

# Exhibit 1

# Incident Update

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San Diego County Office of Emergency Services  
858-245-9366

INCIDENT NAME: HIGHWAY 78 (WITCH CREEK) FIRE  
INCIDENT DATE/TIME: October 21, 2007  
LOCATION: SANTA YSABEL AT HWY 78  
REPORT DATE/TIME: 2:15 p.m.

## Update:

The Sheriff is issuing an advisory evacuation for San Diego Country Estates in Ramona.

The evacuation point is Poway High School located at 15500 Espola Road.

The county is posting fire updates for the public at [www.sdcountyemergency.com](http://www.sdcountyemergency.com). Residents should call 2-1-1 for all non-emergency calls related to this fire. If the call is initiated from a cell phone, 2-1-1 can be reached at 858-300-1211.

# Exhibit 2

**October 21, 2007**

**11 p.m. News Conference Re: Fire**

**NBC 7/39 Newscast**

**Susan Taylor:**

... they've been practicing for this basically since the Cedar Fires. They do mock emergency drills around the City to see... they have been doing mock emergencies to deal with mass casualties from all sorts of emergencies and now all of the things they have learned have ...

**Mayor Sanders:**

With me this evening is 5<sup>th</sup> District Councilmember Brian Maienschein, Fire Chief Tracy Jarman, and Executive Assistant Chief of Police Bill Mahe. There's a high potential that the Witch Fire may enter our City limits in the early morning hours between 1 and 2 a.m. on Monday through the San Pasqual Valley and that's in the far northeastern part of the City of San Diego. This potential will depend on the velocity of the winds, and the efforts of firefighters to fight back this fire. This is a very quickly evolving situation. In an abundance of caution, we want San Diegans to be aware of this potential now so that they can take appropriate actions and collect important belongings so that when evacuations are necessary they can evacuate immediately. Residents in the area of Highway 78 and Bandy Canyon are now under a mandatory evacuation order. In order to ensure that residents in the area are advised of this emergency, San Pasqual Valley residents will be receiving a reverse-9-1-1 call from the City of San Diego advising them of mandatory evacuations. If a police officer visits your home, please listen to what they have to tell you. When they tell you you need to evacuate, please

evacuate immediately. Listen to them, take the directions that they have and leave the area as quickly as possible.

I want all of our citizens to know that our fire department will do everything in their power to contain the fire and safeguard their belongings. In the meantime, please do your part by evacuating if you are asked to do so.

The City of San Diego has activated the CAPS line: 619-570-1070 and they'll have all information about evacuation centers, areas that need to be evacuated, they can answer questions that you have.

Please, if you're asked to evacuate, evacuate immediately and leave the area so the firefighters and police officers can do their job.

Right now I have Councilmember Maienshein , Fire Chief Tracy Jarman, and Executive Assistant Chief of Police Bill Mahe.

**Councilmember  
Maienshein:**

Thank you, Mayor. And tonight as we begin the mandatory evacuation of the San Pasqual Valley, we expect that there will be fire entering the valley sometime in the early morning hours. We ask that people please leave in an orderly fashion. There isn't a need to panic. We've evacuated large communities before and done it because the people have not had to panic, and so I would urge that, Number 1. Number 2, we would ask people to not be looky-loos and come into the area to look at the progression of the fire. It's important that we be able to get our law enforcement personnel and our fire personnel in and out in

an orderly fashion. If you see law enforcement there asking you to leave, please leave immediately.

If there's some good news about this portion of the City and this portion of my Council District, is that there's a lot of greenery there and so we're hoping that this will slow down the progression of this fire and give us more time to ensure that we get everybody out and at the same time get all our law enforcement and fire personnel in.

So to those people of that community, please continue to do what they've done all along during the course of today, cooperate, help one another and let's make sure that we can get out of this as quickly and easily as possible and with that I know that Chief Jarman will have some more information. There are fire strike teams already out in the valley and I know she's going to add more to that. So, Chief Jarman.

**Chief Jarman:**

Good evening. As you can see the wind is still blowing. It's very strong and it's causing the fire to move quicker than we had anticipated, but I have got to assure you that we have all been coordinating since early this morning. This is Calfires' fire. They are the incident commander. Poway, Escondido, City of San Diego, Lakeside, we're all working together.

The Witch Fire has basically broken into two separate fires, two heads of the fire. One head of the fire is headed towards San Pasqual, the other head of the fire has headed towards what we're calling 52 and south of Poway. Right now we're focused on the San Pasqual area and to ensure

people get evacuated from the area of Highway 78 and Bandy Canyon Road.

We've pre-positioned some strike teams out in the area, San Pasqual Academy, Fire Station 52 in Poway and Fire Station 42 in the Sabre Springs area, just to ensure that we're set to go, whatever comes our way. We're watching the progress of the fire as challenging; it's hard to have aircraft up when you have this type of wind. But we did get Copter 1 up to take an aerial surveillance and we're awaiting information back from them as we speak. So if I could ask all of the citizens out there to proceed cautiously, calmly and we'll get through this just like we always have in the past. We'll do the best we can.

We've ordered a hundred strike teams from out of the area, brush engines and fifty strike teams for structure protection, but it just depends on how soon those resources can get here. Meanwhile, we've staffed up every engine that we have in the City of San Diego and we're doing the best we can to keep you safe and get the information out through the media, so thank you. Turning it over to Assistant Chief, Bill Mahe.

**Assistant Chief Mahe:**

Thank you Tracy. What I'd like to do is update everybody on the evacuation locations in the areas that are being evacuated. Since early this afternoon, law enforcement and firefighters from throughout the County and multiple agencies have been using both 9-1-1...Reverse 9-1-1 systems as well as door-to-door notifications to ask for evacuations and I implore anyone who is getting those notifications, to evacuate as quickly as possible to the areas

that are designated. As of right now, what we know is that all Ramona is under evacuation. All residents are under a mandatory evacuation in the Ramona area and authorities are notifying up to the 10,000 residents that live there. Evacuees can go from Ramona to Mira Mesa High School. The Poway High School location that was previously identified has been closed down and we're moving...expanding into the Mira Mesa High School area. All schools in the Ramona Unified School District will be closed tomorrow.

The American Red Cross has set up the following three shelters as temporary evacuation points for residents in paths of both fires: for residents in the east county affected by the Harris Fire, shelters are located at Steele Canyon High School, which is 12440 Campo Road in Spring Valley, that's Thomas Brothers Map Page 1272 B-7 and the Campo Community Center at 976 Sheridan Road in Campo. Approximately 200 shelter residents were served dinner at Steele Canyon and people have continued to arrive since early this afternoon. The Campo Center reports a handful of residents at the time of...just a few minutes ago. For residents in the Santa Ysabel and Ramona areas affected by the Witch Creek/Highway 78 Fire, a shelter is open at Mira Mesa High School. That was the one that was previously located at Poway High School. Approximately 80 evacuees as of a few minutes ago are staying at that shelter. Three facilities will remain open as long as there is a need...or these, excuse me, these facilities will remain open as long as there is a need. Residents will be provided a place safe to stay, drinks and meals at all of these locations. Residents with large animals are instructed to



take them to Lakeside Rodeo grounds located at Highway 67 and Mapleview Street or the San Diego Fairgrounds at Del Mar. Residents are urged to place their household pets in carriers and crates, and bring pets supplies if you would to help, and leashes as well to keep them under control. Bring all the necessary daily medications and as you evacuate your households, please make sure you obtain the necessary medications for yourself as well as your pets and animals.

The Red Cross advises all residents as well as law enforcement and firefighters, please heed the evacuation notifications. For updated information, you can call either 211 or the CAPS line, the Citizens Access Phone System, which is 619-570-1070, that's 619-570-1070. And just one more update on the schools that are closed that we know about at this point in time, all schools in the Ramona Unified School District will be closed; all schools in the Poway Unified School District will be closed tomorrow, and that's what we know of right now. Thank you very much.

**Unknown:**

. . . . Can you clarify for us the two areas in which the Witch Creek Fire is. . . ?(Could not hear rest of question)

**Chief Jarman:**

Okay. Actually, the south flank of the Witch Fire is 52 and south of Poway, near the Sycamore Canyon area. It's not moving as fast as the area in the San Pasqual area at this time.

**Unknown:**

(Could not hear question)

**Chief Jarman:**

Actually that's coming through Calfire. We requested it from northern California, up above the Malibu fire and the other fires that are going on. I know that the Witch Creek Fire is the Number 1 concern for the state of California as we speak. So the resources are headed this way, we just don't know what time they will get here.

**Unknown:**

What about Scripps Ranch....(Could not hear questions)

**Chief Jarman:**

Right now, Scripps Ranch should be fine, but they can watch the news. We'll try to use the media to get the word out when evacuations need to take place. We need it to be orderly. If everybody tries to evacuate at the same time, we're going to clog our freeways. So, right now, we're trying to get everybody out of San Pasqual/Ramona area and we'll go from there. We'll keep you updated as we go through the night.

**Unknown:**

(Could not hear question)

**Chief Jarman:**

Exactly. Thank you.

**Unknown:**

Any other questions? Thank you all very much.

# Exhibit 3

# Exhibit 4

## List of Homes Destroyed in Rancho Bernardo

**\*\*This list was compiled by the Office of Councilmember Brian Maienschein and is not an official listing of all structures lost. We will continue to update this list as more information becomes available.**

### **Aceituna Street.**

18494

18525

18607

18647

18667

18687

18707

18736

18787

### **Agreste:**

11691

### **Aguacate Way:**

17867

17887

### **Aguamiel:**

18028

17998

17988

17978

17967

17968

17961

17960

17952

17955

17946

17947

17942

17938

17941

17913

17905

17881

17873

17865

Address not visible house across from 17850 & next to 17849

17841  
17838  
17825  
17814  
Address not visible across from 17808 & next to 17803  
17794  
17786  
17778

**Aguamarina Pt.**  
13033

**Agosto Way**  
12929  
12938  
12949  
12958  
Between 12938 & 12958  
12968  
12969  
12988

**Alcade:**  
11476  
11460

**Aliento:**  
11486  
11463  
11462  
11454  
11457  
11512  
11513  
11523  
11533  
11552

**Almendro:**  
18078 (significant damage)  
18068 (significant damage)

**Andanza:**  
11656  
11666  
11676

**Augustus Place**

Address not visible btwn 12714 & 12723

**Ave. Cordilla**

18675

**Azofar**

18425

18435

**Azucar:**

17808

17816

17824

17849

Address not visible house btwn 17849 & 17865

17865

17885

17864 (Extensive Damage)

**Bedfordshire Court:**

12613

**Bellechase Circle:**

17776

17782

17788

17792

17796

**Bernardo Trails Court**

18375

18455

18490

**Bernardo Trails Drive:**

18684

18735

18808

18829

18839

**Bravata Court**

18829

18828

18808  
12888 (Partial)

**Cabela Place**  
11449

**Cabela Drive:**  
18013  
No address visible btwn 18013 & 17995  
17995  
17987  
17961  
17943

**Calle Estapona**  
18064  
18054

**Caminito Ramillette**  
13145  
13140  
13130  
12899

**Canfield Place:**  
18278  
18298  
18295  
18275

**Capilla:**  
11279 (partial)

**Chetenham Lane:**  
12580  
12532

**Chieftan:**  
18185

**Chretien:**  
18161  
18169  
18189  
18197



**Cloudsly Drive:**

12464  
12515  
12523  
12524  
12535 partial  
12546  
12554  
12566  
12571  
12572  
12579  
12595 (partial)

**Cmto Pasadero:**

18791 #73  
18721 #150 & 148

**Collonades:**

18167  
18175  
18183

**Corazon:**

17947  
17948  
17927  
17898  
17897  
17877  
17878  
17858  
17857  
17837  
17838  
17818  
17808

**Corte de Aceitunos**

18175  
18181  
18187

**Creciente Way:**

17716  
17777

17787

**Creciente Court:**

11323

**Danza Circle:**

11517

No address visible btwn 11527 & 11534

11534

11524

**Duenda:**

11419

11448 (partial)

11458

Address not visible next to 11449 & across from 11458

11464

11468

11469

11478

11479

11510

**Escoba:**

11479

11534

**Haden Hall Court:**

18255

**Hampshire Lane:**

18379

**Ipai Court:**

11072

**Jocatel:**

11686

11666

**Lancashire:**

18520

18539

18551

18545

18560

18576  
Address not visible btwn 18560 & 18576  
18584  
18587 (partial)  
18617  
18635  
18641  
18647  
18653  
18673  
18683  
Address not visible btwn 18673 & 18683  
18690  
18682  
Address not visible btwn 18682 & 18666  
18658  
18650  
18642  
18634  
18626  
Address not visible btwn 18618 & 18602  
18564  
18576  
Address not visible btwn 18576 & 18560  
18560  
Address not visible btwn 18275 & 18258

**Lincolnshire Street:**

18344  
18336  
18328

**Locksley Street:**

18588  
18580  
Address not visible btwn 18627 & 18611  
18643  
18642  
18667  
18683  
18689  
18697  
18682  
18666  
18658

**Lunada Place**

12898

12850

12841

12808

**Lunada Point**

18718

**Luz Place:**

11373

11363

11353

Address not visible to left of 11372

**Luz Road:**

11430

11420

**Mirasol Drive:**

18070

**Matinal Drive:**

17616

17608

**Moon Song:**

18285

**Olmeda Court**

Between 13014 & 13023

**Olmeda Place**

18708

18707

**Pajaro:**

11389

**Palito Court:**

11536

11485(partial)

11539

11529

11519

Address not visible to the right of 11534

Address not visible across from 11479

**Poblado Road:**

\*Some units burned in La Terraza – unable to confirm units.

**Polvera Ave**

12929  
12939  
12944  
12958  
13164  
12986  
13084  
13184  
13103  
13104  
13113  
13123  
13013  
13023  
13034  
13044  
13054  
13053

**Polvera Court**

12913  
12923  
12943  
12942  
12922 (Partial)

**Polvera Drive**

18670  
18690  
18705  
18710

**Polvera Way**

18025  
18055

**Pueblo Vista:**

17893

**Robleda Court:**

18608

18687

**Robleda Cove:**

12958 (partial)

**Sencillo:**

18121

18111

**Shopshire Lane:**

Address not visible between 12587 &12559

**Sun Maiden:**

18187

18181

**Tetagnier:**

12095

**Valladares:**

17616

17605

17635

17788

17848

18188

18198

18187

18177

18167

18157

18147

Address not visible to left of 18107

**Via Terifa**

18034

**Voisin Court:**

11964

**Weaving Lane:**

17783

**Wessex Street:**

18666  
18674  
18515  
18523

# Exhibit 5



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# Mitigation Strategies for Reducing Wildland Fire Risks



San Diego County Wildland Fire Task Force  
Findings and Recommendations

Report to the Board of Supervisors  
August 13, 2003

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## EXECUTIVE SUMMARY

On August 13, 2002 (27), at the request of Supervisor Dianne Jacob, the County of San Diego, Board of Supervisors, directed staff to assemble a team of specialists to develop a comprehensive plan for managing wildland vegetation to reduce the severity of wildfires and decrease their impact on residents. Representatives from 24 agencies and organizations have met over the last year, conducting an in-depth analysis of wildland fire issues and developing a comprehensive wildland fire mitigation plan.

① The Task Force researched the history and complexities of wildland fires, including weather, topography, fuel (vegetation), multiplicity of owners/managers, wildland-urban interface, and the diseases and pests that can destroy trees weakened by drought. The Task Force members formed subcommittees to analyze major areas of concern and develop wildland fire mitigation recommendations in each area.

The Vegetation Management Subcommittee developed six recommendations regarding annual evaluations of fire risks, defensible space, weed abatement/fuel modification ordinances, grant funding, wildland fire rapid response teams and low cost insurance for prescribed burning.

The Codes and Ordinances Subcommittee developed five recommendations regarding property setbacks, venting and glazing requirements for new construction, weed abatement issues, fire hazards and review of regulatory compliance on County-owned, operated or controlled properties.

The Bark Beetle Management Subcommittee developed two

recommendations regarding grant funding for removal of dead and dying trees and establishing priorities for such tree removal efforts.

The Public Education Subcommittee developed four recommendations for education efforts regarding forest health, risks and responsibilities of those living in the wildland-urban interface, defensible space and reactivation of a UC cooperative extension position dedicated to wildland fuel management and education.

## INTRODUCTION TO THE WILDLAND FIRE TASK FORCE

The San Diego County Wildland Fire Task Force was formed following the Pines Fire of July/August 2002 to address the continuing wildland fire problem facing the residents of San Diego County. The Pines Fire near Julian was the third largest fire in the County's history, consuming 61,690 acres, destroying 45 structures and damaging 121 structures. It cost an estimated \$22.6 million to extinguish.

Following the Pines Fire, the County Board of Supervisors directed staff to assemble a team of specialists from federal, state, and local agencies to develop a comprehensive plan for managing wildland vegetation to reduce the severity of wildfires and decrease their impact on county residents. Topics of specific review included establishing and maintaining firebreaks, performing prescribed burns, clearing hazardous brush, and organizing a "bug crew" to develop a plan to deal with problems associated with the County's bark beetle infestation.

On September 3, 2002, the Department of Agriculture, Weights and Measures sent a letter inviting various agencies and community groups to a meeting on September 18, 2002. A broad base of expertise was recruited including representatives from local, state and federal agencies, as well as members of local environmental groups. Representatives from 24 agencies and organizations attended that initial meeting to provide diverse expertise for an in-depth analysis of wildland fire issues and for the development of a comprehensive wildland fire mitigation plan. (A list of participating agencies and

other stakeholders can be found in Attachment II, and a list of the meetings held is provided in Attachment III.)

Due to the complexities of the issues and the large number of participants, Task Force members divided into subcommittees to develop a full spectrum of strategies that could be used to reduce wildland fire risks in the unincorporated area.

**Vegetation Management** – Investigate methods of vegetation management including fuel breaks, prescribed burning, mechanical clearing, biological brush control, and chemical brush control.

**Codes and Ordinances** – Review the existing codes relating to wildfires including building codes and vegetation clearance requirements around structures located in wildland-urban interface areas.

**Bark Beetle Management** – Investigate methods for bark beetle eradication or control.

**Public Education** – Expand strategies to educate the public on the essential steps for and the benefits of reducing fire risks.

This report of wildland fire issues and mitigation recommendations is generated from meetings held by the full Task Force, subcommittee meetings, and research of the scientific literature regarding the various issues addressed. A glossary of fire-related terms used in this report is provided in Attachment I. A bibliography of the resources utilized in the Task Force's research is shown in Attachment IV.

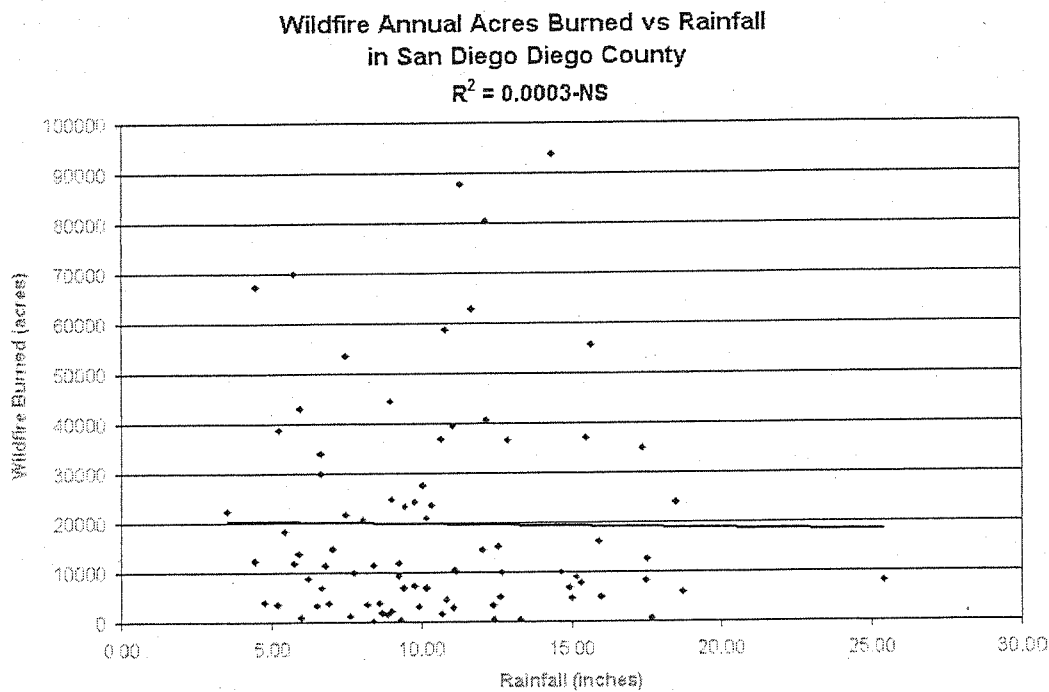


Figure 4.

### Topography

Topography, or the “lay of the land,” greatly influences fire intensity and the direction of spread. Fires generally spread much faster up hill because convective heat rises, preheating the vegetation ahead. Aspect, or the direction that a slope faces, determines the type and moisture content of the vegetation. South facing slopes are drier and consequently have lighter vegetation than north facing slopes. Therefore, southerly exposures generally burn faster but with less intensity. Canyons and saddles funnel winds, increasing wind speed and consequently increasing fire spread. Consequently, homes built in steep, narrow canyons and at canyon rims face an increased risk from fires.

### Fuel

Dr. Jon Keeley, mentioned above, argues that fires are wind driven events and more frequent smaller fires are not ecologically necessary. However, the preponderance of evidence favors fuel as the limiting factor.

Studies conducted by Dr. Richard Minnich of UC Riverside and Dr. Thomas Bonnicksen of Texas A&M conclude that fires in pre-European times were more frequent, less intense, and generally burned during the summer. They concluded that the age of fuel was the limiting factor in fire spread.

The vegetation in San Diego County’s fire prone area is primarily chaparral with some coniferous forests and oak woodlands. These vegetation types are fire-adapted, that is, they have evolved with fire and require fire to maintain healthy, functioning ecosystems.

During the last century, greater emphasis was placed on fire prevention, and professional firefighting forces continued to improve fire suppression methods. One side effect of those efforts was that the average age of wildland vegetation increased, and as it aged, it became increasingly dense. Recent studies indicate that southern California forests currently have three to ten times the vegetation density that existed 100 years ago. The increase in fuel density adds to the problem of controlling fires because more fuel results in more intense wildfires.

Recently burned chaparral and trees will not carry fire for five years post fire. From six to 20 years, these fuels can burn during extreme weather conditions. From 21 to 50 years these fuels will burn well under normal summer and fall conditions, making strong uphill afternoon runs but generally slowing down at night, allowing fire crews to gain control. After 50 years, the amount of dead branches and shrubs exceeds 50% of the available fuel, resulting in very hot fires, extreme fire behavior, long range "spotting" (throwing off embers ahead of the fire) and increased resistance to control. Add Santa Ana conditions to old fuel and the result is the classic southern California firestorm.

At UCLA, two mathematicians (Peng and Schoenburg) analyzed the Los Angeles Malibu fire regime from a statistical and physics perspective. They were aware of the debate over fuel-driven fires versus wind-driven fires and they concluded that, statistically, fuel was the limiting factor. Their illustration below provides a dramatic illustration of the difference between a landscape shaped with almost no fire suppression activity in Baja California compared to San Diego County's landscape, where highly efficient fire suppression forces are employed. Fires in Mexico rarely

exceed 10,000 acres although fire starts are abundant. (See Figure 5.)

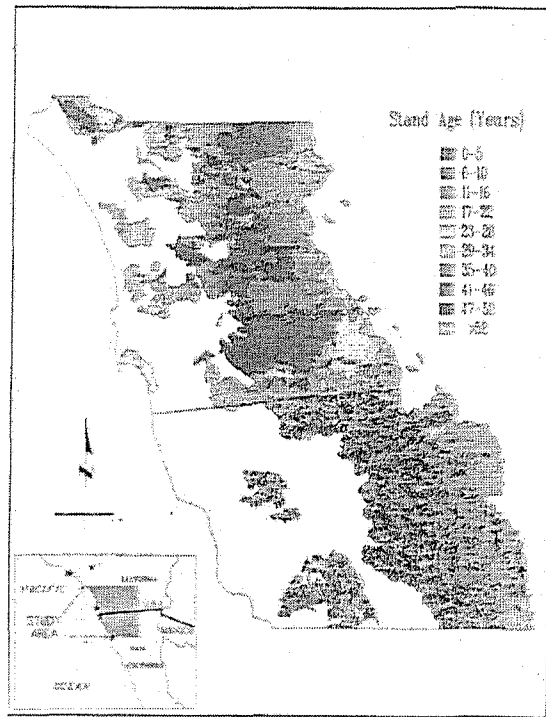


Figure 5. Map comparing fire size of San Diego County and Baja California 1971 (utilizing the most recent comparative data available).

Frequent smaller fires result in a mosaic of differing aged vegetation, so fires become somewhat self-limiting. San Diego's huge areas of aged fuel, on the other hand, can lead to vast acreages burning in a single summertime event like the 61,690 acre Pines Fire of 2002 or the 62,000 acre Conejos Fire of 1950. Santa Ana winds and old fuel can result in conflagrations like the record-setting 190,000 acre Laguna/Boulder Fire of 1970.

Presently, almost one-half of the vegetation in San Diego County's wildland is over 50 years old. Another 30% is over 20 years old. This means that almost 80% of the wildland areas in San Diego will burn

explosively under typical periods of high fire danger. (See Figures 6 and 7.)

San Diego County Fuel Age Classes		
Age	Wildland Acres	Percent of Wildland Acres
0-20 years	290,508	21.54%
21-50 years	413,113	30.63%
51+ years	645,009	47.83%
Total	1,348,630	100.00%

Figure 6.

### Wildland Management Responsibility

One of the significant complexities of wildland management is the multiplicity of owners and land managers. Because land management responsibilities are divided between these groups, effective public

education and ongoing interagency coordination are critical for effective fire mitigation efforts countywide.

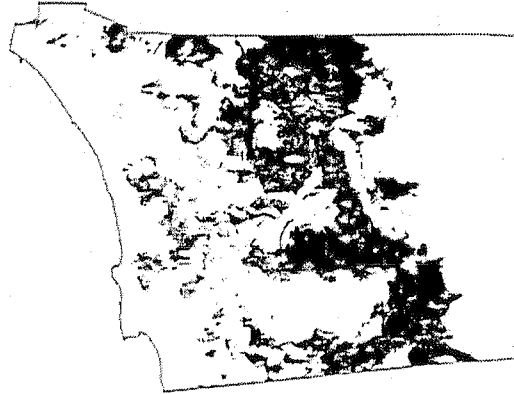


Figure 7. Vegetation older than 50 years.

The chart below shows responsible parties and the number of wildland acres with 50+ year-old vegetation under their control. (See Figure 8.)

Ownership of land with fuels over 50 years old*			
OWNERSHIP	ACRES	SQ MILES	PERCENT
Private	246,592	384.56	38.23%
U.S. Forest Service	122,205	190.86	18.95%
Tribal Lands	73,213	114.39	11.35%
California Department of Parks and Recreation	66,856	104.46	10.37%
Bureau of Land Management	65,508	102.34	10.16%
Water Districts	26,188	40.78	4.06%
Cities	12,214	18.93	1.89%
Military Reservations (Camp Pendleton, Miramar)	12,242	19.11	1.90%
County Parks and Open Space	12,106	18.84	1.88%
State	4,775	7.46	0.74%
State (CalTrans)	1,126	1.66	0.17%
California Department of Fish and Game	931	1.46	0.14%
U.S. Fish & Wildlife Service	331	0.52	0.05%
Other	720	1.02	0.11%
Totals	645,009	1006.41	100.00%

Figure 8. \* Based on the most recent GIS layer.

The set of four maps below shows the geographic distribution of wildlands with fuel over 50 years old in San Diego County by responsible land manager. (See Figure 9.)

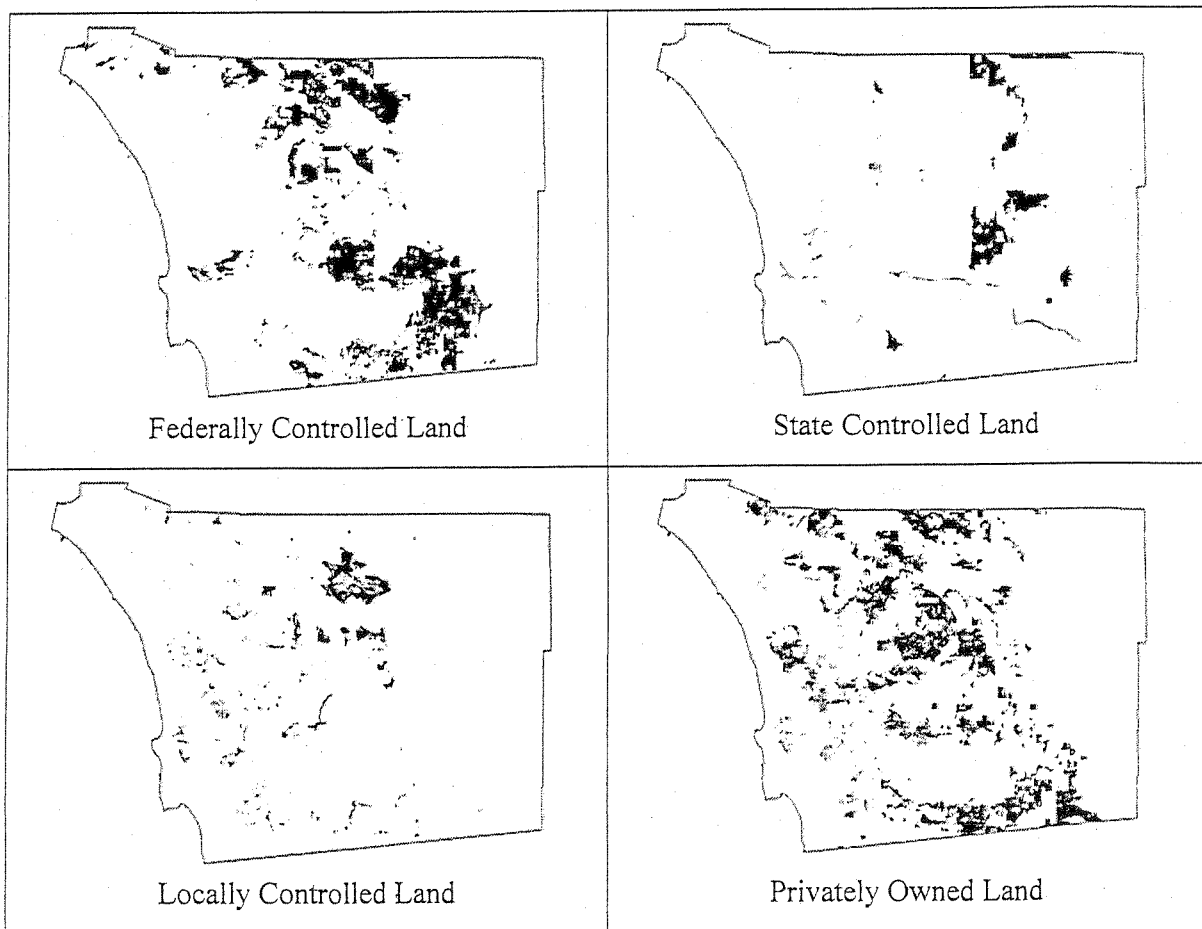


Figure 9. Wildlands with fuel over 50 years old.

### **Wildland-Urban Interface**

The addition of hundreds of new houses each year to “wildland-urban interface” areas adds to the complexity of wildland fire mitigation. These structures may limit the ability of fire managers to pick the most effective location to stop wildland fires and may require firefighters to limit perimeter control activities in order to concentrate on defending homes. The situation is further complicated when homeowners have not maintained an area of reduced vegetation around their homes. This “defensible space”

around structures allows firefighters a safe place to operate under the extreme fire conditions that accompany many recent wildfires.

Flammable roofing material is perhaps the most significant factor in the loss of homes in wildland-urban interface fires. Shingles not only catch fire easily, they break free and sail upward to be deposited as fire-starting embers downwind. Conclusions below regarding major factors in wildland-urban fires put flammable roofing material at the top of the lists. Fortunately, building

## **VEGETATION MANAGEMENT**

This subcommittee agreed that fuel or vegetation management is probably the single most effective tool available to mitigate fires. Prescribed burning, chemical treatment, mechanical treatment, biological treatment, fuel breaks, and defensible space around structures are all forms of vegetation management.

### **Methods of Reducing Vegetation**

#### **Prescribed Burning**

Prescribed burning is the intentional introduction of fire, under favorable weather and fuel conditions, in order to remove old vegetation (fire fuel). Some experts believe that prescribed burns, set under carefully monitored conditions, can safely remove old fuel and present a barrier to the spread of wildfire while minimizing erosion potential and improving habitat. However, other experts believe that any man-imposed action upon wildlands is unnecessary and possibly detrimental.

Proponents of prescribed burning observe that in areas with more frequent fires, especially forests and woodlands, vegetation tends to consist of fewer but larger trees, enhancing drought survival capabilities. In addition, some studies have shown that more frequent, smaller, and less intense fires favor animal populations by increasing plant and habitat diversity.

The U.S. Forest Service has successfully conducted prescribed burns on lands north of Pine Valley and on the eastern slopes of

Palomar Mountain. However, private landowners sometimes are reluctant to allow projects on their lands due to liability concerns. Therefore, some large beneficial projects are halted because one landowner refuses permission to allow his/her land to be burned.

Currently, in San Diego County, all land management agencies annually perform prescribed burns on less than 3,000 acres total. Proponents estimate 27,000 acres annually would be needed to have a significant impact on the fire situation.

#### **Chemical Treatments**

Herbicides have been successfully used to convert some chaparral-covered areas to grasslands and to reduce the understory vegetation load in forests. They may have some use in maintaining clearance around structures and in reducing the cost of maintaining fuel breaks. Herbicides can provide advantageous affects when applied to cut brush stumps to maintain clearance around structures. However, the policies of many land management agencies preclude pesticide use in quantities large enough to have any significant impact on the overall fuel problem.

#### **Mechanical Treatment**

Mechanical methods of vegetation management include bulldozing, crushing, chaining, large brush crushers, other specialized devices, and hand clearing. Many of these methods rely on burning the crushed brush in the winter during periods of damp weather. Hand cutting or "chipping," with the chips being reapplied to the site, is feasible for small areas but



One of the lessons learned from the pilot program is to prioritize the limited chipper availability based on risk factors. Local fire districts or the local wildland agency would be better positioned to set community priorities for chipping services.

Options for future chipping programs include:

- Purchasing chippers with grant funds for individual fire districts or community-based groups. Issues of operator training and liability would need to be addressed if the machine were not operated by district personnel.
- Using grant funds to contract with private companies to provide community “chipper days.” Days would be scheduled, community groups and members notified, and residents would cut and stack for chipping ahead of time.
- Developing and implementing a system of partial cost sharing, with residents paying a portion or all of the costs. Government would provide the service directly or with contracted help, charging on a cost recovery basis. Economies of scale would allow efficient use of resources, reducing costs to residents. Reduced costs may encourage residents to maintain their vegetation in a fire-safe manner.
- Some combination of all of the above could be implemented. San Diego County is diverse geographically and biologically. One method that would work in a mountain community may not be successful in an inland valley community.

## **Recommendations**

***Recommendation 1.*** At the end of each fire season, evaluate the status of fire risks for San Diego County, and as appropriate, prepare a status report of mitigation efforts accomplished in the prior year for the Board of Supervisors.

***Recommendation 2.*** Continue to enforce legal requirements for defensible space (fuel modification zones) around structures.

***Recommendation 3.*** Develop model weed abatement and fuel modification ordinances for existing structures located in wildland areas.

***Recommendation 4.*** Continue to seek grant funds for chipping while exploring the various cost-saving chipping program options listed above.

***Recommendation 5.*** Research options for providing low cost insurance to cover landowners who allow prescribed burning on their lands.

***Recommendation 6.*** If wildland fire damages personal property, continue to assist residents whose property has been damaged or destroyed by providing a rapid response multi-departmental damage assessment team.

# Exhibit 6





















































































































































































































