fires and the impact that it has, and that's really something that is a statewide challenge to the entire fire service. And with that in mind, I directed staff and we worked to develop a comprehensive strategy that dealt with many of the things that you've been dealing with over the past few meetings – the operational issues, the political issues, the fuel management, and really a whole list of things that I'll talk a little bit about when I follow up our presentation. But then we set out kind of a realistic course of action and a timeline to achieve that. One of the first things we did was looked at our brush clearance, and we recognized that our 100' clearance, although at that time was one of the largest, most restrictive requirements at 100', we didn't feel that it was sufficient. This was just after the 1993 firestorms that Chief Freeman spoke about, the recommendations that came out of that fire, which I think now you've seen in appreciation that, going back, all these historical fires, the recommendations are very similar after each fire. It's just the ability to implement those. So staff developed – our Fire Prevention Bureau – developed a new ordinance that increased our

brush clearance from 100' to 200'. But as a new chief coming in, I didn't want to go to the council and try to sell the council and the city on a doubling of our brush clearance. I knew that wasn't going to be politically acceptable. So we sat on – we waited, and by the good graces of the good Lord, the Bel Air Homeowners Association came to me about six months after I was appointed, and if you're unfamiliar, Bel Air was the area – we'll show on the slide -- in 1961 they suffered a devastating fire, lost 484 homes. And out of that, a very active homeowners association was put together and they in act have a subcommittee called their Brush Safety Subcommittee and they had studied the '93 firestorms, the fires in 1995, and they came to me and said Chief, 100' clearance is not enough. And they showed me slides of the flame lengths reaching 100' and as you all I think are aware now, in a wind driven brush fire situation, as Chief Freeman alluded to, we are powerless. There are things that we can do, but what we try to do is to cheat that fire, to cheat Mother Nature, by creating a number of approaches and perspectives that try to turn the advantage in our favor. So when the Bel Air Homeowners Association came to me, I was able to tell them, I've got just the ordinance, and it was already written, and they actually came to city council and presented to the council, and for your elected officials it's a lot easier to vote on a tough ordinance when you've got the public promoting, rather than the other way around with the council trying to do it. And so we were able to increase the ordinance. That was actually the easiest part of it, and we'll show you is how it developed and when we went in, and try as I might to sell the public and our council, I told them, this is not a one-year program. It'll take us 3 to 5 years to get the program implemented to the state that we were all looking for, which was a full implementation of the ordinance. The first year, when we went from 100' to 200', we called it the educational year. What we did is we educated the public in our inspections, and we wanted them to realize what we were asking, and we had a heck of a time working with the city attorney, they had a lot of consternation with citing a property, then not going back and actively enforcing that extra 100' clearance. But we were able to work through that, and each then we increased until we got the type of clearance. This coming year, which will be the 5th year of the program, we're looking at landscape vegetation and I'll talk a little bit about that at the end of the presentation.

What I'd like to do now is introduce our Fire Marshall in the City of Los Angeles, Deputy Chief Jimmy Hill, who also sits on the State Building Standards Commission, and he'll take you through the development of our brush clearance ordinance, and then we'll talk a little bit about how that was

implemented. One of the things that you have in front of you is our last year's mailer, and we're going to skip through pretty quickly some of the things in the slide presentation because you can see it a lot better in the mailer that goes out. One thing, if you take notice, Chief Roper showed his mailer on the picture. This mailer here started out looking just like the Ventura County mailer, because we went to the city attorney and they developed the mailer for us. That first year when we sent out that letter, somehow the people felt that it was saying if you don't trim your bushes, you're going to lose your home. And so this is what the evolution has been, and this most recent one was developed by the Cal State University Art Department and Public Relations Department, and I think you'll find that it's very user friendly and is educational as well as being instructive and informative. With that I'm going to turn you over to Chief Hill.

CHIEF HILL: Thank you, Chief. The commissioners – I'm going to give you an overview of what we consider our Brush Clearance Program within the City of Los Angeles. Our program, very much like many of the others, has been shaped by the history of California fires over the last 80-plus years. As you can see by the chart that our most recent wildland fires here in the state of California leads our list in 2003 with 3,500-plus structures lost, over 800,000 acres burned, and in excess of 22 fatalities. Now these fires date back all the way through 1923. This is followed by activity within the city limits of Los Angeles, and this really gave shape to improving our program and taking directive action to curtail and mitigate the cause of these fires. As you can see, dating back to 1933 with the Griffith Park Fire, we had a large loss in acreage and we had firefighter fatalities, something that is most certainly a real consideration for us when we are out combating these fires. We did the analysis after each of these incidents, and we looked at the contributing factors for these conflagrations. And some of the things stood out very much to us – extended years of drought, such as what we've experienced over the last few years without El Nino and El Nina climates. They've been very cyclical, we've had heavy rains, and then we've had years with a little to no rainfall. Vegetation management was identified. Increasing development in the wildland interface areas, where communities are now in areas that previously were just barren land. Poor accessibility in many of our communities that date back a number of years. The continuous use of combustible building materials – an important factor. Topography that contributes to the extreme fire behavior, inadequate water pumping systems. But one of the things that we content with continually and annually is the Santa Ana winds, which are a primary contributing factor in the spread of these wind-driven fires. Brush clearance is a second key

factor. With those things under consideration, we approached our city officials and we began to implement new technologies, improve our equipment. As you can see, a lit of things that are employing now, and the latest being the digital mapping and area photography, which has assisted us in the recent fires to be able to look at structure protection and take necessary measures for that. We have improved in the area of pumping apparatus and water tenders that we're able to deploy in these areas where we feel that the water supplies were inadequate. We have a method of increasing brush controls on high hazard days so that people are constantly vigilant for fire activity, or persons and areas that could create a problem for us.

Also the advent of firefighting foam capabilities, where you are able to foam structures and it serves as a retardant for those houses that are in the pathway of burning flames or embers that may fall on those properties. Personnel protection has greatly been improved, and an important component, modern radio communications. Risk assessment of pre-fire planning, mutual aid agreements, and interagency training, all of which we are doing.

This is a copy of the brochure which the chief spoke about earlier, something that we have taken a lot of interest in and one that depend very heavily on to inform our public of this program and the needs to take personal responsibility for those individual properties within the city limits of Los Angeles. This handout contains how to do your brush clearance, it contains the specifications and has the timelines for all of our brush clearance and our enforcements that will take place. In just this recent year, we've added an additional component on our parking enforcement program, where we informed the residents in those hillside communities that on those high hazard days, that they need to park their cars in their garages, clear them off the streets, because they will restrict access by fire apparatus if we need to respond to those areas.

After some of our historical fires, we started to take a pro-active approach in protecting those communities, one of which we established a mountain fire district. By ordinance, this gave the local fire authority cause to cite those properties that were not in compliance with local brush fire regulations. It identified those areas that were hazardous due to topography and native vegetation. It also identified wood roofs and required fire resistant roof ordinances. As well, we implemented a minimum standard of 100' of brush clearance.

Following the 1971 **Chatsworth** Fire, which destroyed and damaged over 190 homes, we created an additional boundary called a buffer zone. Those were the areas in the lower land where homes were not

in the heavy brush, but were prone to fire hazards from those conditions of adjacent hillsides, and we expanded our clearance into those areas and mandated that the same standard of brush clearance be enforced in those communities.

In 1980, we recognized the benefit of this program and sought to enhance it even further. The Brush Clearance Unit in 1981 was established with a full-time cadre of inspectors, whose full commitment was to go out and inspect these properties and maintain compliance in the mountain fire district and in the buffer zones, and assure that those property owners comply with the ordinance. And if that does not occur, then those properties are put out to contract.

After the 1985 Baldwin Hills Fire, this served notice to us in that you could have a major conflagration in a relatively urban area that was the boundaries in the city of Los Angeles. This fire was in a light grassy area, and homes were high on the hills, and it destroyed 49 homes and three people lost their lives as a result of this fire. For that reason, the fire code was amended in the city, and it took in those areas where there were light grasses and vegetation, and we annexed about four communities, and they came under the umbrella of our brush clearance ordinance. Additionally, out of that fire, wood shake and wood shingle roofs were identified as a contributing factor and an ordinance was formulated in 1988 and approved in 1989 to ban the use of wood shake roofs in construction within the city limits of Los Angeles.

CHAIR CAMPBELL: Excuse me, Chief. That's the whole city, not just the outlying areas?

CHIEF HILL: This is everything within the city limits of Los Angeles. Earlier, the two previous chiefs mentioned a little bit about the Bates bill. In 1993, we became actively involved in the use of the Bates bill, and the mapping and the overlays that were identified in those communities. It was very general, but we took the overlays and compared it to our existing mountain fire district at that time, and we identified areas where we needed to do additional brush clearance work and from that reason we identified the areas where we had topography problems, we had heavy brush density, or the construction created additional hazards for firefighters in order to defend those spaces. We amended our code regarding those issues, and we added an additional division, called Division 25 for the Los Angeles Fire Code, that defined those mountain fire districts, and they were renamed as that very high fire hazard severity zones and those areas were amended. Additionally we continued to work on our brush clearance ordinance and our mass mailers, and established some very strict timelines as to how we would approach this problem. We're

going to rapidly kind of move through these because you have these in the brochure that you were provided.

This booklet gives every homeowner almost a how to go about doing and clearing the brush and maintaining their property. It delineates the lines, it shows them the areas that we're concerned with, those that are closest to the structures, whereas you have to maintain low to no vegetation and keep it reduced, and as well to those areas that extend behind the structures where we would like to achieve that 200' clearance.

CHIEF BAMATTRE: If I could just take a moment on this one slide, here. One of the greatest difficulties that we had when we increased the ordinance from 100' to 200' was the fact that, as Chief Hill will be talking about, we notice 128,000 parcels a year. Many of those parcels are not in areas that are sparsely populated, so their lot lines actually may be 75' to 100', to they will be clearing brush on their yard, in their lot, from the structure next to them. This was a real tough educational program to go through with the public to get them to recognize that the brush clearance, they may be good on their lot, but they would have to clear down by their property line because that's within 200' from the structure adjacent to them.

CHIEF HILL: Talk a little bit about our brush clearance ordinance. In May 1997 we revised the ordinance and at that time we added the additional 200' to the ordinance. We also start to talk about the issue of defensible space that needed to be maintained around structures so the firefighters would be able to get in and do structural firefighting and be able to protect these properties in the event there was a hostile fire. Under the second category, we have the fuel modification zones, and that effort was to reduce the fire load in that area that's at least 200' feet from the structures. That meant that any trees that were at least 18' high, all of the low hanging branches up to about 6' needed to be pruned from those trees. It also gave us the authority to take away the ladder fuels, which are the flash grasses and the vines and things that will communicate into the high vegetation that will create an area where the fire would be able to spread.

In the third category, we address the landscape vegetation management. Those are the actual plants that homeowners would provide on their property for shade or for decorative, and the ornamental vegetation that would go with it. We've also published a list, and we have, uh, we've routed that to our planning department as well, so that people that are seeking to build homes or do landscaping in particular

areas would be able to know which plants would pose a hazard to the environment, particularly in terms of fires: junipers, eucalyptus, things that contain oils that would flash under fire conditions.

Our brush clearance timeline begins April 4 each year with our mass mailer. We send those brochures to the 123,000 constituents in those areas. And by April 15 we begin our clearance with our initial sweep. Now this sweep is handled by members of the Brush Clearance Unit, augmented by staffing from the local fire station, and we complete 123,000 inspections within a 30-day period. During the months of June through July, we do re-inspections in those areas. And from July to December, we're actually doing contract work. Any of those properties that are determined to be non-compliant are placed out to contract. The homeowners are then assessed the administrative fees and the cost of contracting and those fees are then placed on their tax bills. During the months of January through March, we're busy, we're clearing city-owned property and we continuing with hearings from the previous year and preparing for the next brush season.

CHAIR CAMPBELL: Chief, at what point did you start mandatory fees for people who didn't clean? What year?

CHIEF HILL: We started the initial administrative fees back in 1982 when we enhanced the program. Each year we, after 1998 we started to add on and increase our fees because we were lagging behind in the cost to do the program. We upped it from about $200.00 to about $314.00. But we've also added on non-compliant fees, and this has been very effective in reducing the amount of returned trips that an inspector would do on a particular property in order gain compliance. If you are not in compliance by that second trip, then you will be assessed a $214.00 non-compliance fee, which will also be added on to your brush bill. That has been the impetus to get property owners to step up and really adhere to the timelines in the notice.

CHAIR CAMPBELL: Thank you.

CHIEF HILL: We're very proud of this program and what it has – how much it has improved safety for the citizens in the community of Los Angeles. And over the last 10 years we have not lost a single structure in our mountain fire area and our high fire severity zone.

CHIEF BAMATTRE: I don't want there to be a **(UNINTELLIGIBLE)** -- we're not throwing a – I always caution my people, I don't like to mention that because you never know who's listening out there,

but I think what both Chief Freeman and Chief Roper didn't mention, and I'll mention for them, I think you'll notice quite a bit of similarities in our brush programs. We work very close together. And I think it does pay off in many, many ways. What neither one of them did mention is that in this historical evaluation and study that we do, there have been 9 fires that have burned through that historical corridor where the Simi Fire burned through. This was the first time the fire was prevented from traveling to the ocean. And I think in a large part it's a combination of the tools and the things that we're doing cooperatively to defendant against that, but the brush clearance I think is a big part of that. If it turns that edge in favor of the fire resources, then we have an opportunity to have a positive impact. And certainly this was a good example of a fire where you had a number of agencies. CDF was the overhead management team, you had Ventura County, Los Angeles County, and Los Angeles City cooperating on addressing that fire. Kind of in summary, I think the key, and the recommendations, we support the recommendations that have been put forth. In a broader perspective, what I really think the opportunity the Blue Ribbon Commission has now is, brush management, fuel management, has to be done statewide and there has to be some consistency statewide. Our recommendation is, is that one of the broader recommendations out of this commission needs to be that. We're in a golden opportunity. The state of California is in the process of revising to adopt new codes, probably in the year 2006, both fire code and the building code. Now is the opportunity to incorporate into those codes amendments that will address fuel management. Ray Quintanar will follow me and he'll be talking about the U.S. Forest Service, and certainly some of the issues in the forested areas, and I want you to recognize this as primarily dealing with the urban interface, but there are similar issues in those other areas and recognize as we saw from these last fires a few months ago that firefighters are traveling from anywhere in the state to other jurisdictions. A great improvement to their personal safety is the consistency of codes and ordinances so that if a firefighter from Northern California is in Southern California, they can – their training, their preparation can be the same and they know what types of clearances and what type of tools that they have. So I think it's really important that that consistency and the political support is a statewide issue, and I know that's sometimes difficult for local jurisdictions that have to deal with issues of local control. But I really want to point out that in Los Angeles, when we talk about some of those developing areas, we don't have the ability to widen streets, or to put buffer zones in, but that doesn't prevent you from doing things. And I'll use the example

of what we initiated this year, which is, uh, most of the jurisdictions, the fire agencies have what they call a brush burning index or a similar type of index that is measured each day based on the temperature, the wind and the humidity. When it reaches a certain scale level, then we do taken certain actions. We pre-deploy resources from other parts of the city into our brush areas. One of the things that we incorporated this year, because we can't widen streets, we have cooperated with the police department. They will go out and enforce a no parking ordinance, which in affect provides us that access and doesn't create the situation where our fire resources cannot get into those areas. So there's a lot of ways even though if the money isn't there, or the ability to do it, that you can address some of those issues. With that, we certainly welcome any questions that you might have.

CHAIR CAMPBELL: Thank you, Chief. Yes, sir?

(UNIDENTIFIED MALE SPEAKER): I have one question, uh, you mentioned – and I admire this, very much – the wood shake shingle ban. I'm interested very much in knowing if you successfully avoid – well obviously you successfully avoided it, but did anybody charge a restrain of trade by the roofing industry or wood shake industry, and how did you overcome it if you did face such a challenge?

CHIEF HILL: We were challenged as a result of that, uh, this particular ordinance. And there was a suit filed in the city, against the city, for these, uh, restricting the use of that. However, it was resolved and we have not been challenged in the recent years, and we have been operating very effectively since about 1993, and we do not allow the use of any wood roofs or that type of combustible roofing materials on any structures.

(UNIDENTIFIED MALE SPEAKER): Can you tell me how it was resolved? That's the real key question here.

CHIEF HILL: Unfortunately, I don't have all the details on that. Some of it was ongoing before I came back into the fire prevention, but I do remember that there was a suit filed.

(UNIDENTIFIED MALE SPEAKER): Alright. Thank you.

CHAIR CAMPBELL: Did you hear from the Federal Trade Commission at all? That's a big import product from Canada.

CHIEF HILL: We did receive some notification about it because we recognized that, uh, we were informed that a large number of our shingles were imported from Canada and they did weigh in on that.

CHAIR CAMPBELL: Chief, thank you very much, we appreciate that presentation. Next we have the Fire Marshall for the state of California, John Tennant, and Dave Neff, the Deputy Chief of the California Department of Forestry and Fire Protection. I think their presentation is going to cover on vegetation management, and maybe building codes, is that correct? Gentlemen, who's going to go first here?

CHIEF NEFF: I'll go first.

CHAIR CAMPBELL: Okay, Dave.

MR. TENNANT: I'm John Tennant – is this one working?

CHAIR CAMPBELL: Okay, go ahead, John.

MR. TENNANT: Mr. Chairman –

CHAIR CAMPBELL: You have to hit that button there, there's a green button.

MR. TENNANT: Ah.

CHAIR CAMPBELL: That's better.

MR. TENNANT: Senator, distinguished members of the commission, thank you for the opportunity to be here to present material to you. It's important. And I'm joined by Dave Neff from CDF who will be talking about vegetation management. We are also here on behalf of **ASOUZA** High School. He graduated from **ASOUZA** High School in 1967 and I graduated in 1966. I have of course have had a harder life. [Laughter.}

CHAIR CAMPBELL: Can you both sing the alma meter? No? Thank you!

MR. TENNANT: Dave respectfully declines. The state fire marshal's office is under the Resources Agency in the state organization, and is administratively organized into CDF. State fire marshal's office has statutory authority and responsibility for regulations in the state of California that is perhaps as broad as any other agency in the state. Basically, the fire marshal's charge is fire prevention. Our role is to promote the state's fire and panic safety policy through the comprehensive promulgation of regulations. These regulations are developed by the Code Development and Analysis Division of the office in response to identified public safety concerns governed by new and existing laws under the state fire marshal's statutory authority throughout the state. I'd like to commend the jurisdictions that have come forward – Ventura, Los Angeles County and Los Angeles city, but I would also like to assure you that the

good efforts that they have made are not uniform throughout the state. The regulations and standards for buildings that we develop are then adopted pursuant to the Administrative Procedures Act, and the California Building Standards law. To carry out its mission in the wildland interface, the state fire marshal's office also participates in educational events, and provides information to many entities, including Fire Safe Councils, Fire Alliance, Firewise community workshops, California Chief Fire Prevention Officers Associations, the California Building Officials Association as well.

A history of our development and activity with regard to the interface – ten years ago, during the fire siege of October and November 1993, Southern California experienced 22 concurrent fires, including the devastating Laguna Canyon, **KENALOE** and Topanga fires. These three major interface fires destroyed 744 structures and caused four deaths and numerous injuries. All of the 1993 siege fires were human caused due to arson, power lines, or campfires. In 1997, the state fire marshal's office applied for and received several FEMA grants allocated out of that 1993 federal disaster fund to conduct much needed fire hazard vindication research projects. Among these projects were studies on the fire safe structures, fire safe landscaping, and the development of training curriculum for fire safe planners and inspectors. Throughout the life of these projects, the state fire marshal's office has worked close with the University of California Forest Products lab, researchers and with many stakeholders and interested parties. More recently, the state fire marshal's office received additional funding from FEMA out of that same 1993 disaster fund to conduct additional work based on lessons learned from the studies on fire-safe structures and fire-safe landscaping. This updated effort is for the purpose of developing model code language based on actual performance of building materials and systems when exposed to simulated wildfire scenarios, using updated fire test protocols developed in cooperation with the UC Forest Projects Laboratory researchers. Under the scope of this FEMA-funded project, the state fire marshal's office is developing code language for structures located in the interface areas as a minimum model standard intended to wide application to be made available to local authorities in California and throughout the nation for possible adoption in their communities. With the legislative session last year, the state fire marshal's office sponsored Assembly Bill 1216. In that piece of legislation, the State Fire Marshal's Office was granted authority to develop regulations to uphold the law's intent. That structured availability is essential to effective fire prevent in the interface. The state fire marshal's regulatory authority under AB-1216

includes, but is not limited to, requirements for the use of fire resistant building materials, projection of structure projections, building design and construction requirements for eaves, balconies, roofs, walls, windows, porches, decks, and vents. The efforts of the FEMA-funded research and development occurring over the last seven years will directly serve the newly acquired state fire marshal authority to propose minimum life safety standards, fire safety standards, for structures in interface areas throughout California for adoption into the building code. The language of AB 1216 requires the state fire marshal to submit proposed regulations to the California Building Standards Commission no later than January 1, 2005. If all goes well, such a package will take affect by 2006.

To develop our standards, we are working through working groups. Working closely with the state fire marshal in the development of the interface regulations is an active working group made up of approximately 35 individuals representing housing and community development, California Building Industry Association, the League of California Cities, California building officials, fire prevention officers, fire districts, California Fire Safe Council, the University of California Extension and building industry representatives. We have unique issues and challenges relating to the interface. California received the FEMA grant money directed at the development of model code standards, addressing California's diverse urban wildland interface issues. The uniqueness of this includes the wildland test protocols. This is a science-based approach, using a fire test protocol specifically designed to evaluate the performance of building materials and construction methods used in structures exposed to wildland fire. Direct flame and burning brand fire test protocols for exterior walls, windows, decks and roofs have been developed and are being evaluated and refined. Additional test protocols are still needed for ember intrusion into vents, radiant heat affects on windows, and more. We need to develop a code that will generically address building construction methodology for all structures located in or near a designated wildland area. The state fire marshal's office challenges to develop a code that can be widely enforced and/or amended via local ordinance. The matters that we must consider during the development of these regulations are the affected areas throughout the state, new housing stocks, cost impacts, the impact on business, education of enforcers, industry and training needs, ongoing measurement of building standards effectiveness through quality monitoring and analysis of data collected through the National Fire Incident reporting system.

After the most recent fires, the state fire marshal's office undertook a new approach. Rather than just doing damage assessment where the number of buildings are counted, the square footage is calculated, and a value is assigned, we sent 15 deputy state fire marshals to Southern California in early November 2003 to gather as much empirical information as possible about the recent wildfires as relevant for improvement of fire and building codes. This information was gathered as supporting evidence for future code change proposals, specifically the urban wildland interface area building standards to be promulgated under the statutory authority of AB-1216. Rather than a house-by-house survey, the teams took a holistic approach to the burned and threatened areas and made reports of professional observations that in some cases included parcel-specific information. The following areas identified by the state fire marshal's teams as the most common and/or impact vulnerabilities and strengths, were observed in and around structures that were exposed to the recent Southern California wildfires. The vulnerabilities that we found were proximity and orientation to slope, single-paned and older windows, lack of defensible space, vegetation within 10' of structure proved to be especially hazardous, overhanging vegetation, accumulation of vegetative debris on or near the structure, open wood eaves combined with venting and/or proximate vegetation, raised sub floors, especially when proximate to downward slope, attic and roof vents, location and eaves, soffits and/or roofs. We found that quarter-inch mesh, which has been commonly used to block these vents and soffits was not sufficient to prevent entry of accumulation of embers. Places that suffered badly from the fire also had low flow for water, no emergency shut-offs on sight resulted in tanks running dry when compromised, untreated wood frame structures like patio covers and decks attached to homes were particularly vulnerable.

We found strengths, also. Part of what we wanted to find out was not just why things were burning and why some homes were lost while others stood, but we wanted to find out where we have done well in development so far. We found that dual pane tempered and annealed windows worked well. Buffer zones immediately around the structure within 10', no vegetation right next to windows and walls, fire retardant Class A or B roofing. Construction details also proved very important. Certain instances of vegetation screens between structure and slope, or fire approach with high moisture trees that were not in contact with the structure, provided heat absorption and windscreen affect. Class A fire retardant foam application during the fires or before the fire's approach, proved especially helpful. Homeowner actions prior to or

during fires, garden hoses put out for spot fires, yard sprinklers on roofs, metal covers on vents, eaves, and windows, plywood deck on interior joist to prevent attic ignition.

We have some recommendations to the Blue Ribbon Commission. Based on the challenges previously mentioned, extensive public support and a strong commitment from this commission are essential the success of our efforts to improve building standards in the interface. The resources available to accomplish these tasks need to be fluid or this project could falter. Without needed resources, the grant projects timeline may expire prior to completion of the code development efforts. Additionally, without the resources that the fire marshal's office now has, or will need in the future, building standards proposals such as these can also be delayed or not realized. The state fire marshal's office request that the commission consider and support our efforts in the following manners: development and processing of the state fire marshal's office proposed regulations pursuant to AB 1216. Additional fire test research including development of fire test protocols for vents, radiant heat exposure for windows and more, continued and increased public outreach and education, conducting of public forums such as this to take testimony from other interested and affected parties, outreach and interface with local fire and building authorities during this process, the publication of documents for affected entities during this outreach. Once the regulations are promulgated training for state and local fire building and planning officials on implementation of these new wildland reg **[TAPE 2, SIDE 1 ENDS, TAPE 2, SIDE 2 BEGINS MID-SENTENCE[**and a list of state fire marshal office projects, publication resources and references that are related to this matter. And I appreciate very much any questions.

CHAIR CAMPBELL: The quarter-inch mesh doesn't work.

MR. TENNANT: They found that that wasn't sufficient.

CHAIR CAMPBELL: What was? Total stoppage.

MR. TENNANT: That part will be tested, but I suspect that that, 1/8 inch.

CHAIR CAMPBELL: Any questions by the member of the committee? If not, thank you very much sir.

MR. NEFF: Mr. Chairman, members of the commission, let me introduce myself. My name is David Neff. I'm with the California Department of Forestry and Fire Protection. I'm currently the Deputy Chief of Operations in our San Bernardino unit, administrative unit. I also was one of the unified incident

commander on the Grand Prix Fire in San Bernardino County, and throughout my career I have had many years of a relationship with the state's vegetation management program. I think we've heard some excellent comments this morning from Ventura County, Los Angeles County, and certainly Los Angeles City Fire Department, and I will try not to be too redundant here this afternoon.

This afternoon I am here to inform you of the department's vegetation management program. Henceforth, I'll refer it to the state's VMP program. This program is relative to the states responsibility of managing watershed resources while protecting life, property and natural resources. This is accomplished through management vegetation or fuels in the areas of state responsibility termed watershed, wildland, open spaces, interface and intermix. And I think we've heard all those terms used here earlier today. These terms would be consistent with the areas burned during the recent fire siege of October and November. Vegetation serves as a fuel as well as a vital element to the protection and sustainability of our watersheds. Again in San Bernardino County, where I serve as Deputy Chief of Operations for CDF, during the fire siege, we witness fire progress over approximately 40 miles of urban interface and intermix. That would be the Grand Prix Fire and also the Old Fire, which consumed approximately 150,000 acres. These denuded watersheds now exhibit what has been classically termed the fire and flood cycle associated with watershed fires. Impacts and liability associated with denuded watersheds have the potential to equal or exceed that of the actual fire itself. On Christmas Day, December 25, sixteen lives were lost due to mudslides and debris torrents in the San Bernardino area. These watersheds exemplify the necessity to protect and manage vegetation in our watersheds. Future storms that we're likely to have over the remaining portions of the winter, we will likely see further mudslides and debris torrents affecting not only interface areas, but downstream communities. The state's VMP program is a cost-sharing program between private landowners and CDF to reduce fire-prone vegetation. Through prescribed burning, VMP projects strive to reduce the risk of large damaging wild fires, and improve the growing conditions of native plants and wildlife species. The state's Vegetation Management Program can be an essential tool to managing vegetation and hazardous fields. Time and time again, investigations and studies have indicated that vegetation management is a tool for reducing or limiting the liabilities associated with wild fire. Such discussions are well documented, dating back to the 1940's under Governor Earl Warren's administration. Again, that was in the 1940's. Forty years later, in 1980, the California legislature enacted Senate Bill

1704 by **(UNINTELLIGIBLE)** which initiated the state's Vegetation Management Program. This legislation declares, "The prevention of high intensity wildland fires may be achieved partly through the reduction of the volume and continuity of flammable vegetation in the wildland by a program of fuels management." This legislation is specific not only to the resources themselves but to public safety, protection of water quality, air quality, soils and nutrients, and recreational opportunities. Vegetation species, their arrangement and continuity are a major element, again, the devastating fires that we've seen both in October and November. It's not a question of when will California's vegetation burn, but when, and are we going to be ready here in this state. And again, I think you've heard the other chiefs echo that here this afternoon and this morning. The elements of this program are, 1) CDF will provide technical supervisory services to private land owners, local government and public agencies to help them plan and execute prescribed fire activities; 2) CDF will provide specialized tools, equipment and crews not only to carry out the operations, but to prevent escapes. CDF itself will conduct prescribed fire operations. CDF will assume liability for prescribed fire activities. CDF will cost share will local landowners for planning and implementation of prescribed fire projects, and we cost share at a rate in the state of California between 75% and 90% of those costs. CDF will incorporate long-term vegetation management as the integral part of both resource management and fire protection programs. All burns are developed and conducted in compliance with the state and federal rules and regulations, including the California Environmental Quality Act, and California and federal Clean Air and Rare and Endangered Species Act. There are also an association of other both state and federal rules and regulations that we comply with. Vegetation or fuels treatment is the operational action phase of vegetation or fuels management. Vegetation is manipulated to meet desired results. The desired results could include the creation of defensible space, vegetation mosaics for improved habitat, sight preparation for plant growth, improved 4H for range and livestock, fuel hazard reduction. There are many different uses.

The treatment methods and actions may fall into five what we call broad classes: No. 1 again, is prescribed burning, that's planned and controlled burning; #2 is biological uses, use of cattle goats, sheep, etc.. Chemical, use of herbicides, manual, use of labor, hand crews, some of those inmates crews that we talked about earlier, or we heard about earlier this morning. And mechanical, the use of machines. These techniques may be used in any combination with prescribed fire to meet an objective for resource

management or fire protection purposes. This is not a process where one decides to treat a burned vegetation the next day, the next week, or the next month. In some cases, as you heard this morning, it takes months and in some cases it in fact takes years and years. Projects are very site specific, and they're strategically located. Knowledge staff, extensive planning, and investigation goes into each project, as CDF investigates best management alternatives. Very specific weather and fuel conditions are required. Prescribed burning in most cases has shown to be the most effective, a cost effective and efficient method to treat large areas of vegetation, or what we call fuel beds.

Fiscally speaking, the prescribed burning projects may cost anywhere from $25.00 an acre to $1,500 an acre, depending on the complexities and liability associated with the project. It is inherent that generally speaking those interface projects based upon urban issues are generally high cost projects. The program is by no means cheap, and has generated some liabilities resulting from litigation. Specific litigation, there has been some escapes, but they have been on very, very rare occasions. However, successfully planned and conducted projects have aided in the suppression of fires across the state, saving millions of dollar. I think you heard examples of that both in Ventura County and Los Angeles County here, again, earlier this morning.

Funding for the program is generated by the Forest Resource Investment Fund, it's called FRIF, which are revenues generated from timber harvesting on the state's demonstration forest, under that program. Historically, funding has been at approximately a mere $2.7 million. Treated acres have averaged, throughout the life of the program since 1980 and 1981, right around 40,000 acres annually. In Southern California, the seven counties, the peak was in 1988 there were approximately 20,000 acres treated. And again, that's specific to the state's VMP program. Today, though, less than several thousand acres are treated per year, and I think you heard where most of those acres are treated: here in Ventura County and in Los Angeles County. The reasons for the reductions fall into three categories: 1), stable funding source; 2) knowledgeable staffing. CDF, we term it the changing face of CDF. Again, other departments are going through the same thing. It's takes considerable expertise to conduct these types of activities. And last but not least is controversy over land management and use of prescribed fire.

As communities grow and our population increases, we've witnessed local government, and state and federal government agencies rush to incorporate or purchasing remaining wildland or open spaces for a

variety of purposes. Those purposes include, and again I think we've heard a little bit about it this morning, parks, reserves, flood control zones, water rights, tax base, etc. Rarely do we see adequate dollars and dedicated staff to provide long-term management of these areas considering our existing obligations. In this state there are now approximately 35 to 36 million people that are scattered over in excess of 100 million acres of interface and intermix with communities. The liability of one major interface or intermix incident not only affects residents, it jeopardizes communities, companies, as well as economies. Please keep in mind, the program that we're talking about is $2.7 million, and the cost of fire suppression and damage of recent fires is in the billions of dollars. Many of us in this room, those sitting here, have not experienced just one of these incidents. I'm sure some of you have visited the exact same places over the last 20 or 30 years on several different occasions with fires. In back of me, on the screen, what we've put up are, since 1990 there have been 14 major fire incidents. We did a little calculation on this the other night. These are the, what we call the major fires. There are certainly much smaller fires that have consumed structures. These fires that are in back of me represent in excess of 11,000 structures in the last 13 years. It's amazing. And the element, again, each analysis of the great fires or sieges has and will again consider vegetation or fuels management as the tool to mitigate such incidents. Many concerns, issues and debates surround fuel management projects. And let me give you just a few: habitat protection, air quality, visibility, public health, real estate values, archeological values, operational costs, escape fire liability. In some cases continuing debate, conflicting regulations, and I will point that out, I'll say that one more time, conflicting regulations amongst agencies, regulatory restriction, and threat of litigations have stopped or delayed projects. In some cases, we've witnessed wild fires consuming all assets while we sat there and we debated it. Any one of these focused issues that I've just touched on has standing and possible merit to halt a project. The department's program is a systems analysis approach on a watershed. Looking at all the aspects of the intended project to address critical issues that may jeopardize life, property, and the future of natural resources. Based upon our individual interest as agencies, professions or special interest, the values were also zealously trying to protect, have and will be lost as we debate. In San Bernardino County, CDF and San Bernardino city has VMP projects that we worked on under funding from FEMA for approximately 4½ to 5 years, we sat there and due to extenuating studies and debate, we watched them burn during November, uh, excuse me, October and November. CDF's vegetation management program is not

intended to stop fires, but it's a valuable took to assist in fire suppression while reducing and managing the impacts of wild fires affecting the public, communities and our watershed resources. It's an element to the states fire and resource protection program, which emphasizes resource management, protection of values for future generations, promoting safety and cost loss reduction. And the goals are not a matter of luck. It requires stable funding, a knowledgeable staff, planning and diligent management. And at this point I'll stop, and I hope you have some questions.

CHAIR CAMPBELL: One of the questions I have, in the, uh, two members of this commission Congressman Lewis and Senator Feinstein were able to get $500 million in the FEMA for work as a result of the fires here in Southern California. The second bill they were working on an appropriation to divert some of that to vegetation management. I think about $150 million, if I remember. But that, the budget bill didn't pass – that's the, the overall budget, the first bill was the $87 billion for Iraq, and we got $500 million of that. The second one is the regular budget on everything, and they were working to parse out because FEMA couldn't do certain aspects of that, and they didn't have the authority with which to do it, and this gave them the authority, so that's uh, that's kind of about how many times more than we spent in the last 10 years in this area.

MR. NEFF: We've been working with both offices. But, let me reflect back to the fund that we receive from FEMA, and specifically to CDF. We received $400,000. We spent over a 4 ½ year period in excess of $200,000 of those monies. We were engaged in future studies that were going to take us out another several years that were going to also consume an additional $200,000. We moved on to another project at that point in time.

CHAIR CAMPBELL: One of the things that we've done in this particular area was studied it to death, and done nothing, and the result and affect has been loss of lives and property. I think what Senator Feinstein and Congressman Lewis had in mind is, maybe it's time we now start to do something about the vegetation management. And they put the money with which we can make a beginning, and hopefully we can convince them to continue that on an ongoing basis. But I think that will give us the opportunity to have the agencies working together to do some of the vegetation management that we've been unable to do in the past. We'll quit the studies and we'll act and do what's necessary to save lives and property. Yes? Senator Alpert.

SENATOR ALPERT: I wanted to follow up on that because of some of the comments you made. When Senator Campbell is talking about, you know, now we'll have the money to actually do the work as opposed to the studies. But is your problem no even so much the money but the studies are being required over and over? I mean, I guess I wonder what is your timing problem on this?

MR. NEFF: Money has always been an issue. But I think we've been fortunate after the 1993's that FEMA came in as another funding source. Instead of looking at post-fire rehabilitation, they started looking at putting dollars up front. But even with those dollars up front, we have a number of different agencies that are working in the same watershed. They're all charged with the protection of that watershed, but they come from a very specific viewpoint. We at the Department of Forestry, our charge and our analysis is a systems approach. If you take just one of those and the regulatory authority of another agency, they can stop that, or create such an atmosphere of studies, debate, etc, we lose our opportunity or window to treat those fuels.

SENATOR ALPERT: And what can we do to change that?

MR. NEFF: I think a group needs to be convened that brings together the principal agencies in California, both at local government, state and federal, to take a look at the at times conflicting charges that we have. And again, I'm not trying to point fingers specifically at the wild life agencies, but let me give you another point. You can't burn in the springtime, because that is the nesting period between April, May, June and July. The better alternative of the Fire Protection Agency is to burn in the fall. The species have moved on, their fledglings have, they can now fly and get out of the way of the fire. That's the worse possible time. We can't burn and have a successful program, in most cases, in the fall. We've run into it with some of the other agencies, also. But I think we need to look at what is the individual role of the different agencies in the watershed? Otherwise we're going to continue to be in debate.

SENATOR ALPERT: Can I also follow up, on the prescribed burn wind. You know, the other fire chiefs have talked about some of the problems with air quality and timing, and their CEQA review, but didn't talk about the issue philosophically about people who do not believe that it's an appropriate tool. Could you talk – I mean, your comment was that there's a debate over its use as a management tool.

MR. NEFF: There are individuals, some being scientists, certainly noteworthy professionals, that believe that in some cases a prescribed fire is not an effective and wise tool to use, based on the window

periods that we use. There are certainly others that believe just the opposite, but we get into this academic debate and again, it was a tragedy for we as professionals and managers to watch in October and November. We all have an interest out there, and there's nothing there now. There's hardly a stick on the side of the hill. And it's going to take many, many years for those watersheds to recover.

CHAIR CAMPBELL: Yes, sir.

MR. WILLIAMS: Thank you, Mr. Chairman. I'm Jerry Williams, Director of Fire and Aviation for the U.S. Forest Service. I appreciate your comments here today. I'm particularly interested in knowing, because this is a fire-prone environment, we've all heard that this morning, and it's not so much that if fire will occur, but when it will occur, that we've also heard – I'm impressed in your comments about this reluctance to use fuels treatment or prescribed fire specifically for concerns about habitat protection or air quality, or human health, or real estate values, or archeological values. I think it's interesting for us as a commission to consider something more than money as a limiting factor, and in fact, look at the laws and the regulations and the land use policies that dominate this problem. It's not lost on me that in our efforts to protect habitat and insure human health and air quality and real estate values and archeological values and all the rest in avoiding the short-term risk, we only inadvertently buy long-term consequence to habitat, air quality, human health, real estate values, and archeological values. I appreciate your comments. I'd incur just to be especially focused on the laws and the policies and the regulations that surround this issue. It's not so much a fire management issue at this point, as it is a public lands policy issue.

MR. NEFF: Yes.

MR. WILLIAMS: Thank you, Mr. Chairman.

CHAIR CAMPBELL: Members of the commission, this is probably maybe the most difficult issue with which this commission's going to be confronted. And I think we have to make some hard decisions on it because the result and affect is just going to be loss of life and property. Uh, Mayor? Go ahead.

MAYOR VALLES: yes, I wanted to follow up on a statement that was made our Chair, with respect to the funds that were allocated by Senator Feinstein and Congressman Lewis. Uh, the amount of money. My question is, what role will this commission have, and I'm please that we have congressional representatives here, to make sure that the money flows effortlessly and is not hung up with all kinds of red

tape, which is what we have learned has happened with the Homeland Security monies. Some communities have not received any of that. I don't know what the process is going to be, I don't know what the role of this commission will be to insure that that money does come, and who's ultimately responsibility for it and how's it going to get to the communities? That's not a question to our presenters, but that's a concern that I have as a member of this commission.

CHAIR CAMPBELL: And it's a good concern. Senator Soto.

SENATOR SOTO: With regard to the plant team and starting all over again, I hope that there's some plans for that, but how long will it be – I just derived from what you said a little while ago that it will be a long time before you can start anything. And why is that? Why can't we take some action? Say we were to get some money, how long would it be before you could start on reseeding and replanting, and what do you have to do before you can start that?

MR. NEFF: The problems with the watersheds that we deal with here in Southern California, even though we're in a drought period right now, if we were to put seed out at this time of year, what generally happens is the Santa Ana winds blow them away. There has to be an appropriate weather response to anything that we put out there. That's why, especially inland in Southern California, any regeneration putting seed down has really been determined to be not effective looking at it from an historical base. There has been some very limited success along the coast that is a matter of getting new seed on the ground where you have a storm follow up and you get some quick regeneration. The important thing is to protect those native plant species and what we've seen, in consideration of the drought, we have a severely impacted watershed at this point in time. It's going to be a process where Mother Nature does her thing with the recovery process. What we need to do is make sure that we keep people informed. Again, in San Bernardino County, we have 40 miles of watershed up to 9,000 feet that there is no vegetation, and whether it be a canyon, whether it be a small gully, they have potential to wash soils out of those areas and take lives. And that's exactly what happened on Christmas Eve.

SENATOR SOTO: You know, I was up there – I've been up there a lot of times, but I think it was last Thursday, or whenever it was. Uh, I walked around on some of the burned areas, and they had spread some kind of green material up there.

MR. NEFF: Yes, Cal Trans has been hydroseeding some of their road fills, critical areas where they feel that additional mudslides or debris torrents could come down and impact the public transportation system there.

SENATOR SOTO: That's – oh, I see. They didn't know how that had happened, some of the people that were –

MR. NEFF: Cal Trans has been very active on that – along with the county road department.

SENATOR SOTO: Does that really actually help?

MR. NEFF: Uh, yes. Because it's put down in a mulch base with water, and they should be able to get something to resprout there.

SENATOR SOTO: And I was walking around in what seemed like straw.

MR. NEFF: Yes, they've been doing strawing, and the Forest Service has also been through what they call their burn area rehabilitation efforts, and looking at critical areas and trying to put down mulching materials in those area.

SENATOR SOTO: Does that help?

MR. NEFF: It can help, yes. The storm we saw the other day when within 2 to 3 hours we received 4 to 5 inches of rain, it's not going to be of much assistance.

SENATOR SOTO: Thank you.

CHAIR CAMPBELL: I think one of the things that legislature could do immediately is pass a resolution banning the bark beetle in the San Bernardino Mountains. Then we could use an **(INTELLIGIBLE)** program, we hire people to go up and tell the bark beetle to leave the trees and go back in the ground. [Laughter.] Any other questions?

MR. WOLF: Mr. Chairman?

CHAIR CAMPBELL: Yes, sir?

MR. WOLF: Bob Wolf, Professional Firefighters. I notice, you know, this is a statewide problem, border to border, and it has to be addressed everywhere, and I know it takes professionals to make that happen, and registered professional foresters with degrees that specialize in writing these types of prescriptions for fuels modification, selective cutting of trees and things like that, and I understand that CDF currently is undergoing the possibility of losing quite a few of those professionals. Once those

professionals are gone, is that going – you know, are there enough type of professionals out here to do this on a statewide basis and if we were to lose a significant number of those individuals, would that impact the ability to do anything that maybe this committee would recommend, or whatever legislation comes out?

MR. NEFF: That would add to that changing face of CDF that we talked about – the loss of expertise. But keep in mind it's just not that specific element of the expertise. When I talk about staffing issues, it's that expertise, it's those people that carry out those operations, it's down to the crews that we're talking about, also, that go out and implement those projects.

MR. WOLF: So it's not only having the regulations and the ability and cutting the red tape and narrowing things to where you can react faster, it's also having individuals that are trained and capable to go out and implement to enforce the rules and regulations. Is that correct?

MR. NEFF: Yes.

MR. WOLF: Thank you.

CHAIR CAMPBELL: Thank you very much. Our next presenter is Ray Quintanar, Director of the Fire and Aviation Management of the United States Department of Agriculture and Forest Service, Pacific Southwest Region, and California's very familiar with the Secretary of the Department of Agriculture, Ann Venemen, who served here as Secretary of Agriculture for the State of California for the last six years, in addition to which I've known her personally for a number of years because I served with her father in the State Assembly for four years one time. Who's going to go first?

MR. QUINTANAR: Can you hear me now?

CHAIR CAMPBELL: Yes, those are live, that one in the middle you have to press the button.

MR. QUINTANAR: Thank you, Mr. Chair. We appreciate the opportunity to again present these issues that have been presented to us, and member of the board we appreciate the opportunity to do this. What we're going to do is, we have a panel before us and to address these issues, we've asked a couple of other folks to come along who are experts in their field to also address these issues for us. To discuss some items that we have, uh, fuels modification program, we've invited Professor Bob Martin, Professor Emeritus University of California Berkeley, to address the fuels hazard mitigation issue. Actually, what is a hazard mitigation and how is this reachable to the public, it's something that the public can really address. Then on our forest vegetation management and fuels modification programs and the barriers we have, we

have Bernie Weingart, who's our Deputy Regional Forester for resources for our region, who will make that presentation. Followed by Ron Raley, our Deputy Director for Fire who will address the federal, state and local cooperation assistance coordination and support issues, followed by Professor Emeritus also at the University of California Berkeley, Patrick **PAGNEA**, who's background is fire safety and engineering science, who also was instrumental in the 1991 after-action report, to address those issues. So with that, we'll start with Dr. Martin.

DR. MARTIN: Thank you, Ray. I want to address three things. First of all, it's fuel treatment and I'll go through that pretty quickly, since much of that has been covered already. I wanted to address, then, data that were analyzed for two particular fires, and finally the winter recommendation.

It's not surprising we have a problem keeping up with the fuels situation in California since we've estimated that anywhere from 5½ to 19 million acres of California burned every year prehistorically on the average. That's far more than we'll ever be able to treat with fire, or any other way. The fuels mitigation is basically to reduce the flammability, or otherwise reduce the difficulty of controlling a fire. The three general methods would be compaction, remove the fuel – less fuel, less fire – and finally, break the horizontal and vertical continuity of the fuels. In other words, take the fuel away from the fire either from spreading horizontally, or from going into the crowns of trees. Fuels treatments have been covered pretty well, compaction, to be crushing, chipping, masticating, or lopping. Second of all it'd be removal, and this might be changing species, removing one and putting another in. Burying, which is pretty tough on the habitat and not very practical on a very large scale. Where thinning is being practiced to reduce fire hazard, we also have to take care, then, of the slash and slash fuels that are produced from the thinning, and also we have the problem of controlling shrubs. It's been shown in some places, particularly in east side pine types that, when you thin pine, you grow better shrubs and the trees don't grow much better if you don't control them. These fuel treatments would be strategically located, first to protect structures and developments, special natural features, archeological features, being among those. And to divide the landscape to aid and fire protection.

Going on to public involvement and home survival, I want to quote two studies. The first one the Santa Barbara Paint fire in 1990. This comes from **(UNINTELLIGIBLE)** thesis and in this, if we have a non-flammable roof versus a wood roof, and there's not any way of distinguishing treated versus non-

treated wood roofs, the survival went from 70% for the non-flammable, to 19% for the wood roof. Then if we add to that defensible space, defensible space in this case is defined as 30' clearance of flammable vegetation. There could be other vegetation closer to the structure, but there the survival went from 90% with the defensible space and non-flammable roof to 15% for flammable roof, wood roof, and no vegetation treatment.

ASSEMBLYPERSON KEHOE: Just a quick question, sir.

SENATOR ALPERT**:** Uh, sir? Dr. Martin? Hold on just a second. Yes? Assemblywoman Kehoe.

ASSEMBLYWOMAN KEHOE: Thank you, Senator Alpert. Just, on the wood roofs, your saying there's no distinction between treated and non-treated?

DR. MARTIN: No, there was an attempt to identify it, but we weren't able to do it.

And finally then, once you have a non-flammable roof and defensible space, you're more likely to have somebody to defend it, and there the survival went from 99% down to 4%, with none of those factors. And I think those are pretty good odds for doing things right. Also on that, vegetative clearance is broken down, and if you look at this slide, blue is vegetation greater than 10' tall, purple is vegetation 3' to 10' tall, and red is vegetation 1.5' to 3' tall. And then across the front of the slide is vegetation clearance, zero to 10 the survival went from 36% to 38%, this is the only factor that was considered, 11' to 20' it's 42% to 63%, but when you get out to greater than 40', it goes from 70% to 86% for the three types of fuel.

Going to the 1991 Oakland/Berkeley Tunnel Fire, this was Don Gordon's thesis, and here the same three factors were involved. We had something like 3,370-some structures that were threatened, in other words, they were within the fire zone, or just outside the fire line. Of these, 2,775 – I'm sorry, that was living units, instead of structures – about 2,775 were damaged or destroyed, 2,475 living units were destroyed completely, and about 2,103 structures were lost. The difference between the living units and structures is primarily due to the apartments in the area. So involving the public, first is the building of a fire-resistant structure. In other words, particularly the shake roof, get away from that, and siding, double-paned windows, etc. Professor **PAGNEA** will discuss more about those. Have a defensible space, have a wide, clear driveway, and have a turn around space. He involved with the fire organizations as far as assistance, help, etc. And I wanted to point out that my wife and I had personal experience with a fire. It

approached our house on Friday, the 13th of September – that stuck out in our minds – we were prepared, we have a fire resistant house, concrete, plank siding, Class A roof, and we had vegetative clearance. The fire department did not know that we had a turn around space and they did not come for about an hour and a half. In the meantime, the house before us had a shake roof and no vegetation clearance, and he wasn't very lucky. They lost the entire structure despite about a dozen helicopter buckets of water dropped on it. I wanted to point out also that it hasn't come up today that new material called barricade is available. It seems to be better than foam, and probably should be tested. It's a polymer that swells up, takes up about several hundred times its weight in water. It was discovered from a dirty baby's diaper. A person found everything charred in a fire except the diaper, and he checked, and they were using this material to absorb the urine from the baby, and they've now got this on the market and it seems to be far more effective than foam. And with that, I believe I'll pass it on.

ASSEMBLYWOMAN KEHOE: Can I just – one, one thing – the polymer or the foam, are those readily available for any consumer to have in their own home?

DR. MARTIN: yes, they are. They have a package – it's very expensive – it's a package of about four gallons, costs $300.00, but they have an adapter to put on a garden hose with that.

SENATOR ALPERT**:** Thank you. Okay? Go to our next presenter?

MR. WEINGART: Alright. I too wish to thank the commission for allowing us to be here to address this very complex and critical issue, especially as it revolves around fuels. As deputy to our regional forester here in California, responsible for the 18 national forests here, I want to share his commitment to the fire prevention, suppression, restoration efforts. He is a very strong supporter and always will be. I think that he is taking this fuels issue very seriously. He's put a lot of priority towards it. He's fighting hard in the administration and in the agency to make a difference. He has asked me to take my schedule to 100% working with the various directors involved to work here in a period of time that I can focus 100% of my time and seeing if we can't take our existing programs, which I feel are very excellent and outstanding programs, but seeing if we can't find some things to make them better. Especially by building them together, integrating them, and leveraging off of each other's strengths. Having said that, I must say that the agency truly is at a crossroads. And where we have focused on resource protection, go out there initial attack, it's a very good strategy, a strategy that we'll continue to

use, because keeping fires small, a good initial attack, is effective, inexpensive. The problem with it is that over time, though, it has its costs. Because of the time that one does get away, the conditions, ecological conditions have changed to a point to where there's more of a chance of these larger mega fires to occur. And so it's a shift from thinking it's an initial attack only, or being the best we can there, to really looking at landscape scale fire behavior. It's also a shift from looking at individual buildings and structures to really looking at communities and towns. It's a shift from protecting resources, which we felt we were doing by constantly placing, you know, taking fire out of the ecosystem to one that says, we really do need to restore our ecological processes out there on the ground. This shift really is a national shift and a regional shift. I think that many of you may have heard of our agencies efforts and attempts to do all that we can to focus our efforts, and now the wildland urban interface, try to really do what we can around communities. We're also talking a lot about fire regimes, characterized by short return fire intervals, of which, by the way, are the ones that are the most **(UNINTELLIGLBLE)** historical condition, now. We have a lot of old decadent even age brush fields, and we have a lot of stands out of condition.

Our fuels objectives basically can be summarized in a couple of categories and that is, improving our environment for suppression effectiveness, reducing our risk to our firefighters, loss of life and property, and increasing production capability and reducing a threat of a full stand replacing fires where we are losing not only, we're losing some of the habitat that we thought we were once protecting by not toughing it. Restoring fire-adapted ecosystems, reduction to the affects of the watersheds by doing this. Reducing loss of other natural resources, other habitats, I think many were mentioned earlier. I mentioned condition class and I think I wanted to show what that really means, and basically we always talk about three condition classes. And that's a departure from historical range of variation where you have a low, moderate or high, and also the risks that associated with that, and think of it as low, moderate, high, and we're constantly trying to strive toward moving the 3 to a 2, or the 2 to a 1. Currently, right now the situation on the national forests of California, we've got about 19 million acres that are basically around 80% is in condition class 2 and 3. The other 4 million is very similar, whether you're inside the urban interface or not, they're just a matter of a few percentage point differences. As you can see, we've got a large job ahead of us. It's going to take some retooling, uh, start, uh, our fuels reduction and veg-management programs really need to be retooled to accomplish the two key elements of our national fire

plan, one of which is, you know, using a strategic approach to place these treatments out on the landscape in order to reduce the intensity and the spread of the fires. Writing our civil cultural prescriptions that are really reaching towards bringing **(UNINTELLIGIBLE)** conditions and making that condition class change that I talked about. In doing that, our wild fire specialist and civil culturalist must work more together. We have worked together in the past. I don't want to make it sound like we're not, but I think it's really going to take an extra effort to do more of that, to use all of the skills we have. We can't just keep on hiring more – you know, we're at pretty well limits of budgets it seems like, we've got to find out better ways to utilize those skill bases. And also I'm concerned about the loss of some of those skill bases, as we mentioned earlier. We need to develop those prescriptions jointly to meet the multiple types of objectives were trying to achieve here. Getting these condition classes back is, to me, is one that we're not only providing fire safe areas of landscape, but we're also providing the multiple types of desired outcomes were trying to achieve, like wild life habitat. I think that we'll be able to see that what you can expect is in the near term; we're still going to focus on protection and reducing the effects of large, damaging wild fires. You know that's that wildland urban interface and our strategic placements. Trying to keep those fires small, protect our firefighters, private property and public lives. They are less expensive and do less resource damage. In the long-term however, we're really trying to restore those condition classes. Get them moved from 3, 2, down to 1. We see that, you know, some of the treatments that we're doing on the landscape, when it comes to these large mega fires, truly is working. Your testimony today that many examples where it has, I think we have many, many, too, reaching in our portfolios, such as that on Mt. Laguna, we did some mechanical treatment out there which turned out to be a critical anchor point on the Cedar Fire. Polymer district did some prescribed burning that ended up helping on some of the perimeter control efforts on the Paradise Fire. The list goes on. We also, it's critical that we hold on to what we have. You know, we've done a lot of good things in the past; we're working on a lot of good programs. We've got an excellent fields program under our fire staff here. We've done a lot of good treatments. Those treatments need maintenance. Can't just go out there, treat it and walk away from it. We've got to continue looking at how we maintain those critical spots, too, and blend them in to the strategy of where we go with the next ones. We've got to continue to look at ways that we can allow fire to come back into these ecosystems. Fire use, we've got learn and find ways to where we can allow some of these to help us to get back to that where

they're not large damaging fires, but they can be allowed to burn and help us reach our resource objectives with lower costs, rather than always thinking of it as mechanical and investments. We need to have our effective initial attack. In the past, we just used this more wisely, I think. Having adequate suppression is critical in the organization to carry it out. They, too, though can also help us in accomplishing some of this other work, and we can think of it in sharing the resources again.

Moving on to some of the barriers, you know it's easy to talk about barriers. I'm kind of an optimistic person. I think about things like this commission coming together, I look forward to the opportunity to make things better, constantly making them better. And I think that's why some of these other issues, just like the cultural issues, internal and external, is talked about. You know, how are people going to accept allowing us to go back in there and start doing more mechanical treatments of our trees around our subdivisions, the visual issues, the wild life issues, and others, how are we going to be able to do more prescribed burning, etc. I mean that truly is a cultural issue. Internally, cultural issues have become, are now barriers about how everywhere the way we're handed funds and the expectations behind those funds. You know, there are certain desired outcomes, and so then, you know, we're kind of channeled all the way down from the top down, as this dollar should only do "X." When it gets down here, it's hard to understand why all these people can't help us do what we see is really a priority. So we really need to learn culturally how to make those kinds of shifts and changes. Again, mentioned was the **(UNINTELLIGIBLE)** and other threatened species. But that's in terms of metrics, you know. You can go out into a stand and argue about whether 50% ground closure's going to ruin that stand, moving it to 40 ground closure for an owl or not. And that debate is happening right today. Well, we're talking about, those are things, the same things, we're trying to do to move the condition class from a fire standpoint, from 3 to 2 and 2 to 1. And so we're constantly at odds, it's a balancing act that we all have to work together collaboratively and I think that's the key word, continue working together to figure out those desired outcomes.

Appeals and litigation – we're usually up to our eyeballs. I'm the appeals deciding officer in the region and I've got weekly stacks. And I'll tell you, we have been held back on what we can do, and it has drawn a lot of our dollars and resources to the, I think, the wrong thing. I think that, yeah, we can continue

to learn, continue to adapt and I'm not against that. I just think that there can be some ways that we can help, and there have been some efforts. Our recent restoration act, I think, is really a starting point and we're looking to achieve some streamlining under that and try to help us. However, it's still, the courts are driving a lot of our decisions, and investments. But also I think we've been working hard nationally and regionally on our, what we call, process gridlock. We have a lot of processes, we have a lot of conflicting laws, we have a lot of things that we have to achieve while we're trying to do these job. Well we have been investing a lot of time and money in trying to find ways to knock it down, you know, to beat it back and try to get it to some reasonableness. And we have a long way to go. I think that one thing that I'd really like to mention is the long-term investment. You know, we might get a flush amount because of these fires, to come out to help us, but you know, like I showed you on the numbers, it's going to take – this is a long-term investment. We've got to be committed to help each other find the funds that we need – local, state, federal – to leverage our monies and continue it at a level that we feel like we can make a difference to protect these communities, and these ecosystems. I think that one of the other barriers imbedded in the budget issue, to me, is, you know we're in a situation where we have to borrow money from all of our programs when it comes to suppression. You have a big year where you're spending a lot of money like we have the last few years, it locks up and freezes all of our other funds because we cannot over spend. So then the funds that we have lined up to do fuels work are also frozen. And so while you think you've got the money to do it, all we have to do is think about, we need a way, we need some help, congressional help, and others, to figure out a way to get the agencies the funds to do, to treat these emergencies without affecting our ongoing programs. And I think that's a critical one. And I think I'll leave it with, you know, it seems like we always find the money to fight the crisis, to rebuild, the billions of dollars it took, but we really have a hard time finding the money to do the prep work, call it mitigation or up-front work, treat these fuels. I think maybe there out to be some avenue that we could find, you know, you can't just keep go begging for money, more money, more money. But maybe there's a way to think of it is that, a little money invested might save the money and then it may balance out. But anyway, that's a larger picture question as well. Thank you.

MR. RALEY: Once again, my name's Ron Raley. I'm the Deputy Director of Fire and Aviation Management for the Forest Service, Pacific Southwest Region, and I too am very pleased to be here and

very thankful **[TAPE 2, SIDE B ENDS, TAPE 3, SIDE A BEGINS]** cooperates, assists, coordinate **[NOTHING ON TAPE FOR BRIEF SECOND]** state and local agencies, as well as with citizens and community groups and in implementing veg management, and fuels management programs, and that is what I am prepared to speak to. To speak to that, I think it is worthwhile to take some time to talk about, just what is it that we bring to the table when we come to cooperate with these other citizen groups and other communities and other federal agencies. The Forest Service has a whole litany of programs, grant programs, etc., in the cooperative fire and state and private forestry programs that are available to other federal agencies and to our publics and cooperators. And I'm not going to cover every single one of them because they're so numerous, but I would like to offer for the record, Mr. Chairman, Connecting Forestry to People 2004. It's a pamphlet published by the Forest Service that clearly articulates each of these programs, what they're for, how they can be used, matching funds and so forth, for reference on all of these.

CHAIR CAMPBELL: **(UNINTELLIGIBLE)** that part of the official record.

MR. RALEY: Thank you, sir. Some of these programs, the keynote programs that I want to deal with, there's about eight of them there, and we'll start with kind of a stall worth of our grant programs, is what we call State Fire Assistance. State Fire Assistance has been in place, it's part of the farm bill, it assists state foresters in the reduction of losses due to rural and wildland fire. It is a 50-50 matching grant program, and typically you'll see the state of California end up with about 1.1 million dollars, and that's what they have for '04, to implement some of their programs. A lot of these programs deal with the Fire Safe Councils, fire academy upgrades and so forth, firefighter safety studies, and so forth, and also these can be passed through funds to the local counties. You heard Chief Roper talk about the at-risk juveniles in Ventura County that received funding and that they use on hazard mitigation project called the Crew Project. This state fire assistance funding is used for that. We've had an increase in '04 as a result of some of the legislative efforts on the part of Congressman Lewis. We've had an additional increase o 11.5 million dollars that will be earmarked for the southern California fuels issues, dealing with dead tree removal, and the fuels problems down there. Also the Forest Service earmarked an additional 4.9 million dollars to deal with the mortalities issue in southern California. And then, in addition, the western state fire managers play a critical role in the allocation of funds with regards to these other wildland urban interface

projects, and that is one way that California can become, and is, very involved in the allocation of those resources and what piece of the pie we get. Volunteer fire assistance – volunteer fire assistance funds are available to our rural volunteer fire departments in areas less than 10,000 people. It also is a 50-50 matching grant. Typically we end up with about $1 million dollars that goes out to about 210 different fire departments in the state of California. The commission member representing Senator Brulte asked the question about what's available to these local fire departments to train, to educate, to equip them to deal with the wildland fire problem. This is the mechanism for that. These funds are available for other training and equipment with the volunteer fire departments, but they also can be available for that and there is some question as to whether or not we can actually earmark that to be available.

Economic action is another big program the Forest Service has available. It is deals specifically with biomass utilization developing new products and markets. Development of co-generation plants, and so forth, it is the main venue that we have used in our grant program this year to help remove the biomass that's being generated in southern California. The President's budget had zero dollars in it for FY '04, and once again as a result of the legislative intervention $5.75 million is being made available to southern California to deal with those problems. I'd like to add that all of these programs are focused on multi-jurisdiction projections. Our entire effort with the National Fire Plan, and a lot of the key elements of the National Fire Plan, is to make sure that when we implement programs and projects, that they go across jurisdiction boundaries. In this next program that's available, grant program available, is called Community Protection. It's specifically designed to implement projects adjacent on non-federal lands to protect communities when hazard reduction activities, specifically prescribed fires, are planned on national forest system lands that have the potential to place such communities at risk. And there's $2 million available in California for this. What this means, folks, is that, if there's a project planned on federal land, and we, the community, Fire Safe Councils, feel it necessary to implement some vegetation management to protect the communities on private lands, we're authorized to expend federal funds on those private lands.

Forest health management – this program is all about maintaining the health of our nation's urban and rural forests. Forest insect and disease detection, monitoring, evaluation, prevention and suppression to promote and restore forest health, are all broadly available, broadly available, to all federal, tribal and state and private lands. Ten million dollars was allocated in '04 for this program, and once again as a result of

legislative intervention, $4.5 million is available for private land, specifically earmarked for southern California, and we understand that an additional $25 million is pending approval in the legislature. The other cooperative programs, I would just briefly say that all of these programs are administered by the Forest Service, they have fairly common themes for enhancing, protecting and conserving and utilizing non-federal forest. This forest stewardship program, forest legacy, urban and community forestry, forest and enhancement program are all designed to help the private landowners in non-federal lands. Just to give you a snapshot of where these programs have gone, we looking at four program funding levels for state fire systems, volunteer economic action, community protection, all four of those funding levels from '03 to '04 have significantly increased, and will continue to increase. The other program levels that have increased, both forest health and forest legacy program, have dramatically, dramatically increased.

I'd like to also talk about a very effective program that the Forest Service has that's available to the state and local partners, and that's our Federal Excess Personal Property program. It's been a very successful program over the last several years whereby the Forest Service will acquire to excess property, military equipment, or other federal excess property, and make that property available to state and local for their firefighting or fuels management work. As an example, air tankers, helicopters, air attack aircraft, bulldozers, backhoes, anything that you can imagine that could be made available to locals, the Forest Service can acquire those and those can be on loan to the state for their program, state or local government, to their programs. About $215 million of this equipment is on loan to the states currently, including the current CDF air tankers and many of their helicopters.

Talk a little about program delivery now. And how do we get this plethora of offerings, grant programs, available to our constituency. And the three big programs that we rely heavily on are Fire Wise, California Fire Alliance, and the Fire Safe Council. And I'll rely on my esteemed colleague, Bruce Turbeville, to give a thorough presentation on the Fire Safe Council, so I won't talk much about Fire Safe Councils other than to tell you that the Forest Service is very, very actively involved in that process at all levels, both the statewide level, statewide Fire Safe Council, plus the individual Fire Safe Councils.

Little bit about the FIREWISE Program. This is a national program that we've been involved in since 1986, we're partnering with NFPA, and other wildland agencies and industry, to bring together a whole suite of tools that can used by Board of Commissioners, Planning Commissions, Planning Boards,

etc., in local communities to help them understand the issues with regard to fire safe planning, landscape planning, and so forth. We are very heavily involved in that. We have worked with the California Fire Alliance to put on approximately eight of these workshops in California.

CHAIR CAMPBELL: We have a question.

SENATOR SOTO: How are you getting that information out? There's all kinds of information available and some of them may not know that it's there.

MR. RALEY: One of the things that we're doing is we have websites available on the California Fire Alliance, we have links that are on the Forest Service website, plus the California Department of Forestry website, to the California Fire Alliance, links to the Fire Safe Council, statewide Fire Safe Council website, and then through the network of Fire Safe Councils, primarily, and a lot of these workshops have been advertised locally, these workshops have been sponsored by, in the most part, local Fire Safe Councils, or RCD's. One thing notable about the program is that there's national funding that's been made available for Firewise. There's been national sponsorship and folks that have helped put these things on and provided some of the financing for support in terms of logistics and facilities. That program, by design, is being transferred to the local regions and the states to carry on themselves, so that's something to look at, whether or not we can continue this program on a national basis.

SENATOR SOTO: But do you get the attendance or cooperation from these different jurisdiction when you send them the information? Do you get requests for information from them?

MR. RALEY: Does the fire alliance get requests?

SENATOR SOTO: Yeah.

MR. RALEY: Yes we do, and these workshops that have taken place have been at the request of a lot of the local folks have said, hey we have a need here in our community to make a difference. We have interested insurance companies, interested real estate companies that want to come in and participate, how about if we host one of these workshops in our community? And the fire alliance has been more or less the sounding board or mechanism to kick those workshops off.

CHAIR CAMPBELL: Thank you, Senator. Assemblyman Dutton.

ASSEMBLYMAN DUTTON: Yeah, I was going to wait, but maybe I'll ask this now. Couple slides ago you were talking about various dollars that were budgeted for uses for various purposes, millions

of dollars. I'm curious out of all the dollars that were budgeted in 2003, how much of it actually got out in order to be utilized.

MR. RALEY: Yeah, all the money got out in 2003, and a lot of the grant money is three-year money that's available for expenditures in a three-year period of time. And I cannot tell you, sir, exactly what percentage of the funds were expended last year, but the build up of funding for the southern California problem quite frankly started this last summer. It was recognized previously, but it took a while to get the pipeline open for funding, so I would say that within the last nine months, the pipeline is opening up a lot more.

ASSEMBLYMAN DUTTON: Could you maybe give me some information as to, for the dollars we've talked about that have been allocated over the last year to two years, whatever, how much has actually been disbursed?

MR. RALEY: I can certainly make that available.

ASSEMBLYMAN DUTTON: Could you? Thank you.

MR. RALEY: The last thing that I wanted to talk about was just specifically what is the California Fire Alliance, because quite frankly, this is the body, the esteemed body, that all of the fire agencies in the state of California rely on very heavily to deliver our programs across boundaries in the state of California. And the California Fire Alliance consists of agency administrators, we're not talking about fire program managers, we're talking about the agency administrators from all agencies within the state, who have a stake in pre-fire issues. This includes BLM, it includes CDF, Andrea's the chair of the California Fire Alliance, the National Park Service serves on this group, Forest Service, Los Angeles County, Fish and Wildlife, and the Bureau of Indian Affairs. FEMA, although not a member of the fire alliance, sits at every meeting with the fire alliance and is very much a full participant with that group. Some of the goals of the fire alliance is that they're working with communities to develop leadership for fire loss mitigation plans, fire safe plans in different communities, and they would like nothing more than to double or triple the number of Fire Safe Councils that are in the state. They want to assist communities in developing fire loss mitigation projects also. They provide outreach to communities to increase awareness of program opportunities, and this includes the Firewise workshops. And then they also are the body that maintains this list of communities at risk, so if that list gets modified, it will be in concert with the efforts of the

California Fire Alliance. And then this whole issue, the quagmire of environmental laws and regulations that we have to deal with in California has been taken on by the California Fire Alliance, and they have made some progress at dealing with CEQA and NEPA issues and providing clarity to folks who want to implement these projects. Some of the things that the California Fire Alliance has done is, they have developed these media releases for the workshops and so forth, and they're helping people understand what resources are available to them. And on their website they do have what they call a resource guide, where folks can hit that website and see these different grant opportunities that are available to folks. They carried out a series of Firewise workshops, they've developed a website, and I think the last, most significant thing, is that they are working very hard to develop what they call a one stop shopping so that entities that are interested in grant applications don't have to go to a lot of different places to understand where to get funds for their projects. They can apply one time, Fire Alliance staff group will take those applications, synthesize those, and go back to the applicant and say, hey, volunteer fire assistance is what you want, and that's the grant we're going to apply for you. So I thank you.

CHAIR CAMPBELL: We're going to make that part of the official testimony. Yes, sir?

UNIDENTIFIED MALE SPEAKER: Mr. Chairman, thank you. It might be important to clarify a point that was made earlier. I think some of the perception is that there's an awful lot of money available and, yes, there is. The strength of these co-op programs is aimed toward communities that recognize they've got a problem and want help in confronting the problem. Without that, within the Forest Service, we can easily, and I repeat easily, expend 70% of all the dollars available on planning, appeals, and litigation with no net result on the ground. Thank you.

CHAIR CAMPBELL: Thank you very much. I apologize, but I'm going to have to request that in so far as possible for the presenters, cause we've got six more presenters, and we have four community people who want to testify. So if you can summarize it as much as possible. I've go to get the legislators back to Sacramento tonight.

UNIDENTIFIED MALE SPEAKER: Chairman, may I ask a quick question? Of the funding, could you please tell me how much funding is available for private landowners assistance alone? Not state responsibility area land, but private individual landowners that have hundreds of dead trees on their property. How much actual money could they access through these programs?

MR. RALEY: I cannot tell you that. I do not know what the figures are.

UNIDENTIFIED MALE SPEAKER: Is there any money?

MR. RALEY: We would have to work with the state and with the county to find out how much of that is actually going to the private landowners.

UNIDENTIFIED MALE SPEAKER: I think that's important to know. We appreciate it. Thank you.

PROFESSOR PAGNEA**:** Yes, Senator, I'll make my remarks very brief, both because of your comment, and also because most of the points I plan to cover have already been stated very eloquently by previous speakers this morning. All of you should have a received a reprint of my article from the Fire Safety Journal on the causes of the 1991 fire. It should be in front of you. If you have any questions on that, or anything that we don't have time to cover today, if you go to the e-mail address on the previous slide, you can contact me there, pjpagnea@me.berkeley.edu. With regard to the '91 fire, we're using that as a basis for collaboration between the Lawrence Berkeley National Lab, the Lawrence Livermore National Lab, and the Los Alamos National Lab, they tried to develop a model, a computer-generated model of fire growth and one of the difficult problems is the problem of burning embers. The question of what happened in '91 is very closely related to, as we've heard today, the weather and to the embers. This is an ember that a friend of mine picked up off of his concrete front porch, and if you looked at it carefully you'd see that it was once a cedar shingle. Senator, one of the reasons that the Canadians send us so many cedar shingles and shakes is, my friends tell me, they don't use them themselves. [Laughter.]

We'll talk about when will the next major fire occur. It looks like in the north we have a 22-year cycle between major fires. In the south, your period seems to be even shorter. What can we do before then? Well, in addition to the fuel management that is being discussed by my colleagues, in addition, I'm very happy to see that the Los Angeles city and county are proposing much stricter structural codes, cause I think that is essential. In conclusion, it's going to happen again, and we've got to get ready. [Laughter.] I'll skip the next three slides – skip that, skip that, this one, uh, no, go back one, please. Back one, if you can. This data was obtained by Dave **SAMPSUS**, who was Bob Martin's student and is now an employee of the California Division of Forestry and Fire Protection. Dave interviewed people who were at the fire, both as firefighters and homeowners, and developed these contours. The point that I want to make is, as

you can see, those contours are not contiguous. The fire jumps, and that jumping phenomena is caused by spotting that caused by burning embers. We have a unique fire environment here in California. The serious conflagrations occur when we have these high winds, Diablo winds in the north, and the Santa Ana winds in the south, and the propagation is by largely small pieces of burning wood, we call them brands, fire brands, or fire embers. And we're struggling very hard to get a handle on the fire physics involved in those things, but it's difficult, and it presents a special problem for the fire services because they can't predict there the fire is going to be if it's being transported by these embers.

The next slide shows the **(UNINTELLIGLBLE hoe-ta-graph?)** that is, and I won't go into that much detail, but it simply shows the wind as a function of time on the day of the fire. The day before the fire was fairly normal, with offshore winds at night, and onshore during the day because as the valley heats up, it draws air in and that's the pattern you see at the top of the slide. Then, at about 6:00 in the morning, on October 20, 1991, there was a sudden shift of winds, and we got this Diablo wind in a singular direction out of the northeast. I was looking for a dramatic change in the weather at 11:00, or 10:30, when the ignition occurred. There is none. What we had was a desiccation period of about five or six hours that simply sucked all the remaining moisture out of the fuels and made them vulnerable to this very rapid spread. In addition that day, the next slide shows that we had an inversion layer that was mentioned by Director Jones earlier today. This shows, based on Oakland weather airport data, where the inversion layer was. In that layer, from the 300 meter mark to the 600 meter mark, there is an increasing temperature, which means that the layer is stable, there's very little mixing. So when we dumped all the brands, embers, into that layer, they went straight down stream, down wind, to the homes and to the eucalyptus and other nasty things that were down wind, and that's the reason the fire spread so rapidly.

The next slide shows the cycle of fire in the north. In 1923, you know, most of the City of Berkeley burned down. Chief Williams that in 1945 there was a large grass fire in the same place that the 1991 fire occurred. It wasn't noted much cause there were no structures there at the time, and as we continue to move into grasslands and wildlands with structures, they're going to become more important fires. Nineteen seventy, the Fish Ranch Fire destroyed about 40 homes and over 2,000 in the 1991 tunnel fire. That's a 22-year cycle. Personally, I think it's tied to sunspots, but I haven't been able to nail that down quantitatively. It suggests that the next fire will be 2013, so we've got less than 10 years to prepare.

I think there's 100% chance that there will be that additional, at least one additional conflagration during my lifetime, perhaps several. In fact, I'll go further. I'll say it'll be in October or November of 2013.

Well, since we know that there's going to be another major conflagration, what can we do about it? The next slide suggests approaches that would fire harden structures at the urban wildland interface, and I think that essentially comes down to strict code enforcement, as we heard from previous speakers today. I see no reason in California for tolerating anything less than a Class A roof. A Class C roof is a wooden brand about a 1" cube, that puts on the UL apparatus and ignited and that doesn't really represent much of a hazard. Class B is about a 4" cube, and a Class A roof is about a 10" cube of wood. That's not a very stringent test and we really have no excuse for not using roofs that can't burn.

CHAIR CAMPBELL: There are a lot of shake roofs being built right now.

PROFESSOR PAGNEA: Pardon me?

CHAIR CAMPBELL: Professor. Right here. There are a lot of shake roofs being utilized right now.

PROFESSOR PAGNEA: I think there are, and I think back in 1961, we had that very large fire here in southern California and they attributed it largely to shake roofs. Unfortunately, just as in '23, when the Berkeley City Council prohibited shingles, the Cedar, Shake and Shingle Association got that prohibition removed about three months later, and I think it's time for someone to take a strong stand, and I hope you will.

CHAIR CAMPBELL: I'm retired. [Laughter.]

PROFESSOR PAGNEA: Oh, well. The "you" was meant to include the entire commission! [Laughter.] Alright, I want to go even further. I don't think we should use shingles and shakes on the sides of homes. All of the current restrictions regard roofs, whether they're Class A, B, or C. These kinds of brands will be generated by shingles used on the side of a house that burns, so while constraints on the roof will protect that structure, what about the structures that are down wind? If you're using shingles on the side of your house, you're representing a hazard to your neighbors. If you're putting them on the roof, you're representing a hazard to yourself. If we don't worry about the ember problem, we're still worried, as the fuel management folks tell us, about the contiguous fire spread, and I am very happy to hear that double-paned windows are being required. A burning bush lasts about five minutes. It takes about that

same time to crack the window due to radiation and have the fire come into the house through the window. In most times, if you don't have the defensible space, that's how your structure is compromised, by the window cracking and the fire coming through the window. The double-paned windows, the first pane acts like a filter and takes out all the radiation, very little gets through. So even when your first pane may break, you second pane does not start to get heated until that second one cracks and gets out of the way. So if you have a five-minute burning bush and you have ten minutes worth of protection by two panes of windows, that may be enough to save your house. In addition, you can put a shutter over the windows and any vents. We heard earlier about covered eaves. Dr. Cohen with the Forest Services says there can be no nooks and crannies in our houses, places where embers can land and start to burn. The interior sprinkler systems we heard about earlier? I received a paper from a young physicist whose house survived the Cedar Fire. He had invented an exterior sprinkler system designed to apply a fine mist of water that was sufficient to put out burning embers; not sufficient to put out a house, but to dampen the ignition sources.

In conclusion, my part of this problem is relatively easy. The fire physics is well defined. Your part of this problem is hard. Finding the political will and the fiscal resources to implement the structural and wildland fuel mitigations that are required now is something that I hope you'll accomplish.

CHAIR CAMPBELL: Thank you very much, and I want to thank all of you for your presentations. They've been excellent, and we appreciate it. Very much. I want to say this. And our next witness is Bruce Turbeville, the Chairman of the Fire Safe Council and the California Fire Alliance. If, uh, Bruce, if we can concern ourselves with the redundancy factor, I have some legislators who have to leave here at 5:00, or they're not going to make the plane they're scheduled on. They say 4:30. No more questions now, if it's 4:30. [Laughter.]

MR. TURBEVILLE: I will go as fast as I can.

CHAIR CAMPBELL: Thank you, Bruce, I appreciate that.

MR. TURBEVILLE: There, I guess that's better.

CHAIR CAMPBELL: Yes.

MR. TURBEVILLE: I promise not to sound like the add for Jack In The Box, though. That guy talks faster than I can think. Actually, I can make it really fast, if you'd like. Here's the 1970 report on conditions, we could just pull the recommendations from that and you're all done. Because they're

virtually the same. So, I thank you for allowing me to be here, members of the commission. I'm Bruce Turbeville, Chairman of the Fire Safe Council. For 37 years I was with CDF. Ten years ago I helped CDF form the Fire Safe Council with the idea of supporting the department's budget with private sector funding and support. And I think we've been very successful. The council is independent now of CDF, it's a not for profit organization, and believe me, we're not for profit. We sit on the California Fire Alliance. We help form fire safe councilss, of which there are more than 100 in California. We bring diverse and often opposing interest to the table on the corporate, government and citizen levels. And under our umbrella, these groups agree about one thing: whatever we're doing to stop wild fires from damaging our communities, we need to do it better. We are the statewide umbrella organization that supports community fire safety efforts and creates consensus on fire safety among diverse audiences. In California, we are the community level cooperatives implementing the National Fire Plan.

CHAIR CAMPBELL: Bruce, could I have you very quickly explain what a local Fire Council is?

MR. TURBEVILLE: Oh, the local Fire Safe Council is an organization within a community, made up of community members, generally the fire service, quite often insurance agents, real estate agents, anyone that wants to be a member. It's a public, private **(UNINTELLIGIBLE).**

CHAIR CAMPBELL: Local citizens.

MR. TURBEVILLE: Local citizens. If you'd like, I'll go back real quick and establish, the state Fire Safe Council was initially formed, not looking at the community level, but looking at the state level to bring the private sector in to share the process of educating the people of California, insurance, real estate, that sort of thing. It slid into the community level when people recognized that there was a need, and has become a growing opportunity. There's 110 Local Councils. In fact, our Local Councils were significantly affected by the wild fires. To the men and woman of the fire and land management agencies, we thank you for what you did to stop the fires. But I'm also here to say that while you put out the big fires, we're in danger of perpetuating the big fires depending on decisions we make about your agencies, policies on fire protection, and more importantly, fire prevention and hazard and risk reduction. You are the leaders of these issues, and where you go, land planners, citizens and private companies will follow. If we really want to keep this from happening again, then we must get serious about the community and the prevention elements of the National Fire Plan. Your invitation asked me to comment on a variety of issues: current

activities, barriers to success, planning, codes, and recommendations. I'll address these from the very personal perspective of the people who were flat out afraid of losing their homes to fire. This is not their job, this is their life. It's the life of people like Helen **PALOMA**, who volunteers in **(UNINTELLIGIBLE)**, Lora **DYBERG**, who volunteers in the Mountain Rim communities, **GARRICK LOHODA**, who lives in Idlewild, Marty Levitt, who lives in San Diego, and hundreds of others who run the gamut from retired teachers to foresters and real estate agents. None of them, or none of us, wants to lose our homes to fire, but most of us don't do a damn thing about it. Even though there is so much we can do. The people I just mentioned should be the rule, but unfortunately they are the exception. As far as California being fire safe, let's not fool ourselves, or anyone else. We have a long way to go. How do we get to where we need to be when the state's population is expected to grow to 50 million in the next 16 years? And the fastest developing areas are the wildlands? About 1 million people a year will become Californians, and people are the #1 cause of wildfires. Will we change our approach to land use planning? Will we change where and how people build? And what they are allowed to build with? Will we change how our forests and wildlands are managed? Will we change people's attitudes and actions? Or will we study the problem, come to some conclusions that reinforce the status quo, publish a report, and put it on the shelves? You are doing important work that will shape the future of our state, and we trust you will make the right recommendations, just like those who studied the problem before you. As a result of the 1970 fire siege, the secretary of resources convened as a task force to explore reasons why the fires cause so much damage and to develop recommendations to minimize future damage and prescribe procedures to implement task force recommendations. What came out of that was the Incident Command System, Firescope, Public Resources Code 4291, implementation statewide of the Red Flag Fire Alert program, and the weather forecast criteria, and a few stabs at reducing the use of wood roof coverings. These were big changes. Now it's up to you, to us, to make more changes and implement those changes. We're here to help, but need you to lead the way to reach our goal.

Here's what the Fire Safe Councilss and others are doing in communities throughout California, and some of the challenges we face. San Diego Fire Safe Council was funded by BLM in 2001 for a chipper program, and to help spark community participation and prevention programs. The goal of its community participation project was to start three to five Local Councils. It was wildly successful. It

received interest from more than a dozen areas. Under the Council's brush clearance program, residents called to schedule a chipper to come to their home to chip the brush they cleared and put back on a spot. The council was overwhelmed with requests and still can't meet the need. Unfortunately, the council was not funded for this program in 2002 because of reduced funding availability. Another council was funded to do brush clearance program, but not funded for staff positions needed to make the clearance program happen. We recently worked with the BLM to modify that **(UNINTELLIGIBLE)**. Many other councilss are feeling the affects of reduced funding. The California Fire Safe Council itself, the State Council, receives funding from BLM, Forest Service, U.S. Fish and Wildlife and private sector primarily, PG&E. We are experiencing a funding drop of approximately 25% this year. In the burn areas themselves, in the recent fires, there were some victories. Lytle Creek's defensible space program helped provide defensible space for fire crews on the Grand Prix Fire. When a battalion chief's professional judgment told him to pull out his firefighters for their safety, he met unexpected opposition. Helen Paloma, the chair of that Council, told me that a U.S. Forest Service firefighter objected, saying this community started a Fire Safe Council three years. We promised that if they did their part, we'd do ours. The battalion chief saw the community's work in creating defensible space around homes, he ordered his firefighters back in. The firefighters bravely faced the fire. In this neighborhood of approximately 350 homes in the Lytle Creek community, only 18 were lost. In the mountain communities of San Bernardino County, Laura Dyberg told me that the evaluation plan and practices that her council recently developed paid off. Many residents were already prepared and evacuated before the order came to leave. In San Diego County, **(UNINTELLIGIBLE)** told me that the decision to select Palomar Observatory as the stating area and shelter and planning to use local ham operators for an information source was critical. He told me that thanks to the Palomar Amateur Radio Club, they had round-the-clock information during the fires. These are success stories. As non-profits or businesses, the main source of our revenue is grant funding. Despite our success in delivering our service, our revenue source is drying up. We taught that success breeds success. Yet in this instance, success may breed bankruptcy. The groups rely almost totally on funding from federal agencies discretionary grant programs. They are part of the current strategy to create fire safe California, and they are bell weathers of the problems facing the current strategy. A strategy that won't work because it is piecemeal and not important enough. That's why we need big changes so that we can

realize the small successes like those in Lytle Creek, the San Bernardino Mountains, and San Diego. The sum of the small successes will lead to the larger victory. Despite the National Fire Plan, California Fire Plan, local fire plans, the 100-plus local Fire Safe Councils and so on, preventing wild fires is not a priority. Funding for prevention efforts is down from historic yet still under-funded levels. Despite the Department of Agriculture budget that increases 2004 National Fire Plan funding, 173 million over 2003, the Forest Service Community Action program, just as an example, is down from $3.5 to $2 million, yet the Forest Services budget includes the highest level ever requested for fire suppression. The Bureau of Land Management 2004 community assistance funding is down 34% from 2003. Funding for hazardous fuel reduction over is flat, suppression is budgeted to receive a $35 million increase.

Organizations working in their communities to make them safer from wild fires submitted 299 grant proposals to CDF, BLM and the Forest Service in the past 3 years. They totaled $17.3 million, only $8.8 million was available to fund projects. Only 50% of the need was met. With the new cuts we are looking at significant failure to meet the need in California. We're going in the wrong direction.

CHAIR CAMPBELL: Bruce, if I may. You have a funding problem. Do you have some statements as to how you want to overcome this funding problem? Can we get to what your recommendations are? We see your problem.

MR. TURBEVILLE: We need more money. I mean, it's that simple. I was just trying to explain it.

CHAIR CAMPBELL: No, I understand. I think we have a pretty good view what's happening. And if you have any recommendations, we would appreciate it. Yes, go ahead.

UNIDENTIFIED MALE SPEAKER: Mr. Chairman, may I ask a question on that?

CHAIR CAMPBELL: No, uh, Senator Alpert has a question.

SENATOR ALPERT: I just wanted to check – have you tried, I mean through the real estate industry or the insurance industry, do they put funding up for the programs?

MR. TURBEVILLE: The insurance industry has been very gracious over the last 10 years. We've received substantial grants from them. It's been a slow process, but they are stepping up to the plate. The real estate industry has not been in a position to grant fiscally, but in kind services have been tremendous.

CHAIR CAMPBELL: Okay.

MR. TURBEVILLE: If I may continue on with some recommendations.

CHAIR CAMPBELL: Thank you.

MR. TURBEVILLE: Recognize that it is a significant problem that needs a significant and long-term solution. First, fund in need in California, grant applications for community assistance show 17.3, we need that much to do it. That is what the local councilss are telling us they can do right now. Create a stable funding infrastructure. Create mandatory grant programs so that organizations that meet certain criteria will be eligible to receive funding. We have to remember that we need long-term funding. Every time we do a clearance project, it does grow back, and that's one of the things that we overlook. There's got to be a maintenance program. We need to block grant community assistance funds to the California Fire Safe Council. We are the delivery system for the alliance as well as the Council, and have the ability to take federal grants and disperse them to the local communities outside the perimeters of federal, state or local bureaucracy. Create a favorable business climate that will attract the private sector to support prevent efforts, as the insurance industry, the real estate industry, the building industry. We're working with the as closely as we can. We need somehow or another to make it more beneficial for them to become part of this effort, whether it's through tax credits or some kind of process that will encourage them to become involved. The environmental issues are very important. We need to come to grips with the environmental issues for the Fire Safe Councils that they're getting tired of having to deal with the environmental CEQA and NEPA programs. We need to develop a climate in which pre-fire management, fuels management, vegetation management, or whatever you want to call it, is socially acceptable and demanded. We're killing more native species with wild fire than we're saving by not having fires. As the population grows, new cities will pop up and existing communities will be challenged to accommodate the people. We must figure out how to manage that growth. The Fire Safe Council is currently pursuing a voluntary fire safe building certification program. We have received interest from California's building interest for a pilot project and are talking to the insurance industry, as well as the fire marshal's office, about ways we can work together to increase consumer's knowledge of, and preference for, fire safe construction materials. In other words, if you go to the store to buy 2 by 4's, it'll say if they're fire safe or not, whatever the item is, something that is not out there right now. We're trying to encourage the building industry to work with us on that and get involved with such groups as Home Depot and that sort of thing, it's just part of the

educational process. As far as our recommendations for land use planning, support the fire alliance initiative to advance Firewise by providing training for those communities that held Firewise workshops. Continue to emphasis the importance of community fire plans and fund creation of those plans, determine actionable ways communities can management growth while maintain or improving public safety and environmental health. I just have a couple of final thoughts. As I think about where we want to be and how we will get there, I think of George Washington. Not because he faced a super human task of forging a country, but because he had wooden teeth. The advent of modern dentistry came to late for Washington, but not too late for us to take a page from his lesson **(UNINTELLIGIBLE)**. If we didn't brush our teeth, get annual cleanings and get fillings and do all the other preventative things we do, we'd be like Washington. The entire dental industry was built on prevention. If dentists can do it, so can we. It beats wooden teeth. Thank you.

CHAIR CAMPBELL: Maybe that's why he chopped down the cherry tree, for the wood to make the teeth. Thank you very much. We appreciate your being here today. Ladies and gentlemen, I want to say this. Our next presenter is Robin Wills from the Fire ecologists from the National Park Service. Before Robin comes up, I want to say, I appreciate the members of this commission, and many of them have come a long way, got up early this morning to be here, and I know we're going to lose the Assistant Secretary of Defense Peter Vega at 4:00 cause he has to catch a plane back east. We're going to lose the legislatures at 4:30, they tell me, and I'd like to leave by 5:00. So if the presenters could be as brief as possible and summarize as much as possible, we would greatly appreciate it. Robin Wills. Okay? Thank you, Robin. [Laughter.] Phil Aune, Vice President of Public Resources, California Forestry Service. Phil, I want you to know I requested that you be here because I read your article in the forestry magazine on the fires where you had treated them and the fires where they weren't treated.

MR. AUNE: Well thank you. I'm glad you read that. Can you hear me okay? Okay. A little close? Excuse me for putting my back to you folks there, but I've got to be able to see what I'm saying. No that's fine. Just like that. Uh, a lot of this is communication, and making sure people understand what we're talking about, and I was born and raised – not born, I was raised in Santa **(UNINTELLIGIBLE)** Mountains in a place called Box Canyon, and mom made sure we understood fire safety because we had to clear the brush, but the brush, and do it all, and we got it all accomplished, and this was in the 50's, before

all of these regulations were required. So there's a lot of common sense stuff that we get to communicate. Well, trying to get this fast, here's the problem. We're being very successful in fire across the western United States, as these graphs show. If we look closer at the Sierra Nevada, and we put a single regression line through these graphs, we see that fires and the affect of fire suppression has been outstanding. And we're going to continue that, there's no doubt about that. But meanwhile, just imagine if you're a little seedling, and you were born in 1919, and there're no longer these wild fires and you continue to grow. Our general views of forest fires have been something like the following: here's the Fountain Fire in 1992, 60,000 acres, 300 homes, and of course southern California is one of the reason the panel's here in all of this. But our forests are growing and they're dynamic. Here we see in 1982 our forests are constantly changing. This is 1992, the Fountain Fire, and this is recently. That's quite devastating, and that's the changes we're seeing environmentally and ecologically across our forest. Our climate and precipitation patterns vary across the regions, obviously. We're not going to change a heck of a lot of that, and as we sit in our environments that we have, we're going to have fire ignitions. Fire ignitions are going to occur. Notice in California the blue dots represent human caused ignition, the red dots indicate fire. And in spite of all of our efforts of trying to convince people about being safe with fire, we're still going to have ignition. So we can't change the climate, we can't change the ignition, and our forests have evolved from forests that look like this – here's the original forest, they were open and patchy, we had stylized views like that, but they all represented one thing, a very open forest. We actually have photographic evidence of that. We have our original stand structure in the composition that currently looks exactly like this. It was our original stand structure in the '20's. Here we had, occasionally we had frequent fires, low intensities, and now we have infrequent fires, and their high in intensity. The frequent fires look like that, the fires today look like this. What we're going to talk about today is research at the Blacks Mountain Experimental Forest. It's near Susanville, California, in the northern part of the state. Lassen National Park is relatively there, and here's what we see from photos from Dr. Allen Taylor at Penn State looking at Lassen National Park in early 20th century, the same place in 1992. Well where we're talking about, there's the park, what we're going to look at is the Blacks Mountain Experimental Forest. A Forest Service research site, in my last 13 years of my Forest Service career, I was the research manager for the Pacific Southwest Station that was responsible for this research. And so there's the Blacks Mountain Experimental Forest, there's Blacks

Mountain, eastside pine type, excellent place. We actually had some photographs. This was what Blacks Mountain looked like in 1920, this is what it looked like in 1946, this is what it looked like in 1994 at the time we initiated the study. This is the time that typical pre-treatment conditions at the Blacks Mountain Experimental Forest. The first we did was a prior history study. Dr. Carl Skinner did the study basically classifying all of the wild fires that have occurred, he did this through tree ring analysis, and what he found was 100-acre sized fires occurred every 7 to 10 years, 1,000-acre fires 11 years, 10,000 acres every 19 years. It's hard to imagine an acre not being burned frequently. These days'll show it. The last fire was 1933. Historical frequent low intensity fires lead to that, we have these kinds of conditions. Well this is the Blacks Mountain Experimental Forest research design. Typical project. It was 250 acres in size, and I'll explain these real quick. Low diversity and grazing occurred. This was a no burn, there was no prescribed burn following the treatment. That's where that plot's located, there's where the prescribed burn occurred, in that plot. And this is an area we call a research natural area, roughly in this area. So anyway, this is just to give you an idea what the terrain looked like. Here's what we're trying to achieve in an experimental mode. Low diversity – what does that mean? There's very little structural diversity, there's very few trees well spaced, and so on. And so that's what the research looked like without any burning. This is the same kind of plot where the burning occurred, low diversity. This is in contrast to what we call high structural diversity. Three or more layers of forest canopy on the experimental forest. And again, no broadcast burning following that treatment, and then high diversity followed by broadcast burning. Now here's a complete treatment – they covered 3,000 acres, one of the largest ecological research projects in the United States. High diversity plots are characterized by the green, low diversity by the yellow, the research natural area is the purple, the split plots that where burned were either solid like that – unburned, rather – and the burned ones have a mark like that. Each plot then was 150 acres replicated several times so you can contrast all that date. There's a graze symbol, so we grazed animals in the plots. The important part about this is there are only three things we can do to vegetation: we can remove it through harvesting and other projects, any other ways to manipulate, you can put animals to feed it, or you can burn it. Anything else, it's not relevant. Those are the things that we can do.

Okay, the research treatment involves three variables. First was harvesting. We used standard state of the art equipment, you notice it's not like the equipment of your father's generation of logging.

These are mechanical harvesters, they simply fell on bunches of trees, placed them for delivery. The second treatment, we grazed the areas, as we talked about, with cattle. The third treatment was the application of prescribed fire. This is the kind of fire we wanted to put in the woods. A very gentle fire. But keep in mind every time you put prescribed fire in the woods, there are going to be anomalies. It's not going to be universal, you're going to have blow ups and things like this. So even if, some treatments that we apply we achieved some results that were not quite what we expected. But that's what the research was all about. The whole point was, for 3,000 acres, all these treatments were in place. The grazing, the burning, the harvesting, was all in place. Then in September 2002, a wild fire occurred, called the Cone Fire, and this is where the fire occurred. The wind speeds were gusting from 9 to 20 miles per hour the day the fire started, they were coming out of the west, the relative humidity was 6%. The interesting thing is the fuel moistures. One-hour fuels are the real fine fuels, they're at 1%, the logs with 1,000-hour fuels, they were at 5%. **(UNINTELLIGIBLE)** lumber, the stuff we sell you, is at 15% relative humidity and less, that shows you how dry the conditions were at the time the wild fire occurred. That's what happened. The Cone Fire occurred, and here's where the fire started, there's the point of origin. It burned there, and this road I hear is just simply a reference point. This is the eastern part of the fire. We do not and look at the western part. There's the same road, gives you an idea of the magnitude. These are the day after the fire occurred, the area was flown. Well let's look at this spot right here, and it's a close-up of that. Now I'm going to show you that same spot right there, put some lines – this is the experimental forest, low diversity plot, that was thinned in broadcast burn. This area right here is the Lassen National Forest, no thinning whatsoever, notice the intensity of the fire. Down here, at this spot, this is the experimental forest – no thinning. Look at the fire burn. And up here is private land that had been clear cut and planted several years prior. The interesting thing is the fire could not even carry under those conditions in the area that was thinned in broadcast burn. Rather that the fire burned once you get below that Roseburg Lumber Company project, notice how quickly the intensity, as soon as you leave that line, then the unthinned portion automatically starts again.

So let's take a little close look at some of this. Let's look at the no burned area. That's what it looked like, folks, the day of the fire. You talk about threatened and endangered habitat and wild life, what kind of threatened and endangered habitat are we providing? That's another one. Let's take a look now at

the experimental forest, the fire couldn't even carry through this. This is the part that was thinned and broadcast burned about two years prior to that. As you can see, if you look closely, you could still see remnants of the black from the original broadcast burn. Okay, now, if we look at an area with the same kind of harvesting treatment, but we look at the area that was thinned, but did not follow up with the broadcast burn, we see it looks like this. You see the fire carried through that, but what's interesting, if you look at these pictures, all of these trees – about 95% of these trees – survived that wild fire, the Cone Fire. Let's look at another area. This area is another research plot. Outside of that was not, uh, no research going on. I'm going to show you some photo points quickly – 1, 2 and 3 – and then we're going to move in that direction into the research and experimental area. This is where there's no treatment, we're walking in that direction now, and here's the experimental forest boundary, the treatment boundary, no treatment back that way, treatment and thinning this direction. As the wild fire hit this unthinned area, there were huge flames of wild fire boiling like this, so within the first 25', at the edge of the experimental treatment, we lost a lot of the trees. It was from radiant energy. But the interesting this is that you walked about 10' to 20' in, the fire immediately moved to the ground and became a ground fire, completely management, and the trees today are still surviving. That's a picture of the day of the fire of that one treatment area we just looked at. Lessons learned: What should be the priority for forest treating? You've got to treat them all. The surface fuels, the ladder fuels and the crown fuels, I'll show you that real quickly. Surface fuels conditions often drive a fire. So here's what we look at. This is nice, when you see a forest like this, surface fuels aren't going to cause you much trouble, like that. But if you get these kind of extreme fuel loadings like you're seeing right now, there's no doubt in our what the result of that's going to be. The ladder fuels – these are terms you're going to hear all the time. They provide the avenue for this. The ladder fuels start here, you can see a great picture of the kind of things that lead to latter fuel fires, it starts on the ground, eventually moves up into the tree, and ultimately you have the fuel catastrophic event. Interesting part here is, crown fires rarely occur in our forest. They're rather unusual. But when they do, they're spectacular. What's important here, this is not northern California, this is Lake Arrowhead. This is not San Bernardino and the old fire, this is years earlier. The job isn't done, frankly, until we treat all of the layers, and that's what's important. If you look at this picture here, you see Lassen National Forest before harvesting and treatment, that's what it looks like after. Wide open – notice that there's large trees still left, we're not talking about

taking all the old growth trees or anything like that, it's cleaning up the forest and making it more fire safe. Much of the information about the effectiveness of fuel treatment is anecdotal. As a former research manager, there's no way I would have ever invested dollars to check the theory, does thinning actually stop and prevent wild fires from the kinds of consequences, cause you're never going to find the perfect set of conditions. So we find anecdotal evidence. We're **[SIDE A, TAPE 3, ENDS; SIDE B, TAPE 3 BEGINS]** These kinds of studies, all the way from Colorado, **(UNINTELLIGIBLE)** in California, Webb in Montana, **(UNINTELLIGIBLE)** in New Mexico, **(UNINTELLIGIBLE)** in Washington, the list goes on and on. There's plenty of anecdotal evidence that fires do it. They have the following characteristics. They have the stands that survive fires with frequent regimes and low intensity – they have similar characteristics. Low surface fuels, limited ladder fuels, and they have high space crowns. This does not need additional research, this needs application. This does not need additional debate and discussion, this needs application. Here's what we're talking about. Here's the classic example that starts out – this is the **(UNINTELLIGIBLE Tyee?)** Fire in Washington. The wild fire started in the center right, uh, left portion of that, ran up the hill, that was a thin fuel break, burned through, and notice that the trees survived. No, they were not able to stop the fire, so as soon as it left the thinned area, look what it did to the rest of the forest. Just imagine, if we had our forest looking thinned and in health conditions, what we could do to work and reduce the affects of catastrophic wild fires. It's not just Washington. This is the Treasure Fire on the Tahoe National Forest. A DFPZ, a many thousand-acre fire was kept to about 400 acres through the use of this. This is the **(UNINTELLIGIBLE)** Fire on the Plumas National Forest. This was thinned in 1996, this was a staging area for the fire, we're going to walk up the hill, look at this, this is thinned, they actually did a burn out from the top of the hill, but as we get up to the top, there was no thinning over the ridge, it's complete devastation, we lost four bald eagle habitats, four Northern California Spotted Owl areas as well, and this is what the forest looked like. In the program is a concluded illegal operation, and that's fine. [Laughter.] Uh, I think that what I want to say there, cause it gets to the recommendations. In the year 2000, California state legislators passed AJR 69, which said basically that is the position of the state of California that the United States Forest Service should get up on top of and complete their processes for getting on top of these fuels problems. There is no such activity or resolution that says anything such as that for the state and the private lands. The legislators are united that the Forest Service

must do something about their lands. Where's the functional equivalent of that for state and private lands? Another thing, in 2003, AB 2993 was passed. AB 2993 said we must look at the kinds of incentives that we have in managing our forest lands. What are they, and what can we do? And the most important thing you want us to do was, in AB 2993, was look at not only the monetary things that are available and you heard lots of discussion about the various monetary programs available, but what are the incentives that we can give to landowners to help encourage them to do that? So that's in process now, a committee has been organized and their data will be coming out shortly. Now, I think what's really important is the kind of things that Jerry Williams was talking about, that we look at and assess, what are the laws and regulations and the real true barriers to getting people motivated to do the job? What are the barriers? And a lot of them are legislative and conflicting laws and regulations. I'll give you an example. One thing I think could really expedite the process. In areas where we have known fire problems condition class, fire regimes, da da da, it's all published, why are we bothering to do CEQA or those kinds of regulations? Why don't we, instead, put the agencies monitoring the effectiveness and turn the people lose? Do you have the courage to trust the people to do the job right through the Fire Safe Councils? And what kind of things can we put in place that changes it from all of this pre-planning paperwork to post-planning inspection monitoring. And heaven forbid you really come down hard on those people that are way outside the box and not effectively dealing with their land. And I'll leave that with the conclusion. I thank you very, very much for the opportunity to talk to you today, and that's Race Horse 1A, Forest Ecology. [Laughter.]

CHAIR CAMPBELL: We appreciate it. Thank you very much.

UNIDENTIFIED MALE SPEAKER: I'd like to ask one question. Phil? One question real quick. If, uh, having seen this program, and I'm definitely a believer, has it been presented to the Center for Biological Diversity? Have you sat down and shown them the matrix with all four of the forest examples and gotten a response from them as to why they continue to obstruct?

MR. AUNE: Let me be perfectly frank. If you're looking for a solution, why would you bother looking at this? If you're looking for obstructions, this does not help you, to answer your case. And my point is that we'll take this and discuss this with anybody, and we think that across the board that there's no question that these kinds of treatments work. Whether you're willing to accept that, if that changes your

agenda, I'm not sure that they'll want to deal with that, David. The answer to your question is no, I haven't been, but I'll be glad to go any time, any day, any place.

UNIDENTIFIED MALE SPEAKER: I'm willing to give it a shot once.

MR. AUNE: Okay, guy.

CHAIR CAMPBELL: Thank you very much. Thanks, Phil. Our next presenter is Russ Johnson, Public Safety Industry Manager of the SRI. He'll talk about mapping the fires. Your button. You have to press that green button. That's it. Until the red light shows.

MR. JOHNSON: Oh. Good. Thank you for allowing me to be here and share with you. My presentation has a number of slides, and I promise you I will go as fast as I can. This is about GIS, but truly the reason that I have for being here is to share with you how a technology that agencies have millions of dollars invested in currently can be leveraged and amplified to be more effective, both in the response area, but more importantly, in the mitigation area. Again, I will try to be quick with my presentation. I know we're running late.

In a prior life I spent 30 years with the Forest Service and Fire Management in Southern California before I became an advocate of GIS, and so I have a great passion for the work that you're doing here and I'm very supportive and appreciative of what you're trying to accomplish. The focus of the presentation is a group of people that came together in southern California under the concept of MAST, the Mountain Area Safety Taskforce, and in using a technology, GIS, they were able to – and I don't know how to forward this --

UNIDENTIFIED MALE SPEAKER: There's a button on the side there.

MR. JOHNSON: On the side? There we go. They were able to bring together their data, their ideas, and develop a shared vision of what the problem was. Not only the problem overall, but their individual problems and the role they played in solving the overall problem. The process consisted of bringing together various agencies' data, a lot of people and resources to work together, under a unified command which you heard about earlier today, some of the unified commanders are here, providing objectives and allowing people to work together and use GIS to help and assist in solving and identifying problems not only for mitigation, but for preparation for response. The MAST center, again, collected a lot of data, which in typical form, at every emergency that you respond to that's complex, that's multi-

jurisdictional, GIS data is going to have problems because of formats, projections and different disparate data bases, all of these problems were overcome before the event occurred. The primary problem, as you've seen and heard and know, was vegetation mortality, which is mapped and shown on the main division of the San Bernardino National Forest. The darker colors represent 80% dead timber, and the conifer areas. One of the first objectives was to put together public information through a website to allow the public to understand what they could do, what their roles were, and what the agencies were collectively doing to try to solve this problem. Information not only about fire prevention, but later, active fire perimeters were put together when the fires occurred to allow the public and the press access to information which was vital at the time. Great demand for information and perimeter data. Also the public could enter their address into this website, see where they lived, see what the problem was, what the proliferation of the dead and dying trees were in their area, and furthermore where other activities could be performed to render their capability more fire safe, where they cold find information to do that. This slide doesn't show it well, but you can see the dead and dying trees through imagery. A global geographic imagery company donated half a million dollars worth of imagery to facilitate the process of understanding what this problem was and how it was proliferating. For all the data put together, I'm just going to run through some maps. We were able to put together transportation systems, evaluation planning, primary routes. Edison put their data in, so we've got the private sector involved with the government to understand what assets they had at risk. GIS was powerful in establishing priorities for where tree removal was critical to maintain critical utility services to critical facilities, and where the utilities were at greatest risk. Potential incident command post – critical facilities that must be protected. Pre-planned evaluation centers, Red Cross centers and shelters, mountain populations at risk to understand the problem of evaluation. Later you'll find the agency successfully evacuated 85,000 people, which is enormous, and it was done in a relatively professionally way, without many problems. Thresholds were identified and evacuations were orderly. Law enforcement and fire working together. The agencies work together to provide understanding that if this problem occurred, they would have people coming in from all over the country to help in suppressing these fires or the incidents that may occur. So books were put together, GIS helped facilitate identifying areas where people from out of the area shouldn't go, hazardous areas that couldn't be protected. These were internal documents, but they were very helpful, along with other pieces of information like staging

areas, and so on. So these books were available and handed to strike teams and other crews coming into the area that didn't know, or were not familiar necessarily with the local circumstances. Safe refuge areas, helibase locations. When the incidents occurred, it was interesting and enlightening for me to see that we were able to ramp up GIS commensurate with the level of the incident. Seldom can you do this in a devastating event. At the World Trade Center, it took us weeks to bring together all of the disparate data from all of the different agencies, departments, before we could even produce maps that made sense for emergency operation decision support. A lot of maps were produced quickly, incident action plan maps, obviously, maps for briefings, fire progression. Modus data. This is data taken from satellites that identify points of one kilometer over 1500 degrees through satellite rotation, helped identify hot spots for the area and were published and given to the press when the perimeter data was slow in coming in. It was very accurate. Again, the evacuation centers, 80,000 people evacuated. A lot of those people ambulatory. It was an amazing feat. And the one thing I learned from this when I went to the evacuation centers was how those valuable those maps were to those people. Understanding, you saw a lot of things on the television, but that really wasn't precise enough for them to know if their homes were still there. So having these maps delivered to the evacuation centers were critical. Tactical planning – Dorothy, could I get you to –it's becoming quite easy now to take GIS data and quickly render it in three dimensions. And I sat down with a number of the operations people – all you've got to do is hit the forward button once you've clicked on it, just double click on it, back up one and double click on it. Never mind, we'll go forward. Anyway, you can rotate this data and virtually navigate it, so that operations people looking at ridges and opportunities for contingency plans, spread forecasts using modeling to determine when and where a fire would be at a given set of time or circumstances, contingency planning, where and how far out in front of this event did we need to get to protect the community of Big Bear? Public information – the demand was very high, and again, these maps were published because the data base was there and all the data was available. High level briefings. A number of high level briefings, as you all on this commission probably understand the need to have information and understand what's going on and quickly. The joint information center was helpful with all of the maps. A lot of elected officials, high level people coming through, and they needed information and they needed it quickly. Projecting a live GIS so that you could show things, attributes, certain data, certain kinds of proposals, was very effective for some of the operations people. The

evacuation centers, Red Cross using GIS to determine routing to get things to the appropriate centers. Analysis – in this case we're looking at smoke overlays and people who might be affected by that, young children and older folks, and letting the health department somewhat get in front of this and understand what they may be faced with. At the Emergency Operation Center, or at the OCC in Riverside, had a lot of people through and during one of the MAC group meeting, we used 3-D visualization so that they could have a better understanding of what was going on. You want to try one more time? Just double click on it. Double click real fast. One more time. Let's just move on. I apologize. That uh, it would have zoomed in right down to the fires. Um, and it's interesting, the fires, and testimony to the firefighters and the fire crews, the vegetation mortality areas, when the fire really did not consume much of the dead tree areas. And those dead trees are still there. That problem still exists and still threatens those communities. Damage assessment was facilitated through GIS, burn intensity maps were very valuable for folks to begin to look at what the potential for debris movement downhill would be given certain kinds of planned events or traditional one-year, five-year flood scenarios, where a lot of this data was used to put together requests for FEMA money to begin to mitigate some of those problems. I looked at the areas of Devore and Waterman and the flood prediction maps were right on. This data was then pulled together again quickly when the floods occurred, and incident management went right back into place using the same database because of all of this data and the shared approach. A lot of handheld devices now being used to collect data, and when you have a common database, everybody has access to that data immediately. This is the problem we faced in New York City. New York City had a lot of great GIS data, but it was in different departments, it was in different silos, it was in different formats, no one person knew where it was. And over a week's worth of time had to be spent to pull that data together, put it into a common database, and produce maps and produce analysis for the World Trade Center events. These problems can be overcome when people have the foresight, vision and leadership to work together to use GIS, where they have shared geography and shared risk, and it amplifies the investments they already have in this technology. The kinds of maps that were important for New York City were obviously potential staging areas. Where the water was out, where the water wall existed, where were fuel tanks before the buildings went down. What's the condition of the buildings, a 3-D visualization of the triage of the buildings, modeling the plume, understanding where the material might go. So, we're quickly concluding here, but MAST, I think, in

traveling around the country and working with GIS relative to homeland security, the biggest problem that we're facing is, the whole motion of shared data, a common operating picture, people working together, the MAST operation demonstrated, I think, a successful deployment of agencies working together to be very effective. In southern California, we're going to have incidents, and GIS is going to be called upon to help manage that incident. It will be more powerful if those issues are overcome before the incident occurs and focus is placed on mitigation as strongly as we place it on response. What is needed to do this? It's leadership. It's a vision. It's a willingness to challenge organizational barriers. It's not within the realm of normal traditional business for agencies to share their information and work together, even between departments, but where this is done, success can be found. I'm going to leave it at that. I apologize for going through this so fast, but we're getting late and I would be happy to answer any questions.

CHAIR CAMPBELL: I want to thank you very much. That's an unbelievable technology. And it's unbelievably helpful in the fighting of fires.

MR. JOHNSON: And again, I hate to see people re-inventing, duplicating and spending money in one place that could be shared in another. A regional approach with GIS will pay big dividends. Thank you very much.

CHAIR CAMPBELL: Thank you, sir.

MR. RALEY**:** Could I ask a question before you leave, Russ? Because at the end of your testimony, Senator, there was a statement about conflict. And it's true in the state of California that if you take a series of entities, such as Fish and Game, and a local fire department, and a flood control district, etc., that they all have overlapping jurisdictions. And what you basically have shown right here is, hypothetically, if all those people were operating out of the same database, it would facilitate, or at least make the decision making process go smoother. Is that an assumption?

MR. JOHNSON: I absolutely agree. There are issues about sharing data. And data sharing agreements need to be put in place. And not all data has to be released, but I think it's important that people understand, for planning purposes, even if the data is only used for planning and then put in escrow, if you will, for when there is a response requirement, that those kinds of issues be considered up front. This data will be – people will demand this data when the event occurs. And you're going to go through this under

the siege of a complex emergency. It should be done before, and I think, Ron, your assumption is right on. Again, thank you.

CHAIR CAMPBELL: Thank you. I want to make a statement concerning our next meeting, before people start to leave. Our next meeting is on January 21 in San Diego, and at that hearing we will have a detailed, chronological review of the Cedar Fire and the role and capabilities of military firefighting resources, as well as status reports on after-action reviews being conducted by other federal, state, or local entities. A hearing scheduled for February 5 in Riverside will focus on specific issues of interest to the commission. For example, communications interoperability and command and control systems. If any members would like to recommend an area of specific interest, please contact the commission's executive secretary, Bob Gerber, who is to my immediate right. Uh, Dallas, could I ask you to hold off the review and let me take public comment?

DIRECTOR JONES: It's one paragraph **(UNINTELLIGIBLE).**

CHAIR CAMPBELL: Then go. Do it.

DIRECTOR JONES: In light of the time frames, I've actually shortened the presentation. No more Powerpoint. It's basically one paragraph, and I think it's very powerful or I wouldn't request that I be allowed to read it into the record. This comes from the East Bay Hills Fire Report of 1991. "The conditions were conducive to a conflagration which resulted. But they were not exceptional. They occur in **(UNINTELLIGIBLE)** urban wildland interface measure areas all over the state every autumn. You can do little to control them, but we must be ready for them. We can control construction and subdivision standards. We can adopt and enforce prudent brush, **(UNINTELLIGIBLE)** and debris clearance standards. We can widen roads and provide alternative safe routes to access and egress. Or we can continue to pay for our failure to do so through higher fire insurance premiums, taxes, utility bills, and from time to time, death and destruction." Thank you very much.

CHAIR CAMPBELL: Uh, Greg Greenwood, who's the Deputy Assistant Secretary of the California Resources Agency has an announcement to make to us. Thank you for being here, Greg.

MR. GREENWOOD: Thank you, Mr. Chairman. I am indeed Greg Greenwood. I am the science adviser to Mike **CRISMAN**, the new California Resources secretary. I am also on the 7:00 p.m. Southwest flight to Sacramento. I have no Powerpoint. I will be exceedingly brief. I want to inform the commission

of an activity that we believe in the resource agency is extremely complimentary to what you on the Blue Ribbon Fire Commission are undertaking. I took the liberty of distributing at the lunch break a short handout that includes testimony of Secretary Crisman, plus an invitation letter which I will get to in a moment, and at the very last page, some examples of ecological environmental and natural resources issues arising from these fires.

Clearly the fires in 2003 had enormous impacts on the society and environment in Southern California. Clearly the most poignant of these impacts are the loss of life and the loss of structures and residences. But it's important to remember that the fires, as you can see from Phil **(UNINTELLIGIBLE)**'s presentation and the presentation you just heard from Russ Jones (sic), fires have a variety of other impacts on the ecology, the environment and the natural resources of the region. These values, environmental, ecological and natural resources values, are those for which the California Resources Agency and the California Environmental Protection Agency are stewards. These impacts, some of them are quite obvious. I hope you've all seen the incredible pictures, images, of smoke from space. I mean, the extraordinary impact these fires had on our atmosphere. Earlier in the day there was the mention of the very tragic events of the mudslide in Waterman Canyon, again a very obvious natural resource impact in this case that led to fatalities among human beings. And there's also, if anyone drives around the Lake Arrowhead/Cedar Glen area, it's quite clear, while there were structures lost, there were also considerable resource damage done to the forest. There are other impacts that are less evident, but nonetheless critical to the quality of life in southern California, and the state of the economy. One thing it struck me when I looked at Cedar Glen is the vast amount of solid waste that this region is going to have to absorb with all these structures. And that is not necessarily benign solid waste, there are other going to be other pollution issues associated with it. There clearly are going to be water quality issues in eroded watersheds that have repercussions on water supply. There are large areas, particularly in San Diego County, that were set aside explicitly for endangered species habitat, are clearly change now and that leads to great questions about how do we manage those parts that have not yet burned. Maybe we should burn them tomorrow. Maybe we should really protect them very strongly. There's some very serious questions here. And the resources agency believes that it's important for us to understand the nature of these impacts, and in a manner complimentary to the charge to the Blue Ribbon Commission, to determine what, if any, restoration resource management

strategies might we change or undertake to mitigate the impacts of these fires, as well as the fires that you have heard will inevitably reoccur in this environment. And to this end, the Resources Agency has been working with a partnership of universities, particularly the University of California at UCLA and at Davis, a variety of private organizations and a variety of other government agencies, to explore these topics. And if you got your interest whetted by Phil Aune's slides, you should pay attention to an invitation to a meeting that we are attempting to schedule in early February at the UCLA conference in Lake Arrowhead. We hope to schedule this meeting to dovetail with your February 5 meeting, the meeting of the commission in Riverside. We hope to have a reception the evening of the 5th, and then have a scooping session devoted exclusively to the ecological environmental and natural resources impacts of these fires at Lake Arrowhead. I personally think that scoping session is a very important first step. There are likely to be follow-up steps, there's talk of a larger region-wide science symposium, there could be the definition of more professional networks. Those are all relevant steps that we will discuss at that scoping session. I really believe that if that scoping session does a good job, we'll be in a good position to present to the commission on your last meeting on the 19th, a set of ecological, environmental and natural resources issues that you might consider as outstanding issues to be dealt with in some way at the conclusion of your commission. If you have any questions, I'd be glad to take them, or I will see you on the plane.

CHAIR CAMPBELL: Thank you very much, Greg. We will now get to public testimony. Excuse me if I don't do well on these names. Ann Hoffman and Don Schmidts from LUPDF.

MS. HOFFMAN: Good afternoon, Commissioners, thank you for having us here this afternoon. My name is Ann Hoffman, I'm President of the Land Use Preservation Defense Fund. We're dedicated to advancing the public interest and the fair regulation of land. And my property also completely burned in the Pacific Malibu Fire of last year. We are facing a crisis of authority in California in our state fire policy. The parents, being the executive agencies, and the politicians, if you forgive me, have left the children at home alone with matches, and the children are the resource agencies who have allowed preservation biology to dominate and sort of supercede fire protection in a regulatory scheme of land use in many, many areas. The following – hello? Okay! The, um, in some respect these land, these preservation modalities have resulted in a situation where it appears animal and plant habitat is more important in some cases than human habitat, and I would just say that the statutes don't always support the supremacy of these policies,

and the people are not really totally in favor of this pre-Columbian, native only, ethic that is dominating much of the vegetation management policies that you people have been discussing today. The following are just a few of the shocking examples of how one agency, the California Coastal Commission, has subordinated public safety for some of these philosophies. They have recently designated all chaparral and scrub, the most common vegetation type in the coastal zone, as ecologically sensitive, environmentally sensitive habitat, which may not be removed, and in Malibu, for instance, agriculture, natural fresh clearance activities like agriculture and livestock maintenance and recreation, have been banned in most cases, conservation easements, requiring the preservation of chaparral, have been opposed on 95% of properties, and native plants must be planted from the list of, the Native Plant Society's list, which are identical to the plants that are prohibited from being planted in L.A. County, a hazardous weeds list. And I have complete documentation to show you this. What they're doing is creating a hazardous fuel preservation program up and down the coast. They've also implemented a $12,000 an acre penalty for people doing brush clearance as penalty for complying with the L.A. County fire code. And they call it a mitigation fee, but people are being charged up to $30,000 to save the lives of -- there are men and women in this room who risk their lives for us every day. I find this sort of an affront to human decency, and basically what these agencies have done is amended the state fire code without having the review, the necessary findings, and the approval of the State Fire Commission as is required by state law. The major recommendation we're here to ask you, is to recommend amending the fire code that no regulation, no agencies but the fire agencies be permitted to regulate fuel modification and fire safety issues as pertains vegetation management, and that any agencies that do such shall have penalties, because one of the other clauses that they have, and the regulations are that, if there's a conflict between the Coastal Commission's regulations, and the fire department, the fire department shall sit down with the Coastal Commission's representatives and negotiate a balance between fire safety and environmental preservation. And I am here to say that Californians are not interested in having their children's safety negotiated with environmentalists. Your first duty and your obligation is to protect the public safety. And you have such a great opportunity with this to do that. Another example is, Chief Freeman and many of the fireman in our community had asked the Coastal Commission, given them a letter, saying that they were endangering people's lives, and that they were very unconventional fire modalities, and they did not accept any of the

changes, and I think that you have an opportunity to make sure that no fireman in this state ever has to ask permission to a resource agency to have defensible space, or to defend his firemen. So, anyway, to wrap up, we have sent the Governor a request to ask -- 12 trade organizations from up and down the state, sent the Governor a request -- to ask the Coastal Commission to comply with executive order S203 and not impose the **(UNINTELLIGIBLE)** designation on chaparral because it has not been adopted as a former statute and is a form of an underground rule. And I would like to submit that document to the record. Thank you very much for your time.

CHAIR CAMPBELL: Thank you very much.

MR. SCHMIDTS: Good afternoon, Commissioners. I know the afternoon wears on. My name is Don Schmidts. I'm a land use consultant**.** I represent a number of property owners building homes, farms, ranches, mostly in Los Angeles and Ventura counties. Much of the information I wish to discuss with you today has already been covered, and I will just move right past it. You are aware that the Santa Monica Mountains area that you are seeing right now is a Class 4 fire zone by and large. There are a number of appropriate fire safety measures which have been taken by the government. These risk areas are well defined within the state of California. Areas that you can see is, where you are sitting right now, there's been a number of steps that should have been taken to assess these fire safety issues. We have done a good job in this state to date as it pertains to building code. Current fire safety measures require that stucco and concrete siding be required on all residential structures and commercial structures, with a Class 4 and Class 3 fire zone. Shift around here.

CHAIR CAMPBELL: You can pull the mike over to you.

MR. SCHMIDTS: Okay, thank you. Structures built within these zones must have a Class A tile or metal roof. I would like to comment, as a side note, I do not believe that the main problem that we have in the state is the Canadians trying to sell us shake roofs. [Laughter.] We've been putting, we've been requiring concrete tile and metal roofs within these identified wildland urban interfaces for a number of years. We required dual-paned glass. We require interior sprinklers. We do, rightfully so, require very strict access guidelines now for the fire department. A minimum of 20 feet for a single family home is required now within Los Angeles County in a Class 4 fire zone. A proper fire department turn-around is already required. The fire department must have vehicular access to within 150 feet at the back of all

structures. Los Angeles Count is very tough on these things, appropriately so. There are also fuel modification plan requirements, which you've heard a great deal of testimony about. We really believe that this is the key. And in these areas, 200 feet is required in all directions. The gist of our presentation to you today is, we do not believe that this is adequate. The fuel modification zones as you can see is a Zone A, which is an irrigated zone, where specific species are not allowed that would provide ladder fuels to the structure. A Zone B, which is also an irrigated zone that goes out to 100 feet, which has a little bit more latitude in regard to allowing trees, and a Zone C, which is selective thinning of native brush and trees. The current development standards for brush clearance are still not adequate. This is one of the place I'll be moving very quickly because clearly, one of the things I've learned today is that everybody on this commission and everybody in this room is very much aware of the fact that we have a problem. The losses are intolerable up and down the state. As you can see from the maps, over the last 40 years the Santa Monica Mountains in western Los Angeles County have been entirely blanketed by wild fires, and they will continue to be so. So what is it that we still need to do, that we have these construction standards, that we have these access standards, and that we have the best fire departments in the world, and we are still suffering these terrible losses? Well, the last thing that we have to get diligent on, that we must be extremely serious about, is our fuel modification. These losses here that occurred in Ventura County, occurred on structures that have the development standards that I've already articulated, and have the brush clearance requirements that I've already stated of 200' to 100'. This is not adequate. We need to improve these fuel modification standards, and we need to expand these fuel modification standards in the Class 4 fire zone to 400 feet. The Fair Plan requirements are in fact 400 feet within these rural Class 4 fire zones. By the Fair Plan, I believe most of you are familiar with, is a state mandated insurance policy. I think that this is telling, because they have to put their money where their mouth is, and they know what it is that is required to maintain the structural integrity of these residences and buildings. Without the establishment of these more restrictive standards, we are going to continue to experience these losses. That's an excerpt from the Fair Plan requirements and you can see that they require 400 feet. The fire departments, as they have already testified to today are quite clear on the fact that fuel modification is the key. Since that's already been testified to, I'll move along.

Increasing the area for fuel modification within these regions is essential. Now this is not a color-enhanced picture. This is a property in western Malibu, you can see the area located around these houses, that is 400' of brush clearance, you can see it's green, and you can see the entire mountainside around it is completely burned. I'd also like to state that an earlier picture shown by the Los Angeles County Fire Department chief showing the effectiveness of brush clearance. He stated it was 200 feet. I could tell by the scale that it was in fact a 400' brush clearance area. Which is very common, because people cannot get their house insured without doing the 400'. We believe that this extension of the brush clearance is not only essential, it's very practical and most of the property owners would be amenable to do it. You see the standard 200', this is from a natural project I did in Santa Monica Mountains, and here's where it would be at a 400' radius. The problem that we have is, although you have been hearing testimony about economic incentives to obtain the cooperation of property owners to do fuel modification, the fact of the matter is we're doing the exact opposite in the state of California. We are providing significant economic disincentives. The California Coastal Commission is in fact requiring $12,000 per acre for clearance of brush for a single family home within the chaparral areas of the coastal zone.

CHAIR CAMPBELL: $12,000 to?

MR. SCHMIDTS: Oh, the money goes to the Santa Monica Mountains Conservancy so that they can buy up additional park land.

CHAIR CAMPBELL: No, I mean the $12,000, do they come and clean for you?

MR. SCHMIDTS: Oh, no. The property owner is still required to do the fuel modification.

CHAIR CAMPBELL: Do the fuel modification.

MR. SCHMIDTS: On their property, pursuant to fire department requirements, they, as a condition of approval to build their home or to do an addition to their home –

CHAIR CAMPBELL: Gotcha.

MR. SCHMIDTS: Thank you. I just kind of wanted to drive that point home. [Laughter.] This is a copy of the Coastal Commission's staff report, it's only a couple months old, and the verbage right there, from the habitat impact mitigation fund shows you in black and white that in fact this is what we are doing in the state of California.

In conclusion, to prevent this continued loss of property and life, we must change this. Now this is a very telling picture, besides the obvious. The house on the left has stucco siding, I assume dual-paned glass. I've looked at the picture carefully, and it has a ceramic tile roof. These homes over here are of similar construction, but they have proper brush clearance. The good news is, that we can do this, that we can create the science and the policies to protect ourselves. The bad news is, is that you are almost certainly doomed to fail. And the reason why is because after this commission goes home to Sacramento or Washington, D.C., and we make the excellent recommendations in the boardrooms, in the Planning Commission hearings, in the environmental review board meetings, the guys in the trenches, myself, are going to continue to be assaulted by the different regulatory agencies that are going to do everything in their power to dissuade proper fuel modification. The National Park Service biologists will go to ERB meetings and specify that no, there shouldn't be brush clearance, and in fact the County of Los Angeles should condemn the private property in the chaparral environ. The State Park Service, as they have done within the last two months, will specify to the forestry division no, we will not allow you to clear brush on adjacent park service property to protect this home, because there's no state law that specifies that. The California Coastal Commission will continue to send its enforcement staff out into these mountains, and they will continue to site property owners for brush clearance done by the Los Angeles County Forestry Division, and they will fine the property owners for the brush clearance along the roads, and for the fire breaks, and violations of the coastal **(UNINTELLIBLE)** fines a $15,000 per day and those are enforced with a full weight and effect of the Attorney General's office. The only way that you will make this stick is with the law of supercedence. If you can amend the law so that the brush clearance requirements -- we recommend 400 feet --- but whatever it is, for God's sake give us some protection. The state law must be established that local and state regulatory agencies cannot penalize the property owners for endeavoring to implement the fuel modification policies that you intend to adopt. If you do not provide us that protection at least at the state level, then ultimately, 10 years from now, there's going to be another commission, somebody else holding up the report that you made, and explaining to the people we knew what the answers, we simply didn't have the political will to implement them.

CHAIR CAMPBELL: Thank you very much. Our next testimony from –

[Applause.]

CHAIR CAMPBELL: I thought it was the People's Republic of Santa Monica, not of Malibu.

[Laughter.]

CHAIR CAMPBELL: Uh, Gary **TOOKAL**.

MR. TOOKAL: Good afternoon, Mr. Chairman, I'll be very brief. My name is Gary Tookal. I'm Assistant Vice President, Public Fire Protection of the National Fire Protection Association. First let me thank you for the important work that you are doing as part of the commission. All of us that are involved in public safety appreciate your efforts to address the issue of wildland fire throughout the state of California.

CHAIR CAMPBELL: Excuse me, Gary. We're excusing the legislators at this time.

MR. TOOKAL: Okay.

CHAIR CAMPBELL: Sorry about that.

MR. TOOKAL: Not a problem.

CHAIR CAMPBELL: Okay, go ahead.

MR. TOOKAL: It's particularly an honor for me to be here since I began my fire service career in southern California, and I certainly understand the issues that you all are facing. For many years NFPA has been actively working to reduce the hazards associated with wildland fire, people with public education and the use of safety codes and standards. Specifically, we will provide the commission staff a copy of the NFPA 1144 to provide to each of you. That standard is titled *Standard for Protection of Life and Property from Wild Fire*. It is also available at our website, nfpa.org. Coincidentally, NFPA 1144 is a reference by both the NFPA building code and by the NFPA uniform fire code, which will serve as the basis for the upcoming additions of the California building and fire codes. For many years the provisions found in NFPA 1144 have assisted local, state and federal agencies in dealing with the escalating challenges that come with the increase number of wildland urban interface fires. The standard addresses key elements of wildland fire safety, such as community education, training, risk analysis, thinning and pruning of vegetation, access and egress for firefighters, adequate water supplies, building design, location and community planning. Several members of the California Fire Service, both at the local, state and some of the federal agencies that have been represented here today, serve on the NFPA 1144 committee. The input provided by those committees, and other people who participate in the standards development, contributes

to the public safety all across the country. I'm here today to pledge NFPA's assistance to the commission's efforts. Our staff and our committees will be happy to assist you in any way possible. We all share your goal of strengthening public safety. Although most of the elected officials have left, I would like to just add one comment. You all have a very significant challenge in front of you. But the fortunate thing for you, is you have the experts that are probably the cream of the crop, not only in the United States but throughout the world in trying to address this problem. The people that you have been hearing from today, and many of the other fire service leaders that are not here today, really understand this problem and can help you solve this very serious issue. So it is very fortunate that the problem is here with this level of expertise that you have to help you deal with this serious issue. Thank you.

CHAIR CAMPBELL: Thank you very much, Gary. Mrs. Theresa Jordan. Mrs. Jordan, you have submitted at least 60 pages, which we are going to make part of the official record. With that understanding, would you be as succinct as possible?

MRS. JORDAN: Mr. Chairman and members of the commission, this letter is completely different from anything else that I have submitted, but it does touch base on all the issues that I have pretty much covered in all the letters. It's about 10 minutes, but if you'd like to just give me 5 minutes to read into it, then you have the letter.

CHAIR CAMPBELL: If you would summarize, and we would accept the letter and put the full letter in the testimony.

MRS. JORDAN: Well, I'll read at least the first three pages.

CHAIR CAMPBELL: Fair enough.

MRS. JORDAN: Good afternoon, members of the commission. Theresa Jordan, Simi Valley resident. I have a letter on the planning decisions discussion topic that I will read into the record, copies have been provided for your consideration. My letter reads:

Dear Members of the Commission:

Why, when Ventura County sustained small property losses and no deaths, even though over 170,000 of land burned, am I before you? Because, more could have been done previous to the Simi Valley fire incident to keep the blaze smaller. Had the Ventura County Fire Protection District anticipated the fire becoming a runaway train since the winds in the canyons are erratic, the impacts to our westerly

neighbors would have been different. A smaller blaze would have freed up firefighting resources badly needed elsewhere and make a big difference in the areas that sustained loss of life and high property destruction. Because while the counties of San Diego and San Bernardino, and locally the city of Moorpark, have agendized the fire incidents, the city of Simi Valley has not. The city of Moorpark held a workshop for its citizens. My city has not. Because not enough was done and is being done for the independent living, legally blind, because a person who had had recent hip surgery was told to leave her vehicle and had to walk home while other drivers were allowed with their vehicles into the same vicinity into the west end of town, because people were allowed to gawk within close range of the fire on the easterly end of town, because a horrendous traffic snarl was allowed to take place at the intersection of Yosemite Avenue and Alamo Street, which would have hampered emergency vehicles and evacuation of residents, had this been necessary, because somewhere down the line community's multi-hazard functional plans broke down, and because these problems are a symptomatic of the deficiencies allowed in the development and emergency planning process due to the unjust postponement of community's comprehensive general plan updates. Public safety must never be compromised. Members of the commission, from all of the news articles that I have read while numerous problems affected the outcome of these catastrophic incidents, one of the common problems that encumbered communications, stretched resources, fire warnings, evacuations, etc., in every community was planning – inadequate, inaccurate, and/or the lack of. While the local government level development process is cut and dry, the same cannot be said about emergency preparedness and response planning, even though the two go hand in glove. In the 15-plus years that I have participated in the public hearing process for numerous development projects in my city, the one issue that I opposed most of them on is public safety. I've done so because these two words mean different things in my city, and apparently the same seems to be true of other communities. Police protection is emphasized above emergency preparedness. If communities realize that it is better not making the news because disaster did not strike in town, then being number one or two on this FBI's list of safest cities, then the emergency preparedness part of the planning process, currently consisting of education the public at schools, groups, organizations and emergency exposition dates, will finally get its place in the sun, uniformity. Otherwise public safety with regard to fires will continue to be a menu of emergency expo day, where fire trucks are displayed, families take pictures with firefighting personnel,

printed fire prevention information is readily available, and everyone is happy until disaster strikes and chaos occurs. In Simi Valley, the major emphasis of these emergencies preparedness expos continues to be public education on earthquake preparedness. For the past couple of years the expo has been combined with the Chamber of Commerce Street Fair. This combination takes away from what the participant learned and the information sheets end up in some drawer, box, or altogether discarded. Members of the commission, also in my city, public safety with regard to emergencies is not addressed, or is inadequately addressed in development projects, negative declarations, and in environmental impact reports. The only process that can back up any deficiencies in emergency planning issues is the general plan updated, specifically the safety elements multi-hazard functional plan policy since the citizenry believes that firefighting resources will save them from themselves in extraordinary situations. News articles of people previously voicing concerns that their homes could be bypassed during a fire incident have either been ignored or never read. Otherwise, more people would have educated themselves on how to safeguard property and lives. Instead, folks end up fending for themselves, evacuating at the last minute, or taking a dangerous stand to protect their property. I doubt that the fire incidents of October 2003 will serve as an incentive for communities to undertake the comprehensive general plan update. It is high time that elected and appointed government officials and agencies personnel walk in the shoes of disaster victims and survivors. Otherwise, in California, we will suffer more and deadlier catastrophes. Members of the commission, it is heartbreaking to read the mind boggling accounts of the victims and survivors, as well as of the firefighting crews, because in May 1985, Mr. William Medigovich, then Director of the California Governor's Office of Emergency Service, stated in the letter to county administrators, city managers, c hair persons, Boards of Supervisors, mayors, and the Emergency Services Director's coordinators that, "State and local governments share a responsibility to be prepared for emergencies which threaten the citizens and resources of California. We must develop and maintain plans and programs that enable us to discharge this responsibility in time of emergency. It is essential that state and local plans create a more effective emergency response structure." More flabbergasting has been the falling on deaf ears, and the emergency management and planning process from the Governor's Office of Emergency Services to the local government agencies of Mr. Medigovich's statements on the state-of-the-art, multi-hazard, functional plan guidance. "With teamwork and the application of this guidance, we can improve emergency management

capabilities throughout the state. This product will be used as the cornerstone for future emergency response planning efforts. I say this because the chronology of various disaster incidents on the OES website illustrate the lack of follow-through and lessons not learned in light of the fact that it took the state 9 years to update it's own emergency plan. People should not –

(UNIDENTIFIED SPEAKER): (Whispering) Could you pause for a second?

MRS. JORDAN: (Whispering) Huh? Oh, I'm sorry.

CHAIR CAMPBELL: Finish the paragraph..

MRS. JORDAN: Okay. Um, " . . . This product will be used as a cornerstone for future emergency response plannings." I say this because the chronology of various disaster incidents on the OES website illustrate the lack of follow-through and lessons not learned in light of the fact that it took the state 9 years to update it's own emergency plan. People should not have to concern themselves over rebuilding construction fraud, or fighting bureaucratic red tape with insurance carriers unnecessarily. And you have my letter.

CHAIR CAMPBELL: Ms. Jacobs [sic], I want to commend you, and I mean this sincerely, if we had a lot of citizens who devoted the time and effort to doing what they could in the communities, the state would be a lot better off. I appreciate the time you spent here today.

MRS. JORDAN: Thank you.

CHAIR CAMPBELL: I also very much appreciate the information you've provided this commission, and I want to thank you very much and wish you a very Happy New Year.

MRS. JORDAN: You too. Thank you.

CHAIR CAMPBELL: Now, Ladies and Gentlemen, I want to thank the California Highway Patrol, particularly you Commissioner **HELMICK**, and the officers that were here today to provide security for this meeting. We thank them very much. And now, ladies and gentlemen, we sit adjourned.

[Laughter.]